CEMONT

CHAPTER 3

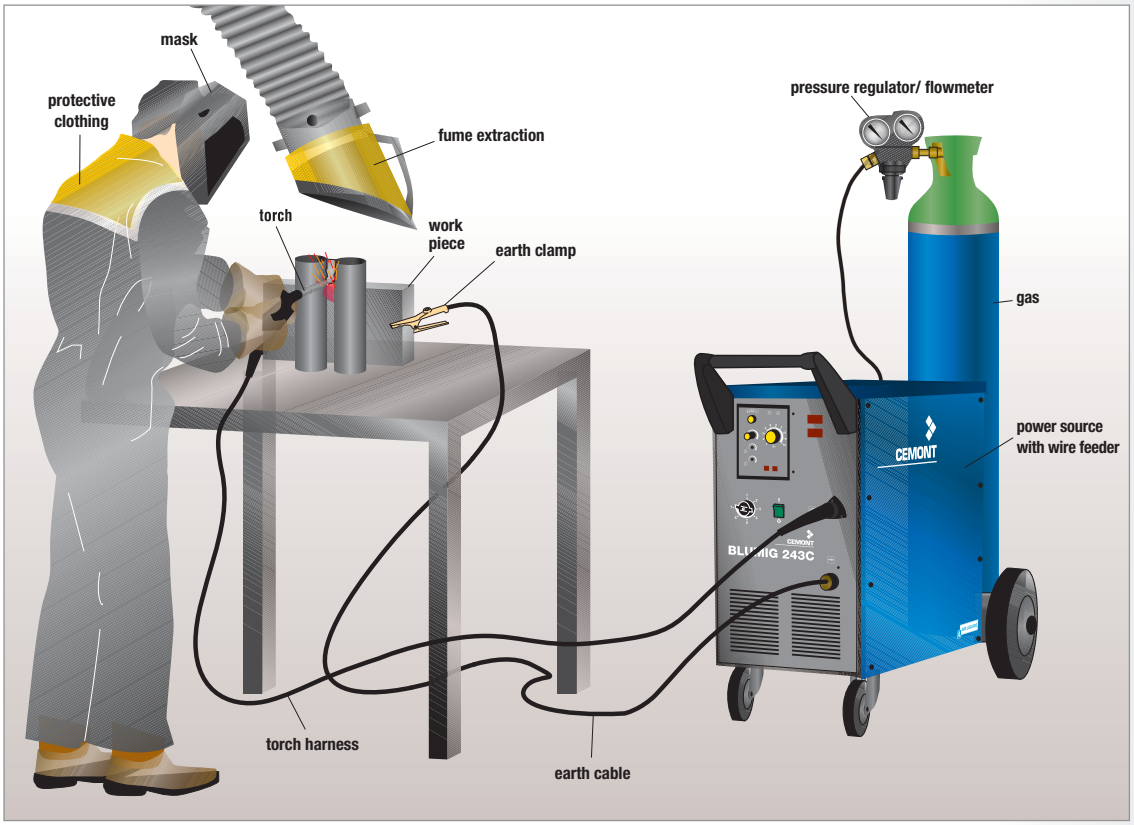
MIG/MAG welding

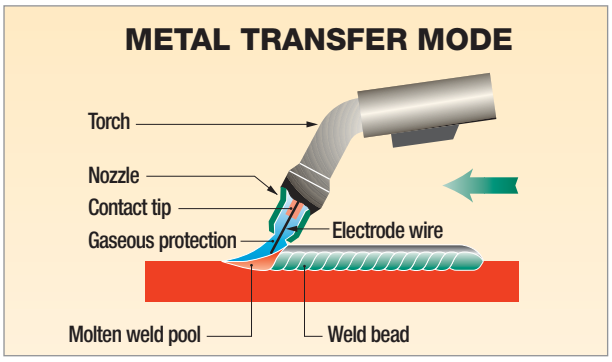
WARRANTY 2 YEARS

CEMONT

MIG/MAG Welding Process

A TYPICAL MANUAL MIG/MAG WELDING INSTALLATION





MIG/MAG Welding Process

The MIG/MAG welding processes use an arc under gaseous protection.

The electrode is a metallic wire.
The electrode, the metal transferred in the arc and the weld bead are protected from the atmosphere by an inert gas for MIG welding and an active gas for MAG welding.

The definition explains the names MIG (Metal Inert Gas) and MAG (Metal Active Gas).

In manual welding this process is called semi-automatic because the wire is fed automatically as soon as the arc starts.

AIR LIQUIDE WELDING

SELF positions:

SELF role:

- used in short-circuit mode,
- limits the short-circuit current,
- the higher the SELF, the colder, the weld bead.

Ω Small SELF

Used for bigger sections

ΩΩ Big SELF

Used for medium sections

- ARC is smooth
- Lower welding speed

ΩΩΩ Total SELF

- ARC is very smooth
- Possible to use CO_2 gas

LEXICON

SEMI-AUTOMATIC WELDING

MIG (Metal Inert Gas): Arc welding process with a consumable wire. This wire is transferred in the arc and the molten metal is deposited in the molten pool, protected by an inert gas.

MAG (Metal Active Gas): Same description as MIG but the gas protection is active (CO_2 or argon + CO_2 mixture).

MIG pulse: The current varies during welding, the power supplies a very precise “shape wave”. Pulse is primarily used for stainless steel and light alloys.

Synergic MIG: The welding parameters are programmed in the power source set for a common evolution according to a predefined law. One single setting is needed which facilitates the use of those machines and improves the welding quality.

2 Times mode: Welding starts by pulling the torch’s trigger. It stops by releasing the trigger.

Spot mode: The power source starts to weld when the trigger is pulled, but welding stops automatically after a pre-set delay.

Intermittent mode: This is a point mode which is repeatable. If the pressure on the trigger is maintained, welding will be re-started after another delay which is also regulated.

MIG/MAG: single-phase range

	115 A	140 A	170 A	180 A	200 A	240 A
PRECISA					201 SG	
BLUMIG						241 C
MAXISTAR			180 MEC	200 M		
EASYMIG	151 DUAL	170 DUAL				
Welding current						

MIG/MAG: three-phase range

	200 A	220 A	260 A	280 A	330 A	350 A	400 A	500 A	520 A
PRECISA							420 PH		
MT									603 SH
BLUMIG S					353 S	403 S		503 S/SH	
BLUMIG C		243 C		283 C	353 C				
BLUMIG AUTOMOTIVE									
MAXISTAR		250 T							
Welding current									

PRECISA 420 PH

THE CLASS LEADER

» INNOVATION

» QUALITY
AT THE
RIGHT PRICE

» SAFETY

EASYMIG 151 / 170 DUAL

The EASYMIG range is used for smaller jobs requiring light weight and compact equipment, which is easy to use. Available for use: with or without gas, the EASYMIG units are equipped with the essential accessories needed for immediate use.

Standards
EN 60974-1
EN 60974-10

Features and product advantages:

- **Input voltage:** 230 V single-phase.
- **Wire feeder device:** 2 rollers.
- **Simple:** adjustment of the current with a switch and of the wire feed speed with a single knot control.
- **Versatile:** EASYMIG DUAL for welding with steel, stainless steel and aluminium solid wires as well as gasless cored wires.
- **Complete:** delivered with torch and all accessories for immediate use.
- **Portable:** equipped with handle and wheels for easier movement.

PORTABLE FOR MAINTENANCE OPERATIONS

1 Handle for transport.
2 On/off switch.
3 Power switch.
4 Wire feed setting.
5 Primary cable.
6 Earth cable.
7 Built-in torch.

WARRANTY 2 YEARS

TECHNICAL CHARACTERISTICS:

		EASYMIG 151 DUAL	EASYMIG 170 DUAL
Input voltage		230 V - single-phase (50/60 Hz)	
Input power		2.5 kVA - 2.2 kW	2.8 kVA - 2.5 kW
Max input current		22 A	24 A
Effective input current		8.5 A	10.2 A
Open circuit voltage		20 - 36 V	18 - 32 V
Welding current range		30 - 115 A	30 - 140 A
Duty cycle at 40 °C	at 15 %	115 A	140 A (18%)
	at 60 %	60 A	75 A
	at 100%	45 A	60 A
Adjustment positions		4	6
Protection index		IP 21	
Dimensions		240 x 510 x 460 mm	440 x 670 x 750 mm
Weight		23.5 kg	36 kg

• Wear parts for torches
see pages 3-20 & 3-21
• Wire-feeder roller
see page 3-18

TO ORDER:

Power source complete with torch	W000263721	W000263722

Delivered equipped with:

- electric primary cable,
- equipped earth cable, and built-in torch,
- handle and wheels
- 2 roller plate,
- safety instructions,
- user manual.

MAXISTAR 180 MEC / 200 M MAXISTAR 250 T

MAXISTAR is a range of semi-automatic MIG/MAG welding equipment. Used for welding applications in workshops or for outdoor work.

COMPACT MACHINES FOR LIGHT APPLICATIONS

Standards
EN 60974-1
EN 60974-10

Features and product advantages:

- **Input voltage:** 230 V single-phase or 400 V three-phase.
- **Mode:** continuous or tack welding.
- **Wire feeder:** 2 roller plate.
- **Simple:** adjustment of the current with a switch and of the wire feed speed with a single knob control.
- **Versatile:** for welding with steel, stainless steel and aluminium wires.
- **Reliable:** air cooled transformer.

WARRANTY 2 YEARS

2007-227

1. Thermal safety indicator.
2. Switch on/off.
3. Power switch.
4. Tack welding adjustment.
5. Stick-out adjustment.
6. Starting speed regulation.
7. Wire feed speed.
8. European connection for torch.

2007-228

TECHNICAL CHARACTERISTICS:

		MAXISTAR 180 MEC	MAXISTAR 200 M	MAXISTAR 250 T
Input voltage 50 Hz		230 V - single-phase	400 V - three-phase	
Input power		3 kVA - 2.5 kW	6.9 kVA - 5.5 kW	6.9 kVA - 5.5 kW
Max input current		24 A	32 A	11 A
Effective input current		10.5 A	12 A	5.5 A
Adjustment positions		6	8	6
Open cicruit voltage		18 - 32 V	18 - 33 V	18 - 35 V
Welding current		30 - 170 A	35 - 180 A	35 - 200 A
Wire diameter		0.6 - 0.8 mm	0.6 - 0.8 mm	0.6 - 1.0 mm
Duty cycle at 40 °C	at 30%	140 A (18%)	180 A (15%)	200 A (25%)
	at 60%	75 A	100 A	130 A
	at 100%	60 A	75 A	100 A
Protection index		IP 21		IP 23
Dimensions (mm)		440 x 670 x 750		
Weight		38.5 kg	43 kg	54 kg

• **Torches** see pages 3-19, 3-20 & 3-21
• **Rollers** see page 3-18

TO ORDER:

Power source only	**W000263724**	**W000263725**	**W000263726**
Options			
Reverse polarity kit	**W000257998**		

Delivered equipped with:

- electric primary cable,
- equipped earth cable,
- 2 roller plate for wire sizes 0.6 - 0.8 mm, 1.0 - 1.2 mm,
- safety instructions,
- user manual.

BLUMIG 241 C - (single-phase)
243 C / 283 C / 353 C - (three-phase)

The BLUMIG range of MIG/MAG welding equipment is robust and powerful, providing the best performance on the market. It will meet all your needs.

WARRANTY 2 YEARS

COMPACT MACHINES FOR INTENSIVE USE

Standards
EN 60974-1
EN 60974-10

Features and product advantages:

- **Input voltage:** 230 V single-phase and 230 - 400 V three-phase.
- **Mode:** 2 T / 4T / tack welding.
- **Wire feeder:** 4 roller plate.
- **Simple:** adjustment of the current with a switch and of the wire feed speed with a single knob control.
- **Digital display:** included on the BLUMIG 353 and an option for other models.
- **Versatile:** range of gases.
- **Reliable:** air cooled transformer.
- **Self adjusting** control board.

2007-154

2007-153

• **Torches** see pages 3-19, 3-20 & 3-21
• **Rollers** see page 3-18

1. Selection 2T / 4T / tack welding.
2. Tack welding adjustment.
3. Displays.
4. Stick-out adjustment.
5. Wire speed.
6. Starting speed adjustment.
7. Power switch.
8. Switch on/off.
9. European connection for torch.

Delivered equipped with:

- electric primary cable,
- equipped earth cable,
- rollers 0.8- 1.0 mm,
- safety instructions,
- user manual.

TECHNICAL CHARACTERISTICS:

	BLUMIG 241 C	BLUMIG 243 C	BLUMIG 283 C	BLUMIG 353 C
Input voltage	230 V single-phase	230 - 400 V three-phase		
Input power	8.8 kVA - 8.2 kW	6.8 kVA - 6 kW	10.5 kVA - 9 kW	13.5 kVA - 11.5 kW
Max input current	38 A	19 -11 A	27 - 15 A	33 - 19 A
Effective current	19 A	10 - 6 A	15 - 9 A	20 - 11 A
Adjustment positions	10	7	10	14
Open circuit voltage	18 - 35 V	18 - 35 V	18 - 40 V	18 - 45 V
Welding current range	40 A - 240 A	35 A - 220 A	35 A - 280 A	35 A - 350 A
Wire diameter	0.6 - 1.0 mm	0.6 - 1.0 mm	0.6 - 1.0 mm	0.6 - 1.2 mm
Duty cycle at 40 °C at 30%	200 A (25%)	200 A	250 A	300 A (35%)
Duty cycle at 40 °C at 60%	130 A	140 A	170 A	270 A
Duty cycle at 40 °C at 100%	100 A	110 A	140 A	210 A
Protection index	IP 23			
Dimensions (mm)	500 x 870 x 950			570 x 930 x 990
Weight	71 kg	71 kg	80 kg	96 kg

TO ORDER:

Power source only	W000261955	W000263728	W000263729	W000264208
Options				
Reverse polarity kit	W000257998			
Digital display	W000352093			

AIR LIQUIDE WELDING

BLUMIG AUTOMOTIVE

WARRANTY 2 YEARS

The AUTOMOBILE specialist, fitted with two torches with 360 degree swan neck swivel spouts. This equipment is designed for the repair and assembly of all types of steel. Constant control of the welding current permits fine adjustment and the various "self" levels guarantee smooth welding.

Features and product advantages:

- **Mode:** stroke / 4 stroke / Point / Intermittent.
- **Reeling:** 2 plates, 4 rollers (possibility of a spool gun).
- **Anti-adhesion**.
- Constant control of wire speed.
- Equipped with a 2-cylinders support (M20).

Standards
EN 60974.1
EN 60974.5
EN 60974.10

NEW

TECHNICAL CHARACTERISTICS:

	BLUMIG AUTOMOTIVE
Main power supply	400 V three-phase
Regulating position	20
Open circuit voltage	14 - 30 V
Welding current range	20 - 200 A
Duty cycle (10 min cycle at 40 °C) at 30%	155 A
Wire diameter	0.6 - 1.0 mm (occasionally 1.2 mm)
Protection class	IP 21
Insulation class	H
Weight	82 kg
Dimensions	720 x 380 x 700 mm

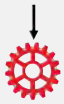
TO ORDER:

Power source only	**W000277369**
Options	
TM 141T 3 m torch	**W000277007**
Spool Gun option	**W000277973**
6 m Spool Gun - SG 150	**W000228491**

Delivered equipped with:

- power cable,
- equipped earth cable,
- 2 plates 4 rollers for 0.6 - 1.0 mm wire,
- a safety, user and maintenance manual.

WEAR PARTS:

		Wire guide Entrance	Rollers		Rollers profile				Wire guide Intermediate	Wire guide Exit
	Ø wire (mm)									
Steel	0.6	W000277771	W000277778	-	✓	-	-	-	W000277779	W000277782
			-	W000277772	-	✓	-	-		
	0.8		W000277772	-	-	✓	-	-	W000277779	W000277782
			-	W000277772	-	✓	-	-		
	1.0		W000277773	-	-	✓	-	-	W000277780	W000277783
			-	W000277773	-	✓	-	-		
Aluminium	1.0		W000277775	-	-	-	✓	-	W000277780	W000277783
			-	W000277775	-	-	✓	-		
	1.2		W000277776	-	-	-	✓	-	W000277781	W000277784
			-	W000277776	-	-	✓	-		
FeFlux - FCW	1.2		W000277777	-	-	-	-	✓	W00027771	W000277784
			-	W000277777	-	-	-	✓		

Torch TM 141T

for BLUMIG AUTOMOTIVE

Features and product advantages:

- Small and easy to hold with well designed handle.
- 360° swan neck swivel spout, excellent for welding in position.

NEW

TECHNICAL CHARACTERISTICS:

		TM 141 T
Air cooling		air
Rated current	M21 mixed gas (DIN EN 439)	150 A
	CO_2	160 A
Duty cycle		60%
Voltage class		L 113 V
Wires used		0.6 to 1.0 mm
Gas supply		mini: 10 l/min - maxi: 18 l/min
Original equipment mounted on the torch	Contact tube	M4x25 - 0.8 Ac
	Nozzle	Ø 11 mm
	Liner	0.6 - 0.8 Ac
Weight		0.9 kg

Reference	TM 141 T
Length 3 m	W000277007

WEAR PARTS:

REP	TM 141 T Reference		
1	spiral steel liner	Ø 0.6 - 0.8 mm / 3 m (blue)	W000010730
		Ø 1.0 - 1.2 mm / 3 m (red)	W000010733
2-11	Nozzle	Ø 11 mm	W000345403
2-14		Ø 14 mm	W000345404
2-14P		"point"	W000345405
3	Contact tube M4x25	Steel Ø 0.6 mm	W000277012
		Steel Ø 0.8 mm	W000277013
		Steel Ø 1.0 mm	W000277014

BLUMIG 353 S
BLUMIG 403 S / 503 SH

The BLUMIG range of MIG/MAG welding equipment is robust and powerful, providing the best performance on the market. It will meet all your needs.

**SEPARATE WIRE FEEDER
HEAVY DUTY**

Standards
EN 60974-1
EN 60974-10

Features and product advantages:

- **Input voltage:** 230 V - 400 V three-phase.
- **Mode:** 2 T / 4T / tack welding.
- **Wire feeder:** 4 roller plate.
- **Perfect starting:** possibility to adjust the starting speed.
- **Stick-out:** adjustable with a potentiometer.
- **Simple:** adjustment of the current with a switch and of the wire feed speed with a single knot control.
- **Digital display:** precise adjustment and optimal reading (standard with 353/403).
- **Versatile:** for all solid or flux cored wires.
- **Powerful:** air cooled transformer.
- **Safety:** protection class IP 23.
- **Ergonomic design:** due to its pivoting wire feed unit support.

2007-156

1 Selection 2T / 4T / tack welding.
2 Tack welding adjustment.
3 Wire speed.
4 Stick-out adjustment.
5 Starting speed regulation.
6 Digital displays.
7 European connection for torch
8 Power and on/off switch.
9 Power switch (precise adjustment).

WARRANTY 2 YEARS

2007-157

TECHNICAL CHARACTERISTICS:

		BLUMIG 353 S	BLUMIG 403 S	BLUMIG 503 S	BLUMIG 503 SH
Compatible wire feeders		TF 300		TF 400	TF 400H
Input voltage 50 Hz		230 V - 400 V three-phase			
Input power		13.5 kVA - 11.5 kW	16.5 kVA - 14 kW	24 kVA - 20 kW	
Max input current		33 - 19 A	42 - 24 A	60 - 34 A	
Effective input current		20 - 11 A	25 - 14 A	35 - 20 A	
Adjustment positions		14	30	30	
Open circuit voltage		18 - 45 V	18 - 46 V	19 - 54 V	
Welding current		40 - 330 A	35 - 400 A	50 - 500 A	
Wire diameter		0.8 - 1.2 mm	0.8 - 1.2 mm	0.8 - 1.6 mm	
Duty cycle at 40 °C	at 35%	300 A	350 A	450 A	
	at 60%	230 A	270 A	345 A	
	at 100%	180 A	210 A	270 A	
Protection index		IP 23			
Dimensions (mm)		500 x 1180 x 950		600 x 1250 x 1050	
Weight		93 kg	108 kg	140 kg	

• **Wire feeder** see page 3-12
• **Torches** see pages 3-19, 3-20 & 3-21
• **Rollers** see page 3-18

TO ORDER:

Power source only	**W000263731**	**W000263732**	**W000263733**	**W000263734**
Cooler unit	-	-	-	**W000262188**
Liquid for cooling unit	-	-	-	**W000227236**
Options				
Digital display feeder	**standard on power source**			**standard on wire**

Delivered equipped with:

- electric primary cable,
- equipped earth cable,
- safety instructions,
- user manual.

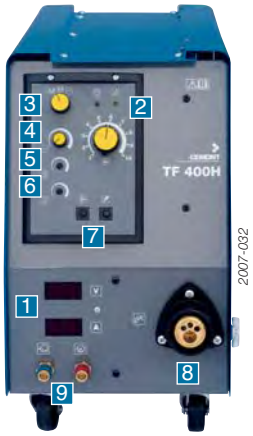
TF 300 (air) / 400 (air) / 400H (water)

The TF wire feeders are compatible with all the power sources in the BLUMIG S range.
Delivered as standard with an insulated cable.

Features and product advantages:

- **Sealed structure:** protection of the wire feeding system.
- **Digital display:** A/V included on TF 400 and TF 400H.
- **Ergonomic design:** adjustment on the front panel, and pivoting wire feed unit support for easier storage and orientation of the wire feeders.
- **Efficient wire feeding:** 4 roller plate.
- **Safety:** secure locking of the wire feeding compartment.
- **Self adjusting** control board (TF 300).

2006-896



2007-032

1. Digital display A/V.
2. Wire speed.
3. Mode 2T / 4T / tack welding.
4. Tack welding adjustment.
5. Starting speed.
6. Stick-out adjustment.
7. Test / Purge gas / Wire advance.
8. Torch connection.
9. Water inlet / outlet on TF 400H type.


Rollers see page 3-18

TECHNICAL DATA:
TF 300 - TF 400 - TF 400 H

	TF 300 AIR	TF 400 AIR	TF 400 WATER
Digital display A/V	-	✔	✔
Wheels	✔	✔	✔
Equipped for water cooled torch	-	-	✔
Rollers	0.8 (1.0) mm	1.0 (1.2) mm	

Cat. nr	TF 300	TF 400	TF 400 H
Harness length 5 m	W000263745	W000263747	W000263749
Harness length 10 m	W000263746	W000263781	W000263750
Harness length 20 m	-	W000263748	W000263751

PRECISA 201 SG

WARRANTY 2 YEARS

PRECISA 201 SG is a multi-process inverter technology power source. Its weight, power and primary single-phase input voltage, make the PRECISA 201 the specialist for rapid maintenance operations.

PORTABLE MULTI-PROCESS

Standards
EN 60974-1
EN 60974-10

Features and product advantages:

- **Input voltage:** 230 V single-phase.
- **Display:** digital A / V.
- **Multi-process:** MIG / MMA / TIG DC.
- **Wire feeder:** 2 roller.
- **Professional:** robust construction with handle.
- **Programmable:** 9 programs available, 11 program memory.
- **Polarity inversion:** for welding applications with gasless flux cored wire.
- **Wire spool:** D 200, D 300 optimal.
- **MIG torch connections:** with European connectors or Spool Gun.

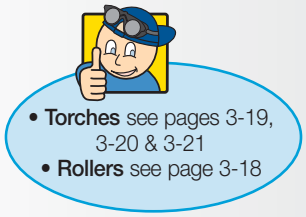
2007-629

1. Digital display.
2. Program mode buttons.
3. Potentiometer.
4. MIG / MMA / TIG DC selection.
5. Selection 2T / 4T / point.
6. European connector for torch.
7. Spool Gun connection control.
8. Welding current adjustment.
9. Wire speed regulation.

2007-630

TECHNICAL CHARACTERISTICS:

		PRECISA 201 SG		
		MMA	TIG	MIG
Input voltage 50/60 Hz		230 V single-phase		
Input power		8 kVA - 5.6 kW		
Max input current		23 A	16 A	21 A
Effective input current		35 A	27 A	35 A
Open circuit voltage		70 A	25 V	50 A
Welding current range		28 - 180 A	5 A - 200 A	30 - 200 A
Duty cycle at 40 °C	at 35%	-	200 A	200 A
	at 40%	180 A	-	-
	at 60%	140 A	155 A	155 A
	at 100%	115 A	125 A	125 A
Wire diameter		0.6 - 1.0 mm		
Protection index		IP 23		
Dimensions		235 x 470 x 570 mm		
Weight		29 kg		



• **Torches** see pages 3-19, 3-20 & 3-21
• **Rollers** see page 3-18

TO ORDER:

Power source only	**W000263772**
Options	
15 kg spool support	**W000253322**
TIG Torch	**W000266434**
Kit 25C25+	**W000011139**

Delivered equipped with:

- electric primary cable,
- earth cable,
- rollers for wires 0.8 / 1.0 mm,
- safety instructions,
- user manual.

PRECISA 420 PH

WARRANTY 2 YEARS

The PRECISA 420 PH is the ideal partner when it comes to the flexibility required for welding on all materials (steel, light alloys or applications such as agricultural machines, metallic furniture, etc...). Designed for both conventional and advanced MIG/MAG processes (for thin plate MIG brazing etc...) and also for MMA applications. This machine is optimized due to the facilities for adjustment and the wide range of synergic programs for all materials and gas combinations. This installation is the best solution for an efficient machine, which is easy to adjust and easy to use.

Features and product advantages:

- **Numerical control** of parameters giving exceptional arc stability and welding quality.
- **Water cooled**.
- **Easy selection of parameters**, easy to read digital displays.
- **Synergic curves** available as standard to optimize results with a simple “one button” selection.
- **A wide set of welding processes** available for optimum welding in all situations:
  - ***Speed Short Arc™:*** high welding speed / low deformation on thin plates,
  - ***Pulsed:*** for optimum aluminium and stainless steel welding,
  - ***Cold Double Pulse™:*** for the highest quality on thin plates especially stainless and aluminium, weld bead with TIG aspect,
  - ***MIG Brazing:*** for thin coated plates, e.g. car body repair, with low deformation and good mechanical characteristics.

Standards
EN 60974-1
EN 60974-10

SYNERGIC PULSED FOR TOP WELDING RESULTS

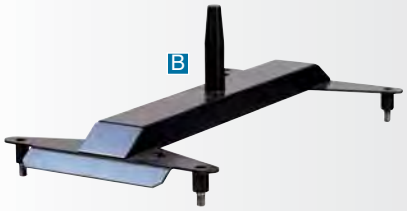
1. Welding voltage and set up parameter display.
2. Welding current or wire speed or thickness display.
3. Mode and welding cycle selection LEDs.
4. Process choice selector.
5. Gas selector.
6. Wire grade selector.
7. Wire diameter selector.
8. Scrolling of set up parameters.
9. Parameter setting.
10. Selector for wire speed or thickness display.

• **Torches** see pages 3-19, 3-20 & 3-21
• **Rollers** see page 3-18

PRECISA 420 PH

Basic functions:

- Wire speed setting (empty)
- Wire speed setting (welding)
- Arc length setting (empty)
- Arc length setting (welding)
- End setting (empty)
- End setting (welding)
- Spot 2T/4T/cycle
- Hot start
- Fading
- Spray end
- Synergic mode
- Semi-synergic mode
- Parameter saving
- Display calibration
- Assisted calibration
- Software update
- Error messages
- Language choice



TECHNICAL CHARACTERISTICS:

		PRECISA 420 PH
Three-phase input voltage		400 V - 50/60 Hz
Primary consumption		44.5 A (60%) - 39 A (100%)
Open circuit voltage		106 V
Welding current range		20 A - 420 A
Duty cycle at 40 °C	at 45%	420 A
	at 100%	350 A
Protection index		IP 23 S
Dimensions (with trolley and feeder)		1150 x 750 x 1500 mm
Weight		107 kg

TO ORDER:

	Power source water cooled	**W000273132**	
	Option		
A	**Wire feeder TF 420H**	**W000273133**	
	Workshop trolley for power source	**W000550046**	
B	**Pivot stand** (requires wire feeder trolley)	**W000550048**	
C	**Workshop trolley for wire feeder**	**W000550050**	
D	**RC-JOB remote control**	**W000273134**	
	Harnesses	**Steel**	**Aluminium**
	2 m	**W000055091**	**W000055095**
	5 m	**W000055092**	**-**
	10 m	**W000055093**	**W000055096**
	15 m	**W000055094**	**W000055097**

Delivered equipped with:

- electric primary cable,
- earth cable,
- rollers for wire 0.8 / 1.0 mm,
- safety instructions,
- user manual.

MT 603 SH

The MT 603 S(H) is a synergic thyristor controlled unit for MIG-MAG welding. Robust and powerful it has been designed to produce high quality welds for the widest range of industrial applications.
The separate wire feeders (air-water cooled) are available with different lengths of harness for all your welding needs.

Features and product advantages:

- **Input voltage:** 220-230-240-380-400-415-440 V three-phase.
- **Mode:** 2T / 4T welding cycle.
- **Wire feeder:** 4 roller plate.
- **Perfect starting:** possibility to adjust the starting speed.
- **Arc extinction device (stick-out):** adjustable with knob.
- **Simple:** easy adjustment of the welding parameters with the OPT system function which is a synergic mode with access to pre recorded parameters which optimise welding performance.
- **Flexibility:** possibility to modify the welding parameters (in welding too) from the wire feeder or from the remote control when available.
- **Digital display:** precise pre-setting of welding thickness or wire speed and optimal reading of welding parameters (A + V).
- **Versatile:** for all solid or flux cored wire welding.
- **Powerful:** power transformer, choke and rectifier air cooled.
- **Safety:** protection class IP 23.
- **Ergonomic:** due to its pivoting wire feed unit support (option).

WARRANTY 2 YEARS

Standards
EN 60974-1
EN 60974-10

SYNERGIC CONTROL
THYRISTOR TECHNOLOGY

1. 2T / 4T welding cycle.
2. Crater filler cycle.
3. Gas selection.
4. Solid or cored wire selection.
5. Display for current, thickness and wire speed.
6. Voltage display.
7. Selection for the display 5.
8. Material selection.
9. Wire diameter selection.
10. ON and warning lamps.
11. ON / OFF switch.

TECHNICAL CHARACTERISTICS:

		MT 603 SH
Wire feeder range		DV44i - DV44iw
Three-phase input voltage (50/60 Hz)		220-230-240-380-400 415-440 V
Max input current		77.6 A (230 V) - 44.6 A (400 V)
Effective input current		60.1 A (230 V) - 34.5 (400 V)
Voltage regulation		Continuous adjustement
Open-circuit voltage		61 V
Welding current		40 - 520 A
Wire diameter		0.8 - 1.6 mm (2.4 mm FCW)
Duty cycle at 40 °C	at 60%	520 A
	at 100%	370 A
Protection index		IP 23
Dimensions		680 x 460 x 1200 mm
Weight		208 kg

Delivered equipped with:

- primary cable 5 m,
- earth cable 5 m with clamp,
- gas hose 2 m,
- safety instructions,
- user manual.

TO ORDER:

Power source only	**W000263736**

MT 603 SH Additional units

• For torches
see page 3-19,
3-20 & 3-21

To order:

Cooler unit COOLER II	W000302009
Liquide for cooling unit FREEZCOOL 10L	W000010167

DV44i (air) / DV44iw (water)

The DV44i(w) wire feeders are compatible with the MT 603 S(W) power source. They are delivered as standard with sheathed cables (different lengths), trolley and spool cover.
Wire feeder for intensive use.

4 ROLLERS DIAMETER 37 mm

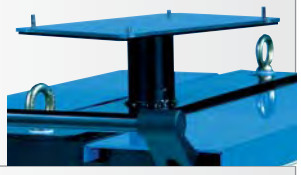
Standards
EN 60974-5

Features and product advantages:

- **Sealed structure:** protection of the wire feeding system.
- **Easy to use:** synergic and manual adjustment of welding parameters.
- **Comfortable:** due to its pivoting wire feed unit support (option) changing the orientation of the feeder making welding easier.
- **Efficient wire feeding:** 4 roller plate.
- **Safety:** no access to moving parts and protection enclosure IP 23.
- **Simple:** feeder with handle for ease of movement.
- **Robust:** sheathed cables and torch support.
- **Versatile:** for all kinds of solid and flux cored wires up to 2.4 mm.

Rollers see page 3-18

A 

B 

C 

To order:

	Wire feeder DV 44i D37 (air)	5 m	W000268844
		10 m	W000268845
		15 m	W000268846
	Wire feeder DV 44iW D37 (water)	5 m	W000268847
		10 m	W000268848
		15 m	W000268849
	Options		
A	Remote control		W000305112
B	Pivot support		W000305010
C	Slinging ring		W000305061

1. Rollers for wire feeders

EASYMIG / MAXISTAR ranges

Roller	Steel
0.6 / 0.8 mm	W000232110
1.0 / 1.2 mm	W000232112
Entry wire guide	W000231810

BLUMIG range

Roller	Steel	Alu	Flux cored wire
0.6 mm	W000050096	-	-
0.8 mm	W000050097	W000050100	-
1.0 mm	W000050098	W000050101	-
1.2 mm	W000050099	W000050102	W000229621 (1.0 / 1.2 mm)
1.6 mm	W000218767	-	W000265883 (1.4 / 1.6 mm)
Entry wire guide	W000233472		
Intermediate wire guide	W000252183		
Exit wire guide	W000269661		

PRECISA 201 SG range

Roller	Steel	Alu	Flux cored wire
0.6 - 0.8 mm	W000352037	-	-
1.0 - 1.2 mm	W000352036	W000270323	W000227891
Entry wire guide	W000227907		

MT 603 S(H) range

<table>
<tr><th colspan="2"></th><th>Entry wire guide</th><th colspan="2">Roller</th><th>Intermediate wire guide</th><th colspan="2">Exit wire guide</th><th>ALUKIT</th></tr>
<tr><td rowspan="5">Steel</td><td>0.6</td><td rowspan="5">W000305150</td><td rowspan="2">W000305125</td><td rowspan="4">W000267598</td><td></td><td></td><td></td><td></td></tr>
<tr><td>0.8</td><td></td><td></td><td rowspan="4">W000271819</td></tr>
<tr><td>1.0</td><td rowspan="2">W000267599</td><td></td><td rowspan="3">W000271820</td></tr>
<tr><td>1.2</td><td rowspan="2">W000305126</td><td></td><td rowspan="2">W000271821</td></tr>
<tr><td>1.6</td><td></td><td></td></tr>
<tr><td rowspan="3">Alu</td><td>1.0 - 1.2</td><td></td><td colspan="2">W000260185</td><td rowspan="3">W000305135</td><td></td><td></td><td>W000255648</td></tr>
<tr><td>1.2 - 1.6</td><td></td><td colspan="2">W000260186</td><td></td><td></td><td>W000255649</td></tr>
<tr><td>1.6 - 2.4</td><td></td><td colspan="2">W000260187</td><td></td><td></td><td>W000255650</td></tr>
<tr><td rowspan="3">Flux cored wire</td><td>1.0 - 1.2</td><td rowspan="2">W000305150</td><td colspan="2"></td><td></td><td colspan="2">W000271820</td><td></td></tr>
<tr><td>1.2 - 1.6</td><td colspan="2">W000266330</td><td></td><td colspan="2">W000271821</td><td></td></tr>
<tr><td>1.6 - 2.4</td><td></td><td colspan="2">W000266331</td><td></td><td></td><td></td><td></td></tr>
</table>

2. Welding torches

EASYMIG / MAXISTAR ranges

	EASYMIG 151	EASYMIG 170
Replacement torch	W000264746	W000228236

MAXISTAR / BLUMIG / PRECISA ranges

Torches		WMT2-15 A	WMT2-25 A	WMT2-36 A	WMT2-500 W
Cooling		Air	Air	Air	Water
Duty cycle at 60%	CO_2	180 A	230 A	300 A	500 A (at 100%)
	Ar + CO_2	150 A	200 A	270 A	450 A (at 100%)
Length	3m	W000277445	W000277473	W000277482	W000277492
	4m	W000277447	W000277474	W000277483	W000277493
	5m	-	W000277475	W000277484	W000277494

Spool Gun SG 150 air cooled - 150 A - 100% - 6 m	W000228491
Spool Gun SG 300 air cooled - 300 A - 100% - 6 m	W000228490

WMT2 range

A complete range of MIG MAG welding torches devised to meet all needs in the field of semi-automatic welding.

- **WMT2-15 A:**
  For car bodywork, due to its small overall size.
- **WMT2-25 A:**
  For interlocking, metal and maintenance work.
- **WMT2-36 A:**
  For sheel metal work, mechanical welding and metal frames.
- **WMT2-500 W / WL:**
  For heavy duty work requiring water cooling of the torch. The swan neck is available in two lengths.

Standards
EN 60974.1
EN 60974.7

The Benefits:

- Very easy to use
- Ergonomic handle for perfect grip
- Flexibility thanks to the back swivel
- Wear parts in conformity with EC standards
- European connector

TECHNICAL CHARACTERISTICS:

TORCHES	WMT2-15 A	WMT2-25 A	WMT2-36 A	WMT2-500 W / 500 WL*
Cooling	air	air	air	water
Duty cycle	@ 60%			@ 100%
CO_2	180 A	230 A	300 A	500 A
Ar + CO_2	150 A	200 A	270 A	450 A
Voltage class	L 113 V			
Wires used	Steel 0.6 to 1.0 mm	Steel 0.8 to 1.2 mm	Steel 0.8 to 1.6 mm	Steel 0.8 to 2.4 mm
	-	Alum. 1.0 to 1.2 mm	Alum. 1.0 to 1.6 mm	Alum. 1.0 to 2.4 mm
Gas supply	10 to 18 l/min	10 to 18 l/min	10 to 18 l/min	10 to 25 l/min
Standard delivery with				
Contact tube	Steel 0.8 mm	Steel 1.0 mm	Steel 1.2 mm	Steel 1.2 mm
Nozzle (diameter)	12.5 mm	14.0 mm	16.0 mm	16.5 mm
Liner	For steel wire 0.6 - 0.8 mm	For steel wire 1.0 - 1.2 mm	For steel wire 1.0 - 1.2 mm	For steel wire 1.0 - 1.2 mm

Cat. nr	WMT2-15 A	WMT2-25 A	WMT2-36 A	WMT2-500W	WMT2-500WL*
3 m length	W000277445	W000277473	W000277482	W000277492	W000277533
4 m length	W000277447	W000277474	W000277483	W000277493	W000277534
5 m length	-	W000277475	W000277484	W000277494	W000277535

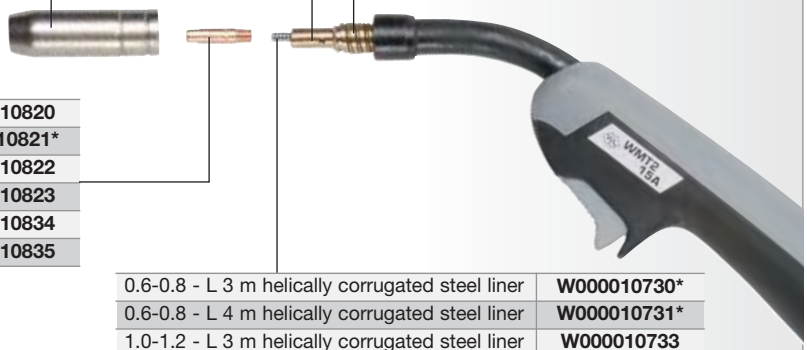
**long swan neck*

WMT2-15 A

Conical nozzle Ø 12.5 mm	**W000010786***
Very conical nozzle Ø 10.0 mm	**W000010787**
Cylindrical nozzle Ø 16.0 mm	**W000010788**

Contact-tube support	**W000277903**

Nozzle spring	**W000277448**



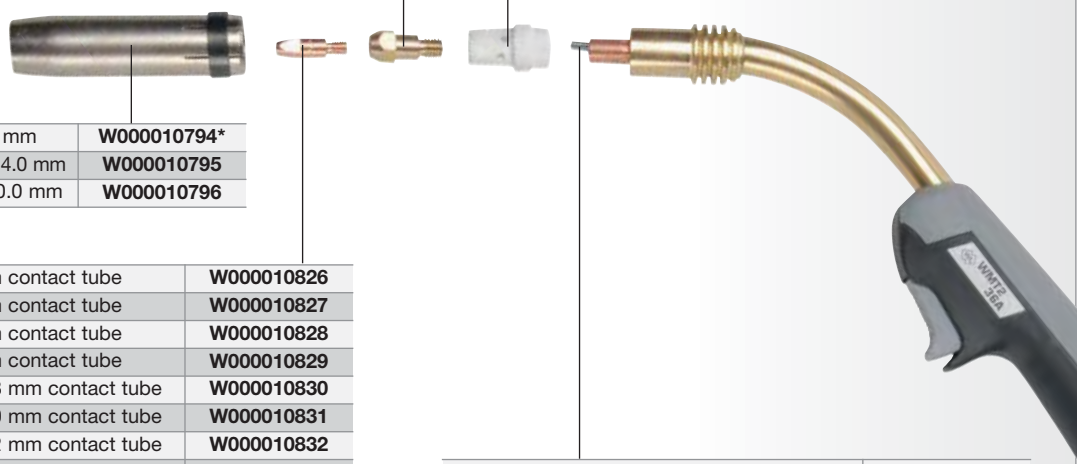
M6x25 Cu - Ø 0.6 mm contact tube	**W000010820**
M6x25 Cu - Ø 0.8 mm contact tube	**W000010821***
M6x25 Cu - Ø 1.0 mm contact tube	**W000010822**
M6x25 CuCrZr - Ø 0.6 mm contact tube	**W000010823**
M6x25 CuCrZr - Ø 0.8 mm contact tube	**W000010834**
M6x25 CuCrZr - Ø 1.0 mm contact tube	**W000010835**

0.6-0.8 - L 3 m helically corrugated steel liner	**W000010730***
0.6-0.8 - L 4 m helically corrugated steel liner	**W000010731***
1.0-1.2 - L 3 m helically corrugated steel liner	**W000010733**
1.0-1.2 - L 4 m helically corrugated steel liner	**W000010734**

WMT2-36 A

M6x28 Contact-tube support	**W000010721**
M8x28 Contact-tube support	**W000010722***

Insulating diffuser	**W000010780***
High temperature insulating diffuser	**W000010781**
Ceramic insulating diffuser	**W000010782**



Conical nozzle Ø 16.0 mm	**W000010794***
Very conical nozzle Ø 14.0 mm	**W000010795**
Cylindrical nozzle Ø 20.0 mm	**W000010796**

M6x28 Cu - Ø 0.8 mm contact tube	**W000010826**
M6x28 Cu - Ø 1.0 mm contact tube	**W000010827**
M6x28 Cu - Ø 1.2 mm contact tube	**W000010828**
M6x28 Cu - Ø 1.6 mm contact tube	**W000010829**
M6x28 CuCrZr - Ø 0.8 mm contact tube	**W000010830**
M6x28 CuCrZr - Ø 1.0 mm contact tube	**W000010831**
M6x28 CuCrZr - Ø 1.2 mm contact tube	**W000010832**
M6x28 CuCrZr - Ø 1.6 mm contact tube	**W000010833**
M6x28 - Ø 1.0 mm alu contact tube	**W000010850**
M6x28 - Ø 1.2 mm alu contact tube	**W000010851**
M6x28 - Ø 1.6 mm alu contact tube	**W000010852**
M8x30 Cu - Ø 0.8 mm contact tube	**W000010834**
M8x30 Cu - Ø 1.0 mm contact tube	**W000010835**
M8x30 Cu - Ø 1.2 mm contact tube	**W000010836***
M8x30 Cu - Ø 1.6 mm contact tube	**W000010837**
M8x30 CuCrZr - Ø 0.8 mm contact tube	**W000010840**
M8x30 CuCrZr - Ø 1.0 mm contact tube	**W000010841**
M8x30 CuCrZr - Ø 1.2 mm contact tube	**W000010842**
M8x30 CuCrZr - Ø 1.6 mm contact tube	**W000010843**
M8x30 - Ø 1.0 mm alu contact tube	**W000010853**
M8x30 - Ø 1.2 mm alu contact tube	**W000010854**
M8x30 - Ø 1.3 mm alu contact tube	**W000010855**

0.6-0.8 - L 3 m helically corrugated steel liner	**W000010730**
0.6-0.8 - L 4 m helically corrugated steel liner	**W000010731**
0.6-0.8 - L 5 m helically corrugated steel liner	**W000010732**
1.0-1.2 - L 3 m helically corrugated steel liner	**W000010733***
1.0-1.2 - L 4 m helically corrugated steel liner	**W000010734***
1.0-1.2 - L 5 m helically corrugated steel liner	**W000010735***
1.6 - L 3 m helically corrugated steel liner	**W000010867**
1.6 - L 4 m helically corrugated steel liner	**W000010868**
1.6 - L 5 m helically corrugated steel liner	**W000010869**
1.0-1.2 - L 3 m Teflon liner	**W000010736**
1.0-1.2 - L 4 m Teflon liner	**W000010737**
1.0-1.2 - L 5 m Teflon liner	**W000010738**
1.6 - L 3 m Teflon liner	**W000010745**
1.6 - L 4 m Teflon liner	**W000010746**
1.6 - L 5 m Teflon liner	**W000010747**

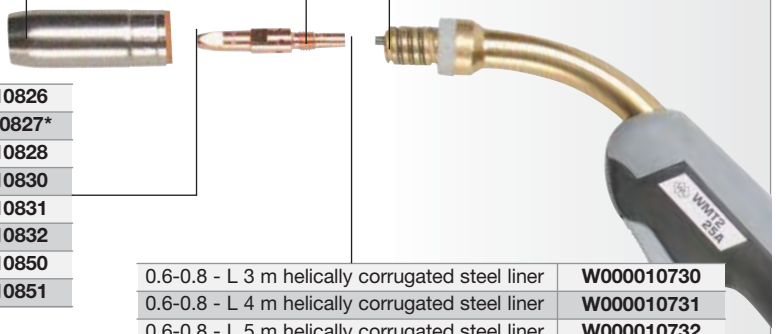
**Original torch equipment*

WMT2-25 A

Conical nozzle Ø 14.0 mm	**W000010790***
Very conical nozzle Ø 12.0 mm	**W000010791**
Cylindrical nozzle Ø 17.0 mm	**W000010792**

Contact-tube support	**W000010720**

Nozzle spring	**W000277477**



M6x28 Cu - Ø 0.8 mm contact tube	**W000010826**
M6x28 Cu - Ø 1.0 mm contact tube	**W000010827***
M6x28 Cu - Ø 1.2 mm contact tube	**W000010828**
M6x28 CuCrZr - Ø 0.8 mm contact tube	**W000010830**
M6x28 CuCrZr - Ø 1.0 mm contact tube	**W000010831**
M6x28 CuCrZr - Ø 1.2 mm contact tube	**W000010832**
M6x28 - Ø 1.0 mm alu contact tube	**W000010850**
M6x28 - Ø 1.2 mm alu contact tube	**W000010851**

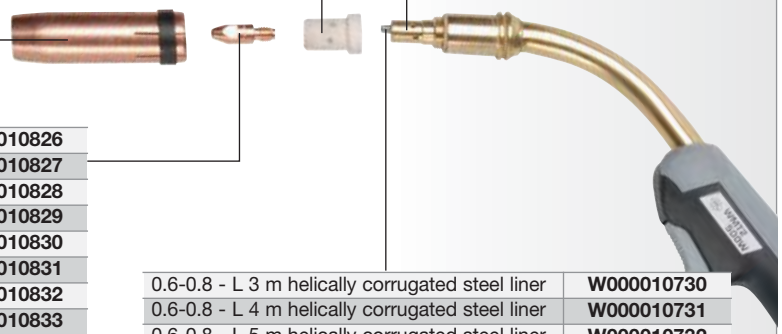
0.6-0.8 - L 3 m helically corrugated steel liner	**W000010730**
0.6-0.8 - L 4 m helically corrugated steel liner	**W000010731**
0.6-0.8 - L 5 m helically corrugated steel liner	**W000010732**
1.0-1.2 - L 3 m helically corrugated steel liner	**W000010733***
1.0-1.2 - L 4 m helically corrugated steel liner	**W000010734***
1.0-1.2 - L 5 m helically corrugated steel liner	**W000010735***
1.0-1.2 - L 3 m Teflon liner	**W000010736**
1.0-1.2 - L 4 m Teflon liner	**W000010737**
1.0-1.2 - L 5 m Teflon liner	**W000010738**

WMT2-500 W / 500 WL (long swan neck)

Insulating diffuser	**W000010783***
High temperature insulating diffuser	**W000010784**
Ceramic insulating diffuser	**W000010785**

Contact-tube support M6x28	**W000010723**
Contact-tube support M8x28	**W000010724***

Conical nozzle Ø 16.5 mm	**W000010797***
Very conical nozzle Ø 14.5 mm	**W000010798**
Cylindrical nozzle Ø 20.0 mm	**W000010799**



M6x28 Cu - Ø 0.8 mm contact tube	**W000010826**
M6x28 Cu - Ø 1.0 mm contact tube	**W000010827**
M6x28 Cu - Ø 1.2 mm contact tube	**W000010828**
M6x28 Cu - Ø 1.6 mm contact tube	**W000010829**
M6x28 CuCrZr - Ø 0.8 mm contact tube	**W000010830**
M6x28 CuCrZr - Ø 1.0 mm contact tube	**W000010831**
M6x28 CuCrZr - Ø 1.2 mm contact tube	**W000010832**
M6x28 CuCrZr - Ø 1.6 mm contact tube	**W000010833**
M6x28 - Ø 1.0 mm alu contact tube	**W000010850**
M6x28 - Ø 1.2 mm alu contact tube	**W000010851**
M6x28 - Ø 1.6 mm alu contact tube	**W000010852**
M8x30 Cu - Ø 0.8 mm contact tube	**W000010834**
M8x30 Cu - Ø 1.0 mm contact tube	**W000010835**
M8x30 Cu - Ø 1.2 mm contact tube	**W000010836***
M8x30 Cu - Ø 1.6 mm contact tube	**W000010837**
M8x30 Cu - Ø 2.0 mm contact tube	**W000010838**
M8x30 Cu - Ø 2.4 mm contact tube	**W000010839**
M8x30 CuCrZr - Ø 0.8 mm contact tube	**W000010840**
M8x30 CuCrZr - Ø 1.0 mm contact tube	**W000010841**
M8x30 CuCrZr - Ø 1.2 mm contact tube	**W000010842**
M8x30 CuCrZr - Ø 1.6 mm contact tube	**W000010843**
M8x30 CuCrZr - Ø 2.0 mm contact tube	**W000010844**
M8x30 CuCrZr - Ø 2.4 mm contact tube	**W000010845**
M8x30 - Ø 1.0 mm alu contact tube	**W000010853**
M8x30 - Ø 1.2 mm alu contact tube	**W000010854**
M8x30 - Ø 1.6 mm alu contact tube	**W000010855**
M8x30 - Ø 2.0 mm alu contact tube	**W000010856**
M8x30 - Ø 2.4 mm alu contact tube	**W000010857**

0.6-0.8 - L 3 m helically corrugated steel liner	**W000010730**
0.6-0.8 - L 4 m helically corrugated steel liner	**W000010731**
0.6-0.8 - L 5 m helically corrugated steel liner	**W000010732**
1.0-1.2 - L 3 m helically corrugated steel liner	**W000010733***
1.0-1.2 - L 4 m helically corrugated steel liner	**W000010734***
1.0-1.2 - L 5 m helically corrugated steel liner	**W000010735***
1.6 water - L 3 m helically corrugated steel liner	**W000010739**
1.6 water - L 4 m helically corrugated steel liner	**W000010740**
1.6 water - L 5 m helically corrugated steel liner	**W000010741**
2.0-2.4 water - L 3 m helically corrugated steel liner	**W000010742**
2.0-2.4 water - L 4 m helically corrugated steel liner	**W000010743**
2.0-2.4 water - L 5 m helically corrugated steel liner	**W000010744**
1.0-1.2 - L 3 m Teflon liner	**W000010736**
1.0-1.2 - L 4 m Teflon liner	**W000010737**
1.0-1.2 - L 5 m Teflon liner	**W000010738**
1.6 - L 3 m Teflon liner	**W000010745**
1.6 - L 4 m Teflon liner	**W000010746**
1.6 - L 5 m Teflon liner	**W000010747**
2.0-2.4 - L 3 m Teflon liner	**W000010817**
2.0-2.4 - L 4 m Teflon liner	**W000010818**
2.0-2.4 - L 5 m Teflon liner	**W000010819**

**Original torch equipment*