

2.1 Specifications**2.1.1 Gantry System**

Model Number	Cutting Width	Overall Machine Width
Avenger 1 - 8	105.5" (2680mm)	177" (4826mm)
Avenger 1 - 10	129.5" (3289mm)	201" (5436mm)
Avenger 1 - 12	153.5" (3899mm)	225" (6045mm)
Avenger 1 - 14	177.5" (4509mm)	249" (6654mm)
Avenger 1 - 16	201.5" (5118mm)	273" (7264mm)
Avenger 1 - 18	225.5" (5728mm)	297" (7874mm)
Avenger 1 - 20	249.5" (6337mm)	321" (8483mm)

NOTICE

Cutting length is total rail length minus truck length and travel limits.

Total rails lengths are available in 16 ft (5m) increments, plus an optional 9 ft (3m) section.

Truck Length (includes travel limits)	89" (2260mm)
Machine Height	84" (2130mm)
Cutting Table Height	25" (635mm)
Speed Range (inches per minute)	2 - 400 ipm (5 to 10160mm/min)
Rapid Traverse (inches per minute)	750 ipm (19,000mm/min)
Maximum Number of tool stations	12
Drives	Dual X, Single Y with band

The ESAB Group reserves the right to change specifications without notice.

2.1.3 Requirements

The following are requirements for cutting machine gantry only. Refer to vendor supplied manuals for process equipment and accessories.

Electrical Power	460 VAC, 10 amp, 60 HZ, Single Phase*
Operating Temperature (Ambient)	32° to 122°F (0° C - 50° C)
Relative Humidity (non-condensing)	5% - 95%
Compressed Air (clean, dry) Required for cutting machine rail air blast.	900 CFH @ 100 PSI.

* Special input power requirements are available.

NOTICE

When air temperature surrounding the cutting machine is more than 104°Fahrenheit (40° C) or the duty cycle is more than 50%, special cooling equipment may be required. Contact ESAB for more detailed information.

Avenger 1

2.1.2 Performance

When properly installed and maintained, the Avenger 1 can achieve the following performance limits.

Accuracy Measured over a 60" x 60" area.	±0.015" (0.38mm)
Repeatability Measured over a 60" x 60" area.	±0.005" (0.13mm)
Contouring Speed	2 - 300 ipm (5 to 7620mm/min)
Traverse Speed	2 - 750 ipm (5 to 19000mm/min)
Kerf Compensation	Up to 0.250" (6.4mm)
Trace Record Speed	2 - 60 ipm (5 to 152cpm)

2.4 SPECIFICATIONS

Table 2-2. Technical Specifications

Input Voltage	200/230/380/415/460/575 V, 3 Phase, 50/60 Hz
Input Current/Phase	115/100/60/55/50/40 Amps
Power Factor	95%
Output Current	200 Amps
Output Voltage	160V DC
Duty Cycle	100%
Open Circuit Voltage	325 V DC
Power Source Size	22"W x 42"D x 44"H (550 x 1050 x 1100 mm)
Power Source Weight	725 lbs. (330 kg)
Junction Box Size	18"W x 7.5"D x 16"H (457 x 190 x 406 mm)
Junction Box Weight	38 lbs. (17 kg)

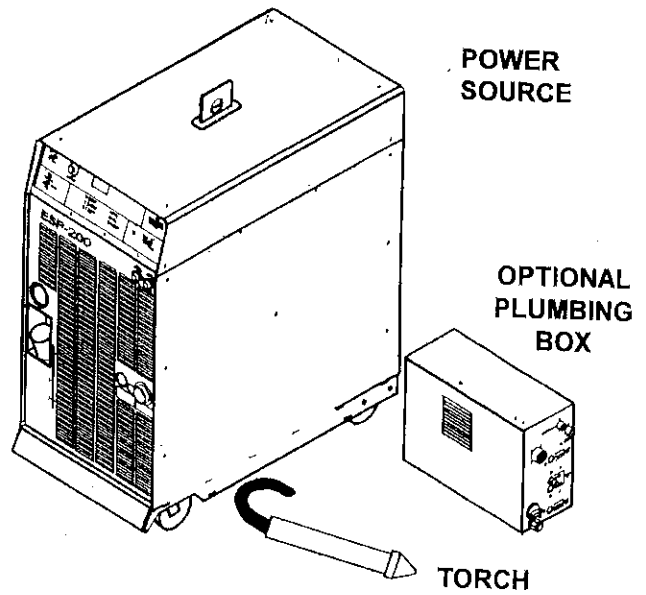


Figure 2-1. ESP-200/PT-19XLS Plasma System

Table 2-3. Technical Specifications (Plasma Gas)

Type of Gas	PT-19XLS		PT-26
		O ₂ , N ₂ , Air, Ar-H ₂	
Pressure	75 psig (5.17 bar) minimum N ₂ and O ₂		100 psig (6.9 bar)
Flow	Plasma gas 200 cfh (5.66 M ³ /h) max.		240 cfh (6.8M ³ /h)
Purity Required	O ₂ - 99.5% min., N ₂ - 99.995% min., Air - clean and dry		
Recommended Liquid Cylinder Service Regulators	Oxygen:	R-76-150-540LC	19777
	Inert Gas:	R-76-150-580LC	19977
Recommended Cylinder 2-Stage Regulators	Oxygen:	R-77-75-540	998336
	Argon-Hydrogen:	R-77-75-350	998341
	Nitrogen:	R-77-75-580	998343
	Industrial Air:	R-77-150-590	998348
Recommended Heavy-Duty Hi-Flow Station or Pipeline Regulators	Oxygen:	R-27-75-024	998761
	Nitrogen:	R-76-75-034	191155

Table 2-4. Technical Specifications (Starting Gas)

Type	PT-19XLS		PT-26
		N ₂ or Air	
Pressure	20 to 40 psig (1.38 - 2.76 bar)		100 psig (6.9 bar)
Flow	200 cfh (5.66M ³ /min) maximum		200 cfh (5.66M ³ /h) @ 60 psig(4.1 bar)
Purity Required	N ₂ - 99.995% min., Air - clean and dry		N ₂ - 99% min., Air - clean and dry

Table 2-5. Technical Specifications (Secondary Gas)

Type	PT-19XLS		PT-26
		N ₂ or Air	
Pressure	110 psig (7.6 bar) maximum		100 psig (6.9 bar) maximum
Flow	250 cfh (7.08 M ³ /min)Maximum		200 cfh (5.66 M ³ /h) @ 85 psig (5.86 bar)
Purity Required	Nitrogen - 99% minimum, Air - clean and dry		