

Article-No.	Description	
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Lead Intensifying Screens 0.1 mm

Lead on flexible cardboard with exposed lead surface protected against abrasion.

For gamma radiography with Ir-192. Lead thickness 0.1 mm.

Packed in 25 pairs For film areas:

- 12 12110 6 x 24 cm
- 12 12111 6 x 48 cm
- 12 12112 6 x 72 cm
- 12 12123 9 x 12 cm
- 12 12113 10 x 24 cm
- 12 12114 10 x 40 cm
- 12 12115 10 x 48 cm
- 12 12116 10 x 72 cm
- 12 12125 13 x 18 cm
- 12 12118 18 x 24 cm
- 12 12119 24 x 30 cm
- 12 12120 15 x 40 cm
- 12 12121 30 x 40 cm
- 12 12126 35 x 43 cm



Lead Intensifying Screens 0.02 mm

Lead on flexible cardboard with exposed lead surface protected against abrasion.

For X-Ray radiography and Yb-169. Lead thickness 0.02 mm.

Packed in 25 pairs. For film areas:

- 12 12210 6 x 24 cm
- 12 12211 6 x 48 cm
- 12 12212 6 x 72 cm
- 12 12223 9 x 12 cm
- 12 12213 10 x 24 cm
- 12 12214 10 x 40 cm
- 12 12215 10 x 48 cm
- 12 12216 10 x 72 cm
- 12 12225 13 x 18 cm
- 12 12218 18 x 24 cm
- 12 12219 24 x 30 cm
- 12 12220 15 x 40 cm
- 12 12221 30 x 40 cm
- 12 12226 35 x 43 cm



Other sizes on request

KYOKKO - Fluorometallic screens, SMP 308

A multilayer combination of lead and salt intensifying screens.

With many films the identification is far higher than lead screens.

Packed in pairs. For X-Rays in the range 80 - 300 keV

- 12 12903 10 x 48 cm
- 12 12902 10 x 40 cm
- 12 12904 30 x 40 cm
- 12 12907 1 m, 7 cm wide

Article-No.	Description	
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Steel Intensifying Screens

For use with Cobalt-60. Thickness 0.5 mm.
Surface protected by removable layer. In pairs

- 12 12913 10 x 48 cm
- 12 12914 15 x 40 cm
- 12 12916 18 x 24 cm
- 12 12917 24 x 30 cm
- 12 12915 30 x 40 cm



Self-Sealing PVC Cassettes

With VELCRO hook strip welded to the closing flap.
For films and screens of size:

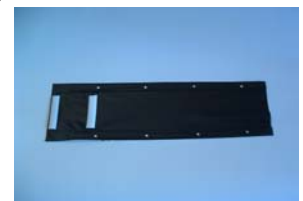
- 12 13250 6 x 24 cm
- 12 13251 6 x 48 cm
- 12 13252 6 x 72 cm
- 12 13253 10 x 24 cm
- 12 13254 10 x 48 cm
- 12 13255 10 x 72 cm
- 12 13249 9 x 12 cm
- 12 13248 13 x 18 cm
- 12 13256 15 x 40 cm
- 12 13258 18 x 24 cm
- 12 13259 24 x 30 cm
- 12 13257 30 x 40 cm



Double Ply Cassettes, PVC

Made from double thickness, waterproof material. Will remain flexible at temperatures down to -40° C and will withstand unusually high ambient temperatures. For use with film and screens in the following sizes:

- 12 13510 6 x 24 cm
- 12 13511 6 x 48 cm
- 12 13512 10 x 24 cm
- 12 13513 10 x 48 cm



Magnetic Cassettes, PVC

Black self sealing, self clamping cassettes.
for use with film and screens in the following sizes:

- 12 13112 10 x 24 cm
- 12 13113 10 x 48 cm

Link Type Cassettes

Made of black, light-tight PVC with a self sealing strip along the loading end. Additional velcro strips are welded to the outside to allow the cassettes to be linked together. Film overlap is adjustable from 25 - 75 mm.
For use with film and screens in the following sizes:

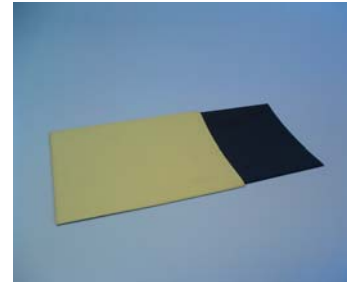
- 12 13461 6 x 24 cm
- 12 13462 6 x 48 cm
- 12 13463 10 x 24 cm
- 12 13464 10 x 48 cm

Article-No.	Description	
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Double Envelope Cassettes, PVC

Films and screens are placed into the inner pocket which is then placed inside the outer pocket. PVC cassette 0.4 mm material
For films and screens of size:

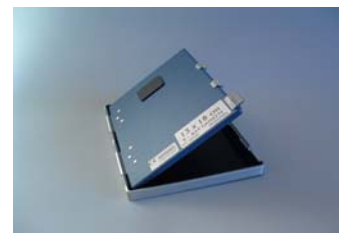
- 12 13310 6 x 24 cm
- 12 13311 6 x 48 cm
- 12 13312 10 x 24 cm
- 12 13313 10 x 40 cm
- 12 13314 10 x 48 cm
- 12 13316 13 x 18 cm
- 12 13317 15 x 40 cm
- 12 13318 18 x 24 cm
- 12 13319 24 x 30 cm
- 12 13320 30 x 40 cm



Rigid Cassette

Made of pure aluminium with protective coating. With a lead plate inside against back scatter. The self supporting base (facing focal spot) may be covered directly with pieces to be radiographed. Pressure on film is exerted only by the foam rubber inlet the safety pressure lock. For films and screens of size:

- 12 13610 6 x 24 cm
- 12 13611 6 x 48 cm
- 12 13613 6 x 72 cm
- 12 13617 9 x 12 cm
- 12 13614 10 x 24 cm
- 12 13615 10 x 40 cm
- 12 13616 10 x 48 cm
- 12 13316 13 x 18 cm
- 12 13619 18 x 24 cm
- 12 13620 15 x 40 cm
- 12 13621 24 x 30 cm
- 12 13618 30 x 40 cm
- 12 13623 35 x 43 cm



Vacuum Cassette Material

Available of roll 400 m long to make light-, water- and airtight vacuum cassettes for film/screen combinations with the Vacumatsystem.

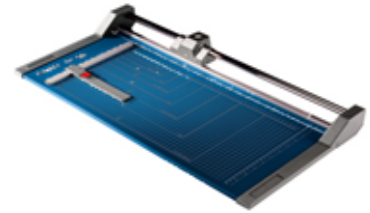
- 12 13719 7 cm wide, per 100 m for 6 cm films
- 12 13721 11 cm wide, per 100 m for 10 cm films
- 12 13722 21 cm wide, per 100 m for 18 cm films
- 12 13723 26,5 cm wide, per 100 m for 24 cm films
- 12 13724 32 cm wide, per 100 m for 30 cm films

Article-No.	Description	
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Rotary Blad Film Cutter

to cut films, screens or cassette material

- 12 13782 **Film Cutter CUT 36**
 Max length of cut: 36 cm
 Max height of cut: 2 mm
 Size: 555 x 360 mm
 Weight: 2.8 kg
- 12 13783 **Film Cutter CUT 51**
 Max length of cut: 51 cm
 Max height of cut: 2 mm
 Size: 655 x 360 mm
 Weight: 3.2 kg
- 12 13784 **Film Cutter CUT 72**
 Max length of cut: 72 cm
 Max height of cut: 2 mm
 Size: 915 x 360 mm
 Weight: 4.6 kg



- 12 13785 **Spare Blade for CUT 72**
- 12 13786 **Spare Blade for CUT 46**
- 12 13787 **Spare Blade for CUT 36**

- 12 13756 **Light Tight PVC Tape**
 used to seal end of films, 19 mm wide, length 33 m

- 12 30038 **Film Corner Cutter, Desk Top Model**
 Table top model to round off the corners of
 films cut to special sizes. Radius approx. 35 mm.

Article-No.	Description	
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Channel Hanger, Single

In stainless steel, the straight round top bar has a standard length of 46 cm. For film size:

- 12 21000 6 x 24 cm
- 12 21001 6 x 36 cm
- 12 21002 6 x 48 cm
- 12 21003 6 x 72 cm
- 12 21004 10 x 24 cm
- 12 21005 10 x 36 cm
- 12 21006 10 x 40 cm
- 12 21007 10 x 48 cm
- 12 21008 10 x 72 cm
- 12 21009 15 x 40 cm



Channel Hanger, Double

In stainless steel, the straight round top bar has a standard length of 46 cm. To take two films for size:

- 12 21010 6 x 24 cm
- 12 21011 6 x 36 cm
- 12 21012 6 x 48 cm
- 12 21014 10 x 24 cm
- 12 21015 10 x 36 cm
- 12 21016 10 x 40 cm
- 12 21017 10 x 48 cm

Channel Hanger, triple

In stainless steel, the straight round top bar has a standard length of 46 cm. To take three films for size:

- 12 21020 6 x 24 cm
- 12 21021 6 x 36 cm
- 12 21022 6 x 48 cm
- 12 21024 10 x 24 cm
- 12 21025 10 x 36 cm
- 12 21026 10 x 40 cm
- 12 21027 10 x 48 cm

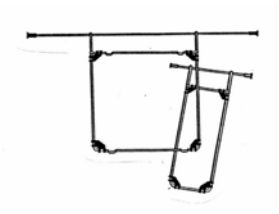


Article-No.	Description	
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Clip Type Hanger, Single

In stainless steel, the straight round top bar has a standard length of 45 cm. To take one film of size:

- 12 22001 6 x 24 cm
- 12 22002 6 x 36 cm
- 12 22003 6 x 40 cm
- 12 22004 6 x 48 cm
- 12 22005 6 x 72 cm
- 12 22006 10 x 24 cm
- 12 22007 10 x 36 cm
- 12 22008 10 x 40 cm
- 12 22009 10 x 48 cm
- 12 21010 10 x 72 cm
- 12 22011 9 x 12 cm
- 12 22012 13 x 18 cm
- 12 22014 15 x 30 cm
- 12 22018 15 x 40 cm
- 12 22013 18 x 24 cm
- 12 22019 20 x 40 cm
- 12 22015 24 x 30 cm
- 12 22016 30 x 30 cm
- 12 22020 30 x 40 cm
- 12 22017 36 x 36 cm
- 12 22022 36 x 43 cm
- 12 22021 40 x 40 cm



Clip Type Hanger, Double

In stainless steel, the straight round top bar has a standard length of 45 cm. To take one film of size:

- 12 22101 6 x 24 cm
- 12 22102 6 x 36 cm
- 12 22103 6 x 40 cm
- 12 22104 6 x 48 cm
- 12 22106 10 x 24 cm
- 12 22107 10 x 36 cm
- 12 22108 10 x 40 cm
- 12 22109 10 x 48 cm
- 12 22111 9 x 12 cm
- 12 22112 13 x 18 cm

Clip Type Hanger, Triple

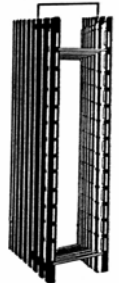
In stainless steel, the straight round top bar has a standard length of 45 cm. To take one film of size:

- 12 22201 6 x 24 cm
- 12 22202 6 x 36 cm
- 12 22203 6 x 40 cm
- 12 22204 6 x 48 cm
- 12 22206 10 x 24 cm
- 12 22207 10 x 36 cm
- 12 22208 10 x 40 cm
- 12 22209 10 x 48 cm

Article-No.	Description
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X-Ray Film Processing Bracket

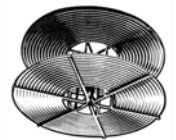
- 12 22140 5 hangers 10 x 48 cm
- 12 22150 10 hangers 6 x 48 cm
- 12 22160 10 hangers 10 x 48 cm
- 12 22200 15 hangers 6 x 48 cm
- 12 22205 15 hangers 10 x 48 cm
- 12 22210 18 hangers 6 x 48 cm
- 12 22215 18 hangers 10 x 48 cm
- 12 22250 65 hangers 6 x 48 cm
- 12 22251 60 hangers 6 x 48 cm
- 12 22253 60 hangers 10 x 48 cm
- 12 22255 65 hangers 10 x 48 cm



Stainless Steel Processing Spirals

For manual processing of long strip film.

- 12 23006 For film 7 cm wide and up to 3 m long
- 12 23007 For film 7 cm wide and up to 5 m long
- 12 23010 For film 6 cm wide and up to 3 m long
- 12 23011 For film 6 cm wide and up to 5 m long
- 12 23012 For film 10 cm wide and up to 3 m long
- 12 23015 For film 10 cm wide and up to 5 m long



Processing Rod for Spirals

For sliding the spirals down the shaft, 200g

- 12 23016

Film Clips

- 12 30010 Non perforating, 10 mm wide
- 12 30015 Non perforating, 20 mm wide, weight 40 g
- 12 30011 Non perforating, 20 mm wide
- 12 30018 Non perforating, 30 mm wide, weight 75 g



Immersion Heater 600 W

To heat up developer. Stainless steel, 490 mm.

Electrical supply: 230 V, 600 W. mains cable 1.5 m

- 12 30000 Immersion Heater with, PVC Fitting, 600 g
- 12 30001 Immersion Heater with Hook, 500 g



Tankentleerer mit Balg und Ventil

For emptying or switching contents of tanks that hold chemicals., 300 g

- 12 30009

Tankthermometer

Thermometer in PVC hose. Temperature range -10 up to + 50°C, length 26 cm

- 12 30003



Tank Spindle

Complete with special thermometer, to read off the chemical concentration.

Length: 19 cm, 20 g

- 12 30008

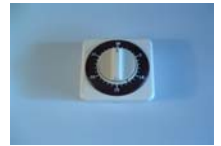
Article-No.	Description	
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- 12 30004 **PVC Mixing Paddle**
Grey for developer or red for fixer
Length: 68 cm, 100 g
- 12 30005 **Film Wipers**
for squeezing off excess water from films
before drying.
Length: 25.5 cm, 110 g
- 12 30006 **Spare Blades for Film Wipers**
For Film wiper, pair, only for old Kindermann type
- 12 30055 **Measuring Pail, 17 Itr.**
For mixing chemicals etc. with spout and
carrying handle.
- 12 30076 **Thiosulfate Test Bottle**
To check the finished film for storage life.
A few drops placed on the film will discolor
in proportion. The color is compared against
a scale. 1 bottle 100 ml. (140 g)
- 12 30675 **Pump for Chemicals 230 / 12 V**
Trafo 230/12 V with 12 V plug . Immersion pump with 2 m
hose and cable that plugs into the socket.
Size Trafo: 150 x 120 x 30 mm, 1.8 kg
- 12 30676 **Immersion pump, 12 V**
For mobil lab. Cable and hose are clipped together
for a length of 2 m, cable with plug.
Size: 350 x 40 x 40 mm, 0.8 kg
- 12 32050 **Water filter, Type M 5**
Durable plastic with transparent cup. Both sides with 3/4"
connection. The replaceable filter insert will remove
all particles larger than 5 µm out of fresh water flow.
Size: 120 mm φ, 300 mm height, 1.5 kg
- 12 32051 **Spare Filter Insert for M 5**

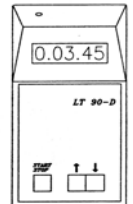


Article-No.	Description	
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12 30041 **Darkroom Timer 30 min.**
 Used for free standing or for wall mounting.
 runs back from 30 minutes to zero
 Size: 120 x 120 x 85 mm, 600 g



12 30105 **Darkroom Timer, Digital, Type LT 90**
 The countdown time is from 00.01 (1sec.) up to 9.59.59
 (9 h, 59 min, 59 sec.) speedily increased by two push buttons.
 The strong plastic case may be fitted to the wall.
 Size: 190 x 100 x 50 mm



12 30106 **DuKa-Uhr LT 90** with main supply 230 V / 9 V
 cable length each 1.5 m, 500 g

12 30106 **DuKa-Uhr LT 90** for mobile lab with plug, 250 g

12 30045 **Darkroom Ventilation System**
 Light proof radial blower switchable between
 airing and exhaust. Three speeds may be selected.
 As such suitable for placement in dividing walls,
 windows partitions of max. 24 mm thickness.
 Air volume 200 / 240 / 265 cbm/h
 Electr. supply: 49 W, 220 V, 50 Hz
 Temperature range: -40°C bis +50°C
 Size: 296 x 285 x 184 hole
 Weight: 3.8 kg

12 30046 **Set for Wall Mounting**
 The extended fixing rods will fit wall thickness of up
 to 370 mm

Article-No.	Description
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12 30120 **KOWOBRITE S, Darkroom Safelight, 230 V**
 In red aluminium housing, black side plates of durable plastic. May be roated 180 degrees on is wall mounting.Full light immediately
 Screen area: 220 x 145 mm, 23 V / 9 W
 Size: 315 x 185 x 175 mm, 2.5 kg



12 30220 **KOWOBRITE S, Darkroom Safelight, 12 V**
 Same as Code 30120 but wiht 12 V / 9 W

12 30121 Spare lamp for KOWOBRITE S, 230 V / 9 W
 12 30221 Spare lamp for KOWOBRITE S, 12 V / 9 W

12 30112 Spare filter, red, 26 x 16 cm for KOWOBRITE S
 12 30119 Spare filter, yellow, 26 x 16 cm for KOWOBRITE S

KOWOWET Wet Film Viewer

To be installed near the processing unit. May be used for a quick glance at the film near the end of the fixing or washing stage. Two 50 W halogen lamps are inside and the on/off operation is done by a footswitch.

Weight: 2.5 kg (with transformer)
 Screen area: 200 x 55 mm
 Size: 225 x 80 x 100 mm

12 30102 **KOWOWET 230 V with transformer**
 for stationary lab with 1 m cable, 1.5 kg
 12 30103 **KOWOWET 12 V**
 for mobile lab, 1.5 kg



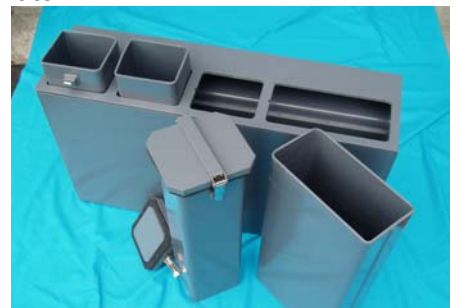
Spare Lamp for KOWOWET

12 30104 12 V / 50 W Halogenlamp

Processing Unit JUNIOR

12 30520 For the occasional processing of films up to 10 cm wide and 48 cm long.
 2 tanks with spill proof lids clamped down by a stainless hatch

9 l, 125 x 140 x 590 mm
 1 tank 9 l, 125 x 140 x 570 mm
 1 tank 17 l, 125 x 260 x 570 mm
 1 three side splash wall with waste outlet
 Sizes : 800 x 250 mm
 Height : 600 mm
 Weight : 13 kg



Plumbing Unit for Wall Mounting

12 30505 For the distribution of the fresh water feeder lines to the tanks of a manual processing unit. 4 valves are spaced alongside and the main line has a back pressure valve. All items mounted on a base plate 800 x 200 mm

Article-No.	Description	
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12 30630 **Processing unit TE 22 PK**
 Hand-Processing unit for mobile laboratories.
 Five tanks with each 22,5 l are placed inside a robust
 robust water jacket with hinged lid. Each tank may be emptied
 via a stopcock plug into the jacket. With overflow.
 The developer tank with separate wall to the next tank
 for indirect temperature. With stop puller
 Sizes: 960 x 400 mm
 Height: 700 mm
 Weight: 48 kg



12 30657 **Mounting frame TE 22 PK**
 For installing the TE 22 PK in a mobile lab.
 Stainless steel 2.5 kg

12 30655 **Underframe for TE 22 PK**
 Stainless steel (for used TE 22 PK
 in stationary labs)

12 30656 **Water Inlet for 22.5 ltr. Tank**
 The water inlet-pipe is fitted to the rear wall near the top of
 the tank. It leads out trough the open space between
 jacket and lid of the TE unit and may be connected to a hose

12 30653 **Splash Proof Lids, 22.5 ltr. Tanks**
 For 22.5 ltr. Tanks, light tight and made from GFC
 Size: 360 x 170 x 130 mm, 400 g

12 30668 **Spare Tank for TE 22 PK**
 For the TE-Units with outlet.
 Capacity: 22,5 l
 Size deep: approx. 585 mm
 Size inside: 330 x 117 mm
 Weight: 3,5 kg

12 30669 **Spare Stopper for Tank**

12 30670 **Stopper Puller**

Article-No.	Description	
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Manual-Processing Unit Type C

Thermostated, stationary film processor, built in PVC welded, thickness 7 mm

- 1000 W Heater
- digitale thermostat
- lid for developer and fixer tank

Different types of dimension.

12 30530

Manual-Processing Unit Type C 21

Developer: 10 ltr.
 Rinse: 20 ltr.
 Fixer: 20 ltr.
 Final bath: 70 ltr.
 Size: 76 x 67 x 92 (LxBxH)
 Weight: 60 kg

12 30540

Manual-Processing Unit Type C 31

Developer: 20 ltr.
 Rinse: 20 ltr.
 Fixer: 30 ltr.
 Final bath: 70 ltr.
 Size: 97 x 67 x 92 (LxBxH)
 Weight: 70 kg



13 30550

Manual-Processing Unit Type C 41

Developer: 30 ltr.
 Rinse: 20 ltr.
 Fixer: 40 ltr.
 Final bath: 130 ltr.
 Size: 148 x 67 x 92 (LxBxH)
 Weight: 80 kg

Article-No.	Description	
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12 39017 **Silver Recovery ROTU 4**
 A rotating cylindrical cathode in the power head will collect up to 6000 g of silver. Within two ranges, the plating current changes automatically between 0.5 - 4.0 A according to the silver concentration in the fixer. Maximum recovery of silver is 15 g/h 0,5 - 2 und 2,5 - 4 A
 Tank volume: 7 l
 Size: 250 x 250 x 430 mm
 Weight: 5,9 kg



12 39022 **Silver Indicator Paper, pH / Ag**
 pH-value in the range 4 - 8, Silver concentration in the range 0,5 - 10 g Ag/l. 100 test strips

12 31080 **Film Dryer Typ DR**
 Table top machine for drying films up to 35 cm. At a speed of 14 to 40 cm/min
 Electr. supply: 220/240 V, 50/60 Hz, 10 A
 Size: 630 x 600 x 350 mm
 Weight: 24 kg

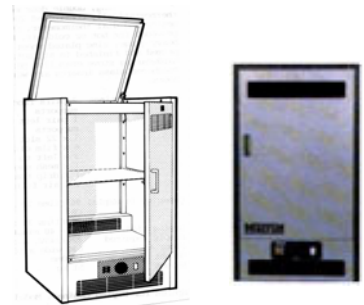


12 31070 **Wall Mounted Drying Cabinet**
 40 films 10 x 48 cm on clips may be placed inside. Thermostatically controlled heater/blower 1000 W, built in thermometer, control lamp
 Size outside: 84,5 x 100 x 43,5 cm (H x B x T)
 Size inside: 70 x 96 x 40 cm (H x B x T)
 Electr. Supply: 230 V / 50 Hz
 Weight: 27 kg



12 31075 **Spare Filter**
 Spare air filter for Wall Mounted Drying Cabinet

12 31060 **KOWOTHERM MK 5 Film Dryer**
 There are slotted hanger racks for clip type hangers. 6 stainless steel rods for films be hung up with clips. For 40 films 10 x 48 cm or any equivalent number of films 20 films up to max. 35 x 43 cm
 With air filter and 1000 W heater/blower.
 Size outside: 105 x 57 x 57 cm (H x B x T)
 Size outside: 230 V / 50 Hz
 Size outside: 35 kg



12 31035 **Spare filter KOWOTHERM MK 5**

Article-No.	Description	
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12 33600

COMPACT 2
NDT Film Processing Unit

Pro roller racks for safe and fast film transport
 Automatic Start-Stop-System with integrated
 Stand-by-Function. Wit digital display Microprocessor controlled
 control panel. Automatic tank filling, intermediary
 squeegees, integrated economy circuits, automatic
 replenishment system.

As an option can get a "through the wall" mounting kit
 for either film infeed or output.

Film format:	max. 45 cm min. 10 x 10 cm
Process time:	individuell in 0,1 min-steps, 1,0 - 10 min.
Processing speed:	variabel von 15,5 - 76,5 cm/min.
Capacity per hour:	18 x 24 cm - 349 Films (2 Films parallel) 24 x 30 cm - 174 Films 30 x 43 cm - 123 Films
Developer temperature, adjustable:	28°-40°C
Dryer temperature:	35° -70°C
Water consumption (during processing):	1,9 Itr. / min.
Tank volumes:	(D, F, W) 12.5 l, 12 l;13 l
Standing area:	0,47 m ²
Size total:	97 x 68 x 127 (LxWxH)
Weight empty (full) with open working table:	77 kg (115 kg)
Weight empty (full) with closed working table:	115 kg (129 kg)
Electrical supply:	220 - 240 Volt, 50/60 Hz.,2200 W. 10 A

CE- certified