Handbook
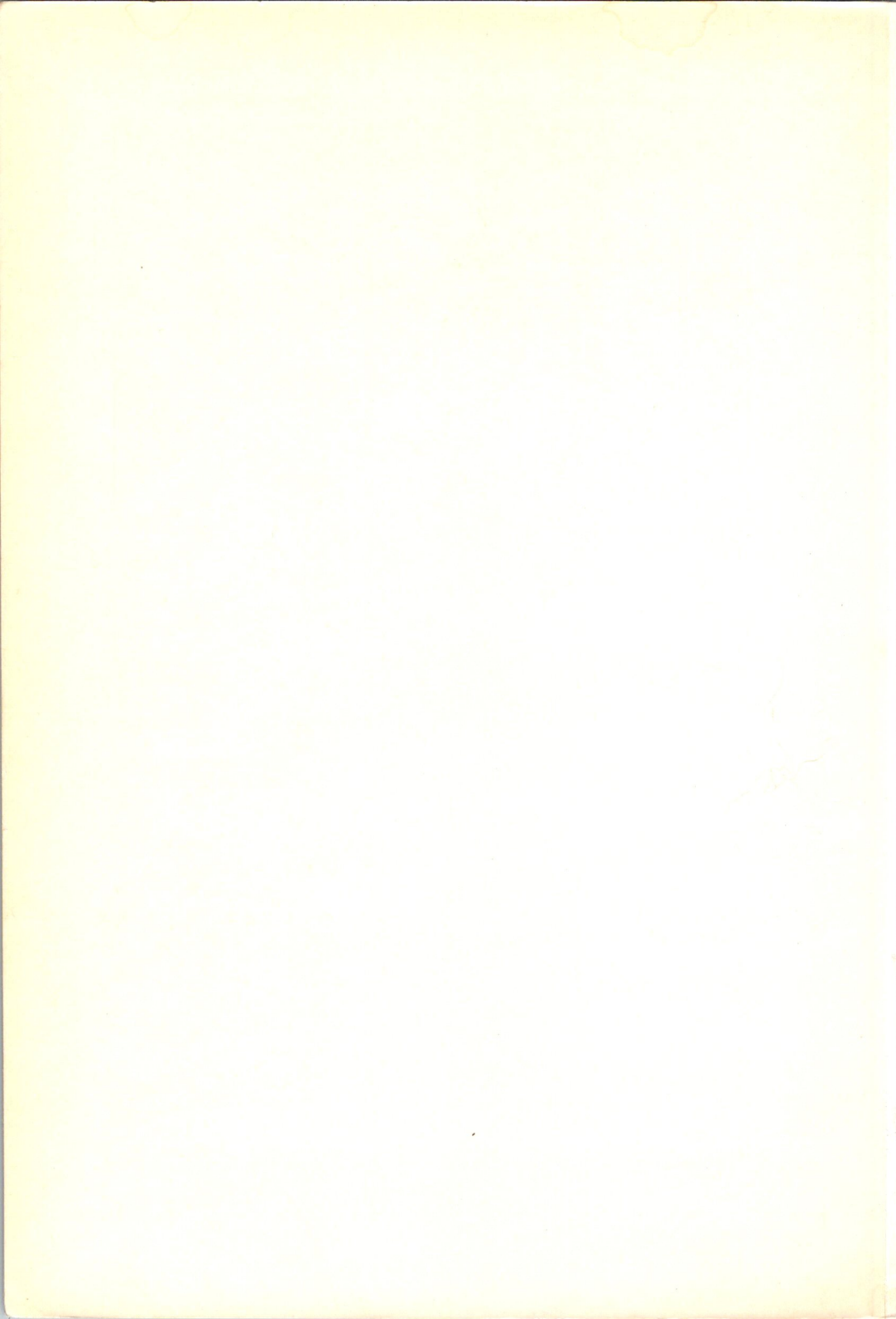# of the
LEICA-System

Leitz

Photography. Projection. Enlargement. Reproduction. Observation.

**Issue
1. April 1981**

Contents:

General Catalogue for Photographic Dealers

(Edition of 1–9–1980)

List of Agencies

Federal Republic of Germany including West Berlin:

Franz Bergmann GmbH & Co. KG
Kurfürstendamm 170
1000 Berlin 15

Tel.: (030) 8814006
Telex: 0185769
Cable:
Laborbergmann, Berlin

Ernst Leitz KG Frankfurt
Fröbelstraße 6-8,
P.O. Box 900620
6000 Frankfurt/M. 90

Tel.: (0611) 770226 and 702038
Telex: 4189100

Ernst Leitz KG Hamburg
Harvestehuder Weg 22a
Alsterchaussee 40
P.O. Box 132044
2000 Hamburg 13

Tel.: (040) 449357
Telex: 0214016
(LEIHA D)
Cable:
Leicaleitz, Hamburg

Ernst Leitz KG Köln
Follerstraße 2
P.O. Box 250327
5000 Köln 1

Tel.: (0221) 235005
Telex: 8883570
Cable:
Leitzwest, Köln

Hans J. Bauer KG Düsseldorf
Freytagstraße 15
P.O. Box 140142
4000 Düsseldorf

Tel.: (0211) 683694/95
Telex: 08586753
Cable:
Leitzbauer, Düsseldorf

Ernst Leitz KG Stuttgart
Böheimstraße 34,
P.O. Box 89
7000 Stuttgart

Tel.: (0711) 609493/95
Telex: 721515
Cable: Leitzsüdwest

Ernst Leitz KG München
Königinstraße 11,
P.O. Box 409
8000 München 22

Tel.: (089) 283032 and 285677
Telex: 524260
Cable:
Leitzbayern, München

Ernst Leitz KG Nürnberg
Krauss-Straße 4, 8500 Nürnberg

Tel.: (0911) 225395 and 225884

EUROPE

Andorre
Higinio Cierco
Prada Ramon
Edificio Cierco
B.P. 20
Andorra la Vieille

Tel.: 21.357
Telex: 211 CIERCO AND

Austria
Leitz-Austria
Friedrich von Rosen & Co. KG
Dr.-Karl-Lueger-Ring 12
A-1014 Wien 1

Tel.: (022) 636665
Telex: 07/5507

Belgium
Ets. F. Masson S.P.R.L.
Chaussée de Charleroi, 51
B-1060 Bruxelles

Tel.: 5386260
Telex: 260.36 B

Denmark
Nordisk Optisk Compagni A/S
Industriholmen 17-19
2650 Hvidovre

Tel.: 0045 1 785511
Telex: 15949

Finland
Elwe oy
Ahventie 4
PL 29
SF-02171 ESPOO 17

Tel.: 90 – 423455
Telex: 123184 elwe sf

France
Wild + Leitz France S.A.R.L.
86, avenue du 18 juin 1940
B.P. 326
F-92506 Rueil-Malmaison Cedex

Tel.: 732.92.13
Telex: WLF 203334 F

Gibraltar
William Serfaty & Co. Ltd.
66-68 and 70 Main Street
P.O. Box 63
GIBRALTAR

Tel.: 2188

Greece

Nicolaos G. Asteriadis
Technical Representations
54, Tsimiski Str.
T.T. 18
P.O. Box 500
Thessaloniki

Tel.: (031) 278.692 and 278.693
Telex: 4 11 30 ASNI GR

Great Britain

E. Leitz (Instruments) Ltd.
48 Park Street
Luton LU1 3HP

Tel.: Luton (Std 0582) 413811
Telex: 825475 Leitz g

Ireland

E. Leitz (Instruments) Ltd.
48 Park Street
Luton LU1 3HP

Tel.: Luton (Std 0582) 413811
Telex: 825475 Leitz g

Photo Distributors (Ireland) Ltd.
56 Grafton Street
Dublin 2

Tel.: 777977

Italy

Polyphoto S.p.A
Via dei Gracchi, 8
I-20146 Milano

Tel.: 4984 941-2-3-4-5
Telex: 332 240 Pondra I

Luxemburg

OPTIQUE MOITZHEIM
Rue Philippe 2
Luxembourg

Tel.: 22256

Malta

P. Cutajar & Co, Ltd.
12 St. Paul Street
Valletta

Tel.: 625488-625489
Telex: MW-248

Netherlands

N. V. Fototechn. Groothandel Odin b.v.
Graafseweg 66-68
Postbus 138
6500 AC Nijmegen

Tel.: (0031 80) 228411
Telex: 48341

Norway

Jean Mette A. S.
Optisk avdeling
Viggo Hansteens vei 27
Vinderen-Oslo 3

Tel.: (0047 2) 144590
Telex: 18831

Portugal
WILD + LEITZ PORTUGAL
Importação e Comércio
de Instrumentos de
Precisão, Lda.
Praça das Aguas Livres, 8
Lisboa 2

Tel.: 68 91 12
Telex: 16 544

Switzerland
Petraglio & Co. S.A
Silbergasse 4
2501 Biel-Bienne

Tel.: (0132) 231277
Telex: 34609

Sweden
Brandt Optik A.B.
Sandhamnsgatan 39
P.O. Box 27053
10251 Stockholm

Tel.: 235060
Telex: 19852

Spain
Germán Cortés S. A.
Consejo de Ciento, 366-368
Barcelona 9

Tel.: 3181700
Telex: 54 098 gera e

Las Palmas
Jaen Optico
Leon y Castillo, 407
Las Palmas de Gran Canaria

Tel.: 26 41 48, 26 39 46, 26 38 45

Ceuta
Casa Ros
Camoens 1
Ceuta

Turkey
Gantenbein Ticaret
P. K. 1158
Istanbul-Karaköy

Tel.: 432800
Telex: 24659 BUGATR

Yugoslavia
Chemcolor
Ulica Proletershih Brigada 37 a
P.O. Box 274
YU-4100 Zagreb

Tel.: 577-700000
Telex: 21236

AMERICA

Argentina
Lutz, Ferrando y Cia. S.A.

Florida 240
1005 Buenos Aires
Telex: 21409 Lutz ar

Bolivia
Casa Kavlin S.A.

Casilla 500
Calle Potosi 1130-1136
La Paz
Tel.: 53221/41530
Telex: CWC BX 5298 ITT 3560082

Brazil
WILD LEITZ

Instrumental de Precisão Ltda.
Caixa Postal, 57053
04081 SÃO PAULO – SP

Av. Vieira de Morais, 45

04617 SÃO PAULO—SP
Tel.: 240-9224, 240-9303
Telex: 1123569 ipwl. br

Canada
Wild Leitz Canada Ltd.

513 McNicoll Avenue
Willowdale, Ontario M2H 2C9
Tel.: (416) 497-2460
Telex: 06-98 65 60 wildleitz tor

Chile
CIENTEC
INSTRUMENTOS CIENTIFICOS

Barentin, Scholz y Cia. Ltda.
Casilla 972
Antonio Varas 754
Santiago/Chile
Tel.: 257350
Telex: 94436 PBVTR KU para CIENTEC
94260 PBVTR KU para CIENTEC

Costa Rica
Agencias Goicoechea Ltda.

Apartado 713
San José
Tel.: 210050
Cable: GOICO SAN José

Colombia
Sanitas Ltda.

Apartado Aéreo 53068
Carrera 13 No. 55-28 Ing. 2
Bogotá 2
Tel.: 488-875, 347-421
Telex: 4-5403 ccai co

indicar: para Sanitas Ltda.

Bogotá Telefonos
488875 y 357421

Dominican Republic
Casa Sander
Vittorio Levi & Co.

Apartado 753
Arzobispo Meriño No. 502
Santo Domingo
Tel.: 2-4770
Cable: Sanderco Santodomingo

Quimico Tecnica Industrial

Apartado de Correos No. 2058
Ave. Rep. del Ecuador No. 20
Santo Domingo
Tel.: 533-4559, 532-1163
Cable: QUITECIND, Santo Domingo

Horizontes Dominicanos C. por A.

Apartado Postal 1723
Calle 12 Esq. Lic. Virgilio
Diaz Ordonez
Santo Domingo
Tel.: 566-3157
Telex: ITT: Horidom 3460275
RCA: 326-4153 Hordom dr

Ecuador
Omnia pro Medico S.A.

Casilla 575
Quito
Avenida Colón Nr. 1699
Quito Tel.: 234-720, 236-610, 524-684
Telex: 2277 Omnia Ed

El Salvador
Representationes „Real"

Apartado 1817
67 Avenida Sur
Centro Roma 2
San Salvador
Tel.: 23-4336
Telex: REAL 30159 ICS SAL
RCN 18006

Guatemala
Precisión

6a Avenida 29-03
Zona 11
Centro Comercial Granai + Townson
Guatemala
Tel.: 460178
Telex: 5402 CAMIND GU
At. Sr. Alfred Bran
Casa Precisión

Guyana
Guyana Stores

Agencies Division
P.O. Box 273
Georgetown/Guyana
Tel.: 62636-8 u. 66171
Telex: GY 212

Honduras
Agencia D. Paysen, S. de R.L. de C. V.

Apartado Postal 252
Blv. Morazan entre cine mayay
Restaurant Kloster
Tegucigalpa D. E.
Tel.: 32-50-10, 32-52-51, 32-52-53
Telex: HT 1111 Depay

Mexico
Comercial Ultramar, S. A.

Apartado Postal 24346
Colima 411
Mexico 7, D.F.
Tel.: 533073, 5330731, 5330732
Telex: 1771226 dehak me
Para Comercial Ultramar, Mexico

Panama
Foto Internacional S.A.

P.O. Box 1878
Ave. Central 151
Panamá 1
Tel.: 62-1333
Telex: 3481033

Paraguay
Eberhard Lewkowitz

Casilla de Correo 523
Calle Estrella 485
Asunción
Tel.: 43510-47024
Telex: 378 Py Lewkowitz

Peru
Mario del Rio S.A.

Apartado 2923
Lima
José de la Torre Ugarte 140
Lince/Lima
Tel.: 221737
Telex: 25277 pu cp isidr Lima
indicar: DELRIO MARIO S.A.
MAPELSA-Telefono 407487

Surinam
INTRACO N.V.

P.O. Box 1855
Gravenstraat 59
Paramaribo
Tel.: 76751 u. 77707
Telex: Intrac — sn — 266

Uruguay
Casa Stapff

Casilla Correo 640
Calle Gral. Máximo Tajes 6493
Montevideo
Tel.: 503466
Telex: P. Booth 901 UY
Stapff 503466

USA (United States)
E. Leitz, Inc.

Rockleigh, New Jersey 07647
Tel.: (201) 767-1100
Telex: 135356

also for:
Bahamas
Barbados
Bermudas
Haiti
Jamaica
Netherlands Antilles
Trinidad and Tobago

Venezuela
C. Hellmund & Cia. S. A.

Apartado 589 – Carmelitas 1010
Caracas
Tel.: 239.71.54
Telex: 23391 chyco ve
Cable: Hellmund Caracas

AFRICA

Angola
Rocha Monteiro Lda.

R. Salvador Correia 69-1°
Caixa Postal 28 15
Luanda/Angola
Tel.: 34 394

Benin
AGENCE CENTRALE/CFAO

Boîte Postale 908
Cotonoce
République Populaire du Benin
Tel.: 31.25.38, 31.25.39

Burundi
Van Hopplynus S.A.

Rue Royale, 101
B-1000 Bruxelles
Tel.: 219.37.00
Telex: 24.506 B

Cameroun
Compagnie Soudanaise

Boîte Postale 84
Douala
République Unie du Caméroun
Tel.: 42.45.46
Telex: COSOUD 5603 Kn

Centrafique
PHARMOPTIC SA

Boîte Postale 195
Bangui/République Centrafricaine
Tel.: 28.41

Congo
Monsieur Rozan

Opticien
Boîte Postale 876
Brazzaville/République Populaire du Congo

Côte d'Ivoire
Optique Instrumentale

01 Boîte Postale 1265
Abidjan 01
Tel.: 32.26.68, 32.58.15
Telex: Sagship 2280

Société ETEC

04 Boîte Postale 801
Abidjan 04
Tel.: 35.28.07, 35.49.17
Telex: TERTRANS 2473/Code 010

Egypt
Techno Scient

Hussein Nagui & Co.
13, Abdel Salam Aref St.
(Ex-Bustan St.)
P.O. Box 2737
Cairo ARE
Tel.: 750022
Telex: 93047 TS (UN)

Ethiopia
Jos. Hansen & Soehne (Ethiopia) Ltd.

P.O. Box 1501
Addis Ababa
Tel.: 447270-447273
Telex: 21033

Gambia
Breckwoldt & Co.

(Gambia) Ltd.
P.O. Box 281
Banjul
Tel.: SIK 2164

Gabon
Ceca Gadis

Département Technique
Boîte Postale 89
Libreville
République du Gabon
Tel.: 72.21.34
Telex: 5230 GO

Technic Medical Service

Boîte Postale 902
Libreville
République du Gabon
Tel. 72.33.47 u. 72.00.92
Telex: 5330 GO

Ghana
Devag Ltd.

P.O. Box M. 262
Accra
Tel.: 64978
Telex: 2146, Accra

Guinea
André & Cie S.A.

Département AFRIQUE
7, Chemin Messidor
CH-1006 Lausannes
Tel.: (021) 20.11.11
Telex: 2.41.01 CH

Haute Volta
Société d'Etudes & Travaux Topographiques (S.E.T.)

Boîte Postale 888
Ouagadougou
République de Haute-Volta

Kenya
Wild Leitz East Africa Limited

Technical Centre
Waiyaki Way, Westlands
P.O. Box 14993
Nairobi
Tel.: 742269/70/71
Telex: 22632 aatravel

Liberia
Jos. Hansen & Soehne (Liberia) Ltd.

P.O. Box 28
Monrovia
Tel.: 22317
Telex: 4239 HANSEN LIB

Libya
Mr. Ben Othman

P.O. Box 74232
Tripoli

Madagascar
Madoptique

C. Ranarivelo
40, Avenue de l'Indépendance
Antananarivo/Madagascar
Tel.: 204-54
Telex: Manivico/tana Nr. 22356

Photorama

Boîte Postale 13
Antananarivo
Tel.: 241.44

Malawi
Gaskells Limited

Chibisa House, Private Bag 39
Blantyre
Tel.: 633622/631066/633802
Telex: 4112, Blantyre

Mali
Photo-Ciné

L. M. Rolde
B.P. 93
BAMAKO
Tel.: 225.02

Marocco
Chimilabo S.A.

193, Avenue de l'Armée Royale
Casablanca
Tel.: 27.14.86, 27.14.70
Telex: 21.748 CHIMICOL

Mauritius
HALBWACHS,

Photo-Cine LTD
P.O. Box 155
Port Louis
Tel.: 2-5235
Cable: HALPHOT, PORTCOUN

Moçambique
F. Bridler & Co. Ltd.

Caixa Postal 65
Maputa
Tel.: 23031
Cable: BRIDLER

Nigeria
Hagemeyer (Nigeria) Limited

82, Murtala Muhammed Way E.B.
P.O. Box 179
Lagos
Tel.: 44925/44947/48953
Cable: BEADFIRM

Niger
Optique de France et du Niger

Boîte Postale 10102
Niamey
République du Niger
Tel.: 73.34.32
Telex: TRANSCAP 5219

Ruanda
Van Hopplynus S.A.

Rue Royale, 101
B-1000 Bruxelles
Tel.: 219.37.00
Telex: 24.506 B

Sierra Leone
Breckwold & Co. (S.L.) Ltd.

5, Wilberforce Street
P.O. Box 77
Freetown
Tel.: 23881
Telex: 3233

South Africa, Republic of
Wild + Leitz RSA (PTY) Ltd.

Lowliebenhof Building, cor. Smit and Simmonds Street
P.O. Box 3954
Johannesburg 2000
Tel.: 725-3930
Telex: 4-22427

BRANCHES
Wild + Leitz RSA Ltd.

305-307 MEDICAL SQUARE
156 MAIN ROAD
P.O. Box 1135
SEA Point, CP
Tel.: 44-9341

Wild + Leitz RSA (Pty) Ltd.

Devenport Road
P.O. Box 18211
Dalbridge (Natal)
Tel.: 21-4219

Togo
Agence Centrale/CFAO

Boîte Postale 1246
Lomé
République du Togo
Tel.: 21-60 à 62
Telex: 5217 Senafrica

Tunisia
Samos

Société d'Appareillage Médical et Hospitalier
9, Avenue Khéreddine Facha
Tunis
Tel: 284.355
Telex: Samos 12523 TN

Zaire (République du)
Van Hopplynus S.A.

Rue Royale, 101
B-1000 Bruxelles
Tel.: 21937 00
Telex: 24 506

Zambia
Jos. Hansen & Soehne (Zambia) Ltd.

Cairo Road, Hamburg House
P.O. Box 1104
Lusaka
Tel.: 72773/74533/74971/74972
Telex: 41521

Zimbabwe
Business Equipment Corporation

CBH HOUSE
1 VICTORIASTREET
P.O. Box 1611
SALISBURY
ZIMBABWE
Tel.: 702031
Telex: RH 4136

ASIA

Bahrain
Behbehani Bros. Ltd.

P.O. Box 168
Manama
Tel.: 253872
Telex: 8921 barkat gj

Bangladesh
Haroon Enterprises

62 Purana Paltan, 1st Floor
Dacca - 2
Tel.: 244940, 255226, 281198

Bangladesh Scientific & Surgical

Instrument Co.
Khan Mansion
107 Motijheel Commercial Area
Dacca 2
Cable: Equipment
Tel.: 254967

Cambodia
Schmidt & Co. (H.K.) Ltd.

G.P.O. Box 297
Hing Kong
Tel.: 5-455644
Telex: 74766 schmc hx

Cyprus
Photo Fisher

237 Ledra Street
P.O. Box 1349
Nicosia
Tel.: 65455
Cable: LEICA

Hong Kong
Schmidt & Co. (HK) Ltd.

28th Floor Wing On Centré
111 Connaught Road, Central
G.P.O. Box 297
Hong Kong
Tel.: 5-455644
Telex: 74766 schmc hx

India
The Scientific Instrument Co. Ltd.

6. Tej Bahadur Sapru Road
Allahabad 211011
Tel.: 51434
Telex: SICO 030-219

Indonesia
Schmidt Scientific (Pte) Ltd.

P.O. Box 629
Singapore 9110
Telok BLANGAIT
WEST POST OFFICE
Tel.: 2727233
Telex: RS 23736 schmss

Iran
Owzan Company (Joint Stock)

236, Onstad Nejatullah Ave (old Villa Ave)
P.O. Box 51-1587
Tehran
Tel.: 009821/898353, 896326, 896237
Telex: 212927 okza ir

Iraq
NASRALLA ENGINEERING SERVICES

P.O. Box 253
BAGHDAD
Tel.: 93060, 93069
Telex: 2185 orpalace IK „Attn. Mr. Nasralla"

Israel
A. Berner & Sons Ltd.

15 Rothschild Blvd.
P.O. Box 447
Tel Aviv
Tel.: 53421, 59789
Telex: 0049/341667 rm ym-u

Japan
Schmidt Limited

1-2-8, Uchikanda, Chiyoda-ku, Tokyo 101
Int'l P.O. Box 5300, Tokyo 100-31
Tel.: (03) 293 6661
Telex: 223470 schmid j

Jordan
Mouasher Cousins Co.

Scientific Division
P.O. Box 1387
Amman
Tel.: 24907-39907
Telex: 1456 Sabco jo

Korea (South)
Korea Schmidt Company

18th Floor, Sam Jung Bldg.
69-5, 2-KA Taipyung Rd.
Chung-ku
I.P.O. Box 2081 Seoul
Tel.: 23-4961, 229714
Cable: KOSCHMIDT SEOUL

Kuwait
Morad Yousuf Behbehani

P.O. Box 146
Kuwait
Tel.: 814000
Telex: 2048 BEHBEHANI

Laos
Schmidt & Co. (H.K.) Ltd.

G.P.O. Box 297
Hong Kong
Tel.: 5-455644
Telex: 74766 schmc hx

Lebanon
**Société Intercontinentale
d'Expansion Economique (Liban)**

Rue Sour – Imm. Saad & Trad
B.P. 11-1045
Beyrouth
Tel.: 366600
Telex: SATRAD 21515 LE

Malaysia
Schmidt Scientific SDN. BHD

WISMA MIRAMA, 12th Floor
Jalan Wisma Putra
P.O. Box 592
Kuala Lumpur 08-05
Tel.: 03-427122, 03-427089
Telex: Schmidt MA 300035

Nepal
Nepal Commercial Enterprises Pvt. Ltd.

1/135, Pulchowk, Lalitpur
P.O. Box 148
Kathmandu
Tel.: 21 072
Telex: 257

Oman
PHOTOCENTRE

P.O. Box 3115, Ruwi
Sultanate of Oman
Tel.: 702823
Telex: 3499 KHARUSI MB

Oman International Corporation

Central P.O. Box 4769 Ruwi
Sheikh Ali Bin Zaher Bldg., Mutrah
Tel.: 734211/734212
Telex: 3312 inoman MB

Pakistan
Azam TRADING CORPORATION

26, Shaheed-e-Millat Road
P.O. Box 3509
KARACHI 5
Tel.: 412412
Cable: MAZA
Telex: 24313 AZAM PK

Philipines
Edward Keller Ltd.

Philippine Branch
2723 Pasong Tamo Extension
Makati, Rizal
CCPO Box 1469, Metro Manila 317
Tel.: 88-07-11
Telex: RCA 722-2025 edk ph
ITT 7425108 – Eastern 3546

Qatar
Rafco

P.O. Box 831
Doha/Qatar
Tel.: 56249, 23678
Telex: 4270

Saudi Arabia
AHMAD & MOHAMMAD

SALEH KAKI
P.O. Box 208
RIYADH
Tel.: 28880
Telex: 201313 AMSKRH SJ

Techno Arabia Inc.

Photo Division
P.O. Box 5258 C. R. 9336
Jeddah/Saudi Arabien
Tel.: 34646
Telex: 401062 for Lechno arabia inc.

Singapore
Schmidt Scientific (PTE) Ltd.

Block 3
Unit 909/917, 9th Floor
PSA Multi-Strey Complex
Pasir Panjang Road
Singapore, 5

Mail address
Schmidt Scientific (PTE) Ltd.

P.O. Box 626
Telok Blangah West Post Office
Singapore, 4
Tel.: 2727233 (5 lines)
Telex: RS 23736 Schmss

South Yemen, Peoples' Republic of
Nasher Engineering Office
Mr. Abdulbaki A. Nasher

P.O. Box 2254
Sana a'
Tel.: 6133
Cable: Nasher Sanaa

Syria
Jamil Chacra

26 Rue Muradi, Fardosse
B.P. 2270 Damascus
Tel.: 117977
Cable: CHACRA

Sri Lanka
EMSO LIMITED

71/2 Green Path
P.O. Box 312
COLOMBO 7
SRI LANKA
Tel.: 95587
Telex: 1267 Quiktours
Attention EMSO

Taiwan
Schmidt & Co. (Taiwan) Ltd.

906 Chia Hsin Building
96 Chung Shan Rd., North Sect. 2
Taipei
Tel.: 5515211, 5318281 Ext. 481/2
Telex: 11111 Schmidt

Thailand
Berli Jucker Co. Ltd.

542/1 Ploenchit Road
P.O. Box 173
Bangkok
Tel.: 2524071
Telex: BEJUCO TH 84331

United Arab Emirates
General Enterprises

P.O. Box 363
Dubai
Tel.: 24131-133
Telex: 5528 geco db

Vietnam
Schmidt & Co. (H.K.) Ltd.

G.P.O. 297
Hong Kong

AUSTRALIA

Contents

LEICA R4

Compact, single-lens, electronically controlled 35 mm reflex camera with alternative through-the-lens metering methods: LEITZ selective measurement or LEITZ largefield integrating measurement.

Combined with multiple automatic programs: automatic shutter speed control with aperture preselection, automatic aperture control with shutter speed preselection, automatic program, automatic flash control.

Interchangeable focusing screens. Attachable data back. Rapid motor winder alternatively with attachable MOTOR-WINDER R4 or MOTOR-DRIVE R4.

Detailed description page 19

Code Number

LEICA R4, black chromium finish
Complete with camera cap, baseplate cap, carrying strap . . . .   **10043** _____

LEICA R4, silver chromium finish
Complete with camera cap, baseplate cap, carrying strap . . . .   **10041** _____

Use of existing LEICA R lenses
All lenses of the LEICA R4/LEICA R3-MOT range are suitable for the LEICA R4 without modification.

The 180 mm ELMARIT-R f/2.8 lenses (Code No. 11 919) up to Serial No. 2939700 and 250 mm TELYT-R f/4 (Code No. 11 920) up to Serial No. 3050600 can, however, be used only with automatic shutter speed control with LEITZ largefield integrating measurement, and manual operation.

Lenses of the LEICAFLEX models can be fitted with a cam for the full utilisation of the LEICA R exposure facilities. The use of modified lenses remains unrestricted on all LEICAFLEX models.

Accessories
For the LEICA R4

Everready cases

for the LEICA R4
(without motor winder or motor drive)

Ever ready Case

Genuine leather
with standard front for the following lenses
21 mm f/4[1]), 24 mm f/2.8[1]), 28 mm f/2.8[1]), 35 mm f/4[1]), 35 mm f/2.8,
35 mm f/2, 50 mm f/1.4

Code Number

Ever ready Case with standard front. . . . . **14569** _____

Ever ready Case

Genuine leather
with large front for the following lenses
16 mm f/2.8, 19 mm f/2.8[1]), 21 mm f/4[1]), 24 mm f/2.8, 28 mm f/2.8,
35 mm f/4, 35 mm f/2.8, 35 mm f/2, 50 mm f/2, 50 mm f/1.4, 60 mm f/2.8,
80 mm f/1.4, 90 mm f/2.8, 90 mm f/2

Ever ready Case with large front . . . . **14568** _____

Leather case for lens hood. . . . . **14621** _____
for 28 mm f/2.8 lens (Code No. 11204)

1) Without lens hood

4   4/81

Combination cases[1])

Combination case
for the LEICA R4
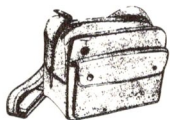
External dimensions from about 25 x 14 x 19 cm
Genuine leather, with coupling ring
Accepts 1 LEICA R4 with lens inserted and up to 3 further lenses

Code Number

Combination case for the LEICA R4.............................. **14832** _____

Combination case
for the LEICA R4
with Motor Winder or Motor Drive
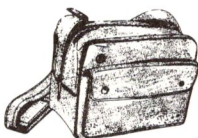
External dimensions: about 31 x 18 x 23 cm
Genuine leather, with coupling rings
Accepts 1 LEICA R4 with Motor Winder or Motor Drive attached and
handgrip with lens inserted and up to 3 other lenses.

Combination case for the LEICA R4 with Motor Winder R4 or
Motor Drive-R4 .... **14833** _____

---

1) List of items accommodated see "Technical Information", page 222

Combination case, Safari version
for the LEICA R4
with Motor Winder or Motor Drive

External dimensions: about 31 x 18 x 23 cm
Canvas, with coupling ring
Accepts one LEICA R4 with Motor Winder or Motor Drive attached
and handgrip and lens inserted, and up to 3 other lenses.

Code Number
Safari combination case, canvas .... **14 837** _____

Universal holdall case[1])
for the LEICA R4 with and without Motor Winder/Motor Drive

External dimensions: about 36 x 21 x 24 cm
Genuine leather, with coupling ring
Accepts two camera bodies and up to 6 lenses

Universal holdall case .... 14 834 _____

Coupling ring (replacement) .... 14 836 _____

Reporter case
without partitions

External dimensions: about 38 x 21 x 30 cm
Genuine leather
with 2 outside pockets

Reporter case .... 14 830 _____

---

1) List of items accommodated see "Technical Information", page 222

Correction lenses

	Code Number	
+ 0.5	14240	
+ 1.0	14241	
+ 1.5	14242	
+ 2.0	14243	
+ 3.0	14244	
− 0.5	14245	
− 1.0	14246	
− 1.5	14247	
− 2.0	14248	
− 3.0	14249	

Interchangeable focusing screens
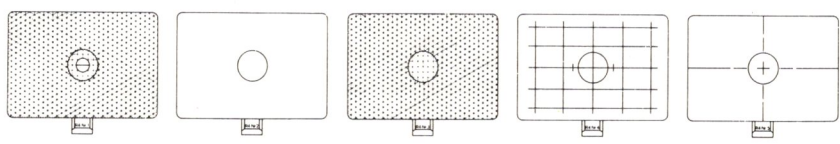
Universal screen (replacement)
in case with dust brush and forceps for interchange . . . . **14303** _____

Plain groundglass screen
in case with dust brush and forceps for interchange . . . . **14304** _____

Microprism screen
in case with dust brush and forceps for interchange . . . . **14305** _____

Groundglass screen with grid division
in case with dust brush and forceps for interchange . . . . **14306** _____

Clearglass screen with crosslines
in case with dust brush and forceps for interchange . . . . **14307** _____

Eyecup

Eyecup
can also be used in combination with the correction lenses . . . . **14257** _____

Angle finder

for viewing from above, but also for unnoticed photography "round the corner" or above people's heads.

Carrying strap

Cable release

for all camera models with conical thread

Adapter

Spare parts for the camera

Ball-and-socket heads

Large ball-and-socket head with A ³/₈ and A ¼ DIN 4503 (³/₈ in and ¼ in) combined tripod thread . . . .   **14121** _____

Small ball-and-socket head with A ¼, DIN 5403 (¼ in) tripod thread . .   **14119** _____

Table-top tripod

Table-top tripod with 3 folding legs, A ¼, DIN 4503 (¼ in) tripod thread   **14100** _____

Universal handgrip
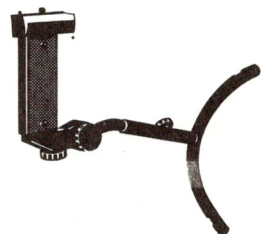
Universal handgrip with shoulder stop, adjustable in all directions for use by the individual owner. Thread A ¼ DIN 4503 (¼ in) for screwing on the carrying strap 14130 . . . .   **14188** _____

MOTOR WINDER R4
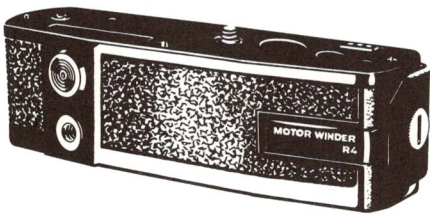
Compact, handy motor winder for film transport and shutter wind, for the LEICA R4 only.

Patented, quietly running uncoiling drive with load-dependent force lock.

Single-frame and series release. – Frame frequency with series up to 2 fps.

Practical handgrip with release button for series releases as accessory.

Socket[1]) for the Remote Control LEICA R electronic control unit and other electric releases (see Accessory Range).

Housing for 6 rechargeable or ordinary batteries for very convenient and quick interchange.

Detailed description page 23

Code Number

MOTOR WINDER R4
with cover . . . .   **14 282** _____

Handgrip R4 for hand-held exposures
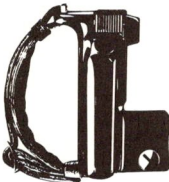
Sturdy, practical design with ridged button for series releases, adjustable leather loop, screw with coin slot for attaching the handgrip to the Motor Winder R4 or Motor Drive R4.

Handgrip R4 for hand-held exposures . . . .   **14 283** _____

---

1) Coupling plug (5-pin) 302-013.154-004 for same available from Technical Service Centre POB. 2027
   Ernst Leitz Wetzlar GmbH, D-6330 Wetzlar.

Accessories
for the MOTOR WINDER R4

Adapter for external supply MW-R

for connection to external current sources; with 1 m appliance cable and screw plug[1]).
(The adapter for the external supply MW-R is inserted in the Winder in the place of the battery housing).

Possibilities of connection:
Battery housing (with holder 14279) if at low temperatures the batteries have to be kept at body heat and have therefore to be carried externally.
Mains units up to 8.5 V d.c.

Further possibilities see LEICA R-MOT working sheets.

	Code Number
Adapter for external supply MW-R	**14278** _____
Extension cable 5 m MW-R for external supply	14298 _____

Holder for the battery housing MW-R

with sockets marked "+" and "−" for the battery charger, for instance for the Varta AG, GE 1, 2-12/0, 005-0,1 ex.

For recharging, the 6 NiCd batteries, for instance Varta AG DEAC 501RS, remain in the battery housing.

External current supply of the Motor Winder R4 by means of the adapter for external supply MW-R, Code No. 14278. Built-in screw socket.

	Code Number
Holder for the battery housing MW-R	**14279** _____

---

1) Suitable for same: either 302-013.154-011 coupling socket or 042.813.155-008 2-pin built-in socket, available from Technical Service Centre, POB 2027, Ernst Leitz Wetzlar GmbH, D-6330 Wetzlar, Germany.

Housing for rechargeable and ordinary batteries MW-R

for the MOTOR-WINDER R4, replacement.
For heavy-duty work (prolonged operation, low temperatures, expeditions) a second housing with fresh or recharged batteries offers additional reliability. Can be changed within seconds with a single action.

Code Number

Housing for rechargeable or ordinary batteries . . . .   **14 280** _____

Remote Control LEICA R
electronic control unit
(RC LEICA R)

Electronic control unit for remote release

Built-in timer for automatic releases

7 integrated circuits in C-MOS-technology

Digital display of the completed exposure through feedback of the camera.

For the LEICA R only with motorised film transport.

Detailed description page 29

Code Number

Remote Control LEICA R (RC LEICA R) . . . .   **14 277** _____

Tripod holder R4

for the use of the LEICA R4 combination with long-focal-length lenses on a tripod or with the universal handgrip. Sturdy design with two knurled screws, the tripod threads of the MOTOR WINDER R4 or the MOTOR DRIVE R4.

Holder with A ¼ DIN 4503 (¼ in) thread for photographic tripods. . . . . .   **14 284** _____

Electric release switch R4

for universal handgrip with 0.3 m cable and screw plug:

Practical accessory for photography with long-focal-length lenses such as the 250 mm f/4, 350 mm f/4.8, 400 mm f/6.8, 560 mm f/6.8

When inserted in the pistol grip the push button can be directly connected with the screw plug via the 0.3 m cable with the MOTOR WINDER R4 or the MOTOR DRIVE R4.

Code Number

Electric release switch R4 0.3 m................................ **14 237**

Electric cable release

for remote release, with 5 m cable and screw plug. In conjunction with extension cables of 25 m length (14 274) for electric remote release up to 100 m distance.

Code Number

Electric cable release 5 m **14 272**

25 m extension cable

(for electric remote release)
with screw plugs

Code Number

Extension cable 25 m.. **14 274**

MOTOR DRIVE R4
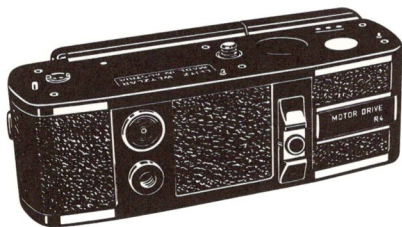
Compact, handy Motor Drive for film transport and shutter wind, for the LEICA R4 only.

Special LEITZ gear design ensures quiet running.

Series releases of 4fps, 2fps, and single-frame release as required.

Practical handgrip with release button as accessory.

Socket[1]) for the Remote Control LEICA R electronic unit and other electric releases (see Accessory Range).

Very conveniently and quickly interchangeable housing, for 10 ordinary or NiCd rechargeable batteries.

Detailed description page 26

Code Number

MOTOR DRIVE R4
with cap. . . . .   **14 292** _____

Handgrip R4 for handheld exposures

Sturdy, practical design with ridged button for series releases, adjustable leather loop, screw with coin slot for attaching the handgrip to the MOTOR WINDER R4 or the MOTOR DRIVE R4.

Code Number

Handgrip R4 for hand-held exposures. . . . .   **14 283** _____

---

1) Suitable for same: 5-pin plug 302-013.154-004, available from Technical Service, P.O.B. 2027, Ernst Leitz Wetzlar GmbH, D-6330 Wetzlar, Germany.

Accessories
for the MOTOR DRIVE R4

Adapter for external supply MD-R

For connection to external current sources; with 1 m appliance cable and screw plug[1]).
(The adapter for the external supply MD-R is inserted in the drive in the place of the battery housing).

Possibilities of connection:
Battery housing (with holder 14279) if at low temperatures the batteries have to be kept at body heat and must therefore be carried externally.
Mains units up to 14v d.c.

Further possibilities see LEICA R4 Working Sheets.

Adapter for external supply MD-R . . . .   **14323** _____
Extension cable 5 m MD-R for external supply . . . .   **14325** _____

Housing for ordinary or rechargeable batteries MD-R
for the MOTOR DRIVE R4 as replacement
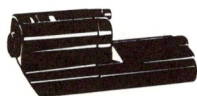
For heavy-duty work (prolonged operation, low temperatures, expeditions) a second housing with fresh or recharged batteries offers additional reliability. Can be exchanged with a single action within seconds. The housing has sockets for the following connections:

Battery charger, for instance the Varta AG GE 1,2,12/0,005-0,1 ex for the 10 external current supply of the MOTOR DRIVE R4.

Code Number
Housing for ordinary or rechargeable batteries MD-R . . . .   **14322** _____

---

1) Suitable for same: either socket 302-013.154-011 or built-in socket 042-813.155-002 (2-DIN) available from Technical Service, P.O.B. 2027, Ernst Leitz Wetzlar GmbH, D-6330 Wetzlar, Germany.

Remote Control
LEICA R electronic control unit
(RC LEICA R)
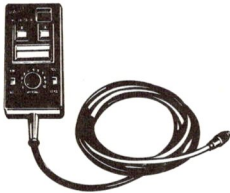
Electronic control unit for remote release

Built-in timer for automatic releases

7 integrated circuits in C-MOS-technology

Digital display of the completed exposure through feedback of the camera.

For the LEICA R only with motorised film transport.
Detailed description page 29

Code Number

Remote Control LEICA R (RC LEICA R) . . . . **14 277** _____

Tripod holder R4

For the use of the LEICA R4-combination with long-focal-length lenses on a tripod or with the universal handgrip. Sturdy design with knurled screws, the tripod threads of the MOTOR WINDER R4 or the MOTOR DRIVE R4.

Holder with A ¼ DIN 4503 (¼ in) thread for photographic tripods. . . . . . **14 284** _____

Electric release switch R4

for universal handgrip with 0.3 m cable and screw plug:
Practical accessories for photography with long-focal-length lenses such as the 250 mm f/4, 350 mm f/4.8, 400 mm f/6.8, 560 mm f/6.8

When inserted in the pistol grip the push-button can be directly connected with the screw plug via the 0.3 m cable with the MOTOR WINDER R4 or the MOTOR DRIVE R4.

Electric release switch R4 0.3 m. . . . . **14 237** _____

Electric cable release

for remote release with 5 m cable and screw plug. In conjunction with extension
cables of 25 m length (14 274) for electric remote release up to 100 m distance.

Code Number

Electric cable release 5 m . . . . **14 272** _____

25 m Extension cable

(for electric remote release)
with screw plugs

Extension cable 25 m. . . . . **14 274** _____

Data Back DB LEICA R4
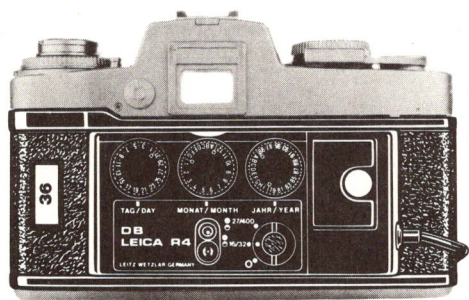
Camera back with device for exposing data on to film.

The DB LEICA R4 data back can be exchanged with the LEICA R4 camera back.

Fading-in of day, month, year (date) or figures or letters (code) through flash diode in the bottom-right-hand corner of the picture together with the exposure.
Day selector: numbers from 1 to 31 and one empty field.
Month selector: numbers from 1 to 12, letters from A to G and 2 empty fields.
Year selector: numbers from 80 to 99, letters from A to K and 2 empty fields.
Fading-in also with Motor Winder and Motor Drive operations.
Dimensions of the data field on the film about 0.7 x 4.5 mm.
On/off switch, also selector for the adjustment to films of different speed.
Fade-in exposure control by LED.
Cable connection to the flash contact of the camera.
Current supply by two silver oxide 1.5v button cells (as for LEICA R4) sufficient for more than 100 films.
Battery test button.
Film cartridge viewing window.
Dimensions: about 137 x 54 x 30 mm.

Code Number
Data Back DB LEICA R4. . . . . 14 297 _____

Large-capacity cassette
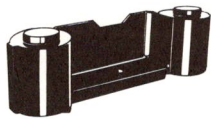
Back for large film reserve (up to 10 m film = 250 exposures) with device for the fading-in of data.
The large-capacity cassette can be interchanged with the back of the LEICA R4, and can be operated either manually with the rapid transport lever of the LEICA R4 or with the Motor Winder/Motor Drive.
Cassette-to-cassette film transport. The special cassettes necessary are part of the outfit of the large-capacity cassette.
Data can be faded in as with the Data Back DB LEICA R4.

Code Number
Large-capacity cassette . . . . **in preparation** _____

Description of the camera and technical data

LEICA R4
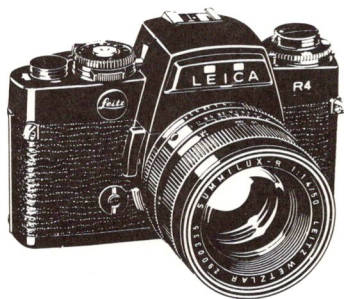
Type of camera:
Compact, single-lens, electronically controlled 35 mm reflex camera with alternative through-the-lens metering methods: LEITZ selective measurement or LEITZ largefield integrating measurement. Combined with multiple automatic programs: automatic shutter speed control with aperture preselection, automatic aperture control with shutter-speed preselection, automatic program, automatic control. Interchangeable focusing screens. Attachable data back. Rapid motor wind alternatively with attached MOTOR WINDER R4 or MOTOR DRIVE R4.

Body:
(All-metal aluminium die-cast) covered with textured PVC for easy handling, zinc-die-cast camera top, 1 mm gauge, baseplate made of 0.8 mm-gauge brass. Silver or black chromium finish. Mechanical fitting and electrical contacts for the MOTOR WINDER R4 and MOTOR DRIVE R4. Detachable and hinged back with film cartridge window. Tripod thread: standard A ¼ (¼ in). Eyelets on both sides for carrying strap, width 16 mm. Rapid bayonet changer for LEICA R lenses and accessories.

Lens system:
LEICA R lenses with rapid bayonet changer from 15 to 800 mm focal length. With LEITZ Absorban cementing layers and LEITZ coating or LEITZ multiple coating. Full-aperture measurement with auto-diaphragms up to 350 mm focal length. Working-aperture measurement with all lenses and accessories without auto-diaphragms.

Viewfinder:
Bright, contrasty viewfinder image with built-in penta prism and interchangeable LEITZ focusing screens. Basic outfit with the LEITZ universal focusing screen. Shallow eyecap for spectacle wearers. 10 correction lenses from +3 to −3 dioptres, a 90°-angle finder and a rubber eyecup can be attached. Viewfinder magnification 4.06x = 0.85 with 50 mm lens at infinity setting. The viewfinder image shows 92 % of the picture area on the film, corresponding to the picture area on the mounted transparancy.
Viewfinder adjustment: − 1 dioptre. Swing-in eyepiece diaphragm.

Five interchangeable focusing screens:
1) Universal screen (part of the basic outfit),
2) plain groundglass screen,
3) Microprism screen,
4) Groundglass screen with grid division,
5) Clear-glass screen with crosslines.

Viewfinder display:
Display by LED: chosen program
Measured data (shutter speed or aperture).
Storage of the LEITZ selective measurement at
Long-time range or large aperture
Over- and under-exposure
Flash readiness with system-compatible flash units
$\pm$ correction
Display by fading in:
Preset aperture with all R lenses with auto-diaphragms.
Chosen shutter speed with "m" and "T" programs.

Exposure measuring methods:
LEITZ selective measurement and LEITZ largefield integrating measurement combined with practically arranged programs. Light metering through the lens: at full aperture with all LEICA R lenses with and at working aperture for lenses and accessories without auto-diaphragm.
LEITZ selective measurement with precise measuring field outline of 7 mm Ø visible in the viewfinder. The selectively measured value can be stored, if necessary for up to 30 seconds, through slight pressure on the camera release button. The fact of the storage is displayed in the viewfinder by extinction of the program display.
Measuring range: 1 cd/sq.m to 32000 cd/sq.m at 1.4. For the 50 mm SUMMILUX-R f/1.4 this produces a working range from $+3$ to $+19$ exposure values at ISO 100/21° (ASA 100/21 DIN). This corresponds to an aperture speed combination of f/4 1/4 sec to 22 1/1000 sec.
LEITZ largefield integrating measurement (weigthed measurement).
Measuring range: 1 cd/sq.m to 32000 cd/sq.m at f/1.4. For the 50 mm SUMMILUX-R f/1.4 this produces a working range from $+1$ to $+19$ exposure values at ISO 100/21° (ASA 100/21 DIN). This corresponds to an aperture/shutter speed combination of f/4 1/4 sec to 22/1/1000 sec.

Programs:
There are 5 choices of program:
1) Automatic shutter speed control with aperture preselection and LEITZ selective measurement.
2) Automatic shutter speed control with aperture preselection and LEITZ largefield integrating measurement.
3) Automatic aperture control with shutter speed preselection and LEITZ largefield integrating measurement.
4) Automatic program with LEITZ largefield integrating measurement.
5) Manual setting of shutter speed and aperture with LEITZ selective measurement.

In addition: Automatic flash control

Film speed range:
Film speed selector with click-stop button: range: ISO 12/12° to 3200/36° (ASA 12 DIN to 3200/36 DIN).
Click-stop positions in 1/3 exposure steps.
Exposure corrections (override) of $\pm$ 2 exposure values in half steps.

Batteries and battery test:

2 1.5 v silver oxide button cells, size: 11.5 m Ø : height 5 mm (replacement batteries see under Technical Information).
Battery test with push-button and LED. Battery housing with protective cap on the underside of the camera. Batteries can be exchanged also with film in the camera.

Operating the camera:

When the slack of the release button is taken up (applies also to the release on the MOTOR WINDER R4/MOTOR DRIVE R4 with or without handgrip) or the locking button on the program selector is pressed the camera is switched on. The exposure meter is functioning and the LED displays in the viewfinder are visible.

Distance setting:

Quick and precision focusing with the various focusing screens. Assessment of the depth of field is possible when the very conveniently arranged depth-of-field lever is pressed.

Mirror:

Semi-silvered hinged mirror with a Fresnel reflector behind it for Leitz selective measurement and Leitz largefield integrating measurement. It has been coated with 17 vapour-deposited layers. 70% of the light is directed to the viewfinder, 30% transmitted by the mirror.

Shutter:

Vertically-acting metal-blade focal-plane shutter for electronic continuous control from 1 to $1/1000$ sec in the "A" and "P" programs. With manual setting and automatic aperture control electronic in full values: 1, $1/2$, $1/4$, $1/8$, $1/15$, $1/30$, $1/60$, $1/125$, $1/250$, $1/500$, $1/1000$ sec.
Mechanical shutter control with "X" setting $= 1/100$ sec, "B" $=$ time exposures of any duration, and "100" $= 1/100$ sec, "P" and "100" can also be used when the batteries are exhausted.
All shutter settings are fully effective also with the motor winder or the motor drive attached.
Attention: Immediately remove exhausted batteries.

Release:

Smooth shutter release with pressure point for measured value storage with selective exposure measurement. International conical thread for the cable release.

Electronic selftimer (delay mechanism):

Operates with all shutter speeds. Move it to standby position by turning the switch knob. Release with the camera release button. Operation can be stopped by return of the switch knob to its rest position. Delay time about 8 sec.

Flash synchronisation:

Automatic flash mode: system-compatible flash units automatically switch the shutter speed to $1/100$ sec with all programs via additional contact in the accessory shoe when the flash unit is ready for action.
Standard contact bush (X) on the front of the camera for flashbulbs and electronic flash units. Centre contact (X) in the accessory shoe. The two contacts cannot be used simultaneously..
Flash units with centre contact are connected to the "X" flash contact in the accessory shoe. For work with electronic flash units the shutter ring is as a rule set at "X" ($1/100$ sec). With manual setting flash synchronisation is ensured also with slower shutter speeds and at "B".
This applies to automatic mode only when modern thyristor-fired flash units are used.

Film loading:
Detachable camera back can be hinged. Instead of the ordinary back, the data back or the large-capacity cassette can be attached. Rapid loading system for all commercial 35 mm films: simple film insertion by means of pushing the film under the tongues of the take-up spool. The film plane is marked on the camera top. Film cartridge window in the camera back.

Film transport:
Angled rapid lever for film transport and shutter wind. Its standby position is favourable for photographers who use their left eye in front of the viewfinder. Travel of the rapid winding lever 130°. Motorised film transport with the MOTOR WINDER R4 or MOTOR DRIVE R4 attached. With motor operation the rapid winding lever remains in the parked position. Viewing window for film transport. Automatic switch-off with motor wind after 36 exposures (end of film). Automatic frame counter (counting forwards) with automatic return to "S" (–2 frames) when the camera back is opened. For shorter length of film "20" and "24" are marked in red.
Folding film rewind crank, when pulled out serves for opening the camera back. Push-button for film rewind release and multiple exposures with automatic return on the camera baseplate.
Multiple exposures also possible with MOTOR WINDER R4 and MOTOR DRIVE R4 operation.

Carrying strap:
Black perlon tissue, width 16 mm.
When an everready case is used the carrying strap remains on the camera.

Dimensions:
Height: 88.1 mm, length 138.5 mm, total depth 60 mm (depth of body 32.2 mm).

Weight:
Body without lens 0.63 kg.
Body with 50 mm SUMMICRON-R f/2 0.88 kg

MOTOR WINDER R4
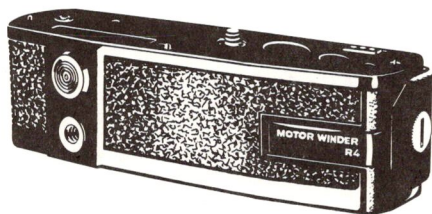
Type of Instrument: Winder
Compact, handy motor winder for film transport and shutter wind, for the LEICA R4 only.
Patented, quietly running uncoiling drive with load-dependent force lock.
Single-frame and series release. – Frame frequency with series up to 2 fps.
Practical handgrip with release button for series releases as accessory.
Socket[1]) for the Remote Control LEICA R electronic control unit and other electric releases (see accessory range).

Current supply:
by
6 standard 1.5 v alkali-manganese batteries in the housing. Capacity according to Leitz test conditions: about 150 36-exposure films at 20 °C
or
6 NiCd rechargeable batteries, for instance Varta AG DEAC 501 RS in the housing. The rechargeable batteries remain in the housing during recharging.
or
Adapter for external supply 14 278 with 1 m appliance cable and screw plug. The adapter for external supply is pushed into the winder in place of the battery housing.
With the MOTOR WINDER R4 attached to the LEICA R4 its ordinary or rechargeable batteries take over the current supply of the camera. The camera batteries are automatically switched off.

Winder Housing:
All-metal (magnesium diecast), covered with textured PVC for easy handling.
LEITZ development, LEITZ design, manufactured to LEITZ quality standards.
Coupling and connecting elements between the camera and the winder are concealed or protected on the underside of the camera and the top of the winder.
Locating pins ensure simplified, convenient attachment to the base of the LEICA R4.
Precise, secure connection of the winder with screw with folding toggle with the tripod thread of the LEICA R4.
Electronic control, hybrid integrated circuit (HIC) specially developed for LEITZ, in C-MOS technique.
Electric release with guard ring for series exposures on the front of the winder
Precise orientation for the attachable handgrip.
Driven by a d.c. micro-motor with air-core armature.

---

1) Suitable for same: plug 302-013.154-004 (5-pin) available from
   Technical Service, Ernst Leitz Wetzlar GmbH, P.O.B. 20 27, D-6330 Wetzlar, Germany.

Convenient quick change with locking button for insertable battery housing.
2 A ¼ (¼ in) tripod threads, preferably for the attachment of the tripod holder 14 284 (available as accessory).
Button for multiple exposures and for rewind release.

Winder functions:
The MOTOR WINDER R4 is controlled by the camera electronics. This ensures very high functional reliability.
The film is transported and the shutter wound automatically after exposure.
Automatic switch-off of the Motor at the "36" position of the frame counter of the LEICA R4 (end of film). In addition the film can be transported and the shutter wound by means of the rapid winding lever.
Multiple exposures possible with single-frame and series release.
Acoustic warning against accidental multiple exposures.
Automatic switch-off when the battery performance drops below the required level.

Available shutter speeds:
1. With single-frame release on the camera:
   All speeds 1 to $1/1000$ sec, "X" and "100" setting, as well as "B" = time exposure of any duration (as long as the camera release button remains pressed).
2. With series release on the MOTOR WINDER R4:
   All speeds from 1 to $1/1000$ sec, "X".

Operation:
The combination of the LEICA R4 with the MOTOR WINDER R4 is switched on either by means of pressing (taking up the slack) of the camera release button or of the release switch on the MOTOR-WINDER R4.
The Motor-Winder R4 can be used with all programs of the LEICA R4.

Important: With winder operation the rapid winding lever of the LEICA R4 must be in its parked position.

Release facilities:
On the MOTOR-WINDER R4
Series release via release switch on the MOTOR WINDER R4
or
with handgrip R4 14 283
or
through socket for external supply on the MOTOR WINDER R4.
Series exposures are made as long as the above-mentioned release buttons are pressed or the related control pulses are transmitted.
On the LEICA R4
single-frame release via camera release for selected exposures.
or
single-frame exposures with measured-value storage with LEITZ selective mea-sure-ment via camera release.
When after release the finger is taken off the release button of the LEICA R4, the film is transported and the shutter wound automatically.

Even with the MOTOR WINDER R4 attached, intermediate camera release and manual winding are possible. This is particularly important when the winder switches off at "36" and a few frames are still left on the film for exposure.
Film insertion and removal are easy even with the MOTOR WINDER R4 attached.

Dimensions:
Height 40 mm, length 140 mm, depth 50 mm (depth of housing alone 46 mm).

Weight:
MOTOR WINDER R4 without batteries: 0.225 kg
MOTOR WINDER R4 with batteries: 0.4 kg

MOTOR DRIVE R4
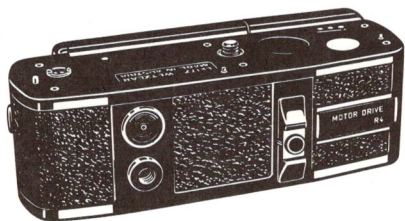
Type of instrument: Drive
Compact, handy motor drive for film transport and shutter wind, for the LEICA R4 only.
Special LEITZ gear design ensures quiet running.
Series releases of 4fps, 2fps, and single-frame release as required.
Practical handgrip with release button as accessory.
Socket[1]) for the Remote Control LEICA R electronic control unit and other electric releases (see Accessory Range).
Very conveniently and quickly interchangeable battery housing.

Current supply:
by
10 standard 1.5 v alkali-manganese batteries in the housing. Capacity according to Leitz test conditions: about ... 36-exposure film at 20°C
or
10 NiCd rechargeable batteries, for instance Varta AG DEAC 501 RS in the housing. The rechargeable batteries remain in the housing during recharging.
or
Adapter for external supply 14 323 with 1 m appliance cable and screw plug to be screwed on, for instance, to the battery housing. Adapter for external supply is pushed into the drive in place of the battery housing.
With the MOTOR DRIVE R4 attached to the LEICA R4 its ordinary or rechargeable batteries take over the current supply of the camera. The camera batteries are automatically switched off.

Drive Housing
All metal (magnesium diecast), covered with textured PVC for easy handling.
Leitz development, Leitz design, manufactured to Leitz quality standards.
Coupling and connecting elements between the camera and the drive are concealed or protected on the underside of the camera and the top of the drive.
Locating pins ensure simplified, convenient attachment to the base of the LEICA R4.
Precise, secure connection of the drive with screw with folding toggle with the tripod thread of the LEICA R4.
Electronic control, integrated circuit in C-MOS technique.
Electric release with guard ring for series exposures on the front of the drive.
Precise orientation for the attachable handgrip.
Driven by a d.c. micro motor with air-core armature.

---

1) Suitable for same: plug 302-013.514-004 (5-pin) available from
   Technical Service, Ernst Leitz Wetzlar GmbH, P.O.B. 20 27, D-6330 Wetzlar, Germany.

Two tripod bushes A ¼ (¼"), perferably for attaching the tripod holder 14 284 (available as accessory).
Conveniently operated slider on the front of the housing for switch-over to 4fps, 2fps, or single-frame.
Knob for multiple exposures and rewind release.

Drive functions:
The MOTOR DRIVE R4 is controlled by the camera electronics. This ensures very high functional reliability.
The film is transported and the shutter wound automatically after exposure.
Automatic switch-off the drive at the "36" position of the frame counter of the LEICA R4 (end of film). In addition the film can be transported and the shutter wound by means of the rapid winding lever.
Multiple exposures possible with single-frame and series release.
Acoustic warning against accidental multiple exposures.
Automatic switch-off when the battery performance drops below the required level.

Available shutter speeds:
1. With single-frame release on the camera:
   All speeds from 1 to $^1/_{1000}$ sec, "X" and "100" setting as well as "B" = time exposure of any duration (as long as the camera release button remains pressed).
   With single-frame release on the MOTOR DRIVE R4:
   All speeds from 1 to $^1/_{1000}$ sec and "X".
2. With series release on the MOTOR DRIVE R4:
   All speeds from 1 to $^1/_{1000}$ sec "X".

Operation:
The combination of the LEICA R4 with the MOTOR DRIVE R4 is switched on either by means of taking up the slack of the camera release button with the release switch on the MOTOR DRIVE R4.
The MOTOR DRIVE R4 can be used with all programs of the LEICA R4.

Important: With DRIVE operation the rapid winding lever of the LEICA R4 must be in its parked position.
With a slider the MOTOR DRIVE R4 is switched to series release, 4fps, 2fps, and single-frame release. Switch-over is possible even during exposures.

Release facilities
on the MOTOR DRIVE R4
Series release, 4fps or 2fps, as well as single-frame via release switch on the MOTOR DRIVE R4
or
with handgrip R4
or
socket for external supply on the MOTOR DRIVE R4.
Series exposures are made as long as the above-mentioned release buttons are pressed or the related control pulses transmitted.
on the LEICA R4
single-frame release via camera release for selective exposures.
or
single-frame exposures with measured-value storage with Leitz selective measurement via camera release.
When after release the finger is taken off the release button of the LEICA R4 the film is transported and the shutter wound automatically.

Even with the MOTOR DRIVE R4 attached, camera release and manual winding are intermediately possible. This is particularly important when the winder switches off at "36" and a few frames are still left on the film for exposure.
Film insertion and removal are easy even with the MOTOR DRIVE R4 attached.

Dimensions:
Height 45 mm, length 140 mm, depth 61 mm (depth of housing only: 55.5 mm).

Weight:
MOTOR DRIVE R4 without batteries: 0.32 kg
MOTOR DRIVE R4 with batteries: 0.62 kg

Remote Control
LEICA R4 control unit

(RC LEICA R)
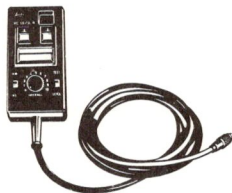
Type of instrument:
Electronic control unit for remote release
Built-in timer for automatic releases
7 integrated circuits in C-MOS technology
Digital display of the completed exposure through feedback of the camera.
For the LEICA R only with motorised film transport.

Housing:
Screw-coupled plastic diecast parts.
All controls and function displays are readily accessible and clearly arranged on the top.
Appliance cable, 2 m, with screw plug for the socket on the MOTOR WINDER R4/MOTOR DRIVE R4.
Brief instructions embossed in the back of the housing.

Functions:
Broad push-button   for single-frame and series release.
Digital display of completed exposures on 2mm high, 2-digit red 7-segment display. The segments light up for about 2 seconds after the exposure.
Reading button   for the display, whenever required, of the number of completed exposures. After slight touch the digital display lights up for about 2 seconds.
Input button   for the correction of the digital display when some exposures had already been made without the RC LEICA R (only when the slider is set at "TEST").
Zero return of the digital display by simultaneous pressure on the reading and input buttons   .
Rotary INTERVAL switch for automatic single-frame releases at various timee intervals.
Operational display by the decimal point of the digital display on the left lighting up.
Slider "x1/x10" for interval ranges:
The switch-over "x1" and "x10" respectively is digital and therefore very exact:
Setting "x1" = about 1 frame per 0.5sec – about 1 frame per 1 minute.
Setting "x10" = about 1 frame per 5sec – about 1 frame per 10 minutes.
Slider "LEICA/TEST" for various functions:
Setting "LEICA" =   camera is released by push-button or interval setting.
Setting "TEST" =   release functions blocked
                    with the aid of a rotary switch the interval setting can be programmed. The release pulse is indicated by the right-hand decimal point of the digital display lighting up, but the LEICA R4 is not released. This permits the exact determination of time intervals. After switch-over from "TEST" to "LEICA" the camera is released at the preselected interval.
Range with extension cables (14274): up to 100m

Dimensions and weight:
Height 120mm, width 60mm, depth 30mm,
weight including cable 220g

Contents

The range of the LEICA R lenses

List of the LEICA R-lens programme

Designation	Maximum aperture	Focal length in mm	Filter dia.	Code No.
SUPER-ELMAR-R	3.5	15	built-in	11 213
Fisheye-ELMARIT-R	2.8	16	built-in	11 222
ELMARIT-R	2.8	19	–	11 225
SUPER-ANGULON-R	4	21	S 8.5	11 813
ELMARIT-R	2.8	24	S 8	11 221
ELMARIT-R	2.8	28	S 7	11 204
PA-CURTAGON-R	4	35	S 8	11 202
ELMARIT-R	2.8	35	E 55 or S 7	11 231
SUMMICRON-R	2	35	E 55 or S 7	11 115
SUMMICRON-R	2	50	E 55 or S 7	11 215
SUMMICRON-R[1])	2	50	E 55 or S 7	11 216
SUMMILUX-R	1.4	50	E 55 or S 7	11 776
MACRO-ELMARIT-R	2.8	60	E 55 or S 7	11 212
ANGENIEUX-ZOOM	2.8	45 – 90	E 67	
VARIO-ELMAR-R	4.5	75 – 200	E 55 or S 7	12 226
SUMMILUX-R	1.4	80	E 67	11 880
ELMARIT-R	2.8	90	E 55 or S 7	11 239
SUMMICRON-R	2	90	E 55 or S 7	11 219
MACRO-ELMAR-R	4	100	E 55 or S 7	11 232
MACRO-ELMAR[2])	4	100	E 55 or S 7	11 230
ELMARIT-R	2.8	135	E 55 or S 7	11 211
ELMAR-R	4	180	E 55 or S 7	11 922
APO-TELYT-R	3.4	180	E 60	11 242
ELMARIT-R	2.8	180	E 67	11 923
TELYT-R	4	250	E 67	11 925
TELYT-R	4.8	350	E 77	11 915
TELYT-R	6.8	400	S 7	11 960
MR-TELYT-R	8	500	E 77	11 243
TELYT-R	6,8	560	S 7	11 865
TELYT-S	6.3	800	S 7	11 291

Extender R 2x
Accessories for the LEICA R lenses
Filters, lens hoods

[1]) For LEICA R models only
[2]) For the Universal Focusing Bellows-R only

15 mm SUPER-ELMAR-R f/3.5

High-speed lens of extremely large angle of view

Angle of view: 110°
Number of elements: 13 (12 components)
Correction of optical aberrations by means of floating elements
Built-in turret with 4 filters: UV., yellow, orange, blue (conversion filter)
Fully-automatic preset diaphragm with click-stops (including ½ values)
Smallest aperture: f/22
Combined feet-metre scale
Focusing range: ∞ to 0.16 m (6.3 in)
Smallest object field: 70 x 106 mm (2.75 x 4.2 in (about 1:2.9))
Rubberised focusing ring
Non-rotating focusing mount
Hard-chrome LEICA R rapid bayonet changer
Black finish
Built-on lens hood
Lens cap Ø: A 83.5 mm
Length from bayonet flange: 92.5 mm
Maximum diameter: 83.5 mm
Weight: 0.815 kg

Code Number

15 mm SUPER-ELMAR-R f/3.5
with lens hood, lens cap and rear cover. . . . .   **11 213** _____

(Replacement lens caps see from page 65)

16 mm FISHEYE-ELMARIT-R f/2.8

Fisheye lens for special pictorial effects
(only for the LEICA R models and LEICAFLEX SL 2/SL 2 MOT)

Angle of view: 180°
Number of elements: 11 (8 components)
Built-in turret with 4 filters: u. v., yellow, orange, blue 80 B (conversion)
Fully automatic pre-set diaphragm with click-stops (including ½ values)
Smallest aperture: f/16
Combined "feet-metre" scale
Focusing range: ∞ to 0.3 m (12 in)
Smallest object field: 401 x 601 mm (15.8 x 23.8 in)
Non-rotating focusing mount
Hard-chrome LEICA-R rapid bayonet changer
Black finish
Built-on lens hood
Lens cap dia. A 65 mm
Length from bayonet flange: 60 mm
Diameter: 71 mm
Weight: 0.470 kg

Code Number

16 mm FISHEYE-ELMARIT-R f/2.8
with built-on lens hood, lens cap and rear cover . . . .   **11 222** _____

(Replacement lens caps see from page 65)

19 mm ELMARIT-R f/2.8
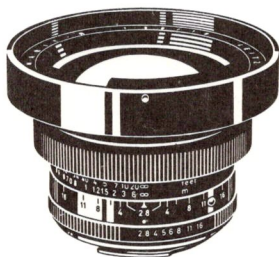
Fast ultra-wide-angle lens

Angle of view: 97.5°
Number of elements: 9 (7 components)
Internal thread: M 82 x 0.75
Fully automatic pre-set diaphragm with click-stops (including ½ values)
Smallest aperture: f/16
Combined "feet/metre" scale
Focusing range: ∞ to 0.3 m (12 in)
Smallest object field:
261 x 392 mm (10.3 x 15.4 in (about 1:10))
Non-rotating focusing mount
Hard-chrome LEICA-R rapid bayonet changer
Black finish
Lockable lens hood
Lens cap dia. A 88 mm
Length from bayonet flange: 60 mm
Diameter: 88 mm
Weight: 0.500 kg

Code Number

19 mm ELMARIT-R f/2.8
with lens hood, lens cap and rear cover. . . . .   **11 225** _____

(Replacement lens caps see from page 65)

21 mm SUPER-ANGULON®-R f/4

Wide-angle lens of extremely wide angle of view

Angle of view: 92°
Number of elements: 10 (8 components)
Filter size: 8.5
Internal thread: M 75 x 0.75
Fully automatic pre-set diaphragm with click-stops (including ½ values)
Smallest aperture: f/22
Combined "feet-metre" scale
Focusing range: ∞ to 0.2 m (8 in)
Smallest object field:
148 x 221 mm (6 x 8.75 in approx)
Non-rotating focusing mount
Hard-chrome LEICA-R rapid bayonet changer
Black finish
Lens hood lockable, also adapter for Series 8.5 filters
Lens cap dia. A 75 mm
Length from bayonet flange: 43.5 mm
Diameter: 78 mm
Weight: 0.410 kg

Code Number

21 mm SUPER-ANGULON f/4
with lens hood, lens cap and rear cover. . . . . **11813** _____

(Replacement lens hood, lens caps, Series 8.5 filters see from
page 65)

24 mm ELMARIT-R f/2.8

Lens of very wide angle of view
(only for the LEICA R models and for LEICAFLEX SL 2/SL 2 MOT)

Angle of view: 84°
Number of elements: 9 (7 components)
Correction of aberrations through floating elements.
Filter size: 8
Internal thread: M 60 x 0.75
Fully automatic pre-set diaphragm with click-stops (including ½ values)
Smallest aperture: f/22
Combined "feet-metre" scale
Focusing range: ∞ to 0.3 m (12 in)
Non-rotating focusing mount
Smallest object field:
250 x 374 mm (10 x 15 in (about 1:10.5))
Non-rotating focusing mount
Hard-chrome LEICA-R rapid bayonet changer
Black finish
Lens hood lockable, also adapter for Series 8 filters
Lens cap dia. A 70 mm
Length from bayonet flange: 46 mm
Diameter: 67 mm
Weight: 0.429 kg

Code Number

24 mm ELMARIT-R f/2.8
with lens hood, lens cap and rear cover. . . . . **11 221** _____

(Lens hood, lens caps as replacement, Series 8 filters,
see from page 65)

28 mm ELMARIT®-R f/2.8
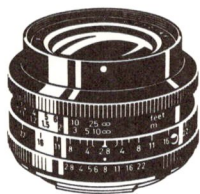
Wide-angle lens

Angle of view: 76°
Number of elements: 8 (8 components)
Filter size: 7
Internal thread: M 48 x 0.75
Fully automatic pre-set diaphragm with click-stops (including ½ values)
Smallest aperture: f/22
Combined "feet-metre" scale
Focusing range: ∞ to 0.3 m (12 in)
Smallest object field:
188 x 282 mm (7.5 x 11.3 in (about 1:8))
Non-rotating focusing mount
Hard-chrome LEICA-R rapid bayonet changer
Black finish
Locking lens hood, also adapter for Series 7 filters
Lens cap dia: A 51 mm
Length from bayonet flange: 40 mm
Diameter: 63 mm
Weight: 0.275 kg

Code Number

28 mm ELMARIT-R f/2.8
with lens hood, lens cap and rear cover. . . . . **11 204** _____

(Replacement lens hood, lens caps, Series 7 filters see page 65)

35 mm PA-CURTAGON-R f/4

The PA-CURTAGON-R is a special wide-angle lens for perspective compensation (PA) in architectural photography. Tall buildings can be photographed without converging verticals, because the optical system can be displaced from the optical axis up to 7 mm simply by the rotation of a ring.

Lateral displacement, too, offers advantages if aligned the camera cannot be symmetrically.

In addition, special perspective exaggeration effects which are popular in the modern pictorial concept can also be obtained.

Wide-angle lens without pre-set diaphragm with perspective compensation

Displacement from the optical axis:
  7 mm to the left and right, top and bottom
Radial adjustment: at 90° click-stop intervals
Angle of view: 63 – 78°
Number of elements: 7 (6 components)
Filter size: 8
Internal threat: M 60 x 0.75
Click-stops
Smallest aperture: f/22
Combined "feet-metre" scale
Focusing range: ∞ to 0.3 m (12 in)
Smallest object field:
140 x 210 mm (5.5 x 8.3 in (about 1:6))
Non-rotating focusing mount
Hard-chrome LEICA-R rapid bayonet changer
Black finish, with bright decorative ring
Locking lens hood, also adapter for Series 8 filters
Lens cap dia: A 63.7 mm
Length from bayonet flange: 51 mm
Diameter: 70 mm
Weight: 0.29 kg

Code Number

35 mm PA-CURTAGON-R f/4
with lens hood, lens cap and rear cover. . . . . **11 202** _____

(Replacement lens hood and lens caps, Series 8 filters see page 65)

35 mm ELMARIT-R f/2.8

Wide-angle lens

Angle of view: 64°
Number of elements: 7 (6 components)
Filter size: E 55 or Series 7
For Series 7 filters the adapter 14 225 is required
Internal thread: M 55 x 0.75
Fully automatic pre-set diaphragm
with click-stops (including ½ values)
Smallest aperture: f/22
Combined "feet-metre" scale
Focusing range: ∞ to 0.3 m (12 in)
Smallest object field:
140 x 210 mm (5¾ x 8 ½ in (about 1:6))
Non rotating focusing mount
Hard-chrome LEICA-R rapid bayonet changer
Black finish
Built-on, extensible lens hood
Lens cap dia: A 63 mm
Length from bayonet flange: 41,5 mm
Diameter: 66 mm
Weight: 0.34 kg
For Series 7 filters the adapter 14 225 is required.

Code Number

35 mm ELMARIT-R f/2.8
with lens hood, lens cap and rear cover............................. **11 231** _____
(Replacement lens caps, E 55 or Series 7 filters, filter adapter 14 225,
see from page 65)

35 mm SUMMICRON® -R f/2

Fast wide-angle lens

Angle of view: 64®
Number of elements: 6 (6 components)
Filter size: E 55 or Series 7
For Series 7 filters the adapter 14 225 is required
Internal thread: M 55 x 0.75
Fully automatic pre-set diaphragm with click-stops (including ½ values)
Smalles aperture: f/16
Combined "feet-metre" scale
Focusing range: ∞ to 0.3 m (12 in)
Smallest object field: 140 x 210 mm (5.5 x 8.3 in (about 1:6))
Non-rotating focusing mount
Hard-chrome LEICA R rapid bayonet changer
Black finish
Built-on, extensible lens hood
Lens cap dia: A 63 mm
Length from bayonet flange: 54 mm
Diameter: 66 mm
Weight: 0.422 kg

Code Number

35 mm SUMMICRON-R f/2
With lens hood, lens cap and rear cover **11 115**
(Replacement lens caps, E 55 or Series 7 filters,
filter adapter 14 225, see from page 65)

50 mm SUMMICRON-R f/2

Fast universal lens

Angle of view: 45°
Number of elements: 6 (4 components)
Filter size: E 55 or Series 7
For Series 7 filters the adapter 14 225 is required
Internal thread: M 55 x 0.75
Fully automatic: pre-set diaphragm with
click-stops (including ½ values)
Smallest aperture: f/16
Combined „feet-metre" scale
Focusing range: ∞ to 0.5 m (20 in)
Smallest object field:
180 x 270 mm (7.5 x 10.75 in) (about 1:7.5)
Non-rotating focusing mount
Hard-chrome LEICA-R rapid bayonet changer
Black finish
Built-on, extensible lens hood
Lens cap dia: A 63 mm
Length from bayonet flange: 41 mm
Diameter: 66 mm
Weight: 0.250 kg

Rear of lens:

Universal
version
11 215

Version
11 216 for
LEICA R-models

50 mm SUMMICRON-R f/2
With lens hood, lens cap and rear cover
1. Version for LEICA R-models only.................................. **11 216** _____
2. Universal version for all LEICA R and LEICAFLEX models .... **11 215** _____

(Replacement lens caps, E 55 or Series 7 filters, filter adapter 14 225
see from page 65)

ELPRO (achromats) near-focusing attachments
ELPRO 1 .... **16 541** _____
ELPRO 2 .... **16 542** _____
Leather case for 1 near-focusing attachment...................... **14 553** _____

50 mm SUMMICRON-R f/2	ELPRO	Distance scale at	Distance in cm		Object field size in mm	Repro-duction scale
			object to film	object to front lens		
	1	∞	50	41	184 x 276	1:7.7
		0.5	31	21	91 x 137	1:3.8
	2	∞	30	21	94 x 141	1:3.9
		0.5	24	14	62 x 93	1:2.6

50 mm SUMMILUX®-R f/1.4

Ultra-fast lens

Angle of view: 45°
Number of elements: 7 (6 components)
Filter size: E 55 or Series 7
For Series 7 filters the adapter 14 225 is required
Internal thread: M 55 x 0.75
Fully automatic pre-set diaphragm with click-stops (including ½ values)
Smallest aperture: f/16
Combined "feet-metre" scale
Focusing range: ∞ to 0.5 m (20 in)
Smallest object field: 180 x 270 mm (7.1 x 10.6 in) (about 1:7.5)
Rubberised focusing ring
Non-rotating focusing mount
Hard-chrome LEICA-R rapid bayonet changer
Black finish
Built-on, extensible lens hood
Lens cap dia: A 63 mm
Length from bayonet flange: 50.6 mm
Diameter: 66.5 mm
Weight: 0.395 kg

Code Number

50 mm SUMMILUX-R f/1.4
with lens hood, lens cap and rear cover. . . . . **11 776** _____

(Replacement lens caps, E 55 or Series 7 filters, filter adapter 14 225,
see from page 65)

60 mm MACRO-ELMARIT®-R f/2.8
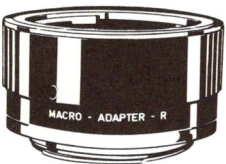
Universal lens for photography in the range from infinity to reproduction scale 1:1

Angle of view: 39°
Number of elements: 6 (5 components)
Filter size: E 55 or Series 7
For Series 7 filters the adapter 14 225 is required
Internal thread: M 55 x 0.75
Fully automatic pre-set diaphragm, also with Macro Adapter R
click-stops (including ½ values)
Smallest aperture: f/22
Combined "feet-metre" scale, reproduction scales are also engraved
Focusing range: ∞ to 27 cm
Free working distance: 15 cm
With Macro Adapter R: 27 to 24 cm
Free working distance: 16 to 10 cm
Smallest object field: 48 x 72 mm
(1.9 x 2.9 in) (1:2)
with Macro Adapter R: 24 x 36 mm
(0.9 x 1.4 in) (1:1)
Non-rotating focusing mount
Hard-chrome LEICA-R rapid bayonet changer
Black finish
Built-on lens hood
Lens cap dia: A 63 mm
Length from bayonet flange: 62.3 mm
Diameter: 67.5 mm
Length of the Macro adapter: 30 mm
Diameter of the Macro adapter: 62 mm
Weight: 0.39 kg
Weight of the Macro adapter R: 0.13 kg

Code Number

60 mm MACRO-ELMARIT-R f/2.8
With lens hood, lens cap and rear cover . . . . **11 212** _____
MACRO-ADAPTER-R. . . . . **14 256** _____
For use with automatic shutter speed control and manual setting of shutter speed and aperture

Cover for the Macro Adapter-R:
Front cap (= body cover of the camera). . . . . 14 103 _____
Rear cap (= rear cover of the lens) . . . . 14 162 _____

(Replacement lens caps, E 55 or Series 7 filters, and filter adapter 14 225 see from page 65)

45-90 mm ANGENIEUX-Zoom f/2.8

Angle of view: 54° to 27°
Number of elements: 15 (12 components)
Filter size: E 67 or Series 8
Internal thread: M 67 x 0.75
Fully automatic pre-set diaphragm with
click-stops (including ½ values)
Smallest aperture: f/22
Combined "feet-metre scale
Focusing range: ∞ to 1 m (40 in)
Smallest object field:
   Focal length 45 mm: 485 x 727 mm (19.1 x 28.6 in) (about 1:20)
   Focal length 90 mm: 216 x 324 mm (8.5 x 11.8 in) (about 1:9)
Non-rotating focusing mount
Hard-chrome LEICA R rapid bayonet changer
Black finish
Screw-in lens hood, also adapter for Series 8 filters
Length from bayonet flange: 122 mm
Diameter: 69 mm (with lens hood 78 mm)
Weight: 0.774 kg

Supply on request through local LEITZ Agency

Manufacturer, warranty, and service: Pierre Angenieux, F-42570 Saint-Héand.

75-200 mm VARIO-ELMAR-R f/4.5

Lens of variable focal length

Angle of view: 32° to 12.5°
Number of elements: 15 (11 components)
Filter size: E 55 or Series 7
For Series 7 filters the adapter 14 225 is required
Internal thread: M 55 x 0.75
Fully automatic pre-set diaphragm with click-stops (including ½ values)
Smallest aperture: f/22
Combined "feet-metre" scale
Focusing range: ∞ to 1.2 m (48 in)
Smallest object field:
Focal length 75 mm: 270 x 405 mm (10.6 x 15.9 in) (about 1:11)
Focal length 200 mm: 107 x 160 mm (4.2 x 6.3 in) (about 1:4.5)
Focusing tube sets both focal length and focusing distance
Hard-chrome LEICA-R rapid bayonet changer
Black finish; easy-grip focusing tube covered with grained PVC
Built-on, extensible lens hood
Lens cap dia: A 70 mm
Length from bayonet flange: 157 mm
Diameter: 70 mm
Weight: 0.725

Code Number

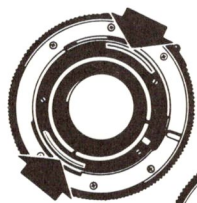**75-200 mm VARIO-ELMAR-R f/4.5**
with lens hood, lens cap and rear cover. . . . . **11 226** _____

(Replacement lens caps, E 55 or Series 7 filters and filter adapter 14 225 see page 65)

ELPRO (achromats) near-focusing attachments
ELPRO 3 . . . . 16 543 _____
ELPRO 4 . . . . 16 544 _____
Leather case for one rear-focusing attachment . . . . 14 553 _____

75-200 mm VARIO-ELMAR-R f/4.5	ELPRO	Distance scale at	Distance in cm		Object field size in mm	Reproduction scale
			object to film plane	object to front lens		
	4	75 mm/∞	156	135	414x621	1:17,3
		200 mm/1.2	80	58	62x 93	1:2.6
	3	75 mm/∞	82	61	187x281	1:7.8
		200 mm/1,2	61	38	41x 62	1:1.7

80 mm SUMMILUX-R f/1.4

Ultra-high-speed lens of long focal length

Angle of view: 30°
Number of elements: 7 (5 components)
Filter size: E 67 or Series 8
For Series 8 filters the adapter
    14264 is required
Internal thread: M 67 x 0.75
Fully automatic preset diaphragm with
    click-stops (including ½ values)
Smallest aperture: f/16
Combined "feet-metre" scale
Focusing range: ∞ to 0.8 m (32 in)
Smallest object field: 192 x 288 mm
    (7.6 x 11.3 in) (about 1:8)
Rubberised focusing ring
Non-rotating focusing mount
Hard-chrome LEICA-R rapid bayonet changer
Black finish
Built-on, extensible lens hood
Lens cap dia: A 75 mm
Length from bayonet flange: 69 mm
Diameter: 75 mm
Weight: 0.625 kg

Code Number

80 mm SUMMILUX-R f/1.4
With lens hood, lens cap and rear cover .... **11880** _____

(Replacement lens caps, E 67 or Series 8 filters, filter adapter 14264,
see from page 65)

90 mm ELMARIT-R f/2.8

Universal lens of long focal length

Angle of view: 27°
Number of elements: 5 (4 components)
Filter size: E 55 or Series 7
For Series 7 filters the adapter
  14255 is required
Internal thread: M 54 x 0.75*
Fully automatic pre-set diaphragm with
  click-stops (including ½ values)
Smallest aperture: f/22
Combined "feet-metre" scale
Focusing range: ∞ to 0.7 m (28 in)
Smallest object field: 140 x 210 mm
  (5.5 x 8.3 in) (about 1:6)
Non-rotating focusing mount
Hard-chrome LEICA-R rapid bayonet
  changer
Black finish
Built-on, extensible lens hood
Lens cap dia: A 65 mm
Length from bayonet flange: 72 mm
Diameter: 65 mm
Weight: 0.515 kg

Code Number

90 mm ELMARIT-R f/2.8
with lens hood, lens cap and rear cover............................ **11 239** _____

(Replacement lens caps, E 55 or Series 7 filters and filter adapter
14 226 see page 65)

ELPRO (achromat) near-focusing attachment
ELPRO 3 .... 16 543 _____
Leather case for one near-focusing attachment..................... 14 553 _____

_____
* up to No. 2 809 000 internal thread of lens M 54 x 0.75

90 mm ELMARIT-R f/2.8	ELPRO	Distance scale at	Distance in cm		Object field size in mm	Repro-duction scale
			object to film	object to front lens		
	3	∞	74	61	161 x 241	1 : 6.7
		0.7	44	30	72 x 108	1 : 3.0

90 mm SUMMICRON-R f/2

Fast reportage lens
Amgle of view: 27°
Number of elements: 5 (4 components)
Filter size: E 55 or Series 7
For Series 7 filters the adapter
14 225 is required
Internal thread: M 55 x 0.75*
Fully automatic pre-set diaphragm with
click-stops (including ½ values)
Smallest aperture: f/16
Combined "feet-metre" scale
Focusing range: ∞ to 0.7 m (28 in)
Smallest object field:
140 x 210 mm (5.5 x 8.3 in) (about 1:6)
Non-rotating focusing mount
Hard-chrome LEICA-R rapid bayonet
changer
Black finish
Built-on, extensible lens hood
Lens cap dia: A 70 mm
Length from bayonet flange: 62.5 mm
Diameter: 70 mm
Weight: 0.56 kg

Code Number

90 mm SUMMICRON-R f/2
with lens hood, lens cap and rear cover. . . . .   **11 219** _____

(Replacement lens caps, E 55 or Series 7 filters and filter adapter
14 225 see page 65)

ELPRO (achromat) near-focusing attachment
ELPRO 3 . . . .   16 543 _____
Leather case for one near-focusing attachment. . . . .   14 553 _____

_____
* up to No. 2 770 950 internal thread of lens M 54 x 0.75

90 mm SUMMICRON-R f/2	ELPRO	Distance scale at	Distance in cm		Object field size in mm	Reproduction scale
			object to film	object to front lens		
	3	∞	74	61	161 x 245	1:6.7
		0.7	44	30	72 x 108	1:3.0

100 mm MACRO-ELMAR-R f/4
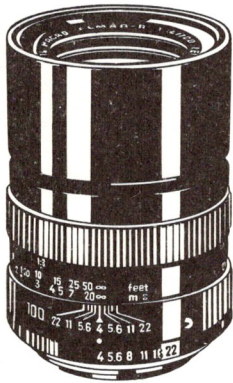
Universal lens of medium-long-focal length for work from ∞ up to the near-focusing range (reproduction scale 1:1.6)

Angle of view: 25°
Number of elements: 4 (3 components)
Filter size: E 55 or Series 7
For Series 7 the adapter 14 225 is required
Internal thread: M 55 x 0.75
Fully automatic pre-set diaphragm, also
    with Macro Adapter-R with click-stops
    (including ½ values)
Smallest aperture: f/22
Combined "feet-metre" scale, reproduc-
    tion scales are also engraved
Focusing range: ∞ to 60 cm
    Free working distance: 39 cm
    With Macro Adapter-R 60-42 cm
    Free working distance: 39-25 cm
Smallest object field: 72 x 108 mm
    (2.8 x 4.25 in) (about 1:3)
    With Macro Adapter-R: 38 x 57 mm
    (1.5 x 2.25 in) (about 1:1.6)
Non-rotating focusing mount
Hard-chrome LEICA R rapid bayonet
    changer
Black finish
Built-on extensible lens hood
Lens cap dia: A 63 mm
Length from bayonet flange: 90 mm
Maximum diameter: 67.5 mm
Weight: lens 540 g
Length of the Macro Adapter-R: 30 mm
Diameter of the Macro Adapter-R: 62 mm
Weight of the Macro Adapter-R: 0.13 kg

Code Number

100 mm MACRO-ELMAR-R f/4
With lens hood, lens cap and rear cover . . . . **11 232** _____

MACRO ADAPTER-R. . . . . **14 256** _____
For use with automatic shutter speed control and manual setting of aperture and shutter speed

Covers for the Macro-Adapter-R:
Front cap (= body cover of the camera). . . . . 14 103 _____
Rear cap (= rear cover of the lens) . . . . 14 162 _____

(Replacement lens caps, E 55 or Series 7 filters, and filter adapter 14 225 see from page 65)

ELPRO (achromats near-focusing attachments

ELPRO 3 .... 16543 _____

ELPRO 4 .... 16544 _____

Leather case for one-near-focusing attachment .... 14553 _____

100 mm MACRO-ELMAR-R f/4	ELPRO	Distance scale at	Distance in cm		Object field size in mm	Repro-duction scale
			object to film plane	object to front lens		
	4	∞	150.5	136	323 x 484	1 : 13
		0.6	48.6	31	61 x 92	1 : 2.5
With close-up focusing ring 14262	4	∞	48.5	31	63 x 94	1 : 2.6
		0.6	40.6	20	34 x 51	1 : 1.4
	3	∞	75.5	61	145 x 218	1 : 6
		0.6	41.6	24	48 x 72	1 : 2

135 mm ELMARIT-R f/2.8

Telephoto lens
Angle of view: 18°
Number of elements: 5 (4 components)
Filter size: E 55 or Series 7
For Series 7 filters the adapter
  14 225 is required
Internal thread: M 55 x 0.75*
Fully automatic pre-set diaphragm with
  click-stops (including ½ values)
Smallest aperture: f/22
Combined "feet-metre" scale
Focusing range: ∞ to 1.5 m (5ft)
Smallest object field: 220 x 330 mm
  (8.7 x 13.0 in) (about 1:9)
Non-rotating focusing mount
Hard-chrome LEICA-R rapid bayonet
  changer
Black finish
Built-on, extensible lens hood
Lens cap dia: A 65 mm
Length from bayonet flange: 93 mm
Diameter: 67 mm
Weight: 0.73 kg

135 mm ELMARIT-R f/2.8   Code Number
with lens hood, lens cap and rear cover............................ **11 211** _____

(Replacement lens caps, E 55 or Series 7 filters and filter adapter
14 225 see page 45)

ELPRO (achromats) near-focusing attachments
ELPRO 3 .... 16 543 _____
ELPRO 4 .... 16 544 _____
Leather case for one near-focusing attachment..................... 14 553 _____

_____

* up to No. 2 772 618 internal thread of lens M 54 x 0.75

135 mm ELMARIT-R f/2.8	ELPRO	Distance scale at	Distance in cm		Object field size in mm	Repro-duction scale
			object to film	object to front lens		
	4	∞	150	135	237 x 355	1 : 9.9
		1.5	84	68	106 x 159	1 : 4.4
	3	∞	76	61	107 x 160	1 : 4.5
		1.5	58	42	66 x 99	1 : 2.8

180 mm ELMAR-R f/4
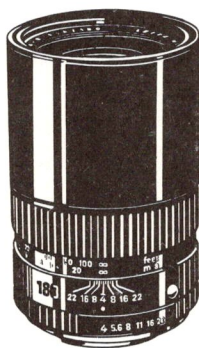
Handy telephoto lens
Angle of view: 14°
Number of elements: 5 (4 components)
Filter size: E 55 or Series 7
For Series 7 filters the adapter
    14225 is required
Internal thread: M 55 x 0.75
Fully automatic pre-set diaphragm with
    click-stops (including ½ values)
Smallest aperture: f/22
Combined "feet-metre" scale
Focusing range: ∞ – 1.8 m (6 ft)
Smallest object field: 175 x 262 mm
    6.9 x 10.3 in) (about 1:7)
Non-rotating focusing mount
Hard-chrome LEICA-R rapid bayonet
    changer
Black finish
Built-on, extensible lens hood
Lens cap dia: A 65 mm
Length from bayonet flange: 100 mm
Diameter: 65.5 mm
Weight: 0.54 kg

Code Number

180 mm ELMAR f/4
with lens hood, lens cap and rear cover. . . . . **11922** _____

(Replacement lens caps, E 55 or Series 7 filters and filter adapter
14225 see page 65)

ELPRO (achromats) near-focusing attachments
ELPRO 3 . . . . 16543 _____
ELPRO 4 . . . . 16544 _____
Leather case for 1 near-focusing attachment. . . . . 14553 _____

180 mm ELMAR-R f/4	ELPRO	Distance scale at	Distance in cm		Object field size in mm	Reproduction scale
			object to film	object to front lens		
	4	∞	151	135	178 x 267	1:7.4
		1.8	93	75	80 x 120	1:3.3
	3	∞	77	61	80 x 120	1:3.3
		1.8	63	45	48 x 72	1:2.0

180 mm APO®-TELYT-R f/3.4

Special lens of extended spectral range

Angle of view: 14°
Number of elements: 7 (4 components)
Filter size: E 60 or Series 7.5
For Series 7.5 filters the adapter 14263 is required
Internal thread: M 60 x 0.75
Fully automatic pre-set diaphragm with click-stops (including ½ values)
Smallest aperture: f/22
Combined "feet-metre" scale
Focusing range: ∞ – 2.5 m (8 ft 4 in)
Smallest object field: 276 x 414 mm (10.9 x 16.3 in) (about 1:11.5)
Non-rotating focusing mount
Hard-chrome LEICA-R rapid bayonet changer
Black finish
Built-on, extensible lens hood
Lens cap dia: A 66 mm
Length from bayonet flange: 135 mm
Diameter: 68 mm
Weight: 0.75 kg

180 mm APO-TELYT-R f/3.4   Code Number
with lens hood, lens cap, rear cover, filter adapter . . . . **11242** _____

(Replacement lens caps, E 60 filters and filter adapter 14263, see from page 65)

180 mm ELMARIT-R f/2.8

Fast telephoto lens

Angle of view: 14°
Number of elements: 5 (4 components)
Filter size: E 67 or Series 8
For Series 8 filters the adapter 14 264 is required
Internal thread: M 67 x 0.75
Fully automatic pre-set diaphragm with click-stops (including ½ values)
Smallest aperture: f/22
Combined "feet-metre" scale
Focusing range: ∞ to 1.8 m (6 ft)
Smallest object field: 193 x 290 mm (7.6 x 11.4 in) (about 1:8)
Non-rotating focusing mount
Hard-chrome LEICA-R rapid bayonet changer
Black finish
Built-on, extensible lens hood
Lens cap dia: A 75 mm
Tripod thread A ¼ (DIN 4503) (¼ in)
Length from bayonet flange: 121 mm
Diameter: 75 mm
Weight: 0.755 kg

Code Number

180 mm ELMARIT-R f/2.8
with lens hood, lens cap and rear cover. . . . . **11 923** _____

(Replacement lens caps, E 67 or Series 8 filters, filter adapter 14 264
see from page 65)

250 mm TELYT®-R f/4

Telephoto lens

Angle of view: 10°
Number of elements: 7 (6 components)
Filter size: E 67 or Series 8
For Series 8 filters the adapter 14164 is required
Internal thread: M 67 x 0.75
Fully automatic pre-set diaphragm with
 click-stops (including ½ values)
Smallest aperture: f/22
Combined "feet-metre" scale
Focusing range: ∞ 1.7 m (5 ft 8 in)
Smallest object field: 124 x 186 mm
 (4.9 x 7.3 in) (about 1:5.2)
Rubberised focusing ring
Non-rotating focusing mount
Hard-chrome LEICA-R rapid bayonet changer
Black finish
Built-on, extensible lens hood
Tripod thread A ¼ (DIN 4503), (¼ in), with
 click-stops, tilting for upright and
 horizontal format.
Leather case
Lens cap Ø: A 75 mm
Length from bayonet flange: 195 mm
Diameter: 75 mm
Weight: 1.23 kg

Code Number

250 mm TELYT-R f/4
With lens hood, lens cap and rear cover, as well as leather case....... **11925** _____

(Replacement lens caps, E 67 or Series 8 filters and filter adapter
14264, see from page 65)

350 mm TELYT-R f/4.8
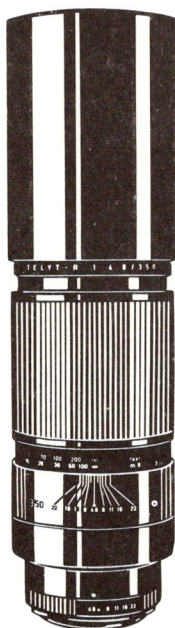
Telephoto lens

Angle of view: 7°
Number of elements: 7 (5 components)
Filter size: E 77
Internal thread: M 77 x 0.75
Fully automatic pre-set diaphragm with
    click-stops (including ½ values)
Smallest aperture: f/22
Combined "feet-metre" scale
Focusing range: ∞ to 3 m (10 ft)
Smallest object field: 171 x 257 mm
    (6.75 x 10.1 in) (about 1:7.1)
Rubberised focusing ring
Non-rotating focusing mount
Hard-chrome LEICA-R rapid bayonet changer
Black finish
Built-on, extensible lens hood
Tripod thread, A ¼, DIN 4503; with click-stops,
    tilting for upright and horizontal format
Leather case
Lens cap dia: A 83.5 mm
Length from bayonet flange: 286 mm
Diameter: 83.5 mm
Weight: 1.82 kg

Code Number

350 mm TELYT-R f/4.8
With lens hood, lens cap and rear cover, as well as leather case. **11 915**

(Replacement lens caps, see from page 65)   **in preparation**

400 mm TELYT-R f/6.8
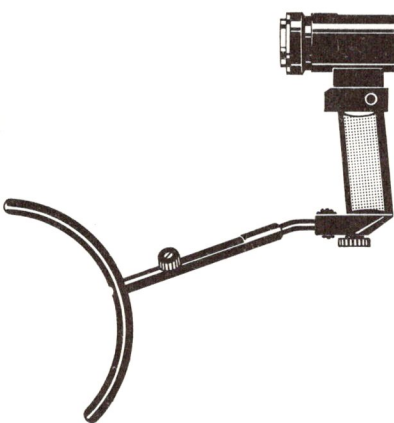
Follow-focus lens of long focal length

Angle of view: 6°
Number of elements: 2 (1 component)
Filter size: Series 7 (in filter slot)
  or Series 8
Internal thread: M 72 x 0.75
For Series 8 filters the adapter
  14165 is required
Click-stops (between 8 and 16
  also ½ values)
Smallest aperture: f/32
Focusing range: ∞ to 3.6 m (12 ft)

Follow-focus device (sliding front part
  of the lens with parallel guide,
  push-button for the release of the
  focusing mechanism)
Smallest object field: 158 x 236 mm
  (6.2 x 9.3 in) (about 1:6.5)
Built-on, extensible lens hood
Rotatable tilting device for upright
  and horizontal format,
  with click-stops
Lens can be dismantled for convenient
  transport
Hard-chrome LEICA-R rapid objective
  changer
Slot with cover for Series 7 filters
Black finish
Tripod thread A ¼ and A ³/₈ (DIN 4503)
  (¼ in and ³/₈ in)
Universal handgrip with shoulder stock,
  detachable
Lens cap dia: A 78 mm
Length from bayonet flange: 384 mm
Diameter: 78 mm
Weight: 1.83 kg

Code Number

400 mm TELYT-R f/6.8, consisting of:
400 mm TELYT-R f/6.8 lens unit . . . . 11 903 _____
Lens tube . . . . 11 906 _____
Universal handgrip with shoulder stock . . . . 14 188 _____

400 mm TELYT-R f/6.8, complete,
with lens hood and lens cap and rear cover . . . . **11 960** _____

(Replacement lens caps and Series 7 or 8 filters and adapter 14165
see from page 65)

Accessories recommended for the 400 mm TELYR-R f/6.8

Code Number
Extension tube (60 mm) for the 400 mm TELYT-R f/6.8 (also for the
560 mm TELYT-R f/6.8) to extend the operating range (near focusing) .   14 182 _____

Focusing distances   Smallest object field
with 1 extension tube: with 1 extension tube:
353 – 226 cm (11 ft 7 in – 21 ft 2 in)   8 x 12 cm (3.1 x 4.7 in)

Carrying strap for heavy equipment . . . . 14 130 _____

Electric cable release for insertion in the universal handgrip for the
LEICA R4-MOT with MOTOR WINDER R4/MOTOR DRIVE R4 . . . . .14 237 _____

500 mm MR-TELYT-R f/8

Catoptric telephoto lens
(reflecting lens design)

Angle of view: 5°
Number of elements: 6 (5 components)
 Including 2 mirrors and one special filter
Filter size on the front ring of the lens: E 77
Internal thread: M 77 x 0.75
Combined "feet-metre" scale
Focusing range: ∞ to 4 m (13 ft 4 in)
Smallest object field: 180 x 270 mm
 (7.1 x 10 x 6 in) (about 1:7.5)
Cradled helical focusing mount for hand support
Rubberised focusing ring
Hard-chrome LEICA-R rapid bayonet changer
Black finish
Screw-on lens hood
5 special screw-in filters: UV, neutral density 4 x,
 yellow, orange, red (M 32 x 0.5)
Leather case
Lens cap dia: A 83.5 mm
Length from bayonet flange: 121 mm
Diameter: 87 mm
Weight: 0.75 kg

Code Number

500 mm MR-TELYT-R f/8
With lens hood, lens cap and rear cover
5 special filters and leather case **11 243**

(Replacement lens caps, special filters, leather case see from page 65)

560 mm TELYT-R f/6.8

Smallest object field: 224 x 336 mm
(8.8 x 13.2 in) (about 1:9)
Built-on, extensible, easy-grip lens
hood covered with grained PVC
Rotatable tilting device for upright
and horizontal format, with
click-stops
Lens can be dismantled for convenient
transport
Hard-chrome LEICA-R rapid bayonet
changer
Slot with cover for Series 7 filters
Black finish
Tripod thread A 1/4 and 3/8 (DIN 4503)
(1/4 and 3/8 in)
Universal handgrip with shoulder stock,
detachable
Lens cap. dia: A 98 mm
Length from bayonet flange: 530 mm
Diameter: 98 mm
Weight: 2.33 kg

Long-focal length follow-focus lens
Angle of view: 4.3°
Number of elements: 2 (1 component)
Filter size: Series 7 (in filter slot)
Click-stops (between f/8 and f/16
also 1/2 values)
Smallest aperture: f/32
Focusing range: ∞ – 6.4 m (21 ft)
Follow-focus device (sliding front
part of the lens with parallel guide,
push-button for the release of the
focusing mechanism)

Code Number

560 mm TELYT-R f/6.8, consisting of:
560 mm TELYT-R f/6.8 lens unit..................................... 11 907 _____
Lens tube .... 11 906 _____
Universal handgrip with shoulder stock............................. 14 188 _____

560 mm TELYT-R f/6.8, complete
with lens hood and lens cap and rear cover .... **11 865** _____

(Replacement lens caps and Series 7 filters see from page 65)

Recommended accessories for the 560 mm TELYT-R f/6.8

Code Number

Extension tube (60 mm) for the 560 mm TELYT-R f/6.8
(also for the 400 mm TELYT-R f/6.8) to extend the operating range
(near focusing).. 14 182 _____

Focusing distances   Smallest object field
with 1 extension tube   with 1 extension tube
641 – 391 cm (21 ft—13 ft)   11.2 x 16.8 cm (4.4 x 6.6 in)

Carrying strap for heavy equipment .... 14 130 _____

Electric cable release for insertion in the universal handgrip for the
LEICA R4 with MOTOR WINDER R4/MOTOR DRIVE R4................ 14 237 _____

800 mm TELYT-S f/6.3
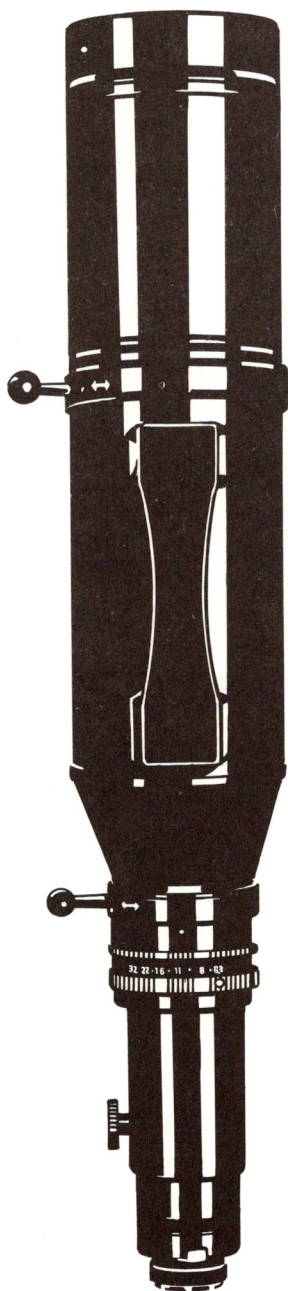
Extreme telephoto lens with LEITZ special glasses for maximum optical performance

Angle of view: 3°
Number of elements: 3 (1 component)
Filter size: Series 7 (in filter slot)
Click-stops (between ft 6.3 and 22 also ½ values)
Pre-set diaphragm
Smallest aperture: f/32
Focusing range: ∞ to 12.5 m (41 ft)
Smallest object field: 320 x 480 mm (1 ft 0.6 in – 1 ft 7 in) (about 1:13)
Rapid focusing by means of an easy-grip drive knob and parallel guide
Lens can be dismantled into 5 parts for transport in a special metal case – assembly and dismantling by means of bayonet and marked locking rings with levers
Sturdy carrying grip for assembled lens
Lining-up device in the shape of a sports finder with rear and front sight and field-of-view orientating device for upright and horizontal format, protected against damage by integration with the carrying handle
Detachable and lockable lens hood
Slot with cover for Series 7 filters
Tripod thread A¼ and A³/8, DIN 4503 (¼ in and ³/8 in) for robust tripods.
Support ring, rotatable with tripod thread A¼ (DIN 4503) (¼ in) for additional monopod
Black finish
LEICA R rapid bayonet changer
Rotatable tilting device for upright and horizontal format, with click-stops
Lens cap dia: A 152 mm
Length from bayonet flange: 790 mm
Diameter: 152 mm
Weight: 6.86 kg

EXTENDER-R 2x

for the LEICA R

Focal-length-extending lens attachment

Number of elements: 5 (4 components)
Aperture range from f/2 to f/22
Fully automatic pre-set diaphragm transfer
    for automatic shutter speed control
    and manual setting of shutter speed and aperture
Focal length suitable for use from 50 to 800 mm
Hard chrome LEICA R rapid bayonet changer
Black finish
Length from bayonet flange: 30 mm
Diameter: 62 mm
Weight: 0.18 kg

Code Number

EXTENDER-R 2x for LEICA R

With 2 caps. . . . . **11 236** _____

Replacement caps:
Rear cover (= rear cover for lens) . . . . 14 162 _____
Front cap (= camera body cover) . . . . 14 103 _____

EXTENDER-R 2x for LEICAFLEX models see page 262.

Accesories for LEICA-R lenses

LEICA-R lens:	Code No.	Lens hood	Lens cap	Rear cover	Filters (2) or screw thread	Series	Adapter for Series filters	A Ø in mm
15 mm f/3.5	11213	built-in	14294	14162	built-in		—	83.5
16 mm f/2.8	11222	built-in	14089	14162	built-in		—	65
19 mm f/2.8	11225	12529	14221	14162	M 82 x 0.75		—	88
21 mm f/4	11813	12506	14145	14162	—	8.5	lens hood	75
24 mm f/2.8	11221	12523	14184	14162	—	8	lens hood	63.7
28 mm f/2.8	11204	12509	14172	14162	—	7	lens hood	51
35 mm f/4	11202	12514	14184	14162	—	8	lens hood	63.7
35 mm f/2.8 from No. 2928901	11231	built-in	14133	14162	E 55 or 7		14225	63
35 mm f/2 from No. 2791417	11115	built-in	14133	14162	E 55 or 7		14225	63
50 mm f/2 from No. 2777651	11215 11216	built-in	14133	14162	E 55 or 7		14225	63
50 mm f/1.4 from No. 2806501	11776	built-in	14133	14162	E 55 or 7		14225	63
60 mm f/2.8 from No. 3013651	11212	built-in	14133	14162	E 55 or 7		14225	63
80 mm f/1.4	11880	built-in	14265	14162	E 67 or 8		14264	75
90 mm f/2.8 from No. 2809001	11239	built-in	14089	14162	E 55 or 7		14225	65
90 mm f/2 from No. 2770951	11219	built-in	14144	14162	E 55 or 7		14225	70
100 mm f/4	11232	built-in	14133	14162	E 55 or 7		14225	63
100 mm f/4 for Bellows R from No. 2933351	11230	built-in	14089	14162	E 55 or 7		14225	65
135 mm f/2.8 from No. 2772619	11211	built-in	14089	14162	E 55 or 7		14225	65
180 mm f/4	11922	built-in	14089	14162	E 55 or 7		14225	65
180 mm f/3.4 from No. 2947024	11242	built-in	14281	14162	E 60 or 7.5		14263	66
180 mm f/2.8 from No. 2939701	11923	built-in	14265	14162	E 67 or 8		14264	75
75–200 mm f/4.5	11226	built-in	14144	14162	E 55 or 7		14225	70
250 mm f/4 from No. 3050601	11925	built-in	14265	14162	E 67 or 8		14264	75
350 mm f/4.8	11915	built-in	14294	14162	E 77		—	83.5
400 mm f/6.8	11960	built-in	14152 (1)	14162	—	7	filter slot	78
500 mm f/8	11243	built-in	14294	14162	E 77	—	—	83.5
560 mm f/6.8	11865	built-in	14295 (1)	14162	—	7	filter slot	98
800 mm f/6.3	11921	built-in	on request	14162	—	7	filter slot	152

(1) Lens cap for lens mount 11906 of 400 mm f/6.8 and 560 mm f/6.8 on request
(2) Filters see Table

Filters

	Screw-thread			
	E 32*	E 55	E 60	E 67
UV	13400	13373	13381	13386
Yellow	13403	13236	–	–
Yellow-green	–	13391	13392	13393
Orange	13402	13312	13383	13388
Red	13401	–	–	–
Neutral density 4x	13405	–	–	–
Circular polarizing	–	13357	13376	13377
Polarizing	–	13374	–	–

	Series filters				
	6	7	7.5	8	8.5
UV	13012	13009	–	13018	13024
Yellow	13013	13006	–	13019	–
Yellow-green	13014	13007	–	13021	–
Orange	13011	13008	–	13017	13023
Circular polarizing	–	13370	–	13372	–
Filter adapter	14160 (E 44)	14161 (E 54) 14225 (E 55)	14222 (E 59) 14263 (E 60)	14165 (E 72) 14264 (E 67)	

Transparant plastic containers (replacement)

Code Number

For Series 6 filters. . . . .   **14612** _____

For Series 7, 8, polarising and circular polarising filters. . . . .   **14614** _____

---

* E 32 as replacement for 500 m MR-TELYT-R f/8

Lens Hood for the

Leather cases for the

Contents

Product range, description, and technical data of items

Near-focusing devices for the LEICA R system

There are 4 ways into the near-focusing range

1) Universal lenses which are also corrected for the close-up range
The very long focusing range permits their use for both long-distance and close-up objects. Merely by rotating the focusing ring you can focus the lens continuously from infinity to the close-up range (see page 46 and 52).

2) Near-focusing attachments to be screwed in front of the lens
extend the focusing range optically: through shortening the focal length of the lens they permit photography in the close-up range. LEITZ near-focusing attachments are achromats which further improve the optical performance of the lens especially in the near-focusing range.

3) Extension rings to be inserted between the camera and the lens
extend the focusing range of the lens mechanically by increasing the camera extension. The exposure time is precisely measured and controlled by the automatic exposure control of the LEICA R.

4) The universal Focusing Bellows, which increases the camera extension like the extension tubes
It offers the advantage of continuous focusing for all LEICA R lenses from 50 to 250 mm focal length, for instance with the 100 mm MACRO-ELMAR® f/4 specially designed for it from ∞ to 1:1. In addition the LEITZ PHOTAR® Macro lenses can be attached for the extreme close-up range.

ELPRO near-focusing attachments for LEICA R lenses

ELPRO near-focusing attachments (achromats)

● maintain the excellent optical performance
    f the lenses also in the near-focusing range
● are easy to handle
● extend the possibilities of pictorial composition
● do not demand any exposure factors

	Code Number	
ELPRO 1	16541	_____
ELPRO 2	16542	_____
ELPRO 3	16543	_____
ELPRO 4	16544	_____
Leather case for one near-focusing attachment	**14553**	_____

ELPRO near-focusing attachments for LEICA-R lenses

Lens	ELPRO Code No.	Focusing scale at	Distance in cm object to film	object to front lens	Object field size in mm	Repro- duction scale
50 mm SUMMICRON-R f/2 (E 55) from No. 2777651 11215/11216	1 16541	∞ 0.5	50 31	41 21	184×276 91×137	1:7.7 1:3.8
	2 16542	∞ 0.5	30 24	21 14	94×141 62×93	1:3.9 1:2.6
90 mm ELMARIT-R f/2.8 from No. 2809001 (E 55) 11239	3 16543	∞ 0.7	74 44	61 30	161×241 72×108	1:6.7 1:3.0
90 mm SUMMICRON-R f/2 from No. 2770951 (E 55) 11219	3 16543	∞ 0.7	74 44	61 30	161×241 72×108	1:6.7 1:3.0
100 mm MACRO-ELMAR-R f/4 (E 55) 11232	3 16543	∞ 0.6	75.5 41.6	61 24	145×218 48×72	1:6 1:2
	+ MACRO- ADAP.-R. 14256	∞ 0.6	42 37.4	24 17	49×73 29×44	1:2 1:1.2
	4 16544	∞ 0.6	150.5 48.6	136 31	323×484 61×92	1:13 1:2.5
	+ MACRO- ADAP.-R 14256	∞ 0.6	48.8 40.4	31 20	63×94 34×51	1:2.9 1:1.4
135 mm ELMARIT-R f/2.8 from No. 2772619 (E 55) 11211	3 16543	∞ 1.5	76 58	61 42	107×160 66×99	1:4.5 1:2.8
	4 16544	∞ 1.5	150 84	135 68	237×355 106×159	1:9.9 1:4.4
180 mm ELMAR-R f/4 (E 55) 11922	3 16543	∞ 1.8	77 63	61 45	80×120 48×72	1:3.3 1:2
	4 16544	∞ 1.8	151 93	135 75	176×267 80×120	1:7.4 1:3.3
75-200 mm VARIO-ELMAR-R f/4.5 (E 55) 11226	3 16543	75 mm/∞ 200 mm/1.2	82 60	61 38	187×281 41×62	1:7.8 1:1.7
	4 16544	75 mm/∞ 200 mm/1.2	156 80	135 58	414×621 62×93	1:17.3 1:2.6

all values round

MACRO-ADAPTER-R

MACRO-ADAPTER-R
for LEICA R lenses with the automatic pre-set diaphragm transfer for automatic shutter control and manual setting of time and aperture for the use of LEICA R cameras.

Length of bayonet flange: 30 mm
Diameter: 62 mm
Weight: 0.13 kg

	Code Number
MACRO-ADAPTER.	**14 256** _____

Covers for the Macro-Adapter-R:
Front cover (= camera body cover). . . . . 14 103 _____
Rear cover (= rear cover of lens) . . . . 14 162 _____

Macro-Adapter-R for LEICA-R lenses

Lens	Distance scale at	Distance in cm object – front lens	Reproduction scale	Object field size in mm
50 mm SUMMICRON-R f/2	∞ 0.5	11.6 9.9	1:1.75 1:1.42	42×63 34×51
60 mm MACRO-ELMARIT-R f/2.8	∞ 1.2	16 9.7	1:2 1:1	48×72 24×36
90 mm ELMARIT-R f/2.8 90 mm SUMMICRON-R f/2	∞ 0.7	32 23	1:3 1:2	72×108 90×72
100 mm MACRO-ELMAR-R f/4	∞ 0.6	42 25	1:3.3 1:1.6	80×120 39×59
135 mm ELMARIT-R f/2.8	∞ 1.5	75 55	1:4.5 1:3	108×162 72×108
180 mm ELMAR-R f/4	∞ 1.8	140 91	1:6 1:3.3	144×216 79×118
180 mm APO-TELYT-R f/3.4	∞ 2.5	133 95.6	1:6 1:3.9	144×216 95×142
180 mm ELMARIT-R f/2.8	∞ 1.8	124 78.4	1:6 1:3.4	144×216 82×123
250 mm TELYT-R f/4	∞ 1.7	256 99.1	1:8.4 1:2.9	202×303 70×105
350 mm TELYT-R f/4.8	∞ 3.0	477 178	1:11.6 1:4.1	278×417 97×146

all values round

Ring combination for the near-focusing range

**Ring combination for the near-focusing range
with semi-automatic preset diaphragm**

Lens	Dis-tance scale at	Ring combination					
		2-part (height 25 mm) 14158			3-part (height 50 mm) 14159		
		Dis-tance in cm object – front lens	Repro-duction scale	Object field size in mm	Dis-tance in cm object – front lens	Repro-duction scale	Object field size in mm
50 mm SUMMI-CRON-R f/2	∞	13.5	1:2.1	50×75	8.1	1:1.04	25×37
	0.5	11,2	1:1.6	38×58	7.5	1.09:1	22×33
90 mm ELMARIT-R f/2.8 90 mm SUMMI-CRON-R f/2	∞	37.6	1:3.6	86 × 130	21.4	1:1.8	43×65
	0.7	25.2	1:2.2	53×79	17.6	1:1.4	34×50
135 mm ELMARIT-R f/2.8	∞	87.2	1:5.4	130×195	50.7	1:2.7	65×97
	1.5	59.7	1:3.4	81×121	42.3	1:2.1	50×75
180 mm ELMARIT-R f/4	∞	161	1:7.2	172×258	96.6	1:3.6	86×129
	1.8	97.2	1:3.6	87 × 130	75.4	1:2.4	58×87
180 mm APO-TELYT-R f/3.4	∞	154	1:7.2	172×258	89.4	1:3.6	86×129
	2.5	104	1:4.4	106×159	74.0	1:2.7	66 × 99
180 mm ELMARIT-R f/2.8	∞	146	1:7.2	172×258	81.2	1:3.6	86×129
	1.8	84.9	1:3.8	91×137	61.3	1:2.5	60×90
250 mm TELYT-R f/4	∞	299	1:10.1	242×363	172	1:5.0	121×181
	1.7	104	1:3.2	76×114	85.8	1:2.3	55×82
350 mm TELYT-R f/4.8	∞	558	1:13.9	334×501	316	1:7.0	167×250
	3.0	187	1:4.4	105×157	153	1:3.2	76×114

all values round

Universal Focusing Bellows-R
for all LEICA R and LEICAFLEX cameras
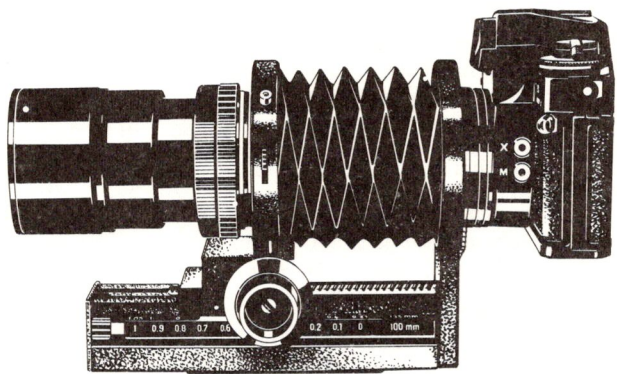
Universal Focusing Bellows-R

Very robust, variable extension for continuous settings in conjunction with all LEICA R and LEICAFLEX Models.
Maximum extension 100 mm.

Rotatable scale rod engraved with the reproduction scales for 90, 100 and 135 mm LEICA R lenses.
Additional mm scale, length 100 mm.

Additional, clampable adjustment facility for the maintenance of a preset reproduction scale.

Closure of the lens aperture to the preselected value with twin cable release or by pressure on the sliding knob, (spring-back diaphragm).

Can be used for upright and horizontal format
Tripod thread A 1/4 and A 3/8 DIN 4503 (1/4 in and 3/8 in)
Weight: 0.78 kg

Code Number

Universal Focusing Bellows-R
(without lens) . . . . **16860** _____
Twin cable release for same . . . . 16494 _____

With special 100 mm MACRO-ELMAR f/4 lens for work in the focusing range from infinity to 1:1.

Universal handgrip
with shoulder stock for hand-held exposures with the Universal Focusing Bellows-R

Universal handgrip with shoulder stock. . . . . **14188** _____

100 mm MACRO-ELMAR f/4

Lens for use on the Universal Focusing Bellows-R

Angle of view: 25°
Number of elements: 4 (3 components)
Filter size: E 55 or Series 7
For Series 7 the adapter
    14 225 is required
Internal thread: M 55 x 0.75
Click-stops, including ½ values
Smallest aperture: f/22
Focusing range with Universal
    Focusing Bellows R: ∞ to 1:1
Smallest object field: 24 x 36 mm
    (1 x 1.5 in)
Hard-chrome LEICA R rapid bayonet
    changer
Black finish
Built-on, extensible lens hood
Lens cap dia: A 65 mm
Length from bayonet flange: 62.5 mm
Diameter: 68 mm
Weight: 0.365 kg

Code Number

100 mm MACRO-ELMAR f/4
with lens hood, lens cap and rear cover. . . . .   **11 230** _____

(Replacement lens caps, E 55 or Series 7 filters, filter adapter 14 225,
see from page 65)

PHOTAR lenses for the Universal Focusing Bellows-R
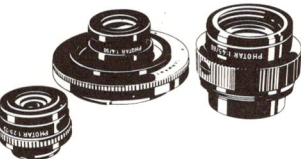
Lens	Code No.	Short extension		Long extension	
		Repro-duction scale	Working distance	Repro-duction scale	Working distance
12.5 mm PHOTAR f/2.4	549 025	7.5 : 1	8 mm	15.5 : 1	7 mm
25 mm PHOTAR f/2	549 026	3 : 1	22 mm	7 : 1	17 mm
25 mm PHOTAR f/1.4	549 027	1 : 1	88 mm	3 : 1	59 mm
All values are round. The working distance is the distance between the object plane and the lens mount.					

Code Number

PHOTAR® lenses (thread: W 0.8 in x $^1/_{36}$ in) attachable with the PHO-
TAR-Adapter-R. . . . .   14 259 _____

Possibilities of combining LEICA R lenses with the Universal Focusing Bellows-R

Lens	Reproduction scale	Distance object to front lens in cm	Object field size in mm
50 mm SUMMICRON f/2	1:1.2 – 2.9:1	9.1 – 4.5	29.6 x 4.4 to 8.4 x 12.5
60 mm MACRO-ELMARIT-R f/2.8	1:1.5 – 2.8:1	12.5 – 5.7	35 x 53 to 8.5 x 12.8
60 mm MACRO-ELMARIT-R f/2.8 with MACRO-ADAPTER-R	1.2:1 – 3.3:1	8.7 – 5.4	20 x 30 to 7.2 x 10.8
90 mm ELMARIT-R f/2.8 90 mm SUMMICRON-R f/2	1:2.1 – 1.8:1	24.5 – 10.4	51.1 x 76.6 to 13.7 x 20.6
100 mm MACRO-ELMAR® f/4	∞ – 1:1	∞ – 18.7	∞ to 24.0 x 36.0
100 mm MACRO-ELMAR-R f/4 with helical focusing mount	1:2.4 – 1.7:1	32.6 – 14.7	57.1 x 85.7 to 14.2 x 21.3
100 mm MACRO-ELMAR-R f/4 with helical focusing mount and MACRO-ADAPTER-R	1:1.4 – 2.0:1	22.6 – 13.8	33.3 x 50.0 to 12.1 x 18.1
135 mm ELMARIT-R f/2.8	1:3.2 – 1.2:1	57.7 – 25.9	77.2 x 115.8 to 20.6 x 30.9
180 mm ELMAR-R f/4	1:4.3 – 1:1.1	108.9 – 51.5	102.7 x 154.0 to 25.9 x 38.8
180 mm APO-TELYT-R f/3.4	1:4.3 – 1:1.1	101.8 – 45.3	102.7 x 154.0 to 27.4 x 41.1
180 mm ELMARIT-R f/2.8	1:4.3 – 1:1.1	93.4 – 36.3	102.7 x 154.0 to 26.2 x 39.4
250 mm TELYT-R f/4	1:6 – 1:1.1	195.0 – 62.2	144.0 x 216.0 to 27.4 x 41.1
350 mm TELYT-R f/4.8	1:8.3 – 1:1.6	362.0 – 107.0	199.0 x 298.0 to 38.0 x 57.0

all values are round

Adapter ring for the use
of the M lenses on the Universal Focusing Bellows-R.

65 mm ELMAR-M f/3.5 lens (∞ — 1.5:1)
Lens unit of the 90 mm ELMARIT-M f/2.8 (∞ — 1.1:1)
Lens unit of the 135 mm TELE-ELMAR-M f/4 (∞ — 1:1.3)

Code Number
Adapter ring **16863**

Other LEICA M lenses can be used with adapter 14 167.

Accessories for close-up photography

Copying Stand
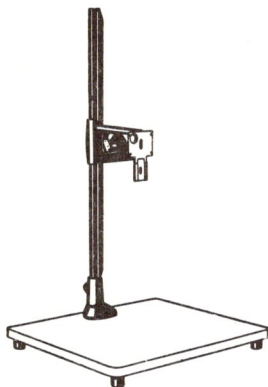
For the attachment of:
- The LEICA R and all LEICAFLEX models with or without
- Universal Focusing Bellows R
  All LEICA models with VISOFLEX 3, with or without Universal Focusing Bellows 2

Code Number

Copying stand
consisting of:
46 x 50 cm baseplate, 80 cm column, with non-rotating guide and
flange, carrier with coarse and fine adjustment .... **16707** _____
Weight: 6.26 kg

Angle finder
For the LEICA R4

For observation from above but also for work with the copying stand and photography "round the corner" or above the heads of a crowd

Code Number

90° angle finder, right-way-round, upright image, focusing eyepiece .. **14326** _____

Contents

LEICA M4-P

35 mm measuring-viewfinder camera. Interchangeable lenses from 21 to 135 mm (with VISOFLEX 3 attachment from 65 to 800 mm). Rangefinder and field-of-view frames for 28* and 90 mm, 35 and 135 mm, 50 and 75 mm. Split-image and coincident image rangefinder. Rapid motor wind with attachable MOTOR WINDER M4-2. Attachable coupled exposure meter.

Detailed description page 91

Code Number

LEICA M4-P, black chromium finish
Complete with camera body cover, flash socket covers and carrying
strap. . . . . **10415** _____

LEICA MD-2 see page 129

---

* 28 mm lenses from Serial No. 2 314 921 on.

LEICA WINDER M4-2

Compact, handy winder for the LEICA M4-P, LEICA M4-2, and LEICA MD-2. Single-frame exposures and series* with the camera release. Frame frequency up to 3fps. Extremely quiet running of gear and motor.

Detailed description page 93

	Code Number	
LEICA WINDER M4-2	**14400**	
Connecting cable for external supply (replacement)	14229	
Housing for ordinary or rechargeable batteries (replacement).........	14227	

LEICAMETER MR exposure meter
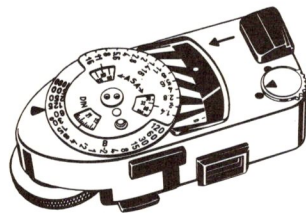
	Code Number	
LEICAMETER MR, black chromium finish	**14218**	
Leather case for the LEICAMETER	14213	

---

* With LEICA-WINDER M4-2 under serial No. 10350 a series release is not possible.

Accessories for the LEICA M4-P

Everready case

For the LEICA M4-P (without LEICA WINDER) with LEICAMETER MR

Code Number

Everready case for the LEICA M4-P with a 21 mm, 28 mm, 35 mm or
50 mm f/2 or 50 mm f/1.4 lens ....   14546 _____

Combination case

For the LEICA M4-P

External dimensions about 17 x 16 x 9 cm
Accepting:
1 LEICA M4-P with LEICAMETER MR and 500 mm* f/2, 35 mm f/2, 35 mm f/1.4,
28 mm* f/2.8, or 21 mm f/2.8 lens in position, in addition 1 90 mm f/2.8 or 135
mm f/4 (TELE-ELMAR-M) lens.

Code Number

Combination case for the LEICA M4-P............................   **14826** _____

---

* Without lens hood

Holdall combination case
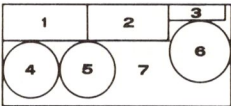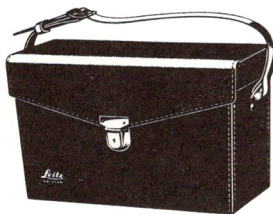
External measurements: about 30 x 12.5 x 18.5 cm

with insert I fitted for:
1 = 1 LEICA M body
2 = 1 LEICA M body with LEICAMETER® and 35 mm or 50 mm lens or 90 mm
TELE-ELMARIT-M f/2.8 in position with lens hood and covers.
3 = 3 filters E 39, E 41, E 43 or Series 6 in containers.
4 = 1 135 mm f/4 lens with lens hood and covers.
5 = 1 21 mm or 28 mm lens with lens hood and covers.
6 = 1 90 mm f/2 or 135 mm f/2.8 lens coupled with 1 35 mm or 1 90 mm f/2.8 lens,
each coupled with 1 lens of 35 mm or 50 mm focal length.
All lenses (except 35 mm with finder attachment) with lens hood and covers.
7 = space for films or for additional filters in containers.

		Code Number	
Outfit I complete, Weight: 1.455 kg.		**14807**	___
Holdall combination case, separate		14815	___
Insert of outfit I, separate		14817	___

Replacement coupling ring, Item No. 028-855.001-000
(available from LEITZ After Sales Service Dept).

Correction Lenses

for LEICA M Models (spherical)

	Code Number	
+ 0.5	14361	___
+ 1.0	14362	___
+ 1.5	14363	___
+ 2	14364	___
+ 3	14365	___
− 0.5	14366	___
− 1	14367	___
− 1.5	14368	___
− 2	14369	___
− 3	14370	___

Our Technical Service Department supplies correction lens mounts for astigmatism (Item No. 042-253.008). The lens must be produced and mounted by an ophthalmic optician.

Ball-and-socket heads

Large ball-and-socket head with tripod thread A ¼ and A ³/₈ DIN 4503
(¼ and ³/₈ in) . . . . **14 121** _____

Small ball-and-socket head with tripod thread A ¼ (¼ in) . . . . **14 119** _____

Table-top tripod

Code Number

Table-top tripod with 3 folding legs, tripod thread A ¼ DIN 4503 (¼ in) . **14 100** _____

Universal handgrip
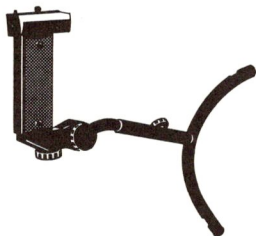
Universal handgrip with shoulder stock, universally adjustable to suit all users. Thread A ¼ DIN 4503 (¼ in) for attachment of the carrying strap 14130

	Code Number
Universal handgrip with shoulder stock	**14188** _____

Carrying strap for heavy outfits, with non-slip pad, with 2 tripod screws, thread A ¼ (¼ in) see also Universal handgrip 14188 . . . .   **14130** _____

Cable releases

for all camera models with conical thread.

	Code Number
Cable release, length 25 cm, with arresting screw.	14067 _____
Cable release, length 50 cm, with arresting screw.	14076 _____

Bayonet adapter rings

for the use of LEICA lenses
with screw mount on the
LEICA M4-P and MD-2

	Code Number
21 and 50 mm focal length	14097 _____
35, 135 mm focal length and VISOFLEX attachment I	14099 _____

Spare parts for cameras

	Code Number
Carrying strap with non-slip pad (replacement).	14226 _____
Flash socket cover (replacement).	15526 _____
Camera body cover M bayonet (replacement)	14195 _____

Accessories
for the near-focusing range

Universal Focusing Bellows 2
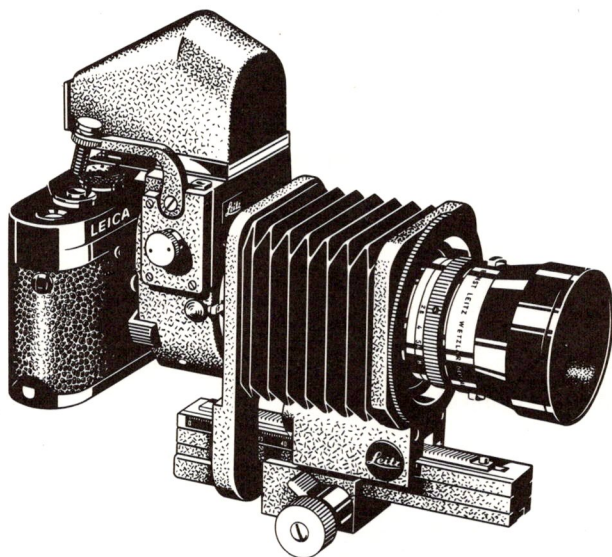
Variable extension for continuous focusing in conjunction with the VISOFLEX 3 Mirror Reflex attachment.
Permits photography within the range of ∞ to 1:1 with the lens units of the 90 mm ELMAR-M and ELMARIT-M and the 65 mm ELMAR-M.
Additional adjustment for reproduction at a preset scale.
For upright and horizontal format.
Tripod thread A 1/4 and A 3/8, DIN 4503 (1/4 in and 3/8 in).
Weight: 0.56 kg

Code Number

Universal Focusing Bellows 2
Outfit for the 65 mm ELMAR-R (∞ to 1.4:1) and lens unit of the 90 mm
ELMAR or ELMARIT-M (∞ to 1:1) and 135 mm TELE-ELMAR-M (∞ to
1:1.3) . . . . **16 556** _____

Accessories for the Universal Focusing Bellows 2

Adapter ring for:

M lenses with screw thread
Focal length 50 mm 1.4:1 – 3.2:1
Focal length 35 mm 2.1:1 – 4.7:1

Adapter ring . . . . **16 596** _____

Adapter ring for:

Lenses with screw thread
Focal length 50 mm 1.1:1 – 3:1
Focal length 35 mm 1.7:1 – 4.3:1
25 mm REPRO-PHOTAR f/2 4:1 – 8:1
12.5 mm* PHOTAR f/2.4 9:1 – 17:1
50 mm* PHOTAR f/4 1.3:1 – 3:1

Code Number

Adapter ring . . . . **16590** _____

Lens unit of the SUMMICRON-M up to Serial No. 2 915 801
(1.4:1 – 3.2:1)
Adapter ring . . . . 16590 _____
+ adapter ring . . . . 17672 _____

Lens unit of the 90 mm SUMMICRON-M up to Serial No. 2 997 000
(1:9 – 1:1.2)
Lens unit of the 135 mm ELMARIT-M (1:18.5 – 1:1.32)
Lens unit of the 200 mm TELYT-M f/4 (∞ – 1:3)
Lens unit of the 280 mm TELYT-M f/4.8 (∞ – 1:6)

Adapter ring . . . . **16598** _____

Lens unit of the 135 mm TELYT-ELMAR-M (∞ – 1:1.3), of the
90 mm ELMAR-M and ELMARIT-M (∞ – 1:1) and of the
65 mm ELMAR-M f/3.5 (∞ – 1.4:1)

Adapter ring (replacement) . . . . **16558** _____

Copying Stand

For the attachment
● of the LEICA R and all LEICAFLEX
   models with or without Universal
   Focusing Bellows R
● all LEICA models with VISOFLEX 3,
   with or without Universal Focusing
   Bellows 2
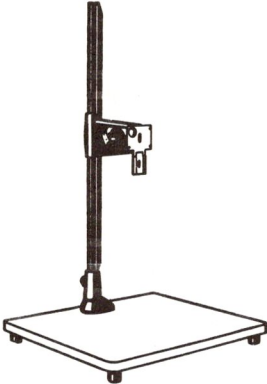
Copying Stand
consisting of:
46 x 50 cm baseplate, 80 cm column, with parallel guide
and flange, carrier with coarse and fine adjustment . . . . **16707** _____
Weight: 6.26 kg

---

* Adapter ring (Item No. 042-716.041). This adapter ring is part of the 25 mm REPRO-PHOTAR
  f/2 and can be obtained as a space part from the Technical Service, Ernst Leitz Wetzlar
  GmbH, or the national Leitz Agency only.

Description and technical data of the instruments

The LEICA M4-P

Type of camera:
35 mm measuring viewfinder camera. Interchangeable lenses. Rapid motor wind with attachable MOTOR WINDER M4-2. Attachable coupled exposure meter.

Body:
Compact, all-metal body with hinged back, easy-grip, covered with grained PVC. Camera top and baseplate made of brass, black chromium finish. Measuring viewfinder. Stainless steel carrying eyelets on both sides. Mechanical connection for the LEICA WINDER M4-2. Tripod thread: standard A ¼, (¼in). Rapid bayonet changing mount for LEICA M lenses and accessories. Accessory shoe with centre contact. Separate flash contacts for X and M. Field-of-view selector.

Lens system:
LEICA M lenses with rapid bayonet changing mount from 21 to 135 mm. With VISO-FLEX 3 attachment from 65 to 800 mm. All lenses with LEITZ Absorban cementing layers and LEITZ coating.

Measuring viewfinder:
● Bright and contrasty finder image with bright field-of-view frame for
28 mm and 90 mm,
35 mm and 135 mm or
50 mm and 75 mm
and automatic parallax compensation. When a lens is inserted its related field-of-view frame is automatically faded into the viewfinder image.* Any desired pair of frames can be preselected with the field-of-view selector. The image area corresponds to the image field of the lens at a short focusing position. Spectacle wearers, too, are able to observe the image field fully. A range of 10 correction lenses from +3 to—3 dioptres can be attached.
● Split-image and coincident image rangefinder standing out as a bright field in the centre of the finder image. Long effective measuring base of 48 mm (measuring base 69 mm x 0.7 viewfinder magnification). This ensures quick and reliable focusing even in poor lighting conditions and with all lenses up to 135 mm focal length.

---

* 28 mm lenses from serial No. 2 314 921 on.

Shutter:
Horizontaly acting rubber-blind focal-plane shutter, extremely quiet. Mechanically determined speeds: 1, $^1/_2$, $^1/_4$, $^1/_8$, $^1/_{15}$, $^1/_{30}$, $^1/_{60}$, $^1/_{125}$, $^1/_{250}$, $^1/_{500}$, $^1/_{1000}$ sec, and B = time exposures of any desired duration.

Release:
Smooth shutter release: international conical thread for cable releases in the release button.

Flash synchronisation:
Automatic flash synchronisation for flash bulbs (M contacts) from "B" to $^1/_{500}$ sec, for electronic flashes (X contact) from "B" to $^1/_{50}$ sec. Two separate standard sockets for M and X as well as separate centre contact (X) in the accessory shoe. 3 flash units can be fired simultaneously through all 3 contacts.

Flash table see "Technical Information".

Film loading:
Remove the baseplate and turn up the centre part of the camera back. Rapid film loading system for all commercial 35 mm films and LEICA cassettes.

Film transport:
Angled lever with movable end piece for rapid film transport and shutter wind. Its standby position is favourable for persons using their left eye for focusing. Travel of the rapid winding lever 120°. Facility for interval winding. Double exposure block. Forward-counting automatic frame counter read through a magnifier. Automatic return to Start (-2 frames) as the camera is being opened. Lever for rewind release with automatic return when the winder lever is operated.
Angled, folding crank for convenient and rapid rewind of the film.

Carrying strap:
Black perlon tissue, width 16 mm, adjustable length. Always soft and pliable irrespective of temperature and weather. 20 mm wide anti-slip section. When the ever-ready case is used, the carrying strap remains on the camera.

Dimensions:
Height: 77 mm, Length: 138 mm, Depth: 36 mm

Weight:
Body without lens: 0.545 kg
Body with the 50 mm SUMMICRON-M f/2: 0.74 kg

Exposure measurement:
With the LEICAMETER MR exposure meter, which is inserted in the accessory shoe and coupled with the shutter speed dial.
The measuring angle corresponds to the 90 mm field of view, therefore selective measurement when the 90 mm frame is faded in. Measured-value storage. Measuring range from 0.5 to 16 000 cd/sq.m (1.6 – 50 000 asb). Current supply from a 1.5 v mercuric oxide button cell, for instance Mallory PC 625.

LEICA-WINDER M4-2
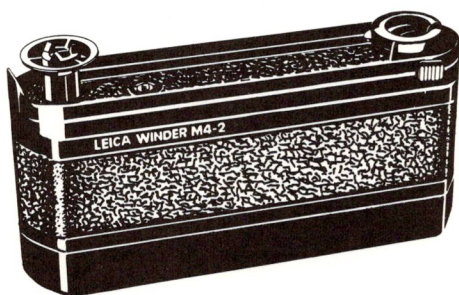
Type of instrument: winder
Compact, handy winder for the LEICA M4-P, LEICA M4-2, and LEICA MD-2.
Single-frame exposures and series* with the camera release.
Frame frequency up to 3 fps.
Extremely quiet running of the gear and motor.

Body:
Robust, glass-fibre-reinforced plastic body, easygrip, covered with grained PVC.
The winder is powered by a d.c. mircomotor with air core armature.
The winder is attached to the camera in place of the baseplate. It is mechanically
controlled by the camera only.
The housing for ordinary or rechargeable batteries is attached to the bottom of the
winder.

Current supply from:
4 1.5 v alkali-manganese batteries in the battery housing. Capacity to LEITZ test
standards: about 150 36-exposure films at 20°C.
or
4 NiCd rechargeable batteries, for instance Varta AG DEAC 501 RS, in the battery
housing. During charging the rechargeable batteries remain in the housing.
or
External supply through the connecting cable which is part of the outfit. At low tem-
peratures, for instance, the battery housing can be detached to be kept near the
body for warmth and connected with the winder through the connecting cable.

Available shutter speeds:
$1/1000$ to 1 sec and "B".

Release:
Via camera release button

Dimensions:
Height including the battery housing: 56 mm, Length: 138 mm, Depth: 34 mm,

Weight: 0.37 kg

---

* With LEICA-WINDER M4-2 under serial No. 10 350 a series release is not possible.

Contents:

The range of the LEICA M lenses

Table of the LEICA M lens range

Designation	Maximum aperture	Focal length in mm	Filter dia.	Code No.
ELMARIT-M	f/2.8	21	E 49	11 134
ELMARIT-M	f/2.8	28	E 49	11 804
SUMMICRON-M	f/2	35	E 39	11 310
SUMMILUX-M	f/1.4	35	S 7	11 870
SUMMICRON-M	f/2	50	E 39	11 819
SUMMILUX-M	f/1.4	50	E 43	11 114
NOCTILUX-M	f/1	50	E 58	11 821
SUMMILUX-M	f/1.4	75	E 60	11 814
TELE-ELMARIT-M	f/2.8	90	E 39	11 800
SUMMICRON-M	f/2	90	E 49	11 136
TELE-ELMAR-M	f/4	135	E 39	11 851
ELMARIT-M	f/2.8	135	E 55	11 829
Lenses for VISOFLEX 3 and Universal Focusing Bellows				
ELMAR-V	f/3.5	65	S 6	11 162
TELE-ELMAR-M	f/4	135	E 39	11 852
ELMARIT-M	f/2.8	135	E 55	11 827
ELMARIT-M-head	f/2.8	135	E 55	11 828
TELYT-V	f/4	200	E 58	11 063
TELYT-V	f/4.8	280	S 8	11 914
TELYT-V	f/6.8	400	S 7	11 966
TELYT-V	f/6.8	560	S 7	11 864
TELYT-S	f/6.3	800	S 7	on request

21 mm ELMARIT-M f/2.8
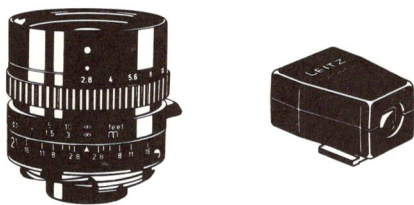
Lens of extremely wide angle of view

Angle of view: 92°
Number of elements: 8 (6 components)
Filter size: E 49
Internal thread: M 49 x 0.75
Click-stops (including ½ values)
Smallest aperture: f/16
Combined "feet-metre" scale
Focusing range: ∞ to 0.7 m (28 in)
Smallest object field: 705 x 1058 mm
    (2 ft 3.75 in x 3 ft 5.7 in) (about 1:30)
Non-rotating focusing mount
Brilliant finder required
Hard-chrome LEICA M rapid bayonet changer
Black finish
Push-on lens hood
Lens cap dia: A 51 mm
Length from bayonet flange: 46 mm
Diameter: 53 mm
Weight: 0.29 kg

Code Number

21 mm ELMARIT-M f/2.8
with lens hood, lens cap and rear cover. . . . .   **11 134** _____
Brilliant finder with case. . . . .   12 012 _____
Replacement case. . . . .   14 628 _____

(Replacement lens caps and lens hood, see from page 120)

28 mm ELMARIT-M f/2.8
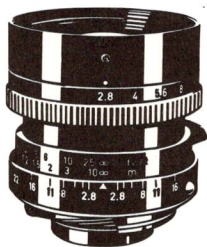
Wide angle lens

Angle of view: 76°
Number of elements: 8 (6 components)
Filter size: E 49
Internal thread: M 49 x 0.75
Click-stops (including ½ values)
Smallest aperture: f/22
Combined "feet-metre" scale
Focusing range: ∞ to 0.7 m (28 in)
Smallest object field: 533 x 800 mm
    (21 x 32.5 in) (about 1:22)
Non-rotating focusing mount
Built-in camera finder
Hard-chrome LEICA-M rapid bayonet changer
Black finish
Push-on lens hood
Lens cap dia.: A 51 mm
Length from bayonet flange: 48 mm
Diameter: 53 mm
Weight: 0.25 kg

Code Number

28 mm ELMARIT-M f/2.8
with lens hood, lens cap and rear cover........................... **11 804** _____
Brilliant finder with case*... 12 017 _____
Replacement case... 14 628 _____

(Replacement lens caps and lens hood, see page 120)

---

* Brillant finder not necessary for LEICA M4-P

35 mm SUMMICRON-M f/2
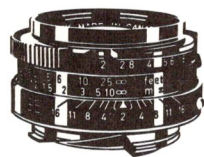
High-speed wide angle lens

Angle of view: 64°
Number of elements: 7 (5 components)
Filter size: E 39
Internal thread: M 39 x 0.5
Click-stops (including ½ values)
Smallest aperture: f/16
Combined "feet-metre" scale
Focusing range: ∞ to 0.7 m (28 in)
Smallest object field: 430 x 640 mm
   (17 x 25 in) (about 1:18)
Non-rotating focusing mount
Built-in camera finder
Hard-chrome LEITZ M rapid bayonet changer
Black finish
Push-on lens hood
Lens caps dia.: A 42 mm
Length from bayonet flange: 26 mm
Diameter: 52 mm
Weight: 0.19 kg

Code Number

35 mm SUMMICRON-M f/2
with lens hood, lens cap, and rear cover . . . . **11310** _____

(Replacement lens caps and lens hood, filter E 39 see from page 120)

35 mm SUMMILUX-M f/1.4

Ultra-high-speed wide-angle lens

Angle of view: 64°
Number of elements: 7 (5 components)
Filter size: Series 7, for insertion in the lens hood
Click-stops (including ½ values)
Smallest aperture: f/16
Combined "feet-metre" scale
Focusing range: ∞ to 1 m (40 in)
Smallest object field: 630 x 950 mm
    (25 x 37 in) (about 1:26)
Non-rotating focusing mount
Built-in camera finder
Hard-chrome LEICA M rapid bayonet changer
Black finish
Lens hood functions as filter holder,
    to be unscrewed for insertion
    of Series 7 filters
Lens cap dia.: A 42 mm
Length from bayonet flange: 28 mm
Diameter: 53 mm
Weight: 0.245 kg

Code Number

35 mm SUMMILUX-M f/1.4
with lens hood, lens cap and rear cover. . . . . **11870** _____

(Replacement lens caps and lens hood, Series 7 filters, see from page 120)

50 mm SUMMICRON-M f/2

High-speed universal lens

Angle of view: 45°
Number of elements: 6 (4 components)
Filter size: E 39
Internal thread: M 39 x 0.5
Click-stops (including ½ values)
Smallest aperture: f/16
Combined "feet-metre" scale
Focusing range: ∞ to 0.7 m (28 in)
Smallest object field: 277 x 416 mm
    (11 x 16.4 in approx.) (about 1:11.5)
Non-rotating focusing mount
Built-in camera finder
Hard-chrome LEICA-M rapid bayonet
    changer
Black finish
Push-on lens hood
Lens cap dia.: A 42 mm
Length from bayonet flange: 42 mm
Diameter: 52 mm
Weight: 0.195 kg

Code Number

50 mm SUMMICRON-M f/2
with lens hood, lens cap and rear cover. . . . . **11 819** _____

(Replacement lens caps and lens hood, E 39 filters, see from page 120)

50 mm SUMMILUX-M f/1.4

Ultra-high speed lens

Angle of view: 45°
Number of elements: 7 (5 components)
Filter size: E 43
Internal thread: M 43 x 0.45
Click-stops (from No. 2 048 701
      including ½ values)
Smallest aperture: f/16
Combined "feet-metre" scale
Focusing range: ∞ to 1 m (40 in)
Smallest object field: 410 x 620 mm
      (16 x 24.5 in approx.) (about 1:17)
Non-rotating focusing mount
Built-in camera finder
Hard-chrome LEICA-M rapid
      bayonet changer
Black finish
Push-on lens hood
Lens cap dia.: A 45 mm
Length from bayonet flange: 46 mm
Diameter: 53 mm
Weight: 0.36 kg

Code Number

50 mm SUMMILUX-M f/1.4
with lens hood, lens cap and rear cover. . . . .   **11 114** _____

(Replacement lens caps and lens hood, E 43 filters see from page 120)

50 mm NOCTILUX-M f/1
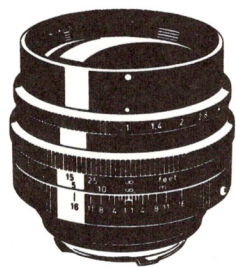
Top-quality lens of extreme speed

Angle of view: 45°
Number of elements: 7 (6 components)
Filter size: E 58
Internal thread: M 58 x 0.75
Click-stops (including ½ values)
Smallest aperture: f/16
Combined "feet-metre" scale
Focusing range: ∞ to 1 m (40 in)
Smallest object field: 410 x 620 mm
   (11 x 16.4 in approx.) (about 1:17)
Non-rotating focusing mount
Built-in camera finder
Hard-chrome LEICA-M rapid bayonet
   changer
Black finish
Lockable lens hood
Lens cap dia.: A 61 mm
Length from bayonet flange: 62 mm
Diameter: 69 mm
Weight: 0.58 kg

Code Number

50 mm NOCTILUX-M f/1
with lens hood, lens cap and rear cover. . . . .   **11 821**_____

(Replacement lens caps and lens hood, E 58 filters see from page 120)

75 mm SUMMILUX-M f/1.4
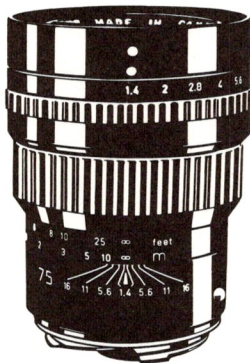
Ultra-high-speed lens of medium focal length

Angle of view: 31°
Number of elements: 7 (5 components)
Filter size: E 60
Internal thread: M 60 x 0.75
Click-stops (including ½ values)
Smallest aperture: f/16
Combined "feet-metre" scale
Focusing range: ∞ to 1 m (40 in)
Smallest object field: 300 x 450 mm
   (11.8 x 17.7 in) (about 1:12.5)
Non-rotating focusing mount
Built-in camera finder
Hard-chrome LEICA-M rapid bayonet
   changer
Black finish
Lockable lens hood
Lens cap dia.: A 62 mm
Length from bayonet flange: 80 mm
Diameter: 63 mm
Weight: 0.49 kg

Code Number

75 mm SUMMILUX-M f/1.4
with lens hood, lens cap and rear cover. . . . . **11 814** _____

(Replacement lens caps and lens hood, E 60 filters, see from page 120)

90 mm TELE-ELMARIT-M f/2.8
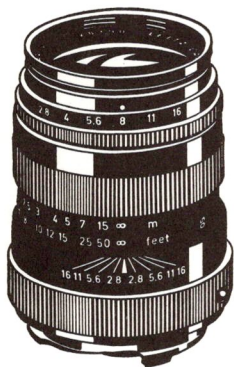
Handy press and snapshot lens

Angle of view: 27°
Number of elements: 4 (4 components)
Filter size: E 39 or Series 5.5
For Series 5.5 filters the adapter
   11 251 is required
Internal thread: M 39 x 0.75
Click-stops (including ½ values)
Smallest aperture: f/16
Combined "feet-metre" scale
Focusing range: ∞ to 1 m (40 in)
Smallest object field: 220 x 330 mm
   (8.7 x 13 in approx.) (about 1:9)
Non-rotating focusing mount
Built-in camera finder
Hard-chrome LEICA-M rapid bayonet
   changer
Black finish
Screw-on lens hood
Lens cap dia.: A 42 mm
Length from bayonet flange: 62 mm
Diameter: 51.5 mm
Weight: 0.225 kg

Code Number

90 mm TELE-ELMARIT-M f/2.8
with lens hood, lens cap and rear cover. . . . . **11 800** _____

(Replacement lens caps, adapter ring 11 251 for Series filters and lens
hood, E 39 filters, see from page 120)

90 mm SUMMICRON-M f/2

High-speed lens for press work

Angle of view: 27°
Number of elements: 5 (4 components)
Filter size: E 49
Internal thread: M 49 x 0.75
Click-stops (including ½ values)
Smallest aperture: f/16
Combined "feet-metre" scale
Focusing range: ∞ to 1 m (40 in)
Smallest object field: 220 x 330 mm
    (8.7 x 13 in approx.) (about 1:9)
Non-rotating focusing mount
Built-in camera finder
Hard-chrome LEICA-M rapid bayonet
    changer
Black finish
Built-on, extensible lens hood
Lens cap dia.: A 63.7 mm
Length from bayonet flange: 79 mm
Diameter: 67 mm
Weight: 0.41 kg

Code Number

90 mm SUMMICRON-M f/2
with lens hood, lens cap and rear cover. . . . .   **11 136** _____

(Replacement lens caps see from page 120)

135 mm TELE-ELMAR-M f/4

Telephoto lens

Angle of view: 18°
Number of elements: 5 (3 components)
Filter size: E 39
Internal thread: M 39 x 0.5
Click-stops (including ½ values)
Smallest aperture: f/22
Combined "feet-metre" scale
Focusing range: ∞ to 1.5 m (60 in)
Smallest object field: 220 x 330 mm
    (8.7 x 13 in approx.) (about 1:9)
Non-rotating focusing mount
Built-in camera finder
Hard-chrome LEICA-M rapid bayonet
    changer
Black finish
Lens unit can be unscrewed
Push-on lens hood
Lens cap dia.: A 42 mm
Length from bayonet flange: 105 mm
Diameter: 55 mm
Weight: 0.55 kg

Code Number

135 mm TELE-ELMAR-M f/4
with lens hood, lens cap and rear cover. . . . .   **11 851** _____
(Replacement lens caps and lens hood, E 39 filters, see from page 120)

Lens unit of the 135 mm TELE-ELMAR-M f/4 separate
for use on the Universal Focusing Bellows 2 and VISOFLEX 3 with lens
hood. . . . .   11 852 _____

135 mm ELMARIT-M f/2.8

with viewfinder front attachment
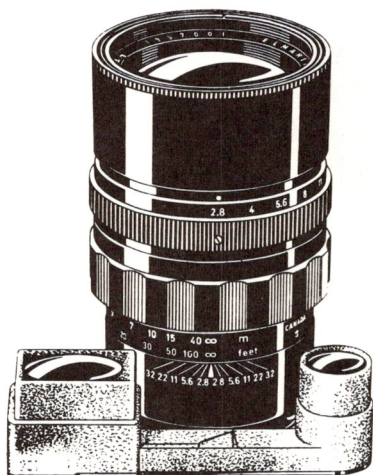
High-speed telephoto lens
Angle of view: 18°
Number of elements: 5 (4 components)
Filter size: E 55 or Series 7
For Series 7 filters the adapter
   14 225 is required
Internal thread: M 55 x 0.75
Click-stops (including ½ values)
Smallest aperture: f/32
Combined "feet-metre" scale
Focusing range: ∞ to 1.5 m (60 in)
Smallest object field: 220 x 330 mm
   (8.7 x 13 in approx.) (about 1:9)
Non-rotating focusing mount
Built-in camera finder
Hard-chrome LEICA M rapid bayonet
   changer
Black finish
Lens unit can be unscrewed
Built-on, extensible lens hood
Lens cap dia.: A 63.7 mm
Length from bayonet flange: 114 mm
Diameter: 66 mm
Weight: 0.735 kg

Code Number

135 mm ELMARIT-M f/2.8
with lens hood, lens cap and rear cover. . . . . **11 829** _____

(Replacement lens caps and E 55 or Series 7 filters and adapter ring
14 225, see from page 120)

Lens unit of the 135 mm ELMARIT-M f/2.8 separate for use on the
Universal Focusing Bellows 2. . . . . 11 828 _____

Mirror-reflex attachment
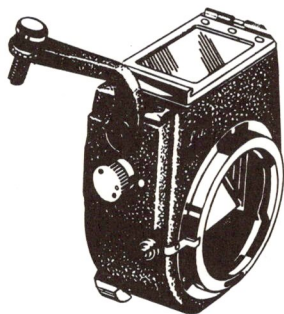
VISOFLEX® 3*
Mirror reflex device for lenses from 65 to 800 mm and Universal Focusing Bellows 2.
Three possibilities of varying the mirror operation:
1. Instant return shortly before shutter release (adjustable)
2. Coupled with the lever operation.
3. Arrest of raised mirror (for long exposure times).
In the settings 1 and 2 the mirror returns to its rest position after the exposure.
Cable release bush.
Right-angle right-way-round 4 x viewing magnifier.
Vertical 5 x magnifier (reversed image), adjustable for the correction of deficient
eyesight from + 1.75 to − 2.5 dioptres. The magnifiers can be left in position when
the camera body is interchanged.
¼" tripod thread A ¼
Weight: 0.48 kg

	Code Number
VISOFLEX 3	
without magnifier......................................	16 497 _____
4 x magnifier (90°), also for VISOFLEX 2....................	16 499 _____
VISOFLEX 3 with 4 x magnifier, complete	**16 498** _____
5 x magnifier (vertical), also for VISOFLEX 2	16 461 _____

Accessories for the VISOFLEX 3

	Code Number
Correction lenses (spherical) for the 4 x magnifier (also for the LEICA- (also for the LEICAFLEX SL)	
+0.5	14 118 _____
+1.0	14 371
+1.5	14 372 _____
+2.0	14 373 _____
+3.0	14 374 _____
−0.5	14 375 _____
−1.0	14 376 _____
−1.5	14 377 _____
−2.0	14 378 _____
−3.0	14 379 _____

---

* cannot be used on the LEICA CL

Universal helical focusing mount for the use of the 65 mm ELMAR-M f/3.5, the 90 mm ELMARIT-M f/2.8 and 135 mm TELE-ELMAR-M f/4 lens units . . . .   16464 _____

Extension tube for extending the reproduction scales of the universal focusing mount (height: 26.5 mm) . . . .   16471 _____

Short tube for the use of the 90 mm SUMMICRON-M f/2 (up to No. 2 997 000) and of the 135 mm ELMARIT-M f/2.8 on the VISOFLEX 3 . . . .   16462 _____

Extension ring for extending the reproduction scale of the short tube (height: 14.5 mm) . . . .   16474 _____

Extension ring for the use of the 125 mm HEKTOR®, and 135 mm ELMAR and HEKTOR in short mount, 200 mm, 280 mm (up to Serial No. 2 340 952) TELYT-M and 400 mm f/5 (normal focusing range) . . . .   16466 _____

Extension ring for the use of the 50 mm and 35 mm* M lenses on the VISOFLEX 3 . . . .   16469 _____

---

* For lenses with screw thread a bayonet adapter 14 097 is required

The versatile possibilities of the VISOFLEX 3

16 469

ATTENTION!
For the near-focusing range only

16 464

16 471

16 462

16 474

16 466

14 020

16 469

14 182

16469

25 982 b-110

35 mm M-lenses	50 mm M-lenses	65 mm ELMAR-M f/3.5	90 mm ELMARIT-M f/2.8	135 mm TELE-ELMAR-M f/4.1	90 mm SUMMICRON-M f/2	135 mm ELMARIT-M f/2.8	200 mm TELYT-M f/4	280 mm TELYT-M f/4.8	400 mm TELYT-M f/6.8	560 mm TELYT-M f/6.8
14 cm (5½")	**21.3 cm** (8³/₈")	**∞ – 33 mm** (∞ – 13")	**lens unit ∞ – 50 cm** (∞ – 19¾")	**lens unit ∞ – 98 cm** (∞ – 36⁵/₈")	**lens unit ∞ – 72 mm** (∞ – 28³/₈")	**lens unit ∞ – 151 cm** (∞ – 59³/₈")	**∞ – 300 mm** (∞ – 10 ft)	**∞ – 350 mm** (∞ – 11'8")	**∞ – 353 cm** (∞ – 12 ft)	**∞ – 641 cm** (∞ – 21'3")
2 x 3 cm (³/₄ x ¹/₈")	**3.1 x 4.7 cm** (1¼ x 1⁷/₈")	**5.8 x 8.7 cm** (2¼ x 3½")	**8 x 12 cm** (3¹/₈ x 4¾")	**12 x 18 cm** (4¾ x 7¹/₈")	**14.4 x 21.6 cm** (5³/₄ x 8½")	**21.6 x 32.4 cm** (8½ x 12¾")	**30.7 x 46.1 cm** (12 x 18½")	**24.2 x 36.3 cm** (9¾ x 14½")	**15.8 x 23.6 cm** (6³/₈ x 9½")	**22.4 x 33.6 cm** (8⁷/₈ x 13½")
14.5 cm (5¾")	20.8 cm (8¼")	33 – 27 cm (13 – 10¾")	50 – 39 cm (19¾ x 15½")	100 – 68 cm (39³/₈ x 26¾")	74 – 47 cm (29¹/₈ x 18½")	155 – 93 cm (61 – 36½")	311 – 176 cm (10'4" – 5'10")	350 – 276 cm (11'8" – 9'2")	353 x 226 cm (11'9" x 7'11")	641 – 386 cm (21'3" – 12'7")
1.6 x 2.4 cm (⁵/₈ x 1")	2.4 x 3.6 cm (1 x 1½")	2.9 x 4.3 cm (1¹/₈ x 1¾")	4 x 6 cm (1⁵/₈ x 2³/₈")	6 x 9 cm (2³/₈ x 3½")	7.4 x 11.2 cm (2⁷/₈ x 4³/₈")	11.0 x 16.6 cm (4²/₈ x 6½")	15.6 x 23.4 cm (6¹/₄ x 9³/₈")	17.8 x 26.7 cm (7¹/₈ x 10¾")	8 x 12 cm (3¹/₈ x 4¾")	11.2 x 16.8 cm (4³/₃ x 6⁷/₈")

Bold type = normal working range
Lean type = black intermediate rings necessary for the macro or close-up range
Format: dimensions of the field at minimum focusing distance.

65 mm ELMAR-V f/3.5

for the VISOFLEX 3

Universal lens of the shortest focal length

Angle of view: 36°
Number of elements: 4 (3 components)
Filter size: Series 6
For Series 6 filters the adapter
    14 160 is required
Internal thread: M 44 x 0.75
Click-stops (including ½ values)
Aperture preselection
Smallest aperture: f/22
Use on the VISOFLEX 3:
    With universal helical focusing mount
    16 464: ∞ to 0.35 m (14 in) = 1:2.5
    with additional ring 16 471:
    0.33 m (13 in) to 0.27 m (11 in) = 1:1.25
Smallest object field: 30 x 45 mm
    (1.2 x 1.8 in approx.)
(ELPRO 2 near-focusing attachment can be used for reproduction scales from 1:3.2 to 1:1.4)
Black finish
Built-on lens hood
Lens cap dia.: A 56 mm
Length from bayonet flange: 55 mm
Diameter: 58 mm
Weight: 0.13 kg

Code Number

65 mm ELMAR-V f/3.5
with lens hood, lens cap and rear cover. . . . .   **11 162** _____
Universal helical focusing mount required for use on the VISOFLEX 3 . . 16 464 _____

(Replacement lens caps and adapter ring 14 160 for Series 6 filters,
see from page 120)

135 mm ELMARIT-M f/2.8

for the VISOFLEX 3

High-speed telephoto lens

Angle of view: 18°
Number of elements: 5 (4 components)
Filter size: E 55 or Series 7
For Series 7 filters the adapter
    14 225 is required
Internal thread: M 55 x 0.75
Click-stops (including ½ values)
Smallest aperture: f/32
Focusing range: ∞ to 1.55 mm (62 in)
Smallest object field: 220 x 330 mm
    (8.7 x 13 in approx.) (about 1:9)
(ELPRO 3 and 4 near-focusing attachments can
    be used for reproduction scales
    from 1:10 to 1:2.8)
Non-rotating focusing mount
Hard-chrome LEICA-M rapid bayonet
    changer
Black finish
Lens unit can be unscrewed
Built-on, extensible lens hood
Lens cap dia.: A 63.7 mm
Length from bayonet flange: 77 mm
Diameter: 66 mm
Weight: 0.55 kg

Code Number

135 mm ELMARIT-M f/2.8 for the VISOFLEX 3
with lens hood, lens cap and rear cover. . . . . **11 827** _____

(Replacement lens caps and E 55 or Series 7 filters and adapter ring
for Series filters see from page 120)

Lens unit of the 135 mm ELMARIT-M f/2.8 separate for use on the Uni-
versal Focusing Bellows 2. . . . . 11 828 _____

200 mm TELYT-V f/4

for VISOFLEX 1, 2, 3
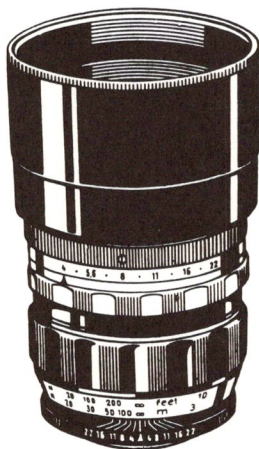
Telephoto lens

Angle of view: 12°
Number of elements: 4 (4 components)
Filter size: E 58
Internal thread: M 58 x 0.75
Click-stops (including ½ values)
Aperture preselection
Smallest aperture: f/22
Combined "feet-metre" scale
Focusing range: ∞ to 3 m (10 ft)
Smallest object field: 310 x 460 mm
   (12.2 x 18.1 in) (about 1:13)
Non-rotating focusing mount
LEICA thread
Black finish
Chromium-plated scale rings
Built-on, extensible lens hood
Lens cap dia.: A 72 mm
Length from the end of the mount: 97 mm
Diameter: 72 mm
Weight: 0.64 kg

Code Number

200 mm TELYT-V f/4
with lens hood, lens cap and rear cover. . . . . **11063** _____
Adapter rings required for the use on the VISOFLEX 2 and 3 . . . . 16466 _____

(Replacement lens caps and E 58 filters see from page 120)

Extension ring 15 mm for photography in the near-focusing range. . . . . 14020 _____
Lens unit of the 200 mm TELYT-V f/4 separate for use on the Universal
Focusing Bellows 2. . . . . 11069 _____

280 mm TELYT-V f/4.8
for VISOFLEX 3
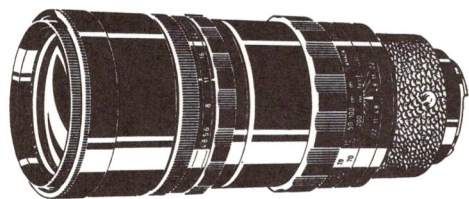
Telephoto lens
Angle of view: 8.5°
Number of elements: 4 (4 components)
Filter size: Series 8
For Series 8 filters the adapter
    14169 is required
Internal thread: M 66 x 0.75
Click-stops (including ½ values)
Aperture preselection
Smallest aperture: f/22
Combined "feet-metre" scale
Focusing range: ∞ to 3.5 m (11 ft 8 in)
Smallest object field: 242 x 363 mm
    (9.5 x 14.3 in) (about 1:10)
Non-rotating focusing mount
Hard-chrome LEICA M rapid bayonet
    changer
Black finish
Built-on, extensible lens hood
Lens cap dia.: A 76 mm
Length from bayonet flange: 184 mm
Diameter: 76 mm
Weight: 1.2 kg

Code Number

280 mm TELYT-V f/4.8
with lens hood, lens cap and rear cover. . . . .   **11914** _____

(Replacement lens caps and adapter ring 14169 for Series 8 filters see
from page 120)

Adapter ring 10 mm for photography in the near-focusing range . . . . . .   16469 _____
1 ring – 3.5 to 2,76 m (11 ft 8 in to 9 ft 2 in approx.),
smallest object field 178 x 267 mm (7 x 10.5 in approx.);
2 rings – 2.76 m to 2.33 m (9 ft 2 in to 7 ft 5 in),
smallest object field 141 x 212 mm (5.6 x 8.3 in);
3 rings – 2.33 m to 2.06 m (7 ft 5 in to 6 ft 10 in),
smallest object field 117 x 176 mm (4.6 x 6.9 in).

(Data refer to the distance between object and film plane.)

Lens unit of the 280 mm TELYT-V f/4.8 separate for use on the Univer-
sal Focusing Bellows 2 or on the TELEVIT follow-focus device. . . . .   11904 _____

400 mm TELYT-V f/6.8

for the VISOFLEX 3
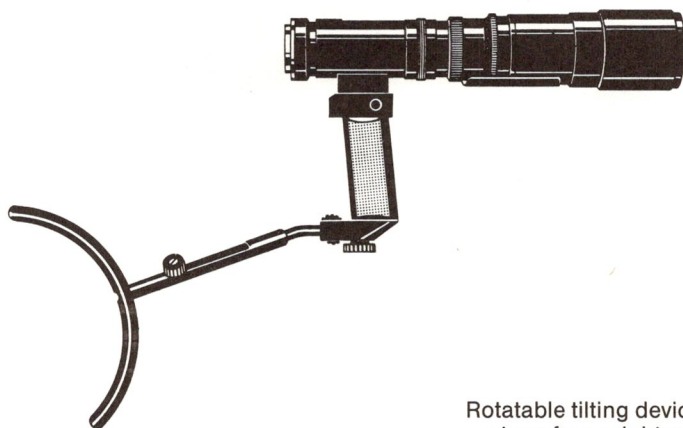
Rapid-action lens of long focal length

Angle of view: 6°
Number of elements: 2 (1 component)
Filter size: Series 7 (in filter slot)
Internal thread: M 72 x 0.75
Click-stops (between f/8 and f/16
  also ½ values)
Smallest aperture: f/32
Focusing range: ∞ to 3.6 m (11 ft 10 in)
Follow-focus device (sliding front part of
  the lens in parallel guide, push-button
  for releasing the focusing mechanism)
Smallest object field: 158 x 236 mm
  (6.2 x 9.3 in approx.) (about 1:6.5)

Rotatable tilting device with click-
  stops for upright and horizontal
  format
Lens can be dismantled for transport
Hard-chrome LEICA-M rapid
  bayonet changer
Black finish
Filter slot with cover, for Series 7
  filters
Built-on, extensible lens hood
Tripod thread: A ¼ and A ³/₈ and
  DIN 4503 (¼ in and ³/₈ in)
Universal handgrip with shoulder
  stock, detachable
Lens cap dia.: A 78 mm
Length from bayonet flange: 365 mm
Diameter: 78 mm
Weight: 1.83 kg

Code Number

400 mm TELYT-V f/6.8 consisting of
Lens unit of the 400 mm TELYT-V f/6.8. . . . .   11 903 _____
Lens tube . . . .   11 905 _____
Universal handgrip with shoulder stock. . . . .   14 188 _____

400 mm TELYT-V f/6.8 complete
with lens hood, lens cap and rear cover. . . . .   **11 966** _____
(Replacement lens covers and Series 7 filters, see from page 120)

Recommended accessories:
Extension tube (60 mm) for the 400 mm TELYT-V f/6.8 to extend the
focusing range (near focusing) . . . .   14 182 _____
With one extension tube: nearest focusing distance 353-226 cm
                           (11 ft 7 in – 8 ft 7 ft 5 in)
Smallest object field: 8 x 12 cm (3.1 x 4.7 in)

Carrying strap for heavy equipment . . . .   14 130 _____

560 mm TELYT-V f/6.8

For the VISOFLEX 3
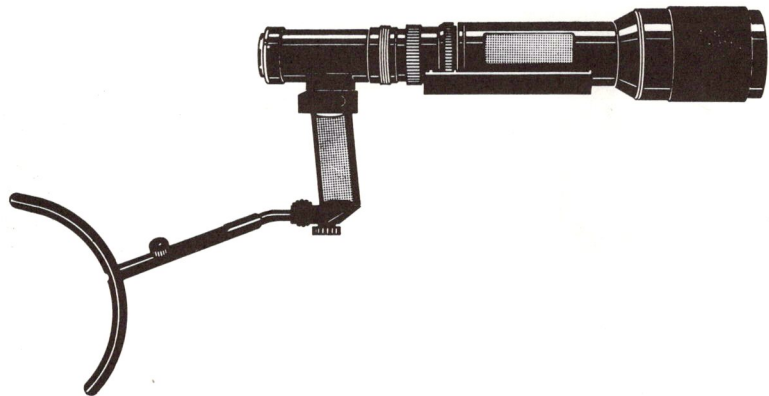
Rapid-action lens of long focal length

Angle of view: 4.3°
Number of elements: 2 (1 component)
Filter size: Series 7 (in filter slot)
Click-stops (between f/8 and f/16 also ½ values)
Smallest aperture: f/32
Focusing range: ∞ to 6.4 m (21 ft)
Follow-focus device (sliding front part of the lens in parallel guide, push-button for releasing the focusing mechanism)
Smallest object field: 224 x 336 mm (8.8 x 13.2 in) (about 1:9)
Rotatable tilting device with click-stops for upright and horizontal format
Lens can be dismantled for transport

Hard-chrome LEICA-M rapid bayonet changer
Black finish
Filter slot with cover, for Series 7 filters
Built-on extensible lens hood
Tripod thread: A ¼ and A ³/₈ and DIN 4503 (¼ in and ³/₈ in)
Universal handgrip with shoulder stock, detachable
Lens cap dia.: A 98 mm
Length from bayonet flange: 510 mm
Diameter: 98 mm
Weight: 2.3 kg

560 mm TELYT-V f/6.8 consisting of:	Code Number	
Lens unit 560 mm TELYT-V f/6.8	11 903	_____
Lens tube	11 905	_____
Universal handgrip with shoulder stock	14 188	_____

560 mm TELYT-V f/6.8 complete
With lens hood, lens cap and rear cover .... **11 864** _____

(Replacement lens covers and Series 7 filters see from page 120)

Recommended accessories:
Extension tube (60 mm) for the 560 mm TELYT-V f/6.8 to extend the focusing range (near focusing) .... 14 182 _____
With one extension tube: nearest focusing distance 641-396 cm (21 - 13 ft)
Smallest object field: 11.2 x 16.8 cm (4.4 x 6.6 in)

Carrying strap for heavy equipment .... 14 130 _____

800 mm TELYT-S f/6.3
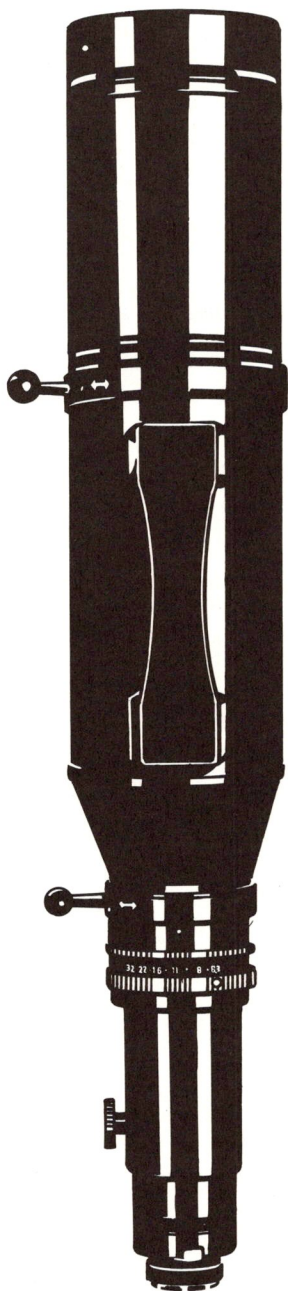
Extreme telephoto lens with LEITZ special glasses for optimum optical performance

Angle of view: 3°
Number of elements: 3 (1 component)
Filter size: Series 7 (in filter slot)
Click-stops (between f/6.3 and f/22 also ½ values)
Preset diaphragm
Smallest aperture: f/32
Focusing range: ∞ to 12.5 m (41 ft)
Smallest object field: 320 x 480 mm (1 ft 0.6 in - 1 ft 7 in) (about 1:13)
Rapid focusing by means of an easy-grip rotary knob and parallel guide
Lens can be dismantled into 5 parts for transport in a special metal case – assembly and dismantling by means of bayonet and marked locking rings with levers
Sturdy carrying handle for assembled lens
Lining-up device in the shape of a sports finder with rear and front sight and field-of-view orientating device for upright and horizontal format, protected against damage by integration with the carrying handle.
Detachable and lockable lens hood.
Slot with cover for Series 7 filters
Tripod thread A ¼ and A ³/₈, DIN 4503 (¼ in and ³/₈ in) for robust tripods.
Support ring, rotatable with tripod thread A ¼ (DIN 4503) (¼ in) for additional monopod
Black finish
Hard-chrome LEICA R rapid bayonet changer
Rotatable tilting device for upright and horizontal format, with click-stops.
Lens cap dia.: A 152 mm
Length from bayonet flange: 768 mm
Diameter: 152 mm
Weight: 6.86 kg

Code Number

800 mm TELYT-S f/6.3, complete, with special metal transport case .... on request _____

Accessories for the LEICA M lenses

Brilliant finders and cases

Right-way-round brilliant image.
Bright field-of-view frame faded in.

Brilliant finder for 21 mm lenses
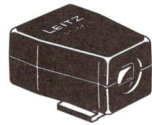
	Code Number
Reproduction scale 0.3, with case..............................	**12012** _____
Case (replacement).......................................	14628 _____

Brilliant finder for 28 mm lenses
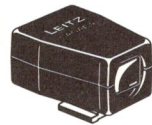
Reproduction scale 0.5 with line marking for parallax compensation below about 2 m, with case..................	**12017** _____
Case (replacement).......................................	14628 _____

Brilliant finder for 90 mm lenses
Object area at natural size, parallax compensation and marking for reduction of field of view below about 2 m............... **12025** _____

Leather case for viewfinders
Brilliant finders for 21 mm and 28 mm focal length .... 14617 _____

Accessories for the LEICA M lenses

LEICA M-lens	Code No.	Lens hood	Cap for lens hood	Lens cap	Rear cover	Filters		Internal thread	A Ø in mm
						or			
						screw thread	Series		
21 mm f/2.8 from No. 2 993 701	11 134	12 537	—	14 267	14 269	E 49		M 39 x 0.75	51
28 mm f/2.8 from No. 2 977 551	11 804	12 536	—	14 267	14 269	E 49		M 49 x 0.75	51
35 mm f/2 from No. 2 974 251	11 310	12 524	—	14 268	14 269	E 39		M 39 x 0.5	42
35 mm f/1.4 from No. 2 166 701	11 870	12 504	—	14 143	14 269	Series 7 in lens hood		—	42
50 mm f/2 from No. 2 915 801	11 819	12 538	—	14 268	14 269	E 39		M 39 x 0.5	42
50 mm f/1.4	11 114	12 586	14 037	14 123	14 269	E 43		M 43 x 0.5	45
50 mm f/1	11 821	12 519	—	14 205	14 269	E 58		M 58 x 0.75	61
75 mm f/1.4	11 814	12 539	—	14 266	14 269	E 60		M 60 x 0.75	62
90 mm Tele f/2.8	11 800	11 250	11 252	14 268	14 269	E 39 or S. 5.5 with adap. 11 251		M 39 x 0.5	42
90 mm f/2 from No. 2 997 001	11 136	built-in	—	14 133	14 269	E 49		M 49 x 0.75	63.7
135 mm Tele f/4	11 851	12 575	14 033	14 268	14 269	E 39		M 39 x 0.5	42
135 mm f/2.8 from No. 2 788 927	11 829	built-in	—	14 133	14 269	E 55		M 55 x 0.75	63.7
65 mm f/3.5 from No. 2 378 901	11 162	built-in	—	14 153	14 074	Series 6 with adapter 14 160		M 44 x 0.75	56
200 mm f/4	11 063	built-in	—	14 261	14 050	E 58		M 58 x 0.75	72
280 mm f/4.8 from No. 2 340 953	11 914	built-in	—	14 079	14 269	Series 8 with adapter 14 169		M 66 x 0.75	76
400 mm f/6.8	11 966	built-in	—	14 152	14 269	Series 7 in filter slot		M 72 x 0.75	78
560 mm f/6.8	11 864	built-in	—	14 295	14 269	Series 7 in filter slot		—	98
800 mm f/6.3	on request	built-in	—	on request	14 269	Series 7 in filter slot		—	152

Code Number

Rear cover for LEICA M lenses . . . . 14 051 _____

Filters

Filters	Screw-in					
	E 39	E 41	E 43	E 44	E 48	E 55
UV	13131	13205	13206	—	13330	13373
Yellow	13086	13160	13161	—	13295	13236
Yellowgreen	13096	—	13171	—	13305	13391
Orange	13101	—	13176	—	—	13312
Red	—	13190	13191	—	—	—
Infra-red	—	—	13196	—	—	—
Blue	13098	—	13173	—	13307	—
Circular polarizing	—	—	—	—	—	13357
Polarizing	13352 A 42	—	13351 A 45	13358	—	13374

	Screw-in		Series		
	E 58	E 60	6	7	8
UV	13270	13381	13012	13009	13018
Yellow	13235	—	13013	13006	13019
Yellow-green	13245	13392	13014	13007	13021
Orange	—	13383	13011	13008	13017
Red	13255	—	—	—	—
Infra-red	—	—	—	—	—
Blue	—	—	—	—	—
Circular polarizing	—	—	—	13370	13372
Polarizing	—	—	—	—	—
Filter adapter	—	—	14160	14161	14169

Code Number

Transparent plastic containers (replacement)
for Series 6, E 39, E 41 and E 43 filters.   14612
for Series 7 and 8, E 48 and E 58 filters   14614

Lens hoods (replacement)

For the 21 mm f/2.8 lens . . . . **12537** _____

For the 28 mm f/2.8 lens from Serial No. 2977551 . . . . **12536** _____

For the 35 mm f/2 lens from Serial No. 2974251 . . . . **12524** _____

For the 35 mm f/1.4 lens from Serial No. 2166701 . . . . **12504** _____

For the 50 mm f/2 lens from Serial No. 2915801 . . . . **12538** _____

For the 50 mm f/1.4 lens . . . . **12586** _____
Cover for same . . . . 14037 _____

For the 50 mm f/1 lens . . . . **12519** _____

For the 75 mm f/1.4 lens . . . . **12539** _____

For the 90 mm f/2.8 lens, rubber, E 39 . . . . **11250** _____
Cover for same . . . . 11252 _____

For the 135 mm f/4 lens . . . . **12575** _____

Cover for same . . . . 14033 _____

Contents

Copying outfits

Copying stand
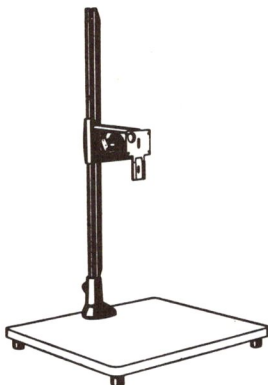
Suitable for:
LEICA M cameras in conjunction with the VISOFLEX 3, with or without Universal Focusing Bellows 2, with or without winder.
All LEICAFLEX and LEICA R models with or without Universal Focusing Bellows R.
LEICA R4-MOT with Motor Winder R4, Motor Drive R4 and Tripod holder 14284, with or without Universal Focusing Bellows R. 35 mm s.l.r. cameras and medium-format cameras with tripod bush A ¼ DIN 4503 (¼ in).
Consisting of:
46 x 50 cm baseplate, 80 cm column with parallel guide and flange, carrier with coarse and fine adjustment.
Weight: 6.26 kg

Code Number

Copying stand **16 707**

Accessories:
Near-focusing devices see page 69
Illumitran see page 133
Object table see page 132

REPROVIT IIa
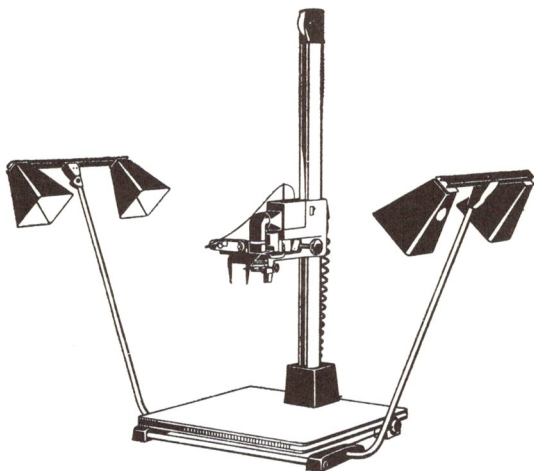
Universal copying outfit for the reproduction of flat or three-dimensional objects, designed for the use of the LEICA MD-2 special camera.

Detailed description page 135.

REPROVIT IIa

Consisting of:
Baseplate 67 x 68 cm, connecting cable, column with parallel guide and counter-weight, carrier arm with built-in projection device, coarse and fine adjustment and magnet release, exposure timer.
Special changing slide with scale, settings from DIN A2 to 1:1. Extension of the range with the column rotated through 180°. Designed for the LEICA MD-2. Drive fork and aperture lever for the automatic stopping-down of the 50 mm FOCOTAR® lens.

90° 5x angled magnifier
50 mm FOCOTAR f/4.5 lens
4-lamp illuminator
4 distance rods

	Code Number	
Basic outfit of the REPROVIT IIa complete (220 v)	**16 788**	_____
Ditto, for 110 v a.c....	**16 789**	_____
Dust cover for the REPROVIT IIa..................................	16 608	_____
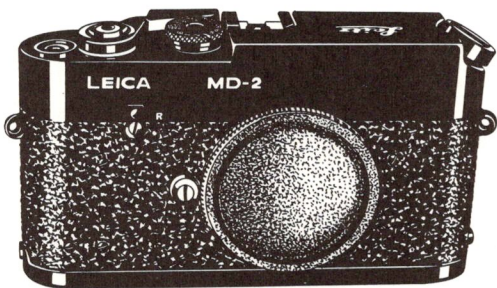
The LEICA MD-2

Special 35 mm camera for copying and microphotography.
Technical data as for the LEICA M4-P
But without: viewfinder
              rangefinder
              field-of-view selector
Possibility of fitting with the recording device through the special baseplate for the body of the LEICA MD-2 with light-tight slot for the introduction of recording strips for the photographic identification of exposures directly on the film. Strip, width 5.5 mm, accepting handwriting (numbers and symbols). The strip can be introduced into the camera. Covers a field of about 3.5 mm width along the length of the 24 x 36 mm film format, on which the identifying text will appear after the exposure.
Dimensions: height: 77 mm, length: 138 mm, depth: 36 mm
Weight: 0.48 kg

Code Number

LEICA MD-2, Black chromium finish
Complete with body cover and flash socket cover .... **10 105** _____

Recording device consisting of:
Special baseplate for the LEICA MD-2 (including 10 marking strips) ... 14 142 _____
1 packet of 100 marking strips..................................... 14 170 _____

Accessories for the REPROVIT® IIa

Universal camera holder

For attachment remove the changing slide and cover of the illuminator from the REPROVIT IIa, attach the camera holder and the new cover.
Suitable for:
LEICA M cameras in conjunction with the VISOFLEX 3, with or without Universal Focusing Bellows 2, with or without winder.
All LEICAFLEX and LEICA R models with or without Universal Focusing Bellows R.
LEICA R4-MOT with Motor Winder R4 and tripod holder 14 284, with or without Universal Focusing Bellows R. 35 mm s.l.r. cameras and medium-format cameras with tripod bush A ¼ DIN 4503 (¼ in).

Code Number
Universal camera holder for the REPROVIT IIa . . . . **16 798** _____
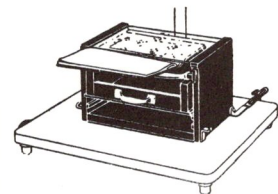
Framing box

for rapid, perfectly plane position of book pages, maps, drawings of DIN A 3 (29.7 x 42 cm) object field

Code Number
Framing box . . . . **16 761** _____

Light box

for the reproduction of slides, negatives, x-ray originals, stained-glass objects,
as background illumination for reproductions of 3-dimensional objects,
for the convenient sorting of negatives and slides

Technical details
Grey metal housing, space-saving trapezoidal shape
Large working area because of the trapezoidal form; illuminated area and sur-
rounding field arranged at the same level (no disturbing edges)
Low design produces favourable conditions for reproduction
400 x 614 mm illuminated area (adequate for instance for 96 50 x 50 mm slides).
2 strip lights such as Philips TL-D 18W/83 or Osram L-18W/31, low heat generation
on the working plate, brightness about 9000 lux, colour temperature about 3200°K.
Because strip lights do not have a continuous spectrum the light box cannot be
recommended for reproductions in colour if faithful colour rendering is essential.
For colour reproductions in transmitted light (duplicating of colour transparancies)
the Illumitran is particularly well suited (see page 133).
420 x 437 mm glass sheet for keeping the originals flat.
2 built-in carrying handles
on/off switch
4 black cloths for the elemination of stray light

Code Number

Light box . . . . **16792** _____

Other accessories

Four spacing rods, can be screwed into the threads M 8 of the carrying handles for the use of a glass plate.
Spacing rod available from our Technical Service Department, Item No. 042-721.020.
The glass plate for same can be obtained by the customer to our dimensions from a glazier.

Code Number

Object stage for the production of slide copies and photography within the magnification range . . . . **16786** _____

25 mm REPRO-PHOTAR® f/2 with special ring for up to 4x magnification (with 3 extension rings 16 615 about 7x) . . . . **16787** _____

REPRO extension ring (height 26 mm)
(2 REPRO rings in conjunction with the 50 mm FOCOTAR permits settings within the range from 1:1 to 2:1) . . . . **16615** _____

5x low-power magnifier, straight (image inverted and reversed) . . . . **16486** _____

90° 5 x angled magnifier (image inverted) (replacement) . . . . **16488** _____

Illumitran-D*
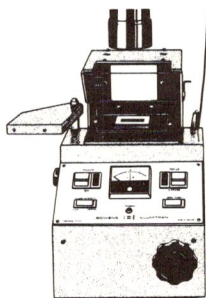
Semi-automatic slide copier   ILLUD _____

Universal holder for all film formats up to 6 x 6 cm   UNIHA _____

9 x 12 cm sheet-film attachment   PFASZ _____
With extension cable for photo cell   VERLE _____

Accepts:
LEICA R4-MOT with Focusing Bellows-R and 100 mm MACRO-ELMAR f/4
as well as the copying stand for same.

Contrast control unit   _____
Filter   _____
Flash firing button   _____
Flash tube   _____
1 pair of lamps for ILLUD   _____

Description and technical data of the instruments

REPROVIT IIa
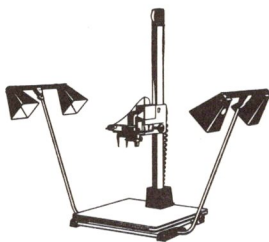
Type of instrument:
Universal copying outfit for the reproduction of flat or three-dimensional objects, designed for the use of the LEICA MD-2 special camera.

Consisting of:
67 x 68 cm baseplate: with electrical installation, and four non-slip rubber feet.

4 spacing rods for shadowless photography.

Column with parallel guide and counterweight.

Carrying arm with self-locking vertical adjustment (coarse and fine) on the column, built-in projection device for 150 W 220 v projector lamp with pin-type base (such as Osram No. 58.8295, base G 17 q), built-in magnet release for vibration-free release of the camera shutter by the electric exposure timer.

Special changing slide with bellows and rack-and-pinion drive for the continuous adjustment of the lens for object sizes from DIN A 2 (about 420 x 594 mm) to the reproduction scale 1:1, 50 mm FOCOTAR-2 f/4.5 lens; drive fork and lever for the automatic aperture adjustment when the changing slide is used; series 6 filters can be attached to the aperture lever with the aid of an adapter (thread M 44 x 0.75); automatic switch-over from projection illumination to 4-lamp illumination and back when the changing slide is being operated. The exposure is locked when the changing slide is not in the exposure position; mirror housing for deflecting the projection light onto the focusing screen and through the lens, interchangeable with 5x angled magnifier.

4-lamp illuminator (200 W frosted lamps), attached to two carrier arms for uniform illumination; anti-reflection cloth.

Electric timer for exposures from 0.5 to 60 sec, can be switched to exposure times from 5 seconds to 6 minutes.

Function:
The instrument is switched on with a rocker switch on the baseplate.
Lock the LEICA MD-2 onto the changing slide in the projection position, set the shutter speed dial of the LEICA MD-2 at "B", attach the cable release to the camera. Determine the object field size with the aid of the projection illumination. Simultaneously focus by changing the bellows extension.

Push the changing slide into the exposure position. This switches the projection illumination off, the 4-lamp illumination on, and at the same time closes the aperture to the preselected value.
Set the shutter speed on the exposure timer and release the shutter.

Contents:

FOCOMAT V35 AUTOFOCUS

Compact enlarger for colour and black-and-white with automatic and 40 mm WA-FOCOTAR f/2.8 wide-angle lens
for negative formats 24 x 36 mm
      28 x 28 mm
      13 x 17 mm and
      35 mm transparencies (external format 50 x 50 mm)
with 12v 75W tungsten halogen lamp with cold-light mirror,

Extremely large automatic enlarging range 3-16x
with the 40 mm A-FOCOTAR f/2.8

30% more enlargement and 70% more picture area (compared with a 50 mm lens).

FOCOMAT V35 AUTOFOCUS
Complete with
built-in transformer, mains cable, 75W 12v tungsten halogen lamp, cold-light mirror, 24 x 36 mm negative holder, adjusted lens, interchangeable LEITZ module.

Detailed description see page 149.

Code Number

With 40 mm WA-FOCOTAR f/2.8
Black-and-white version
– 220v (with black-and-white module) .... **17405** _____
– 110/250v (with black-and-white module) .... **17407** _____

Colour version
– 220v (with colour module) .... **17409** _____
– 110/250v (with colour module) .... **17411** _____

with 50 mm YSARON f/3.5
black-and-white version
– 220v (with black-and-white module) .... **17404** _____

Colour version
– 220v (with colour module) .... **17408** _____

Accessories
for the FOCOMAT V35 AUTOFOCUS

Modules:
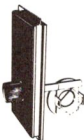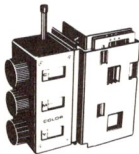
Colour module   black-and-white module

	Code Number
Colour module...	**17 428** _____
Black-and-white module...	**17 427** _____
Vario-contrast module....................................	in preparation _____

Negative/transparency holder:

Code Number

24 x 36 mm negative holder (replacement, one-sided glass pressure..	**17 420** _____
28 x 28 mm negative holder......................................	**17 423** _____
13 x 17 mm negative holder......................................	**17 424** _____
Glassless 24 x 36 mm negative holder	**17 431** _____
24 x 46 negative holder with two-sided glass pressure........	in preparation _____

	Code Number
Holder for 35 mm slides (50 x 50 mm external dimensions)...........	**17 419** _____
Film troughs (2) for the enlarging of uncut films	**17 425** _____

Diffusion disc:

Diffuse disc for integrating exposure measurement. To be swung in front of the lens before measurement.

Code Number

Diffusion disc. **17 430**

Other accessories:

Code Number

Red filter (to be swung in front of the lens, can also be used together with the diffusion disc). **17 440**

Dust cover for the instrument. **17 429**

Adapter ring for 1:1 reproduction scale (26 mm). **16 615**

Adapter ring for 1:1.3 reproduction scale (8 mm) **17 439**

(up to 3 adapter rings can be combined, reproduction scale down to 1.15:1).

Replacement lamps:
Obtainable from:
Technical Service Centre, POB 2027, Ernst Leitz Wetzlar GmbH, D-6330 Wetzlar, Germany, or the national Leitz agency.
Specifications: 75W/12v, base GZ 6,35, 038.101.128.000

Conversion of an existing instrument from the 50 mm YSARON f/3.5 to the 40 mm LEITZ-WA-FOCOTAR f/2.8 high-quality lens by Technical Service Centre Ernst Leitz Wetzlar GmbH, or authorised workshops of the Leitz agencies.

FOCOMAT IIc
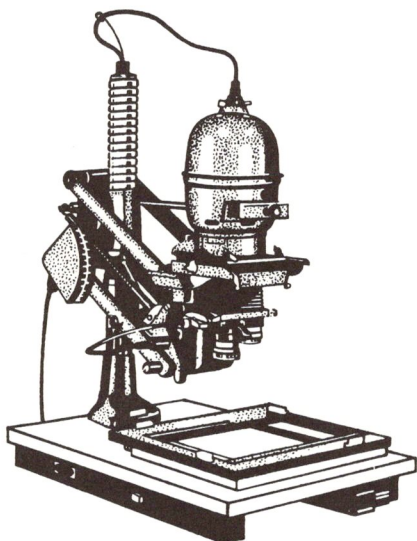
Type of instrument:
Universal enlarger für colour and black-and-white
For Formats from 13 x 17 mm to 60 x 90 mm
For electron micrographs, holder up to format 79 x 93 mm.
Two automatic focusing ranges, adjustable:
up to 40 x 40 m format: 2 to 11x with the 60 mm FOCOTAR f/4.5, from the 45 x 60 to
the 60 x 90 mm format: 1.5 – 6x with the 100 mm FOCOTAR-2 f/5.6.
With 150 W high-voltage enlarger lamp

Manual settings:
Up to 1:1 enlarging scale, reductions to 1:2.5
Through raising of the lamp housing on the column with the 60 mm FOCOTAR 16x
and with the 100 mm FOCOTAR-2 up to 8.6x.

FOCOMAT IIc

Complete with 53.5 x 59 cm baseplate, 80 cm column, dia. 6 cm, parallelogram guide, lamp housing, double condenser,

60 mm FOCOTAR f/4.5 and 100 mm FOCOTAR f/5.6 special enlarging lenses with lens changing slide with automatic switch-over of the automatic focusing mechanism,

24 x 36 mm and 6 x 6 cm negative masks,

150 W lamp ready for mains connection, swivelling red filter

Without masking frame

Detailed description: see page 155.

Code Number

FOCOMAT IIc, 220 v version	**IIc**	**17 860** _____
In CSA (Canadian Standard Association) Safety Version (100 v)		17 613 _____
FOCOMAT IIc-COLOR, complete (including transilluminated enlargement indicator and slide for 12 x 12 cm correction filters).............		**17 870** _____
In CSA version (Canadian Standard Association safety regulations)		17 614 _____

Variants of the instrument

FOCOMAT IIc for the attachment of the **Agfa Color Head** (220 v) ..	on request _____
In CSA version (110 v)	on request _____
Adapter	17 775 _____
60 mm dia. adapter ring..................................... For the use of the Agfa VARIOMAT	17 633 _____
FOCOMAT IIc for attachment of the **Super-Chromega D** Dichroic II (220 v)	on request _____
In CSA version (110 v) .... Adapter PSL Hamburg	on request _____
FOCOMAT IIc for the attachment of the **Durst CSL 450** (220 v) ...	on request _____
In CSA version (110 v)	on request _____
FOCOMAT IIc for the attachment of the **Wallner Color Head** (220 v) Adapter Wallner	on request _____
In CSA version (110 v)	on request _____

Accessories for the FOCOMAT IIc

Negative masks for format: Code Number _____

13	x 17	mm...................................	17897	_____
18	x 24	mm...................................	17899	_____
24	x 24	mm...................................	17887	_____
28	x 28	mm...................................	17898	_____
24	x 38	mm (replacement)	17888	_____
3	x 4	cm	17889	_____
4	x 4	cm	17890	_____
4.5 x	6	cm	17891	_____
4	x 6.5	cm	17892	_____
6	x 6	cm (replacement)	17893	_____
14	x 20	mm "F 16".............................	17857	_____
32	x 45	mm "M"................................	17858	_____
22.5 x 32		mm "M ½"..............................	17859	_____

Accessories for single negatives
Insert for the fitting of the double-glass plate and additional helical
mount click-stop .... 17712 _____
10 x 22 cm double-glass plate for same........................... 17710 _____

Electron micrographs
● Effective format 62 x 65 mm
Insert with enlarged recess for the double-glass plate and additional
helical focusing mount click-stop .... 17716 _____
10 x 22 cm double-glass plate for same........................... 17710 _____
62 x 65 mm negative mask for same................................ 17803 _____

● Effective format 79 x 93 mm
Insert with enlarged recess and graduated filter for the double-glass
plate and additional helical mount click-stop .... 17808 _____
10 x 22 cm double-glass plate for same........................... 17710 _____

● Effective format 76 x 95 mm
Insert for plates in the 3 ½ x 4 in (83 x 102 mm) format with graduated
filter and helical focusing mount click-stop........................ 17717 _____

Glass negative holder

Glass negative holder for the 6.5 x 9 and 7 x 7 cm format............. 17869 _____

Graduated filter for the FOCOMAT IIc-COLOR from 6 x 6 .... **17855** _____
(Also recommended for black-and-white contrasty paper)

Film pressure device

Film pressure device
With one-sided glass pressure (specially treated for the 24 x 36 mm
format. . . . . **17876** _____

Additional setting device for the extension of the reproduction scale
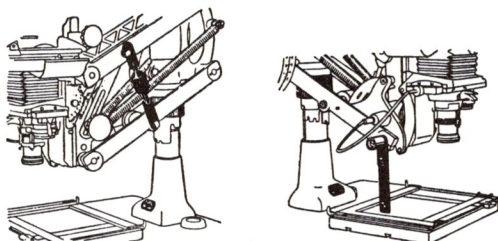
Additional setting device for 1:1 and reductions (without 16617 and
16615). . . . . **17861** _____

Adapter tubes for extending the reproduction scale

Adapter tube for the 60 mm FOCOTAR for reductions down to 1:2.5,
i.e. from the 6 x 9 cm to the 24 x 36 mm format . . . . 16617 _____
Adapter tube for the 100 mm FOCOTAR-2 for the 1:1 reproduction
scale. . . . . 16615 _____

Device for correcting converging verticals
Film holder tilting device with additional bellows, film holder (specially
treated) . . . . **17884** _____

Dust cover for the FOCOMAT IIc or IIc-COLOR. . . . . **17606** _____

High-voltage enlarger lamps (available from Technical Service Centre,
E. Leitz Wetzlar GmbH, P.O.B. 2027, D-6330 Wetzlar, Germany, under
the following order numbers):

Lamp	Code Number	
150W/110v.	38 127 001-002	_____
150W/125v.	38 127 001-005	_____
150W/220v.	38 127 001-014	_____
(part of the basic outfit)		
250W/110v.	38 127 002-002	_____
250W/125v.	38 127 002-005	_____
250W/220v.	39 127 002-014	_____

Accessories for enlargers

FOCOMAT V35 AUTOFOCUS/FOCOMAT IIc

LEITZ FOCOTIMER

Electronically controlled exposure timer with digital display. The long-time range can also be used for the control of developing processes.

Code Number

FOCOTIMER 110v version .... 17 432 _____
FOCOTIMER 220v version .... 17 433 _____
Foot switch for the FOCOTIMER and FOCOMETER................... 17 434 _____

LEITZ-FOCOMETER

Automatic electronic exposure meter for black-and-white and colour with timer. Electronic light measurement with automatic conversion into the associated exposure time.
Storage and digital display of the calculated exposure time.
Choice of selective and integrating measurement.

Integrating measurement with the FOCOMAT V35 AF through diffusion disc (Code No. 17 430) in front of the lens.
The long-time range can be used for the control of developing processes.

Code Number

FOCOMETER 110v version.. 17 435 _____
FOCOMETER 220v version.. 17 436 _____
Foot switch for FOCOMETER and FOCOTIMER .... 17 434 _____

Voltage stabiliser
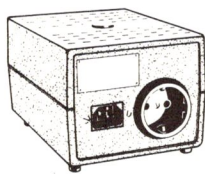
Recommended for colour enlarging in the event of mains fluctuations.
For the FOCOMAT V35 AF only.

Voltage stabiliser: 115 v version .... **17 437** _____
Voltage stabiliser: 230 v version .... **17 438** _____

Masking frames
(For all FOCOMAT models)

Code Number

24 x 30 cm (10 x 12 in) universal masking frame
(height 25 mm), 4 adjustable masking strips, combined feet/metre scale **17 584** _____

30 x 40 cm (12 x 16 in) masking frame, (height 30 mm) with adjustable
masking strips and adapter ring for the column (for FOCOMAT Ic only)
to compensate for the greater thickness of the frame .... **17 586** _____

Masking frame
for the English system (inch):
12 x 16 in masking frame (height 1.18 in) .... **17 630** _____

Description and technical data of the instruments

FOCOMAT V35 AUTOFOCUS
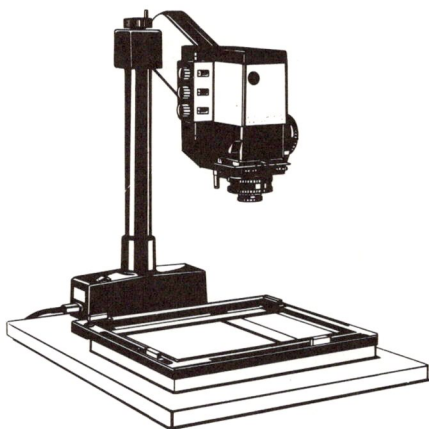
Type of instrument:
Compact enlarger for colour and black-and-white

with automatic focusing

and 40 mm WA-FOCOTAR f/2.8 wide-angle lens.

for negative formats 24 x 36 mm,
                           28 x 28 mm,
                           13 x 17 mm and
                           35 mm transparencies (external format 50 x 50 mm)

with 12v/75W tungsten halogen lamp with cold-light mirror

Extremely large automatic enlarging range 3-16x

with the 40 mm WA-FOCOTAR f/2.8

30% more enlargement and

70% more picture area (compared with a 50 mm lens), at the same working distance to the base board

Negative stage:

For negative holder with glassless support and one-sided glass pressure (with anti-Newton treated surface), interchangeable for the formats:
24 x 36 mm* (part of the basic outfit).
28 x 28 mm
13 x 17 mm

For the 24 x 36 mm glassless negative holder

For the 24 x 36 mm glass negative holder (two-sided glass pressure)

For 35 mm transparency holders (external format 50 x 50 mm). Convenient, quick colour enlarging of slides. After once-for-all determination of sharpness, automatic focusing within the 3-16x enlarging range.

Screw-on film troughs.

Technical description of the film stage:

Diecast part fixed to the frame of the enlarger head,
film stage alignment parallel to the baseplate, at right angles to the optical axis.

Maximum width 28 x 36 mm.
Spring-loaded pressure on the negative and slide holder through oscillating pressure plate.
Quick and easy insertion of the negative or slide holders in the enlarger head through raising the pressure plate.
When the pressure plate is raised, film strips can be easily moved to the next frame.
Convenient arrangement of the controls on the right and left.
Integrated format masking, continuously adjustable through rotary knobs on the front: adjustment range:
from about 36 mm to 3 mm in the x direction
and
from about 28 mm to 6 mm in the y direction
The negative strips of the various formats can be inserted without risk of damage and fixed in position. Single negatives, too, can be positioned in the holder.
When the anti-Newton disc is damaged, the upper pressure plate can be interchanged.

---

* With frame number windows

Automatic precision focusing mechanism
High-precision, durable AUTOFOCUS device.
Wrong/imprecise focusing prevented by automation.
Quick, continuous focusing within the automatic enlarging range without manual refocusing.
Long AUTOFOCUS range with the 40 mm WA-FOCOTAR f/2.8 for enlargements from 72 x 108 mm to 384 x 576 mm, i.e. focusing range of 3x to 16x enlargement.
Enlargement display between the vertical-adjustment arm and the enlarger head illuminated by means of fibre optics. Can be switched for separate display of the enlarging ratios of 40 and 50 mm lenses. Convenient arrangement of this display permits reading of the scale also in a sitting position.
Adjustment range of the focal plane from 0 to 60 mm for the adaptation of the automatic focusing mechanism to various heights of masking frames. When the column is raised to 60 mm = 17.5x magnification (manual on the baseboard).
Large area of the baseboard permits easy and convenient movement of the masking frame.
"Giant enlargements" through swivelling the column (floor projection).
The AUTOFOCUS mechanism saves time and material.
Ideal for part-enlargements.
The lens focusing mechanism consists of a stainless-steel precision cam adjusted in the factory.

40 mm WA-FOCOTAR f/2.8 lens
High-performance wide-angle enlarger lens in the top quality class (WA = wide angle).
Enlarger lens of the world-famous FOCOTAR series specially computed for the FOCOMAT V 35 AUTOFOCUS, incorporating highly refractive LEITZ glasses.
Number of elements: 5, modified Gauss type, UV absorption.
f/2.8 to f/16 click-stops at full aperture values, can be switched over to continuous adjustment. Illuminated aperture scale can be read from the front.
High contrast, high resolving power, very good illumination and excellent colour differentiation ensure brilliant reproduction.
Optimum correction at 11x enlargement.
Optimum reproduction already from f/5.6, which means shorter exposure times and with giant enlargements reduced danger of enlarger shake.
Easy focusing outside the automatic range with the helical focusing mount on the instrument.

FOCOMAT V 35 AUTOFOCUS
Also available with the 50 mm YSARON F/3.5 lens, fully adjusted.
4-element lens of good optical performance, click-stops, illuminated aperture scale – no continuous adjustment.
Automatic focusing range 3 x to 12x.
Subsequent modification for the 40 mm WA-FOCOTAR f/2.8 is possible.

Enlarger head
LEITZ illuminating system developed according to the latest standard of illuminating technique.
Light deflection on the principle of Ulbricht's Globe in the mixing chamber of neutral polyalkene foam ensures: high light utilisation
optimum illumination
unsurpassed colour homogeneity

The diffused illuminating system with soft illumination is eminently suitable for black-and-white and for colour work.

LEITZ modules for colour and black-and-white
In the black-and-white version of the FOCOMAT V35 AUTOFOCUS the red filter forms part of the module, which is inserted in the enlarger head between the lamp and the light chamber.

The red filter can be inserted into and removed from the optical path with a rotary knob.

Quick and simple exchange of the black-and-white module against the colour module.
Colour module with dichroic filters controlled with cams.
The substractive colour correction filters can be continuously adjusted.
The filters (Y, M, C) can be simultaneously removed from the optical path with preservation of the programmed filter values, and, needles to say, reintroduced in the programmed state.
The filter density range for Y, M and C extends from 0 to 200 densitometric filter values (corresponding to 288 Kodak CC densities or 400 Agfa densities).

Controls with display scale for density values of the dichroic filters.
The scales are colour coded, illuminated, and arranged in the sequence Y, M, C from bottom to top.
When the colour module is inserted the controls are on the left of the enlarger head.
Convenient operation from a sitting position.
High linearity of the density curves permits accurate adjustment of the filter values throughout the entire range.
Vario-contrast module for the processing of Multigrade Paper (in preparation).
Gradation setting from soft to hard.
Simple handling with "single-knob" control, identical exposure times when the gradation is changed.

Excellent cooling system
The cold-light mirror of the horizontally arranged tungsten halogen lamp deflects the heat rays towards the rear.

Optimum heat dissipation already at the lamp mount by means of a special working principle (cooling ring).
This cooling ring prolongs the life of the lamp.

In addition, infra-red suppression filter on the front of the mixing chamber – reflects heat rays.
The infra-red suppression filter is matched for the spectral sensitivity of the colour materials and suppresses radiation only in the infra-red region.

A deflecting baffle (DBGM design registered) on the outside of the mixing chamber removes further heat from the chamber.

High stability

The FOCOMAT V35 AUTOFOCUS is even more robust than the existing FOCOMAT lc.

Rigid steel column of circular cross section in reflection-reducing black finish, can be rotated in the large foot of the instrument. Dia.: 60 mm. Total height from base-board to the vertical-adjustment arm: 600 mm.

Asymmetrically arranged aluminium diecast vertical-adjustment arm, can be rotated on needle bearings round the column.

Lamp housing can be rotated (needle bearing) on the vertical-adjustment arm.

Fully enclosed vertical-adjustment arm. Rolling-band mechanism and diagonal spring ensure rigid parallel guidance of the lamp housing and counter-balance during vertical adjustment throughout the entire range.

A brake, also integrated in the arm, is operated by turning the handgrip. After release of the knob quick and positive adjustment of the vertical-adjustment arm. After the clamping knob has been arrested, the lamp housing remains in the chosen position, absolutely rigidly and free from vibration.

Diecast column foot.

The foot of the column contains the transformer, fuse, on/off switch, voltage selector in the 110-250v version, mains plug and the mechanism for the vertical adjustment. The column can be raised continuously up to 60 mm. Setting by means of a scale.

Large, robust baseboard.

Professional baseboard with white 540 x 590 mm effective area.

Shock-absorbing 4-point support.

Additional stabilisation of the baseboard by means of a profile steel on the underside.

Space for a large packet of enlarging paper under the baseboard.

Electrical data/safety

All electrical cables are wired inside the instrument and fully protected.

The only cable outside the instrument is the mains cable. Low-voltage transformer built into the foot of the enlarger, hence no separate part to be set up.

Transformer input maximum 100W

Input voltage/frequency depending on the instrument version:

220v–50Hz or

110–220v/60–60 Hz

Fuses:

220v   version T315mA

110–250v version T630mA

Tungsten halogen lamp:

12v 75W with cold-light mirror.

Test symbols: VDE-GS, interference suppression symbols, CSA, Demko, Nemko, Semko, and SEV safety symbol.

Dimensions and weights

Height: 600 mm; width: 540 mm; depth: 700 mm

FOCOMAT V35 AUTOFOCUS: 21.8 kg

Colour module: 0.475 kg

FOCOMAT IIc
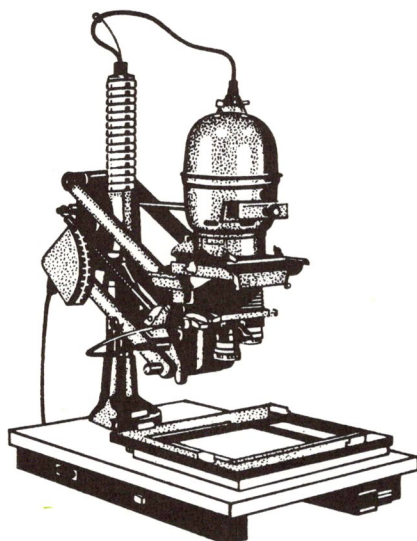
Type of instrument:
Universal enlarger for colour and black-and-white
For formats from 13 x 17 mm to 60 x 90 mm
For electron micrographs, holder up to format 79 x 93 mm
Two automatic focusing ranges, adjustable:
up to 40 x 40 mm format: 2 to 11x with the 60 mm FOCOTAR f/4.4, from the 45 x 60 to the 60 x 90 mm format: 1.5 – 6x with the 100 mm FOCOTAR-2 f/5.6
With 150W high-voltage enlarger lamp

Manual settings:
Up to 1:1 enlarging scale, reductions to 1:2.5
Through raising of the lamp housing on the column with the 60 mm FOCOTAR 16x and with the 100 mm FOCOTAR-2 up to 8.6x.

Film stage
The film stage is aligned parallel to the baseboard and at right angles to the optical axis.
Maximum clearance 60 x 90 mm
Rapid and easy insertion of the negative holders
Negative holder with top and bottom glass plate for roll films and film strips up to 60 x 90 mm negative format. The top glass plate has been specially treated for the prevention of Newton's rings.
Negative masks from the 13 x 17 mm format onwards for insertion in the negative holder.
Negative holder exerting one-sided glass pressure (anti-Newton surface) for the 35 mm format.
Holders for electron micrographs:
Negative holder for 62 x 65 mm effective format
Negative holder for 79 x 93 mm effective format
with graduated filter
and 100 x 220 mm double-glass plate
Glass negative holder for the 65 x 90 mm format
Glass negative holder for the 76 x 95 mm format
with graduated filter

Precision autofocusing mechanism and lenses
Rapid, continuous adjustment of the enlarging ratios without manual refocusing.
The automatic mechanism prevents wrong/inaccurate focusing.
Rapid changeover from one focal length to the other with the lens changing slide
Rapid switch-over of the automatic focusing ranges.
Lens change and switch-over of the automatic lens adjustment are simultaneous
Two cams of hardened special alloy, factory-adjusted, are operated by cam rollers
for both focal lengths.

Range of automatic focusing:
  60 mm FOCOTAR f/4.5 from about 2 to 11x
100 mm FOCOTAR-2 f/5.6 from about 1.5 to 6x
Precise, durable autofocus mechanism.
Saving of time and material through autofocus mechanism
Raising facility of the focal plane up to 30 mm for adjustment of the automatic
mechanism to different heights of the masking frame.
Swivelling of the column for giant enlargements (floor projection) possible.

60 mm FOCOTAR f/4.5
For formats up to 40 x 40 mm
High-performance enlarging lens in the top class
Number of elements: 5, triplet variant with 1 cemented component
Apertures: f/4.5 to f/22 with click-stops at full values
Optimum correction at 5x enlargement
Optimum reproduction at f/8
Up to 16x enlargement on the baseboard outside the automatic focusing range
through raising the lamp housing. Easy focusing outside the automatic range
through helical mount on the instrument.

100 mm FOCOTAR-2 f/5.6
Number of elements: 6, modified Gauss type with 1 cemented component
Apertures: f/5.6 to f/22, click-stops at full values
Enlarger lens of the world-famous FOCOTAR series of high optical quality
Optimum illumination up to 60 x 90 mm format.
Optimum correction at 6x enlargement
Optimum reproduction at f/8
Up to 6.8x enlargement on the baseboard outside the automatic focusing range
through raising the lamp housing (manual).
Easy focusing outside the automatic range with the helical mount on the instru-
ment.

Enlarger head

150 W high-voltage opal enlarger lamp in well-ventilated lamp housing. Instead of the 150 W a 250 W enlarger lamp can be used. To achieve uniform illumination the lamp can be vertically adjusted, rotated, and fixed with 3 fixing screws.

For special tasks (correction of converging verticals) the lamp housing is vertically adjustable.

Double condenser designed for up to 60 x 90 mm format.

The combination of the opal lamp and the condenser is suitable for black-and-white as well as for colour enlarging (for colour the 250 W lamp is recommended).
The illuminating system offers

   high light utilization

   good illumination

Colour version: Enlarger head + filter slide for the insertion of the 120 x 120 mm correction filters. Easy interchange of the filters with a raiser.

Transilluminated ratio indicator for colour enlargements (additionally available).

Possibility of attaching well-known colour heads, e. g. Agfa, Super-Chromega D Dichroic II, Durst CLS 450, Wallner.

High rigidity

Chromium-plated steel column, circular cross section, in a solid diecast foot screwed on to the baseboard. Diameter of column 60 mm, height 800 mm.

Parallelogram linkage with enlarger head, including film stage, bellows, and lens holder. Rapid and easy adjustment of the enlarger head. Particularly rigid solidly mounted levers and balancing spring.

Enlarger head can be safety – clamped at any desired level within the entire adjustment range through clamping knob, remains in the chosen position firmly and without vibration.

Parallelogram linkage firmly connected with the column via column clamping piece. After release of the clamping piece the entire parallelogram linkage can be moved upwards or downwards along the column.

Large professional baseboard, white, effective area 535 x 590 mm. High immobility owing to solid construction on two wooden strips, width 5 cm, permanently mounted on the baseboard. Additional stability through profile steels on the underside of the baseboard.

Space for a medium-sized package of enlarging paper.

Storage box for negative masks on the underside of the baseboard, easily accessible at the front right-hand side.

Full utilization of the baseboard area from corner to corner.

Electrical data/safety

Electrical cables wired in the baseboard and in the column.

Socket at the top end of the column for the connection of the enlarger head.

Additional holder prevents sagging of the connecting cable.

Socket for mains cable underneath the baseboard.

On/off switch on the left on the baseboard.

150 W high-voltage enlarger lamp

Dimensions and weights

Height: 920 mm; width: 535 mm; depth: 740 mm

FOCOMAT IIc in black-and-white version:	37.6 kg
FOCOMAT IIc in colour version:	38.3 kg

LEITZ FOCOMETER

Modern, electronic automatic exposure meter for black-and-white and colour with timer.
Electronic light measurement with automatic conversion into exposure time.
Storage and digital display of the determined exposure time.
Spot and integrating measurement possible. The latter via a diffusion disc in front of the lens.
The long-time range can be used for the monitoring of developing processes.

Type of instrument:
Electronic light measurement with automatic conversion of the measured light intensity into the exposure time for the paper in use
Storage and digital display of the determined exposure time
Determination of the speed of all types of paper as well as manual setting facility for the paper speed
Determination of the density range (contrast range) of negatives and transparencies through spot measurement of the brightest and darkest area. For black-and-white for the determination of the grade of paper to be used.

Operation of the enlarger
After release the time display runs backwards to the 000 position. Thereafter the previously determined time immediately lights up again and can be repeated.
Manual time setting via slider switch. If after a measurement a time different from the measured time is set manually, the set time will be operative.
The previously measured time will be stored and will reappear in the display after switch-over to automatic operation.
Use as a simple timer (exposure timer) for the control of the enlarger (switch position manual).
The operative time is visible in the display window. It can be stopped by repeated pressure of the time button. The originally input time is automatically programmed.
The long-time range can be used for the monitoring of developing processes.
During the lapse of the time a new time can be input via the slider switches and called subsequently.

Controls
Slider switch for the setting of the paper speed.
Illuminated push-buttons for exposure measurement
continuous light
exposure with interruption
3 slider switches for time preselection
Selector for 2 time ranges
Mains switch: on/off
Socket for foot switch
Safety socket for instrument connection
Measuring probe via plug-in connection

Technical Data

The electronics of the instrument are designed according to MOS technique and specially filtered against mains interference.

The housing and other plastic parts are made of acid-resistant and not easily flammable materials.

VDE-GS test symbol, interference suppression symbol, CAS, Demko, Nemko, Semko and SEV safety symbol.

Mains connection: 220v
110v

The instrument is independent of the mains frequency.

Power: 440W

Instrument socket: 2-pin, with switch, fused circuit 2A slow fuse

Time range: 0.1 to 99.9 sec adjustable in steps of 0.1 sec.

Switch-over to 0.01 to 9.99 min in steps of 0.01 min

Light range: linear measurement from 0.04 to 10 Lux

Error limits: reproducible time error $\pm 1\%$
Absolute time error $\pm 1\%$
Measuring error $\pm 1.5\%$

LEITZ-FOCOTIMER

Electronically-controlled exposure timer
with digital display
The long-time range can also be used
for the monitoring of developing processes.

Type of instrument:
Modern, electronically-controlled exposure timer with digital display.
The time elapsed is visible on the display panel. It can be stopped by repeated pressure on the time button. The original time is automatically reprogrammed.
The long-time range can be used for the monitoring of developing processes.
While the time is elapsing, a new time can be fed in via the slider switches and called subsequently.
The end of the time in the long-time range will be indicated acoustically shortly in advance.
Illuminated button for continuous light
for exposure with interruption
3 slider switches for time preselection
Selector for 2 time ranges
On/off mains switch
Socket for foot switch
Safety socket for connecting the enlarger
The mains cable with safety plug

Technical Data
The electronics of the instrument are designed according to MOS technique and specially filtered against mains interference.
The housing and other plastic parts are made of acid-resistant and not easily flammable material.
VDE-GS test symbol, interference suppression symbol, CSA, Demko, Nemko, Semko, and SEV safety symbol.
Mains connection: 220v
110v
The instrument is independent of the mains frequency.
Power: 440 W
Instrument socket: 2-pin, with switch
Fused circuit 2A slow
Time range: 0.1 to 99.9 sec adjustable in steps of 0.1 sec
Switch over from 0.01 to 9.99 min in steps of 0.01 min
Error limits: reproducible time error: $\pm 1\%$
absolute time error: $\pm 1\%$

Contents:

PRADOVIT C/CA

PRADOVIT CA 1500 (24 v/150 W AUTOFOCUS)
PRADOVIT C 2500 (24 v/250 W)
PRADOVIT CA 2500 (24 v/250 W AUTOFOCUS)
PRADOVIT CA 1500/CA 2500 FOR LAP DISSOLVE PROJECTION

Officially certified school projector, with VDE or GS test symbol.

Automatic 35 mm slide projector with smooth slide change = projection without irritating dark intervals, the method of projection that is kindest to your eyes.

Standard magazines for 36 or 50 slides.

Optimised for the 35 mm format
For projection of the 40 x 40 mm format, a special condenser and aspherical 40 x 40 mm illuminating lens must be used.
High optical performance with:

the 90 mm LEITZ COLORPLAN f/2.5 for glass-mounted slides,
the 90 mm LEITZ COLORPLAN CF f/2.5 (curved field) for unglazed slides
LEITZ projector lenses from 35 to 300 mm

Detailed description page 179

Outfits with 24 v/150 W tungsten halogen lamp
PRADOVIT CA 1500 (250 v/50 Hz) with AUTOFOCUS,
Complete with 24 v/150 W lamp, 1 magazine for 36 slides, mains cable and remote-control cable, **and lens:**

				Code Number
35 mm*	ELMARON	f/2.9	....	30 226 _____
50 mm**	ELMARIT-P	f/2.8	....	30 393 _____
60 mm***	ELMARON	f/2.8	....	30 385 _____
85 mm	ELMARON	f/2.8	....	30 228 _____
90 mm	**COLORPLAN**	**f/2.5**	....	**30 229** _____
90 mm	**COLORPLAN-CF**	**f/2.5**	....	**30 295** _____
120 mm	ELMARON	f/2.8	....	30 258 _____
150 mm	ELMARON	f/2.8	....	30 231 _____
200 mm	ELMARON	f/3.6	....	30 232 _____
250 mm	ELMARON	f/4	....	30 233 _____

Body without lens, focusing sleeve, remote-control cable, mains cable,
but with interchangeable condenser for 60-150 mm .... 30 202 _____

---

* only up to 35 mm format and 30-slide magazine
** only up to 35 mm format, not for 50-slide magazine
*** up to effective format 40 x 40 mm, not for 50-slide magazine.

● **PRADOVIT CA 1500** (220 v/50 Hz) **for lap dissolve with AUTOFOCUS (with built-in TRIAC and 10-pin socket,**
complete with 24 v/150 W lamp, 1 magazine for 36 slides, Mains cable and remote-control cable **and lens:**

			Code Number	
35 mm*	ELMARON	f/2.8	30 364	_____
50 mm**	ELMARIT-P	f/2.8	30 298	_____
60 mm***	ELMARON	f/2.8	30 366	_____
85 mm	ELMARON	f/2.8	30 367	_____
90 mm	**COLORPLAN**	**f/2.5**	**30 368**	_____
90 mm	**COLORPLAN-CF**	**f/2.5**	**30 383**	_____
120 mm	ELMARON	f/2.8	30 369	_____
150 mm	ELMARON	f/2.8	30 370	_____
200 mm	ELMARON	f/3.6	30 371	_____
250 mm	ELMARON	f/4	30 372	_____

Body without lens, focusing sleeve, remote-control cable, mains cable but with interchangeable condenser for 60-150 mm .... 30 361 _____

Outfits with 24 v/250 W tungsten halogen lamp

PRADOVIT C 2500 (adjustable 110-240 v/50-60 Hz)
complete with: 24 v/250 W lamp, 1 magazine for 36 slides, mains cable and remote-control cable, **and lens:**

			Code Number	
35 mm*	ELMARON	f/2.8	30 242	_____
50 mm**	ELMARIT-P	f/2.8	30 394	_____
60 mm***	ELMARON	f/2.8	30 386	_____
85 mm	ELMARON	f/2.8	30 244	_____
90 mm	**COLORPLAN**	**f/2.5**	**30 245**	_____
90 mm	**COLORPLAN-CF**	**f/2.5**	**30 296**	_____
120 mm	ELMARON	f/2.8	30 291	_____
150 mm	ELMARON	f/2.8	30 247	_____
200 mm	ELMARON	f/3.6	30 248	_____
250 mm	ELMARON	f/4	30 249	_____
300 mm	EPNOR	f/4.3	30 279	_____

Body without lens, focusing sleeve, remote-control cable, mains cable, but with interchangeable condenser for 60-150 mm .... 30 204 _____

---

*   only up to 35 mm format and 30-slide magazine
** only up to 35 mm format, not for 50-slide magazine
*** up to effective format 40 x 40 mm, not for 50-slide magazine

PRADOVIT CA 2500 (adjustable 110-240 v/50-60 Hz)
with AUTOFOCUS
complete with 24 v/250W lamp, 1 magazine for 36 slides, mains cable
and remote-control cable, **and lens:**

			Code Number	
35 mm*	ELMARON	f/2.8	30250	___
50 mm**	ELMARIT-P	f/2.8	30395	___
60 mm***	ELMARON	f/2.8	30387	___
85 mm	ELMARON	f/2.8	30252	___
90 mm	**COLORPLAN**	**f/2.5**	**30253**	___
90 mm	**COLORPLAN-CF**	**f/2.5**	**30297**	___
120 mm	ELMARON	f/2.8	30292	___
150 mm	ELMARON	f/2.8	30255	___
200 mm	ELMARON	f/3.6	30256	___
250 mm	ELMARON	f/4	30257	___
300 mm	EPNOR	f/4.3	30278	___

Body without lens, focusing sleeve, remote-control cable, mains cable
but with interchangeable condenser for 60-150 mm .... 30205 ___

● **PRADOVIT CA 2500** (adjustable 110-240 v/50-60 Hz)
**With AUTOFOCUS for lap dissolve (with built-in TRIAC and 10-pin
socket)**
Complete with: 24 v/150W lamp, 1 magazine for 36 slides, mains cable
and remote-control cable, **and lens:**

			Code Number	
35 mm*	ELMARON	f/2.8	30373	___
50 mm**	ELMARIT-P	f/2.8	30299	___
60 mm***	ELMARON	f/2.8	30375	___
85 mm	ELMARON	f/2.8	30376	___
90 mm	**COLORPLAN**	**f/2.5**	**30377**	___
90 mm	**COLORPLAN-CF**	**f/2.5**	**30384**	___
120 mm	ELMARON	f/2.8	30278	___
150 mm	ELMARON	f2.8	30379	___
200 mm	ELMARON	f/3.6	30380	___
250 mm	ELMARON	f/4	30381	___
300 mm	EPNOR®	f/4.3	30382	___

Body without lens, focusing sleeve, remote-control cable, mains cable
but with interchangeable condenser for 60-150 mm .... 30363 ___

*   only up to 35 mm format and 30-slide magazine
** only up to 35 mm format, not for 50-slide magazine
*** up to effective format 40 x 40 mm, not for 50-slide magazine

PRADOVIT A Advertising Projector

Projection without irritating dark interval also in advertising
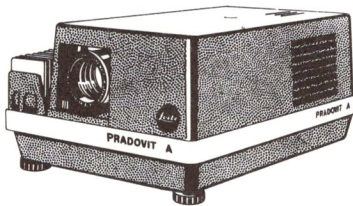
**with AUTOFOCUS and
24 v/250 W
tungsten halogen lamp**

Detailed description see page 183

Outfits PRADOVIT A (adjustable 110-240 v/50-60 Hz),
complete with 24 v/250 W lamp, 1 magazine for 36 slides,
mains cable and remote-cable,
built-in mechanism for continuous projection,
2 magazine repeaters,
built-in timer
and lens:

			Code Number	
35 mm*	ELMARON	f/2.8	30 280	
50 mm**	ELMARIT-P	f/2.8	30 389	
60 mm***	ELMARON	f/2.8	30 388	
85 mm	ELMARON	f/2.8	30 282	
90 mm	**COLORPLAN**	**f/2.5**	**30 283**	
120 mm	ELMARON	f/2.8	30 284	
150 mm	ELMARON	f/2.8	30 285	
200 mm	ELMARON	f/3.6	30 286	
250 mm	ELMARON	f/4	30 287	
300 mm	EPNOR	f/4.3	30 288	
Body without lens, focusing sleeve, remote-control cable, mains cable.			30 208	

*   Only for 35 mm format and 30-slide magazine
** Only up to 35 mm format, not for 50-slide magazine
*** Up to effective format 40 x 40 mm, not for 50-slide magazine.
    These limitations on the length of the magazine do not apply to the
    PRADOVIT-A with Daylight Projection Box.

Daylight Projection Box

For the PRADOVIT A (Advertising Projector) – PRADOVIT C/CA –
Body covered with matt black foil.
340 x 340 mm back projection screen (required focal length 50 mm).
No restriction on length of magazine.

Detailed description see page 184.

Code Number

Daylight Projection Box
Projector console and anti-glare hood . . . . **37 963** _____

Standard accessories

For the PRADOVIT C 1500, CA 1500, C 2500, CA 2500 PRADOVIT-A Advertising Projector

Hood

Code Number

Hood for the projector with lenses of up to 120 mm focal length, as
dust protection and projector base with projection area . . . .   **37 956** _____

Carrying case

Carrying case for the PRADOVIT C 1500/2500 and
CA 1500/2500, A (Advertising Projector)
With lenses of up to 250 mm focal length . . . .   **37 961** _____

Extension cable, 8-pin for remote-control (10 m) . . . .   **37 957** _____
Holder for micro attachments . . . .   37 937 _____
Remote-control cable (replacement) 3 m. . . . .   37 955 _____
Appliance cable (replacement) . . . .   37 644 _____

Film guide on the PRADOVIT C/CA/A:
1. Holder for the PRADOVIT. . . . .   37 937 _____
2. Rotation facility with rod part . . . .   32 850 _____
3. Lens carrier . . . .   32 404 _____
4. Film guide. . . . .   37 868 _____
5. Optionally:
   ● 50 mm ELMARIT-P f/2.8 . . . .   37 011 _____
      Focusing sleeve for same. . . . .   37 119 _____
      Interchangeable condenser for same . . . .   37 206 _____
   ● 90 mm COLORPLAN f/2.5 . . . .   37 005 _____
      Focusing sleeve for same. . . . .   37 119 _____
      Interchangeable condenser for same . . . .   37 200 _____
   ● 120 mm ELMARON f/2.8. . . . .   37 022 _____
      Focusing sleeve for same. . . . .   37 119 _____
      Interchangeable condenser for same . . . .   37 200 _____

Interchangeable projector lenses with accessories

			Code Number
35 mm*	ELMARON	f/2.8	37041 _____
50 mm**	ELMARIT-P	f/2.8	37011 _____
60 mm***	ELMARON	f/2.8	37004 _____
85 mm	ELMARON	f/2.8	37003 _____
90 mm	**COLORPLAN**	**f/2.5 (Ø 42.5 mm)**	**37005** _____
90 mm	**COLORPLAN-CF**	**f/2.5**	**37015** _____
120 mm	ELMARON	f/2.8	37022 _____
150 mm	ELMARON	f/2.8	37030 _____
200 mm	ELMARON	f/3.6	37062 _____
250 mm	ELMARON	f/4	37082 _____
300 mm	EPNOR		34837 _____

Focusing sleeves for the following focal lengths:

35 mm – 120 mm (dia. 42.5 mm)	37119 _____
150 mm	37121 _____
200 mm	37129 _____
250 mm	37130 _____
300 mm	34640 _____

Interchangeable condensers (24 x 36) for:

35 mm to 50 mm	37223 _____
60 mm to 150 mm	37224 _____
175 mm to 300 mm	37225 _____

Accessories for 40 x 40:
Interchangeable condensors for:

60 mm to 120 mm	37227 _____
150 mm to 300 mm	37228 _____
Aspherical lens for 40 x 40	37226 _____

Projector, light-pointer and AF lamps:
Replacement lamps supplied by:
Technical Service Center. POB 2027, Ernst Leitz Wetzlar GmbH,
D-6330 Wetzlar, or the national Leitz Agency.

---

* Only for 35 mm format and 30-slide magazine
** Only up to 35 mm format, not for 50-slide magazine
*** Up to effective format 40 x 40 mm, not for 50-slide magazine

Universal accessories

For the PRADOVIT C/CA, PRADOVIT A, PRADOVIT R/RA

Timer

For universal use with all PRADOVIT models with 6-pin DIN 45 322 socket.

Robust plastic body.
Connecting cable, length 60 cm, with 6-pin plug.
Interval timer, adjustable between about 3 and 30 sec, figures engraved in white.
Detailed description page 188.

	Code Number	
Timer, complete	**37 969**	_____

Infra-red remote-control
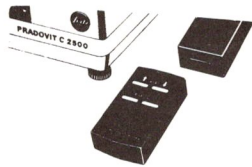
Range about 20 m.
Connecting cable, length 0.6 m, with 8-pin plug.
Powered by 9 v IEC 6F 22 battery.
Detailed description see page 188

	Code Number	
Infra-red remote control complete, but without battery	**37 970**	_____
Additionally necessary for the PRADOVIT R/RA 150:		
Infra-red remote-control adapter	37 975	_____

Magazines

Transparent box with two 36-slide magazines	37 863	_____
Transparent box with two 50-slide magazines	37 835	_____
Stacking box with two **36-slide** magazines	**37 844**	_____
Stacking box with two **50-slide** magazines	**37 855**	_____

PRADOVIT R/RA 150
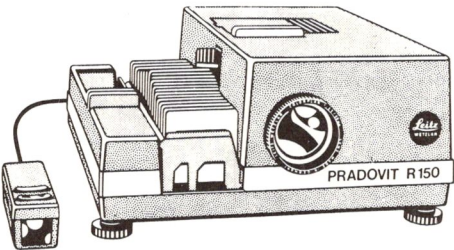
Officially certified school projector with GS text symbol.

PRADOVIT R 50 with 24v/150W tungsten halogen lamp.
PRADOVIT RA 150 with 24v/150W tungsten halogen lamp and AUTOFOCUS

Automatic 35 mm slide projector for standard 36 or 50-slide magazines.
High optical performance through the
90 mm LEITZ-COLORPLAN f/2.5 for glass-mounted slides,
90 mm LEITZ-COLORPLAN-CF f/2.5 (curved field) for unglazed slides,
LEITZ projector lenses from 50 to 150 mm focal length,
Appliance cable, length 2.5 m, VDE or GS test symbol,
The remote-control handgrip can be inserted in the projector as control panel.
Detailed description see page 185

Outfits:
PRADOVIT® R 150 (220v/50Hz),
complete with 24v/150W lamp, 1 36-slide magazine, **and lens:**

			Code Number
50 mm* ELMARIT-P®	f/2.8	....	30590 _____
85 mm ELMARON	f/2.8	....	30582 _____
90 mm COLORPLAN	**f/2.5**	....	**30563** _____
90 mm COLORPLAN-CF	**f/2.5**	....	**30567** _____
120 mm ELMARON	f/2.8	....	30566 _____
150 mm ELMARON	f/3.2	....	30565 _____

Body, with condenser for 60 to 150 mm focal length and 24v/150W
tungsten halogen lamp.. 30560 _____

---

* Not for 50-slide magazine

PRADOVIT R 150 (adjustable 110-240v/50-60Hz), Code Number
complete with 24v/150W lamp, 1 36-slides magazine, **and lens:**

50 mm* ELMARIT-P	f/2.8	....	30591 _____
85 mm ELMARON	f/2.8	....	30572 _____
90 mm COLORPLAN	**f/2.5**	....	**30573** _____
90 mm COLORPLAN-CF	**f/2.5**	....	**30577** _____
120 mm ELMARON	f/2.8	....	30576 _____
150 mm ELMARON	f/3.2	....	30575 _____

Body with condenser for 60 to 150 mm focal length and 24v/150W
tungsten halogen lamp... 30570 _____

PRADOVIT RA 150 with AUTOFOCUS (220v/50Hz)
complete with 24v/150W lamp, 1 36-slide magazine, **and lens:**

50 mm* ELMARIT-P	f/2.8	....	30592 _____
85 mm ELMARON	f/2.8	....	30532 _____
90 mm COLORPLAN	**f/2.5**	....	**30533** _____
90 mm COLORPLAN-CF	**f/2.5**	....	**30538** _____
120 mm ELMARON	f/2.8	....	30537 _____
150 mm ELMARON	f/3.2	....	30535 _____

Body with condenser for 60 to 150 mm focal length and 24v/150W
tungsten halogen lamp... 30530 _____

PRADOVIT RA 150 with AUTOFOCUS (adjustable 110-240v/50-60Hz)
complete with 24v/150W lamp, 1 36-slide magazine, **and lens**

50 mm* ELMARIT-P	f/2.8	....	30593 _____
85 mm ELMARON	f/2.8	....	30542 _____
90 mm COLORPLAN	**f/2.5**	....	**30543** _____
90 mm COLORPLAN-CF	**f/2.5**	....	**30547** _____
120 mm ELMARON	f/2.8	....	30546 _____
150 mm ELMARON	f/3.2	....	30545 _____

Body with condenser for 60 to 150 mm focal length and 24v/150W
tungsten halogen lamp... 30540 _____

● **PRADOVIT RA 150** (adjustable 110-240v/50-60Hz), **for LAP DIS-
SOLVE with AUTOFOCUS, built-in TRIAC and 10-pin socket,**
complete with 24v/150W lamp, 1 36-slide magazine, mains cable and
remote-control cable **and lens:**

50 mm* ELMARIT-P	f/2.8	....	30548 _____
85 mm ELMARON	f/2.8	....	30553 _____
90 mm COLORPLAN	**f/2.5**	....	**30554** _____
90 mm COLORPLAN-CF	**f/2.5**	....	**30557** _____
120 mm ELMARON	f/2.8	....	30555 _____
150 mm* ELMARON	f/3.2	....	30556 _____

Body without lens, with interchangeable condenser for 60 to 150 mm.. 30551 _____

PRADOVIT R 150-CSA version
for 120v mains
on request

---

* Not for 50-slide magazines

Standard accessories

For the PRADOVIT R 150, RA 150

Carrying case
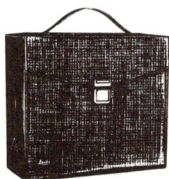
Code Number

Carrying case for dust-free storage .... **37 954** _____

Multiple plug for the connection of tape and separate remote-control cable .... 37 911 _____

Separate remote-control cable, length 3 m, with light pointer .... 37 953 _____

Extension cable for remote-control, length 5 m..................... 37 931 _____

Interchangeable projector lenses

Code Number

50 mm*	ELMARIT-P	f/2.8	....	37 011	_____
85 mm	ELMARON	f/2.8	....	37 003	_____
90 mm	COLORPLAN	f/2.5	....	37 005	_____
90 mm	COLORPLAN-CF	f/2.5	....	37 015	_____
120 mm	ELMARON	f/2.8	....	37 022	_____
150 mm	ELMARON	f/3.2	....	37 031	_____

Interchangeable condenser for 60 to 150 mm .... 37 222 _____

Interchangeable condenser for 50 mm........................... 37 221 _____

_____

* Not for 50-slide magazine

Universal accessories

For the PRADOVIT C/CA, PRADOVIT R, PRADOVIT R/RA

Timer

For universal use with all PRADOVIT models with 6-pin DIN 45 322 socket.

Robust plastic body.
Connecting cable, length 60 cm, with 6-pin plug.
Interval timer, adjustable between about 3 and 30 sec, figures engraved in white.
Detailed description page 188

	Code Number
Timer, complete	**37 969** _____

Infra-red remote control

Range about 20 m.
Connecting cable, length 0.6 m, with 8-pin plug.
Powered by 9 v IEC 6F 22 battery.
Detailed description see page 188

	Code Number
Infra-red remote-control complete, but without battery	**37 970** _____
Additionally necessary for the PRADOVIT R/RA 150:	
Infra-red remote-control adapter..................................	37 975 _____

Magazines

	Code Number
Transparent box with two 36-slide magazines	37 863 _____
Transparent box with two 50-slide magazines	37 835 _____
Stacking box with two **36-slide** magazines	**37 844** _____
Stacking box with two **50-slide** magazines	**37 855** _____

Lap dissolve control units

D.U. 24 A lap dissolve control unit
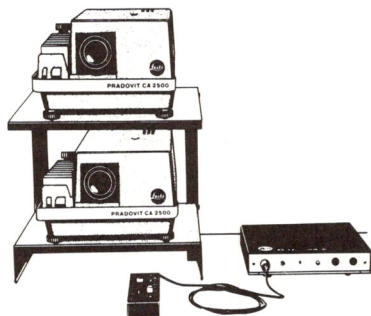
For two projectors, with recording facility for cassette and tape.
Uses:
Projection in the home, lecturing, advertising, teaching and communication.
Detailed description see page 189

Code Number

D.U. 24 A lap dissolve control unit, with hand piece and connecting cable, length 2 m, coupling cable for "free head" and connecting pieces 1 and 2 . . . . **37 973** _____
Extension cable, length 5 m, for the hand piece of the control unit . . . . . 37 931 _____

D.U.-24 M lap dissolve control unit
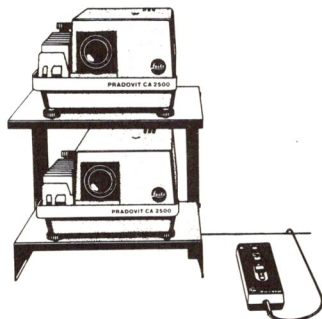
For two projectors for manual lap dissolve control.
Detailed description see page 191

Uses:
Projection in the home, lecturing, advertising, teaching and communication.

Code Number

D.U.-24 M lap dissolve control unit . . . . **37 971** _____

PRADOVIT projectors for lap dissolve

Modified versions with built-in TRIAC, ready for connection to the D.U.-24 A or D.U.-24 M:

● **PRADOVIT CA 2500** (adjustable 110 to 240 v/50-60 Hz) **with AUTOFOCUS, with built-in TRIAC and 10-pin socket,**
complete with 24 v/250 W lamp, 1 36-slide magazine, mains cable and remote-control cable, **and lens:**

			Code Number	
35 mm*	ELMARON	f/2.8	30373	_____
50 mm**	ELMARIT-P	f/2.8	30299	_____
60 mm***	ELMARON	f/2.8	30375	_____
85 mm	ELMARON	f/2.8	30376	_____
90 mm	**COLORPLAN**	**f/2.5**	**30377**	_____
90 mm	**COLORPLAN-CF**	**f/2.5**	**30384**	_____
120 mm	ELMARON	f/2.8	30378	_____
150 mm	ELMARON	f/2.8	30379	_____
200 mm	ELMARON	f/2.6	30380	_____
250 mm	ELMARON	f/4	30381	_____
300 mm	EPNOR	f/4.3	30382	_____

Body without lens, focusing sleeve, remote-control, mains cable, but with interchangeable condenser for 60-150 mm .... 30363 _____

● **PRADOVIT CA 1500** (220 v/50 Hz) **with AUTOFOCUS, built-in TRIAC and 10-pin socket,**
complete with: 24 v/150 W lamp, 1 magazine for 36 slides, mains cable and remote-control cable, **and lens:**

			Code Number	
35 mm*	ELMARON	f/2.8	30364	_____
50 mm**	ELMARIT-P	f/2.8	30298	_____
60 mm***	ELMARON	f/2.8	30366	_____
85 mm	ELMARON	f/2.8	30367	_____
90 mm	**COLORPLAN**	**f/2.5**	**30368**	_____
90 mm	**COLORPLAN-CF**	**f/2.5**	**30383**	_____
120 mm	ELMARON	f/2.8	30369	_____
150 mm	ELMARON	f/2.8	30370	_____
200 mm	ELMARON	f/3.6	30371	_____
250 mm	ELMARON	f/4	30372	_____

Body without lens, focusing sleeve, remote-control cable, mains cable but with interchangeable condenser for 60-150 mm .... 30361 _____

● **PRADOVIT RA 150** (adjustable 110-240 v/50-60 Hz) **with AUTOFOCUS, with built-in TRIAC and 10-pin socket,**
complete with 24 v/150 W lamp, 1 36-slide magazin, mains cable and remote-control cable **and lens:**

			Code Number	
50 mm*	ELMARIT-P	f/2.8	30548	_____
85 mm	ELMARON	f/2.8	30553	_____
90 mm	**COLORPLAN**	**f/2.5**	**30554**	_____
90 mm	**COLORPLAN-CF**	**f/2.5**	**30557**	_____
120 mm	ELMARON	f/2.8	30555	_____
150 mm	ELMARON	f/3.2	30556	_____

Body without lens, with interchangeable condenser for 60 to 150 mm.. 30551 _____

---

* only up to 35 mm format and 30-slide magazine
** only up to 35 mm format, not for 50-slide magazine
*** up to effective format 40 x 40 mm, not for 50-slide magazine

Accessories
for lap dissolve projection

Console for lap dissolve projection

29791-310
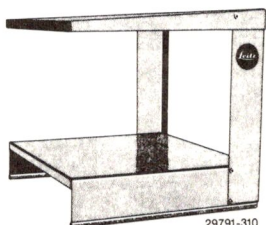
With this console, 2 PRADOVIT projectors are set up vibration-free on top of each other. Detailed description see page 192.

Code Number

PRADOVIT console   **37 972** _____

Hood for the PRADOVIT C/CA/A projectors with lenses up to 120 mm focal length, as dust protection , with projection area . . . . **37 956** _____

Carrying case for PRADOVIT C 1500/2500 and
                     CA 1500/2500, A (advertising projector)
                     with lenses of up to 250 mm focal length . . . **37 961** _____

Carrying bag for the PRADOVIT R/RA 150, for dust-free storage . . . . **37 954** _____

Other accessories see under PRADOVIT C or PRADOVIT R

Possibility of combining the projectors
All automatic 35 mm PRADOVIT projectors which have auxiliary equipment with built-in TRIAC for lamp control can be used with the D.U.-24A control unit:
PRADOVIT C 1500, CA 1500, C 2500, CA 2500
PRADOVIT S, PRADOVIT S/AF
PRADOVIT R 150, PRADOVIT RA 150
PRADOVIT COLOR 150 or 250W with and without AUTOFOCUS
The projectors to be coupled need not be identical, but the combination of instruments of the same lamp power is recommended.
In the interest of operating convenience PRADOVIT projectors with AUTOFOCUS are preferable.

Existing PRADOVIT C/CA, S/SAF, R/RA, and PRADOVIT COLOR projectors can be modified at any time by Ernst Leitz Wetzlar, GmbH, Technical Service Centre, or authorised Leitz Workshops for use of the D.U.-24A and D.U.-24M lap dissolve control units.
All modified versions of projectors, i.e. with 10-pin socket and built-in TRIAC, can be used as ordinary single projectors without dummy plug.

12-pin control unit connection

29792-310
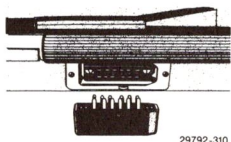
For the adaptation of lap dissolve control units with built-in TRIAC for lamp control and 12-pin DIN plug for all PRADOVIT C, PRADOVIT S, and PRADOVIT A models. Consisting of:
PRADOVIT C-/S baseplate with 12-pin socket and plug strips, instructions and circuit plan.

Code Number

Control unit connection, 12-pin . . . . **37958** _____

PRADOVIT C/S projectors already supplied can be fitted with the 12-pin control unit connection by LEITZ WETZLAR, Technical Service Centre, or authorized workshops.

Description and technical data of the instruments

PRADOVIT C/CA
Projection without irritating dark interval

PRADOVIT CA 1500 (24 v/150 W AUTOFOCUS)
PRADOVIT C 2500 (24 v/250 W)
PRADOVIT CA 2500 (24 v/250 W AUTOFOCUS)
PRADOVIT CA 1500/CA 2500 for lap dissolve projection

Officially certified school projector, with VDE or GS test symbol.

Type of instrument:
Automatic 35 mm slide projector with smooth slide change = projection without irritating dark intervals, the method of projection that is kindest to your eyes.
Standard magezines for 36 or 50 slides.
Optimised for the 35 mm format
For projection of the 40 x 40 mm format, a special condenser and aspherical 40 x 40 mm illuminating lens must be used.
High optical performance with:
the 90 mm LEITZ COLORPLAN f/2.5 for glass-mounted slides,
the 90 mm LEITZ COLORPLAN-CF f/2.5 (curved field) for unglazed slides
LEITZ projector lenses from 35 to 300 mm

Projector Housing:
Stylish design and optimum stability through high-quality aluminium diecasting.
Charcoal enamel finish and bright central decorative band for pleasing appearance.
LEITZ manufacture and more than 20 years' experience in the design of PRADOVIT projectors guarantee durability and high reliability.
Quiet, precise projector running.
Very rigid 3-point support.
Vertical adjustment with knurled screws for precision horizontal aligment.
Appliance plug for mains cable.
Mains switch.
Lamp ecomomy switch
Voltage selector 110-240 v/50-60 Hz in the adjustable models.
Standard version of the models CA 1500 for 220/240 v/50 Hz mains.
Connection for remote control (8-pin)
Connection for slide control units (6-pin)
Remote-control with built-in light pointer (cable length 3 m)
Slide changing button
Folding carrying handle

Magazine guide and slide transport
Free access to the magazine chamber of the projector
Convenient insertion of the standard magazines to 36 or 50 slides
Trouble-free guide of the slide magazine in the magazine trough. – Good sliding properties and excellent heat insulation.
Trouble-free slide transport by securely guided claw and hard-chromed sliding elements of the control rollers. Projects all types of slide mount (to DIN 108 standards).
Projection without irritating dark interval with 3-channel system. Dark phase from the start to the end of the curtain shutter operation only 0.4 sec.
Automatic blanking of the slide gate when the slide transport device in the optical path is empty.
Low noise level of slide transport and change.
Forward and reverse movement of the inserted slide magazine as required.
Automatic return of the last projected slide when the magazine is removed.

Slide change and focusing
Remote-control handgrip with 3 m long cable and 8-pin standard plug:
Forward and reverse transport of the slide magazine by means of two push-buttons
Rapid, motor-driven focusing of the projected image (forward and reverse) with two push-buttons
In the CA models: switch for automatic focusing
Light pointer built into the remote-control handgrip, with switch button
Extension cable of up to 50 m length for remote control or permanently installed remote-control cables (as accessories)
or
Slide changing button on the projector (forward and reverse)*

Further possibilities:
Timer, can be connected for automatic showing with adjustable time intervals*
Radio control, attachable, wireless (on request)
IE remote-control, attachable, wireless
Lap dissolve devices,
(with or without tap control)

AUTOFOCUS Device
Automatic focusing with the PRADOVIT CA models
Extremely sensitive and rapid response through silicon photo elements. High setting accuracy.
PRADOVIT CA Autofocus device has its own light source, which makes it independent of the centring of the projector lamp. High electrical stability
Autofocus device switched on with the switch on the remote-control handgrip or with dummy plug.
Automatic middle position with magazine change

Sockets
Socket, 8-pin, for remote control
Socket, 6-pin, wired to DIN standards. Possibility of connecting tape or slide control units
Simultaneous use of remote-control cable and slide control unit (without additional twin plug) through the above-mentioned two sockets

---

* With CA models automatic focusing through the use of the dummy plug.

180

Lenses and condenser system:
High optical performance, optical image quality through the
90 mm LEITZ-COLORPLAN f/2.5 for glass-mounted slides
90 mm LEITZ-COLORPLAN-CF f/2.5 (curved field) for unglazed slides
Adaptation to all requirements from wide-angle projection to the bridging of long
projection distances through LEITZ lenses of 35 to 300 mm focal length
Modern, aspherical condenser system, specially computed for the 35 mm format
Interchangeable condensers –
For the 35 mm format:
35 mm lens
50 – 150 mm lenses
175 – 300 mm lenses
On request also 40 x 40 format through interchange of the aspherical condenser
system and the interchangeable condenser for: 60 – 120 mm lenses and 150 – 300
mm lenses.

Tungsten halogen lamps and their function:
24 v/150W for CA 150
24 v/250W for PRADOVIT C 2500 and CA 2500
(Transformer built into the projectors)
Projectors are supplied complete with lamp. Optimum lamp centration carried out
in the factory
Easy change of the projector lamps
Slide illumination in conjunction with the aspherical condenser system radiantly
bright from corner to corner.
Uniformity of illumination more than 80% (referred to 90 mm COLORPLAN f/2.5 and
24 x 36 mm film size)
Effective light flux:
To DIN 19021 standards, referred to 24 x 36 mm film size and 90 mm COLORPLAN f/
2.5 lens:
PRADOVIT CA 1500: 550 lm
PRADOVIT CA 2500: 800 lm
Slide gate temperature
Measured to DIN 19021 standards
PRADOVIT CA 1500: 55°C
PRADOVIT CA 2500: 65°C
Economy switch
(separate switch) for doubling the life of the lamp

Blower system
Two-channel blower for optimum cooling
Separate cool air streams for slide gate and lamp through ingenious two-channel
radial blower.
In addition: heat filter, thickness 5.5 mm (KG 1-glass for the absorption of IR rays).
Remarkably quiet running of the blower.

PRADOVIT CA 1500/CA 2500 for lap dissolve projection
In addition:
10-pin socket for the connection of the D.U.-24A or D.U.-24M lap dissolve control units.
Built-in TRIAC for lamp modulation.

Mains connection
For 220v/50Hz or, with voltage selector 110-240v/50-60Hz in the adjustable models.

Electrical safety
VDE or GS symbol as well as interference suppression symbol, also Semko, Nemko, Demko and SEV

Thermostatic cut-out
Built-in. Automatically switches off the current during overheating (for instance broken fan belt).

Dimensions and weights
Standing area: Length 334 mm; width 268 mm; height 166 mm.
Weight: depending on the model and equipment, between 7 and 10 kg

Outfit including:
Projector with carrying handle
Detachable mains cable, length 2.5 m
Factory-centred tungsten halogen lamp.
1 36-slide magazine
Detachable remote-control cable, length 3m, with light pointer
Choice of projector lenses from 35 to 300 mm focal length with cap
Other accessories optional

PRADOVIT A
Advertising projector
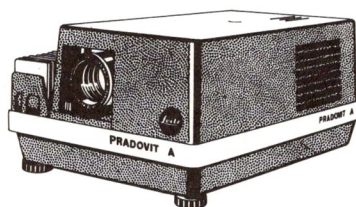
**with AUTOFOCUS and
24 v/250 W
tungsten halogen lamp**

Type of instrument:
Projection without irritating dark interval also for advertising
The well-tried new slide change with its robust mechanism, reliability of prolonged operation, optimum slide preservation and rapid, precision AUTOFOCUS device are components of the PRADOVIT A.
The magazine repeater for continuous projection is built-in. One repeater plate in the magazine behind the last and in front of the first slide gives the pulse for the return of the magazine and its renewed advance.
Between 2 and 48 slides can be continuously projected
The slide change pulse is generated by the built-in timer or by a continuous tape.
The PRADOVIT A has the 250W/24 v lamp, the AUTOFOCUS device, built-in timer and magazine repeater as standard equipment.
LEITZ projector lenses also from 35 to 300 mm.

Outfit PRADOVIT A (adjustable 110 – 240 v/50 – 60 Hz),
complete with 24 v 250 W tungsten halogen lamp,
one magazine for 36 slides,
mains cable,
remote-control cable,
built-in mechanism for continuous projection,
two repeater plates,
built-in timer,
and lens.

Dimensions and weight:
Standing area: length 334 mm; width 268 mm; height 166 mm.
Weight: about 10 kg

Daylight Projection Box

for the PRADOVIT A (advertising projector – PRADOVIT C
Stylish, robust body with rounded corners, covered with grained, matt-black foil.
Specially coated 340 x 340 mm back projection screen for radiant groundglass
screen images of 10 x magnification. A frame behind the projection screen provides
neat framing of the projected image.
Platform insert for setting up the projector (required focal length 50 mm). Unres-
tricted length of magazines. The firm connection between the projection box and
the platform permits joint rearrangement of the mounted and adjusted unit.
A hook-in hood serves as protection against stray light from the rear.

Dimensions and weights:
Length 470 mm
Width (without projector) 400 mm
Height 405 mm

Standing area with projector
Length (depth) about 550 mm
Width about 650 mm

Weight about 9 kg

PRADOVIT R 150 and RA 150
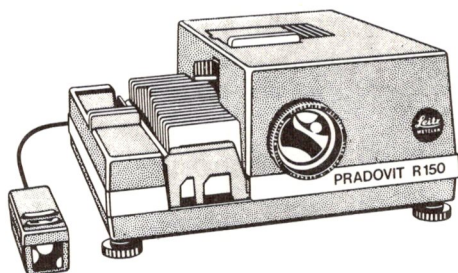
PRADOVIT R 150 (24v/150W)
PRADOVIT R 150 (24v/150W) with AUTOFOCUS
PRADOVIT R/RA 150 for lap dissolve
Officially certified school projector with VDE or GS test symbol

Type of instrument:
Automatic 35mm slide projector for standard 36 or 50-slide magazines.
High optical performance through the
90mm LEITZ COLORPLAN f/2.5 for glass-mounted slides,
90mm LEITZ COLORPLAN-CF f/2.5 (curved field) for unglazed slides
LEITZ projector lenses from 50 to 150 mm focal length.

Projector housing
Modern design. Impact-proof, high-quality plastics with textured surface, charcoal colour. Modular construction facilitates servicing.
Rigid 3-point support. Vertical adjustment with knurled screws through up to about 6%, levelling facility.
Special bobbin in the base of the projector for the appliance cable.
Mains switch
Lamp economy switch
Voltage selector 110-240v/50-60Hz in the adjustable models
Standard version for 220v/240v/50Hz mains
Appliance mains cable (2-strand, VDE or GS, length 2.5 m).
Remote-control handgrip can be inserted in the projector as control panel.
Socket for separate remote-control cable, for tape or slide control units, timer, infra-red remote-control, radio control.

Magazine guide and slide transport:
Free access to the magazine chamber of the projector.
Convenient insertion of the 36 or 50-slide standard magazines.
Trouble-free slide transport through hard-chromed slide tracks and firmly guided claw (does not protrude beyond the projector housing).
Projects all types of slide mounts (to DIN 108 standards).
Automatic blanking during slide change or when the instrument is switched on without projection.
Rapid slide change, dark interval only 1.4 sec.
Forward and reverse adjustment of the inserted slide magazine as required.
Quiet slide transport and change
The slide stage can be taken out for rearrangement of slides or single-frame projection.

Slide change and focusing with:
Remote-control handgrip
Alternatively:
Can be inserted as control panel in the projector for forward and reverse slide change and focusing.
For hand-held use (connecting cable, length 1.2 m, fixed to the projector, where it can be stored) for and reverse slide transport, focusing.
The built-in light pointer is operated with a push-button.
or
possibility of connecting a separate remote-control cable (length 3 m) with light pointer.
If required:
Extension cable (5 m) for remote-control.

Further possibilities:
Timer, can be connected for automatic showing with adjustable time intervals.
Infra-red remote control, attachable, wireless.
Lap dissolve devices
With or without tape control.

AUTOFOCUS device:
Automatic focusing with the PRADOVIT RA 150.
Switch for automatic focusing on the projector housing.
LED indicates operational readiness.
The AUTOFOCUS device has its own light source (strip lamp) which makes it independent of the centration of the projector lamp. High setting accuracy.

Lenses and illuminating system:
High optical performance through the
90 mm LEITZ COLORPLAN f/2.5 for glass-mounted slides,
90 mm LEITZ COLORPLAN-CF f/2.5 (curved-field) for unglazed slides,
LEITZ projector lenses from 50 to 150 mm focal length.
Modern condenser system for brilliantly bright slide illumination (aspherical system)
Condensers interchangeable

Socket:
Socket, 6-pin, to DIN standards for:
separate remote-control cable (3 m) with light pointer
Extension cable (5 m) can also be used
Connecting cable for the slide-control unit (tape coupling)
Multiple plug for the connection of slide-control unit and separate remote-control cable
Timer for automatic slide showing with adjustable time intervals (in preparation)
Infra-red remote control
Lap dissolve device

Tungsten halogen lamp and its function:
24 v/150 W in the PRADOVIT R 150 and RA 150
(Transformer built into the projector)
Transformers supplied complete with lamp
Easy change of projector lamps
Uniformity of illumination more than 80 % (referred to the 90 mm COLORPLAN f/2.5 and 24 x 36 mm film size).
Separate lamp economy switch, doubles the life of the lamp.

Effective light flux
To DIN 19021 standards, referred to 24 x 36 mm film size and the 90 mm COLORPLAN f/2.5 lens: 600 lm

Slide gate temperature:
to DIN 19021 standards: 60°C

Blower system:
Direct blower for optimum cooling of slide, lamp, and projector.
Absorption of the infra-red radiation and thereby reduction of the heat load on the slide by means of additional KG 1 heat filters.
Remarkably quiet, trouble-free blower running.

Mains connection:
For 220/240 v/50 Hz or, with the 110-240 v/50-60 Hz voltage selector in the adjustable models.

Electrical safety:
VDE or GS symbol, Semko, Nemko, Demko and SEV

Dimensions and weights:
Length 280 mm, width 262 mm, height 133 mm
Weight: R 150 4.3 kg
Weight: RA 150 4.4 kg

Outfit:
PRADOVIT R 150 and RA 150
with mains cable,
factory-centred tungsten halogen lamp
1 36-slide magazine
Remote-control cable with light pointer
Choice of projector lenses from 50 to 150 mm focal length
Other optional accessories.

PRADOVIT RA 150 for lap dissolve projection
In addition:
10-pin socket for the connection of the D.U.-24 A or D.U.-24 M lap dissolve control units. Built-in TRIAC for lamp modulation.

Timer
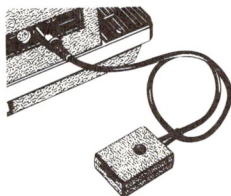
can be universally used for all PRADOVIT models with 6-pin socket to DIN 45 322, for instance PRADOVIT C, PRADOVIT S, PRADOVIT RC, PRADOVIT R 150, PRADOVIT-COLOR and all projectors with 6-pin socket to DIN 45 322 which are wired to DIN 45 523 specifications.

Robust plastic body with black, grained surface.
Connecting cable, length 60 cm, with 6-pin plug. The length of the cable permits any desired set-up next to the projector. The 6-pin plug is inserted in the "tape" socket in the PRADOVIT C models. With AUTOFOCUS models of this series the remote-control socket is closed with the dummy plug if AUTOFOCUS is to be operated.
Interval timer, adjustable between about 3 and 30 sec, figures engraved in white.

Dimensions:
Length 65 mm; width 50 mm; height 23.5 mm

Infra-red remote control
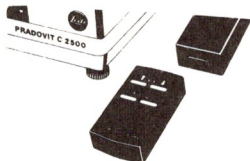
Range about 20 m
Detector in robust plastic housing, modern design
Connecting cable, length 60 cm, with 8-pin plug, adapter for PRADOVIT R/RA 150
Selector with autofocus and remote focusing
Transmitter in handy, robust plastic housing
Powered by 9v IEC 6F 22 battery
Four transmitting channels with a push-button each for slide transport forward, slide transport reverse, and focusing forward and focusing reverse
Push-buttons conveniently and practically arranged
Infra-red remote-control complete, but without battery

Dimensions and weight:
IR detector
Length 120 mm, width 65 mm, height 42 mm
Weight 0.0182 kg
IR transmitter
Length 115 mm, width 60 mm, height 23 mm
Weight: 0.092 kg

D.U.-24A lap dissolve control unit
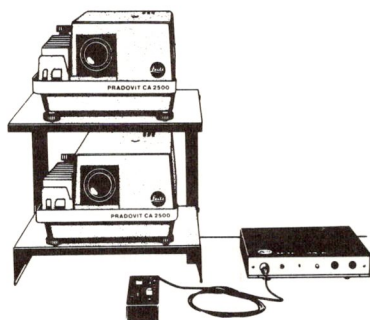
For two projectors, with recording facility for cassette and tape.

Uses:
Projection in the home, lecturing, advertising, teaching and communication.

Brief technical description and function
Control unit for continuous gradual and cut lap dissolves
No time limit for gradual lap dissolves
24v supply through the modified projectors with built-in
TRIAC for lamp control, hence no heating of the control unit
Control piece with slider with integrated switches for slide change in the end position
Light change of the projectors can be repeated as often as desired, because slide transport is not coupled.
Push-button for instant light change from projector A to projector B (flip-over button).
The built-in signalling device controls the lap dissolve of the projectors through its frequency modulation. A signal of this frequency modulation can be recorded on a cassette or stereo tape recorder without difficulty.
Black metal housing with bright front plate. All controls are arranged on the front.
6-pin socket for the connection of the control piece
6-pin socket (cannot be confused) for the connection of cassette recorders with built-in AV head or reel tape units with AV head (the slide control unit cannot be used for this purpose).
5-pin socket (for stereo plug) for the connection of stereo tape recorders for multi-play methods
Warning light to check the control signal
Warning light indicates the need for reversing a projector cable because it is out of phase
"Line-up" switch, both projectors have the same brightness for alignment.
Two 1.5m connecting cables with 10-pin plugs for the projectors at the back of the control unit
No additional mains cable required.

Control piece, with 2m connecting cable, with the following controls:

Slider switch for lap dissolve control. End position colour coded (same colour code on the connecting cables to the projectors)
Operating mode switch with 3 positions:
"Record" normal position for manual lap dissolve and tape marking
"Play" – automatic signal processing from the tape
"Erase" – erase of the recorded signal
"Flip-over button" – rapid lap dissolve without slide transport
Extension of the handpiece-control unit cable up to 30 m with 5 m extension cables (Code No. 37 539)
Coupling cable "Free Hand" and connecting pieces 1 and 2 are part of the outfit

Possibility of combining the projectors
All the automatic PRADOVIT 35 mm projectors which have the auxiliary equipment with built-in TRIAC for lamp control can be used with the D.U.-24A control unit:
PRADOVIT-C 1500, CA 1500, C 2500, CA 2500
PRADOVIT S- and PRADOVIT S/AF
PRADOVIT R 150 – and PRADOVIT RA 150
PRADOVIT COLOR – 150 or 250 W with and without autofocus
The projectors to be coupled need not be identical, but the combination of instruments of the same lamp power is recommended.
On account of operating convenience PRADOVIT projectors with AUTOFOCUS are preferable.

Dimensions and weights:
Control unit
Length 230 mm, width 215 mm, height 55 mm
Weight: 2.14 kg
Handpiece
Length 150 mm, width 55 mm, height 43 mm
Weight: 0.29 kg

D.U.-24 M lap dissolve control unit
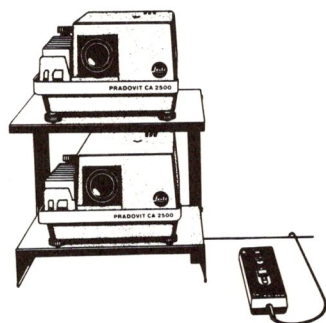
For two projectors for manual lap dissolve control.
Uses:
Projection in the home, lecturing, advertising, teaching and communication

Brief technical description and function
Control piece with all controls
Push-button for triggering the lap dissolve and slide change of the "dark" projector
Setting wheel for the pre-selection of the desired time from cut lap dissolve to gradual lap dissolve up to about 5 sec
Push-button for switching on the built-in light pointer
Setting wheel for switching on the built-in timer and pre-setting of the desired interval time up to 30 sec. This permits "automatic slide shows".
Connecting cable, length 3 m, dividing after 2.5 m for connection to the two projectors.
10-pin plugs for the projectors.

Possibility of combining the projectors
All automatic 35 mm PRADOVIT projectors which have auxiliary equipment with built-in TRIAC for lamp control can be used with the control unit D.U.-24 M:
PRADOVIT C 1500, CA 1500, C 2500, CA 2500
PRADOVIT S PRADOVIT S/AF
PRADOVIT R 150, PRADOVIT RA 150
PRADOVIT COLOR 150 or 250 W with and without AUTOFOCUS
The projectors to be coupled need not be identical, but the combination of instruments of the same lamp power is recommended.
In the interest of operating convenience PRADOVIT projectors with AUTOFOCUS are preferable.

Dimensions and weight:
Length 155 mm, width 65 mm, height 35 mm
Weight: 0.39 kg

PRADOVIT console for lap dissolve projection

29791-310
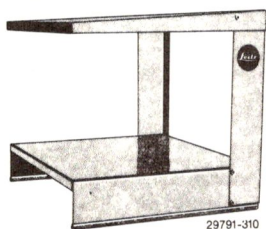
With this console two PRADOVIT projectors are set up vibrationfree on top of each other. This saves space and moves the optical axes of the lap dissolve projectors as closely together as possible (optimum coincidence of the projected images). Two rubber strips ensure firm setting up.

Dimensions and weight:
Length 325 mm, width 355 mm, height 300 mm
Weight 4.2 kg

Contents

PRADO®-UNIVERSAL for 5x5, 6x6, 7x7

Officially certified school projector, with VDE or GS test symbol

Universally extensible projector, with 24v/250W tungsten halogen lamp, for 5x5, 6x6, 7x7 cm slides, 35 mm film strips, as well as micro-, macro-, and other attachments.
Leitz projector lenses from 35 to 300mm

Detailed description see page 203

PRADO-UNIVERSAL (5x5 cm slides)

Complete with 24v/250W tungsten halogen lamp and lens:

		Code Number
35 mm ELMARON	f/2.8	31618 _____
50 mm ELMARIT-P	f/2.8	31649 _____
90 mm COLORPLAN	**f/2.5** (Ø 42.5 mm).....................	**31636** _____
90 mm COLORPLAN-CF	**f/2.5**	**31646** _____
120 mm ELMARON	f/2.8	31644 _____
150 mm ELMARON	f/2.8	31622 _____
200 mm ELMARON	f/3.6	31638 _____
250 mm ELMARON	f/4	31641 _____
300 mm EPNOR	f/4.3	31647 _____

Longer focal lengths on request

Projector housing as basic outfit for 5x5 with 5x5 condenser system, 5x5 heat filter, 24v/250W tungsten halogen lamp, but without lens, focusing sleeve, slide changer, interchangeable condenser, 35 mm attachment, mains cable,..................................... 31650 _____

Accessories for the PRADO UNIVERSAL 5x5:
Carrying case for the PRADO UNIVERSAL and lenses except 200 mm f/2.5, 250mm f/2.8 and 300 mm.................................... 37942 _____
35 mm film strip guide and 18x24mm mask .... 37868 _____
5x5 heat filter (5.5 mm), replacement .... 37869 _____
Mains cable, replacement....................................... 37644 _____

LEITZ projector lenses 35-300 mm focal length, focusing sleeves for 5x5, 5x5 interchangeable condensors see under "5x5 Attachment"

6x6 attachment
1. For the adaptation of a PRADO-UNIVERSAL (5x5) for 6x6 (2¼ x 2¼in) slides (existing lenses of the PRADO-UNIVERSAL 5x5 from 150mm focal length onwards can be used).
2. For the further extension of a PRADO-UNIVERSAL (6x6) (according to the breakdown below, lens, focusing sleeve, and attachment with condenser are required depending on the nature of the outfit).

6x6 attachment complete with lens	consisting of				
	Attach-ment with condenser	Cover-plate	Slide changer	Focusing sleeve	Lens
ELMARON 2.8/150 mm Code No. 37883	32311	37867	37815	37186	37030
ELMARON 3.6/200 mm Code No. 37897	32310	37867	37815	37132	37062
ELMARON 4/250 mm Code No. 37898	32310	37867	37815	37131	37082
EPNOR 4.3/300 mm Code No. 37977	32310	37867	37815	37128	34837

Also required for modification from 5x5 to 6x6 version:
6x6 condenser system with filter .... 37871 _____

Projector lamps:
Replacement supplied by:
Technical Service Centre, P.O.B. 2027, Ernst Leitz Wetzlar GmbH, D-6330 Wetzlar, Germany, or the national Leitz Agency (please give detailed data).

PRADO-UNIVERSAL
(for 6x6 cm or 7x7 cm slides, effective format 54x55 mm)

Complete with 24v/250W tungsten halogen lamp and lens:
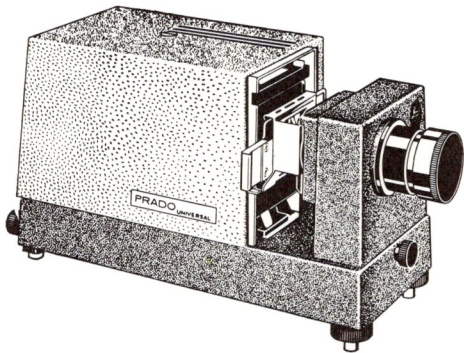
Detailed description see page 203

	Code Number
150mm ELMARON f/2.8	31 628
200mm ELMARON f/3.6	31 639
250mm ELMARON f/4	31 642
300mm EPNOR f/4.3	31 648

Longer focal lengths on request.

Projector body as basic outfit for 6x6 with 6x6 condenser system, 6x6 heat filter, 24v/250W tungsten halogen lamp, but without lens, focusing sleeve, slide changer, interchangeable condenser, attachment, mains cable, cover plate .... 31 651 _____

Accessories for the PRADO-UNIVERSAL 6x6:
Carrying case for the PRADO-UNIVERSAL and 150mm lens .... 37 942 _____

6x6 slide changer (external slide dimensions 5x5 cm, effective format up to 38x38 mm) .... 37 865 _____

6x6 slide changer (external slide dimensions 7x7 cm (2¾ x 2¾in) (replacement), effective format 54 x 54 mm) .... 37 815 _____
Mains cable (replacement) .... 37 644 _____

LEITZ projector lenses 150-300mm, focusing sleeve for 6x6, 6x6 attachment with condensers see under "6x6 attachment".

5x5 attachment

1. For the adaptation of a PRADO-UNIVERSAL (6x6) for 5x5 (2x2in) slides existing lenses of the PRADO-UNIVERSAL 6x6 can be used).
2. For the further extension of a PRADO-UNIVERSAL 5x5 (according to the breakdown below, lens, focusing sleeve, and interchangeable condenser are required depending on the nature of the outfit).

5x5-attachment complete with lens		consisting of:				
		Attach-ment with condenser	Inter-change-able condenser	Slide changer	Focusing sleeve	Lens
Code No.	35 mm ELMARON f/2.8 37873 (Ø 42.5 mm)	32402	37216	37849	37119	37041
Code No.	50 mm ELMARIT-P f/2.8 37978 (Ø 42.5 mm)	32402	37216	37849	37119	37011
Code No.	90 mm COLORPLAN f/2.5 37892 (Ø 42.5 mm)	32402	37218	37849	37119	37005
Code No.	90 mm COLORPLAN-CF f/2.5 37967 (Ø 42.5 mm)	32402	37218	37849	37119	37015
Code No.	120 mm ELMARON f/2.8 37968 (Ø 42.5 mm)	32402	37218	37849	37119	37022
Code No.	150 mm ELMARON f/2.8 37877	34402	37214	37849	37121	37030
Code No.	200 mm ELMARON f/3.6 37896	32402	37214	37849	37129	37062
Code No.	250 mm ELMARON f/4 37895	32402	37214	37849	37130	37082
Code No.	300 mm EPNOR f/4.3 37976	32402	37214	37849	34640	34837

Also required for modification from 6x6 to 5x5 version:
5x5 condenser system with filter .... 37872 _____

Projector lamps

Replacements supplied by:
Technical Service, P.O.B. 2027, Ernst Leitz Wetzlar GmbH,
D-6330 Wetzlar, Germany, or the national Leitz Agency (please give detailed data).

Micro-/macro attachments

Micro attachment A
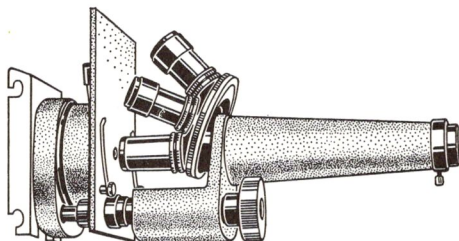
For the projection of microscopic specimens at magnifications of up to 1400x on the screen.
Simple rotation of the revolving nosepiece ensures the reproduction of the microscopic image at 3* graduated magnifications, starting with low power.

	Code Number
Microscope carrier comprises:	
4x projection eyepiece (37301), quadruple revolving nosepiece with 4/0.12, 10/0.25, and 25/0.50 objectives, each with anti-glare protection, 1 screw cover, large object stage with 2 stage clips, diaphragm slide, adjustable condenser	32823 _____
Attachment (rotating holder).......................................	32850 _____
Micro-attachment A complete....................................	**32820** _____
Items required	
for PRADO UNIVERSAL: cover plate	37867 _____
for PRADOVIT S, PRADOVIT-C and PRADOVIT COLOR: holder for micro-attachments	37937 _____
Additional items available:	
2x projection eyepiece	37300 _____
Projection prism for the tracing of the microscopic image on the bench, adjustable	37889 _____
Micro cell for liquids, depth 3 mm	37858 _____
Required for conversion to Micro attachment B:	
Mirror housing with fixtures	32824 _____
Projection prism...	37889 _____
PRADO UNIVERSAL outfit (5x5) for micro attachments A+B or macro attachment (consisting of 31650 and 37656).......................	31635 _____

For the use of the micro-attachments and the macro attachment on the PRADO UNIVERSAL (6x6) the 5x5 illuminating system, Code No. 37872, is required.

---

* A fourth objective can be attached if desired.

Micro attachment B
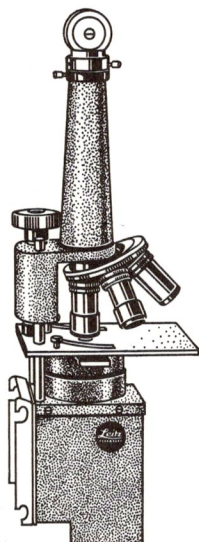
for the projection of liquid or melting objects at magnifications of up to 1400x on the screen. Simple rotation of the revolving nosepiece ensures the reproduction of the microscopic image at 3* graduated magnifications, starting with low power.

	Code Number
Microscope carrier	
comprising:	
4x projection eyepiece (37 301), quadruple revolving nosepiece with 4/0.12, 10/0.25, 25/0.50 objectives each with anti-glare projection, 1 screw cover, large object stage with 2 stage clips, diaphragm slide, adjustable condenser.	32 823
Mirror housing with fixtures	32 824
Projection prism.	37 889
Micro-attachment B complete	**32 821**
Items required:	
For PRADO UNIVERSAL: cover plate.	37 867
For PRADOVIT S, PRADOVIT-C and PRADOVIT COLOR: holder for micro-attachments	37 937
Additional items available:	
4x projection eyepiece.	37 301
2x projection eyepiece.	37 300
Required for conversion to Micro-attachment A:	
Attachment (rotating holder) with fixtures	32 850
PRADO-UNIVERSAL outfit (5x5) for micro-attachments A+B or Macro-attachments (consisting of: 31 650, 37 656)	31 635

For the use of the micro-attachments and the macro-attachment on the PRADO-UNIVERSAL (6x6) the 5x5 illuminating system, Code No. 37 872 is required.

---

* A fourth objective can be attached if required.

Macro attachment
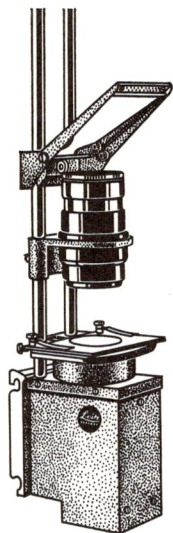
For showing general features of liquid or melting specimens at magnifications of up to about 120x on the screen and for the projection of physical and chemical experiments.

Attachment Code Number
comprising:
Mirror housing with long rails and deflecting mirror,
object stage with 2 stage clips, lens carrier (without lens,
focusing sleeve, interchangeable condenser) .... 32825 _____

Items required:
For PRADO-UNIVERSAL: cover plate .... 37867 _____
For PRADOVIT S, PRADOVIT C, and PRADOVIT COLOR: holder for
micro-attachments .... 37937 _____
Choice of lenses:
50 mm ELMARIT-P f/2.8 (object field dia. 34 mm) .... 37011 _____
Focusing sleeve for same .... 37119 _____
Interchangeable condenser for same............................. 37200 _____
90 mm COLORPLAN f/2.5 (object field diameter 40 mm) .... 37005 _____
Focusing sleeve for same .... 37119 _____
Interchangeable condenser for same............................. 37200 _____
PRADO-UNIVERSAL outfits (5x5) for the macro-attachment or for the
micro-attachments A+B (consisting of 31650 and 37656)............ 37635 _____

For the use of the macro-attachment and the micro-attachments on the PRADO UNIVERSAL (6x6) the 5x5 illuminating system, Code No. 37872, is required.

Polarizing attachment for 35mm projectors
In the version as polarized-light projector birefringence and polarizing phenomena can be demonstrated in the orthoscopic and conoscopic beam (see List 310-8).

DIASCRIPTOR OP 2500
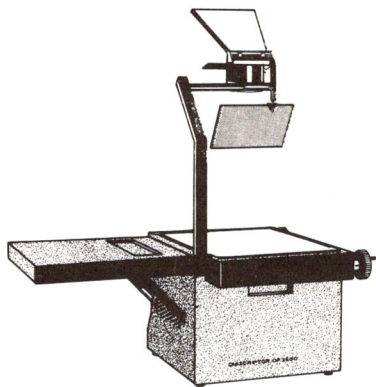
24 v/250 W tungsten halogen lamp)

Officially certified school projector, with VDE or GS test symbol.

Universal daylight overhead and demonstration projector. Object area 285 x 285 mm (DIN A 4 upright and horizontal format) with corners cut at 45°.

Detailed description page 205

Outfits:

Code Number

DIASCRIPTOR OP 2500 including:
285 mm SCRIPTAR, 24 v/250 W
tungsten halogen lamp, mains cable. . . . . **33 409** _____

DIASCRIPTOR OP 2500 including
340 mm SCRIPTAR, 24 v/250 W
tungsten halogen lamp, mains cable. . . . . **33 410** _____

Scroll roller device consisting of.	33 457 _____
Holder 1 (replacement)	33 465 _____
Holder 2 (replacement)	33 466 _____
Scroll-type foil (replacement).	33 458 _____
Anti-glare shield	33 834 _____
Dust cover.	33 835 _____
Accessory case	33 852 _____
Scroll-type foil 10 m (including flange)	33 461 _____
Scroll-type foil 25 m (including flange)	33 460 _____
25 sheets of foil	33 464 _____
Shelf attachment	33 459 _____
Fresnel lens, glare-free	33 451 _____

Projector lamps:
Replacement supplied by:
Technical Service, P.O.B. 20 27, Ernst Leitz Wetzlar GmbH, D-6330 Wetzlar,
Germany or the national Leitz Agency (please give detailed data)

Description and technical data of the instrument

PRADO®-UNIVERSAL for 5 x 5 / 6 x 6 / 7 x 7
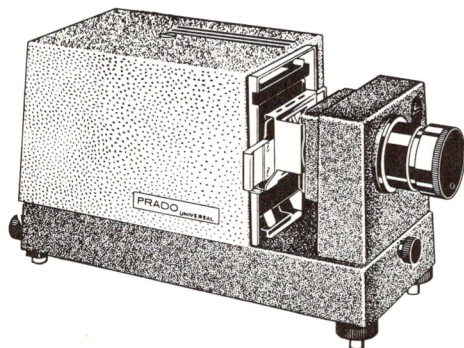
Officially certified school projector, with VDE or GS test symbol

Type of projector
Universally extensible projector, with 24v/250W tungsten halogen lamp, for 5 x 5, 6 x 6, 7 x 7 cm slides, 35 mm film strips, as well as micro-, macro-, and other attachments.
Leitz projector lenses from 35 to 300 mm

Projector body
Modern design. All-metal body ensures optimum stability. Two-colour enamel finish: bottom charcoal, top light grey.
Very rigid 3-point support with 4-point base.
Simple vertical adjustment with knurled screws on the front.
Instrument socket for mains cable
Central switch with positions for blower, normal lamp power and economy running
Voltage selector 110-250v/50-60Hz

Blower system
Excellent cooling through a separately adjustable 2-cycle blower system with additional direct effect on the slide
Highly effective heat filter (KG 1-glass), thickness 5.5 mm for additional absorption of infra-red rays
Very quiet blower running.

Thermostatic cut-out
The temperature cut-out automatically cuts off the current during overheating (for instance obstruction of the fresh-air supply through accidental covering of the louvres in the body).

Optional possibilities of extension
with slide changer for
5x5 cm slides (nominal formats 24x36 mm and 40x40 mm),
6x6 or 7x7 cm slides (nominal format 54x54 mm)
with film guide (rotatable) for
35 mm film straps, with mask also 18x24mm
with micro-attachments A and B
for the projection of microscopic specimens
with macro-attachment
for low-power projection of liquid or flowing objects
with polarizing attachment (on request)

Lenses and condenser system
Aspherical condenser system with reflector
Aspherical condenser and heat filter interchangeable for 5x5 and 6x6
Interchangeable condensers
For the 5x5 format and lenses of:
  35 – 50 mm (for 24x36 mm nominal format only):
  90 – 120 mm
150 – 300 mm
For the 6x6 format and lenses of:
150 mm
200 – 300 mm
LEITZ projector lenses
From 35 to 300 mm, ensuring free choice of image size and projection distance.
35 and 50mm lenses exclusively for the 24x36 mm format
Other focal lengths for 24x36 mm and 40x40 mm formats.
Lenses from 150mm for the 6x6 or 7x7 format (picture size 54x54 mm)

The tungsten halogen lamp and its function
PRADO-UNIVERSAL for the 24v/250W tungsten halogen lamp, long life and high light output at low slide gate temperature.
Universal lamp centration, easy lamp change
Lamp enconomy switch (doubles the life of the lamp)
Voltage selector 110 – 240v/50 – 60Hz
Transformer built into the projector
Evenness of illumination more than 80% (referred to 90 mm COLORPLAN f/2.5 and 24x36 mm slide size)

Effective light flux:
To DIN 19021 standards
A. With the 90 mm COLORPLAN and 24x26 mm slide size = 750 lm
B. With the 90 mm COLORPLAN and 38x38 mm slide size = 1200 lm
C. With the 150 mm ELMARON and 54x54 mm slide size = 1307 lm

Slide gate temperature:
To DIN 19021 standards
A. With the 90 mm COLORPLAN and 24x36 mm slide size = 67°C
B. With the 150 mm ELMARON and 54x54 mm slide size = 61°C

Electrical safety
VDE or GS as well as interference suppression symbol, and Semko, Nemko, Demko and SEV

Standing area:
320 – 150mm, height 195 mm

Description and technical data of the instrument

DIASCRIPTOR OP 2500
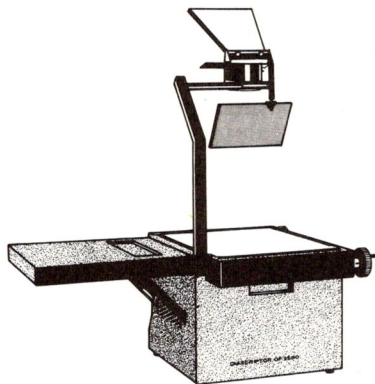
24 v/250 W tungsten halogen lamp

Officially certified school projector, with VDE or GS test symbol.

Type of projector
Universal daylight overhead and demonstration projector
Object area 285 x 285 mm (DIN A 4 upright and horizontal format) with corners cut at 45°.

Projector body
Sturdy metal body, enamelled in two colours with two integrated carrying handles.
Rigid 4-point support with one levelling foot.
Rotary knob on the front for focusing and simultaneous adjustment of the lens and the illuminating system. This ensures optimum image illumination free from colour fringes independently of the projection distance.
Top part attached to the bottom part with strong hinges, can be raised and is fixed in the raised position. Retractable locating pins to DIN 108 standard for foils and transparencies.
Shelf for working utensils (crayons) on the operating side of the projector, which also serves as a space for storing the cable during transport.
Connecting cable in orange signal colour, length 5 m, permanently connected with the instrument
Double rocker switch for on/off, economy switch and full power
Warning light (lights up when lamp is on full power)
VDE standard disconnecting plug, which interrupts mains supply when the top of the instrument is raised.

Lenses and illuminating system:
High optical quality
Choice of two projector lenses:
285 mm SCRIPTAR for projection distances from 1 to 4 m
Raised projection angle about 35°
340 mm SCRIPTAR, high-quality triplet projector lens for projection distances from 1.3 to 4 m up to the front edge of the projector.
Raised projection angle 35°
Illuminating unit, consisting of cold-light reflector, lamp, condenser, heat filter made of well-tried KG-1 glass and Fresnel lens.
Fresnel lens in two versions (clear Fresnel lens, glare-free Fresnel lens as accessory). Easy removal for cleaning when the top is raised.

Lamp and function:
24 v/250 W tungsten halogen lamp, mean life 50 operating hours. Instrument fuse 2 amp (T-2A).
Lamp economy switch, which trebles lamp life (more than 150 operating hours).
"Long-life lamp" (life 300 hours) can also be inserted
Effective light flux about 1900 lumen with lamp economy
about 2550 lumen at full power
Evenness of illumination about 48%
Temperature on the working surface about 55°C
All values measured to standards of the Institute for Film and Picture, 8022 Gruenwald

Blower system:
Efficient, quietly-running tangential blower for cooling the housing and the working top.
The blower starts up immediately the lamp is switched on.

Thermostatic cut-out:
Automatic thermostatic cut-out, switches the instrument off on overheating (for instance when the louvres are covered).

Mains connection:
For 220 v/50 Hz

Electrical safety
VDE or GS as well as interference suppression symbol

Dimensions and weights:
Standing area 364 x 364 mm
Weight of the DIASCRIPTOR OP 2500: 14.3 kg
                    Scroll roller device: 1 kg

Contents

The range of the LEITZ TRINOVID binoculars

TRINOVID C	8 x 20 C	10 x 22 C		
Magnification	8 x	10 x		
Objective dia.	20 mm	22 mm		
Exit pupil	2.5 mm	2.2 mm		
Twilight factor	12.65	14.83		
Field of view at 1000 in degrees	120 m 6.9	95 m 5.4		
Approximate weight	185 g	210 g		
Dimensions: Approximate width Approximate depth Approximate height	58 mm 33 mm 90 mm	58 mm 33 mm 108 mm		

TRINOVID B	7 x 42 B/BA*)	8 x 32 B/BA*)	8 x 40 B/BA*)	10 x 40 B/BA*)
Magnification	7x	8x	8x	10x
Objective dia.	42 mm	32 mm	40 mm	40 mm
Exit pupil	8 mm	4 mm	5 mm	4 mm
Twilight factor	17.2	16	17.9	20
Field of view at 1000 m in degrees	140 m 8	130 m 7.4	128 m 7.3	110 m 6.3
Approximate weight	650 g (B) 660 g (BA)	483 g (B) 493 g (BA)	490 g (B) 600 g (BA	590 g (B) 600 g (BA)
Dimensions: Approximate width Approximate depth Approximate height	126 mm 50 mm 173 mm	115 mm 39 mm 117 mm	123 mm 47 mm 150 mm	123 mm 47 mm 143 mm

8 x 20 C TRINOVID

Compact binoculars of high optical performance,
ideal when light weight and small volume are required
All-metal construction

Magnification: 8x
Objective diameter: 20 mm
Diameter of exit pupil: 2.5 mm
Twilight factor: 12.65
Field of view: 120 m at 1000 m distance, 6.9°
Central drive, internal focusing
Dioptre compensation ± 3 dioptres
Interchangeable roll-back rubber eyecups
Adjustable to interpupillary distance, can be folded
Easy-grip central part and tubes, covered with grained PVC, other external metal
parts silk-finish plating or enamel
Dimensions (folded): Width 58 mm
                     Depth 33 mm
                     Height: 90 mm
Weight: 0.185 kg

	Code Number	
8 x 20 C TRINOVID with carrying cord	**40 302**	
Soft-leather case	42 196	

10 x 22 C TRINOVID

High-power compact binoculars of high optical performance.
The ideal leisure binoculars in the mini-size.
All-metal construction

Magnification: 10x
Objective diameter: 22 mm
Diameter of exit pupil: 2.2 mm
Twilight factor: 14.83
Field of view: 95 m at 1000 m distance, 5.4°
Central drive, internal focusing
Dioptre compensation $\pm$ 3 dioptres
Roll-back rubber eyecups, interchangeable
Adjustable for interpupillary distance, can be folded
Easy-grip central part and tubes, covered with grained PVC, other external metal
parts black silk-finish plating or enamel
Dimensions (folded): Width 58 mm
　　　　　　　　　　　Depth 33 mm
　　　　　　　　　　　Height 108 mm
Weight: 0.21 kg

Code Number

10 x 22 C TRINOVID with carrying cord . . . . **40 303** _____
Soft-leather case . . . . 42 197 _____

7 x 42 B/BA TRINOVID

TRINOVID 7 x 42 B
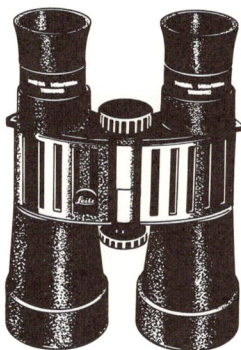
TRINOVID 7 x 42 BA

Special night binoculars, large exit pupil and very large field of view.
Particularly suitable for hunting and sailing. (Observation from an unsteady support), because the object of observation can be kept within the field of view. BA version noise suppressing and non-slip.
All-metal construction

Magnification: 7x
Objective diameter: 42 mm
Diameter of exit pupil: 6 mm
Twilight factor: 17.2
Field of view: 140 m at 1000 m distance, 8°
Central drive, internal focusing
Dioptre compensation ± 3 dioptres
Roll-back rubber eyecups, interchangeable
Hinged bridge, adjustable for interpupillary distance
Easy-grip tubes and body, covered with PVC (B) or green rubber (BA), other external metal parts: black or green plating or enamel.
Eyelets for carrying cord

Dimensions: Height about 173 mm
                       Width about 125 mm
Weight: 7 x 42 B, 0.65 kg
                     7 x 42 BA, 0.66 kg

	Code Number
7 x 42 B TRINOVID with carrying cord	**40 218** _____
7 x 42 BA TRINOVID with rubber reinforcement, with carrying cord (technical data as 7 x 42 B TRINOVID)	**42 234** _____

Accessories for the 7 x 42 B/BA TRINOVID
Flat leather case with carrying cord . . . . 42 173 _____
Soft-leather ever-ready case . . . . 42 189 _____
Rain guard (black) . . . . 42 101 _____
Rain guard (green) . . . . 42 137 _____

8 x 32 B/BA TRINOVID
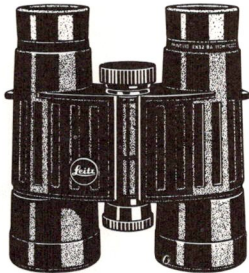
TRINOVID 8 x 32 B   TRINOVID 8 x 32 BA

Compact universal binoculars –
the smallest among the large ones, wide-angle effect
Powerful even in waning light
In BA version noise suppressing and non-slip
All-metal construction

Magnification: 8x
Objective diameter: 32 mm
Diameter of exit pupil: 4 mm
Twilight factor: 16
Field of view: 130 m at 1000 m distance, 7.4°
Central drive, genuine internal focusing
Dioptre compensation ± 3 dioptres
Roll-back rubber eyecups, interchangeable
Hinged bridge, adjustable for interpupillary distance
Easy-grip tubes and body, covered with grained PVC or with green rubber (BA).
Other external metal parts: black or green plating or enamel
Eyelets for carrying cord
Dimensions: Height: about 117 mm
            Width: about 115 mm
Weight: 8 x 32 B   0.483 kg
            8 x 32 BA 0.493 kg

Code Number

8 x 32 B TRINOVID with carrying cord . . . . **40 208** _____

8 x 32 BA TRINOVID with rubber reinforcement
with carrying cord (technical data as 8 x 32 B TRINOVID) . . . . **40 237** _____

Accessories for the 8 x 32 B/BA TRINOVID
Flat leather case with carrying cord . . . . 42 177 _____
Soft leather ever-ready case. . . . . 42 181 _____
Rain guard (black). . . . . 42 101 _____
Rain guard (green) . . . . 42 137 _____

8 x 40 B/BA TRINOVID

TRINOVID 8 x 40 B
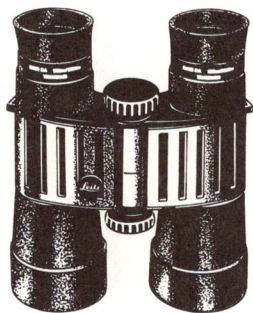
TRINOVID 8 x 40 BA

Universal binoculars of enhanced light power in the limiting region of twilight.
Their large exit pupil make them particularly suitable for hunting, observation from
an unsteady support (boat) or when it is not possible to hold the binoculars steady.
In BA version noise suppressing and non-slip.
All-metal construction

Magnification: 8x
Objective diameter: 40 mm
Diameter of exit pupil: 5 mm
Twilight factor: 17.9
Field of view: 128 m at 1000 m distance, 7.3°
Central drive, internal focusing
Dioptre compensation $\pm$ 3 dioptres
Roll-back rubber eyecups, interchangeable
Hinged bridge, adjustable for interpupillary distance
Easy-grip central part and tubes, covered with grained PVC (B) or green rubber (BA)
Other external metal parts: black or green plating or enamel
Eyelets for carrying cord
Dimensions: Height about 150 mm
             Width about 124 mm
Weight: 8 x 40 B 0.59 kg
        8 x 40 BA 0.6 kg

Code Number

8 x 40 B TRINOVID with carrying cord .... **40 221** _____

8 x 40 BA TRINOVID with rubber reinforcement,
with carrying cord (technical data as 8 x 40 B TRINOVID) .... **40 235** _____

Accessories for the 8 x 40 B/BA TRINOVID
Flat leather case with carrying cord .... 42 173 _____
Soft-leather ever-ready case .... 42 179 _____
Rain guard (black) .... 42 101 _____
Rain guard (green) .... 42 137 _____

10 x 40 B/BA TRINOVID

TRINOVID 10 x 40 B
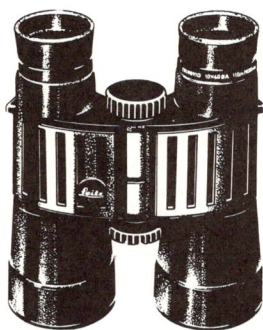
TRINOVID 10 x 40 BA

Universal high-power binoculars of very high twilight performance. Particularly suitable for the observation of distant and small objects. Ideal for sports, hunting and wildlife observation.
All-metal construction.

Magnification: 10x
Objective diameter: 40 mm
Diameter of exit pupil: 4 mm
Twilight factor: 20
Field of view: 110 m at 1000 m distance, 6.3°
Central drive, internal focusing
Dioptre compensation ± 3 dioptres
Roll-back rubber eyecups, interchangeable
Hinged bridge, adjustable for interpupillary distance
Easy-grip tubes and body, covered with grained PVC (B) or green rubber (BA)
Other external metal parts: black or green plating or enamel
Eyelets for carrying cord
Dimensions: Height about 143 mm
            Width about 122 mm
Weight: 10 x 40 B 0.59 kg
            10 x 40 BA 0.6 kg

|		Code Number
10 x 40 B TRINOVID with carrying cord	**40 228**	_____
10 x 40 BA TRINOVID with rubber reinforcement, with carrying cord (technical data as 10 x 40 B TRINOVID)	**40 236**	_____

Accessories for the 10 x 40 B/BA TRINOVID
Flat leather case with carrying cord	42 177	_____
Soft leather ever-ready case.......................................	42 179	_____
Rain guard (black)...	42 101	_____
Rain guard (green)	42 137	_____

Accessories for the TRINOVID binoculars

Roll-back rubber eyecup, black (replacement) for 8 x 20 C and 10 x 22 C TRINOVID binoculars .... 42 136 _____

Roll-back rubber eyecup, black (replacement) for all TRINOVID B binoculars except 7 x 42 B .... 42 133 _____

Roll-back rubber eyecup, black (replacement) for the 7 x 42 B TRINOVID .... 42 141 _____

Roll-back rubber eyecup, green (replacement) for all TRINOVID BA binoculars except 7 x 42 BA.................................... 42 138 _____

Roll-back rubber eyecup, green (replacement) for the 7 x 42 BA TRINOVID .... 42 139 _____

Rubber rain guard (black) for the TRINOVID B .... 42 101 _____

Rubber rain guard (green) for the TRINOVID BA.................... 42 137 _____

Black perlon tissue carrying cord (replacement for TRINOVID B/BA binoculars) .... 42 148 _____

Non-slip pad, black, (item no. 028.790.510-011).
Available from Technical Service Centre, Ernst Leitz Wetzlar GmbH, P.O.B. 2027, D-6330 Wetzlar, or your national LEITZ Agency.

Description and technical data of the binoculars

LEITZ TRINOVID binoculars

LEITZ precision mechanism-features and advantages:
Stylish LEITZ design – Trend-setting in form and construction
Modern compact design reduces the conventional volume

Volume comparison:
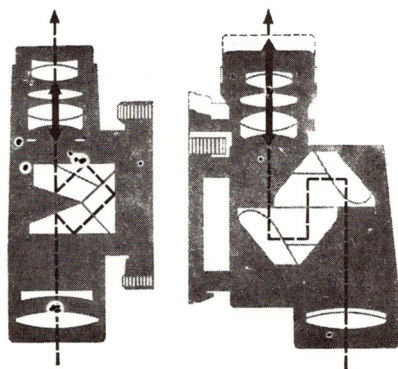
Left: LEITZ TRINOVID   Right: Conventional binoculars with Porro prisms

Light weight for strain-free observation
Easy focusing with convenient central drive
Dioptre compensation affords individual adaptation to the user's visual acuity
Solid all-metal construction guarantees optimum, lasting adjustment and best possible protection of all optical and mechanical components.
BA version also noise damping and non-slip.
Maintenance-free.
Genuine internal focusing ensures complete exclusion of dust, atmospheric humidity, and spray water.

LEITZ high-performance optical equipment – features and advantages
Novel optical design; used by LEITZ with great success.
The special arrangement of the optical path has resulted in the stylish flat shape of the TRINOVID binoculars.

Computation of the optical systems based on the latest knowledge and the use of high-quality glasses
Coating of all glass-air interfaces, matched to the maximum sensitivity of the eye, to ensure contrast and brightness
Maximum angular accuracy of the penta-prisms
Penta-prisms polished right to the apex (no wide dark edges)
Matt black internal finish of the TRINOVID binoculars prevents disturbing reflections.
Strict selection of all optical elements, careful matching of objectives, prisms, and eyepieces
Installation of the prism seating with precision-adjusted prisms, on shock-proof mountings
Circular pupils without secondary pupils, free from stray light
Strain-free observation even over prolonged periods (without headaches), because both optical systems have identical magnification and perfectly parallel alignment.
Widefield eyepiece produce large fields of view
Even in weak lighting contrast the resolving power of the LEITZ TRINOVID binoculars is fascinating.
LEITZ TRINOVID binoculars differentiate the smallest detail also in twilight.
LEITZ TRINOVID binoculars make the finest colour nuances visible (fascinating brilliance).
Because of their large field of view LEITZ TRINOVID binoculars facilitate the finding and observation also of moving objects.
LEITZ TRINOVID binoculars are something special, connoisseurs appreciate this.
LEITZ TRINOVID BA binoculars for heavy-duty work.
Rubber-reinforced LEITZ binoculars are extremely robust and therefore suitable for roughest use.
The rubber reinforcement acts as a noise suppressor.
The rubber reinforcement does not slip.
The rubber reinforcement offers additional protection against the weather.
The rubber reinforcement – an even more effective additional protection against shock and impact.
Stylish appearance
LEITZ precision and LEITZ functional reliability
International LEITZ Warranty;
10 years' guarantee for LEITZ TRINOVID Binoculars:
Solid proof of reliability and great practical value.

Contents

Batteries (button cells)

(replacement)

Manufacturer: designation:

For the LEICA R4-MOT and LEICA R3/R3-MOT:

Manufacturer	Designation
UCAR	EPX 76
UCAR	No. 357
UCAR	S 76 E
MALLORY	10 L 14
MALLORY	MS 76 H
VARTA	V 76 PX
VARTA	V 76 HS
VARTA	No. 541
EVEREADY	S 76 E
NATIONAL	G 13
RAY O VAC	RS 76 G
MAXELL	ST 44 F

for the LEICAFLEX SL/SL 2:

MALLORY	PX 625
VARTA PERTRIX	7002

for the LEICA M 5:

MALLORY	PX 625
VARTA PETRIX	7002

for the LEICA CL:

MALLORY	PX 625
VARTA PETRIX	7002
MALLORY NATIONAL	H–D

for the LEICAMETER MR:

MALLORY	PX 625

4/81

Compartments of camera cases

Code Number

Combination case for the LEICA R4-MOT........................ **14 832** _____
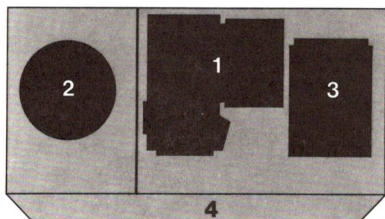
The following combinations can be carried:

Compartment 1:
for the LEICA R4-MOT **without** Motor-Winder/Motor-Drive with one of the following lenses:
3.5/15[2]), 2.8/16, 2.8/19[2]), 4/21[2]), 2.8/24[2]), 2.8/28[2]), 4/35[2]), 2.8/35, 2/35, 2/50, 1.4/50, 2.8/60[3]), 1.4/80, 2.8/90, 2/90, 4/100, 2.8/135, 4/180 or Extender R with 2/50, 2.8/60, 2.8/90, 2/90

Compartment 2:
For one of the following lenses each:
2.8/16, 4/21[1]) all lenses from 24 to 180 mm (including the zoom lenses 2.8/60[3]), 4/100[3]), 2/250, to No. 3 050 600, or Extender R with 2/50, 2.8/60[3]), 2.8/90, 2/90, 4/100, 2.8/135, 4/180.

Compartment 2:
With added coupling ring 14 836 for two each of the following lenses:

2.8/16	All lenses from 21 to 90 mm
4/21[1])	2.8/16, 2.8/24[1]), 2.8/28[1]), 4/35[1]) 2.8/35, 2/35 all lenses from 50 to 135 mm
2,8/24	2,8/16, 4/21[1]), all lenses from 28 to 90 mm as "4/21"
2.8/28	2.8/16, 4/21[1]), 2.8/24[1]), all lenses from 35 to 90 mm as "4/21"
4/35[1])	2.8/16, all lenses from 21 to 90 mm
2.8/35	as "4/35"
2/35	as "4/35"

2/50	2.8/16, all lenses from 21 to 100 mm
2/50 with Extender R	
	2.8/16, 4/21[1]), 2.8/24[1]), 2.8/28, 4/35[1]), 2.8/35, 2/35, 2.8/60, 1.4/80, 2/90
1.4/50	as "4/35"
2.8/60	as "4/35"
2.8/60 with Extender R	
	2.8/35, 2/50
1.4/80	2.8/16, all lenses from 21 to 60 mm (4/35[1])
2.8/90	as "1.4/80"
2/90	as "1.4/80"
2/90 with Extender R	
	2.8/35, 2/50
4/100	2/50

Compartment 3:

for films, filters etc., or one of the following lenses:
4/21[1]), 2.8/24[1]), 2.8/28, 4/35[1]), 2.8/35, 2/35, 2/50, 1.4/50, 2.8/60, 2.8/90, Extender R

Compartment 4:

Outside compartment for lens hoods, films, filters, etc.

---

1) = without lens hood
2) = no other lens fits in the compartment below the camera
3) = also with adapter

**Combination case for the LEICA R4 with Motor Winder/Motor Drive
and handgrip attached** .... **14833** _____

and Safari case .... 14837 _____

The following combinations can be carried:

Compartment 1:

for LEICA R4 (also with Data Back) with Motor Winder/Motor Drive and handgrip
attached with one of the following lenses:
3.5/15[2]), 2.8/16, 2.8/19[2]), 4/21[2], 2.8/24[2]), 2.8/28[2]), 4/35[2]), 2.8/35, 2/35, all lenses
from 50 to 135 mm (2.8/60[3]), 4/180, 2.8/180 from No. 2939701, or Extender with 2/
50, 2.8/60[3]), 2.8/90, 2/90, 4/100, 2.8/135

Compartment 2:

for one each of the following lenses:
2.8/16, 4/21[1]), all lenses from 24-180 mm (including the zoom lenses 2.8/60[3]), 4/
100[3]), 4/250 to No. 3050600, or Extender R with 2/50, 2.8/60[3]), 2.8/90, 2/90, 4/
100[3]), 2.8/135, 4/180, 3.4/180, 2.8/180 from No. 2939701

Compartment 2:

With added coupling ring 14836 for two each of the following lenses:

2.8/16	all lenses from 21 to 135 mm (2.8/60[3])
4/21[1])	2.8/16, 2.8/24[1]), 2.8/28[1]), 4/35[1]), 2.8/35, 2/35, all lenses from 50 to 135 mm (2.8/60[3]), 4/180
2.8/24	2.8/16, 4/21[1]), all lenses from 28 to 135 mm as "4/21"
2.8/28	2.8/16, 4/21[1]), 2.8/24[1]), all lenses from 35 to 135 mm as "4/21"
4/35[1])	2.8/16, all lenses from 21 to 135 mm (2.8/60[3]), 4/180
2.8/35 as "4/35"	
2/35	as "4/35"

224

2/50	as "4/35"
2/50 with Extender R	
	2.8/16, 4/21[1]), 2.8/24[1]), 2.8/28, 4/35[1]), 2.8/35, 2/35, all lenses from 60 to 90 mm
1.4/50	as "4/35"
2.8/60	as "4/35"
2.8/60 with Extender R	
	4/21[1]), 2.8/24[1]), 2.8/28[1]), 4/35[1]), 2.8/35, 2/35, 2/50, 1.4/50
1.4/80	2.8/16, all lenses from 21 to 60 mm (4/35[1])
2.8/90	as "1.4/80"
2.8/90 with Extender R	
	2.8/35, 2/35, 2/50, 1.4/50
2/90	2.8/16, all lenses from 21 to 80 mm, 4/100
2/90 with Extender R	
	2.8/16, 4/21[1]), 2.8/24[1]), 2.8/28[1]), 4/35[1]), 2.8/35, 2/35, 2/50, 1.4/50
4/100	2.8/16, all lenses from 21 to 50 mm
2.8/135	as "4/100"
4/180	4/21[1]), 2.8/35, 2/35, 2/50, 1.4/50

Compartment 3:
for films, filters, etc., or one of the following lenses:
4/21[1]), 2.8/24, 2.8/28, 4/35[1]), 2.8/35, 2/35, 2/50, 1.4/50, 2.8/60[3]), 2.8/90, 4/100, 2.8/135, 4/180, Extender R, or Extender R with 2/50, 2.8/60, 2.8/90
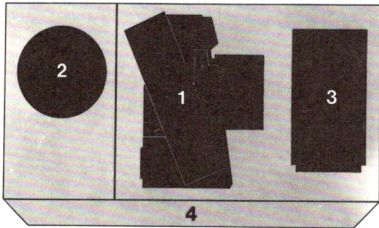
Compartment 4:
Outside compartment for lens hoods, films, filters, etc.

---

1) = without lens hood
2) = no other lens fits in the compartment below the camera
3) = also with adapter

Universal case for the LEICA R4 . . . .

14 834 _____

Universal case for the LEICA R3/R3-MOT . . . .   14 835 _____
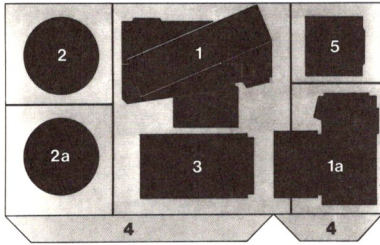
The following combinations can be carried:

Compartment 1:
for the LEICA R4 (also with Data Back) or LEICA R3-MOT respectively with Motor Winder/Motor Drive and handgrip attached with one of the following lenses:
3.5/15, 2.8/16, 2.8/19[2], all lenses from 21 to 135 mm (2.8/60[3]), 4/180, or Extender R with 2/50, 2.8/60, 2/90

Compartment 1a:
For the LEICA R4 (LEICA R3/R3-MOT) without Motor Winder/Motor Drive with one of the following lenses:
2.8/35, 2/50

Compartment 2:
Compartment 2a:
for one of the following lenses each:
2.8/60[3], 1.4/80, 2.8/90, 4/100[3], 2.8/135, 4/180, 3.4/180, 2.8/180, 4/250 to No. 3 050 600, 2.8/45-90, 4.5/75-200
or Extender R with 2/50, 2.8/60[3]), all lenses from 90 to 180 mm (4/100[3]), 2.8/45-90, 4.5/75-200
Smaller lenses (shorter focal lengths) can hardly be lifted from the depth of the compartment.

Compartment 2:
Compartment 2a:
With added coupling ring 14 836 for two each of the following lenses:

2.8/16	4/21[1]), all lenses from 24 to 135 mm (2.8/60[3]), 4/180
4/21[1])	2.8/16, all lenses from 24 to 135 mm (2.8/60[3]), 4/100[3]), 4/180, 2.8/180 from No. 2 939 701
2.8/24	2.8/16, 4/21[1]), all lenses from 28 to 136 mm (2.8/60[3]), 4/180
2.8/28	2.8/16, 4/21[1]), 2.8/24, all lenses from 35 to 135 mm (2.8/60[3]), 4/180
4/35	2.8/16, all lenses from 21[1]) to 135 mm (2.8/60[3]), 4/180
2.8/35	2.8/16, all lenses from 21[1]), to 135 mm (2.8/60[3]), 4/100[3]), 4/180, 2.8/180 from No. 2 939 701
2/35	as "2.8/35"

2/50	as 2.8/35
2/50 with Extender R	
	2.8/16, all lenses from 21[1]) to 135 mm (2.8/60[3]), 4/180
1.4/50	as "2.8/35"
2.8/60	2.8/16, all lenses from 21[1]) to 135 mm, 4/180
2.8/60 with Extender R	
	2.8/16, all lenses from 21[1]) to 90 mm
1.4/80	2.8/16, all lenses from 21[1]) to 135 mm (2.8/60[3]), 4/180
2.8/90	as "1.4/80"
2.8/90 with Extender R	
	2.8/16, all lenses from 21[1]) to 80 mm
2/90	as "1.4/80"
2/90 with Extender R	
	as "2.8/90 with Extender R"
4/100	2.8/16, all lenses from 21[1]) to 90 mm
4/100 with Extender R	
	2.8/15, all lenses from 21[1]) to 50 mm
2.8/135	as "4/100"
2.8/135 with Extender R	
	as "4/100 with Extender R"
4/180	as "4/100"
4/180 with Extender R	
	2.8/35, 2/50
2.8/180 (from No. 2 939 701)	
	4/21[1]), 2.8/24[1]), 2.8/28[1]), 4/35[1]), 2.8/35, 2/35, 2/50, 1.4/50

Compartment 3:
For films, filters etc, or one of the following lenses:
2.8/28[1]), 2.8/35, 2/35, 2/50, 1.4/50, Extender R, Extender R with 2/50

Compartment 4:
Outside compartment for lens hoods, films, filters, etc.

Compartment 5:
For Motor Winder/Motor Drive, RC LEICA R control unit, etc.

---

1) = without lens hood
2) = no other lens fits in the compartment below the camera
3) = also with adapter

Flash synchronisation

Type of flash		R 4-MOT* X-Contact	R3 and R3-MOT* X-Contact	M-Contact	all LEICAFLEX-MODELS ↯= X-Contact	🔆=M-Contact
Electronic		X, 100 ($^1/_{100}$) 1 → $^1/_{60}$, B	X ($^1/_{90}$) 4 S → $^1/_{60}$, B	–	B → ↯ (= $^1/_{100}$)	–
Flash bulbs	AG 1 AG 3 Cube	1 → $^1/_{30}$, B	4 S → $^1/_{30}$, B	–	1 → $^1/_{30}$	1 → $^1/_{60}$
	PF 1 XM 1	1 → $^1/_{30}$, B	4 S → $^1/_{30}$, B	–	–	1 → $^1/_{125}$
	M 2	1 → $^1/_{60}$, B	4 S → $^1/_{60}$, B	–	–	–
	PF 5 XM 5	1 → $^1/_{30}$, B	4 S → $^1/_{30}$, B	$^1/_{125}$ – $^1/_{1000}$	–	1 – $^1/_{125}$
	M 3 25 GE 5	1 → $^1/_{30}$, B	4 S → $^1/_{30}$, B	$^1/_{125}$ – $^1/_{1000}$	–	1 → $^1/_{250}$
	FP 26 PF 6 XM 6	1 → $^1/_{15}$, B	4 S → $^1/_{15}$, B	$^1/_{30}$ – $^1/_{1000}$	–	–
	PF 60	1 → $^1/_{30}$, B	4 S → $^1/_{30}$, B	–	–	–
	PF 100	1 → $^1/_{15}$, B	4 S → $^1/_{15}$, B	$^1/_{30}$	–	–

*With flash exposures the camera must be set at "manual".

With automatic flash control of the LEICA R4:
System-compatible electronic flash units automatically switch the camera electronics to "X" (1/100 sec), when the flash unit is charged. Effective with all programs. With automatic aperture and program control the aperture is not determined automatically. It closes to the set value.

Type of flash			all M-Models from Nr. 854001	M 3 to Nr. 854000	CL
Electronic		X ↯	B → ● (= $^1/_{50}$) B → ↯ (= $^1/_{50}$]	B → $^1/_{50}$	B → $^1/_{60}$
Flash bulbs	AG 1 AG 3 Cube M 2	● ↯	B → $^1/_{30}$	B → $^1/_{25}$	B → $^1/_{30}$
	XM 1 PF 1	M 🔆	B → $^1/_{60}$	B → $^1/_{50}$	–
	XM 5	M 🔆	B → $^1/_{60}$	–	–
	PF 5	M 🔆	B → $^1/_{60}$	B → $^1/_{100}$	–
	M 3	M 🔆	B → $^1/_{125}$	–	–
	GE 5 25	M 🔆	B → $^1/_{500}$	B → $^1/_{500}$	–

↯ or X = contact bush for electronic flash units and centre contacts
🔆 or M = contact bush for flashbulbs

Type of flash		Ig, IIIg,		If, IIf, IIIf — red contact number		from No. 360001 — black contact number		to No. 360000 — contact number	
Electronic	⚡	B red ⚡ (= 1/30) ⚡ (= 1/50)		1/50 T, 1 → 1/25 B	20 0 2	1/30 T, 1 → 1/20 B	2 2 6	1/30 T, 1 → 1/20 B	0 4 6,5
AG 1 AG 3 Cube M 2	⚡	B red ⚡ (= 1/30)		–		–		–	
AG 1 AG 3 Cube	💡	–		1/15 1/25 1/50 1/75	2 9 8 3	1/15 – 1/20 1/30 1/40 1/60	8 11 8 5	1/20 1/30 1/40 1/60	10 12 8 5
XM 1 PF 1	💡	B → 1/60*		1/15 1/25 1/50	2 5 10	1/15 – 1/20 1/30	9 3	1/20 1/30	14 13
PF 5	💡	B → 1/60*		1/15 1/25 1/50 1/75	2 14 11 5	1/15 – 1/30 1/40	16 11	1/20 – 1/30 1/40	14 11
GE 5 25	💡	B → 1/500*		1/15 1/25 1/50 1/75 1/100 1/200 1/500	2 14 11 6 4 2 1	1/15 – 1/30 1/40 1/60 1/100 1/200	16 11 8 5,5 4	1/20 – 1/30 1/40 1/60 1/100	14 11 9 7
M 3	💡	B → 1/125*		1/15 1/25 1/50 1/75	2 7 10 6	1/15 – 1/20 1/30 1/40 1/60	9 15 11 8	1/20 1/30 1/40 1/60	14 13 12 10
All	💡	–		B, T 1 → 1/10	 2	B, T 1 → 1/10	 6	T, 1 → 1/8 B	6 9

Left margin (vertical): **Flashbulbs**

Column note (vertical): For T, 1 – 1/15 set short-time button at ⚡ (next to 30 – 1)

*Except setting red or black arrow

Adaptation of lenses

Conversion of lenses

**Conversion of LEICAFLEX lenses for
use on the LEICA R4, LEICA R3-/R3-MOT**
For the full utilisation of the LEICA R exposure facilities, existing LEICAFLEX lenses can be fitted with a cam.
The use of converted lenses on all LEICAFLEX models is unrestricted.
Modification by Technical Service, Ernst Leitz Wetzlar GmbH, or authorised workshop of the LEITZ agencies.

Conversion of LEICA-R lenses with filter thread E 54 to filter thread E 55:

90 mm ELMARIT-R f/2.8	up to Serial No. 2 809 000
90 mm SUMMICRON-R f/2	up to Serial No. 2 770 950
100 mm MACRO-ELMAR f/4 (for Focusing Bellows R)	up to Serial No. 2 933 350
135 mm ELMARIT-R f/2.8	up to Serial No. 2 772 618

By Technical Service Centre, Ernst Leitz Wetzlar GmbH, or authorised workshop of the LEITZ Agencies.

CL Lenses on LEICA M cameras

Screw-thread LEICA lenses and lenses for the LEICA M models have a differential helical focusing movement, i. e. the rear focusing barrel bearing against the rangefinder coupling roller moves only in and out. For a more compact and lightweight design, the 40 mm SUMMICRON-C f/2 and 90 mm ELMAR-C/4 for the LEICA CL have instead a direct rear focusing cam. These lenses can be mounted on the LEICA M, but do not provide precise coupling with the rangefinder. For this reason we do not recommend the use of the CL lenses on the LEICA M cameras.

Existing 28 mm lenses on the LEICA M4-P

28 mm lenses from Serial No. 24 314 921 on switch in the 28 mm field-of-view frame when used on the LEICA M4-P. A correct switch of the field-of-view is not given when older lenses are used. In the case we recommended the use of the 28 mm brilliant finder (Code-No. 12 017). These lenses cannot be modified.

Interchangeable LEICA M lenses on the LEICA CL

The bayonet lens mount of the LEICA® CL is identical with that of the LEICA M models. Hence numerous LEICA M lenses ar usable on the LEICA CL. In addition, earlier screw-thread lenses can be used with the appropriate bayonet-screw adapter rings (Code No. 14097 for 50 mm, Code No. 14098 for 28 mm and 90 mm and Code No. 14099 for 35 mm).

The LEICA CL finder incorporates bright-line frames for the 40 mm, 50 mm, and 90 mm fields of view. The entire visible field is approximately that for 35 mm lenses. 28 mm lenses require the brilliant finder Code No. 12017.

Exceptions:

1. The following lenses, when used on the LEICA CL, require removal of their lens hoods for focusing, particularly at close distances:

35 mm SUMMICRON	f/2
35 mm SUMMILUX	f/1.4
50 mm SUMMILUX	f/1.4
50 mm NOCTILUX	f/1.2
90 mm ELMARIT	f/2.8

When used on the LEICA CL, the high-speed 50 mm SUMMILUX f/1.4 and NOCTILUX f/1.2 lenses should be stopped down to the least f/2. The 50 mm NOCTILUX f/1 cannot be used.

2. Lenses of extended focusing range:
The LEICA CL rangefinder covers a focusing range from infinity down to 0.8 m (32"). Some LEICA M lenses focus on still nearer distances, but only with their distance scales, not the rangefinder:

28 mm ELMARIT	f/2.8
35 mm SUMMICRON	f/2
50 mm SUMMICRON	f/2 (Code No. 11817)
50 mm SUMMICRON	f/2 with dual range

Here distances shorter than 0.8 m (32") cannot be focused in the viewfinder of the LEICA CL.

3. Collapsible lenses need protective tape to limit retraction of the lens barrel. This is available internationally in various widths from DYMO. (The lens does not have to be returned to the factory).
The tape should surround the lens barrel, leaving a gap of about 1 mm. To cut the right length first make a paper pattern.

Collapsible lenses:

50 mm ELMAR	f/3.5	
50 mm ELMAR	f/2.8	
50 mm SUMMAR	f/2	Required tape width 9.5 mm (3/8 in)
50 mm SUMMITAR	f/2	
90 mm ELMAR	f/4	
50 mm HEKTOR	f/2.5	Required tape width 12.7 mm (½ in)

4. The following lenses of the LEICA M range cannot be used on the LEICA CL:
   a) Lenses whose rear mount enters too far into the camera body, such as the 28 mm ELMARIT f/2.8 (Serial No. below 2314921) and the SUPER-ANGULON 21 mm.
   b) Lenses with a finder attachment such as the 35 mm wide-angle lenses for the LEICA M3 and the 135 mm ELMARIT f/2.8.
   c) The 90 mm SUMMICRON f/2, 135 mm TELE-ELMAR f/4.

Existing interchangeable lenses on the LEICA M5

All lenses with the LEICA bayonet changer, and with a bayonet adapter also the LEICA lenses of older production, i. e. with screw thread, can be used on the LEICA M5.

With minor exceptions or limitations they are also suitable for the full utilisation of selective light metering through the lens.

Exceptions:

1. Collapsible lenses need protective tape to limit the retration of the lens barrel. **The lenses need not be returned to the factory.**

   Collapsible lenses:

50 mm ELMAR	f/3.5	
50 mm ELMAR	f/2.8	
50 mm SUMMAR	f/2	Required tape width 9.5 mm (3/8 in)
50 mm SUMMITAR	f/2	
50 mm SUMMICRON	f/2	
90 mm ELMAR	f/4	
50 mm HEKTOR	f/2.5	Required tape width 12.7 mm (1/2 in)

2. **Lenses that have to be returned to the factory for adaptation:**

   (LEITZ Technical Service, your National Leitz Agency or Authorised After Sales Service Workshop.

   a) Wide-angle lenses of 21 and 28 mm focal length, whose rear mount enters too far into the camera body.

   Through a recess in the lens bayonet, engagement of the photo resistor is prevented. The lenses can now be attached – but light metering through the lens is not possible.

21 mm SUPER-ANGULON	f/4	with screw thread only the **bayonet adapter** (Code No. 14097) must be changed. Please state: for 21 mm
21 mm SUPER-ANGULON	f/4	with bayonet changer
21 mm SUPER-ANGULON	f/3.4	with bayonet changer, (below Serial No. 2473251)
28 mm ELMARIT	f/2.8	with bayonet changer below Serial No. 2314921)

   b) Lenses whose detachable viewfinder front attachments make contact with the cap of the LEICA M5.

   Lens bayonet and finder attachment must be remachined.

32 mm SUMMARON	f/3.5	with **detachable** viewfinder front attachment
50 mm SUMMICRON	f/2	With **close-up range**

In addition, the VISOFLEX 1 and 3 mirror reflex attachments and the Universal Focusing Bellows can be used on the LEICA M5. With these instruments selective light metering is also possible when a tripod is used. Here, the measurement is displayed in the measuring viewfinder of the camera when the mirror has been swung out.

The VISOFLEX 2 cannot be used.

On the LEICA M5 please use only the body cover supplied with it.

Attention:

In the LEICA M5 only films in cartridges with standard spools (to DIN 4535 or ISO standard 1057) can be used. These spools have drive lugs on both ends. The rewind key of the LEICA M5 (see illustration) engages in the lugs facing the camera baseplate.

Filter sizes

For the LEICA M and C lenses and for earlier lenses with screw thread

Examples: A 36 = push-on filters; push-on dia. 36 mm
          E 39 = screw-in filters, screw thread dia. 39 mm
          7 = Series 7 filters.

Lens		Filter size
21 mm SUPER-ANGULON	4	E 39
21 mm SUPER-ANGULON	3,4	E 48 or 7
21 mm ELMARIT-M	2,8	E 49
28 mm HEKTOR	6.3	A 36
28 mm SUMMARON	5.6	A 36
28 mm ELMARIT	2.8	E 48 or 7
28 mm ELMARIT-M (from Serial No. 2 977 551)	2.8	E 49
35 mm ELMAR	3.5	A 36
35 mm SUMMARON (screw thread)	3.5	A 36
35 mm SUMMARON (screw thread, from Serial No. 1 423 141)	3.5	E 39
35 mm SUMMARON (bayonet changer)	3.5	E 39
35 mm SUMMARON	2.8	E 39
35 mm SUMMICRON	2	E 39
35 mm SUMMICRON (from Serial No. 2 307 451)	2	7
35 mm SUMMICRON (from Serial No. 2 483 504)	2	E 39 or 7
35 mm SUMMICRON (from Serial No. 2 974 251)	2	E 39
35 mm SUMMILUX	1.4	E 41
35 mm SUMMILUX (from Serial No. 2 166 701)	1.4	7
40 mm SUMMICRON-C	2	5.5
50 mm ELMAR (screw thread)	3.5	A 36
50 mm ELMAR (bayonet changer)	3.5	E 39
50 mm ELMAR	2.8	E 39
50 mm HEKTOR	2.5	A 36
50 mm SUMMAR®	2	A 36
50 mm SUMMITAR	2	E 36.5
50 mm SUMMICRON-M	2	E 39
50 mm SUMMARIT®	1.5	E 41
50 mm SUMMILUX	1.4	E 43
50 mm NOCTILUX	1.2	8
50 mm NOCTILUX	1	E 58
65 mm ELMAR	3.5	E 41
65 mm ELMAR (from Serial No. 2 378 901)	3.5	6
75 mm SUMMILUX-M	1.4	E 60
85 mm SUMMAREX®	1.5	E 58
90 mm ELMAR (screw thread)	4	A 36
90 mm ELMAR (screw thread, from Serial No. 1 573 001)	4	E 39
90 mm ELMAR (bayonet changer)	4	E 39
90 mm ELMAR-C	4	5.5
90 mm ELMARIT	2.8	E 39
90 mm TELE-ELMARIT	2.8	E 39
90 mm SUMMICRON	2	E 48
90 mm SUMMICRON-M (from Serial No. 2 813 801)	2	E 49
125 mm HEKTOR	2.5	E 58
135 mm ELMAR	4.5	A 36
135 mm HEKTOR (screw thread)	4.5	A 36
135 mm HEKTOR (screw thread, from Serial No. 1 416 001)	4.5	E 39
135 mm HEKTOR (bayonet changer)	4.5	E 39
135 mm ELMAR	4	E 39
135 mm TELE-ELMAR	4	E 39
135 mm ELMARIT	2.8	7
135 mm ELMARIT (from Serial No. 2 788 927)	2.8	E 55
200 mm TELYT	4.5	E 48
200 mm TELYT	4	E 58
280 mm TELYT	4.8	E 58
280 mm TELYT (from Serial No. 2 340 953)	4.8	8
400 mm TELYT	6.8	7 or 8
400 mm TELYT	5.6	7
400 mm TELYT	5	E 85
560 mm TELYT	6.8	7
560 mm TELYT	5.6	7

Dimensions of the LEITZ filter threads

E 39	M 39 x 0.5	E 55	M 55 x 0.75
E 41	M 41 x 0.5	E 58	M 58 x 0.75
E 43	M 43 x 0.5	E 60	M 60 x 0.75
E 48	M 48 x 0.75	E 85	M 85 x 0.75
E 49	M 49 x 0.75		

Projector lamps

Legend: H = tungsten halogen lamps

Projector lamps

Lamp	Type	Volt	Watt	Item No.	Base
L1	H	24	150	038-101.093-000	G 6,35-15
L2	H	24	250	038-101.098-000	G 6,35-15
L3	H	12	100	038-101.092-000	GY 6,35-13
L4	H	12	75	038-101.128-000	GZ 6,35
L5		220	150	038-127.003-013	P 28
L6		110	150	038-127.003-002	P 28
L7		220	250	038-127.004-013	P 28
L8		110	250	038-127.004-002	P 28
L9		220	300	038-127.005-013	P 28
L10		110	300	038-127.005-002	P 28
L11		220	500	038-127.007-013	G 17 q
L12		110	500	038-127.007-002	G 17 q
L13		220	150	038-127.009-013	G 17 q
L14		110	150	038-127.009-002	G 17 q
L15		220	300	038-127.006-013	G 17 q
L16		110	300	038-127.006-002	G 17 q
L17		220	500	038-127.008-013	G 17 q
L18		110	500	038-127.008-002	G 17 q
L19		12	100	038-101.090-000	Ba 15s

Light pointer lamps

Lamp	Volt	Watt	Item No.	Base
L20	12	4	302-053.018-001	Ba 9s
L21	12	2	302-053.018-011	Ba 9s
L22	3	0.45A	038-101.129-000	Ba 9s
L23	12	400 mA	038-101.133-000	Ba 9s
L24	12	3	038-101.134-000	Ba 9s

AF lamp

Lamp	Volt	Watt	Item No.	Base
L25	12	3	302-053.034-002	Strip lamp
L26			031-201.004-022	Strip lamp

Projector / lamp assignment

Projectors	Projector lamps	Light pointer lamps	AF lamp
PRADO S/SM	L5, L6, L7, L8		
PRADO 150	L3, L4		
PRADO 250/500/66	L5, L6, L7, L8, L9, L10		
PRADO UNIVERSAL	L1		
PRADOVIT I/f	L5, L6, L7, L8, L9, L10, L13, L14, L15, L16		
PRADOVIT n 12	L2, L18		
PRADOVIT n 24	L1		
PRADIX	L11, L12, L18		
PRADOLUX	L1, L2		
PRADOVIT COLOR F	L13, L14, L15, L16, L18	L20	
PRADOVIT COLOR 150 + AF	L1	L20	
PRADOVIT COLOR 250 + AF	L2	L20	
PRADOVIT TA/RC	L1	L20	
PRADOVIT COLOR 110	L4	L21	
PRADOVIT R 150/RA 150	L1	L22, L23	L26
PRADOVIT C/CA 1500	L1	L23, L24	L25
PRADOVIT C/CA 2500	L3	L24	L25

Base	Item No.	Watt	Volt	DIASCRIPTOR OP 2500	DIASCRIPTOR OP 250	DIASCRIPTOR 4	EPISKOP LE 19 S	EPISKOP LE 19	EPISKOP Vz 3	EPISKOP Vz 2	EPISKOP III LH	EPISKOP Vh 2/III L2
Fc 2	038-101.127-000	1000	220				○					
R 7s 15	038-127.023-000	650	118			○						
R 7s 15	038-127.020-014	800	220				○		○			
GY 9,5	038-127.025-014	800	220			○						
GY 9,5	038-127.025-019	800	115				○					
GY 9,5	038-127.024-014	500	230						○			
GY 9,5	038-127.024-019	500	115						○			
GY 16	038-127.027-013	2000	220									
GX 9,5	038-127.026-013	1000	220								○	
GX 9,5	038-127.026-019	1000	115								○	
G 6,35	038-101.098-000	250	24	○	○							
P 28	038-127.012-002	500	110							○	○	
P 28	038-127.012-013	500	220							○		
P 28	038-127.017-002	1000	110								○	○
P 28	038-127.017-013	1000	220									○

Projectors · Projector lamp

Projection distances and screen image size

35 mm format

Projection distances and screen image sizes for **the 35 mm format.**
A square screen is necessary when both upright and horizontal slides are to be projected; the table below contains the lengths of the screens in m.
For the projection of 40 x 40 mm slides the given values must be increased by about 10%.

		Focal lengths in mm								
		35	50	60	90	120	150	200	250	300
	1	0,95								
	2	1,95	1,30	1,15						
	3	2,95	1,95	1,75	1,10					
	4	3,95	2,65	2,30	1,50	1,10				
	5		3,30	2,90	1,85	1,40	1,10			
	6		4,00	3,50	2,25	1,70	1,35			
	7			4,00	2,65	1,95	1,55			
	8				3,05	2,25	1,80	1,35		
	9				3,45	2,55	2,05	1,50		
	10				3,80	2,85	2,25	1,70	1,35	
	11					3,15	2,50	1,85	1,45	
	12					3,45	2,75	2,05	1,60	
	13					3,70	2,95	2,20	1,75	1,45
	14					4,00	3,20	2,40	1,90	1,55
	15						3,45	2,55	2,05	1,70
	16						3,65	2,75	2,15	1,80
	17						3,90	2,90	2,30	1,90
	18						4,15	3,10	2,45	2,05
	19							3,25	2,60	2,15
	20							3,45	2,75	2,25
	21							3,60	2,85	2,40
	22							3,80	3,00	2,50
	25							4,30	3,45	2,85
	30								4,15	3,45
	35									4,00

Projection distances in m

6 x 6 cm format

Projection distances and screen image sizes for the **6x6 cm** (2¼ x 2¼in) and 7x7 (2¾ x 2¾ in) format (transparency size 54 x 54 mm).

Projection distances in m		Focal lengths in mm			
		150	200	250	300
	3	0,95			
	4	1,35	0,95		
	5	1,70	1,25	0,95	
	6	2,05	1,50	1,20	0,95
	7	2,40	1,80	1,40	1,15
	8	2,75	2,05	1,60	1,35
	9	3,15	2,30	1,85	1,50
	10	3,50	2,60	2,05	1,70
	11	3,85	2,85	2,25	1,85
	12	4,20	3,15	2,50	2,05
	13		3,40	2,70	2,25
	14		3,65	2,90	2,40
	15		3,95	3,15	2,60
	16		4,20	3,35	2,75
	17			3,55	2,95
	18			3,80	3,15
	19			4,00	3,30
	20			4,20	3,50
	22				3,65
	24				3,85
	25				4,40

Micro attachments A+B

Screen image dia.	Magnification/aperture and reproduction ratio			Eyepiece, and projection distances in feet, in, and m							
	4/0.12	10/0.25	25/0.50	5 x	4 x	3,2 x	2,5 x	2 x	1,6 x	1,25 x	1 x
60 cm	110 : 1	275 :1	680 :1				2,7	3,4	4,2	5,5	6,8
85 cm	155 : 1	400 :1	1000 :1			3,0	3,9	4,8	6,0	7,8	
125 cm	230 : 1	570 :1	1400 :1	2,8	3,6	4,4	5,7	7,1	8,8		

Example: With the 2.5x eyepiece at a projection distance of 2.7 m (9 ft) a screen image of 60 cm (24 in) diameter is obtained. The reproduction scales obtainable with the objectives listed are 110:1, 275:1, and 680:1 respectively.

Macro attachment

	Projection distance	Screen image size in m, ft, in	Reproduction ratio
50 mm ELMARON f/2.8	2,00 m	1,90 m	39 : 1
	3,00 m	2,85 m	59 : 1
	4,00 m	3,80 m	79 : 1
	6,00 m	5,70 m	119 : 1
90 mm COLORPLAN f/2.5	2,00 m	1,00 m	21 : 1
	3,00 m	1,55 m	32 : 1
	4,00 m	2,10 m	43 : 1
	6,00 m	3,20 m	66 : 1

Episcopy
Projection distances and screen image sizes Episcope LEITZ LE 19 and LE 19S

28463–330
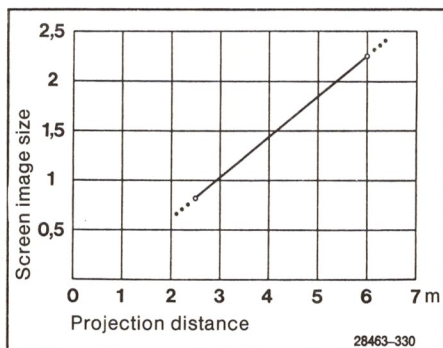
Projection distances between 2.5 and 6 m at screen image sizes between 80 cm and 2.5 m can be obtained.

The versatile possibilities of combinations of the PRADOVIT range in lap dissolve projection

C 2500
(24 V/250 W)

CA 2500 mit Autofocus
(24 V/250 W)

COLOR 250
COLOR 250
AUTOFOCUS
(24 V/250 W)

R 150
(24 V/150 W)

RA 150 mit Autofocus
(24 V/150 W)

COLOR 150
COLOR 150
AUTOFOCUS
(24 V/150 W)

C 1500
(24 V/150 W)

CA 1500 mit Autofocus
(24 V/150 W)
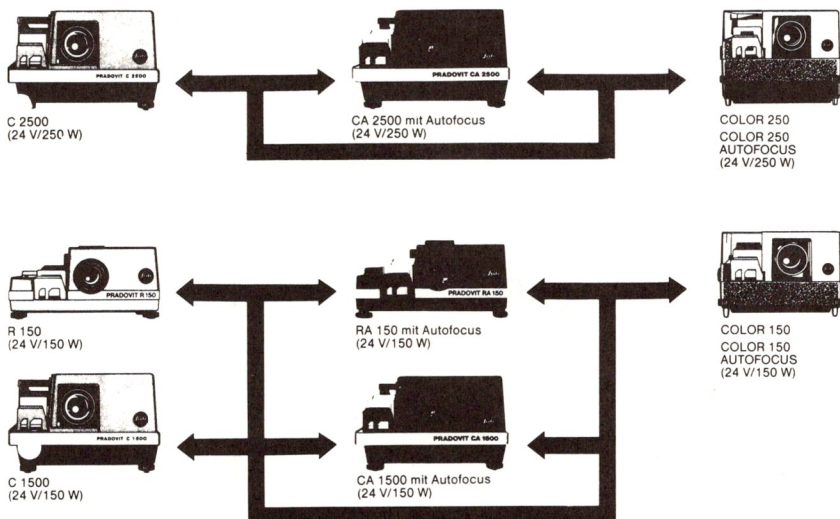
Two PRADOVIT projectors and a D.U.-24 A or D.U.-24 M control unit form a projection unit. LEITZ PRADOVIT models fitted with the 10-pin socket and built-in TRIAC for lamp control can be coupled as desired. In the interest of operating convenience PRADOVIT projectors with AUTOFOCUS device should be chosen.

The models RA, CA 1500, CA 2500 can be ordered with the 10-pin socket. Other PRADOVIT models can be fitted with the 10-pin socket and a TRIAC without difficulty whenever required.

All projectors that have been modified, i. e. with the 10-pin socket and built-in TRIAC, can be normally used as single projectors without additional shorting plug.

Connection of the lap dissolve control unit to the tape or cassette recorder

Spulenbandgerät (Sp)

Cassettenrecorder (CR)
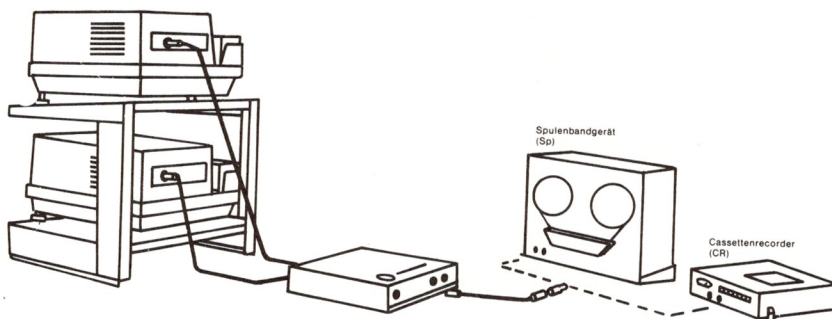
Projector	Lap Dissolve Control Unit	Connection	Tape Recorder
2 PRADOVIT projectors in modified version with built-in TRIAC and 10-pin socket	D.U.-24 A 37 973	6-pin* connecting cable 031-049.159	ITT 740 AV (CR) Philips 2209 AV (CR) Philips 2229 AV (CR) Metz Mecasound Studio 4920 (CR) Uher CR 240 AV Grundig TS 925/ TS 945 (Sp) Philips N 4520 with impulse head (Sp)
as above	as above	6-pin* connecting cable 031-049.159 and connecting piece 1*	Grundig C 420 (CR), CN 1000 (CR) TK 845, TK 847, TS 1000 (Sp) Grundig TK 745, TK 747, TK 850 (Sp) with Grundig Kit No. 137 Grundig TK 222/TK 242/ TK 246/TK 248 TK 600 (Sp) with Grundig Kit No. 12
as above	as above	6-pin* connecting cable 031-049.159 and connecting piece 2*	Uher 560 Royal (Sp) with head carrier Z 346 AV Uher 561 Royal (Sp) with head-carrier Z 346 AV
as above	as above	Standard recording cable	All instruments with "Playback" (various quadro units)

* Forms part of the D.U.-24 A

LEICA genealogical tree

List of the LEICA models

LEICA I

(non-interchangeable lens)

First basic LEICA model, black enamelled, **non-interchangeable ELMAR f/3.5 50 mm lens,** with locking spring for the infinity position, slip-on rangefinder, focal plane shutter, $1/20$ to $1/500$ sec and time exposure.
Available from 1925 onwards.

Compur LEICA

Black enamelled, non-interchangeable ELMAR f/3.5 50 mm lens, Compur shutter, speeds from $1 - 1/300$ sec.
Separate shutter wind and film transport.
Available from 1926 onwards.
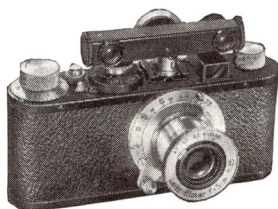
LEICA I

(with changing mount)

Camera with **screw mount for interchangeable lenses.**
Lens flange and lens screw mount not yet standardized.
Available from 1930 onwards.
Lens flange and lens mount standardized in models from Serial No. 60 500 onwards.
Available from 1931 onwards.
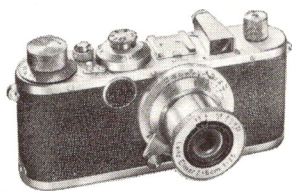
Standard LEICA

Black enamelled or chromium finished, screw mount for interchangeable lenses, slip-on rangefinder, focal plane shutter $1/20$ to $1/500$ sec, pull-out rewind knob.
Serial Nos. from 100 000 onwards.
Available from 1932 onwards.
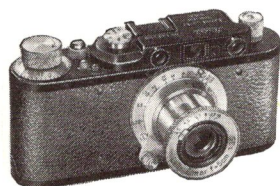
LEICA II

Black enamelled or chromium finished, with built-in coupled rangefinder, focal plane shutter $1/20$ to $1/500$ sec and time exposure.
Serial Nos. from 71 500 onwards.
Available from 1932 onwards.
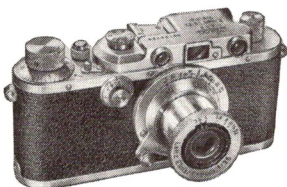
LEICA III

As model II, but with extended range of shutter speeds from 1 to $1/500$ sec, rangefinder with focusing telescope (1.5x), eyelets at sides for carrying strap.
Serial Nos. from 109 000 onwards.
Available from 1933 onwards.

LEICA III a

As model II, but with additional shutter speed $1/1000$ sec.
Serial Nos. from 156 201 onwards.
Available from 1935 onwards.
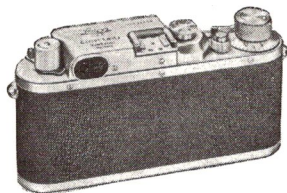
LEICA III b

As model III a, but with eye lenses for viewfinder and rangefinder close together.
The lever for adjusting the rangefinder telescope is next to the rewind knob.
Serial Nos. from 240 017 onwards.
Available from 1938 onwards.

LEICA 250

With enlarged cassette spaces (cassettes for 10 m [33 ft] film) for reporters, otherwise as III a.

LEICA I c

Shutter speeds from $1/30$ to $1/500$ sec and time exposure, slip-on brilliant finder and rangefinder, screw mount for interchangeable lenses.
Serial Nos. from 455 000 omwards.
Available from 1949 onwards.

LEICA II c

As model I c, but with built-in coupled rangefinder, shutter speeds from $1/30$ to $1/500$ sec and time exposure.
Serial Nos. 440 000.
Available from 1948 onwards.
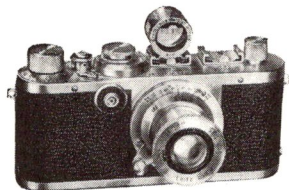
LEICA I f

(black synchronizing dial)

As model I c, but fully synchronized, film indicator built into the film winding knob.
Serial Nos. from 562 000 onwards.
Available from 1952 onwards.

LEICA I f

(red synchronizing dial)

As above, but international shutter speeds $^1/_{25}$, $^1/_{50}$ sec etc.
Serial Nos. from 536001 onwards.
Available from 1952 onwards.
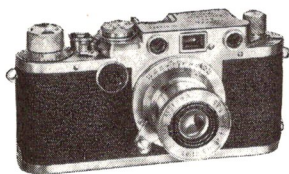
LEICA II f

(black synchronizing dial)

As model II c, but with built-in full flash synchronization, film indicator built into the film winding knob.
Serial Nos. from 451000 onwards.
Available from 1951 onwards.

LEICA II f

(red synchronizing dial)

As above, but with international shutter speeds $^1/_{25}$, $^1/_{50}$ to $^1/_{1000}$ sec and time exposure.
Serial Nos. from 574401 onwards.
Available from 1952 onwards.

LEICA III c

As model II c, but with extended range of shutter speeds from 1 to $^1/_{1000}$ sec and time exposure.
Serial Nos. from 360000 onwards.
Available from 1940 onwards.

LEICA III f

(black synchronizing dial without self-timer)

As model III c, but with built-in full flash synchronization and film indicator built into film winding knob.
Serial Nos. from 525000 onwards.
Available from 1950 onwards.

LEICA III f

(red synchronizing dial, without self-timer)

As above, but international shutter speeds.
Serial Nos. from 615000 onwards.
Available from 1952 onwards.
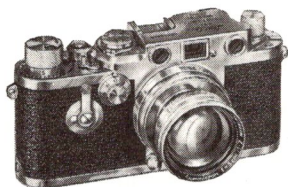
LEICA III f

(with self-timer)

As model III f with red synchronizing dial, but with self-timer of approximiately 12 seconds' delay.
Serial Nos. from 685000 onwards.
Available from 1954 onwards.

LEICA III g

The LEICA III g differs from the LEICA III f in the following technical features:
1. Large bright-line viewfinder with automatic parallax compensation.
2. Shutter speeds graduated in geometrical progression.
3. Fully automatic synchronization (without contact numbers),
4. Film indicator in the back of the camera body.
Serial Nos. from 825001 onwards.
Available from 1957 onwards.
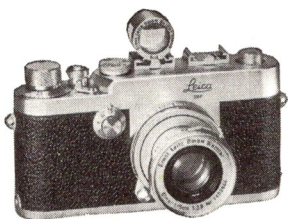
LEICA I g

basically the same design as that of the LEICA III g.
Has no rangefinder and self-timer.
Serial Nos. from 887001 onwards.
Available from 1957 onwards.
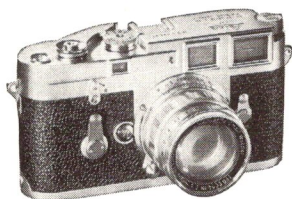
LEICA M 3

Bright-line measuring viewfinder with automatic parallax compensation, automatically faded-in image frames for 50, 90 and 135 mm focal length (35 mm frame obtained by use of 35 mm lens with finder attachment).
Bayonet mount for rapid lens change. Shutter speed knob engages at each setting from 1 to $1/1000$ sec and B.
Attachable exposure meter with direct shutter coupling.
Automatic frame counter under magnifier. Hinged back.
From 1956 onwards with field-of-view selector.
Serial Nos. from 700001 onwards.
Available from 1954 onwards.
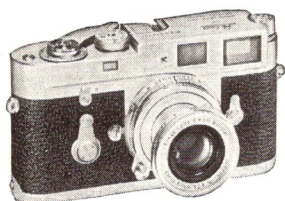
LEICA M 2

As LEICA M 3, with the following differences:
Automatically faded-in image frames for 35, 50, and 90 mm focal lengths.
Film counter must be returned to 0 by hand.
From 1959 onwards with self-timer.
Serial Nos. from 926001 onwards.
Available from 1958 onwards.

LEICA M 1

Without rangefinder. Fields of view for 35 and 50 mm lenses are shown parallax-free and permanently faded into the bright-line finder. Otherwise as M 2.
Serial Nos. from 950001 onwards.
Available from 1959 onwards.
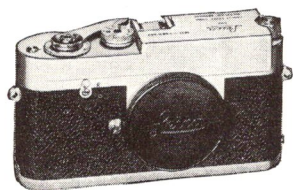
LEICA MD

As LEICA M 1, but without viewfinder, equipped for the use of the marking device.
Serial Nos. from 1 102 501 onwards.
Available from 1965 onwards.
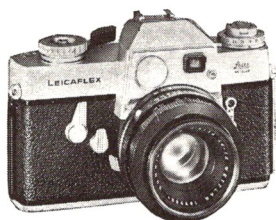
LEICAFLEX

Single-lens-reflex camera, focusing screen with micro-prism measuring field,
built-in CdS exposure meter, lens bayonet mount, focal plane shutter 1 to $1/2000$ sec
and B, electronic flash $1/100$ sec, automatic frame counter under magnifier.
Serial Nos. from 1 080 114 onwards.
Available from 1965 onwards.
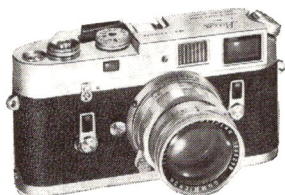
LEICA M 4

Bright-line measuring viewfinder with automatic parallax compensation.
Automatically faded-in image frames for 35, 50, 90 and 135 mm focal length.
Bayonet mount for rapid lens change.
Shutter speed knob from 1 to $1/1000$ sec and B. Attachable exposure meter coupled
directly with the shutter knob.
Rapid film loading system for all standard 35 mm films and LEICA cassettes. Auto-
matic film counter under magnifier. Hinged back.
Serial Nos. from 1 175 001 onwards.
Available from 1967 onwards.
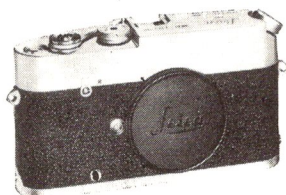
LEICA MD a

as LEICA M 4, but without viewfinder. Designed for the use of the marking device.
Serial Nos. from 1 159 001 onwards.
Available from 1967 onwards.
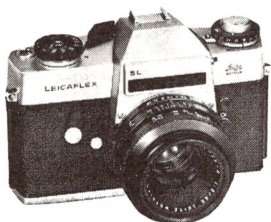
LEICAFLEX SL

Single-lens-reflex camera with selective through-the-lens light metering.
Focusing screen with finest-ground micro-prisms for the assessment of sharpness
throughout the entire viewfinder field. Central measuring field with 4-sided micro-
prisms for positive focusing.
Bayonet mount for rapid lens change.
Focal-plane shutter 1 to $1/2000$ sec and B. Electronic flash up to $1/100$ sec.
Automatic frame counter. Rapid film change.
Serial Nos. from 1 173 005 onwards.
Available from 1968 onwards.

LEICA M 5

as LEICA M 4, but with built-in CdS exposure meter for selective light metering
through the lens. Focal-plane shutter ½ to $1/1000$ sec and B.
Exposure measurement up to 30 sec coupled with the shutter speed dial.
Additional accessory-shoe contact for electronic flash units.
Novel onesided camera suspension. Removable rapid-loading spool.
Rewind crank in detachable baseplate.
Serial Nos. from 1 287 001.
Available from 1971 onwards.

LEICA CL

Compact measuring-viewfinder camera. Brightline measuring viewfinder with automatic parallax compensation. Automatically faded-in image frames for 40 and 50 as well as 90 mm focal length. Quick-changing lens bayonet as in LEICA-M models. Built-in CdS exposure meter for selective light metering through the lens. Vertically travelling focal-plane shutter from 1 to $^1/_{1000}$ sec and B. Accessory-shoe contact for electronic flash units. One-sided camera suspension.
Entire camera back can be pulled off for conventient film insertion.
Rapid film change.
Serial Nos. from 1 300 001 onwards.
Available from 1973 onwards.

LEICAFLEX SL 2

As LEICAFLEX SL but with additional split-image rangefinder for positive focusing. Combined shutter speed and lens stop indication in the viewfinder. Sensitivity of exposure meter increased by 3 steps. Illuminated measuring read-out for poor lighting conditions. Additional accessory-shoe contact.
Serial Nos. from 1 385 001 onwards.
Available from 1974 onwards.

LEICA R 3

Single-lens reflex camera with electronically-controlled metal-blade focal-plane shutter. Alternative integrated (effective) or selective light metering through the lens. Automatic shutter speed determination can be switched over to manual control. Shutter speeds from 4 to $1/1000$ sec, B, X $= 1/90$ sec (electronic flash synchronization). Focusing screen with finest-ground micro-prisms for sharpness assessment throughout the viewfinder field. Central micro-prism ring with additional split-image rangefinder for positive focusing. Quick-changing lens bayonet. Automatic frame counter and film wind control. Film cartridge window, rapid film change.
Serial Nos. from 144001 onwards.
Available from 1976 onwards.

LEICA M 4-2

As LEICA M 4, but with connection for motor winder. Additional accessory-shoe contact for electronic flash unit. Without self-timer.
Serial Nos. from 1468001 onwards.
Available from 1977 onwards.

LEICA MD-2

As LEICA M4-2, but without viewfinder. Equipped for the use of the marking device.
Serial Nos. from 1468723 onwards.
Available from 1977 onwards.

LEICA R 3-MOT

As LEICA R 3, but with connection for motor-winder – R 3.
Display of the selective or integrating measuring mode in the viewfinder above the shutter speed scale.
Serial Nos. from 1 492 251 onwards.
Available from 1978 onwards.

LEICA R 4

Single-lens-reflex camera with electronically controlled metal-blade focal plane shutter. Two exposure measuring modes (LEITZ selective measurement and LEITZ integrating largefield measurement) coupled with operating modes of automatic shutter speed control, automatic aperture control, program automation and manual setting. In addition: flash automation. Electronically controlled shutter speeds from 1 to $^1/_{1000}$ sec X = 100 sec for electronic flash synchronisation. Interchangeable focusing screens. Detachable camera back. Automatic frame counter and film wind control. Film cartridge window. Quick film change. Rapid lens bayonet changer.
Serial Nos. from 1 533 351 onwards.
Available from 1980.

LEICA M 4-P

As LEICA M4-2, but with automatically faded-in field-of-view frames for 6 focal lengths: 28, 35, 50, 75, 90, and 135 mm lens.
Serial Nos. from 1 532 377 onwards.
Available from 1980.

4/81

Contents:

Accessories for the
LEICA R3/R3 MOT

Motor Winder R3

Compact, handy winder, for the LEICA R3-MOT only.
Single-frame and series release. – With series setting frame frequency up to 2 fps.
Very quiet running of gear and motor
Socket[1] can be screwed onto the Remote Control LEICA R electronic control unit and other electronic releases.
Convenient handgrip with release button for series releases as accessory.

Code Number
MOTOR-WINDER R3 . . . . **14270** _____

Handgrip R3 for hand-held exposures

Robust, practical design with convenient release for series releases, (release button of the handgrip and camera release button for single-frame releases are closely spaced for convenient operation.
Adjustable leather loop
Screw with coin slot for the attachment of the handgrip to the MOTOR-WINDER R3.

Code Number
Handgrip R3 . . . . **14271** _____

MW-R adapter for external supply

For connection to an external current source; with appliance cable, length 1 m, and screw plug.
(The MW-R adapter for external supply is inserted in the winder instead of the battery housing).

Possibilities of connection:
Battery housing (with the holder 14279) if at low temperatures the ordinary or rechargeable batteries have to be kept at body heat and therefore housed externally.
Mains unit of up to 8.5 v d.c.
Further possibilities will be found in the LEICA R4-MOT Working Sheets.

Code Number
MW-R adapter for external supply . . . . **14278** _____
Extension cable, length 5 m, for MW-R external supply . . . . 14293 _____

[1]) Coupling plug 302-013.154-004 (5-pin) available from Technical Service, P.O.B. 2027, Ernst Leitz Wetzlar GmbH, D-6330 Wetzlar.

Holder for the MW-R housing for ordinary or rechargeable batteries

With sockets marked "+" and "−" for the battery charger, for instance VARTA AG GE 1,2,−12/0,005-0,1 ex.
During recharging the 6 NiCd batteries, for instance VARTA AG DEAC 501 RS, remain in the housing.
External current supply of the Motor Winder R 3 by means of the MW-R adapter for external supply, Code No. 14 278. Screw socket for same.

Code Number
Holder for the MW-R battery housing . . . . **14 279** _____

MW-R battery housing

For the MOTOR WINDER R 3, replacement
For heavy-duty work (prolonged operation, low temperature, expeditions) a second housing with fresh or recharged batteries offers additional reliability. Interchangeable with a single action within seconds.

Code Number
MW-R battery housing . . . . **14 280** _____

Remote Control LEICA R electronic control unit
(RC LEICA R)

Electronic control unit for remote release
Built-in timer for automatic releases
7 integrated circuits in C-MOS technique
Digital display of the completed exposure by feedback from the camera.

Code Number
Remote Control LEICA R (RC LEICA R) . . . . 14 277 _____

Tripod holder

For the use of the LEICA R 3 MOT combination with long-focal-length lenses on a tripod. Sturdy design with two knurled screws for the tripod bushes of the MOTOR WINDER.

Code Number
Holder with thread A ¼ DIN 4503 (¼ in) for camera tripods . . . . 14 276 _____

Electric release switch

For universal handgrip, with cable, length 0.3m, and screw plug:
Practical accessory for work with long focal length lenses, for instance 250mm f/4, 350mm f/4.8, 400mm f/6.8, 560 mm f/6.8.
With insertion in the pistol grip the push-button can be directly connected with the screw plug on the Motor Winder R3 through the 0.3m cable.

Code Number

Electric release switch . . . . **14275** _____

Electric cable release

For remote release, with cable, length 5m, and screw plug. In combination with extension cables, length 25m (14274) for electric remote release up to 100m.

Code Number

Electric cable release . . . . **14272** _____

25m Extension cable
(for electric remote release)
with screw plugs

Code Number

Extension cable . . . . **14274** _____

Ever-ready cases

For the LEICA R 3,
          LEICA R 3 MOT
          (without motor-winder R 3)

Code Number

Ever-ready case, leather
with standard front part for 50 mm lenses with lens hood . . . . **14 506** _____

Ever-ready case, leather

with large front part, for the following lenses: 16 mm f/2.8, 28 mm f/2.8, 35 mm
f/2.8, 35 mm f/2, 60 mm f/2.8 (without 1:1 adapter), 90 mm f/2.8, 90 mm f/2 with
lens hood; 21 mm f/4, 24 mm f/2.8, PA/35 mm without lens hood . . . . . . **14 507** _____

Combination cases

for the LEICA R 3

External dimensions about 25 x 14 x 19 cm,
soft leather
Accepts 1 LEICA R 3/R 3-MOT without the winder and with lens of focal lengths up
to 180 mm f/4 inserted, and up to 3 additional lenses depending on their length,
films and filters.

Code Number
Combination case . . . . **14 829** _____

For the LEICA R 3-MOT

External dimensions: about 25 x 14 x 19 cm
Soft leather
Accepts one LEICA R 3-MOT with Motor Winder and handgrip attached and lens,
for instance 50 mm f/2, inserted and two additional lenses depending on their
length, films and filters.

Code Number
Combination case . . . . **14 831** _____

Safari case
As above, but green, heavy-duty canvas

Code Number
Safari case . . . . **14 548** _____

Universal Holdall case

For the LEICA R3/R3-MOT
External dimensions: about 36 x 21 x 24 cm
Soft leather

Code Number

Universal holdall case . . . . **14835** _____

List of equipment accepted see under "Technical Information"
page 226

Reporter case

Reporter case
External dimensions: about 35 x 15 x 32 cm
Soft leather

Code Number

Without internal partitions
With two additional outside compartments . . . . **14830** _____
Coupling ring as replacement for all combination cases . . . . 14836 _____

Correction lenses

For the LEICA R3, LEICA R3 MOT
(spherical)

Code Number

+0.5 . . . . 14240 _____
+1.0 . . . . 14241 _____
+1.5 . . . . 14242 _____
+2.0 . . . . 14243 _____
+3.0 . . . . 14244 _____
−0.5 . . . . 14245 _____
−1.0 . . . . 14246 _____
−1.5 . . . . 14247 _____
−2.0 . . . . 14248 _____
−3.0 . . . . 14249 _____

Eyecup

For the LEICA R3/R3 MOT

Code Number

Eyecup . . . . 14257 _____

Angle finder

For unnoticed photography "round corners" or over the heads of a
crowd.

Code Number

For the LEICA R3/R3 MOT
90° Angle finder, right-way-round, upright image, with focusing eye-
piece . . . . **14288** _____

Carrying Strap

Carrying strap
for the LEICA R 3, R 3-MOT, (replacement) . . . . **14 226** _____

Twin flash socket cover

Twin flash socket cover (replacement) . . . . **14 183** _____

For further general camera accessories, lenses and near-focusing equipment see LEICA R 4 product range.

Adapter

Adapter for the use of VISOFLEX 2/3 lenses on:
LEICA R 3/R 3-MOT, LEICAFLEX SL/SL 2-MOT, LEICAFLEX SL/SL-MOT
(at working aperture) . . . . **14 167** _____

Conversion of LEICAFLEX lenses
for use on the LEICA R 3

For the full utilisation of the exposure facilities of the LEICA R 3, existing LEICAFLEX lenses can be fitted with a cam.

The use of converted lenses remains unrestricted on all LEICAFLEX models.

Price and time required for conversion on request from your
National LEITZ Agency
or Technical Service
Ernst Leitz Wetzlar GmbH,
P.O.B. 20 27,
D-6330 Wetzlar, Germany

Accessories for the
LEICAFLEX SL/SL2 (MOT)

LEICAFLEX MOTOR
for the SL-MOT and SL2-MOT

For use on the LEICAFLEX SL-MOT or SL2-MOT only.

Automatic shutter wind for series and single-frame exposures.

Remote control via electric cable connection or radio release etc.

Frame frequency from 3 to 4 fps.
Can be switched for camera and motor operation.
Selector for single-frame and series exposures.

Housing for 10 NiCd rechargeable batteries, for instance VARTA AG DEAC 501 RS (or 10 1.5v midget cells).

This requires one VARTA charger, Code No. GF 1, 2-12/0, 005-0,5. The charger must charge at about 45 ma, i.e. it must be set for 10 rechargeable batteries.

Frame counter for motorised exposures
Limit switch for 36 exposures and infinity setting
3-pin connection for remote release and remote counter.
Dimensions: height 92 mm, length 145 mm, depth 40 mm,
Weight: 0.7 kg

	Code Number
LEICAFLEX-MOTOR	**14077** _____

Accessories for the LEICAFLEX MOTOR
Battery housing for the LEICAFLEX MOTOR, separate (replacement) . . .	14147 _____
Handgrip for hand-held exposures	14181 _____
Extension cable, length 5 m for remote release	14179 _____
Extension cable, length 25 m for remote release	14178 _____
Remote release with push-button, length 2.5 m	14176 _____
Tandem device for the connection of 2 LEICAFLEX SL-MOT cameras For series exposures of 6 to 7 fps.	14185 _____
Cable for the connection of a LEICAFLEX SL-MOT with the LEICINA SUPER ST 1 control unit (for intervals between about 0.5 to about 360 sec)	14187 _____
Universal handgrip for handheld exposures with long-focal-length lenses	14188 _____

EXTENDER-R 2x

For the LEICAFLEX SL/SL2

Focal-length extending lens attachment

Number of elements: 5 (4 components)
Aperture range from f/2 to f/22
Working aperture measurement
Focal lengths suitable for use:
    from 50 to 800 mm
Hard-chrome LEICA R rapid bayonet changer
Black finish
Length from bayonet flange: 30 mm
Diameter: 62 mm
Weight: 0.18 kg

Code Number

EXTENDER-R 2x for the LEICAFLEX SL/SL2
with two caps . . . .   11 237 _____

Replacement caps:
Rear cover (= rear cover for lens) . . . .   14 162 _____
Front cap (= camera body cover) . . . .   14 103 _____

Near-focusing adapters

Code Number

1:1 Adapter* for 60 mm MACRO-ELMARIT-R f/2.8 . . . .   14 198 _____

Near-focusing ring* for the 100 mm MACRO-ELMAR-R f/4 . . . .   14 262 _____

Leather case for the 1:1 adapter or for the near-focusing ring . . . .   14 621 _____
Caps for the 1:1 adapter and near-focusing ring:
Front cap . . . .   14 184 _____
Rear cap . . . .   14 162 _____

---

* The 1:1 adapter or the near-focusing ring can be attached and locked only when the lens aperture is
  closed. This setting is indicated by an additional marking. Wrong attachment is prevented by a block.

Adapter

Adapter for the use of VISOFLEX 2/3 lenses on the
LEICAFLEX SL/SL2, LEICA R (at working aperture)................... 14167 _____

Correction lenses

for the LEICAFLEX SL2/SL2MOT
(spherical)

Code Number

+0.5	14240 _____
+1.0	14241 _____
+1.5	14242 _____
+2.0	14243 _____
+3.0	14244 _____
−0.5	14245 _____
−1.0	14246 _____
−1.5	14247 _____
−2.0	14248 _____
−3.0	14249 _____

For the LEICAFLEX SL/SL MOT,
LEICAFLEX with external exposure measurement
(spherical)

+0.5	14118 _____
+1.0	14371 _____
+1.5	14372 _____
+2.0	14373 _____
+3.0	14374 _____
−0.5	14375 _____
−1.0	14376 _____
−1.5	14377 _____
−2.0	14378 _____
−3.0	14064 _____

Eyecup

For the LEICAFLEX SL2/SL2 MOT

Code Number

Eyecup.. 14257 _____

Ever-ready Case

For the LEICAFLEX SL2/SL2 MOT (without motor)

Code Number

Ever-ready case
With standard front part for the 50 mm f/2 lens with lens hood . . . .   14 504 _____

Combination case

For the LEICAFLEX

External dimensions: about 21 x 11.5 x 19 cm
Weight: 0.66 kg

Code Number

Accepts one LEICAFLEX with lens of focal length up to 135 mm in position, and, depending on their length, up to 2 additional lenses, films and filters. . . . .   14 824 _____

Angle finder

For unnoticed photography "round corners" or above the heads of a crowd

Code Number

For the LEICAFLEX SL/SL;
90° angle finder, right-way-round, upright image, with focusing eyepiece . . . .   14 286 _____

Carrying strap

Code Number

Carrying strap with non-slip pad, adjustable, (replacement) for all LEICAFLEX cameras . . . .   14 092 _____

Twin flash socket cover

Code Number

Twin flash socket cover (replacement) . . . .   14 183 _____

Other general camera accessories and lenses and near-focusing devices etc, see Product Range LEICA R4.

Accessories for earlier LEICA R lenses

ELPRO near-focusing attachment for earlier LEICA R lenses

Lens:	ELPRO	Distance scale on	Distance in cm Object-film	Distance in cm Object-front lens	Object area in mm	Repro-duction ratio
50 mm SUMMICRON-R f/2 (M 44×0.75) 11228	VIa 16531	∞ 0.5	50 31	41 21	184×276 91×137	1:7.7 1:3.8
	2¹) 16542	∞ 0.5	30 24	21 14	94×141 62× 93	1:3.9 1:2.6
90 mm ELMARIT-R f/2.8 up to No. 2809000 (M 54×0.75) 11239	3²) 16543	∞ 0.7	74 44	61 30	161×241 72×106	1:6.7 1:3.0
90 mm SUMMICRON-R f/2 up to No. 2770950 (M 54×0.75) 11219	3²) 16543	∞ 0.7	74 44	61 30	161×241 72×108	1:6.7 1:3.0
135 mm ELMARIT-R f/2.8 up to No. 2772618 (M 54×0.75) 11211	3²) 16543	∞ 1.5	76 58	61 42	107×160 66× 99	1:4.5 1:2.8
	VIIb 16534 or 4²) 16544	∞ 1.5	150 84	135 68	237×355 106×159	1:9.9 1:4.4
80-200 mm VARIO-ELMAR-R f/4.5 (M 55×0.75) 11224	3 16543	80 mm/∞ 200 mm/1.8	82 66	61 45	177×266 50× 75	1:7.4 1:2.1
	4 16544	80 mm/∞ 200 mm/1.8	156 96	135 74	392×588 83×125	1:16.3 1:3.5

All values round

Code Number

Leather case for one near-focusing attachment . . . .   **14 553** _____

---

1) = lens hood cannot be attached
2) = ELPRO 3 and ELPRO 4 can be used only after the lenses have been converted for filter thread
     M 55 x 0.75.
     Conversion will be undertaken by
          Technical Service
          After Sales Service of Ernst Leitz Wetzlar GmbH
          P.O.B. 2027
          D-6330 Wetzlar
     Series 7 filters continue to be suitable with the aid of the adapter No. 14225,
     available as an accessory.

Accessories for earlier LEICA R lenses

R-lens:	Lens hood	Cap for lens hood	Lens cap	Rear cover	Filter size (2)	Adapter for Series filters	Internal thread	A Ø in mm
21 mm SUPER-ANGULON-R f/3.4 11803	–	–	14144	–	Series 8	Lens hood	M 67 x 0.75	70
35 mm ELMARIT-R f/2.8 11201 to No. 2517850	12564	14163	–	14162	Series 6	14160	M 44 x 0.75	47
35 mm ELMARIT-R f/2.8 11201 to No. 2928900	12509	–	14172	14162	Series 7	Lens hood	M 48 x 0.75	51
35 mm SUMMICRON-R f/2 11227 to No. 2791416	12509 (1)	–	14172	14162	Series 7	Lens hood	M 48 x 0.75	51
50 mm SUMMICRON-R f/2 11228 to No. 2777650	12564	14163	–	14162	Series 6	14160	M 44 x 0.75	47
50 mm SUMMILUX-R f/1.4 11875 to No. 2806500	–	14171	14172	14162	Series 7	Lens hood	M 48 x 0.75	51
60 mm MACRO-ELMARIT-R f/2.8 11203 to No. 3013650	12514	–	14184	14162	Series 8	Lens hood	M 60 x 0.75	63.7
90 mm ELMARIT-R f/2.8 11239 to No. 2809000	Built in	–	14089	14162	Series 7	14161	M 54 x 0.75	75
90 mm SUMMICRON-R f/2 11219 to No. 2770950	Built in	–	14144	14162	Series 7	14161	M 54 x 0.75	70
100 mm MACRO-ELMAR f/4 11230 to No. 2933350	Built in	–	14089	14162	Series 7	14161	M 54 x 0.75	65
135 mm ELMARIT-R f/2.8 11211 to No. 2722618	Built in	–	14089	14162	Series 7	14161	M 54 x 0.75	65
180 mm APO-TELYT-R f/3.4 11240 to No. 2947023	Built in	–	14089	14162	Series 7.5	14222	M 59 x 0.75	65
180 mm ELMARIT-R f/2.8 11919 to No. 2939700	Built in	–	14166	14162	Series 8	14165	M 72 x 0.75	78
80-200 mm VARIO-ELMAR-R f/4.5 11224	Built in	–	14261	14162	E 55 or S. 7	14225 for S. 7	M 55 x 0.75	72
250 mm TELYT-R f/4 11920 to No. 3050600	Built in	–	14166	14152	Series 8	14165	M 72 x 0.75	78
400 mm TELYT Lens unit f/5.6 (TELEVIT-R)	Built in	–	14295	–	Series 7	Filter slot	–	89
560 mm TELYT Lens unit f/5.6 (TELEVIT-R)	Built in	–	–	–	Series 7	Filter slot	–	120

(1) = Leather case for some: 14621
(2) = Filters, see tables

Circular polarising filters with screw-in rotary mount

M 44×0.75 for R 35 mm f/2.8 up to No. 2 517 850
E 44   for R 50 mm f/2 up to No. 2 777 650 .... 13 353 _____
M 54×0.75 for R 90 mm f/2.8 up to No. 2 809 000
E 54   for R 90 mm f/2 up to No. 2 770 950
          for 100 mm f/4 for Universal Focusing Bellows R
          up to 2 933 350
          for R 135 mm f/2.8 up to No. 2 772 618 .... 13 354 _____

Polarising filters with screw-in rotary mount

Code Number

M 44×0.75 for R 35 mm f/2.8 up to No. 2 517 850
E 44   for R 50 mm f/2 up to No. 2 777 650 .... 13 358 _____
M 54×0.75 for R 90 mm f/2.8 up to No. 2 809 000
E 54   for R 90 mm f/2 up to No. 2 770 950
          for 100 mm f/4 for Universal Focusing Bellows R
          up to 2 933 350
          for R 135 mm f/2.8 up to No. 2 772 618 .... 13 359 _____

Lens hoods

Code Number

Lens hood for the 28 mm f/2.8 and 35 mm f/2 lenses (replacement) ... **12 509** _____

Lens hood for the 35 mm PA-CURTAGON f/4 lens
(replacement) and for the 60 mm MACRO-ELMARIT-R f/2.8 .... **12 514** _____

Lens hood for R 75 mm f/2.8 and 50 mm f/2 (replacement) .... **12 564** _____

Camera bodies and lenses

Combination case for the LEICA M 5

Accepting:
one LEICA M 5 with lens of focal length up to 135 mm in position, and
two additional lenses depending on their length, films and filters.
External dimensions: about 21 x 11.5 x 19 cm, weight: 0.66 kg

Code Number

Combination case . . . .   14823 _____

Adapter

Code Number

Adapter for the use of cable releases with captive thread on the
LEICA M with bayonet changer . . . .   14088 _____

Carrying strap

Code Number

Carrying strap, adjustable, with split rings and non-slip pad for LEICA
models up to M 4 . . . .   14092 _____

Flash socket covers

Code Number

Flash socket cover for M 3, M 2, M 1, MD (replacement) . . . .   14054 _____
Flash socket cover for M 4, MDa, M 4-2, MD-2 (replacement) . . . .   15526 _____
Twin flash socker cover for M 5 (replacement) . . . .   14183 _____

Camera spools

Code Number

Replacement take-up spool (with spring-loaded head) for the LEICA
M 3, M 2, M 1, MD, IIIg, Ig . . . .   14022 _____
Ditto for all other LEICA models (except M 5, M 4, M 4-2, MDa
and MD-2) . . . .   14021 _____

Camera covers

Bayonet adapters

Bayonet adapters
For use of screw-thread LEICA lenses on the

Rear cap for lenses

Lens hoods

Accessories for earlier LEICA-M lenses

M-lens:	Lens hood	Cap for lens hood	Lens cap	Rear cover	Filter size	Internal thread	A Ø in mm
21 mm SUPER-ANGULON-M f/3.4 to No. 2 993 700	12 501	—	14 102	14 042	Series 7 with lens hood or E 48	M 48 x 0.75	52.5
28 mm ELMARIT-M f/2.8 to No. 2 977 550	12 501	—	14 102	14 042	Series 7 with lens hood or E 48	M 48 x 0.75	52.5
35 mm SUMMARON-M f/2.8	12 585	14 033	14 031	14 051	E 39	M 39 x 0.5	42
35 mm SUMMICRON-M f/2 to No. 2 307 450 to No. 2 483 503 to No. 2 974 250	12 585 12 504 12 504	14 033 — —	14 268 14 268 14 268	14 051 14 051 14 051	E 39 Series 7 in lens hood E 39 or Series 7	M 39 x 0.5 M 39 x 0.5	42 42 42
35 mm SUMMILUX-M f/1.4 to No. 2 166 700	—	—	—	14 051	E 41	M 41 x 0.5	46.5
50 mm ELMAR-M f/2.8	12 585	14 003	14 031	14 051	E 39	M 39 x 0.5	42
50 mm SUMMICRON-M f/2 to No. 2 915 800	12 585	14 033	14 268	14 051	E 39	M 39 x 0.5	42
50 mm NOCTILUX-M f/1.2	—	—	14 102	14 051	Series 8 in lens hood	—	52.5
65 mm ELMAR-M to No. 2 378 900	built-in	—	14 034	14 074	E 41	M 41 x 0.5	54
90 mm ELMAR-M f/4	12 575	14 033	14 268	14 051	E 39	M 39 x 0.5	42
90 mm ELMARIT-M f/2.8	12 575	14 033	14 268	14 051	E 39	M 39 x 0.5	42
90 mm SUMMICRON-M f/2 to No. 2 997 000	built-in	—	14 124	14 051	E 48	M 48 x 0.75	63.7
135 mm HEKTOR-M f/4.5	12 575	14 033	14 031	14 051	E 39	M 39 x 0.5	42
135 mm ELMAR-M f/4	12 575	14 033	14 031	14 051	E 39	M 39 x 0.5	42
135 mm ELMARIT-M f/2.8 to No. 2 788 926	built-in	—	14 124	14 051	Series 7 with adapter 14 161	M 54 x 0.75	63.7
280 mm TELYT-M f/4.8 to No. 2 340 952	built-in	—	—	14 051	E 58	M 58 x 0.75	76
400 mm TELYT-M f/5.6	built-in	—	14 295	14 051	Series 7 in filter slot	—	98
560 mm TELYT-M f/5.6	built-in	—	—	14 051	Series 7 in filter slot	—	120

Code Number

Lens hood for the 50 mm SUMMILUX-M f/1.4, chromium plated . . . .   14 036 _____

Accessories for the LEICINA

A) for the LEICINA SPECIAL

Adapters for LEICA R lenses:

Code Number

For R lenses: adapter . . . .   22 228 _____
LEICA M lenses can be attached without adapter unless there are
no protruding rear components (details on request)
Required for the use of LEICA lenses with screw thread:
Bayonet adapters: . . . .   14 097 or 14 099 _____

For the use of VISOFLEX lenses an adapter tube is required instead
of the VISOFLEX attachment:
Adapter tube. . . . .   543 195 _____

Adapter for non-LEITZ lenses:

For lenses with Arri connection . . . .   22 230 _____

For lenses with M 42 x 1-M attachment . . . .   22 232 _____

For Minolta lenses. . . . .   22 233 _____

B) Accessories only for the LEICINA SUPER RT 1
Front lens attachment for close-ups down to 0.4 m camera distance
(smallest object field 17 x 22 mm) . . . .   22 003 _____
Leather case for same . . . .   14 553 _____

C) Accessories for the LEICINA SPECIAL and the LEICINA SUPER RT
90° angle finder, right-way-round, upright image . . . .   14 286 _____
Holder for the angle finder. . . . .   22 221 _____

Accessories for the FOCOMAT Ic

50 mm FOCOTAR® f/4.5 enlarger lens

	Code Number
50 mm FOCOTAR® f/4.5 enlarger lens	
with click-stops	17 582 _____
Filter drawer	17 772 _____
Enlargement indicator	17 773 _____
Mains cable (replacement)	37 656 _____

Film guides

	Code Number
Film guides	
suitable also for VALOY® II, FOCOMAT I a	
8 x 11 mm...	17 514 _____
13 x 17 mm...	17 517 _____
18 x 24 mm...	17 516 _____
24 x 24 mm...	17 521 _____
24 x 36 mm (replacement)	17 526 _____
4 x 4 cm (corners are cut by approx. 3 mm)...............	17 536 _____

			Code Number
Single-negative holders			
also for the FOCOMAT I a and I and VALOY I and II			
Double glass plate	3.5 x 12 cm...............		17 545 _____
	5 x 16 cm...............		17 565 _____
Masks	24 x 24 mm		17 541 _____
	24 x 36 mm		17 540 _____
	3 x 4 cm...............		17 555 _____

New:
5 x 5 cm slide holder for the FOCOMAT I c .... 17 542 _____

Adapter ring
also for VALOY II for the use of the 50 mm SUMMICRON lens unit...... 17672 _____
Adapter ring for the use of the 50 mm ELMAR and SUMMICRON lenses, collapsible with bayonet mount............................... 17671 _____

Anti-Newton-disc

with 3 mm spacing ring for the type N condenser .... 17652 _____
Type N Condenser (replacement) also for FOCOMAT Ia .... 17639 _____

Accessory for increasing the enlarging range also for FOCOMAT Ia, VALOY I, II
REPRO extension ring, for 1:1 .... 16615 _____

Accessories for the AGFA colour head
for the FOCOMAT Ic-Color and Ia-Color
Adapter .... 17775 _____
Additional condenser... 17780 _____

For the use of the AGFA-VARIOMAT®
40 mm-diameter spacing ring.................................... 17631 _____

In addition the following colour heads can be adapted:
Chromega B Dichroic
Wallner Colorhead
For more detailed information please contact your
National LEITZ Agency.

Masking Frames
for all FOCOMAT models

24x30 cm (10x12in) universal masking frame
(height 30mm), with 4 adjustable masking strips, combined "feet-metre" scale .... 17584 _____

30x40 cm masking frame, with adjustable masking strips and adapter ring for the column for compensating the greater thickness of this frame .... 17586 _____

English system (inch):
12x16in masking frame (height 1.18 in) .... 17630 _____

Accessories
for the PRADOVIT COLOR

Extension cable for remote control, length 5 m. . . . . 37 931 _____
Holder for micro attachments . . . . **37 937** _____
Accessories for the showing of film strips on request.

Multiple plug for the simultaneous connection of tape recorder and
remote-control cable to the PRADOVIT (above Serial No. 400 000),
variants of the PRADOVIT COLOR, PRADOVIT RC, PRADOVIT R 150
and PRADOVIT COLOR 110. . . . . **37 911** _____

Projector lenses and optical accessories

35 mm ELMARON	f/2.8*	37 041	_____
50 mm ELMARIT-P	f/2.8**	37 011	_____
60 mm ELMARON	f/2.8***	37 004	_____
85 mm ELMARON	f/2.8	37 003	_____
90 mm COLORPLAN	**f/2.5** (dia. 42.5 mm)	**37 005**	_____
90 mm COLORPLAN-CF	**f/2.5**	**37 015**	_____
120 mm ELMARON	f/2.8	37 022	_____
150 mm ELMARON	f/2.8	37 030	_____
200 mm ELMARON	f/3.6	37 062	_____
250 mm ELMARON	f/4	37 082	_____
300 mm EPNOR	f/4.3	34 837	_____

* Only up to 24 x 36 mm format and 30-slide magazines
** Only up to 24 x 36 mm format, not for 50-slide magazines
*** 40 x 40 mm effective format, not for 50-slide magazines

Focusing sleeves for focal length
35 mm – 120 mm (dia. 42.5 mm) . . . . 37 119 _____
150 mm . . . . 37 121 _____
200 mm . . . . 37 129 _____
250 mm . . . . 37 130 _____

Interchangeable condenser
for 35 mm to 50 mm . . . . 37 210 _____

Replacement accessory parts
Replacement mains cable . . . . 37 656 _____
Repeater plate for Advertising Projector (replacement) . . . . 37 933 _____

Projector lamps, light pointer and AF lamps and accessories*

Accessories
for the PRADOVIT COLOR 110

Code Number

Remote-control cable with light pointer* . . . .
Multiple plug for simultaneous connection of tape recorder and
remote control 37 911
Extension cable for remote control, length 5 m.   37 931

Accessories
for the DIASCRIPTOR OP 250

Code Number

Anti-glare. 33 834
Shelf attachment 33 833
Transparent dust cover 33 835
Accessory case 33 836

Transparent foils (for use with 33 846 and 33 821)
15 m scroll on cardboard reel 33 822
30 m scroll on cardboard reel 33 823
50 m scroll on cardboard reel 33 824

25 sheet foils in sliding box. 33 831

---

* Projector lamps, light pointer and Autofocus lamps, accessories
Replacements available from Ernst Leitz Wetzlar GmbH, D-6330 Wetzlar, Germany, or your
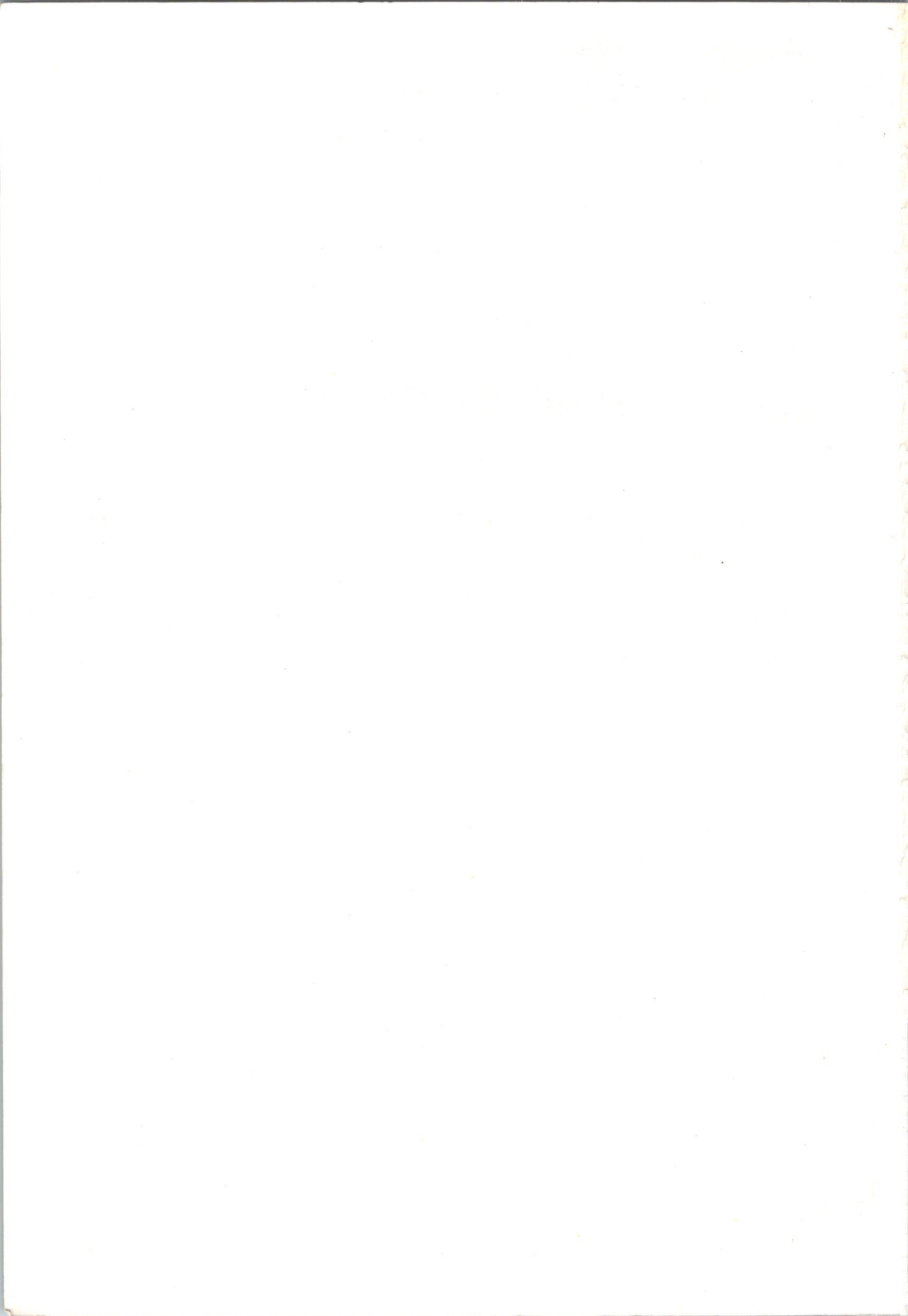National Leitz Agency (please give precise technical data).

Leitz Means Precision.
Worldwide.

FOCOMAT V 35
AUTOFOCUS

PRADOVIT CA 2500

ERNST LEITZ WETZLAR GMBH

D-6330 Wetzlar · Telefon (0 64 41) 29-1 · Telex 4 83 849 leiz d
Subsidiaries: Ernst Leitz (Canada) Ltd., Midland, Ontario · Leitz Portugal S.A.R.L., Vila Nova de Famalicão