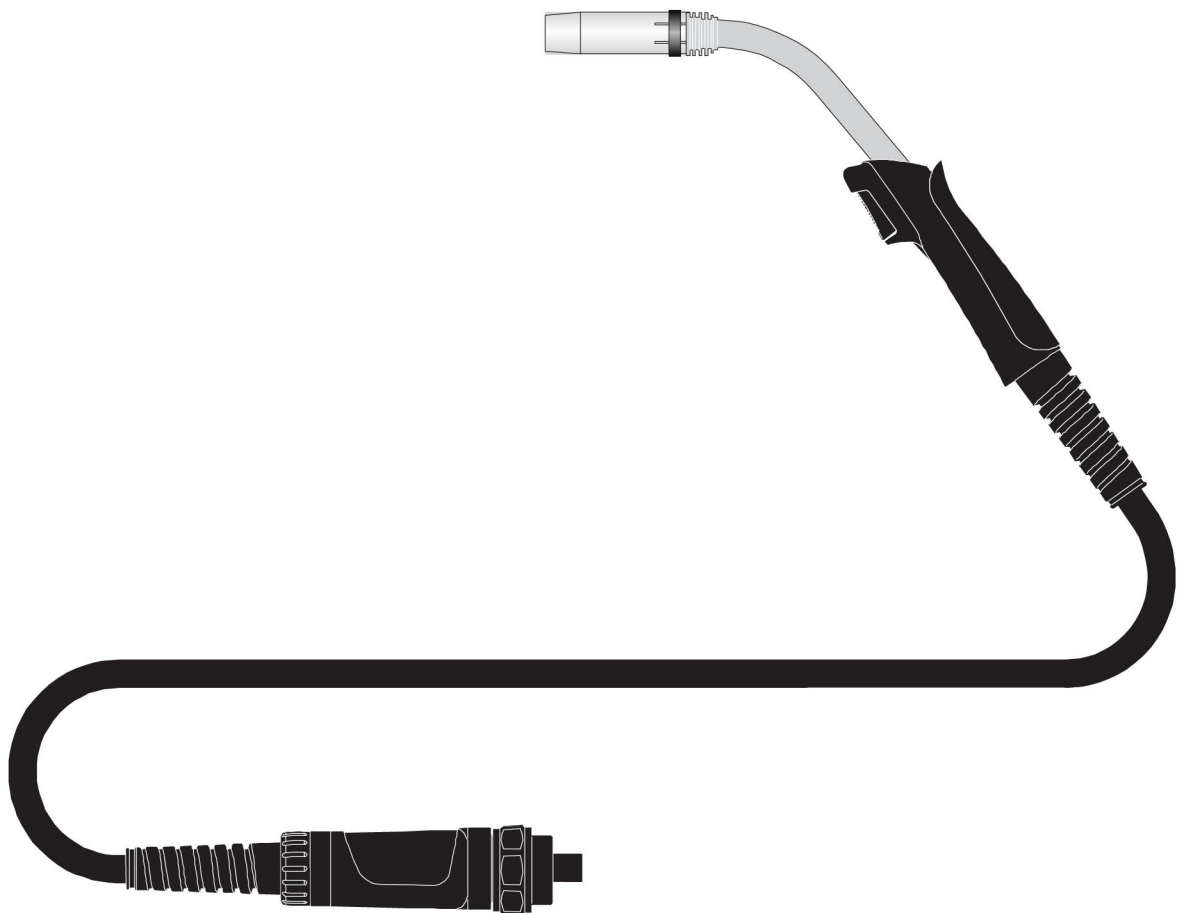




***MXL™ 150v, MXL™ 200,
MXL™ 270, MXL™ 340***



Instruction manual



DECLARATION OF CONFORMITY

According to

The Low Voltage Directive 2006/95/EC, entering into force 16 January 2007

Type of equipment

Welding Torch for MIG and MAG welding.

Type designation etc.

MXL™ 150v, MXL™ 200, MXL™ 270, MXL™ 340

Brand name or trade mark

ESAB

Manufacturer or his authorised representative established within the EEA

Name, address, telephone No, telefax No:

ESAB AB

Esabvägen, SE-695 81 LAXÅ, Sweden

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The following harmonised standard in force within the EEA has been used in the design:

EN 60974-7, Arc welding equipment – Part 7: Torches

Additional information: Restrictive use. These torches are used with equipment of Class A, intended for use in locations other than residential

By signing this document, the undersigned declares as manufacturer, or the manufacturer's authorised representative established within the EEA, that the equipment in question complies with the safety requirements stated above.

Date
Laxå 2007-03-08

Signature

A handwritten signature in dark ink, appearing to read "Kent Eimbrodt", written over a light-colored background.

Kent Eimbrodt
Clarification

Position
Global Director
Equipment and Automation

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1 SAFETY

Users of ESAB 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 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 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 equipment must be familiar with:
 - its operation
 - location of emergency stops
 - its function
 - relevant safety precautions
 - welding and cutting or other applicable operation of the equipment
2. The operator must ensure that:
 - no unauthorised person is stationed within the working area of the equipment when it is started up
 - no-one is unprotected when the arc is struck or work is started with the equipment
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 extinguishing equipment must be clearly marked and close at hand
 - Lubrication and maintenance must **not** be carried out on the equipment during operation



WARNING!

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

ELECTRIC SHOCK - Can kill

- Install and earth the 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. 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!

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



CAUTION!

Read and understand the instruction manual before installing or operating.



2 INTRODUCTION

The MIG / MAG welding torches of this series are exclusively intended for shielded- arc welding using inert gas (MIG) or active gas (MAG) for industrial and commercial use by suitably trained employees. The torches are only available in manual versions.

3 SHIPMENT AND PACKAGING

The components are carefully checked and packaged however damage may occur during shipping.

Checking procedure on receipt of goods

Check that the shipment is correct by referring to the shipping note.

In case of damage

Check the package and components for damage (visual inspection).

In case of complaints

If the package and/or components have been damaged during shipment:

- Contact with the last carrier immediately.
- Keep the packaging (for possible inspection by the carrier or supplier, or for returning the goods).

Storage in an enclosed space

Ambient temperature for shipment and storage: -25°C to +55°C

Relative air humidity: up to 90% at a temperature of 20 °C

4 TECHNICAL DATA

Welding torch	MXL 150v	MXL 200	MXL 270	MXL 340
Type of cooling	Air	Air	Air	Air
Permitted load at 20% intermittence *				
Carbon dioxide CO ₂	150 A			
Mixed gas, Ar/CO ₂	150 A			
Permitted load at 35% intermittence *				
Carbon dioxide CO ₂	120 A	200 A	270 A	340 A
Mixed gas, Ar/CO ₂	120 A	170 A	260 A	320 A
Recommended gas flow	8-15 l/min	10-18 l/min	10-18 l/min	10-20 l/min
Max pressure	2.5 bar			
Wire diameter	0.6-0.8 mm	0.6-1.0 mm	0.8-1.2 mm	0.8-1.2 mm
Weight				
2.5 m hose package	1.1 kg	-	-	-
3.0 m hose package	-	1.6 kg	2.2 kg	2.6 kg
4.0 m hose package	-	2.0 kg	2.6 kg	3.7 kg
Cable assembly				
Standard length	2.5 m	3.0 m / 4.0 m	3.0 m / 4.0 m	3.0 m / 4.0 m
Standard-control cable	2-pole	2-pole	2-pole	2-pole

* The capacity may be reduced up to 30% when pulse welding.

Duty cycle

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

General torch data with reference to IEC/EN 60 974-7	
Type of voltage:	DC voltage
Wire type:	Standard round wire
Voltage measurement:	Peak value of 113V
Connection protection equipment side (EN 60 529):	IP3X
Shielding gas:	CO ₂ or Ar/CO ₂

5 OPERATION

General safety regulations for handling the equipment can be found in the "SAFETY" chapter of this manual. Read it through before you start using the equipment!



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.

MXL welding torches can be used in any welding position.

The torch switch in the MXL handle is suitable for 42 V, maximum 1 A.

5.1 Fitting the liner

Fit the correct wire guide liner for the application, as needed to suit the wire type and diameter. See chapter "MAINTENANCE" section "Spiral liner / PTFE liner".



NOTE!

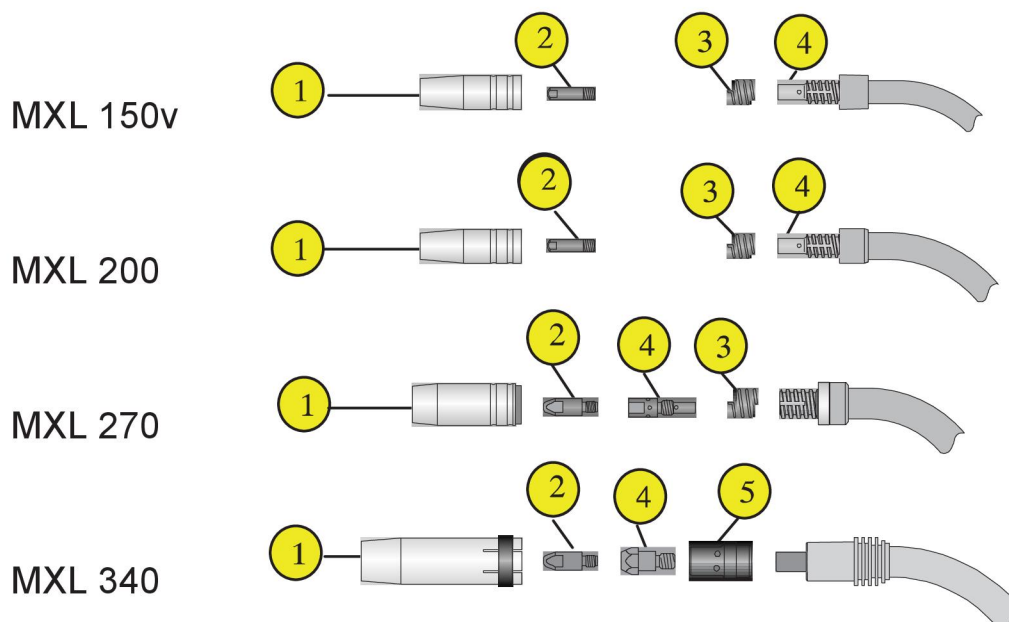
For information on how to install new liners and about correct assembly procedure, see the chapter entitled "Maintenance"

Spiral liner = for steel wires

PTFE-liner = for aluminium, copper, nickel and stainless steel wires

5.2 Assembling the swan neck

The following figures indicate how to assemble the different welding torch types.



1. Gas nozzle
2. Contact tip
3. Nozzle spring

4. Tip adaptor
5. Gas diffuser

5.3 Fitting the central adaptor assembly to the equipment

1. Check that the wire guide liner is fitted correctly.
2. Insert the central plug into the socket on the wire feed unit and secure it by tightening the adaptor nut firmly.

5.4 Setting the level of shielding gas

Set the quantity of gas required on the gas regulator. The type and quantity of gas to be used depend on the welding task to be performed.

5.5 Checklist

Check the cable assembly before connecting it to the wire feed unit to confirm the wire liner is suitable for the wire diameter and type.

Check the fixed end consumable parts on the swan neck, whether the correct contact tip etc. is being used for the wire diameter and type.

5.6 Changing wire

When changing the wire, ensure that the end of the wire is deburred.

Insert the wire into the wire feeding unit in accordance with the operating instructions.

When inserting the wire, press the wire jog button on the wire feed unit.

6 MAINTENANCE

6.1 Overview



NOTE!

Regular maintenance is important for safe, reliable operation.

Welding torch

Cleaning and replacement of the welding torch'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.



WARNING!

Before carrying out cleaning, servicing and repair work, the following shutdown procedure must be followed.

1. Switch off the power supply.
2. Close off the gas supply.

Make sure that the power supply and gas remain turned off all the time while servicing the equipment.

6.2 Cable assembly

Check that all the nuts are tight.

Replace the liner if it is worn or dirty.

Replace damaged, deformed or worn parts.

6.3 Cleaning the wire feed

Disconnect the torch cable assembly from the equipment and lay it out straight.

Unscrew the nut and pull out the wire guide liner. Remove other parts from the swan neck.

Blow compressed air through the wire conduit from both ends in order to remove wire shavings.

Insert the liner into the wire conduit and screw the nut back on.



NOTE!

New liners must be cut to the correct length. Follow the following tips and suggestions:

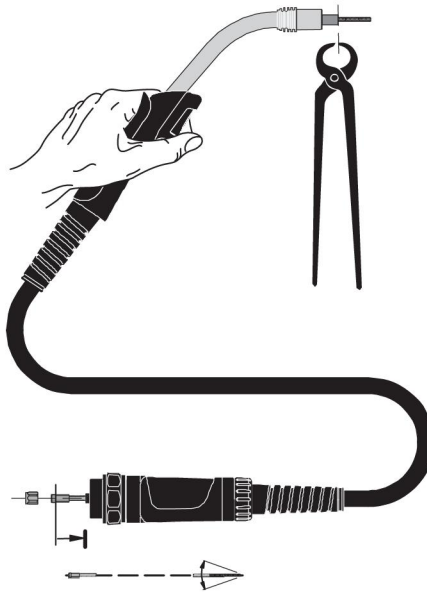
6.4 Spiral liner / PTFE liner

1. Unscrew all the fittings from the swan neck.
2. Unscrew the union nut on the central plug.
3. Remove the old liner, and then push the guide spiral liner through the hose as far as it will go.

Make sure the cable is stretched out more or less straight.

4. Tighten the union nut by hand.
5. Cut the overhang off the spiral at the swan neck and remove the guide spiral liner again.
6. For a smooth transition to the contact tip, grind the end of the spiral to an angle of approx. 40°. Deburr the cutting edge.

7. Push the sharpened guide spiral liner through the hose to the holder nipple.
8. Screw the union nut into position and tighten it using the multiple spanner.
9. Screw the fittings back on again.



6.5 Cleaning the swan neck

- Clean the inside of the gas nozzle regularly to remove welding spatter and spray with ESAB® anti-spatter agent.
- Check the consumables for visible damage and replace if necessary.

7 FAULT-TRACING

If the measures described below are not successful, consult your dealer or the manufacturer.

Read the operating instructions for the welding components, e.g. power source and wire feed unit.

Problem	Cause	Solution
Torch becomes too hot	<ul style="list-style-type: none"> • Contact tip / Collets not tight enough • Current connections on the torch side and to the work piece are loose 	<ul style="list-style-type: none"> • Check and tighten • Check and tighten
No switch function	<ul style="list-style-type: none"> • Control cable interrupted/faulty. 	<ul style="list-style-type: none"> • Check/repair.
Wire burnt back onto the contact tip	<ul style="list-style-type: none"> • Wrong parameter setting • Worn contact tip. 	<ul style="list-style-type: none"> • Check or correct the setting • Replace
Irregular wire feed	<ul style="list-style-type: none"> • Liner blocked • Contact tip and wire diameter do not match one another • Wrong tension set on the wire feed unit 	<ul style="list-style-type: none"> • Blow through in both directions. • Replace contact tip • Correct according to manufacturer's instructions
Short arc between the gas nozzle and workpiece	<ul style="list-style-type: none"> • Spatter bridge between the contact tip and the gas nozzle 	<ul style="list-style-type: none"> • Clean and spray the inside of the gas nozzle
Variable arc	<ul style="list-style-type: none"> • Contact tip does not match the wire diameter, or the contact tip is worn • Incorrect welding parameters set • Liner worn 	<ul style="list-style-type: none"> • Check and replace the contact tip. • Correct the welding parameters. • Replace the wire guide
Porous welds	<ul style="list-style-type: none"> • Large amount of spatter in the gas nozzle. • Insufficient or total lack of gas shield • Draught is disturbing the shielding gas 	<ul style="list-style-type: none"> • Clean the gas nozzle • Check contents of the gas bottle/hoses and the pressure setting • Shield welding area with protective screens

8 DISASSEMBLY AND DISPOSAL



NOTE!

Dispose of electronic equipment at the recycling facility!

In observance of European Directive 2002/96/EC on Waste Electrical and Electronic Equipment and its implementation in accordance with national law, electrical and/or electronic equipment that has reached the end of its life must be disposed of at a recycling facility.

As the person responsible for the equipment, it is your responsibility to obtain information on approved collection stations.

For further information contact the nearest ESAB dealer.



The welding torch system is mainly made from steel, plastics and non-ferrous metal, and must be disposed of in accordance with local environmental regulations.

9 IN THE EVENT OF AN EMERGENCY

In the event of an emergency, the power supply must be switched off immediately.

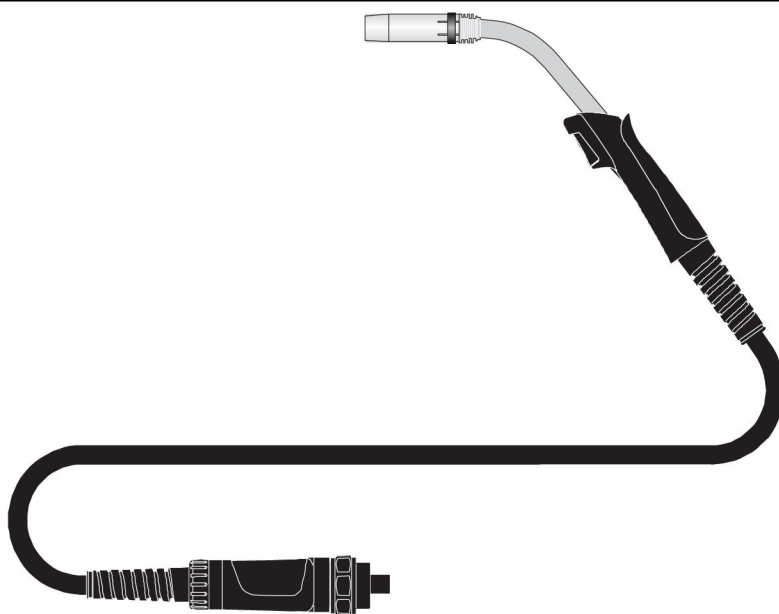
For further action in such circumstances, consult the 'Power source' Instruction manual.

10 ORDERING SPARE PARTS

MXL 150v, MXL 200, MXL 270, MXL 340 is designed and tested in accordance with the international and European standards 60974- 7 and . 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.

Spare parts may be ordered through your nearest ESAB dealer, see the back cover of this document. When ordering, please state product type, serial number, designation and spare part number in accordance with the spare parts list. This facilitates dispatch and ensures correct delivery.

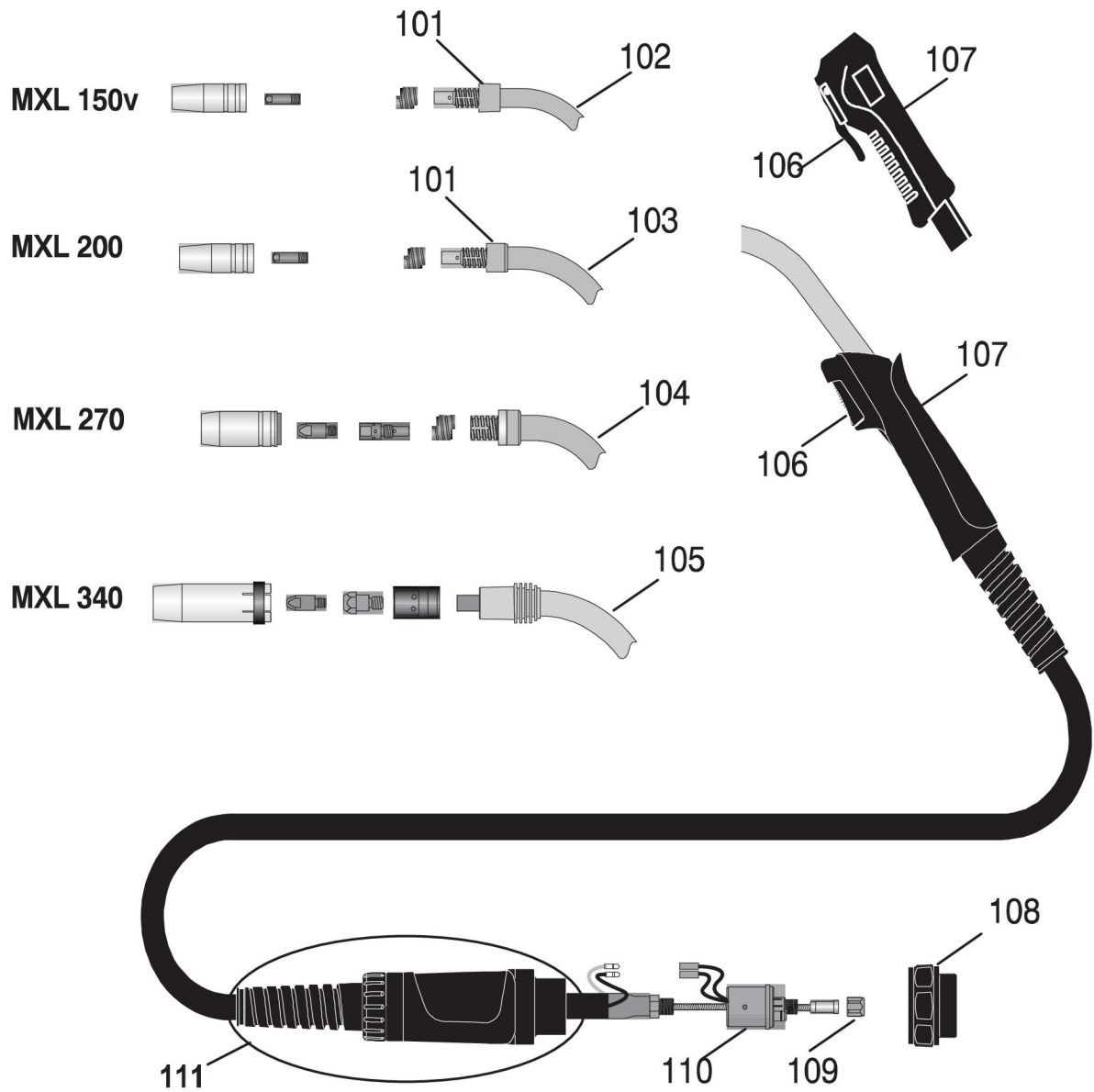
ORDERING NUMBERS



Ordering number	Type	Description	Notes
0700 200 001	MXL™ 150v	Welding torch 2.5 m	with fixed connection
0700 200 002	MXL™ 200	Welding torch 3.0 m	EURO Connection
0700 200 003	MXL™ 200	Welding torch 4.0 m	EURO Connection
0700 200 004	MXL™ 270	Welding torch 3.0 m	EURO Connection
0700 200 005	MXL™ 270	Welding torch 4.0 m	EURO Connection
0700 200 006	MXL™ 340	Welding torch 3.0 m	EURO Connection
0700 200 007	MXL™ 340	Welding torch 4.0 m	EURO Connection

SPARE PARTS LIST

Pos	Denomination	Ordering no.	MXL 150v	MXL 200	MXL 270	MXL 340	Notes
101	Head insulator	0700 200 096	x	x			
102	Swan neck Standard	0700 200 050	x				
103	Swan neck Standard	0700 200 051		x			
104	Swan neck Standard	0700 200 052			x		
105	Swan neck Standard	0700 200 053				x	
106	Trigger 2 pol	0700 200 077	x				MXL 150v
106	Trigger 2 pol	0700 200 095		x	x	x	MXL 200/ 270/ 340
107	Handle complete	0700 200 093	x				MXL 150v Incl trigger pos 106
107	Handle complete	0700 200 094		x	x	x	MXL 150v Incl trigger pos 106
108	Adaptor nut complete	0700 200 097		x	x	x	
109	Liner lock nut	0700 200 098		x	x	x	M10x1
110	Central connector	0700 200 101		x	x	x	Incl. control leads
111	Support sleeve	0700 200 150	x	x	x	x	

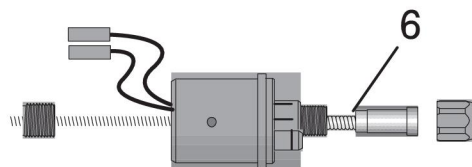
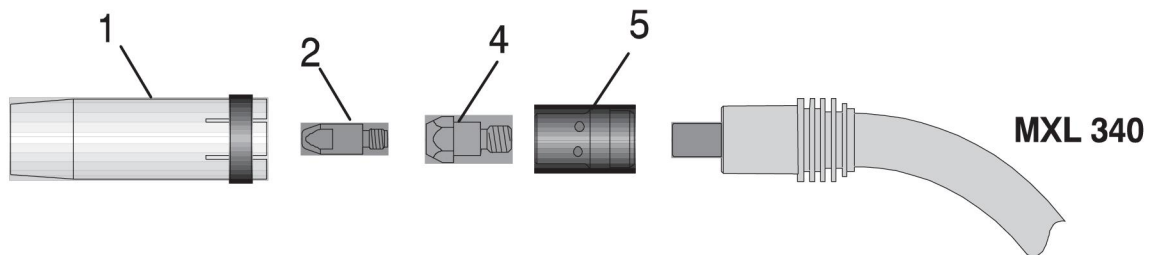
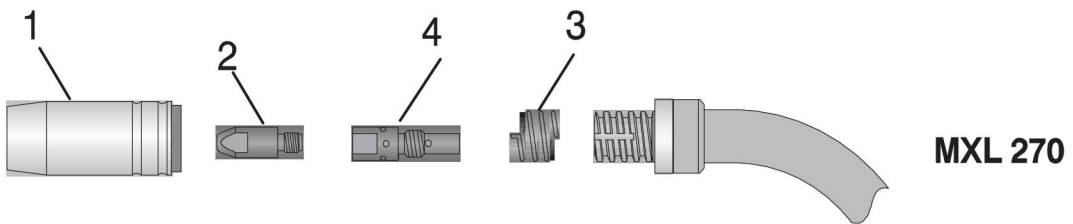
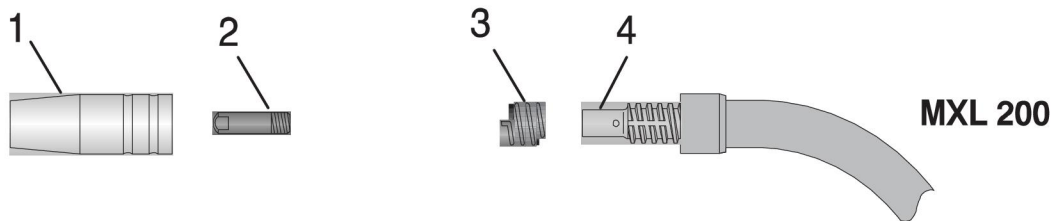
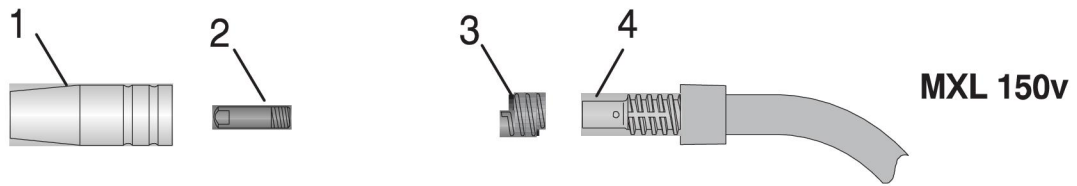


WEAR PARTS

Bold = standard delivery

Item	Denomination	MXL™ 150v	MXL™ 200	MXL™ 270	MXL™ 340
1	Gas nozzle				
	standard Ø 12 mm	0700 200 054	0700 200 054		
	standard Ø 15 mm			0700 200 055	
	standard Ø 16 mm				0700 200 056
	straight Ø 16 mm	0700 200 057	0700 200 057		
	straight Ø 18 mm			0700 200 058	
	straight Ø 19 mm				0700 200 059
	conical Ø 9.5 mm	0700 200 060	0700 200 060		
	conical Ø 11.5 mm			0700 200 061	
	conical Ø 12 mm				0700 200 062
	Nozzle / tip insulator	0700 200 105	0700 200 105		
2	Contact tip Cu				
	W0.6 M6x25	0700 200 063	0700 200 063		
	W0.8 M6x25	0700 200 064	0700 200 064		
	W0.9 M6x25	0700 200 065	0700 200 065		
	W1.0 M6x25	0700 200 066	0700 200 066		
	W0.8 M6x28			0700 200 068	0700 200 068
	W0.9 M6x28			0700 200 069	0700 200 069
	W1.0 M6x28			0700 200 070	0700 200 070
	W1.2 M6x28			0700 200 071	0700 200 071
3	Nozzle spring	0700 200 078	0700 200 078		
	Nozzle spring			0700 200 079	
4	Tip adaptor				
	M6, MXL 150v	0700 200 076			
	M6, MXL 200		0700 200 072		
	M6, 35 mm MXL 270			0700 200 073	
	M6-Alu, MXL 270			0700 200 067	
	M6, 28 mm MXL 340				0700 200 074
	M6, 32 mm MXL 340				0700 200 075
5	Gas diffusor white				0700 200 080

Item	Denomination	MXL™ 150v	MXL™ 200	MXL™ 270	MXL™ 340
6	Steel liner				
	W0.6 - W0.8 2.5 m	0700 200 099			
	W0.6 - W0.8 3.0 m		0700 200 085	0700 200 085	0700 200 085
	W0.6 - W0.8 4.0 m		0700 200 086	0700 200 086	0700 200 086
	W0.9 - W1.2 3.0 m		0700 200 087	0700 200 087	0700 200 087
	W0.9 - W1.2 4.0 m		0700 200 088	0700 200 088	0700 200 088
	PTFE liner				
	W0.6 - W0.8 3.0 m		0700 200 089	0700 200 089	0700 200 089
	W0.6 - W0.8 4.0 m		0700 200 090	0700 200 090	0700 200 090
	W0.9 - W1.2 3.0 m		0700 200 091	0700 200 091	0700 200 091
W0.9 - W1.2 4.0 m		0700 200 092	0700 200 092	0700 200 092	



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www.esab.com



www.esab.com

