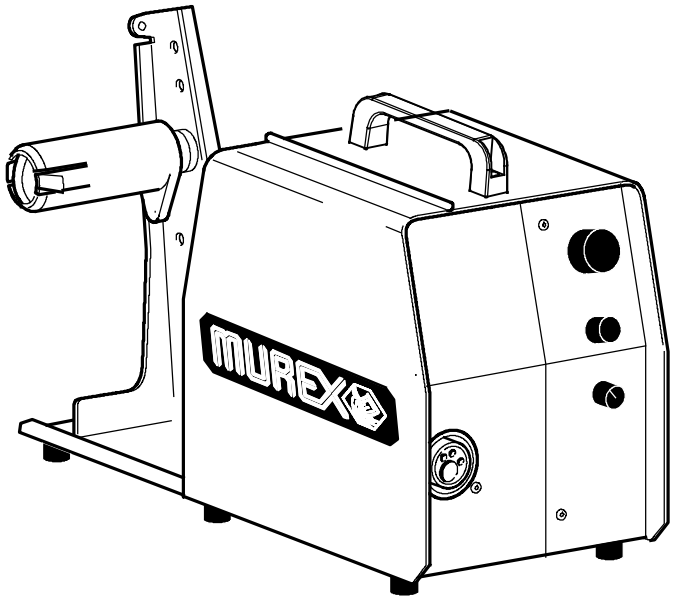
GB

Transmatic 4C



Instruction manual and spare parts list

0459 706 074 090514

Valid for serial no. 435-xxx-xxxx

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1 DIRECTIVE

DECLARATION OF CONFORMITY

Murex Welding Products Ltd, EN8 7TF England, declares that Wire feed unit Transmatic 4C from serial number 435 onwards, conforms to standard IEC/EN 60974-5, in accordance with the requirements of directive (73/23/EEC) and appendix (93/68/EEC) and standard EN 50199 in accordance with the requirements of directive (89/336/EEC) and appendix (93/68/EEC).

On behalf of Murex Welding Products Ltd.
Laxå 2005-02-01

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Manufactured by ESAB Welding Equipment AB.
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2 SAFETY

Users of a welding equipment have the ultimate responsibility for ensuring that anyone who works on or near the equipment observes all the relevant safety precautions. Safety precautions must meet the requirements that apply to this type of welding equipment. The following recommendations should be observed in addition to the standard regulations that apply to the workplace.

All work must be carried out by trained personnel well-acquainted with the operation of the welding equipment. Incorrect operation of the equipment may lead to hazardous situations which can result in injury to the operator and damage to the equipment.

1. Anyone who uses the welding equipment must be familiar with:
   - its operation
   - location of emergency stops
   - its function
   - relevant safety precautions
   - welding
2. The operator must ensure that:
   - no unauthorized person is stationed within the working area of the equipment when it is started up.
   - no-one is unprotected when the arc is struck
3. The workplace must:
   - be suitable for the purpose
   - be free from drafts
4. Personal safety equipment
   - Always wear recommended personal safety equipment, such as safety glasses, flame-proof clothing, safety gloves.
   - Do not wear loose-fitting items, such as scarves, bracelets, rings, etc., which could become trapped or cause burns.
5. General precautions
   - Make sure the return cable is connected securely.
   - Work on high voltage equipment **may only be carried out by a qualified electrician.**
   - Appropriate fire extinquishing equipment must be clearly marked and close at hand.
   - Lubrication and maintenance must **not** be carried out on the equipment during operation.

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WARNING

Arc welding and cutting can be injurious to yourself and others. Take precausions when welding. Ask for your employer's safety practices which should be based on manufacturers' hazard data.

ELECTRIC SHOCK - Can kill

- Install and earth the welding unit in accordance with applicable standards.
- Do not touch live electrical parts or electrodes with bare skin, wet gloves or wet clothing.
- Insulate yourself from earth and the workpiece.
- Ensure your working stance is safe.

FUMES AND GASES - Can be dangerous to health

- Keep your head out of the fumes.
- Use ventilation, extraction at the arc, or both, to take fumes and gases away from your breathing zone and the general area.

ARC RAYS - Can injure eyes and burn skin.

- Protect your eyes and body. Use the correct welding screen and filter lens and wear protective clothing.
- Protect bystanders with suitable screens or curtains.

FIRE HAZARD

- Sparks (spatter) can cause fire. Make sure therefore that there are no inflammable materials nearby.

NOISE - Excessive noise can damage hearing

- Protect your ears. Use earmuffs or other hearing protection.
- Warn bystanders of the risk.

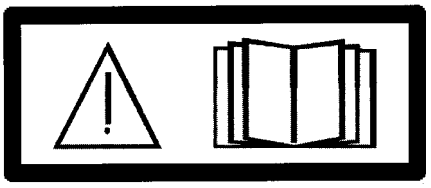
MALFUNCTION - Call for expert assistance in the event of malfunction.

Read and understand the instruction manual before installing or operating.

PROTECT YOURSELF AND OTHERS!

CAUTION!

Read and understand the instruction manual before installing or operating.



We can provide you with all necessary welding protection and accessories.

WARNING!

Do not use the power source for thawing frozen pipes.

CAUTION!

This product is solely intended for arc welding.

3 INTRODUCTION

The **Transmatic 4C** wire feed unit is intended for MIG/MAG welding with the Transweld Challenger 400 power source.

The feed unit can be used together with wire on MarathonPac™, or on wire bobbin Ø 300 mm.

It can be installed either at the power source, suspended above the workplace, on a support arm or on the floor with or without wheel set.

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Accessories for the product can be found on page 20.

3.1 Equipment

The wire feed unit is supplied with connection set (5m), instruction manual and stickers.

4 TECHNICAL DATA

Transmatic 4C	
Power supply	42 V 50–60 Hz
Power requirement	336 VA
Motor current I_{max}	3.5 A
Settings data	
Wire feed speed	1.5–22.0 m/min
Burnback time	0–0.7 s
Gun connection	EURO
Max. diameter wire bobbin	300 mm
Wire dimension	
Fe	0.6–1.6 mm
Ss	0.6–1.2 mm
Al	1.0–1.6 mm
Cored wire	0.8–1.6 mm
Weight	13.2 kg
Dimensions (l x b x h)	569 x 259 x 355 mm
Shielding gas	Gases for MIG/MAG welding
max pressure	5 bar
Maximum permissible load at	
60% duty cycle	365 A
100% duty cycle	280 A
Enclosure class	
basic version	IP2X
with sealed bobbin holder*	IP23
with MarathonPac™	IP23

* Accessories, see page 20.

Enclosure class

The **IP** code indicates the enclosure class, i. e. the degree of protection against penetration by solid objects or water. Apparatus marked **IP2X** are intended for indoor use.

Enclosure class

The **IP** code indicates the enclosure class, i. e. the degree of protection against penetration by solid objects or water. Equipment marked **IP23** is designed for indoor and outdoor use.

Duty cycle

The duty cycle refers to the time as a percentage of a ten-minute period that you can weld at a certain load without overloading. The duty cycle is valid for 40°C.

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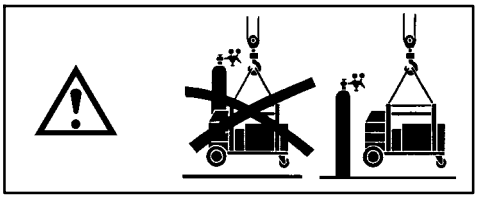
5 INSTALLATION

The installation must be executed by a professional.



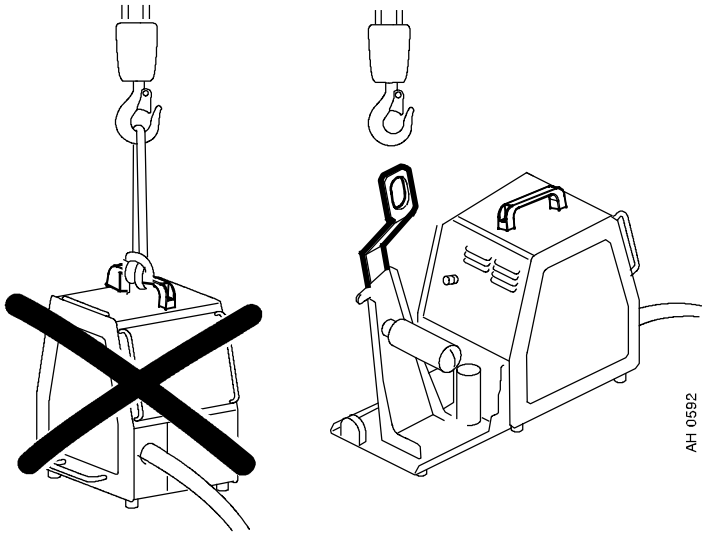
CAUTION!

This product is intended for industrial use. In a domestic environment this product may cause radio interference. It is the user's responsibility to take adequate precautions.

WARNING!

When welding in an environment with increased electrical danger, only power sources intended for this environment may be used. These power sources are marked with the symbol S

5.1 Lifting instructions



Order number for lifting eyelet can be found on page 20.

Note! If another mounting device is used, this should be insulated from the wire feed unit.

6 OPERATION

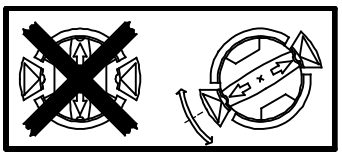
General safety regulations for the handling of the equipment can be found on page 3. Read through before you start using the equipment!

WARNING!

Assure that the side panels are closed during operation.

WARNING!

To prevent the reel from sliding off the hub: Lock the reel in place by turning the red knob as shown on the warning label attached next to the hub.



WARNING!

Rotating parts can cause injury, take great care.

WARNING!

There is a risk of tipping if the wire feed unit is fitted with a counterbalance arm. Secure the equipment, especially if used on an uneven or sloping surface.

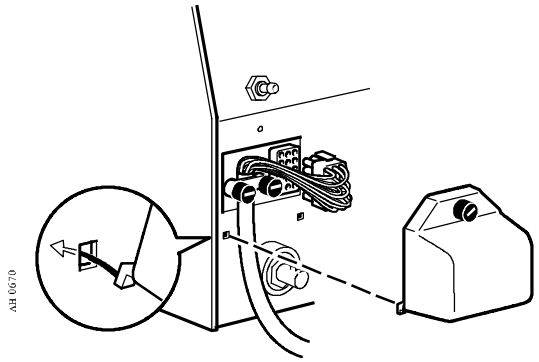
NOTE! *When moving the equipment use intended handle. Never pull on the gun.*

6.1 Connections and control devices

Connecting control cable

When connecting the control cable, it is important to secure the cable with the load–removing grommet.

Ensure that the cover is properly screwed into place.



1 Wire feed speed control

2 Switch for activation of 2/4 stroke, wire inch or gas purging

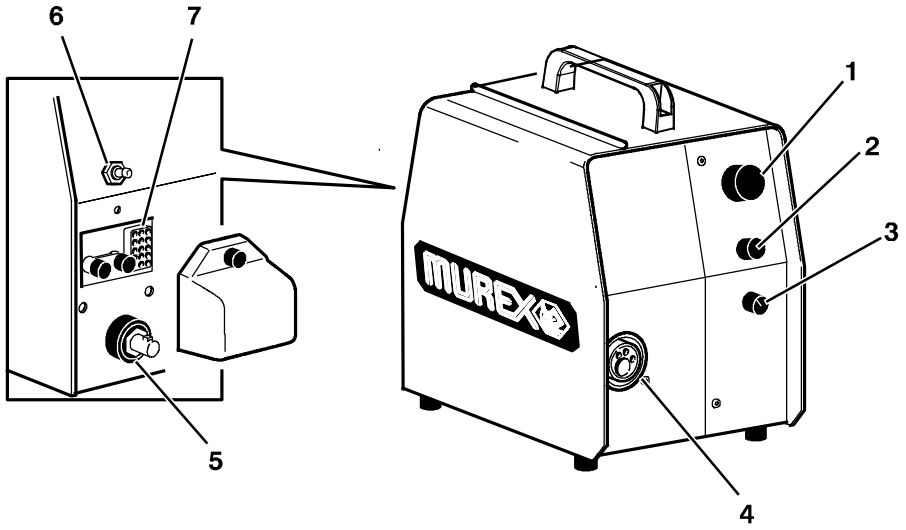
3 Burnback control

4 Connection for welding gun, (EURO)

5 Connection for welding current from power source, (OKC)

6 Connection for shielding gas

7 Connection for control cable from power source



6.2 Symbol and function explanations

Wire feed speed

This sets the required feed speed of the filler wire in m/minute.

2 stroke

With 2-stroke, the gas flow starts followed by the wire feed when the trigger switch is pressed in. The welding process is concluded when the trigger switch is released, the wire feed stops and the gas stops flowing.

4 stroke

With 4 stroke, the gas flow starts when the trigger switch is pressed in and the wire feed starts when it is released. The welding process continues until the switch is pressed in again, the wire feed stops and when the switch is released the gas stops flowing.

Wire inch

Cold wire feed is used to feed wire without welding voltage and gas flow.

Activation of cold wire feed: press in the trigger switch and the wire feed starts.

Gas purging

Gas purging is used to measure that gas flow or to flush the gas hoses to clean them of any air and moisture before commencing welding. Gas purging is carried out with the voltage and wire feed disabled.

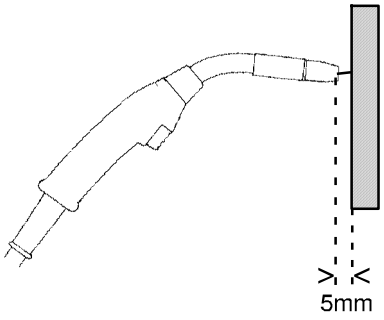
Activation of gas purging: press in the trigger switch and gas purging starts.

Burnback time

Burnback time is a delay between the time when the wire brakes until the time when the power source switches off the welding voltage. Too short burnback time results in a long wire stickout after completion of welding, with a risk of the wire being caught in the weld pool. Too long a burnback time results in a shorter stickout, with increased risk of the arc striking back to the contact tip.

6.3 Wire feed pressure

Start by making sure that the wire moves smoothly through the wire guide. Then set the pressure of the wire feeder's pressure rollers. It is important that the pressure is not too great.



cmek0p10

Fig 1

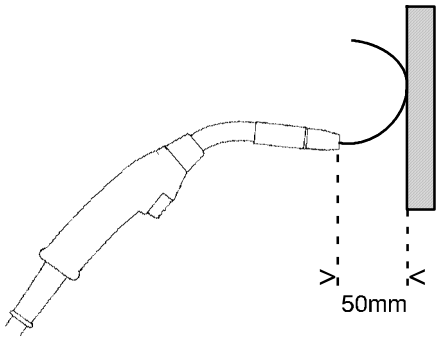


Fig 2

To check that the feed pressure is set correctly, you can feed out the wire against an insulated object, e.g. a piece of wood.

When you hold the gun approx. 5 mm from the piece of wood (fig. 1) the feed rollers should slip.

If you hold the gun approx. 50 mm from the piece of wood, the wire should be fed out and bend (fig. 2).

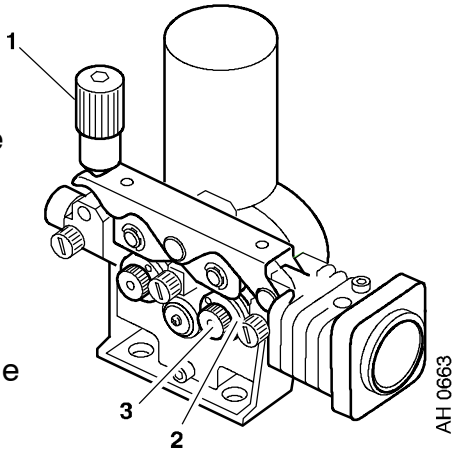
6.4 Replacing and inserting wire

- Open the side panel.
- Disconnect the pressure sensor by folding it backwards, the pressure arm is folded up.
- Straighten out 10–20 cm of the new wire. File away burrs and sharp edges from the end of the wire before inserting it into the wire feed unit.
- Make sure that the wire goes properly into the feed roller's track and into the outflow nozzle or wire guide.
- Fold down the pressure arm and secure it to the pressure sensor.
- Close the side pannel.

6.5 Changing feed roller

- Open the side panel.
- Disconnect the pressure sensor (1) by folding it backwards.
- Disconnect the feed rollers (2) by unscrewing the nuts (3) and pulling out the rollers.

During installation, repeat the above in the reverse order.



Choice of groove in the feed roller

Turn the feed roller with the dimensioning mark for the required groove towards you.

7 MAINTENANCE

Regular maintenance is important for safe, reliable operation.

CAUTION!

All guarantee undertakings from the supplier cease to apply if the customer himself attempts any work in the product during the guarantee period in order to rectify any faults.

7.1 Inspection and cleaning

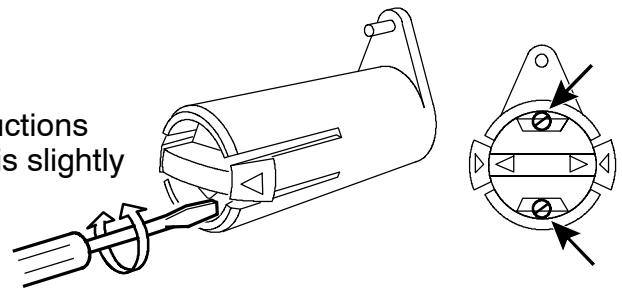
Wire feed unit

Check regularly that the wire feed unit is not clogged with dirt.

- Cleaning and replacement of the wire feed unit mechanism's worn parts should take place at regular intervals in order to achieve trouble-free wire feed. Note that if pre-tensioning is set too hard, this can result in abnormal wear on the pressure roller, feed roller and wire guide.

The brake hub

The hub is adjusted when delivered, if readjustment is required, follow the instructions below. Adjust the brake hub so that wire is slightly slack when wire feed stops.



- **Adjusting the braking torque:**
  - Turn the red handle to the locked position.
  - Insert a screwdriver into the springs in the hub.

  Turn the springs clockwise to reduce the braking torque

  Turn the springs counterclockwise to increase the braking torque. **NB:** Turn both springs through the same amount.

Welding gun

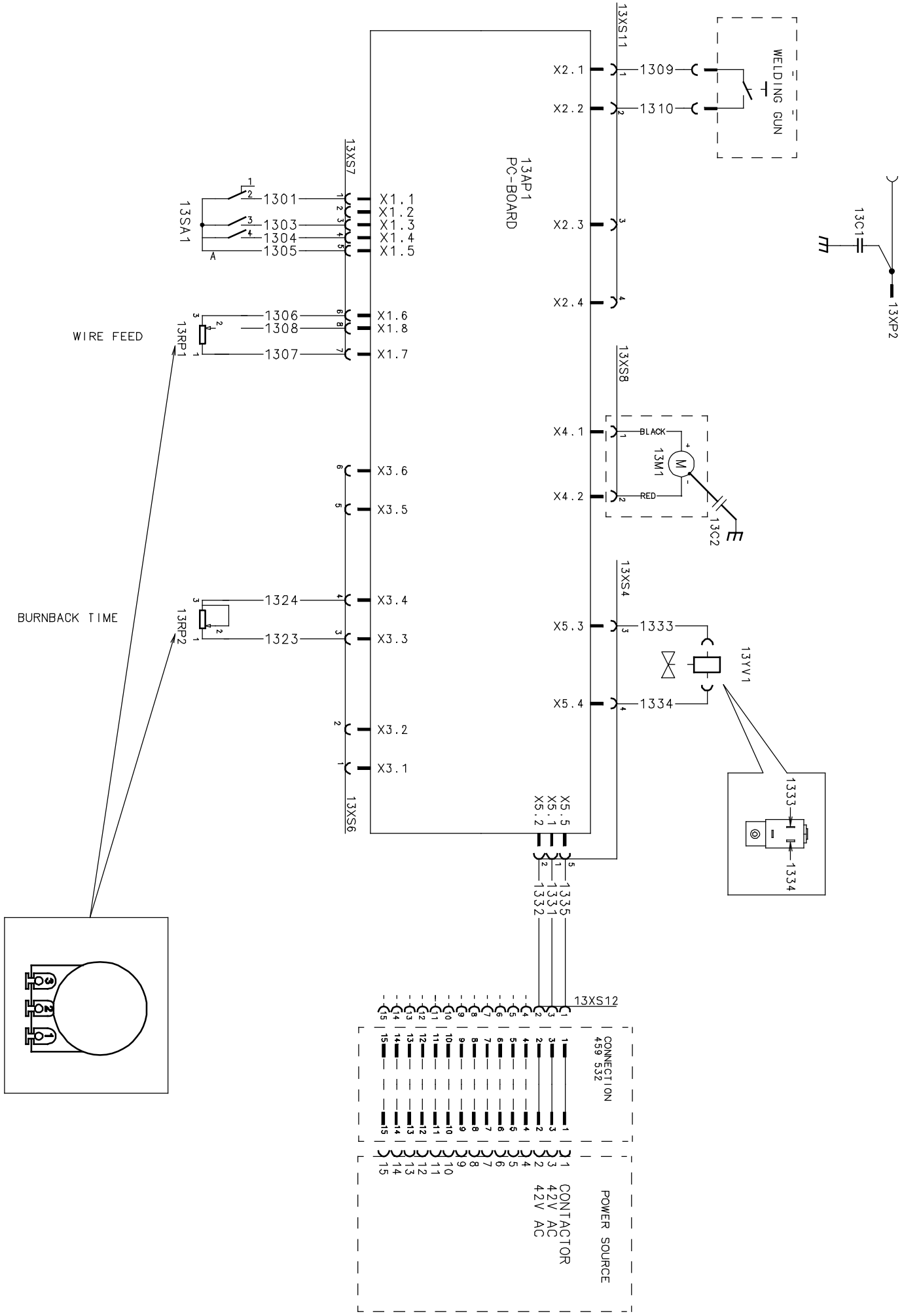
- Cleaning and replacement of the welding gun's wear parts should take place at regular intervals in order to achieve trouble–free wire feed. Blow the wire guide clean regularly and clean the contact tip.

8 ORDERING SPARE PARTS

Repair and electrical work should be performed by an authorized serviceman.
Use only original spare and wear parts.

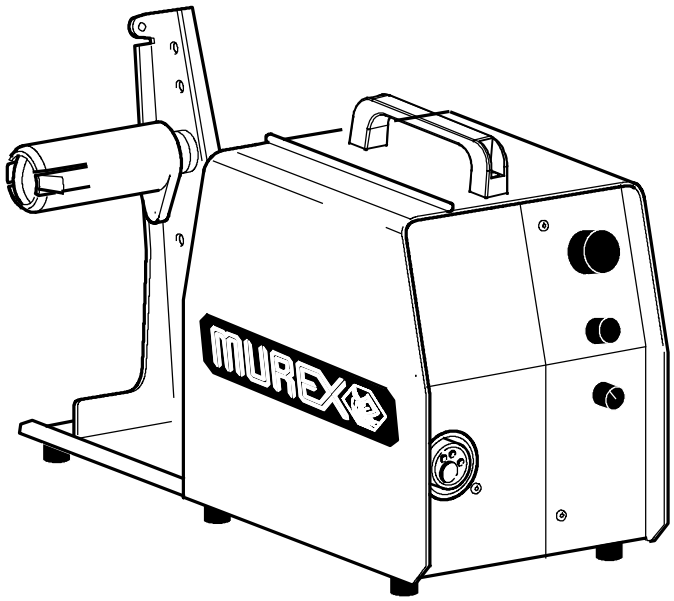
Transmatic 4C is designed and tested in accordance with the international and European standards IEC/EN 60974-5 and EN 50199. It is the obligation of the service unit which has carried out the service or repair work to make sure that the product still conforms to the said standard.

Diagram



Edition 090514

Spare parts list



Valid for serial no. 435-xxx-xxxx

Ordering number

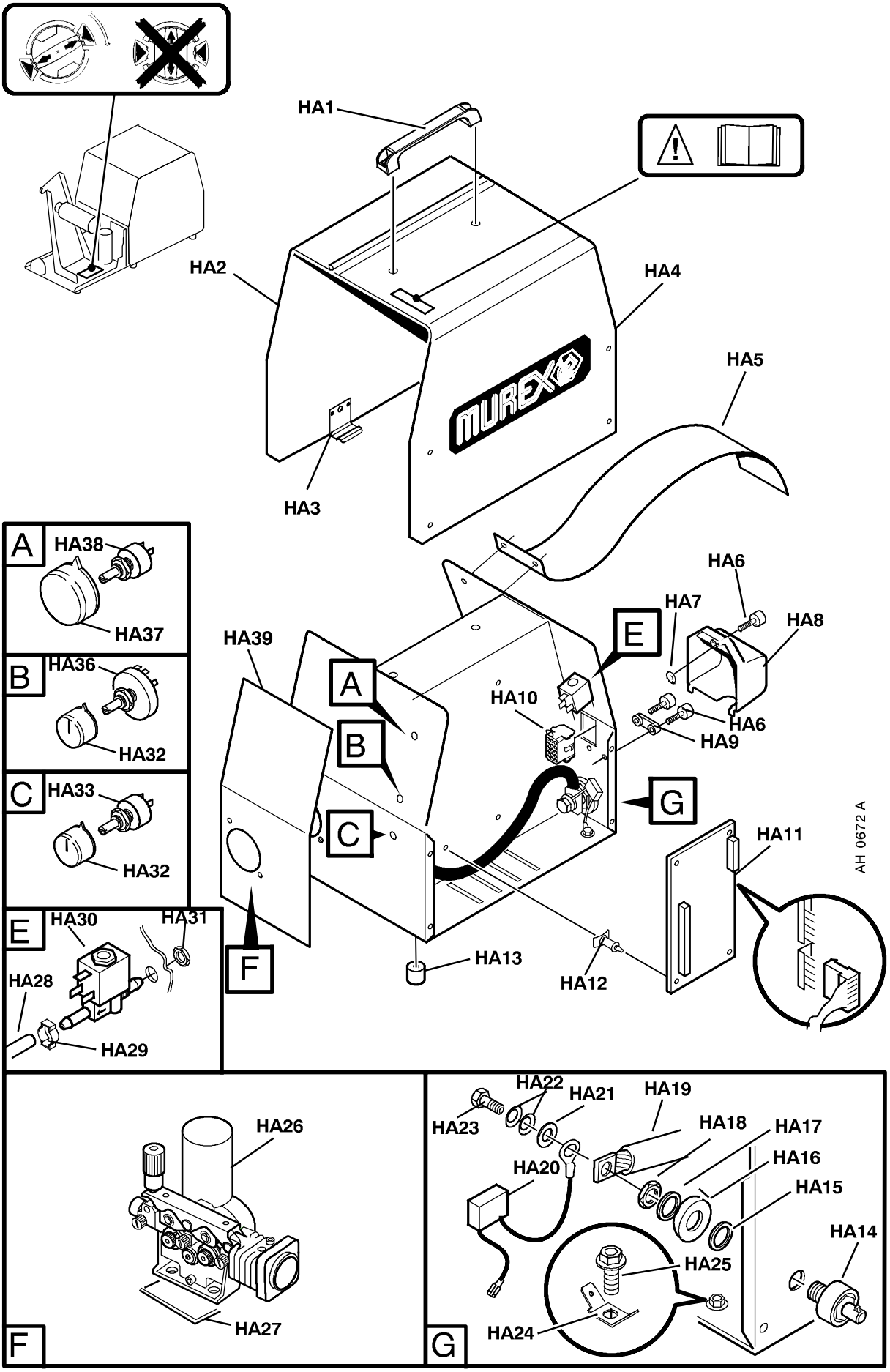
0459 495 884 Transmatic 4C

Spare parts are to be ordered through the nearest MUREX agency. Kindly indicate type of unit, serial number, denominations and ordering numbers according to the spare parts list.

Maintenance and repair work should be performed by an experienced person, and electrical work only by a trained electrician. Use only recommended spare parts.

C = component designation in the circuit diagram

Item	30-4	Ordering no.	Denomination	Notes	C
HA1	1	0459 654 001	Handle		
HA2	1	0459 497 003	Side panel		
HA3	1	0459 547 001	Spring lock		
HA4	1	0459 498 003	Side panel		
HA5	1	0156 633 003	Reel cover		
HA6	3	0458 689 002	Pole screw	M4x25	
HA7	1		O-ring	OR 3.6 x 1.6	
HA8	1	0459 489 001	Connection cover		
HA9	1	0040 936 901	Clamp		
HA10	1	0192 784 016 0192 784 102	Sleeve plug Sleeve	15 pole panel socket For 15 pole socket	13XS12
HA11	1	0487 254 880	Electronic board	Circuit board	13AP1
HA12	4		Circuit board holder	6.3 mm	
HA13	4	0467 695 001	Rubber foot	Ø 20/6.4x3, When ordering: 4 pieces delivered.	
HA14	1	0160 609 881	Welding current terminal		13XP2
HA15	1	0466 325 001	Gasket		
HA16	1		Spacer ring	Included in item HA13	
HA17	1		Washer	Included in item HA13	
HA18	1		Nut	Included in item HA13	
HA19	1	0459 147 881	Cable set		
HA20	1	0467 911 881	Capacitor	0.1 µF 250V with cable lugs	13C1
HA21	1		Washer	Ø 22/10.5x2	
HA22	2		Spring washer	Ø 20/10.2x1.1	
HA23	1		Screw	M10x20	
HA24	2		Flat pin	6.3x0.8	
HA25	4		Screw	M6x8	
HA26	1	0459 000 890	Wire feed mechanism	See page 16	
HA27	1	0459 256 001	Insulating plate		
HA28	1	0456 496 001	Hose, red	L=0.50, Ø 9/5mm, to be ordered per metre	
HA29	1		Hose clamp	Ø 11.3/10.8	
HA30	1	0193 054 006	Solenoid valve		13YV1
HA31	1	0194 130 120	Nut	MF10x1	
HA32	2	0321 475 885	Knob		
HA33	1	0349 485 758	Potentiometer	2.2 kΩ	13RP2
HA34	1	0147 866 009	Cover rubber		
HA35	1	0147 866 008	Switch	2-position	13SA2
HA36	1	0194 055 010	Rotary switch	4-position	13SA1
HA37	1	0321 475 893	Knob		
HA38	1	0349 302 094	Potentiometer	100 kΩ	13RP1
HA39	1	0459 505 006	Label		


HA1
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HA29
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HA33
HA36
HA37
HA38
HA39
A
B
C
E
F
G
AH 0672 A

C = component designation in the circuit diagram

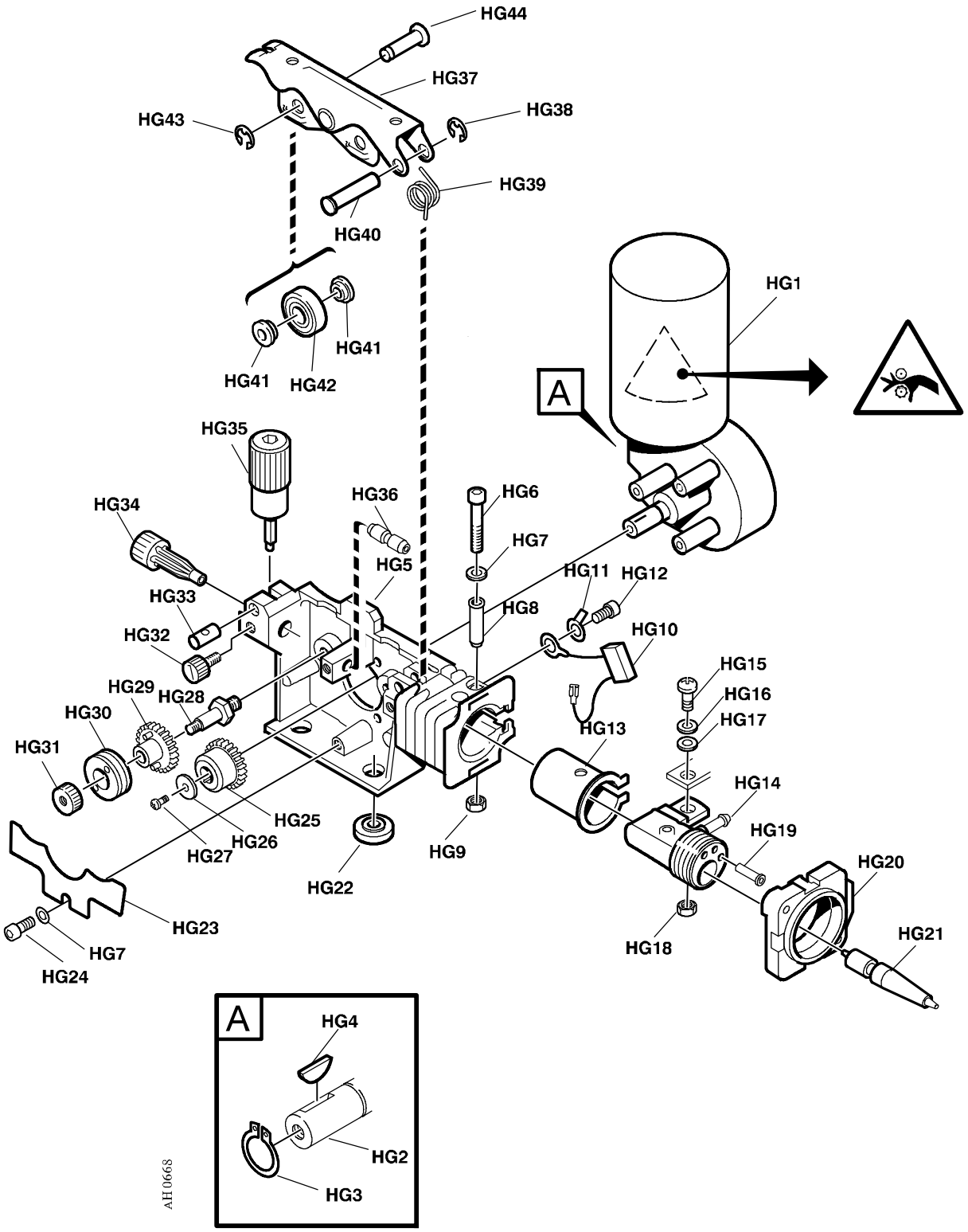
(W) = wear part (V) = V-groove

Item	Qty	Ordering no.	Denomination	Notes	C
		0459 000 890	**Wire feed mechanism**	**Type MEM 30** **Includes items HG1 - HG21 and HG23 - HG44**	
HG1	1	0466 489 001	Drive unit		13M1
HG2	1	0332 351 013	Shaft (with pinion)	Included in item HG1	
HG3	1	0215 701 007	Locking washer	Included in item HG1	
HG4	1	0191 496 114	Woodruff wedge	Included in item HG1	
HG5	1	0455 046 003	Gear housing		
HG6	1		Screw	M6x40	
HG7	2		Washer	Ø 12/6.4x1.5	
HG8	1	0455 048 001	Insulating tube		
HG9	1		Nut	M6	
HG10	1	0467 911 880	Capacitor	0.1 µF 250V with cable lugs	13C2
HG11	1		Flat pin	6.3x0.8 M6	
HG12	4		Screw	M6x12	
HG13	1	0455 045 001	Insulating sleeve		
HG14	1	0455 044 001	Current connection		
HG15	1		Screw	M8x25	
HG16	1		Washer	Ø 16/8.4x1.5	
HG17	1		Belleville washer	Ø 16/8.2x0.9	
HG18	1		Nut	M8	
HG19	1	0459 224 883	Cable set	Includes sleeves and insulating sleeves.	
HG20	1	0455 047 001	Front flange		
HG21	1	0469 837 880	Outlet nozzle **(W)**	Ø 2mm for 0.6-1.6mm Fe, Ss and cored wire	
HG22	4	0153 043 002	Insulating washer		
HG23	1	0469 838 001	Cover		
HG24	2		Screw	M6x12	
HG25	1	0459 440 001	Drive gear **(W)**		
HG26	1		Washer	Ø 16/5x1	
HG27	1		Screw	M4x12	
HG28	2		Axle feed roll	See item HG102	
HG29	2	0459 441 880	Gear adapter **(W)**		
HG30	2	0369 557 003	Feed roller **(W)**	**(V)** For Ø 1.0 & 1.2mm Fe, Ss, Al and cored wire	
HG31	2		Locking nut	See item HG102	
HG32	3	0458 689 001	Screw for nozzle		
HG33	1		Pin bolt	See item HG101	
HG34	1	0455 049 001	Inlet nozzle **(W)**	Ø 3mm for 0.6-1.6mm Fe, Ss, Al and cored wire	
HG35	1		Pressure device	See item HG101	
HG36	1	0455 072 002	Intermediate nozzle **(W)**	For Fe, Ss and cored wire	
HG37	1		Pressure arm	See item HG100	
HG38	1		Locking washer	See item HG100	
HG39	1		Torsion spring	See item HG100	
HG40	1		Shaft	See item HG100	
HG41	4	0455 906 001	Spacer sleeve		
HG42	2	0455 907 001	Pressure roller		
HG43	3	02157 027 08	Locking washer		
HG44	2	0459 518 001	Axel pressure roll		

For more wear parts see page 18.

SPARE PARTS SETS

Item	Ordering no.	Denomination	Notes
HG100	0459 227 880	Pressure arm set	Includes items HGH37, HG38, HG39 and HG40
HG101	0459 228 880	Pressure device set	Includes items HG33, HG35 and one screw M3x12.
HG102	0458 722 880	Axle and nut	Includes items HG28 and HG31.


HG44
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HG38
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HG27
HG9
HG20
HG22
HG23
HG18
HG21
HG7
HG24
A
HG4
HG2
HG3
AH 0668

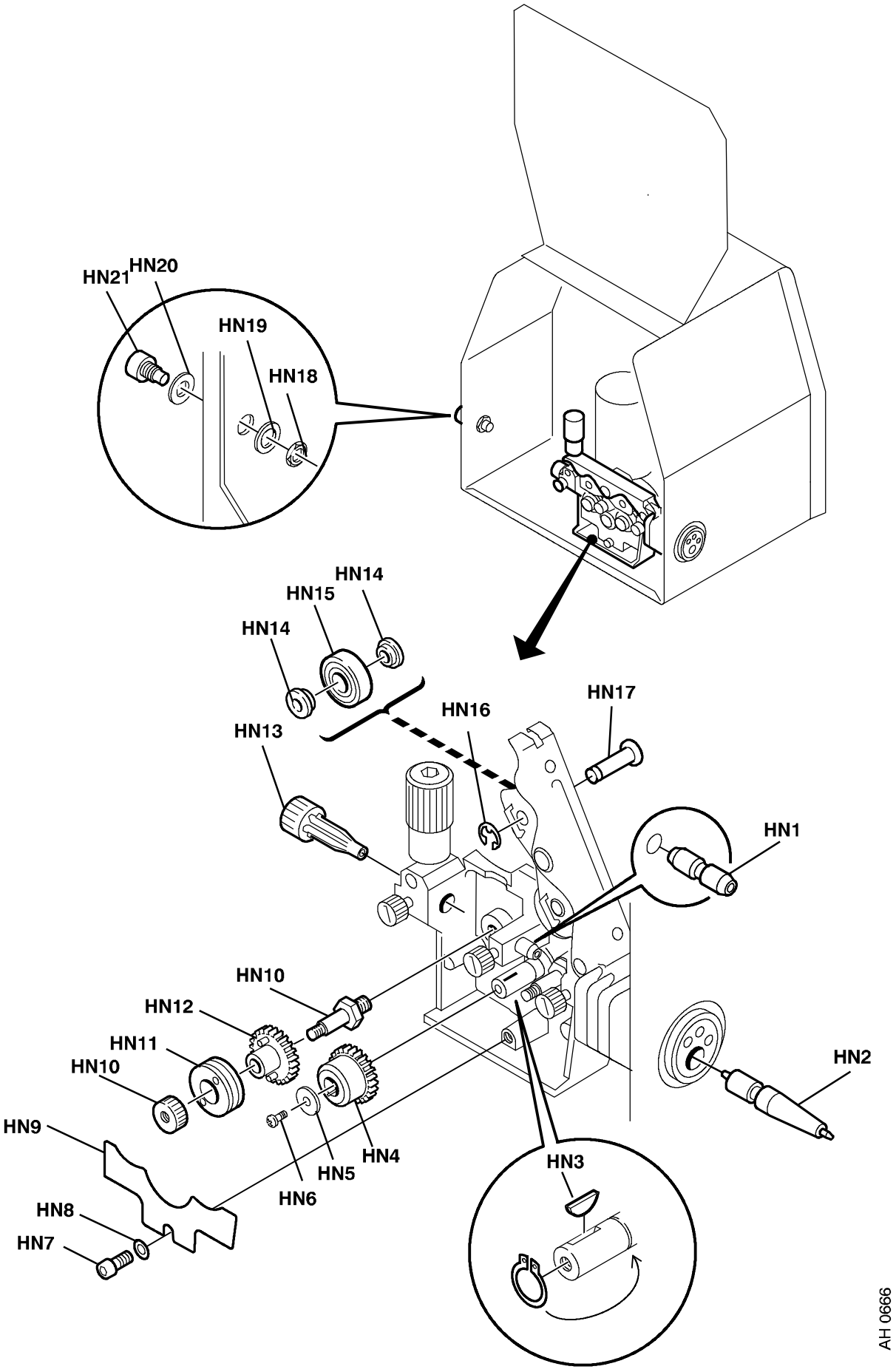
Wear parts

S= Standard, HD = Heavy Duty

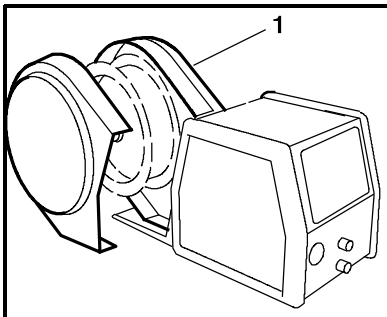
Item	Ordering no.	Denomination	Notes
HN1	0455 072 002 0456 615 001	Intermediate nozzle (**S**) Intermediate nozzle	For Fe, Ss & cored wire For Al Wire
HN2	0469 837 880 0469 837 881	Outlet nozzle (**S**) Outlet nozzle	For Fe, Ss & cored wire, Ø 2.0 mm steel for 0.6-1.6 mm For Al wire, Ø 2.0 mm plastic for 0.8-1.6 mm
HN3	0191 496 114	Woodruff wedge	
HN4	0459 440 001	Motor gear euro	
HN5		Washer	Ø 16/5x1
HN6		Screw	M4x12
HN7		Screw	M6x12
HN8		Washer	Ø 12/6.4x1.5
HN9	0469 838 001	Cover	
HN10	0458 722 880	Axle and Nut	
HN11	0369 557 001 0369 557 002 0369 557 003 0369 557 004 0369 557 011 0369 557 006	Feed roller Feed roller Feed roller (**S**) Feed roller Feed roller Feed roller	For Fe, Ss & cored wire, Ø 0.6 & 0.8 mm, V groove For Fe, Ss & cored wire, Ø 0.8 & 1.0 mm, V groove For Fe, Ss & cored wire, Ø 1.0 & 1.2 mm, V groove For Cored wire, Ø 1.0/1.2 & 1.4/1.6 mm, V-Knurled groove For Al wire, Ø 0.8 & 0.9 mm, U groove For Al wire, Ø 1.0 & 1.2 mm, U groove
HN12	0459 441 880	Gear adapter	
HN13	0455 049 001	Inlet nozzle	
HN14	0455 906 001	Spacer sleeve	
HN15	0455 907 001	Pressure roller	Flat
HN16	0215 702 708	Locking washer	
HN17	0459 518 001	Axel pressure roll	
HN18		Nut	M10
HN19	0458 748 002	Insulating washer	
HN20	0458 748 001	Insulating bushing	
HN21	0156 602 001 0332 318 001	Inlet nozzle (**S**) Inlet nozzle (**HD**)	For Fe, Ss, Al & Cored wire, Ø 2 mm plastic for 0.6-1.6 mm For Fe, Ss & Cored wire, Ø 2.4 mm steel for 1.2-2.0 mm

Welding with aluminium wire

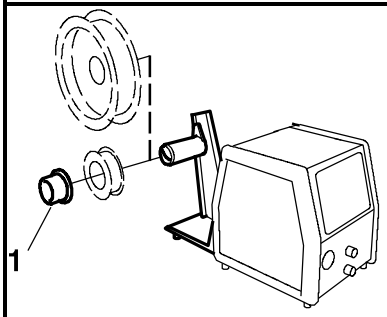
In order to weld with aluminium wire, proper rollers, nozzles and liners for aluminium wire MUST be used, It is recommended to use 3 m long welding gun for aluminium wire, equipped with appropriate wear parts.


HN21
HN20
HN19
HN18
HN14
HN15
HN14
HN16
HN17
HN13
HN1
HN10
HN12
HN11
HN10
HN2
HN9
HN4
HN5
HN6
HN3
HN8
HN7
AH 0666

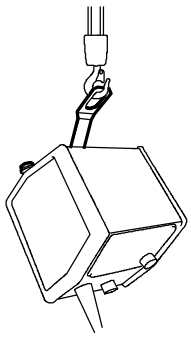
Accessories



1 **Bobbin cover, plastic** Ø 300mm 0458 674 880

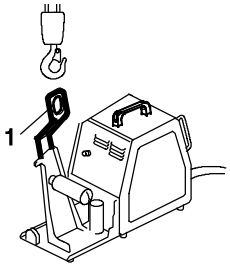


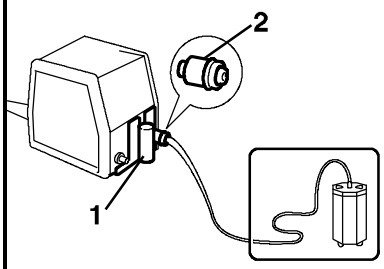
1 **Adapter** for 5 kg bobbin 0455 410 001



1 **Lifting eye** 0458 706 880

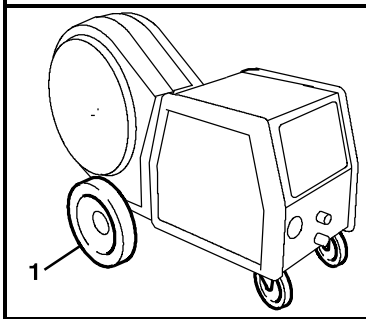
2 **Brake hub** 0146 967 881



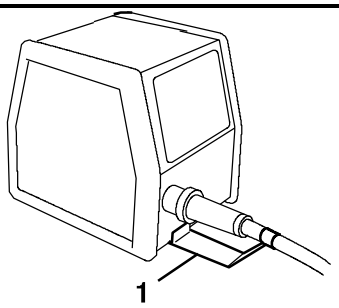


1 **Turning piece** 0458 703 880

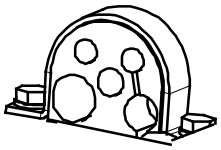
2 **Quick connector** MarathonPac™ F102 440 880



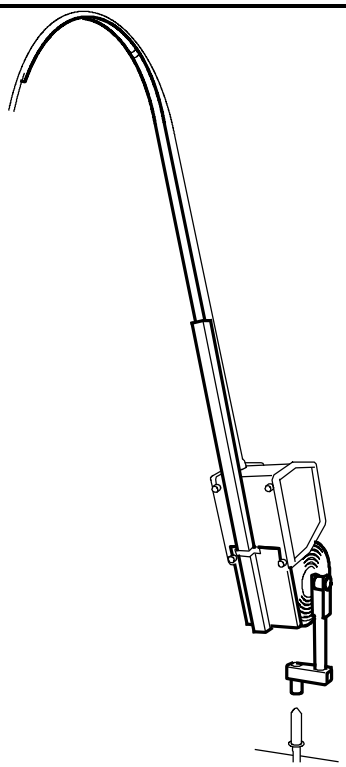
1 **Wheel kit** 0458 707 880



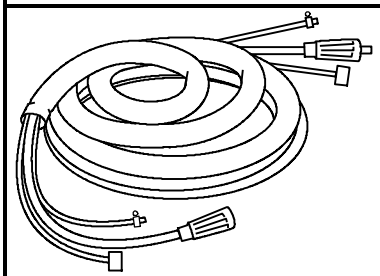
1 **Strain relief for welding gun** 0457 341 881



Strain relief bracket for connection set 0459 234 880



Counter balance device 0458 705 880
(includes mast and counter balance)



Connection set
Connection set 1.7 m 0459 532 880
Connection set 5 m 0459 532 881
Connection set 10 m 0459 532 882

p

p

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