

THERMAL ARC

PowerMaster PLUS

DIGITAL SYNERGIC PULSE MIG

DIGITAL
PERFECTION
SIMPLY
THE BEST



THERMAL ARC
PowerMaster Plus

Thermal Arc® at the forefront with synergic pulse welding technology

The future is here today with the arrival of the newest addition to Thermal Arc's comprehensive range: Digital Synergic Pulse MIG Welding Equipment with PowerMaster PLUS Technology.

Set to transform the growing automotive, aluminium/stainless steel fabrication and repair/maintenance sectors, the Powermaster SP series is a complete range of high-technology digital micro-processor controlled Synergic Pulse MIG Welding Equipment.

This state-of-the-art technology is designed to meet the rigorous demands of a wide range of welding applications, including:

- General aluminium and stainless steel fabrication
- Boat building
- Automotive components and repairs
- Railcar manufacturing
- Custom job shops

Here at Thermal Arc, we know that you want improved productivity, reduced component reworks, and multiple process capabilities from your equipment. So we have developed our Synergic Pulse MIG Welding Equipment with an unbeatable list of standard features, including:

- Multi-Process, GMAW-Conventional (MIG); Synergic non-pulse; Synergic Pulse; TwinPulse®, GTAW, MMAW and CAG
- Over 60 synergic non-pulse/ synergic pulse programs in each model
- 100 independent, user-defined, frequently used welding jobs
- MIG TwinPulse®, providing effortless TIG-like weld appearance
- Programmable scratch-start TIG
- One Touch Control, set the material thickness, then start welding
- Manual MIG mode, enables 2-knob conventional welding controls
- User-friendly controls plus 2-line digital display, enabling easy set-up in all weld modes
- Separate digital volt and ammeter display.

To further expand the capabilities of the PowerMaster Range, all machines now feature PowerMaster PLUS technology as standard. PowerMaster PLUS offers the following advantages over previous Thermal Arc PowerMaster SP units:

- Welding Speed increased by up to 30%
- Single pass butt welds now possible up to 12mm thickness
- Increased Penetration compared to conventional MIG systems
- Reduced Risk of Undercut

Intelligence: One Touch Control ... at your fingertips

Introducing the PowerMaster PLUS Synergic Pulse MIG series:

Selecting a welding machine for a specialised project – or even for general welding requirements – can be a daunting task. You have to take many factors into account, such as running costs, ease of use, versatility and mobility, not to mention machine cost. Always at the forefront of your mind is the awareness that your profitability is based on weld quality, weld repeatability, power consumption, equipment flexibility, workforce flexibility, negligible rework and minimal weld clean up.

You need look no further. The Powermaster SP series delivers all of these attributes, plus MORE! Our intelligent One Touch Control delivers the perfect welding parameters for both synergic non-pulse welding and synergic pulse welding over a wide range of different gas/wire/material thickness combinations. And now setting the optimum welding conditions is as simple as selecting the material thickness.

How does it work?

In synergic non-pulse MIG mode the One Touch Control links the wire feed speed to the arc voltage eliminating the guesswork to achieve the optimum welding parameters.

When synergic pulse mode is selected, the One Touch Control adjusts all the pulse parameters – such as pulse height, pulse width, pulse frequency, background power and wire feed speed – via the micro-processor, giving you the perfect pulse welding performance.



Steel



Stainless Steel



Aluminum



MIG Brazing

Why choose the Powermaster PLUS series over conventional MIG equipment?

- Exceptional out-of-position welding for steel, stainless steel and aluminium
- Effortless TIG-like weld appearance on aluminium and stainless steel with TwinPulse®
- Deeper weld penetration
- Accurate penetration on sheet metal
- Superior welding characteristics on hard-facing and high-alloy steels
- The ability to use larger-than-normal diameter wires on thin base material, providing a cost saving on wire and superior feedability
- Transfer in the vertical up position giving smoother welds, better control and deeper penetration
- Improved edge wetting in synergic pulse mode
- PowerMaster PLUS Technology increases weld speed without affecting the smooth welding characteristics



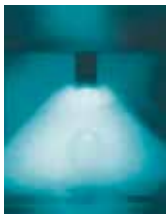
What is Synergic Pulse MIG welding?

Synergic Pulse MIG Welding links the pulse welding parameters to the wire feed speed to achieve optimum welding conditions across the full range of wire feed speed for a given wire size.

- The welding pulse profile is a combination of pulse height, pulse width, pulse frequency and background power – all these parameters are linked via the micro-processor to give the correct arc energy.
- This arc energy is then matched to a wire feed speed that gives an acceptable arc length and the best welding conditions for the chosen gas mixture, wire diameter and material type combination.
- The synergic One Touch Control knob adjusts the arc energy over the available current range of the power source, while maintaining approximately the same arc length. An additional trim knob is also provided to allow the user to tune in the arc length for the particular welding job.
- Pulsed weld current facilitates exact control over the transfer of molten metal droplets across the welding arc.
- As the weld current is pulsed, each droplet is forced off the end of the wire and projected across the arc into the weld pool. Varying the pulse height and frequency allows the size and time of the transferring droplet to be accurately controlled.
- The pulsed droplet transfer produces a spray-like arc over the entire current range, with a smooth, stable weld current producing no spatter and an even weld bead shape.

Perfect starts

An amplified power level is applied to the welding arc at the beginning of the weld bead to ensure that start defects are a thing of the past.



No more spatter

Micro-processor control of wire speed, weld current and voltage, in conjunction with synergic (non-pulse)/synergic pulse programs, ensures precise control and adjustment for the duration of the welding process. This eliminates spatter, and downtime for cleaning the workpiece. With its ability to adjust in milliseconds, the synergic Powermaster SP series provides clean, spatter-free operation from start to finish, every single time.

Intelligent pulsing

Droplets of molten filler metal are transferred across the arc by expertly tailored current pulse parameters – to achieve spatter-free welding for the selected gas/wire/material combination. The pulse forces the droplet off the end of the wire, transfers it across the arc and into the weld pool. The program is optimised to vary the pulse height and frequency, thus ensuring that the size and time of the transferring droplet is accurately controlled. This produces a spray-like arc over the entire welding power range.



SPATTER-FREE IGNITION SEQUENCE:

Contact	Ignition	Upslope control	Arc stabilising	Pulsing begins
0.000 seconds	0.0001 seconds	0.050 seconds	0.200 seconds	0.300 seconds



PULSE PROFILES:

Pulse profiles for different materials are created using the in-built software programme.



Thermal Arc's Synergic Pulse MIG Range: The BENEFITS

Ranging from 320 to 500 amps, each PowerMaster PLUS is the ultimate power source designed for precision MIG welding of steel, aluminium, stainless steel, and other weldable materials. Look at the benefits of choosing Thermal Arc:

- Spray transfer welding permitted at lower-than-normal average weld currents
- No spatter or undercut in the majority of welding applications
- Precise control of welding power, to assure bead shape and root penetration rivalling TIG welding
- High energy arc produced, that virtually eliminates the risk of lack of fusion
- Improved arc control for out-of-position welding and more effective welding of thin materials, with all the advantages of spray transfer
- Optimised pulse programs for gas/wire combinations
- TwinPulse® capabilities
- 100 welding programs accessible via the Smart MIG torch
- Smart controls improving productivity, in an ergonomically designed control panel
- Integrated water recirculator are built into some models for water cooled torches
- Durable, robust, proven design and construction.

Complete arc-length control

Steady, consistent arc length is crucial for quality weld results. Digital arc length control monitors the progress of the weld and detects any deviations within a fraction of a second. Adjustments are made instantaneously ensuring the arc length remains steady for the duration of the welding procedure.

No more end craters!

Automatic reduction of welding energy (down slope) at the completion of the weld ensures a sharp wire end, crater is eliminated and a perfect start-up to the next weld is assured.

The PowerMaster PLUS Advantage:

PowerMaster PLUS technology is a new development in synergic MIG welding that greatly improves weld speed and offers extremely favourable welding characteristics. The advantages of this new technology include:

- Deeper penetration due to high plasma pressure in the arc
- Welding speed increased by up to 30%
- Easy to use in manual welding applications due to incredibly stable arc
- Reduced undercut due to the very short arc length. This also leads to less dilution of the alloying elements in the filler wire and gives a smoother seam surface
- Increased profitability due to higher welding speed
- Better seam quality in regard to the heat affected zone and less distortion due to less heat input
- Minimal or no spatter formation
- Single pass butt welds possible up to 12mm in thickness
- At the end of the welding process, you can be assured of a sharp point on the end of the wire, which results in faultless re-ignition and reduces cold starts and welding spatter on re-ignition
- Welding with a longer stick out is possible due to the very stable arc
- Obvious arc pressure
- Easier placement of the arc into the root
- Good toe/pool wettability
- Torch angle less critical
- More user friendly than standard spray
- Alloy burn off of the filler wire elements minimised (i.e. chrome, nickel, manganese, silicon, etc ...) due to alloying elements spending less time in the hot arc plasma and minimising the heat affected zone
- Angular distortion of the workpiece is reduced
- Transition/Mixed arcs are no longer present

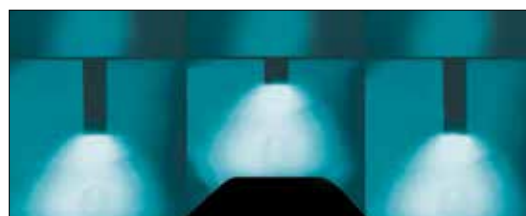


ARC LENGTH CONTROL EXAMPLES:

Constant arc length due to change in stick-out.



Constant arc length due to change in material height.



Leave it to us you don't have to remember – we'll do it for you



Remote control on torch

Welding voltage and wirespeed are controlled directly from the Smart torch ensuring fast and flexible control.



Automation ease

Both the PowerMaster® 400SP and 500SP Automation are easily connected to automation systems. Simply access stored jobs directly from a pendant or controller to obtain a clear, efficient automation solution.



Selectable weld programs

The torch displays the exact welding settings for each application in their correct sequence. With just the touch of a button you can call up 100 different welding settings.



Robot compatible

Analog or digital interface is automatically selected via RobotTool™. The internal CAN-Bus can also be docked to common Bus-systems. Robot interface is supported via software and no hardware changes required.



Remote control

Each parameter can be remotely controlled and operated from a distance of up to 25 metres from the power source. Ideal for automatic or semi automatic welding fixtures.



Computer connectable

The range is fully digital for ease of future upgrades and service. Connection to a PC allows the use of JobTool Software to manage welding jobs data and to monitor electronic diagnostics and service status.

Expert welding intelligence and experience is designed into all our welding programs to provide the optimal welding solution:

- The pre-requisite for perfect welding is finely tuned synergic pulsing programs. The Powermaster SP series comes with advanced digital software knowledge as standard, guaranteeing the pulsing performance for most material types
- There are over 60 preset MIG welding programs for synergic (non-pulse) and synergic pulse welding
- You can save 100 user defined MIG welding jobs
- Weld defects at the start of the welding seam are history with the exact amount of arc energy delivered to the MIG wire for instant fusion into the base material
- Absolute perfection in the welding process and 100% reproducibility of any weld result are achieved by the software program and digital micro-processor control
- The synergic pulse mode turns the filler metal into the finest droplets, then projects them across the arc and into the molten weld pool for spatter-free welding. It also offers the best visual welding results, out-of-position capabilities and smaller fillet weld beads when compared to conventional MIG welding
- The droplet formation, detachment and transition into the molten weld pool takes place in intervals of 100ths of a second.
- The arc length is a crucial factor for the best welding result. Digital arc length control keeps the arc length steady at all times. Wire stick-out and distance changes from wire to workpiece are detected within fractions of a second and are adjusted to achieve faultless results.
- Weld defects at the end of the welding seam (craters) are eliminated automatically by pulsing the arc energy (down slope), without melting the MIG wire, to slowly cool down the weld pool.
- TwinPulse® is supplied as standard with this range. The TwinPulse® controls the melting and cooling tasks in the weld pool systematically and separately. It provides an appearance similar to TIG welding, but at a welding speed approximately seven times faster than conventional TIG, and is ideal for use with aluminium.

PowerMaster PLUS 320 SP: Synergic MIG on the move

The PowerMaster PLUS 320SP is in a league of its own with state of the art features. This includes various welding modes: MIG/MAG, MMA, Synergic Pulse, TwinPulse[®] and the new Speed Process.

Small and compact with a total weight of 35kg, the PowerMaster Plus 320SP features a built-in wire feeder and a maximum output current of 320 Amps, offering the perfect combination of power and portability.

The 320SP is available as an air- or water-cooled system which can be used with a dedicated trolley.

Typical applications include:

- General fabrication of aluminum and stainless steel;
- Aluminum boat fabrication or repair;
- Stainless steel tank and pipe fabrication;
- Maintenance repair;
- Automotive repair;
- Technical schools;
- Applications requiring stringent welding procedure adherence.

MACHINE SPECIFICATIONS	
Nominal Supply Voltage	400V±15%
Nominal Supply Frequency	50/60Hz
Phase	3 phase
Standard	IEC 60974-1
Power Factor at Maximum Output	0.99
Recommended Fuse Size	32 Amp
Input Current at Maximum Output	21.8 Amp
Maximum kVA at Rated MIG Weld Current	15.1kVA
Torch Cooling	Fan Cooled
Welding Current Range	5-320 Amp
Welding Voltage Range	15.2-30V
Nominal DC Open Circuit Voltage	81V
100% Rated Duty Cycle	280 Amp @ 28V
60% Rated Duty Cycle	320 Amp @ 30V
Power Source Dimensions (HxWxD)	498 x 340 x 745 mm
Power Source Weight	35kg
Warranty Period	3 Years

Ordering Information

AIR-COOLED SYSTEM

PowerMaster PLUS 320 SP Power Source (Complete with 1.0/1.2mm V-Groove drive rolls) W1000103PP

Tweco DSA.40 400A Air Cooled Digital torch, 3m 161.628.307

Tweco DSA.40 400A Air Cooled Digital torch, 4m 161.628.407

Tweco TWE4.3E 400A Air Cooled Torch, 3m 161.560.307

Tweco TWE4.4E 400A Air Cooled Torch, 4m 161.560.407

Tweco TWE4.45E 400A Air Cooled Torch, 4.5m 161.560.457



PowerMaster PLUS 400SP: The all-rounder

MACHINE SPECIFICATIONS	
Nominal Supply Voltage	400V±15%
Nominal Supply Frequency	50/60Hz
Phase	3 phase
Standard	IEC 60974-1
Power Factor at Maximum Output	0.99
Recommended Fuse Size	32 Amp
Input Current at Maximum Output	28.1 Amp
Maximum kVA at Rated MIG Weld Current	19.4kVA
Torch Cooling	Fan Cooled / Liquid Cooled
Welding Current Range	5-400 Amp
Welding Voltage Range	15.2-34V
Nominal DC Open Circuit Voltage	81V
100% Rated Duty Cycle	350 Amp @ 31.5V
60% Rated Duty Cycle	400 Amp @ 34V
Dimensions (HxWxD)	855 x 445 x 1116 mm
Weight	112kg
Warranty Period	3 Years

The PowerMaster PLUS 400SP has a maximum output of 400 Amps and is supplied either as an air-cooled package or with a fully integrated liquid cooling system.

This is also the ideal digital PulseMig™ and TwinPulse® power supply to run push / pull gun systems for production welding with aluminum wires

Typical applications include:

- General fabrication of aluminum and stainless steel;
- Aluminum boat fabrication or repair;
- Custom fabrication;
- Automotive components;
- Stainless steel tank and pipe fabrication;
- Maintenance repair;
- Machinery, including construction machinery;
- Pipe Welding;
- Applications requiring stringent welding procedure adherence.

Ordering Information

AIR-COOLED SYSTEM

PowerMaster PLUS 400SP Air-Cooled Power Source	W1000303PP
4 Roll Workshop Wire Feeder Air-Cooled complete with 1.0/1.2mm V drive rolls	W3000103
1m 70mm Air-Cooled Interconnections	W4000400
Tweco DSA.40 400A Air Cooled Digital torch, 3m	161.628.307
Tweco DSA.40 400A Air Cooled Digital torch, 4m	161.628.407
Digital Push-Pull Torch, 8m, Air-Cooled	ML3600PM
Tweco TWE4.3E 400A Air Cooled Torch, 3m	161.560.307
Tweco TWE4.4E 400A Air Cooled Torch, 4m	161.560.407
Tweco TWE4.45E 400A Air Cooled Torch, 4.5m	161.560.457

WATER-COOLED SYSTEM

PowerMaster PLUS 400SP Liquid-Cooled Power Source	W1000203PP
4 Roll Workshop Wire Feeder Liquid-Cooled complete with 1.0/1.2mm V drive rolls	W3000203
1m 70mm Liquid-Cooled Interconnections	W4000500
DSW.450 500A liquid Cooled Digital torch, 3m	160.620.307
DSW.450 500A liquid Cooled Digital torch, 4m	160.620.407
Digital Push-Pull Torch, 8m, Liquid-Cooled	MW5400PM
Tweco SW450.3F Liquid Cooled Torch, 3m	552.316.307
Tweco SW450.3F Liquid Cooled Torch, 4m	552.316.407



PowerMaster PLUS 500 SP: The logical heavy-duty choice

MACHINE SPECIFICATIONS	
Nominal Supply Voltage	400V±15%
Nominal Supply Frequency	50/60Hz
Phase	3 phase
Standard	IEC 60974-1
Power Factor at Maximum Output	0.99
Recommended Fuse Size	63 Amp
Input Current at Maximum Output	37.7 Amp
Maximum kVA at Rated MIG Weld Current	26.1kVA
Torch Cooling	Liquid Cooled
Welding Current Range	5-500 Amp
Welding Voltage Range	15.2-39V
Nominal DC Open Circuit Voltage	81V
100% Rated Duty Cycle	500 Amp @ 39V
Dimensions (HxWxD)	855 x 445 x 1116 mm
Weight	112kg
Warranty Period	3 Years

The PowerMaster PLUS 500SP with a separate 4-roll wire feeder system has a maximum output of 500 Amps and is supplied with a fully integrated water cooling system.

This is the ideal digital PulseMig™ and TwinPulse® welding machine for heavy-duty, high-quality welding applications running push or push / pull gun systems for production welding with aluminum wires.

Typical applications include:

- General fabrication of aluminum and stainless steel;
- Aluminum boat fabrication or repair;
- Custom fabrication;
- Automotive components;
- Stainless steel tank and pipe fabrication;
- Maintenance repair;
- Construction machinery;
- Mining
- Pipe Welding;
- Applications requiring stringent welding procedure adherence.

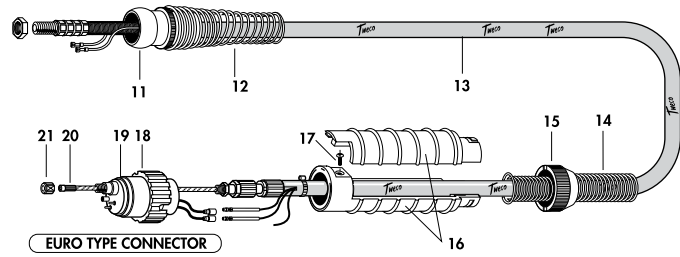
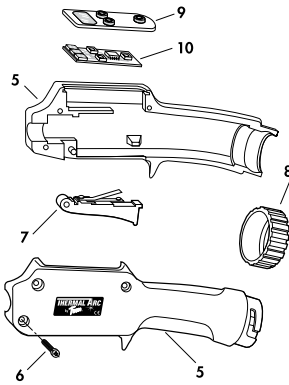
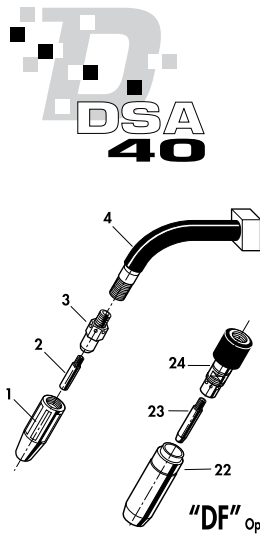
Ordering Information

WATER-COOLED SYSTEM

PowerMaster PLUS 500 SP Power Source (Complete with 1.0/1.2mm drive rolls)	W1000503PP
4 Roll Workshop Wire Feeder Liquid-Cooled complete with 1.0/1.2mm V drive rolls	W3000203
1m 95mm Liquid-Cooled Interconnections	W4000600
DSW.450 500A liquid Cooled Digital torch, 3m	160.620.307
DSW.450 500A liquid Cooled Digital torch, 4m	160.620.407
Digital Push-Pull Torch, 8m, Liquid-Cooled	MW5400PM



DSA.40 Air Cooled Digital Torches



DSA.40	L	400	340
DC	1,0÷1,6 mm	10÷20 l/1'	AIR

Ordering Information

Complete Torches

Tweco DSA.40 400A Air Cooled Digital torch, 3m	161.628.307
Tweco DSA.40 400A Air Cooled Digital torch, 4m	161.628.407

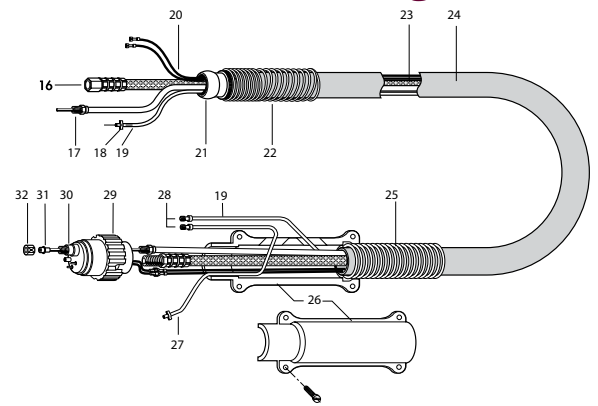
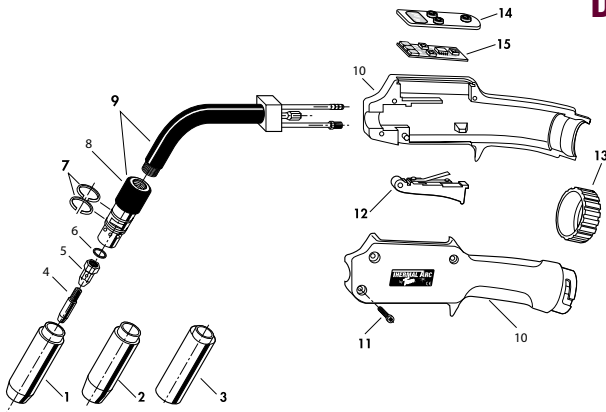
DSA.40 Torch Spare Parts and Consumables

Position	Description	Part No.	Pack Size	Position	Description	Part No.	Pack Size
1*	Insulated fixed nozzle i. Ø 15,9	23-62	2	17	Support screw	181.106.101	50
1	Insulated fixed nozzle i. Ø 12,7	23-50	2	18	Locking ring	127.102.102	5
2	Contact tip Ø 0,8	14H-35	25	19	Euro connector (spring pins)	142.105.113	1
2	Contact tip Ø 1,0	14H-40	25	20	3 m steel liner for wires Ø 0,8/1,0 (Blue colour)	130.020.302	1
2	Contact tip Ø 1,2	14H-45	25	20	4 m steel liner for wires Ø 0,8/1,0 (Blue colour)	130.020.402	1
2*	Contact tip Ø 1,3	14H-52	25	20	3 m steel liner for wires Ø 1,0/1,2 (Yellow colour)	130.030.302	1
3	Gas diffuser	54A	5	20	4 m steel liner for wires Ø 1,0/1,2 (Yellow colour)	130.030.402	1
4	Torch body with insulator	116.103.510	1	20	4 m steel liner for Al. wires Ø 0,8/1,0 (Carbo black colour)	134.030.402	1
5	Handle case with screw (Black)	137.104.108	1	20*	4 m steel liner for Al. wires Ø 1,2/1,6 (Carbo black colour)	134.090.402	1
6	Handle case screw	181.103.106	50	21	Liner nut	117.101.101	10
7	Complete blade switch (Red)	146.101.102	5	22	Gas nozzle i. Ø 17	SW24-17	10
8	Handle case locking ring	127.108.101	1	22	Tapered nozzle i. Ø 15	SW24-15	10
9	Digital torch kit (cover, glass and red buttons)	181.001.100	1	22	Cylindric nozzle i. Ø 21	SW24-21	10
10	Digital board	139.106.801-IPM	1	23	Contact tip Ø 0,8 Cu-Cr	147.020.108	25
11	Knuckle joint	156.102.106	1	23	Contact tip Ø 1,0 Cu-Cr	147.020.110	25
12	Spring (handle side)	141.106.110	1	23	Contact tip Ø 1,2 Cu-Cr	147.020.112	25
13	Cable for torch 3 m.	108.400.302	1	24	Gas diffuser	118.102.511	5
13	Cable for torch 4 m.	108.400.402	1	N/S	Liner Guide, 115mm	S129.5.44.115	1
14	Spring (connector side)	141.106.109	1				
15	Support locking ring	127.105.101	5				
16	Cable support (connector side)	156.101.103	1				

*Supplied as standard



DSW.300 / DSW.450 Water Cooled Digital Torches



	DSW-300		V	L		F ₂ MAX 100% CO ₂	300		F ₂ MAX 100% ARGON OR HELIX	250
	DC		0,8÷1,2 mm		GAS	10÷25 l/1'		H ₂ O		
	30°C		Q _{MIN} H ₂ O	1,2/1'		P _{MIN} H ₂ O	3,0 bar		P _{MAX} H ₂ O	10 bar



	DSW-450		V	L		F ₂ MAX 100% CO ₂	500		F ₂ MAX 100% ARGON OR HELIX	450
	DC		1,0÷2,0 mm		GAS	10÷25 l/1'		H ₂ O		
	30°C		Q _{MIN} H ₂ O	1,5/1'		P _{MIN} H ₂ O	3,0 bar		P _{MAX} H ₂ O	10 bar

Ordering Information

Complete Torches

DSW.300 300A liquid Cooled Digital torch, 3m	160.610.307
DSW.300 300A liquid Cooled Digital torch, 4m	160.610.407

Complete Torches

DSW.450 500A liquid Cooled Digital torch, 3m	160.620.307
DSW.450 500A liquid Cooled Digital torch, 4m	160.620.407

DSW.300/ DSW450 Spare Parts and Consumables

Position	Description	Part No.	Pack Size
10	Handle case with screw (Black)	137.104.108	1
11	Handle case screw	181.103.106	50
12	Complete blade switch (Red)	146.101.102	5
13	Handle case locking ring	127.108.101	1
14	Digital torch kit (cover, glass and red buttons)	181.001.100	1
15	Digital board	139.106.801-IPM	1
16	3 m water-cooled cable	112.050.301	1
16	4 m water-cooled cable	112.050.401	1
17	3 m liner carrier	145.510.301	1
17	4 m liner carrier	145.510.401	1
18	Hose clamp Ø 9,5	101.106.202	20
19	Water hose a meter	202.080.040	1
21	Knuckle joint	156.102.106	1
22	Spring (handle side)	141.106.108	1
23	3 m hose and cable assembly	123.529.302	1
23	4 m hose and cable assembly	123.529.402	1
24	Protection hose a meter	175.300.280	1
25	Spring (connector side)	141.106.109	1
26	Cable support (connector)	156.101.106	1
27	Water out hose a meter	168.080.040	1
28	Water- fitting	150.108.101	10
29	Locking ring	127.102.102	5
30	Euro connector (spring pins)	142.105.510	1
31	3 m steel liner Ø 0,8/1,0 (Blue)	130.020.302	1
31	4 m steel liner Ø 0,8/1,0 (Blue)	130.020.402	1
31	4 m liner Al. Ø 0,8/1,0 (Teflon blue)	134.110.402	1
31	3 m liner Al. Ø 1,0/1,2 (Teflon white)	134.080.302	1
31	4 m liner Al. Ø 1,0/1,2 (Teflon white)	134.080.402	1
31	4 m liner Al. Ø 0,8/1,0 (Carbo black)	134.030.402	1
31*	4 m liner Al. Ø 1,2/1,6 (Carbo black)	134.090.402	1
32	Liner nut	117.101.101	10
N/S	Liner Guide, 115mm	S129.5.44.115	1

DSW.300 Consumables

Position	Description	Part No.	Pack Size
1*	Gas nozzle i. Ø 15	SW23-15	10
2	Tapered nozzle i. Ø 12	SW23-12	10
3	Cylindric nozzle i. Ø 18	SW23-18	10
4	Contact tip Ø 0,8	14H-35	25
4	Contact tip Ø 1,0	14H-40	25
4	Contact tip Ø 1,2	14H-45	25
4*	Contact tip Ø 1,3	14H-52	25
5	Gas diffuser	SW53-14	5
6	Insulating ring	SW63-2	10
7	Elastic ring	SW63-R	20
8	Nozzle holder	SW63-3	1
9	Standard torch with nozzle holder	SW63-50	1
31	3m steel liner Ø 1,0/1,2 (Red)	130.050.302	1
31	4m steel liner Ø 1,0/1,2 (Red)	130.050.402	1

DSW.450 Consumables

Position	Description	Part No.	Pack Size
1*	Gas nozzle i. Ø 17	SW24-17	10
2	Tapered nozzle i. Ø 15	SW24-15	10
3	Cylindric nozzle i. Ø 21	SW24-21	10
4	Contact tip Ø 0,8	16S-35	25
4	Contact tip Ø 1,0	16S-40	25
4	Contact tip Ø 1,2	16S-45	25
4*	Contact tip Ø 1,3	16S-52	25
4	Contact tip Ø 1,6	16S-116	25
4	Contact tip Ø 2,0	16S-564	25
4	Contact tip Ø 0,8 Cu-Cr	147.020.108	25
4	Contact tip Ø 1,0 Cu-Cr	147.020.110	25
4	Contact tip Ø 1,2 Cu-Cr	147.020.112	25
4	Contact tip Ø 1,6 Cu-Cr	147.020.116	25
4	Contact tip Ø 2,0 Cu-Cr	147.020.120	25
5	Gas diffuser	SW54-16	5
6	Insulating ring	SW64-2	10
7	Elastic ring	SW64-R	20
8	Nozzle holder	SW64-3	1
9	Standard torch with nozzle holder	116.116.104	1
31	3 m steel liner Ø 1,0/1,2 (Yellow)	130.030.302	1
31	4 m steel liner Ø 1,0/1,2 (Yellow)	130.030.402	1
31	3 m steel liner Ø 1,2/1,6 (White)	130.040.302	1
31	4 m steel liner Ø 1,2/1,6 (White)	130.04.0402	1
31	3 m liner Al. Ø 1,2/1,6 (Teflon white)	134.070.302	1
31	4 m liner Al. Ø 1,2/1,6 (Teflon white)	134.070.402	1

*Supplied as standard

Options and Accessories

Options and Accessories

Remote Control RC20	Hand Pocket Pendant for PowerMaster PLUS 320SP	W4000000
Remote Control HR911	Full Control Panel for PowerMaster PLUS 400SP/500SP	W4000100
Water Recirculator	For PowerMaster PLUS 320SP	W4001301
Mobile Car Trolley	For PowerMaster PLUS 320SP	W4000300
Swivel Unit K14	For PowerMaster PLUS 400SP/500SP	W4001000
MIG/TIG Coolant 5L	For PowerMaster PLUS 400SP/500SP	W4001400
5m 70mm Interconnection	For PowerMaster PLUS 400SP Air/Liquid-Cooled	W4000503
5m 95mm Interconnection	For PowerMaster PLUS 500SP	W4000607
10m 70mm Interconnection	For PowerMaster PLUS 400SP Air-Cooled	W4000401
10m 70mm Interconnection	For PowerMaster PLUS 400SP Liquid-Cooled	W4000501
10m 95mm Interconnection	For PowerMaster PLUS 500SP	W4000601
TIG Kit	For PowerMaster PLUS 320SP	W4011601
TIG Kit	For PowerMaster PLUS 400SP/500SP	W4011600

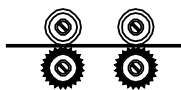


Push/Pull Torches

Digital Push-Pull torch 8m Air Cooled	For PowerMaster PLUS 320SP/400SP Air-Cooled	ML3600PM
Push-pull Control Board	For PowerMaster PLUS 320SP/400SP/500SP	W4001500
Non-Digital Push-Pull torch 8m Air Cooled	For PowerMaster PLUS 320SP/400SP Air-Cooled	181P281A80.00
Digital Push-Pull torch 8m Water Cooled	For PowerMaster PLUS 400SP/500SP Liquid-Cooled	MW5400PM

Feed Rolls - 4 Roll Drive System

Description



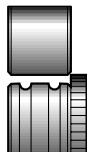
Provides less wire friction in the MIG torch due to the straightening effect of the feed roll system.

Top Drive Roll

Bottom Drive Roll

Wire Type

Style 1



Flat

Double 'U'

Aluminum (Soft) Wire

Style 2

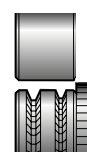


Flat

Double 'V'

Solid (Hard) Wire

Style 3



Flat

Double Knurled 'V'

Flux Cored Wire

0.6/0.8mm Hard Wire V Groove	74238	0.8/0.9mm Cored Wire V Knurl	7977734
1.0/1.2mm Soft Wire U Groove	74796	1.2/1.6mm Hard Wire V Groove	74102
0.8/1.0mm Hard Wire V Groove	74129	1.2/1.6mm Cored Wire V Knurl	74291
1.2/1.6mm Soft Wire U Groove	74797	0.8/0.9mm Soft Wire U Groove	74107
1.0/1.2mm Hard Wire V Groove	74109	1.6/2.4mm Cored Wire V Knurl	7977372