schweißkraft®
Schweißtechnik

MIG-MAG WELDING EQUIPMENT

EASY-MAG

Quality made in Europe





MIG/MAG shield gas welding equipment

Quality made in Europe

SCHWEIßKRAFT EASY-MAG – the level entry class for MIG/MAG shield gas welding equipment

- Low-budget shield gas welding equipment for car repairs, hobbyists and semi-professionals
- For steel and stainless steel welding
- Easy to use and set up
- The soft and stable arc guarantees low-spatter welding results
- Continuously variable wire feed
- Robust chassis with steering rollers for easy transport (chassis for self-assembly)
- Practical gas cylinder holder
- S mark: approved for welding in cramped welding conditions with an increased risk of electrical hazard

EASY-MAG 171, 193 and 213-1
- With 2-reel wire feed

EASY-MAG 213/1
- Suitable for 230 V and 400 V operations

EASY-MAG 253-4, 303-4 and 353-4S
- With 4-reel wire feed
- With current and voltage display





Warranty terms** on **www.stuermer-maschinen.de** or on request from **Stürmer Maschinen GmbH



EASY-MAG 171



EASY-MAG 253-4



EASY-MAG 353-4S







The control system:

1. *Volt/Ampere switch*
2. *Digital display*
3. ***Operational modes** 2-cycle, 4-cycle, spot, gas test*
4. *Temperature control lamp*
5. *Operation control lamp*
6. *Spot time*



7. *Wire burnback*
8. *Wire speed control*
9. *On/off switch*
10. *Welding stages*
11. *Torch connection*
12. *Welding current socket*

Model		EASY-MAG 171	EASY-MAG 193	EASY-MAG 213/1	EASY-MAG 253-4	EASY-MAG 303-4	EASY-MAG 353-4S
Art. no.		1081171	1081193	1081213	1081253	1081303	1081353
Technical specifications							
Wire Ø	mm	0,6 – 0,8	0,6 – 1,0		0,8 – 1,0	0,8 –1,2	0,8 –1,2
Number of wire feed rollers		2	2	2	4	4	4
Wire feed speed	m/min	1 – 14	1 – 18	1 – 18	1 –20	1 –20	1 – 23
Power supply	V	230	3 x 400	230/400	3 x 400	3 x 400	3 x 400
Adjusting range	A	30 – 170	30 – 190	30 – 140 / 140 – 200	30 – 250	30 – 300	30 – 350
ED at $I_{max.}$ and 40 °C	%	10	10	10	35	35	60
Welding current at DC 100 % at 40 °C	A	60	90	65	140	160	260
Switching stages		6	7	9	10	10	21 (3 x 7)
Power factor	cos phi	0,8	0,8	0,75	0,8	0,8	0,95
Effective power consumption	kVA	2,5	2	2,6	5,3	6,6	13,2
Required generator output	kVA	5	4	5	8	10	–
Open circuit voltage	V	18 – 43	18 – 33	24 – 51	16 – 32	16 – 35	15,8 – 35,8
Fuse	A	16	16	16	16	16	25
Cooling type		AF	AF	AF	AF	AF	Fan
Torch cooling		Gas	Gas	Gas	Gas	Gas	Gas
Degree of protection		IP 21	IP 21	IP 21	IP 23	IP 23	IP 21
Insulation class		H	H	H	H	H	H
Torch recommendation		SMB 15/3m	SMB 15/3m	SMB 15/3m	SMB 25/4m	SMB 25/4m	SMB 36/4m
Weight	kg	36	39	41	69	90	138
Dimensions (L x W x H)	mm	810 x 406 x 685			823 x 510 x 735		935 x 550 x 1240
Standards		EN 60 974-1;-3;-10 / S mark / EMC - class A					

Scope of delivery
EASY-MAG 171/193/213
- Basket spool adapter
- Feed rollers 0.6 - 0.8 mm
- Gas hose 1.5 m
- Torch set SMB 15 (torch 3 m, ground cable 2 m, pressure regulator)

Scope of delivery
EASY-MAG 253-4/303-4
- Basket spool adapter
- Feed rollers 0.8 - 1.0 mm
- Gas hose 1.5 m
- Torch set SMB 25 (torch 4 m, ground cable 3 m, pressure regulator)

Scope of delivery
EASY-MAG 353-4 S
- Basket spool adapter
- Feed rollers 1.0 - 1.2 mm
- Gas hose 1.5 m
- Intermediate hose pack 5 m
- Torch set SMB 36 (torch 4 m, ground cable 3 m, pressure regulator)

Wear part set for torch

Wear part set	Art. no.
VST SMB15	1091501
1 sorting box, 1x gas tip assembly, 2x retaining spring, 10x contact tip M6 Ø 0.8/25 mm, 10x contact tip M6 Ø 1.0/25 mm, 2x gas tip conical Standard NW dm 1.2, 1x gas tip cyl.	
VST SMB25	1092501
1x sorting box, 3x retaining spring, 2x tip adapter M6, 5x contact tip M6 Ø 0.8/28 mm, 5x contact tip M6 Ø1.0/28 mm, 2x gas tip conical Standard 1x gas tip cyl.	
VST SMB36	1093601
1 x sorting box, 2 x tip assembly M6/M8/35 mm, 3 x gas distributor standard, 5 x current tip M6-ECu 0.8 mm, 5 x current tip M6-ECu 1.0 mm, 5 x current tip M6-ECu 1.2 mm, 4 x gas tip conical, 1 x gas tip cylindrical	


VST SMB 15


VST SMB 25


VST SMB 36

Intermediate hose pack

Intermediate hose pack, gas-cooled	Art. no.
50 mm² 1.5 m	1018030
50 mm² 5 m	1018031
50 mm² 10 m	1018032


Intermediate hose pack

Wire feed rollers for 4-roll wire feed

Designation	Art. no.
V slot for steel and stainless steel	
0.6 + 0.8 mm **for EASY-MAG 171 (up to year of manufacture 03/2019)**	1015908
0.6 + 0.8 mm **(from year of manufacture 10/2019)**	1016008
0.8 + 1.0 mm	1016010
1.0 + 1.2 mm	1016012
U slot for aluminium	
0.8 + 1.0 mm	1016110
1.0 + 1.2 mm	1016112
1.2 + 1.6 mm	1016116
1.0 + 1.2 mm K slot	1016210
Counterpressure roll smooth	
for EASY-MAG 171	1015910
for EASY-MAG 193/213/253-4/303-4/353-4	1016202

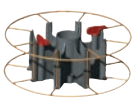

Wire feed roller


Counterpressure roll

Accessories

Basket spool adapter	Art. no.
KA 1, single-part, pluggable	1110001
KA 2, with quick release coupling	1110005
Torch holder	1090011


Basket spool adapter KA 1


Basket spool adapter KA 2


Torch holder

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MIG-MAG WELDING EQUIPMENT

SYN-MAG 273/323

Quality made in Europe



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MIG-MAG WELDING EQUIPMENT

SYN-MAG 353/453

Quality made in Europe



SYN-MAG 273/323 – step controlled shield gas welding equipment
MIG/MAG all-round machines for trades

The state-of-the-art synergie control supports precise regulation of the wire feed with automatic wire adjustment, and fast and easy setting of welding parameters.

- Inexpensive, but really good!
- Suitable for thin to thicker materials (0.8 mm up to max. approx. 15 mm in steel)
- Universally deployable thanks to characteristic curves for steel, stainless steel, aluminium, and gas shielded filler wires (FCW = Flux Cored Wire)
- Central connection
- Temperature overload display
- Powerful 4-roll feed ensures reliable and constant wire feeding and a stable arc
- Always the right setting with 10 or 21 power stages
- With current and voltage display
- With 2-cycle/4-cycle/spot and interval control
- With automatic wire feed correction
- With temperature-controlled fan



Info & video

Experience our capability and request individual advice!

Contact: +49 (0951) 96 555-501
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Warranty terms** on **www.stuermer-maschinen.de** or on request from **Stürmer Maschinen GmbH



SYN-MAG 273



SYN-MAG 323

The control

1. *ON – display (green LED)*
   OVERLOAD – display (orange LED)
2. *Ampere/welding program display*
3. *Wire feed adjustment, Multifunctional button*
4. *2-cycle / 4-cycle / spotting / interval*



5. *Granular step switch*
6. *Step switch - coarse 0 – 3*
7. *Torch connection*
8. *Welding current socket*

Model	SYN-MAG 273	SYN-MAG 323
Art. no.	1089273	1089323
Technical specifications		
Wire Ø steel/stainless steel	0.8 - 1.2 mm	0.8 - 1.2 mm
Wire Ø aluminium	1.0 - 1.2 mm	1.0 - 1.2 mm
Wire Ø flux core wire	0.9 - 1.2 mm	0.9 - 1.2 mm
Wire feed	1.0 - 22 m/min	1.0 - 22 m/min
Adjusting range	30 - 270 A	40 - 320 A
Duty cycle $I_{max.}$ at 40 °C	35 %	30 %
Welding current at 60 % duty cycle [40 °C]	190 A	230 A
Welding current at 100 % duty cycle [40 °C]	160 A	180 A
Open circuit voltage	16.3 - 33.5 V	14.8 - 37.9 V
Switching stages	10	21
Wire feed rollers/driven	4/4	4/4
Power supply	3 x 400 V	3 x 400 V
Permanent output at 100 % DC	5.5 kVA	6.2 kVA
Slow-blow fuse	16 A	32 A
Cos phi power factor	0.96	0.96
Cooling type	AF	AF
Degree of protection	IP 23	IP 23
Torch cooling	Gas	Gas
Gas cylinder max.	20 l	20 l
Dimensions (L x W x H) compact unit	823 x 510 x 735 mm	830 x 540 x 815 mm
Weight	82 kg	94 kg
Standards	EN 60 974-1;-3;-10 / S mark / EMC - class A	







Scope of delivery SYN-MAG 273

- Torch SMB 25 / 4 m
- Feed rollers 1.0 to 1.2 mm
- Earth cable 4 m with 35 mm²
- Pressure regulator Argon/CO_2 (large)
- Basket spool adapter

Scope of delivery SYN-MAG 323

- Torch SMB 36 4 m
- Feed rollers 1.0 to 1.2 mm
- Earth cable 4 m with 50 mm²
- Pressure regulator Argon/CO_2 (large)
- Basket spool adapter

Accessories

Designation	Art. no.
Ground cable 35 mm²/4 m	1250235
Ground cable 50 mm²/4 m	1250250
Pressure regulator Argon/CO2 large	1700050
SMB 25/4 MIG/MAG torch with pressure probe	1092504
SMB 36/4 MIG/MAG torch with pressure probe	1093604
Torch holder	1090011
Basket spool adapter KA 2 with quick release coupling	1110005

Wear part set for torch

Wear part set	Art. no.
VST SMB25	1092501
1x sorting box, 3x retaining spring, 2x tip adapter M6, 5x contact tip M6 Ø 0.8/28 mm, 5x contact tip M6 Ø1.0/28 mm, 2x gas tip conical Standard 1x gas tip cyl.	
VST SMB36	1093601
1 x sorting box, 2 x tip assembly M6/M8/35 mm, 3 x gas distributor standard, 5 x current tip M6-ECu 0.8 mm, 5 x current tip M6-ECu 1.0 mm, 5 x current tip M6-ECu 1.2 mm, 4 x gas tip conical, 1 x gas tip cylindrical	



VST SMB 25



VST SMB36

Wire feed rollers for 4-roll wire feed

Designation	Art. no.
V slot for steel and stainless steel	
0.8 + 1.0 mm	1016010
1.0 + 1.2 mm	1016012
1.2 + 1.6 mm	1016016
U slot for aluminium	
0.8 + 1.0 mm	1016110
1.0 + 1.2 mm	1016112
1.2 + 1.6 mm	1016116
K slot for flux core wire (FCW)	
1.0 + 1.2 mm	1016210
Counterpressure roll smooth	1016202



Wire feed roller



Counterpressure roll smooth

MIG/MAG shield gas welding equipment

SYN-MAG 353/453 – step controlled shield gas welding systems MIG/MAG all-round machines

The state-of-the-art synergie control supports precise regulation of the wire feed with automatic wire adjustment, and fast and easy setting of welding parameters.

- Perfect for welding work on thicker to thick steel, stainless steel and aluminium components
- Stable working conditions thanks to chassis width extension, even with a 50 l gas cylinder (SYN-MAG 453-4 WS)
- With characteristic curves for steel, stainless steel, aluminium, and gas shielded filler wires (FCW = Flux Cored Wire)
- Optionally as compact design or with case and intermediate hose pack for extending the radius of operation
- Central connection
- Temperature overload display
- With current and voltage display
- With 2-cycle/4-cycle/spot and interval control
- With temperature-controlled fan
- **Case system without intermediate hose pack**
- With case holder
- Carriage for case with four swivel castors - two of which can be braked **(holder and carriage for self-assembly)**





Warranty terms** on **www.stuermer-maschinen.de** or on request from **Stürmer Maschinen GmbH

Case easily rotatable



SYN-MAG 453-4 W
- Compact system



SYN-MAG 453-4 WS
- Case system
- fully assembled
- Case quickly and easily removable
- Case **with easy-action, robust chassis**

Scope of delivery
SYN-MAG 353/453
- Feed rollers 1.0 - 1.2 mm
- Basket spool adapter

453 W and 453 WS:
- Systems filled with liquid coolant

All case systems S:
- (for self-assembly) with case holder and chassis with 4 steering rollers, two of which can be braked
- **Without intermediate hose pack, torch, earth cable and pressure regulator in all cases**

The control system:

1. *Digital display for welding current*
2. *Digital display for welding voltage*
3. *Overload indicator, "Auto" display*
4. *Wire feed adjustment, multifunctional button*
5. *2-cycle / 4-cycle / spotting / interval*
6. *Torch connection*
7. *Selection switch "Gas", "Material" and "Wire thickness"*
8. *Water connection - return red*
9. *Water connection - supply blue*





10. *ON/OFF switch*
11. *Step switch - coarse 1 – 3*
12. *Step switch - fine 1 – 10*
13. *Ground cable connection*

Model	SYN-MAG 353-4	SYN-MAG 453-4 W	SYN-MAG 453-4 WS
Art. no.	1080356	1080456	1080457
Technical specifications			
Wire Ø steel/special steel	0.8 - 1.2 mm	0.8 - 1.6 mm	0.8 - 1.6 mm
Wire Ø aluminium	1.0 - 1.2 mm	1.0 - 1.2 mm	1.0 - 1.2 mm
Wire Ø flux core wire	0.9 - 1.2 mm	0.9 - 1.2 mm	0.9 - 1.2 mm
Wire feed	1.0 - 22 m/min	1.0 - 22 m/min	1.0 - 22 m/min
Adjusting range	30 - 350 A	40 - 450 A	40 - 450 A
DC at $I_{max.}$ 40 °C	60 %	35 %	35 %
Welding current at 60 % DC 40 °C	350 A	400 A	400 A
Welding current at 100 % DC 40 °C	260 A	310 A	310 A
Open circuit voltage	15.8 - 36.7 V	16.8 - 44.2 V	16.8 - 44.2 V
Switching stages	21	30	30
Wire feed rollers/driven	4/4	4/4	4/4
Power supply	3 x 400 V	3 x 400 V	3 x 400 V
Permanent output at 100 % DC	9.7 kVA	12.5 kVA	12.5 kVA
Fuse	20 A	25 A	25 A
Cos phi power factor	0.94	0.96	0.96
Insulation class	H	H	H
Degree of protection	IP23	IP23	IP23
Torch cooling	Gas	Water	Water
Gas cylinder max.	20 l	20 l	50 l
Weight	121 kg	149 kg	162 kg
Dimensions (L x W x H)	850 x 550 x 720 mm	850 x 550 x 720 mm	935 x 550 x 1 240 mm
Standards	EN 60 974-1;-3;-10 / S mark / EMC - class A		

Accessories - torch kits

consisting of: torch 4 m, earth cable, 315 bar Argon/CO_2 pressure regulator

Designation	Art. no.
for SYN-MAG 353-4: torch kit 36/50, SMB 36 / 4 m gas-cooled	
Ground cable 50 mm², pressure regulator large	1093611
for SYN-MAG 453-4 W: torch kit 400/50, SMB 400 / 4 m water-cooled,	
Ground cable 50 mm², pressure regulator large	1094010
for SYN-MAG 453-4 WS, torch kit 400/70, SMB 400 / 4 m water-cooled,	
Ground cable 70 mm², pressure regulator large	1094011



Torch kit

Wear part set for torch

Designation	Art. no.
Wear parts set SMB 36 consisting of:	1093601
2 x tip assembly M6/M8/35 mm, 3 x gas distributor standard, 5 x current tip M6-ECu 0.8 mm, 5 x current tip M6-ECu 1.0 mm, 5 x current tip M6-ECu 1.2 mm, 4 x gas tip conical, 1 x gas tip cylindrical, 1 x sorting box	
Wear part set SMB 400 consisting of:	1094001
2 x tip assembly M8, 2 x ring, 3 x gas distributor highly heat resistant, 5 x current tip M8-ECu 1.0 mm, 10 x current tip M8-ECu 1.2 mm, 4 x gas tip conical, 1 x current tip cylindrical, 1 x sorting box	



Wear part set

Intermediate hose pack for SYN-MAG case systems

Mandatory for case system purchases!

Designation		Art. no.
For SYN-MAG 453-4 WS liquid-cooled		
Hose pack liquid cooled pluggable	1.5 m length, 70 mm²	1018025
Hose pack liquid cooled pluggable	5 m length, 70 mm²	1018026
Hose pack liquid cooled pluggable	10 m length, 70 mm²	1018027



Intermediate hose pack



All connections on the intermediate hose pack are easily accessible and pluggable without tools

Wire feed rollers for 4-roll wire feed

Designation	Art. no.
V slot for steel and stainless steel	
0.8 + 1.0 mm	1016010
1.0 + 1.2 mm	1016012
1.2 + 1.6 mm	1016016
U slot for aluminium	
0.8 + 1.0 mm	1016110
1.0 + 1.2 mm	1016112
1.2 + 1.6 mm	1016116
K slot for flux core wire (FCW)	
1.0 + 1.2 mm	1016210
Counterpressure roll smooth	1016202



Wire feed roller



Counterpressure roll smooth

Accessories for liquid-cooled welding equipment

Designation			Art. no.
Coolant	SKF 15	10l - can (pre-mixed)	1030110



Accessories

Designation	Art. no.
Basket spool adapter KA 1, single-part, pluggable	1110001
Basket spool adapter KA 2, with quick release coupling	1110005
Torch holder	1090011



Basket spool adapter KA 1



Basket spool adapter KA 2

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MIG/MAG INVERTERS

SYN-MIG

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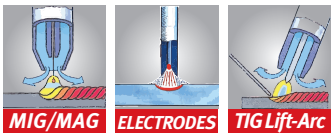
MIG/MAG Inverters

Quality made in Europe

SYN-MIG 161i / SYN-MIG 201i MULTI – portable MIG/MAG inverter 230 V continuously variable control. Perfectly suited for mobile welding of steel.
SYN-MIG 211i MULTI – mobile MIG/MAG inverter 230 V continuously variable control

- The SYN-MIG is an ideal combination of state-of-the-art inverter technology with simple and conventional operation
- Using only 2 buttons (potentiometers) the operation point is continuously set via the voltage and wire speed
- Reliable ignition and a stable arc then ensure best possible welding results
- Also suitable for welding with cored wire
- Wig Lift Arc

SYN-MIG 201i MULTI & SYN-MIG 211i MULTI
- Infinitely variable control Multi-MIG/MAG system for perfect results
- Electrode welding
- Easy to set up no matter what method you use
- TIG lift-arc ignition
- Reversible for flux core wire



SYN-MIG 201i MULTI
SYN-MIG 211i MULTI

Weldable materials

	Wire Ø	SYN-MIG 161i
Steel	0.8 mm	0.8 mm – 3 mm
Stainless steel	0.8 mm	1.0 mm – 4 mm
Flux core wire	0.9 mm	2.0 mm – 4 mm



Warranty terms** on **www.stuermer-maschinen.de** or on request from **Stürmer Maschinen GmbH



SYN-MIG 161i



SYN-MIG 201i MULTI



SYN-MIG 211i MULTI

The control system:

1. *LED overheating indicator*
2. *Wire speed control*
3. *LED display "On" - "Off"*
4. *Voltage controller*
5. *Welding current socket*
6. *Torch connection*
7. *On/off switch*



Operational modes
1. *2-cycle, 4-cycle, electrode, TIG*
2. *Wire speed control*
3. *Voltage controller*
4. *LED display "on" - "off"*
5. *LED overheating indicator*
6. *Threading the wire*



7. *Rotary control for "Arc Force" setting*
8. *On/off switch*
9. *Torch connection*
10. *Welding current socket*

Model	SYN-MIG 161i	SYN-MIG 201i MULTI	SYN-MIG 211i MULTI
Art. no.	1089017	1089020	1089021
Technical specifications			
Continuously variable setting range	25 – 160 A	20 – 200 A	20 – 200 A
Duty cycle at I_{max} and 40 °C:	20 %	35 %	35 %
Welding current at DC = 100 % and 40 °C	80 A	110 A	110 A
Wire Ø steel/special steel	0.6 - 0.8 mm	0.6 - 0.8 mm	0.6 - 0.8 mm
Wire Ø aluminium	–	1.0 mm	1.0 mm
Gasless filler wire	0.9 mm	0.9 mm	0.9 mm
Wire feed speed	1.0 - 14 m/min	1.0 - 14 m/min	1.0 - 14 m/min
Wire feed rollers/driven	2 / 1	2 / 1	2 / 1
Supply voltage	1 x 230 V	1 x 230 V	1 x 230 V
Fuses slow-blow	16 A	16 A	16 A
Cos phi power factor	0.73	0.96	0.96
Required generator output	10 KW	12 KW	12 KW
Open circuit voltage	17 - 28 V	33 V	33 V
Degree of protection	IP 21	IP 21	IP 21
Dimensions L x W x H	525 x 260 x 340 mm	525 x 260 x 340 mm	795 x 540 x 700 mm
Weight	14.5 kg	16 kg	25 kg
Standards	EN 60 974-1;-3;-10 / S mark / EMC - class A		

Scope of delivery
SYN-MIG:
- Torch SMB 15, 3 m
- Earth cable 3 m, 16 mm²
- Pressure regulator small
- Feed rollers 0.8 - 1.0 mm

Experience our capability and request individual advice!

Contact: +49 (0951) 96 555-501
beratung@schweisskraft.de



Wear part set for torch

Designation	Art. no.
Wear part set SMB 15	1091501
Sorting box, gas tip assembly, 2x retaining spring, 10x contact tip M6 Ø 0.8/25 mm, 10x contact tip M6 Ø 1.0/25 mm, 2x gas tip conical Standard NW dm 1.2, 1x gas tip cyl.	
Wear part set	1100152
Consisting of: torch cap short, torch cap medium, torch cap long, gas tip size 5 / 8 mm, gas tip size 6 / 9.8 mm, gas tip size 7 / 11.2 mm, gas tip size 8 / 12.7 mm, gas tip size. 10 / 15.7 mm, clamping sleeve 1.6 mm, clamping sleeve 3.2 mm, clamping sleeve 4.0 mm, clamping sleeve 2.4 mm, clamping sleeve housing 1.6 mm, clamping sleeve housing 2.4 mm, clamping sleeve housing 3.2 mm, clamping sleeve housing 4.0 mm, Teflon seal for tip	



VST SMB 15



Wear part set

Accessories

Designation	Art. no.
Universal carriage	1090015
TIG torch WP 17 V/4 m gas regulator (only for 201i)	1461745
TIG torch WP 26 V/4 m gas regulator (only for 211i)	1462614
Universal torch holder	1090011
Basket spool adapter KA 2	1110005
Earth cable 4 m, complete with earth clamp 16 mm², KS 25/9 mm, clamp for 200 A (for 161i and 201i)	1250215
Earth cable 4 m, complete with earth clamp 16 mm², KS 50/13 mm, clamp for 200 A (for 211i)	1250216



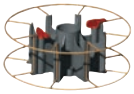
Universal carriage



WP 17 V/4 m



Universal torch holder



Basket spool adapter KA 2



Earth cable 4 m, complete with earth clamp

Wire feed rollers for 2-roll wire feed

Designation	Art. no.
V slot for steel and stainless steel	
0.8 + 1.0 mm	1016010
1.0 + 1.2 mm	1016012
1.2 + 1.6 mm	1016016
U slot for aluminium	
0.8 + 1.0 mm	1016110
1.0 + 1.2 mm	1016112
1.2 + 1.6 mm	1016116
K slot for flux core wire (FCW)	
1.0 + 1.2 mm	1016210
Counterpressure roll smooth	1016202



Wire feed roller

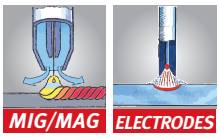
Quality made in Europe

SYN-MIG series – portable MIG/MAG inverter continuously variable control. Universally deployable workshop machine for steel, stainless steel and aluminium

- State-of-the-art and proven inverter technology
- The systems have the following **properties or equipment as standard:**
- 2-cycle/4-cycle, spot and interval welding
- The Synergie function continuously adjusts the material thickness and power, and the wire adapts to this
- Gas test function
- Operation indicator
- Overload indicator
- Temperature controlled fan
- Stable working conditions thanks to chassis width extension, even with a 50 l gas cylinder (SYN-MIG 403i SC)
- **Case system without intermediate hose pack**
- With case holder
- Carriage for case with four swivel castors - two of which can be braked **(holder and carriage for self-assembly)**

Weldable materials

	SYN-MIG 253i	SYN-MIG 303i
Steel	0.8 mm – 8 mm	0.8 mm – 10 mm
Stainless steel	1.5 mm – 6 mm	1.5 mm – 8 mm
Aluminium	2 mm – 5 mm	2 mm – 7 mm





Warranty terms** on **www.stuermer-maschinen.de** or on request from **Stürmer Maschinen GmbH

Info & video



SYN-MIG 403i SC



SYN-MIG 403i SC-WS

The control system:



1. *Operation indicator, overload indicator, "Auto" indicator*
2. *Selection switch "Automatic" or Manual*
3. *Wire threading*
4. *Digital display for welding voltage*
5. *Digital display for welding current*
6. *Selection switch "2- or 4-cycle", "Spot welding" or "Interval welding"*
7. *Selection switch "Wire thickness"*
8. *Selection switch "Material"*
9. *Selection switch "Gas"*
10. *Multifunctional button*
11. *Voltage setting*
12. *Throttle*
13. *On/off switch*
14. *Torch connection*
15. *Welding current socket*

Model	SYN-MIG 253i SC	SYN-MIG 303i SC	SYN-MIG 403i SC	SYN-MIG 403i SC-W	SYN-MIG 403i SC-WS
Art. no.	1089026	1089033	1089040	1089041	1089042
Technical specifications					
Continuously variable setting range	25 – 250 A	30 – 300 A	30 – 400 A	30 – 400 A	30 – 400 A
Duty cycle at I_{max} and 40 °C:	60 %	40 %	40 %	40 %	40 %
Welding current at DC = 100 % and 40 °C	190 A	200 A	250 A	250 A	250 A
Wire Ø steel/special steel	0.8 - 1.0 mm	0.8 - 1.2 mm	0.8 - 1.2 mm	0.8 - 1.2 mm	0.8 - 1.2 mm
Wire Ø aluminium	1.0 - 1.2 mm	1.0 - 1.2 mm	1.0 - 1.2 mm	1.0 - 1.2 mm	1.0 - 1.2 mm
Wire feed speed	1.0 - 22 m/min	1.0 - 22 m/min	1.0 - 22 m/min	1.0 - 22 m/min	1.0 - 22 m/min
Wire feed rollers/driven	4 / 4	4 / 4	4 / 4	4 / 4	4 / 4
Supply voltage	3 x 400 V	3 x 400 V	3 x 400 V	3 x 400 V	3 x 400 V
Fuses slow-blow	16 A	16 A	25 A	25 A	25 A
Cos phi power factor	0.93	0.93	0.93	0.93	0.93
Required generator output	14 kW	18 kW	25 kW	25 kW	25 kW
Open circuit voltage	55 V	55 V	63 V	63 V	63 V
Degree of protection	IP 21	IP 21	IP 21	IP 21	IP 21
Dimensions L x W x H	795 x 540 x 700 mm	795 x 540 x 700 mm	795 x 510 x 720 mm	860 x 550 x 815 mm	935 x 550 x 1 290 mm
Weight	29.5 kg	31 kg	33 kg	45 kg	68 kg
Standards	EN 60 974-1;-3;-10 / S mark / EMC - class A				
Equipment level					
TIG / El. manual	**Yes**				

Scope of supply SYN-MIG 253I SC
- Power cable with 5-pin plug 16A
- Feed rollers 0.8 - 1.0 mm
- Earth cable 4 m, 35 mm²
- Basket spool adapter D300
- Pressure regulator (large)
- Torch SMB 25, 3 m

Scope of supply SYN-MIG 303I SC
- Power cable with 5-pin plug 16A
- Feed rollers 0.8 - 1.0 mm
- Earth cable 4 m, 35 mm²
- Basket spool adapter D300
- Pressure regulator (large)
- Torch SMB 36, 3 m

Scope of supply SYN-MIG 403I SC
- Power cable with 5-pin plug 32A
- Feed rollers 1.0 - 1.2 mm
- Earth cable 4 m, 35 mm²
- Basket spool adapter D300
- Pressure regulator (large)
- Torch SMB 36/4 m

Scope of delivery SYN-MIG 403i SC-W/SC-WS
- Power cable with 5-pin plug 32A
- Feed rollers 1.0 - 1.2 mm
- Earth cable 4 m, 35 mm²
- Basket spool adapter D300
- Pressure regulator (large)
- Torch SMB 400/4 m
- Systems filled with liquid coolant

Accessories

Designation	Art. no.
Universal torch holder	1110005



Universal torch holder

Wear part set for torch

Designation	Art. no.
Wear part set SMB 25 consisting of:	1092501
1x sorting box, 3x retaining spring, 2x tip adapter M6, 5x contact tip M6 Ø 0.8/28 mm, 5x contact tip M6 Ø1.0/28 mm, 2x gas tip conical Standard 1x gas tip cyl.	
Wear parts set SMB 36 consisting of:	1093601
1 x sorting box, 2 x tip assembly M6/M8/35 mm, 3 x gas distributor standard, 5 x current tip M6-ECu 0.8 mm, 5 x current tip M6-ECu 1.0 mm, 5 x current tip M6-ECu 1.2 mm, 4 x gas tip conical, 1 x gas tip cylindrical	
Wear part set SMB 400 consisting of:	1094001
2 x tip assembly M8, 2 x ring, 3 x gas distributor highly heat resistant, 5 x current tip M8-ECu 1.0 mm, 10 x current tip M8-ECu 1.2 mm, 4 x gas tip conical, 1 x current tip cylindrical, 1 x sorting box	



VST SMB 25



VST SMB36

Intermediate hose pack for case system

Mandatory for case system purchases!

Designation		Art. no.
For SYN-MIG 403i SC-WS water-cooled		
Hose pack liquid cooled pluggable	1.5 m length, 70 mm²	1018020
Hose pack liquid cooled pluggable	5 m length, 70 mm²	1018021
Hose pack liquid cooled pluggable	10 m length, 70 mm²	1018022



Intermediate hose pack

Wire feed rollers for 4-roll wire feed

Designation	Art. no.
V slot for steel and stainless steel	
0.8 + 1.0 mm	1016010
1.0 + 1.2 mm	1016012
1.2 + 1.6 mm	1016016
U slot for aluminium	
0.8 + 1.0 mm	1016110
1.0 + 1.2 mm	1016112
1.2 + 1.6 mm	1016116
K slot for flux core wire (FCW)	
1.0 + 1.2 mm	1016210
Counterpressure roll smooth	1016202



Wire feed roller

Accessories for liquid-cooled welding equipment

Designation			Art. no.
Coolant	SKF 15	10l - can (pre-mixed)	1030110



Quality made in Europe

SYN-MIG i SC digital mobile MIG/MAG inverter – continuously variable control. Universally deployable workshop machine for steel, stainless steel and aluminium

- State-of-the-art and proven inverter technology with synergy function
- Display totally clear-cut and easy to use
- Typical applications: Locksmiths, mechanical engineering, agriculture, car workshop, maintenance, repair
- Base materials: structural steels, non-alloyed and low-alloyed materials, ferritic/austenitic CrNi steels, aluminium alloys

Totally easy setting thanks to Synergie function:
3 steps for welding:
- **1st step:** Gas, material, wire diameter
- **2nd step:** 2/4 cycle, spot, interval
- **3rd step:** Material thickness

Features
- 2-cycle/4-cycle
- Spot welding
- Interval welding
- Gas test function
- Operation indicator
- Overload indicator
- Temperature controlled fan

SYN-MIG 403i SC-WS digital:
- **Without intermediate hose pack.**
  Please remember to add to your order!
  (Accessories see)







Warranty terms** on **www.stuermer-maschinen.de** or on request from **Stürmer Maschinen GmbH



SYN-MIG 403I SC-WS DIGITAL



SYN-MIG 403i SC digital

The control system:

1. *Display*
2. *Characteristic curve selection*
3. *Custom parameter setting (e.g., gas pre-flow time, wire burn-back, gas post-flow time)*
4. *2-cycle/4-cycle, spot and interval welding*
5. *Throttle function*
6. *Changeover between electrode and MIG/MAG welding*
7. *Rotary switch for wire feed*
8. *Rotary switch for welding voltage*
9. *On/off switch*



Model		SYN-MIG 253i SC digital	SYN-MIG 303i SC digital	SYN-MIG 403i SC digital	SYN-MIG 403i SC-WS digital
Art. no.		1089125	1089130	1089140	1089142
Technical specifications					
Cont. adjustable MIG/MAG setting range	A	25 – 250	25 – 300	40 – 400	40 – 400
Cont.adjustable electrode setting range	A	25 – 200	25 – 200	30 – 250	30 – 250
Duty cycle at I_{max} and 40 °C	%	60	40	40	40
Duty cycle at 100 % DC and 40 °C	A	200	200	250	250
Current consumption	A	12	15	25	25
Power consumption MIG/MAG	kW	7.5	10.0	13.0	13.0
Electrode power consumption	kW	7.5	7.5	13.0	13.0
Wire Ø steel/special steel	mm	0.8 – 1.2	0.8 – 1.2	0.8 – 1.2	0.8 – 1.2
Wire Ø aluminium	mm	1.0 – 1.2	1.0 – 1.2	1.0 – 1.2	1.0 – 1.2
Wire feed speed	m/min	1 - 22	1 - 22	1 - 22	1 - 22
Wire feed rollers/driven		4 / 4	4 / 4	4 / 4	4 / 4
Supply voltage AC	V / Ph	400 / 3	400 / 3	400 / 3	400 / 3
Fuses slow-blow	A	16	16	25	25
Open circuit voltage	V	55	55	63	63
Power factor	cos phi	0.95	0.95	0.95	0.95
Required generator output	kVA	16	20	28	28
Degree of protection		IP 21	IP 21	IP 21	IP 21
Cooling type		AF			
Torch cooling		Gas			
Dimensions (L x W x H)	mm	835 x 510 x 720	835 x 510 x 720	835 x 510 x 720	935 x 550 x 1 325
Weight	kg	29.5	31	33	69
Standards		EN 60 974-1;-3;-10 / S mark / EMC - class A			





Scope of delivery SYN-MIG 253i SC digital:
- Torch SMB 25/3 m
- Earth cable 4 m, 35 mm²
- Pressure regulator, large
- Basket spool adapter
- Feed rollers V0.8 - 1.0 mm
- Power cable 5 m with 5-pin plug 16A

Scope of delivery SYN-MIG 303i SC digital:
- Torch SMB 36/3 m
- Earth cable 4 m, 35 mm²
- Pressure regulator, large
- Basket spool adapter
- Feed rollers V0.8 - 1.0 mm
- Power cable 5 m with 5-pin plug 16A

Scope of delivery SYN-MIG 403i SC digital:
- Torch SMB 36/4 m
- Earth cable 4 m, 50 mm²
- Pressure regulator, large
- Basket spool adapter
- Feed rollers V1.0 - 1.2 mm
- Power cable 5 m with 5-pin plug 32A

Scope of delivery SYN-MIG 403i SC-WS digital:
- Torch SMB 400/4 m
- Earth cable 4 m, 50 mm²
- Pressure regulator, large
- Basket spool adapter
- Feed rollers V1.0 - 1.2 mm
- Power cable 5 m with 5-pin plug 32A
- Systems filled with liquid coolant

Accessories

Designation	Art. no.
Universal torch holder	1090011
Torch SMB 25/4 m with pushbutton	1092504
Torch SMB 36/4 m with pushbutton	1093604
Ground cable 4 m 35 mm², KS50/13 mm, terminal 400 A	1250235
Ground cable 50 mm², KS50/13 mm, terminal 600 A	1250250
Pressure regulator Argon/CO2 large Schweißkraft	1700050
Basket spool adapter KA 2, with quick release coupling	1110005





Pressure regulator



Basket spool adapter KA 2

Wear part set for torch

Designation	Art. no.
Wear part set SMB 25 consisting of:	1092501
1 x sorting box 2-9 red 275 x 180 x 41 mm, 3 x retaining spring MB 25, 2 x tip holder M6, 5 x contact tip M6-ECu 0.8 mm, 5 x contact tip M6-ECu 1.2 mm, 2 x gas tip conical MB25, 1 x gas tip cylindrical MB 25	
Wear parts set SMB 36 consisting of:	1093601
1 x sorting box 2-9 red 275 x 180 x 41 mm, 2 x tip holder M6 / 28 mm, 3 x gas distributor standard MB36, 5 x contact tip M6-ECu 0.8 mm, 5 x contact tip M6-ECu 1.0 mm, 5 x contact tip M6-ECu 1.2 mm, 4 x gas tip conical MB36, 1 x gas tip cylindrical MB36	

Wire feed rollers for 4-roll wire feed

Designation	Art. no.
V slot for steel and stainless steel	
0.8 + 1.0 mm	1016010
1.0 + 1.2 mm	1016012
1.2 + 1.6 mm	1016016
U slot for aluminium	
0.8 + 1.0 mm	1016110
1.0 + 1.2 mm	1016112
1.2 + 1.6 mm	1016116
K slot for flux core wire (FCW)	
1.0 + 1.2 mm	1016210
Counterpressure roll smooth	1016202



VST SMB 25



Wire feed roller

Intermediate hose pack for case system SYN-MIG 403i SC-WS digitally liquid-cooled		Art. no.
Hose pack liquid cooled pluggable	1.5 m length, 70 mm²	1018035
Hose pack liquid cooled pluggable	5 m length, 70 mm²	1018036
Hose pack liquid cooled pluggable	10 m length, 70 mm²	1018037

Mandatory for case system purchases!



Accessories MIG/MAG torches

Interior and guide spirals

Designation	Art. no.	
Guide spirals with retention nipple and o-ring *recommended for steel and stainless steel*		
blue, insulated 1.5/4.5; for Ø 0.6-0.8mm		**SMB 15-36**
3.0 m	1051573	
4.0 m	1051574	
5.0 m	1051575	
Red, insulated 2.0/4.5; for Ø 1.0-1.2		**SMB 15-36**
3.0 m	1052576	
4.0 m	1052577	
5.0 m	1052578	
Bare metal, 2.0/4.5; for Ø 1.0-1.2		**SMB 400**
3.0 m	1054073	
4.0 m	1054074	
5.0 m	1054075	
Bare metal, 2.5/4.5; for Ø 1.6		**SMB 400**
3.0 m	1054076	
4.0 m	1054077	
5.0 m	1054078	






Designation	Art. no.	
Teflon cores with retention nipple and o-ring *recommended for non-ferrous metals such as Alu, Cu & CuSi*		
Blue, 1.5/4.0; for Ø 0.8-1.0 mm;		**SMB 25-36**
3.0 m	1051593	
4.0 m	1051594	
5.0 m	1051595	
Red, 2.0/4.0; for Ø 1.0-1.2		**MB 25-36**
3.0 m	1052590	
4.0 m	1052591	
5.0 m	1052592	
Yellow, 2.7/4.7; for Ø 1.6		**SMB 400**
3.0 m	1053666	
4.0 m	1053667	
5.0 m	1053668	





Designation	Art. no.	
PA cores with retention nipple and o-ring *recommended for alum.*		
Grey, 2.0/4.0; for Ø 1.0 -1.2mm		**SMB 25-36**
3.0 m	1052583	
4.0 m	1052584	
5.0 m	1052585	
Grey, 2.9/4.7; for Ø 1.6 mm	**SMB 400**	
4.0 m	1052586	



Designation	Art. no.	
Combined Teflon cores with retention nipple, o-ring and brass spiral *recommended for higher amperage aluminium*		
Red, 2.0/4.0; for Ø 1.0 -1.2 mm		**SMB 25-36**
3.5 m	1052593	
4.5 m	1052594	
5.5 m	1052595	



Designation	Art. no.	
Carbon Teflon cores with retention nipple, o-ring and *brass spiral recommended for stainless steel and alum.*		
Black, 2.0/4.0; for Ø 1.0 -1.2 mm		**SMB 25-36**
3.0 m	1052596	
4.0 m	1052597	
5.0 m	1052598	



Designation	Art. no.	
Carbon Teflon cores with retention nipple, o-ring and brass spiral recommended for stainless steel and alum.		
Black, 2.7/4.7; for Ø 1.6 mm		**SMB 400**
4.0 m	1052599	1

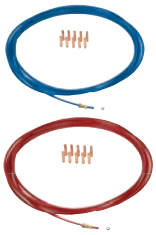


Designation	Art. no.	PQ
O-Ring 3.5 x 1.5	1051583	20
Retention nipple Ø 4 mm	1051596	20
RN for F spiral bare metal 1.5/4.0	1051598	20
RN for F spiral bare metal 2.0 - 2.5/4.0	1051599	20
Guiding tube brass Ø 4 mm	1051597	
Brass spiral assembled 200 mm	1051524	



Accessories for MIG soldering

Designation	Art. no.
MIG soldering torch conversion kit SMB 15/4 m for wire 0.8 mm consisting of 10 x contact tip Ø 0.8 mm and Teflon core blue Ø 0.8-1.0 mm, 4 m	1091521
MIG soldering conversion kit SMB 15/4 m for wire 1.0 mm consisting of 10 x contact tip Ø 1.0 mm and Teflon core red Ø 1.0-1.2 mm, 4 m	1091522



Filler wire CuSi 3
For copper, low alloy copper and copper zinc alloys. Good choice for galvanised sheets.

Designation	Weight	Art. no.
Small spool D200		
Ø 0.8 mm	5 kg	1131620
Ø 1.0 mm	5 kg	1131619
Basket spool K300		
Ø 0.8 mm	15 kg	1131625
Ø 1.0 mm	15 kg	1131624



Filler wire CuAl 8
For manganese and nickel copper aluminium alloys. Good choice for highly stressed and higher strength steels

Designation	Weight	Art. no.
Small spool D200		
Ø 0.8 mm	5 kg	1131630
Ø 1.0 mm	5 kg	1131629
Basket spool K300		
Ø 0.8 mm	15 kg	1131635
Ø 1.0 mm	15 kg	1131634

(further filler wires available on request)



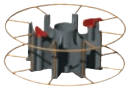
Argon inert gas
Seamless steel cylinders, complete with cylinder valve, with thread as per DIN 477, cap DIN 4667 and fill

Designation	Fill	Art. no.
New cylinder	10 l	1741012
New cylinder	20 l	1741021
Fill	10 l	1741013
Fill	20 l	1741023



Designation	Art. no.
MIG/MAG special gun for cutting, time-saving cleaning and honing of the shield gas tip (Ø 15-18 mm) and loosening and tightening the contact tip	1092000
Basket spool adapter KA 1 single-part, pluggable	1110001
Basket spool adapter KA 2 with quick release coupling	1110005
Centring adapter for D 200 spools Two-part	1110007






schweißkraft®
Schweißtechnik

PROFESSIONAL MIG/MAG WELDING EQUIPMENT

THE INTELLIGENT WELDING DEVICE GENERATION BY SCHWEIßKRAFT

Qualität Made in Germany



Qualität Made in Germany



MIG/MAG shield gas welding equipment

Qualität Made in Germany

SCHWEIßKRAFT PRO-MAG – standard welding devices for thin sheet welding. Top quality for professionals at a low price.

- Standard **2-cycle** and **4-cycle function** for short tack welding or long welds. Tire-free work is thus guaranteed for all welding tasks
- Thanks to the integrated spot and interval control, visually perfect spot and plug welds and consistently reproducible tack welds are no longer a challenge
- The **automatic feed** automatically adjusts the wire speed over a wide range in case of power reduction or increase, thus removing the need for repeated manual adjustment
- An **integrated automatic inching and ignition** ensures fast and safe ignition of the arc
- **Permanent monitoring of the mains voltage** with compensation for fluctuations guarantees a smooth and even arc for best possible welding results
- On completing the welding task, the **automatic burn-back feature** ensures a constant wire length end, thus reliably preventing the wire seizing on the workpiece or contact tip (individually adjustable).
- The **safety force shutdown** prevents inadvertent ignition and uncoiling of the filler wire in 4-cycle operation, thus removing the risk of fire. And the risk of fire this causes
- **Automatic threading** automatically increases the feed speed on threading the wire.



*



MIG soldering



PRO-MAG 200-2 AM



PRO-MAG 250-2

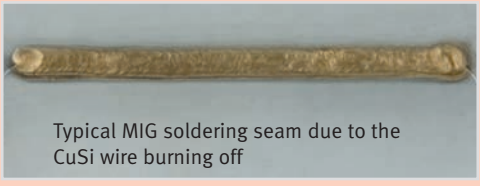
Easy to use

1. *OPERATION control lamp*
2. *TEMPERATUR E control lamp*
3. *Adjusting button for spot and interval time (in seconds)*
4. *Function selection switch operating mode (2-cycle, 4-cycle, sport or interval)*
5. *Adjustment button for wire feed speed*
6. *Stage switch*



PRO-MAG 200-2 AM – the combined system for MIG soldering and MIG/MAG welding

- Body shops in particular need to adapt their repair methods to reflect continual changes. Bodies made of fully galvanised, partly high strength steel cannot simply be welded using legacy methods after a crash without compromising the crash resistance features designed in by the manufacturer. Various automobile manufacturers already require MIG soldering for repairs.
- The PRO-MAG 200 AM is the specially-designed combination system for **MIG/MAG thin sheet welding and MIG soldering.**
- For MIG soldering with the system, you additionally need the “MIG soldering torch conversion kit”.



Typical MIG soldering seam due to the CuSi wire burning off

* Warranty terms on www.stuermer-maschinen.de or request from Stürmer Maschinen GmbH

	MIG soldering	
Model	**PRO-MAG 200-2 AM**	**PRO-MAG 250-2**
Art. no.	1080120	1080125
Recommended Torch kit	**15/25**	**25/35**
Art. no.	1091510	1092510
Technical specifications		
Wire Ø steel/special steel	0.6 - 1.0 mm	0.8 - 1.2 mm
Wire Ø aluminium	1.0 mm	1.0 - 1.2 mm
Wire feed	0.3 - 20 m/min	0.3 - 20 m/min
Drive	2 casters	2 casters
Power supply	3 x 400	3 x 400
Adjusting range	25 - 200 A	35 - 250 A
Duty cycle (DC) at $I_{max.}$ and 40 °C	30 %	30 %
Welding current at 100 % DC 40 °C	100 A	125 A
Switching stages	8	10
Open circuit voltage	14-32 V	16-35 V
Permanent output at 100 % DC	2.3 kVA	3.1 kVA
Fuse	16 A	16 A
Cooling type	AF	AF
Torch cooling	Gas	Gas
Degree of protection	IP 21	IP 21
Insulation class	H	H
Weight	52 kg	55 kg
Dimensions (L x W x H)	760 x 320 x 580 mm	
Standards	EN 60 974-1;-3;-10 / S mark / EMC - class A	

MIG soldering in automotive applications

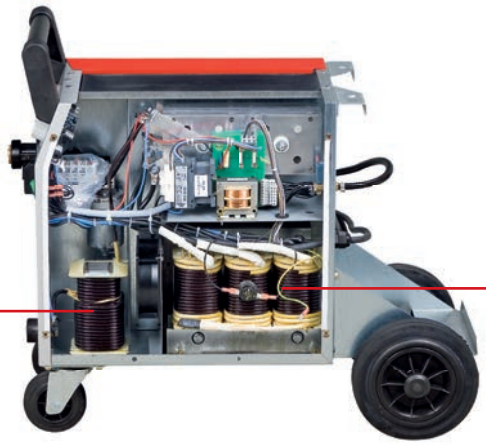
The benefits of MIG soldering

- **No** corrosion on the solder seam
- **Minimum** weld spatter
- **Easy** reworking of the solder seam
- **Lower** working temperature
- **Reduced** impact on the structure in the case of higher strength steels
- Capillary effect of the solder causes 1/3 higher strength in round hole and slot soldering
- **Less** distortion
- **Less** melting material loss of the coating
- cathodic protection of the base material in the immediate area of the weld (zinc)
- Corrosion protection without reworking
- Optimum control for keeping the sheet thickness

Scope of delivery PRO-MAG

- Feed roll Ø 0.8 – 1.0 mm
- **Without basket spool adapter**
- **Without torch**
- **Without earth cable**
- **Without pressure regulator (see accessories)**

- **Highly dynamic choke system** ensures a particularly soft, stable, and highly-dynamic arc, and ensures optimised, low-spatter welding results in steel, stainless steel and aluminium.



- **High performance transformer** with premium, dual-insulation copper wire cable, insulation class H
- **Level wound and level insulated** with additional vacuum impregnation
- With **thermocouple** for overload protection

Accessories - torch kits

consisting of: torch 4 m, earth cable, 315 bar Argon/CO_2 pressure regulator

Designation		Art. no.
Torch kit 15/25	SMB 15/4 m gas-cooled, earth cable 25 mm² 4 m, pressure reg.	1091510
Torch kit 25/35	SMB 25/4 m gas-cooled, earth cable 35 mm² 4 m, pressure reg.	1092510
Universal torch holder		1090011



Torch kit





Universal torch holder

Wear parts sets

Wear part set	Art. no.
VST SMB15	1091501
1 sorting box, 1x gas tip assembly, 2x retaining spring, 10x contact tip M6 Ø 0.8/25 mm, 10x contact tip M6 Ø 1.0/25 mm, 2x gas tip conical Standard NW dm 1.2, 1x gas tip cyl.	
VST SMB25	1092501
1x sorting box, 3x retaining spring, 2x tip adapter M6, 5x contact tip M6 Ø 0.8/28 mm, 5x contact tip M6 Ø1.0/28 mm, 2x gas tip conical Standard 1x gas tip cyl.	



VST SMB 15



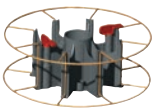
VST SMB 25

Basket spool adapter

Designation	Art. no.
Basket spool adapter KA 1, single-part, pluggable	1110001
Basket spool adapter KA 2, with quick release coupling	1110005



Basket spool adapter KA 1



Basket spool adapter KA 2

Wire feeder rolls

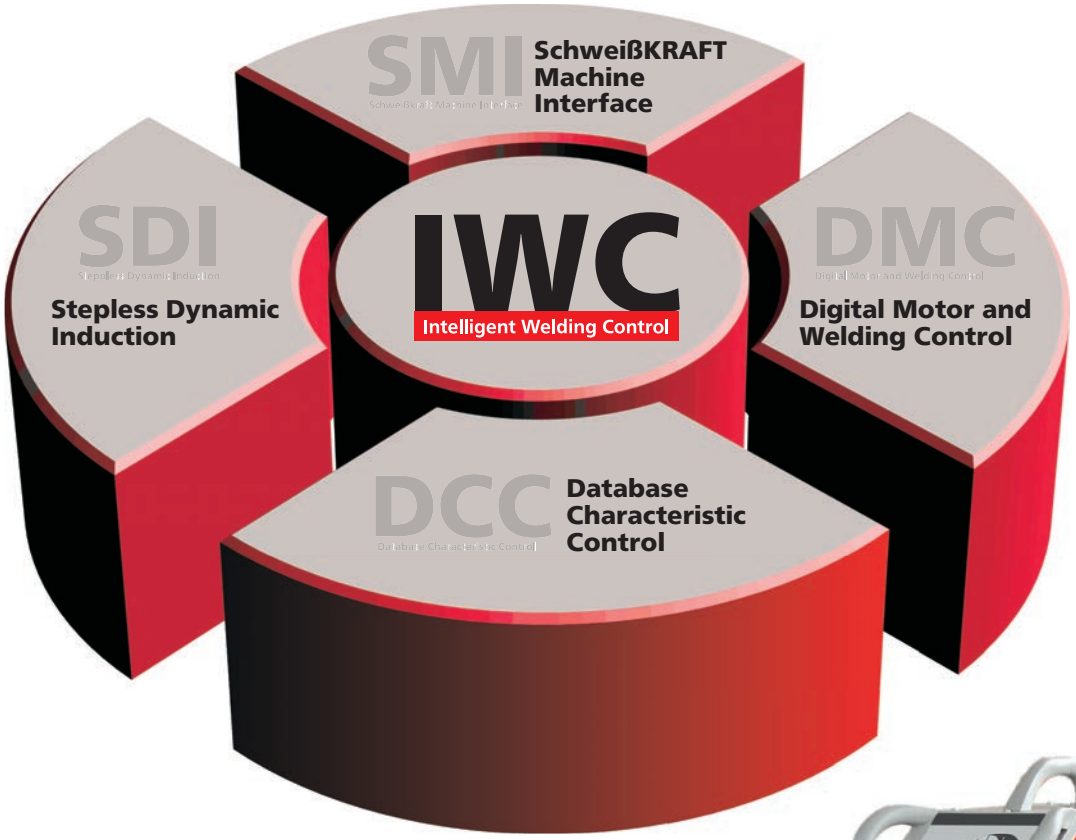
Designation	Art. no.
Wire feeder roll 0.6/0.8 mm (PRO-MAG 160 - 250)	1012108
Wire feeder roll 0.8/1.0 mm (PRO-MAG 160 - 250)	1012110
Wire feeder roll 1.0/1.2 mm (PRO-MAG 160 - 250)	1012112



Wire feed roller

PRO-MIG synergie – step controlled inert gas welding equipment

Best in class welding results and easy control thanks to automated settings and IWC smart processor control



“IWC is a superordinate controller for the entire system”

IWC

Intelligent Welding Control

Intelligent higher-level machine control concept for excellent welding results and safe and easy operation

- Continuous monitoring and digital control of the droplet transfer during the entire ignition and arc process
- Setting the correct welding parameters is easy and safe thanks to the integrated DCC welding parameter database and the convenient SMI control solution
- The integrated microprocessor quickly and efficiently compensates for changes, thus keeping the arc significantly constant

SDI

Stepless Dynamic Induction

Continuously variable, electronic welding choke with ultra-fast control

.

- Excellent ignition properties and a very stable arc thanks to optimised choke effect through integrated processor control
- Visibly less rework required compared with legacy step controlled MIG/MAG systems thanks to improved control over heat transfer, reduced spatter in the mixed arc
- Best possible adjustment to the welding conditions, e.g., in out of position welding, such as vertically rising welds, overhead welds, or welding with a long stick out in positions that are difficult to access



PRO-MIG synergie 404-4 WS

DCC automatic adjustment:
Three easy steps – off we go...

Standard equipment with all PRO-MIG types

DCC
Database Characteristic Control

You simply select the material and wire thickness.
The machine tells you the weldable material thickness – and off you go.
Our PRO-MIG synergie takes care of modifying the other welding parameters on the basis of the stored synergie characteristic curves and DCC itself.
The wire feed speed and all other critical parameters are automatically optimised, depending on the voltage level,
for the programmed materials: steel, stainless steel and aluminium and for various wire electrode diameters and gas types.





Step 2
Select display“ Material thickness”

Step 1
Select the material and wire diameter

Step 3
Press the torch button and use the stage switches to select the material thickness to be welded. The digital display (A) shows the material thickness in mm.

DMC
Digital Motor and Welding Control

Realtime monitoring and precise control of the wire feed speed to prevent burn-on

- Faster and more efficient compensated of arc length changes, e.g., caused by voltage fluctuations in resistances in the hose pack
- Recording of the feed speed via incremental encoder directly on the feed motor, early detection and correction in case of changes in the arc length
  Constant wire feed speeds independently of the feed motor temperature or hose pack soiling

DCC
Database Characteristic Control

Integrated welding parameter database with concentrated expert knowledge

- Automatic setting of welding parameters to reflect the material thickness
- Automatic selection of the required Synergy parameters with optimum specifications by reference to the combination of the material, wire diameter and voltage level with the aid of an extensive, integrated welding parameter database
- Continuous comparison of the actual values with the process specifications during welding – rapid correction if needed

SMI
Schweißkraft Machine Interface

Easy as pie – rules out incorrect operation

- Fast and safe setting of the correct welding parameters with total ease of handling at the same time
- Select the material, set the material thickness and weld



Figure shows accessories air prefilter, torch and hose pack holder

PRO-MIG SYNERGIE 404-4 W

PRO-MIG synergie – The allrounder for industry and trades, for thin sheet to medium sheet thicknesses

- IWC (Intelligent Welding Control) – Intelligent higher-level machine control concept for excellent welding results and safe and easy operation
- SDI (Stepless Dynamic Induction) – Continuously variable, electronic welding choke with ultra-fast control for excellent ignition properties and a stable arc
- DMC (Digital Motor and Welding Control) – Realtime monitoring and precise control of the wire feed speed to prevent burn-on
- Powerful four-roller precision feed system with tool-free reel change
- DCC (Database Characteristic Control) - Integrated welding parameter database with stored characteristic curves provides the appropriate welding parameters for all tasks
- SMI (Schweißkraft Machine Interface) – For fast and safe setting of the welding parameters with total ease of handling at the same time
- Weldable materials: Fe, Al, CuSi3, CrNi
- Burn-in stabiliser detects changes in the stick-out (free wire end) and automatically corrects the arc power – uniform penetration depth in any position
- Mains voltage compensation - automatic detection of fluctuations in the mains voltage and automatic adjustment of the wire feed to match the mains voltage
- Automatic creep-in controls the wire feed speed until the arc is safely ignited, creep-in speed can also be changed manually if required
- PRO-MIG synergie 251-4 AM is particularly suitable for use in thin sheet metal processing from 15 A welding current due to special Synergie programs and SDI technology
- Focused arc can be activated at the touch of a button on PRO-MIG synergie 404-4 models: higher deposition rate than spray arc, welding with short and powerful arc, safe root detection, safe flank detection and reduced undercut
- Units easily manoeuvrable and transportable in the workshop and on the construction site due to robust chassis with large, easy-running wheels
- Pleasant, low-noise continuous operation thanks to optimum housing design and standby switching of fan and water pump
- Optionally available with centrifugal pump
- Three-year Schweißkraft guarantee

UNIQUE IN THIS CLASS!

For all PRO-MIG types:

- **Revolutionary IWC operating concept**
  In contrast to some other suppliers, you benefit from the benefits of a smart control solution from the smallest to the largest system.
- **Digital volt and amperage display with Hold function for the parameters used**
  Ideal for certification welding work for welding data transfer. The parameters used here remain in place until next used and are displayed.
- **Automatic setting of welding parameters to reflect the material thickness.**
  Fast, easy and safe thanks to database support
- **Extremely long duty cycle**
- **Best price-performance ratio**
  State-of-the-art engineering and maximum equipment level

Program/characteristic curves	Fe/CrNi				Aluminium			CuSi	
Synergie operation DCC	0.6	0.8	1.0	1.2	0.8	1.0	1.2	0.8	1.0
PRO-MIG 251-4 AM	●	●	●		●	●	●	●	●
PRO-MIG 311-4	●	●	●		●	●	●	●	●
PRO-MIG 351-4		●	●	●	●	●	●	●	●
PRO-MIG 352-4 W		●	●	●	●	●	●	●	●
PRO-MIG 402-4 W		●	●	●	●	●	●	●	●
PRO-MIG 404-4 W		●	●	●	●	●	●	●	●
PRO-MIG 404-4 WS		●	●	●	●	●	●	●	●



Fig. left
Synergie program selection
PRO-MIG synergie 351-4

Control elements

SMI
Schweißkraft Machine Interface



1. *Digital display for welding voltage with Hold function*
2. *Digital display for welding current with hold function and material thickness*
3. ***Operating modes:** Material thickness display, 2-cycle, 4-cycle, spot, interval*
4. *Setting the spot and interval time*
5. *Rotary button for wire speed and arc length correction*
6. *Synergie program selection: Material/wire diameter program or manual operation e.g., for welding aluminium*
7. *Continuously control of arc hardening*
8. *Granular step switch*

Compact series, gas-cooled/gas-/liquid-cooled, for 20l gas cylinder

PRO-MIG synergie model		251-4 AM	311-4	351-4	352-4 W	402-4 W
Art. no.		1080525	1080531	1080535	1080536	1080542
Adjusting range						
Setting range MIG/MAG	A	15 – 250	35 – 300	25 – 350	35 – 350	40 – 400
Switching stages		10	10	12	12	20
Duty cycle						
Duty cycle at max. current 40 °C	%	30	35	35	35	30
Current at 100 % DC 40 °C	A	140	185	210	210	260
Cooling						
Torch cooling		Gas	Gas	liquid	liquid	liquid
Wire feed						
Weldable wires steel/ stainless steel	mm	0.6 – 1.0	0.6 – 1.0	0.8 – 1.2	0.8 – 1.2	0.8 – 1.2
Weldable wires aluminium	mm	0.8 – 1.2	0.8 – 1.2	0.8 – 1.2	0.8 – 1.2	0.8 – 1.2
Weldable wires CuSi	mm	0.8 – 1.0	0.8 – 1.0	0.8 – 1.0	0.8 – 1.0	0.8 – 1.0
Wire feeder	Rollers	4	4	4	4	4
Electrical data						
Open circuit voltage	V	15 – 39	17 – 39	17 – 42	17 – 42	18 – 45
Connection voltage/mains frequency	V/Hz	400 / 50	400 / 50	400 / 50	400 / 50	400 / 50
Dimensions (L x W x H)	mm	600 x 330 x 620	600 x 330 x 620	600 x 330 x 620	650 x 360 x 680	650 x 360 x 680
Weight approx.	kg	68	72	78	90	109
Equipment level						
Design		Compact	Compact	Compact	Compact	Compact
Penetration depth stabiliser		✓	✓	✓	✓	✓
Mains voltage compensation		✓	✓	✓	✓	✓

Industrial series, gas and liquid cooled, for 50 l gas cylinder

PRO-MIG synergie model		404-4 W	404-4 WS
Art. no.		1080544	1080545
Adjusting range			
Setting range MIG/MAG	A	40 – 400	40 – 400
Switching stages		20	20
Duty cycle			
Duty cycle at max. current 40 °C	%	40	40
Current at 100 % DC 40 °C	A	260	260
Cooling			
Torch cooling		Gas/liquid	Gas/liquid
Wire feed			
Weldable wires steel/ stainless steel	mm	0.8 – 1.2	0.8 – 1.2
Weldable wires aluminium	mm	0.8 – 1.2	0.8 – 1.2
Weldable wires CuSi	mm	0.8 – 1.0	0.8 – 1.0
Wire feeder	Rollers	4	4
Electrical data			
Open circuit voltage	V	18 – 46	18 – 46
Connection voltage/mains frequency	V/Hz	400 / 50	400 / 50
Dimensions (L x W x H)	mm	1 040 x 560 x 850	1 040 x 560 x 1 400
Net weight approx.	kg	133	157
Equipment level			
Design		Compact	With wire feed case
Penetration depth stabiliser		✓	✓
Mains voltage compensation		✓	✓
FOCUS.ARC		✓	✓
FOCUS.ROOT		✓	

Scope of supply PRO-MIG

- **W/WS-Modelle:** Systems filled with liquid coolant
- **Without torch in each case**
- **Without earth cable**
- **Without pressure regulator and without intermediate hose pack (see accessories)**

Focused arc (404 models only)

- Higher deposition rate than spray arc
- Welding with short, powerful arc
- Reliable root coverage.
- Reliable edge detection
- Reduced undercut

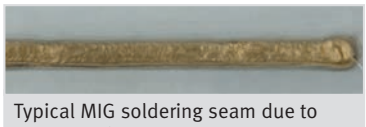
FOCUS . ARC



PRO-MIG synergie 404-4WS

PRO-MIG synergie – The combined systems for MIG soldering and MIG/MAG welding

- Body shops in particular need to adapt their repair methods to reflect continual changes. Bodies made of fully galvanised, partly high strength steel cannot simply be welded using legacy methods after a crash without compromising the crash resistance features designed in by the manufacturer. Various automobile manufacturers already require MIG soldering for repairs.



Typical MIG soldering seam due to CuSi wire deposition

* Warranty terms on www.stuermer-maschinen.de or request from Stürmer Maschinen GmbH

MIG/MAG shield gas welding equipment

Qualität Made in Germany

3 JAHRE Garantie

MIG/MAG



Figure shows *accessories air prefilter, torch and hose pack holder*

PRO-MIG synergie 251-4 AM to 402-4 W
Compact design with steering rollers and generously dimensioned fixed rollers

PRO-MIG synergie 404-4 W to 404-4WS
Industrial design for up 50 l gas cylinders, chassis width extension, steering rollers and generously dimensioned fixed rollers.

WS design with liquid cooling and a separate, removable wire feed case

Complies with DIN EN 1090: *With a Schweißkraft WPQR/WPS package for DIN EN 1090 compliance*

Thanks to the Schweißkraft WPQR/WPS package for the PRO-MIG SYNERGIE series, manufacturers of load-bearing steel structures can now benefit from an inexpensive option for implementing welding procedure specifications (WPS) for the most common welding applications.

For the companies involved, this removes the need for time-consuming and expensive work for creating their own specifications, while at the same time meeting an important requirement in terms of certification and compliance with CE marks. The folder with 12 procedure tests and 169 welding specifications is available as **Art. no. WPQR-SK**
(See page 36 for more details)

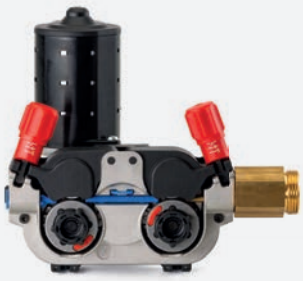
Welding specifications (WPS) valid for:
PRO-MIG synergie 251-4 AM
PRO-MIG synergie 311-4
PRO-MIG synergie 351-4/ 352-4 W
PRO-MIG synergie 404-4 WS

WPQR EN 1090 zertifiziert · certified

WPQR package
Art. no. WPQR-SK

MIG soldering with the PRO-MIG

Welding as of a sensational 15 A
The PRO-MIG 251-4 AM is specially designed for use in thin sheet processing with a sensational welding current of 15 A or more. The special Synergie programs for MIG/MAG welding and MIG soldering of galvanised and aluminised body sheet metal make them the ideal machines for vehicle workshops.



Uniform wire feeding
- Four driven feed rollers
- A powerful, digitally controlled, precise wire drive provides full performance even with hose packs of 5 m length



Unique in this class

For all PRO-MIG types:

Revolutionary IWC control solution
- In contrast to some other suppliers, you benefit from the benefits of a smart control solution from the smallest to the largest system.

Digital volt and amperage display with Hold function for the parameters used
- Ideal for certification welding work for welding data transfer. The parameters used here remain in place until next used and are displayed.

Automatic setting of welding parameters to reflect the material thickness.
- Fast, easy and safe thanks to database support

Extremely long duty cycle

Best in class price/performance ratio
- State-of-the-art engineering and maximum equipment level

Options[1] PRO-MIG synergie 251-4 AM – 402-4 W

Art. no.	Designation
1010005	Rotary pump
1060318	Adapter Euro ZA to Dinse ZA



Options[1] PRO-MIG synergie 404-4 W – PRO-MIG 404-4 WS

Art. no.	Designation
1033669	Air filter attachment
1033662	Tool set
1060214	Torch and hose pack holder
1060213	Crane eyes with storage compartment
1010005	Rotary pump

Intermediate hose packs 95 mm² gas cooled

Art. no.	Designation
1065021	ZWIPA MIG/MAG 95 mm² 5 m gas cooled
1065022	ZWIPA MIG/MAG 95 mm² 10 m gas cooled
1065023	ZWIPA MIG/MAG 95 mm² 15 m gas cooled



Torch MIG/MAG gas cooled

Art. no.	Designation
1050153	Torch EVO MB 15 / 3 m
1050154	Torch EVO MB 15 / 4 m
1050155	Torch EVO MB 15 / 5 m
1050253	Torch EVO MB 24 / 3 m
1050254	Torch EVO MB 24 / 4 m
1050255	Torch EVO MB 24 / 5 m
1050363	Torch EVO MB 36 / 3 m
1050364	Torch EVO MB 36 / 4 m
1050365	Torch EVO MB 36 / 5 m



Torch sets (contain torch, 4 m earth cable and pressure regulator)

Art. no.	Designation
1051650	Torch set EVO MB 15
1051652	Torch set EVO MB 25
1051653	Torch set EVO MB 36
1051654	Torch set EVO MB 401 / 50 mm²
1051655	Torch set EVO MB 401 / 70 mm²



Wear part sets for torch

Art. no.	Designation
1091501	Wear part set MB 15
1092501	Wear part set MB 25
1093601	Wear part set MB 36
1094001	Wear part set MB 401



Accessories

Art. no.	Designation
1110001	Basket spool adapter KA 1
1110005	Basket spool adapter KA 2
1700050	Pressure regulator Argon/CO_2 large
1499003	Inert gas filter 1/4" thread RH
1061353	Retrofit set air filter attachment
1033671	Metal filter cell for air filter
1060270	Retrofit set torch and hose pack holder
1033667	Trolley for feed case
1030110	Coolant SKF 15 10l - canister

(1) available ex works only



Intermediate hose pack liquid cooled

Intermediate hose packs 70 mm² liquid-cooled

(only for PRO-MIG synergie 404-4WS

Art. no.	Designation
1065040	ZWIPA MIG/MAG 70 mm² 1.4 m liquid-cooled
1065041	ZWIPA MIG/MAG 70 mm² 5 m liquid-cooled
1065042	ZWIPA MIG/MAG 70 mm² 10 m liquid-cooled
1065043	ZWIPA MIG/MAG 70 mm² 15 m liquid-cooled
1065044	ZWIPA MIG/MAG 70 mm² 20 m liquid-cooled

Intermediate hose packs 95 mm² liquid-cooled

(only for 1003407 + 1003507)

Art. no.	Designation
1065050	ZWIPA MIG/MAG 95 mm² 1.4 m liquid-cooled
1065051	ZWIPA MIG/MAG 95 mm² 5 m liquid-cooled
1065052	ZWIPA MIG/MAG 95 mm² 10 m liquid-cooled
1065053	ZWIPA MIG/MAG 95 mm² 15 m liquid-cooled
1065054	ZWIPA MIG/MAG 95 mm² 20 m liquid-cooled

Torch MIG/MAG liquid-cooled

Art. no.	Designation
1059940	Torch MAG W 340D 3 m
1059941	Torch MAG W 340D 4 m
1059942	Torch MAG W 340D 5 m
1059943	Torch MAG W 440D 3 m
1059944	Torch MAG W 440D 4 m
1059945	Torch MAG W 440D 5 m
1059946	Torch MAG W 540D 3 m
1059947	Torch MAG W 540D 4 m
1059948	Torch MAG W 540D 5 m
1050403	Torch EVO MB 401D / 3 m
1050404	Torch EVO MB 401D / 4 m
1050405	Torch EVO MB 401D / 5 m



Earth cable complete with clamp

Art. no.	Designation
1250225	Ground cable MK4/25 KS13 200A
1250235	Ground cable MK4/35 KS13 400A
1250250	Ground cable MK4/50 KS13 600A
1250270	Ground cable MK4/70 KS13 600A
1250295	Ground cable MK4/95 KS13 600A



Feed rollers

Art. no.	Designation
	Individual feed rollers for solid wire
1063054	Feed roll V 0.6/0.8 mm solid wire 4/2
1063055	Feed roll V 0.8/1.0 mm solid wire 4/2
1063053	Feed roll V 1.0/1.2 mm solid wire 4/2
1063056	Feed roll V 1.2/1.6 mm solid wire 4/2
1063057	Feed roll V 0.9/1.1 mm solid wire 4/2
	Individual feed rollers for tubular wire
1063058	Feed roll R 1.2/1.6 mm tubular wire 4/2
	Individual feed rollers for aluminium wire
1063059	Feed roll A 1.0/1.2 mm aluminium 4/2
1063060	Feed roll A 1.2/1.6 mm aluminium 4/2
1063061	Feed roll A 1.6/2.4 mm aluminium 4/2

DIN EN 1090

Schweißkraft for a fast and easy approach to DIN EN 1090 certification

DIN EN 1090 – The standard since July 2014
The new DIN EN 1090 standard means fundamental changes for manufacturers of steel and aluminium parts for building and civil engineering. Since 1 July 2014, contracts for metal construction work can only be awarded to companies that have been tested and certified by a notified body. As of this point CE marking for all steel and aluminium load-bearing constructions is mandatory in Europe.
The key issue in DIN EN 1090 is the introduction, documentation and maintenance of a quality management system for in-house production checks that covers the entire manufacturing process in the enterprise from order intake to delivery.

Which EXC class applies to whom?
Classification into execution classes EXC1 to EXC4 to reflect the consequential damage, stress category and manufacturing category is new in DIN EN 1090.
Companies in the scope of class EXC 1 must have in-house production checks as per DIN EN 1090-1; they must employ certified welders with a valid welder document as per DIN EN 287-1. Companies in the scope of classes EXC 2, 3 and 4 need to meet further requirements on top of this, such as a qualified welding inspector, and certified welders with valid welder documents as per DIN EN 287-1.
The following applies to all execution classes: the continuous quality of the welding results must be ensured by the processes and actions defined in the in-house production check manual.

Class	EXC 1	EXC 2	EXC 3	EXC 4
Quality requirements staff	Elementary	Standard	Expert	Expert
Welding supervision	No	SFM/ST	SFI	SFI
Inspection staff/certified welders	Required	Required	Required	Required
Quality documentation materials	No	Yes	Yes	Yes
Material certificates	Yes	Yes	Yes	Yes
Material traceability	No	In part	Yes	Yes
Weld evaluation group	T	C	B	B

5 steps to CE marking – how it is done



Welding procedure qualification – achieve your objective of creating welding instructions faster with Schweißkraft

- For EXC1 and EXC2, Schweißkraft can provide welding instructions for the materials S235 to S355 as per EN ISO 15612.
- For EXC1 and EXC2, Schweißkraft can provide templates for creating your own welding instructions as per EN ISO 15610 for the materials S235 to S275.





Schweißkraft special offers –
Save time and money now with a package deal!

The Schweißkraft WPQR/WPS package for EXC1 und EXC2 – for the PRO-ARC SPEED, PRO-PULS SPEED and PRO-MIG model ranges, all in one book.

Welding procedure specifications (WPS) are required for all execution classes. REHM WPQR/WPS packages contain WPQR-certified welding instructions for standard welding procedures.
The welding instructions cover most steel welding applications for the materials S235 to S355 used to manufacture construction products in the construction industry.

Qualification methods DIN EN ISO 15609	EXC 1	EXC 2	EXC 3	EXC 4
Welding procedure approval testing DIN EN ISO 15614	No	X	X	X
Advance work sample testing DIN EN ISO 15613	No	X	X	X
Standard welding procedure DIN EN ISO 15612	No	**X** up to S275	⌀	⌀
Expertise in welding technology Experience DIN EN ISO 15611	**X** up to S275	**X** up to S275	⌀	⌀
Use of approved filler metals DIN EN ISO 15610				

X *Permissible* ⌀ *Not permissible*

Your benefits:

- You can purchase the Schweißkraft book with **169 WPS** Schweißkraft welding procedure specifications and 12 procedure tests
- Your compliant Schweißkraft welding equipment has the WPQR badge
- And you can extend the Schweißkraft WPQR/WPS packages to include your own welding instructions – without any additional procedure testing

Schweißkraft WPQR package
Art. no. WPQR-SK

Creating your own welding instructions for use of approved filler metals (DIN EN 15610)

Users can create their own welding instructions without needing to audit the procedure by using approved and qualified filler metals for the execution class EXC1, EXC2 for steel grades up to 275 (not permissible for high strength materials) with sheet thicknesses from 3 to 40 mm and an a dimension ≥ 3 mm.

The WPS templates provided by Schweißkraft facilitate the process of creating your own welding instructions.