



Catalogue



PLASMA CUTTING MACHINE

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SVAROG 85 PLASMA SYN SVAROG 105 PLASMA SYN SVAROG 125 PLASMA SYN

Plasma cutting machine

SVAROG PLASMA cutting machines are designed for metal cutting based on modern cutting technology of a thin beam of plasma gas. This technology has several advantages over other methods:

- High cutting speed
- Quality cut with a minimum area of deformation in the material structure.
- Less thermal deformation of the cut material.
- Possibility of cutting carbon steel, high alloy steel, stainless steel and non-ferrous metals.
- This method does not require special gases.
- Low cost.



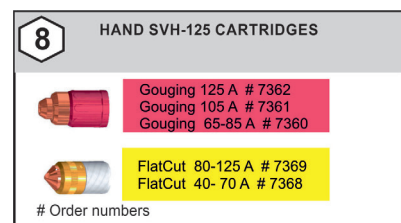
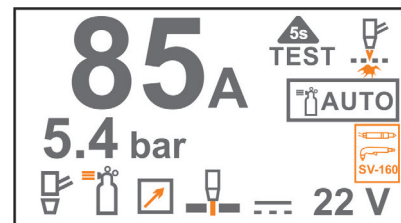
1. SVAROG PLASMA cutting machines are equipped with proportional valves that allow precise automatic and synergistic adjustments of the required working pressure of the cutting gas (depending on the cutting mode and cutting current).



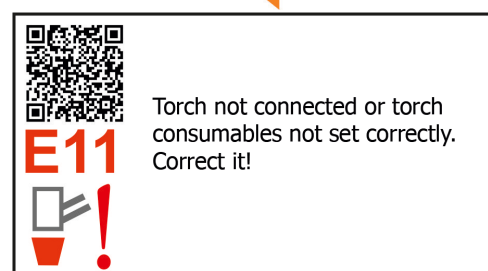
2. Also, the manual adjustment of the cutting gas pressure can be adjusted from the control panel.



3. The machine automatically detects the model of the connected torch. You will also be able to view a library of appropriate consumables.



4. It can be configured in up to 7 languages. Then, the error codes, their causes and solutions are displayed in the corresponding language. Other languages can be accessed via QR code.

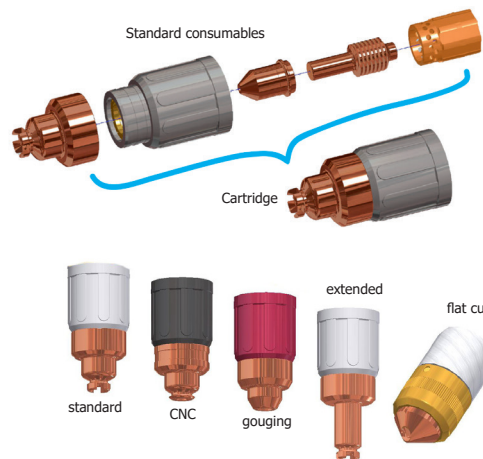


The original SV-FIT system allows you to choose between different torch heads (15,75,90 degrees) and low cost power (SVH-105 torch saves a lot of compressed air compared to SVH-125 torch).

Torch grips can be easily changed with an extended grip (up to 130 centimeters long). By purchasing an extension cord, you can easily extend the torch to 6 meters.



SV torches use traditional consumables or can also use a cartridge system.



Technical data

English	U.	SVAROG 85 plasma	SVAROG 105 plasma	SVAROG 125 plasma
Mains voltage	V/Hz	3 x 400/50-60	3 x 400/50-60	3 x 400/50-60
Cutting current range	A	20 - 85	20 - 105	20/88,0 - 125/170,0
Open circuit voltage U ₂₀	V	330	330	400
Mains protection	A	32 @	@32 (@ 40)	32 @
Effective max. current I _{1eff}	A	26,7	31,9 (36,7)	44,0
Duty cycle at 40 °C = 100% I ₂	A	85	95 (105)	125
Duty cycle at 40 °C = 60% I ₂	A	85	105	125
Duty cycle at 40 °C = %x I ₂	A	100%=85	100%=95 (100%=105)	100%=125
Protection class		IP 23 S	IP 23 S	IP 23 S
Standard		CSN EN IEC 60974-1, CSN EN 60974-10 cl. A	CSN EN IEC 60974-1, CSN EN 60974-10 cl. A	CSN EN IEC 60974-1, CSN EN 60974-10 cl. A
Dimensions (width x length x height)	mm	378 x 696 x 619	377 x 802 x 621	378 x 801 x 619
Weight	kg	39,6	47,7	49,0
Efficiency	%	90	87	92
Input power in idle mode P10	W	24	25	37
Ambient temperature	°C	-10 ÷ +40	-10 ÷ +40	-10 ÷ +40
Relative humidity	%	90	90	90
Altitude above sea level	m	max. 1000 m	max. 1000 m	max. 1000 m
Torch				
Inlet pressure	bar	8,5	8,5	8,5
Operating pressure (cutting, 6.7m torch)	bar	5,0 - 5,5 (SVH/SVS 105)	5,0 - 5,5 (SVH/SVS 105)	5,0 - 6,0 (SVH/SVS 125)
Operating pressure (gouging, 6.7m torch)	bar	3,5 - 4,5 (SVH/SVS 105)	4,8 (SVH/SVS 105)	4,0 - 4,5 (SVH/SVS 125)
Air consumption at 85 A (torch 6.7-9m)	l/min	205 (SVH/SVS 105)	240 (SVH/SVS 105)	295 (SVH/SVS 125)
Arc ignition		pneu-mechanic	pneu-mechanic	pneu-mechanic
Cutting parameters (carbon steel)				
Productive piercing/cutting (I _{2max})*	mm	20*	22*	25*
Productive piercing/cutting (I _{2 DC} =100%)**	mm	20**	22**	25**
Max piercing/cutting (I _{2max} ***)	mm	25***	32***	35***
Max. cutting (separation) (side start) (I _{2max})	mm	35	50	55
Cut quality (I _{2max}) ^Δ	Carbon Steel	30 ^Δ	45 ^Δ	50 ^Δ
	Stainless steel	26 ^Δ	40 ^Δ	45 ^Δ
	Aluminum	20 ^Δ	30 ^Δ	35 ^Δ
	Copper	16 ^Δ	25 ^Δ	30 ^Δ
Max. Cutting speed^{ΔΔ}				
6 mm	m/min	5,09 ^{ΔΔ}	5,09 ^{ΔΔ}	7,10 ^{ΔΔ}
12 mm	m/min	2,06 ^{ΔΔ}	2,06 ^{ΔΔ}	2,51 ^{ΔΔ}
25 mm	m/min	0,58 ^{ΔΔ}	0,58 ^{ΔΔ}	0,82 ^{ΔΔ}
32 mm	m/min	-	0,31 ^{ΔΔ}	0,31 ^{ΔΔ}
40 mm	m/min	-	0,21 ^{ΔΔ}	0,37 ^{ΔΔ}

Explanation of terms

Productive piercing/cutting (I_{2max})*: It's a combustion process in which the plasma is adjusted to the maximum cutting current and cutting quality is achieved at a relatively high cutting speed.

Productive piercing/cutting (I_{2 DC}=100%)::** It's a combustion process in which the plasma is adjusted to a cutting current corresponding to 100% load and good cut quality is achieved at a relatively high cutting speed.

Max. piercing/cutting (I_{2max}*):** It's a combustion process, where the plasma is adjusted to the maximum cutting current and a satisfactory cut quality is achieved.

Max. cutting (separation) (side start) (I_{2max}): It's a combustion process in which the plasma is adjusted to the maximum cutting current and a satisfactory separation of the material is achieved.

Quality cut (I_{2max})^Δ It's a cutting process by which the plasma is adjusted to the maximum cutting current and a good cut quality is achieved.

Max. productive cutting speed^{ΔΔ} It's the maximum cutting speed with a good quality at a maximum cutting current.



The parameters were measured under laboratory conditions on ALFATEC CNC machines. Cutting speeds may vary for different cutting applications.



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