

2014

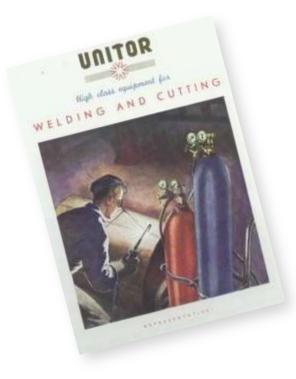
WELDING SOLUTIONS

UNITOR

Part of Wilhelmsen Maritime Services a Wilh. Wilhelmsen group company



Unitor – more than 100 years experience in the welding business



- Long track record of innovation in welding solutions
- Unitor range today consist of equipment adapted to the marine environment (durable, safe, easy to use)
- Equipment designed to tackle a wide range of maintenance tasks – from pipe repair to cold repair. Or from hand rails repair to cutting.





Welding and hot repair work



- Hot work (welding, cutting and brazing) is a vital part of a vessel's maintenance program
- Hot work can cause accidents on board if necessary precautions are not taken
- WSS supply a range of safe, durable and robust welding equipment that is standardised and easy to use
- Support is available from one of the many WSS welding ambassadors





High performance. Improved safety. Controlled Cost. The Unitor welding solution





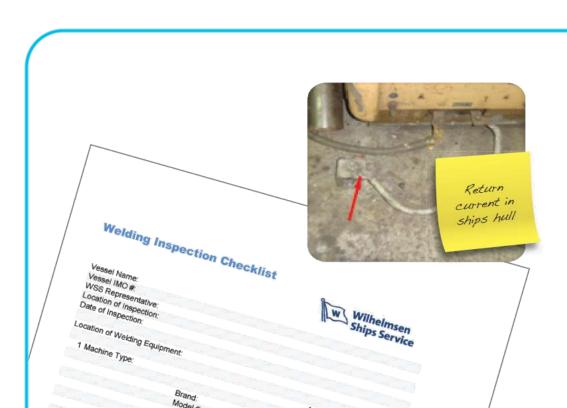


Why is safety important?

Safe welding, we believe, is effective welding, and effective welding leads to *greater cost control* - keeping downtime for repairs to an absolute minimum, and *reducing the risks* to crew, cargo and vessel.

We are introducing **welding safety inspection** service, a confidential assessment of the safety and operational conditions of welding and gas equipment onboard.







Unitor welding machine range

Compact and lightweight

for ease of use onboard, excellent performance-to-weight ratio

Easily Transportable

Dedicated trolleys and undercarriages to further improve mobility

TP Total Protection

To prevent machine faults and breakdowns, the machines are fitted with a Total Protection device that protects against voltage peaks and phase fall out

Voltage reduction device

To prevent accidents due to electric shock



THE ONLY WELDING MACHINES IN THE MARKET **DESIGNED SPECIFICALLY** FOR THE MARITIME INDUSTRY





Safety and quality. Always inseparable.



The Unitor range today represents the most

DURABLE, SAFE AND ROBUST

equipment available.



What is unique with Unitor welding machines?

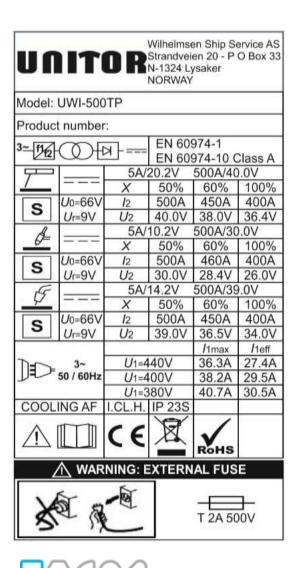






What is unique with Unitor welding machines?





All new Unitor welding machine range is fitted with:

TP Total Protection function that prevents damage to the machine in the event of primary voltage to high or a phase fallout.

VRD Voltage Reduction Devise gives Open Circuit Voltage OCV (touchable voltage) less than 10V for the entire machine range makes the machines safe to work with and in compliance to rules and regulations.

AS 1674.2-2007 Standard: All Unitor welding machines conforms to AS 1674.2-2007 Safety in welding and allied processes (Australian Standard). The standard specify DC only and Touchable voltage (arc sensing voltage) max. 35 Volt by the use of Voltage Reduction Devise (VRD)

What is unique with UNITOR welding machines? OPTIMISING PERFORMANCE

	UN	IT	DR				
Ī	Model: UWI-500TP						
h	Produc	t number	:				
	3~ [H2 () [] ===			EN 60974-1 EN 60974-10 Class A			
T	7		5A/20.2V 500A/40.0V				
٨L			X	50%	60%	100%	
X	S	U0=66V	12	500A	450A	400A	
1	3	Ur=9V	U_2	40.0V	38.0V	36.4V	
ſ	A		5A/	10.2V	500A/30	V0.	
	6-		X	50%	60%	100%	
F	S	U0=66V	12	500A	460A	400A	
	Э	Ur=9V	U2	30.0V	28.4V	26.0V	
ſ	F		5A/14.2V 500A/39.0V				
L	4		X	50%	60%	100%	
ľ	S	U0=66V	12	500A	450A	400A	
L	3	Ur=9V	U2	39.0V	36.5V	34.0V	
ſ					/1max	/1eff	
ŀ	D-C	3~	U1=4	40V	36.3A	27.4A	
	1 50 / 60Hz		U1=400V		38.2A	29.5A	
L	<			80V	40.7A	30.5A	
T	COOL	ING	I.CL.H.	IP 23S			
	\triangle		C€	X	RoHS		
	2		NING: E	XTERN	AL FUS	E	
	So the			T 2A 500V			

CE Conformity European

Welding machine is built according to Directives & Standards

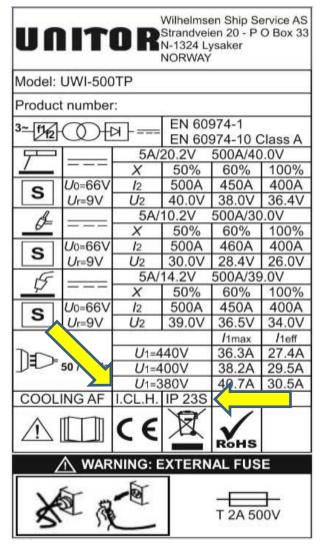
EN 60974-10 European Norm for electromagnetic compatibility.

EN 60974-1 European Norm for arc welding appliance. Passport mark that allows goods to pass freely into and throughout Europe

S Marking

Indicate that Unitor Welding machine are suitable for use in areas with increased electric shock hazard. Important when work takes place in seawater environment and where ships hull is used as returned conductor

What is unique with UNITOR welding machines? OPTIMISING PERFORMANCE



Ingress Protection IP23

The Unitor machines ability to protect against objects and liquid

Unitor welding machines are according to IP23 reg. Protection degree of the casing according to EN 60529

2: Protection against object not greater than 80mm in length and 12mm in diameter

3: Protection from sprayed water at an angle of 60° from vertical

Thermal insulation class

I.CL.H= Thermal class of the insulating materials and insulation systems. *resi*stant up to 180°C.



IP Ingress Protection



EN 60529 outlines an international classification system for the sealing effectiveness of enclosures of electrical equipment against the intrusion into the equipment of foreign bodies (i.e. tools, dust, fingers) and moisture. This classification system utilizes the letters "IP" ("Ingress Protection") followed by two or three digits. (A third digit is sometimes used.

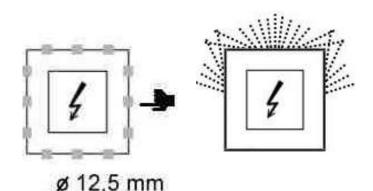
An "x" is used for one of the digits if there is only one class of protection; i.e. IPX4 which addresses moisture resistance only)



IP Ingress Protection

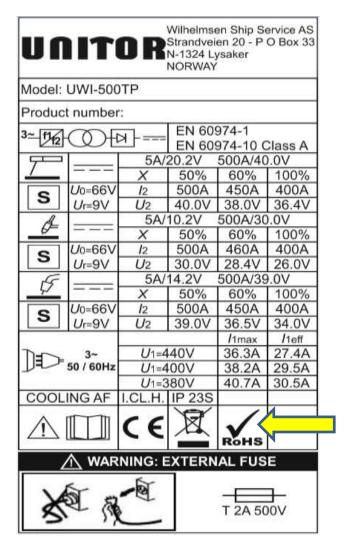
IP Solid Intrusion (Object Size)6 IP0X none IP1X >= 50mm (approx. 2") IP2X >=12mm (approx. 1/2") IP3X >=2.5mm (approx. 1/10") IP4X >=1.0mm (approx. 1/25") IP5X dust proof IP6Xdust tight

IP Liquid Intrusion (Water Direction & Force) IPX0 none IPX1 vertical drops IPX2 drops up to 15° to vertical IPX3 spray up to 60° to vertical IPX4 splash proof in all directions IPX5 jet-water proof in all directions IPX6 powerful jet-water proof in all directions IPX7 temporary immersion IPX8 continuous immersion



What is unique with Unitor welding machines?





Non Asbestos declaration

This confirm that no asbestos are used in the Unitor welding machines

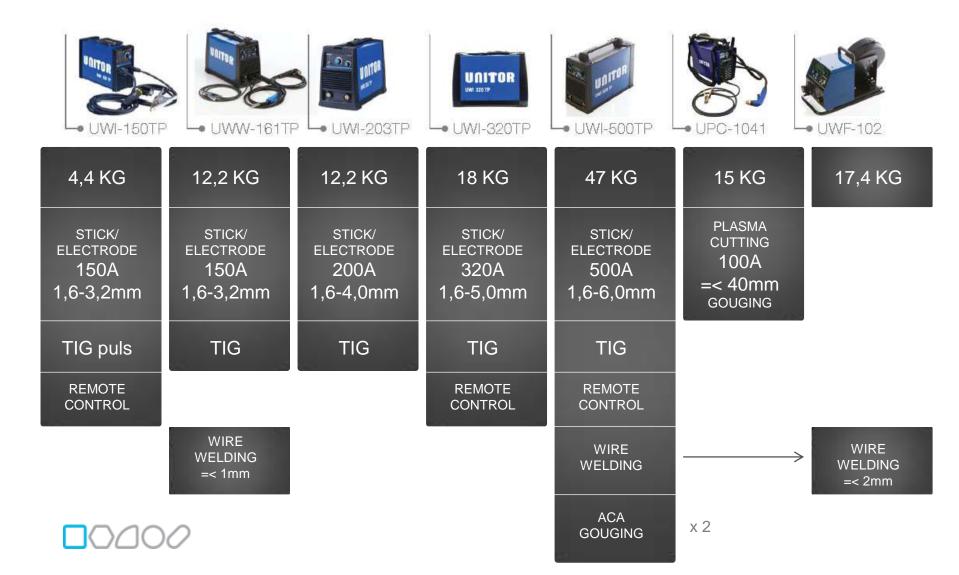
Rohs declaration

Unitor Welding Machines conforms to RoHS2 directive restricts the use of specific hazardous or restricted substances in new electrical and electronic equipment put on the market in the European Union after July 1, 2006.

On July 1, 2011, the European Union Published the RoHS2 (Recast Directive)



Engineered quality



UWI-150TP



Key product information:

- Product no. 150150
- Replacing UWI-150 Autoline (product no. 709659)
- □ 150 A (3,2mm electrode)
- Electrode ,TIG welding, TIG pulse
- 230 V 1 phase 50/60Hz
- Weight : 4,4 kg
- Remote control output
- Comes with suitcase for electrode holder and return clamp





UWI 150 TP

TIG Equipment for UWI-150 TP





TIG-Torch T-150 with DIX 25	150000
Remote Amp control 3m	150151
Argon Regulator w/ flow meter	510010
Gauge Gard	619379
Accessories kit for TIG welding	607810
Needle valve	597310
Flow control meter for torch	597328
TIG welding gloves 6 pairs	632794











Dimensions: UWI 150 TP

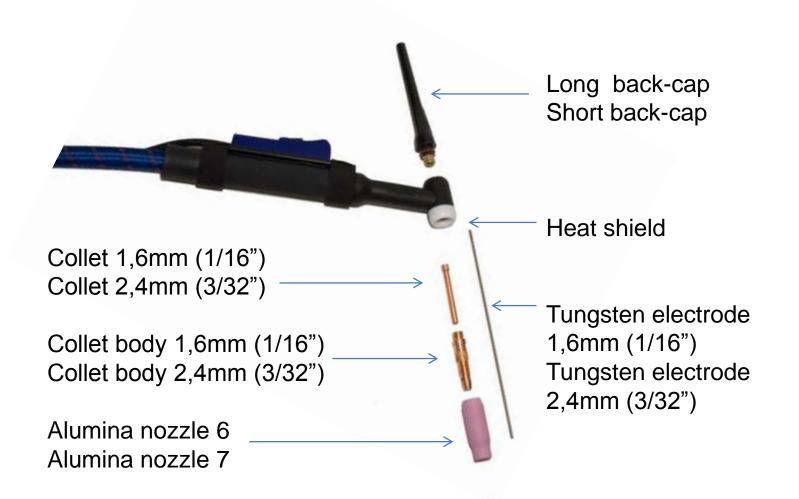




Weight : 4,4 kg









Accessories



Gas hose black ¼" per m Hose clips, one ear, bag of 10 Hose joint ¼" RH, screw type Pincher tool for ear clamps







New quick connectors for argon





Quick coupling argon Hose to hose 6mm (1/4") Black for argon, AR/CO2 Product no. 320201

Quick coupling argon Hose to hose 6mm (1/4") Black for argon, AR/CO2 Product no. 320202



Rods for TIG welding



IMS-210 Icromo-216 18/8 Mo-221 Iduplex-222 Icuni-30-239 Ialbro-237 MF Iflux-238 PF

2,0mm (5/64") 097-604850 2,5mm (3/32") 097-305532 2,0mm (5/64") 097-602979 2,0mm (5/64") 097-725309 2,5mm (3/32") 097-335547 2,4mm (3/32") 097-519736 097-603092











UWW-161TP

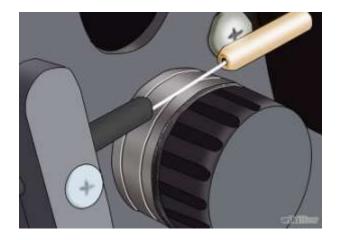




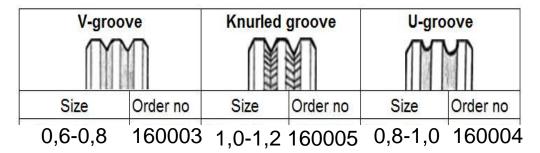


Drive rolls







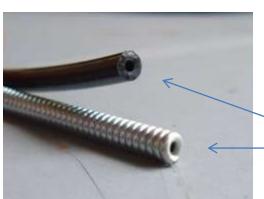


Outgoing wire drive tube Order no 161164



MIG Torch M-161





590075 613756





Product no. Contact tips				
711986	10 tips 0,6mm			
711994	10 tips 0,8mm			
712000	10 tips 1,0mm			
712018	10 tips 1,2mm			

TIG Equipment for UWW-161 TP





TIG-Torch T-161w/Euro connector	160010
Argon Regulator w/ flow meter	510010
Gauge Gard	619379
Accessories kit for TIG welding	607810
Needle valve	597310
Flow control meter for torch	597328
TIG welding gloves 6 pairs	632794









UWI-203 TP





Key product information

- Product no. 203203
- Upgraded to TP version
- 200 A (4,0 mm electrode)
- Electrode, TIG
- □ 380-440 V 3 phase 50/60Hz
- Weight : 12,2 kg
- Comes with electrod holder and return clamp

UWI 203 TP - Dimensions





Weight: 12,2 kg





TIG Equipment for UWI-203 TP





TIG-Torch T-200 with DIX 70	200000
Argon Regulator w/ flow meter	510010
Gauge Gard	619379
Accessories kit for TIG welding	607810
Needle valve	597310
Flow control meter for torch	597328
TIG welding gloves 6 pairs	632794











UWI 320 TP





Key product information

- Product no 320320
- Replace UWR-303 (product no 670430)
- □ 320 A (5,0 mm electrode)
- Electrode ,TIG welding
- □ 380-440 V 3 phase 50/60Hz
- Weight : 18 kg
- Remote ctontrol output



UWI 320 TP - Technical features



Remote control output



Total protection function: Phase detector





Dimensions





Weight: 18 kg





Basic accessories kit for UWI 320 TP





Product no.670406 Electrode holder assembly 400 A Dix 70, 3m cable 50mm2 Return clamp assembly 400A Dix to, 3m cable 50mm2 Remote amp.control 8m Welding gloves Face shield with flip up front shade 11 glass Chipping hammer steel Wire brush









TIG Equipment for UWI-320 TP





TIG-Torch T-200 with DIX 70	200000
Argon Regulator w/ flow meter	510010
Gauge Gard	619379
Accessories kit for TIG welding	607810
Needle valve	597310
Flow control meter for torch	597328
TIG welding gloves 6 pairs	632794



















Trolley and skid





Trolley E10/M10 for TIG/Wire welding

Key product information

- Transport trolley with lifting certificate for either UWW-161TP, UWI-203TP, UWI-320TP and up to 2 10L cylinders.
- Surface treatment: Spay coating
- Safe working load: 70 kg
- TuV Test Load: 140 kg
- Net weight: 25,5 kg

Skid for UWW-161TP, UWI-203TP and UWI-320TP

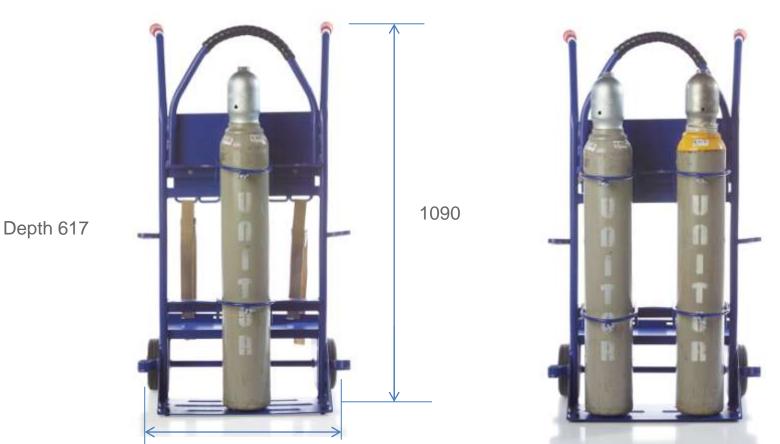
- Product no.764489
- Protects the welding machine towards mechanical damage
- Net weight: 3 kg





Trolley - dimensions





575

 $\Box O \Box O$

Weight: 25,5 kg













UWI-203 TP

UWI-320 TP





UWW-161 TP





UWI 500 TP





- Product no. 500500
- Replace UWI-400/UWR-852 (product no 670398/735860)
- □ 500 A (6,0 mm electrode)
- Electrode, cellulose electrode
- ACA, TIG, Wire Welding,
- □ 380-440 V 3 phase 50/60Hz
- Weight : 47kg
- Remote control output
- IP 23 S



UWI 500 TP - dimensions



510



Weight: 47 kg

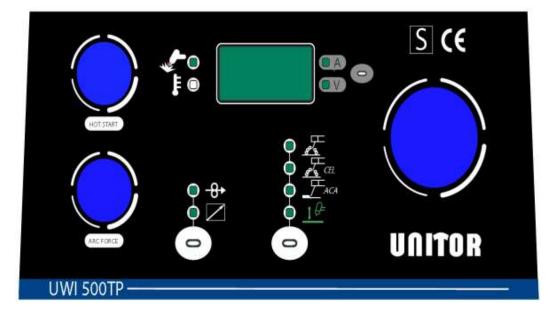
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Special features – UWI 500 TP





Arc force

Arc force increases the short circuit amperage, allowing the welder to use very short arc without sticking the electrode in the melt pool.

Useful when welding with stick electrodes at low amperages.

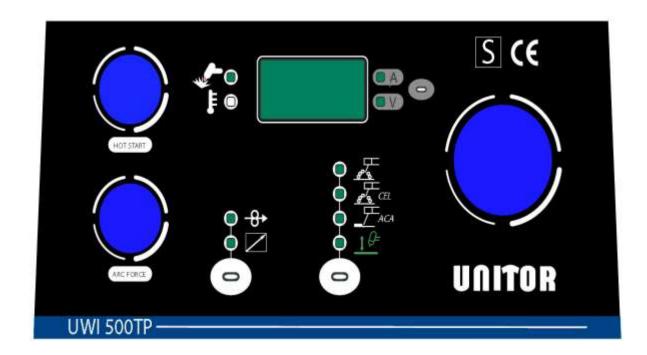
Hot start

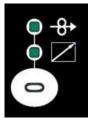
Increased hot start makes arc striking easier and reduces the possibility for electrode sticking.



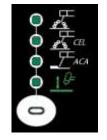


Special features – UWI 500 TP





Wire feeder remote control for electrode holder or TIG torch



Normal stick electrodes Cellulosic stick electrodes Air Carbon Arc Gouging TIG welding



Undercarriage for UWI-500 TP







- Product no 500103
- For fast and easy transport of welding machine to worksite.
- □ Foldable handles to avoid accidents.
- Shelf for storing welding electrodes and accessories.
- Safe and fast ways of getting all equipment to the work site in one go.
- Surface treatment: Spay coating
- Net weight: 20Kg











Basic accessories kit for UWI-500TP





- Product no 670406
- Electrode holder assembly 400 A Dix 70, 3m cable 50mm2
- Return clamp assembly 400A Dix to, 3m cable 50mm2
- Remote amp control 8 m
- Welding gloves
- Face shield with flip up front shade 11 glass
- Chipping hammer steel
- Wire brush

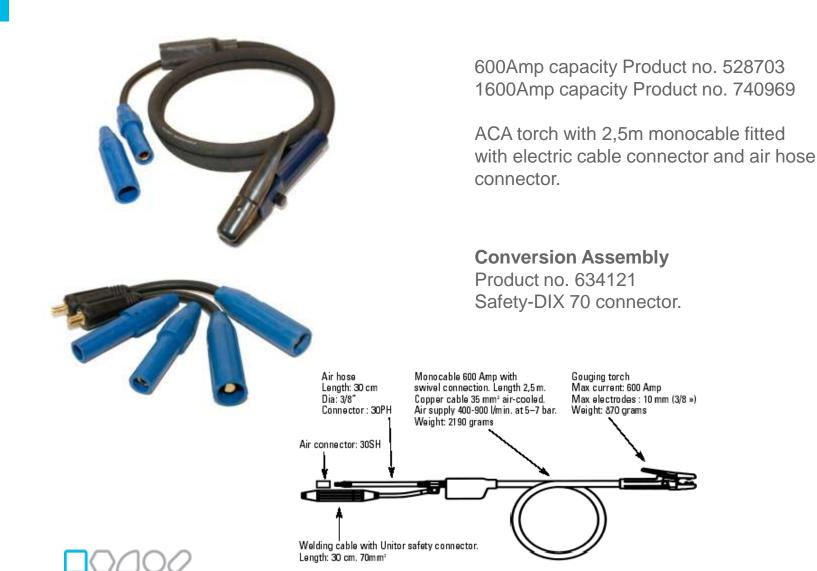






Torch for air carbon arc gouging





Tig equipment for UWI-500 TP





TIG-Torch T-200 with DIX 70	200000
Argon Regulator w/ flow meter	510010
Gauge Gard	619379
Accessories kit for TIG welding	607810
Flow control meter for torch	597328
TIG welding gloves 6 pairs	632794

Trolley for 50 I shielding gas cylinder

- Product no. 778147
- Transport trolley with lifting certificate for 1pc 40 or 50L cylinder.
- Safe and fast way of getting cylinder to the work site.
- Surface treatment: Spay coating
- Safe working load: 100Kg
- TuV Test Load: 200Kg
- Net weight: 13,5Kg

UWF-102 Wire Feeder





- Connects to UWI-500 TP
- □ For all wire welding processes
 - Gas metal arc welding
 - Flux cored arc welding







UWF-102 Wire Feeder

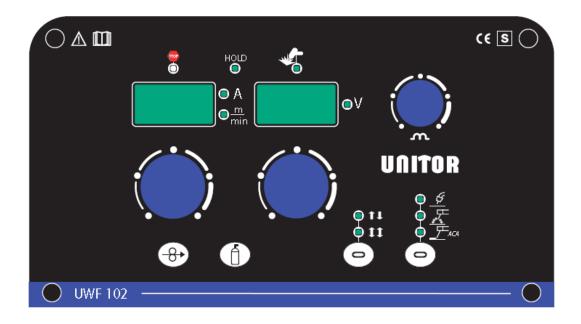
Comes with skid and 4m welding cable 4m shielding gas hose 4m control cable







UWF-102 Wire Feeder



Adjust inductance

Welding with a short arc lower inductance will give crisper arc and easier arc start. The bead will become taller and narrower.

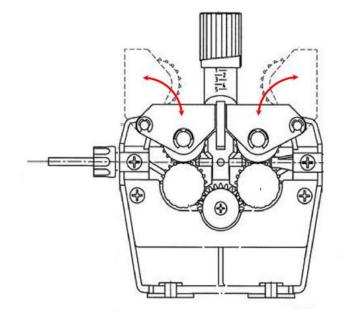
More inductance will give a softer arc and flatter wider bead appearance.

Too much inductance will give difficult arc starts. Low thermal conductivity materials like stainless steel need more inductance to get acceptable wetting with short arc.



Drive rolls



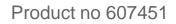


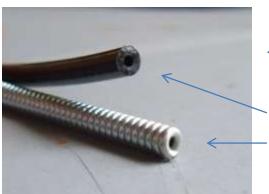


V-groo	ve M	Knurled	groove	U-gro	ove
Size	Order no	Size	Order no	Size	Order no
0,8 - 1 <mark>,</mark> 0mm	77 <mark>81</mark> 92	0,8 - 1,0mm	778195	0,8 - 1,0mm	778197
1,2 - 1, <mark>6</mark> mm	778194	1,2 - 1,6mm	778196	1,2 - 1,6mm	778198



Mig torch T-400





594606 594614 607457

Teflon Liner Steel Liner 0,8-1,2mm Steel Liner 1,4-2,0mm



Product no. Contact tips			
594622	10 tips 0,8mm		
594630	10 tips 1,0-1,2mm		
607455	10 tips 1,2-1,4mm		
607456	10 tips 1,6-2,0mm		

Contact tips must be according to wire size. They need to be replaced regularly



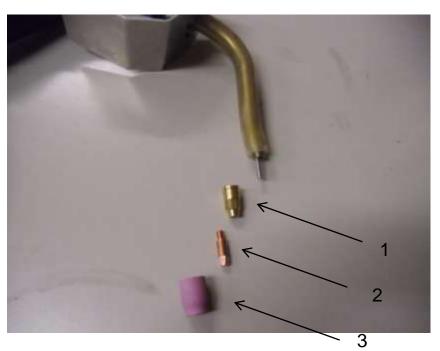
ELECTRIC ARC WELDING & CUTTING

Self shield torch T-350 w/3 m cable



Product no. 750179





750185
750181
750182
750184



Wire welding equipment for UWF-102





- Product no. 778147 (replaces176008)
- Transport trolley with lifting certificate for 1pc 40 or 50L cylinder.
- Safe and fast way of getting cylinder to the work site. Surface treatment: Spay coating
- Safe working load: 100Kg
- TuV Test Load: 200Kg
- Net weight: 13,5Kg

Wire Torch T-400 w/3m cable	607451	
Self shield Torch T-350 w/3m cable75017		
Argon Regulator w/ flow meter	510010	
CO2 Regulator w/flow meter	510012	
Flow control meter for torch	597328	
TIG welding gloves 6 pairs	632794	
Control cable 25m	500104	





Accessories for extension between UWI-500 TP OPTIMISING PERFORMANCE and UWF-102

Control cable 25m for UWI-500TP	500104
Welding Cable 50mm2 per m	175844
Cable connector DIX 70 Male/Female	632893
Gas Hose 1/4" Black for shielding gas per.r	m 576157
Quick Coupling shielding gas hose to hose	320201
Ear clamp ¼" hose, set of 10 pcs	768416
Pincher tool for ear clamps	768507









Wires for SMAW & FCAW

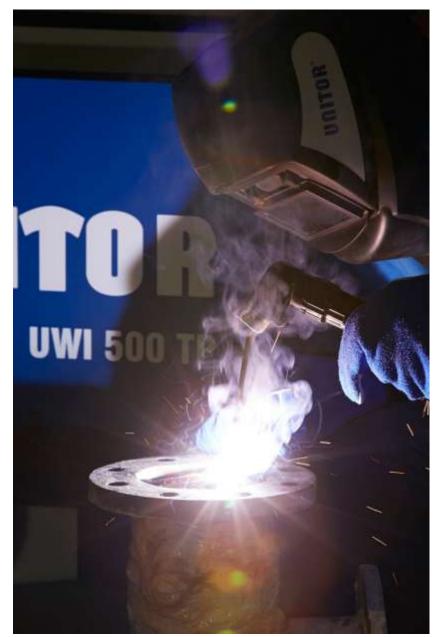
GPS-W-200	0,8 mm (0,030") 090-590117
MS-W-201	0,8 mm (0,030") 090-160100
Coreshield 8	1,6 mm (0,063") 090-750187
S-316-M-GF-221	0,9 mm (0,035") 090-597518
S-309-M-GF-222	0,9 mm (0,035") 090-309000*
lalbro-W-237	0,8 mm (0,030") 090-590091
Icuni-W-239	0,8 mm (0,030") 090-590109
Alumag-W-235	1,0 mm (0,040") 090-590083
Abratech-W-230	1,6 mm (0,060") 090-230230



* 309000 Replace 606041



ELECTRIC ARC WELDING & CUTTING







UPC-1041





- Product no. 404100
- Updated with new features
- Cutting and Gouging up to 40mm
- Supply pressure 6-7 bar
- □ Air consuption 190 L/min
- □ 440/380 V 3 phase 50/60Hz
- Weight : 15 kg

UPC-1041

Wilhelmsen Ships Service

<image>

Plasma cutting advantages

Cutting and gouging all types of metals using the available compressed air onboard. Superior to gas cutting as it also cuts stainless steel, cast iron, copper and aluminum. Reduced consumption of oxygen and acetylene

Best performance to weight ratio on the market. Compact and lightweight to move around onboard.

User friendly and easy to operate

Cutting capacity up to 40mm steel



UPC-1041







Direct torch connection (no quick connection) eliminating problems with twisting the torch connection on the machine side leading to short circuit.

Power switch with built in 32 A fuse, eliminating problems due to connecting to wrong size fuse

Active fan control (fan only running when there is a need) that reduce amount of dust and dirt inside the plasma cutter thereby eliminating the risk of short circuiting.

Double coated electronics further improving reliability

Sturdy cover plate cabinet that also protects the filter regulator. Robust metal pressure regulator with automatic water trap.

New ergonomic plasma torch with safety switch







A welder must protect himself against the danger of electric shocks, fume inhalation, burns, ultra-violet rays and bits of welding slag in the eyes.

He must also protect the work environment towards fire or explosions





Protective clothing

Pos.	Product	Pcs/set	Product no.
Α	Welders gloves for electric arc welding	6 pairs.	196-632786
В	TIG and gas welding gloves	6 pairs.	196-632794
	Working gloves	12 pairs	196-633057
С	Leather jacket, Large for welding	pcs	196-510438
С	Leather jacket, Extra large for welding	pcs	196-510446
D	Leather trousers with belt	pcs	196-633016
E	Leather cuffs	pair	196-175935
F	Arm protector	pair	196-184184
G	Leather apron	pcs	196-510420
Н	Leather spats	pair	196-510453
Ι	Electrode quiver for max 2 kg electrodes	pcs	196-633040









EN 12477:2001 Protective gloves for welders









Working Gloves

TIG Gloves





Fresh Air Face Shield with Auto Vision with Adjustable Shade 9-13, and head band Product no. 196-767000 89/686/EEC category 3 EN 12941:2009

Auto Vision Face Shield with Adjustable Shade 9-13, and head band Product no. 196-767001 89/686/EEC category 2 EN 175:1997-08

Safety Helmet with Flip Vision Face Shield with Flip up frame, head band and filter shade 11 glass Product no. 619114 According to standard EN175:1997

Flip Vision Face Shield with Flip up frame, head band and filter shade 11 glass Product no. 709485 According to standard EN175:1997

Face Shield with handle and and filter shade 11 glass Product no. 709485 According to standard EN175:1997













Guide to arc welding glasses

Amperage	Filter Shade	Quantity in Unit	Product number unit
< 20 A	8–9	5 sets	196-633230
20–40 A	9–10	5 sets	196-633248
40–80 A	10	5 sets	196-633255
80–175 A	11	5 sets	196-633263
175–300 A	12	5 sets	196-633271
300–500 A	13	5 sets	196-633289
Safety Glass		10 pcs	196-633222
Protection Glass		10 pcs	196-633214



Higher amperage require darker filter shade



Work site protection









Welder Spatter Blanket Product no.646067 EN-ISO 25980: 2012 Welding Curtain Product no.735878 EN 1598 Fume Clean 230 Welding Fume Extractor, Product no.735878





Alexander Fomin

Account manager West Russia Wilhelmsen Ships Service St Petersburg, Russia | Mobile: +7 921 8561514 | Tel: +7 812 4490443 | Fax: +7 812 7030274 alexander.fomin@wilhelmsen.com | www.wilhelmsen.com/shipsservice Introducing **Active Solutions**. Combining the right products with competent people to ensure optimal marine chemical performance for your vessels. New and advanced catalogue: <u>wssproducts.wilhelmsen.com</u>



MARINE PRODUCTS MARINE CHEMICALS SAFETY MARITIME LOGISTICS SHIPS AGENCY

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