



We are at your service
around the globe!

K04709

Product range for
container engineering
applications



MUNSCH Kunststoff-Schweißtechnik GmbH
Im Staudchen · D-56235 Ransbach-Baumbach
P.O. Box 1 42 · D-56221 Ransbach-Baumbach
Germany
Phone: +49 (0) 26 23-8 98-80
Fax: +49 (0) 26 23-8 98-85
Internet: <http://www.munsch.de>
E-Mail: munsch@munsch.de



Worldwide market and technology leader

With the invention of the hand extruder for thermoplastic welding applications in 1973, Erich Munsch launched a new first-of-its-kind product line. MUNSCH Kunststoff-Schweißtechnik GmbH was established in 1991 by way of a spin-off of the hand extruder activities from MUNSCH Chemie-Pumpen GmbH. This move came in response to the unparalleled market success and sustained growth of this business segment.



MUNSCH stands for quality and reliability. For more than 30 years, MUNSCH has contributed decisive thermoplastic welding knowhow to the tank engineering and landfill construction sectors. Ease of handling and a unique design make MUNSCH hand extruders a handy and indispensable tool for thermoplastic welding applications. As the world's No.1 in this sector, we are represented by distributors and agents on all five continents.

MUNSCH develops, manufactures and tests its products at its production site in Ransbach-Baumbach, Westerwald. Competent and individual advice and a service that is second to none are available to our customers around the globe.



Our focus is on your satisfaction

Consistent quality at a high standard is the cornerstone of everything we do. For our customers to be certain that they can rely on top quality at all times, we have introduced a quality management system that meets the exacting standards of DIN ISO 9001.

Our focus on customer needs is providing us with an ongoing impetus to launch ever new and innovative products on the market. Judge for yourselves!



MUNSCH Plastic Welding Technology at a glance

- Local service
- Spare parts shipping within 24 hours
- Testing of materials at our inhouse laboratories
- Operator training inhouse and at our customers' sites
- Competent advice
- Innovative products developed and manufactured by the inventor and worldwide market leader

MUNSCH brush-type drives

Cost-attractive and powerful! In addition to brushless drives specifically developed for hand extruders, MUNSCH now also offers a novel brush-type commutator motor. Compared with similar solutions from the standard repertoire, the strength of this new proprietary motor design lies in its considerably extended lifespan.

MUNSCH controller

Safe and convenient! Our new control technology comes with a time interlock for optimum control behaviour and reliable heat-up. In addition, a small control box makes the machine lighter and easier to handle.

MUNSCH brushless hot air blowers

Powerful and maintenance-free: the new hot air blowers feature a brushless drive and a greatly reduced weight.



Granulate extruders and welding extruders for integration into robots and automated assembly lines available on request



MUNSCH hand extruders with brush-type drive

- Drive specifically developed for extruders extends lifespan dramatically as against conventional drill drives
- Noise generation greatly reduced as against hand extruders with conventional motors
- Flanged connection between MUNSCH drive motor and extruder precludes misalignment between drive shaft and extruder screw; excessive bearing stresses are ruled out.
- Ease of maintenance through a maintenance port for brush replacement
- Motor start interlock precludes cold starting of the hand extruder
- Precise temperature control through pre-selection of rod thicknesses and weld materials
- Temperature sensors for preheating and extrudate are protected against mechanical damage



MUNSCH hand extruders with brushless drive

- Service life dramatically extended as against hand extruders with conventional drill drives
- Constant drive torque ensure uniform extrudate output regardless of variations in the drive load
- Noise generation greatly reduced as against hand extruders with conventional motors
- Flanged connection between brushless MUNSCH drive motor and extruder precludes misalignment between drive shaft and extruder screw; excessive bearing stresses are ruled out.
- Extrudate output rates of brushless drive extruders increased by 20 – 30 % as against conventional drives
- Motor start interlock precludes cold starting of the hand extruder
- Precise temperature control through pre-selection of rod thicknesses and weld materials
- Temperature sensors for preheating and extrudate are protected against mechanical damage



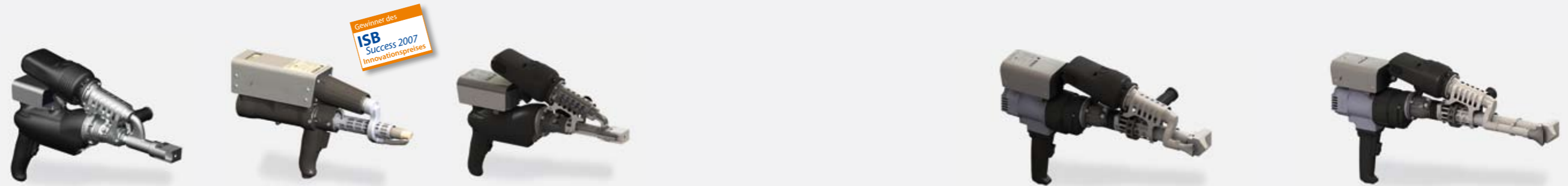


Brush-type drives

Autoair hand extruders are used in shop and field welding applications. The on-board brushless hot air blower makes the unit independent of an external air source.

Your benefits:

- No additional air supply units needed
- Ease of operation
- Ideal for field welding applications
- Motor specifically developed for harsh service conditions
- Cost-effective alternative to brushless drive
- Brushless hot air blower



	MAK-18-S-B ^{1) 2)}	Munsch Mini	MAK-18-B ^{1) 2)}
Max. welding rate	1,8 kg/h, Ø 4 mm 1,1 kg/h, Ø 3 mm	0,6 kg/h, Ø 3 mm	1,8 kg/h, Ø 4 mm 1,1 kg/h, Ø 3 mm
Base materials	PP / PE / PVDF	PP / PE / PVDF / PVC / PVC-C / Nylon / polyurethane, ABS / PFA and others	PP / PE / PVDF
Weld material	Round rod: Ø 3 / 4 mm	Round rod: Ø 3 mm	Round rod: Ø 3 / 4 mm
Application range ²⁾	Wall thicknesses: 4 - 15 mm	Wall thicknesses: 2 - 10 mm	Wall thicknesses: 4 - 15 mm
Weight	4,8 kg	3,4 kg	5,5 kg
Length	455 mm	450 mm	455 mm
Electronic speed control	yes	yes	yes
Cartridge heater	-	875 W	400 W
Hot air blower	2300 W	2300 W	2300 W

	MAK-36-B	MAK-58-B
Max. welding rate	3,6 kg/h, Ø 5 mm 2 kg/h, Ø 4 mm	5,8 kg/h, Ø 5 mm 3,8 kg/h, Ø 4 mm
Base materials	PP / PE / PVDF	PP / PE / PVDF
Weld material	Round rod: Ø 4 / 5 mm	Round rod: Ø 4 / 5 mm
Application range ²⁾	Wall thicknesses: 8 - 30 mm	Wall thicknesses: 12 - 40 mm
Weight	9,2 kg	10,2 kg
Length	570 mm	700 mm
Electronic speed control	yes	yes
Cartridge heater	650 W	800 W
Hot air blower	2300 W	2300 W

Voltage:
230 V and 120 V
380 V version on request

The extruder comes with:
1 welding shoe
1 set of air nozzles

1) Extruder stand included in scope of supply
2) Special 45° and 90° heads and extensions available as accessories

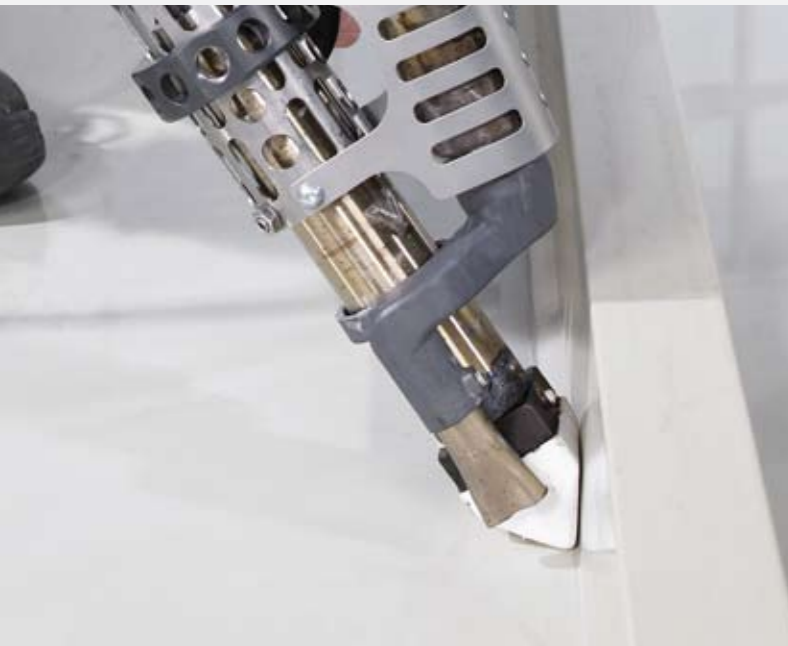


Brushless drives

Autoair hand extruders are used in shop and field welding applications. An on-board brushless hot air blower obviates the need for external air supply.

Your benefits:

- Long service life
- Uniform extrudate output regardless of variations in motor load
- Extruder output increased by 20 – 30 % as against units with conventional drive
- No additional external air supply needed
- Ideal for field welding applications



	MAK-25-S-B ^{1) 2)}	MAK-25-B ^{1) 2)}
Max. welding rate	2,5 kg/h, Ø 4 mm 1,4 kg/h, Ø 3 mm	2,5 kg/h, Ø 4 mm 1,4 kg/h, Ø 3 mm
Base materials	PP / PE / PVDF	PP / PE / PVDF
Weld material	Round rod: Ø 3 / 4 mm	Round rod: Ø 3 / 4 mm
Application range ²⁾	Wall thicknesses: 4 - 15 mm	Wall thicknesses: 4 - 15 mm
Weight	5 kg	6 kg
Length	455 mm	470 mm
Electronic speed control	yes	yes
Drive with power box	yes	yes
Cartridge heater	-	400 W
Hot air blower	2300 W	2300 W

	MAK-40-B	MAK-65-B
Max. welding rate	3,9 kg/h, Ø 5 mm 2,5 kg/h, Ø 4 mm	6,5 kg/h, Ø 5 mm 4 kg/h, Ø 4 mm
Base materials	PP / PE / PVDF	PP / PE / PVDF
Weld material	Round rod: Ø 4 / 5 mm	Round rod: Ø 4 / 5 mm
Application range ²⁾	Wall thicknesses: 8 - 30 mm	Wall thicknesses: 12 - 40 mm
Weight	8 kg	9,4 kg
Length	570 mm	700 mm
Electronic speed control	yes	yes
Drive with power box	yes	yes
Cartridge heater	650 W	800 W
Hot air blower	2300 W	2300 W

Voltage:
230 V

The extruder comes with:
1 welding shoe
1 set of air nozzles

1) Extruder stand included in scope of supply
2) Special 45° and 90° angle heads and extensions available as accessories

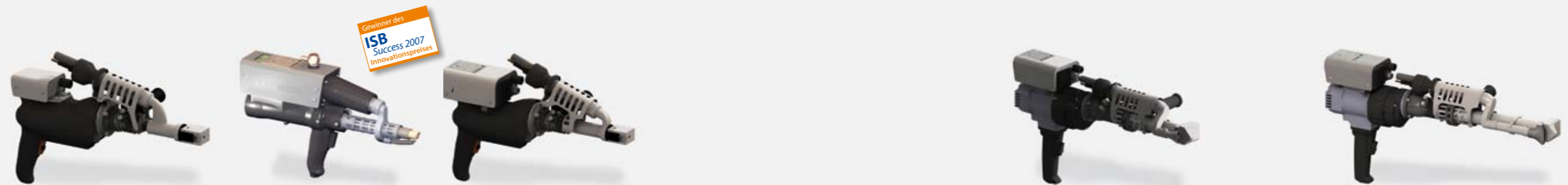


Brush-type drives

Hand extruders supplied from an external air source are the extruder technology of choice for shop welding applications. They are smaller and also lighter than their autoair counterparts.

Your benefits:

- Lighter and smaller than autoair extruders
- Ideal for shop welding applications
- Motor specifically developed for harsh service conditions
- Cost-effective alternative to brushless drive
- Fewer wear parts



	MEK-18-S-B ^{1) 2)}	Munsch Mini-E	MEK-18-B ^{1) 2)}
Max. welding rate	1,8 kg/h, Ø 4 mm 1,1 kg/h, Ø 3 mm	0,6 kg/h, Ø 3 mm	1,8 kg/h, Ø 4 mm 1,1 kg/h, Ø 3 mm
Base materials	PP / PE / PVDF	PP / PE / PVDF / PVC / PVC-C / Nylon / Polyurethane, ABS / PFA und andere	PP / PE / PVDF
Weld material	Round rod: Ø 3 / 4 mm	Round rod: Ø 3 mm	Round rod: Ø 3 / 4 mm
Application range ²⁾	Wall thicknesses: 4 - 15 mm	Wall thicknesses: 2 - 10 mm	Wall thicknesses: 4 - 15 mm
Weight	4,5 kg	3,4 kg	4,8 kg
Length	455 mm	450 mm	470 mm
Electronic speed control	yes	yes	yes
Cartridge heater	-	875 W	400 W
Air heater	2300 W	2300 W	2300 W

Voltage:
230 V and 120 V
380 V version on request

The extruder comes with:
1 welding shoe
1 set of air nozzles

	MEK-36-B	MEK-58-B
Max. welding rate	3,6 kg/h, Ø 5 mm 2 kg/h, Ø 4 mm	5,8 kg/h, Ø 5 mm 3,8 kg/h, Ø 4 mm
Base materials	PP / PE / PVDF	PP / PE / PVDF
Weld material	Round rod: Ø 4 / 5 mm	Round rod: Ø 4 / 5 mm
Application range ²⁾	Wall thicknesses: 8 - 30 mm	Wall thicknesses: 12 - 40 mm
Weight	9,0 kg	10,0 kg
Length	570 mm	700 mm
Electronic speed control	yes	yes
Cartridge heater	650 W	800 W
Air heater	2300 W	2300 W

1) Extruder stand included in scope of supply
2) Special 45° and 90° heads and extensions available as accessories



Brushless drives

Hand extruders supplied from an external air source are the extruder technology of choice for shop welding applications. They are smaller and also lighter than their autoair counterparts.

Your benefits:

- Long service life
- Uniform extrudate output regardless of variations in motor load
- Ideal for shop welding applications
- Extruder output increased by 20 – 30 % as against units with conventional drives
- Fewer wear parts



	MEK-25-S-B ^{1) 2)}	MEK-25-B ^{1) 2)}
Max. welding rate	2,5 kg/h, Ø 4 mm 1,4 kg/h, Ø 3 mm	2,5 kg/h, Ø 4 mm 1,4 kg/h, Ø 3 mm
Base materials	PP / PE / PVDF	PP / PE / PVDF
Weld material	Round rod: Ø 3 / 4 mm	Round rod: Ø 3 / 4 mm
Application range ²⁾	Wall thicknesses: 4 - 15 mm	Wall thicknesses: 4 - 15 mm
Weight	4,7 kg	5 kg
Length	455 mm	470 mm
Electronic speed control	yes	yes
Drive with power box	yes	yes
Cartridge heater	-	400 W
Air heater	2300 W	2300 W

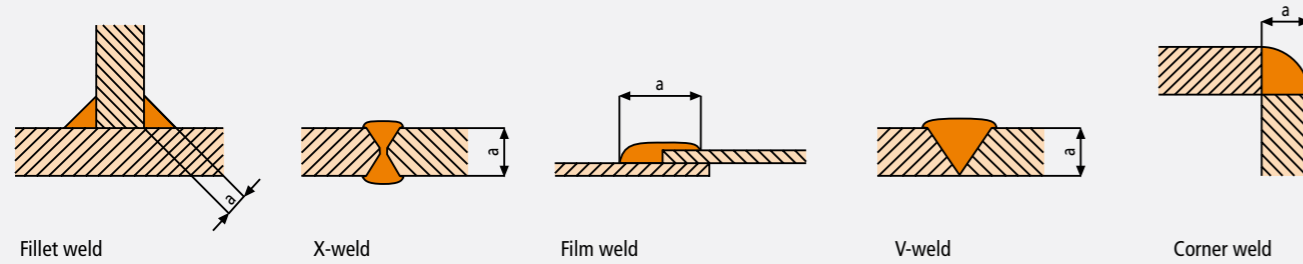
	MEK-40-B	MEK-65-B
Max. welding rate	3,9 kg/h, Ø 5 mm 2,5 kg/h, Ø 4 mm	6,5 kg/h, Ø 5 mm 4 kg/h, Ø 4 mm
Base materials	PP / PE / PVDF	PP / PE / PVDF
Weld material	Round rod: Ø 4 / 5 mm	Round rod: Ø 4 / 5 mm
Application range ²⁾	Wall thicknesses: 8 - 30 mm	Wall thicknesses: 12 - 40 mm
Weight	7,9 kg	8,9 kg
Length	570 mm	700 mm
Electronic speed control	yes	yes
Drive with power box	yes	yes
Cartridge heater	650 W	800 W
Air heater	2300 W	2300 W

Voltage:
230 V

The extruder comes with:
1 welding shoe
1 set of air nozzles

1) Extruder stand included in scope of supply
2) Special 45° and 90° angle heads and extensions available as accessories

To produce a perfect weld seam, the welding shoe must match the specific weld geometry. In addition to the welding shoes listed below (see table), MUNSCH supplies customized welding shoe designs for special applications and weld geometries.



X-weld, V-weld

Extruder type	Dimension a = wall thickness	Catalogue No.	Welding shoe length
MEK-/MAK-18-S	5	42.0105 V	40/60 mm
MEK-/MAK-18	6	42.0106 V	40/60 mm
MEK-/MAK-25-S	8	42.0108 V	40/60 mm
MEK-/MAK-25	10	42.0110 V	40/60 mm
ME-/MA-25-S	12	42.0112 V	40/60 mm
ME-/MA-25 also for EKR, SKR, UKR ¹⁾	15	42.0115 V	40/60 mm
MEK-/MAK-36	8	43.0108 V	40/60/80 mm
MEK-/MAK-40	10	43.0110 V	40/60/80 mm
MEK-/MAK-58	12	43.0112 V	40/60/80 mm
MEK-/MAK-65	15	43.0115 V	40/60/80 mm
ME-/MA-40	20	43.0120 V	40/60/80 mm
ME-/MA-60 also for U2, U8, U5R, U7R, E5 ¹⁾	25	43.0125 V	40/60/80 mm



Fillet weld

Extruder type	Dimension a = fillet depth	Catalogue No.	Welding shoe length
MEK-/MAK-18-S	4	42.0104 K	40/60 mm
MEK-/MAK-18	6	42.0106 K	40/60 mm
MEK-/MAK-25-S	2	42.0108 K	40/60 mm
MEK-/MAK-25	11	42.0111 K	40/60 mm
ME-/MA-25-S			
ME-/MA-25 also for EKR, SKR, UKR ¹⁾			
MEK-/MAK-36	6	43.0106 K	40/60/80 mm
MEK-/MAK-40	8	43.0108 K	40/60/80 mm
MEK-/MAK-58	11	43.0111 K	40/60/80 mm
MEK-/MAK-65	14	43.0114 K	40/60/80 mm
ME-/MA-40	18	43.0118 K	40/60/80 mm
ME-/MA-60 also for U2, U8, U5R, U7R, E5 ¹⁾	21	43.0121 K	40/60/80 mm



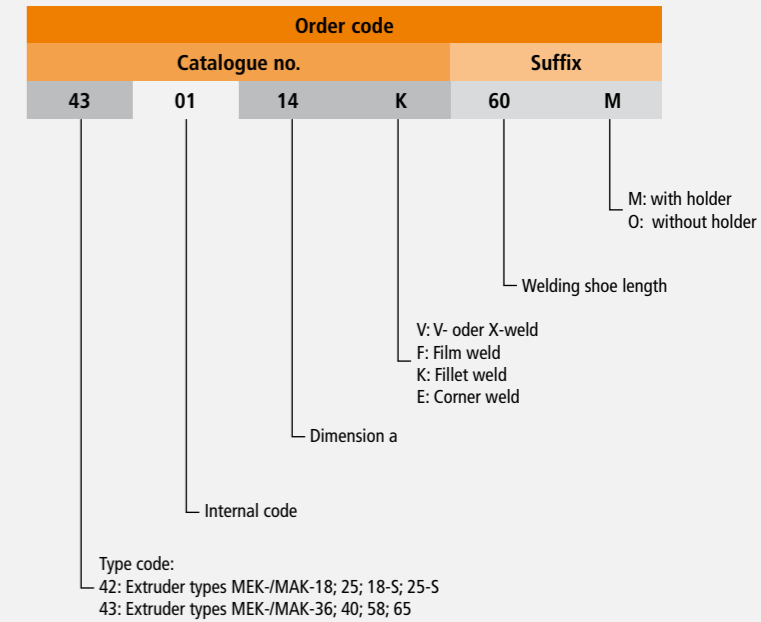
¹⁾ Previous extruder generation

Order Code

Welding shoes can be ordered from our local distributors or from MUNSCH Kunststoff-Schweißtechnik GmbH and also on the internet (for address, see back cover).

The welding shoe type is uniquely identified by the order code, i.e. the catalogue number designates the extruder type and the weld geometry while the suffix defines the welding shoe length and supply option (with or without holder).

- The example on the right denotes:
- for hand extruder type MEK-/MAK-36; 40; 58; 65
 - a = 14 mm
 - for fillet weld
 - welding shoe length = 60 mm
 - including holder



Film weld

Extruder type	Dimension a = weld width	Catalogue No.	Welding shoe length
MEK-/MAK-18-S	5	42.0105 F	40/60 mm
MEK-/MAK-18	6	42.0106 F	40/60 mm
MEK-/MAK-25-S	8	42.0108 F	40/60 mm
MEK-/MAK-25	10	42.0110 F	40/60 mm
ME-/MA-25-S	12	42.0112 F	40/60 mm
ME-/MA-25 also for EKR, SKR, UKR ¹⁾	15	42.0115 F	40/60 mm
MEK-/MAK-36	8	43.0108 F	40/60/80 mm
MEK-/MAK-40	10	43.0110 F	40/60/80 mm
MEK-/MAK-58	12	43.0112 F	40/60/80 mm
MEK-/MAK-65	15	43.0115 F	40/60/80 mm
ME-/MA-40	20	43.0120 F	40/60/80 mm
ME-/MA-60 also for U2, U8, U5R, U7R, E5 ¹⁾	25	43.0125 F	40/60/80 mm



Corner weld

Extruder type	Dimension a = wall thickness	Catalogue No.	Welding shoe length
MEK-/MAK-18-S	4	42.0104 E	40/60 mm
MEK-/MAK-18	6	42.0106 E	40/60 mm
MEK-/MAK-25-S	2	42.0108 E	40/60 mm
MEK-/MAK-25	11	42.0111 E	40/60 mm
ME-/MA-25-S			
ME-/MA-25 also for EKR, SKR, UKR ¹⁾			
MEK-/MAK-36	6	43.0106 E	40/60/80 mm
MEK-/MAK-40	8	43.0108 E	40/60/80 mm
MEK-/MAK-58	11	43.0111 E	40/60/80 mm
MEK-/MAK-65	14	43.0114 E	40/60/80 mm
ME-/MA-40	18	43.0118 E	40/60/80 mm
ME-/MA-60 also for U2, U8, U5R, U7R, E5 ¹⁾	21	43.0121 E	40/60/80 mm



¹⁾ Previous extruder generation



■ Transport case

Suitable MUNSCH transport cases are available for safe storage and transport of the hand extruders.



■ Welding rod dispenser

The welding rod dispenser accommodates 2 welding rod reels with a weight of up to 10 kg each; it can be rotated through 360° and is easy to remove for transport.



■ Extruder stand

For depositing the MUNSCH hand extruder safely during the daily work.



■ Power box

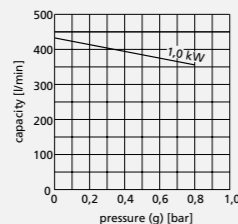
Accommodates the frequency inverter with EMC filter and complete power pack for brushless MUNSCH drives.



■ Compressor

To generate oil-, water- and dust-free compressed air. An integrated vacuum relief valve allows connection to low-pressure test bells.

Technical data:
 Type PICO
 V: 26 m³/h
 230/400 Volt, 50 Hz, IP 55, 1,0 kW
 Max. negative pressure: 0.6 bar



■ Digital thermometer

To check the preheat air and extrudate temperatures; required by DVS Code 2207-4.

Technical data:
 Sensor: NiCr-Ni Weight: approx. 200 g
 Measurement range: -50 bis +1150°C Measurement accuracy: 1°C
 Display: LCD, 13 mm high
 Temperature sensor: spring-mounted knife-edge probe, 1.5 mm dia., made of V4A, plastic handle, 1000 mm silicone cable
 Power supply: 9 V battery (included in scope of supply)



■ Weld trimmer

The weld trimmer removes weld projections without damage to the base material.

Technical data:
 Trim width: 35 mm
 Trim depth: max. 6mm
 Drive rating: 900 W
 Weight: 3 kg

