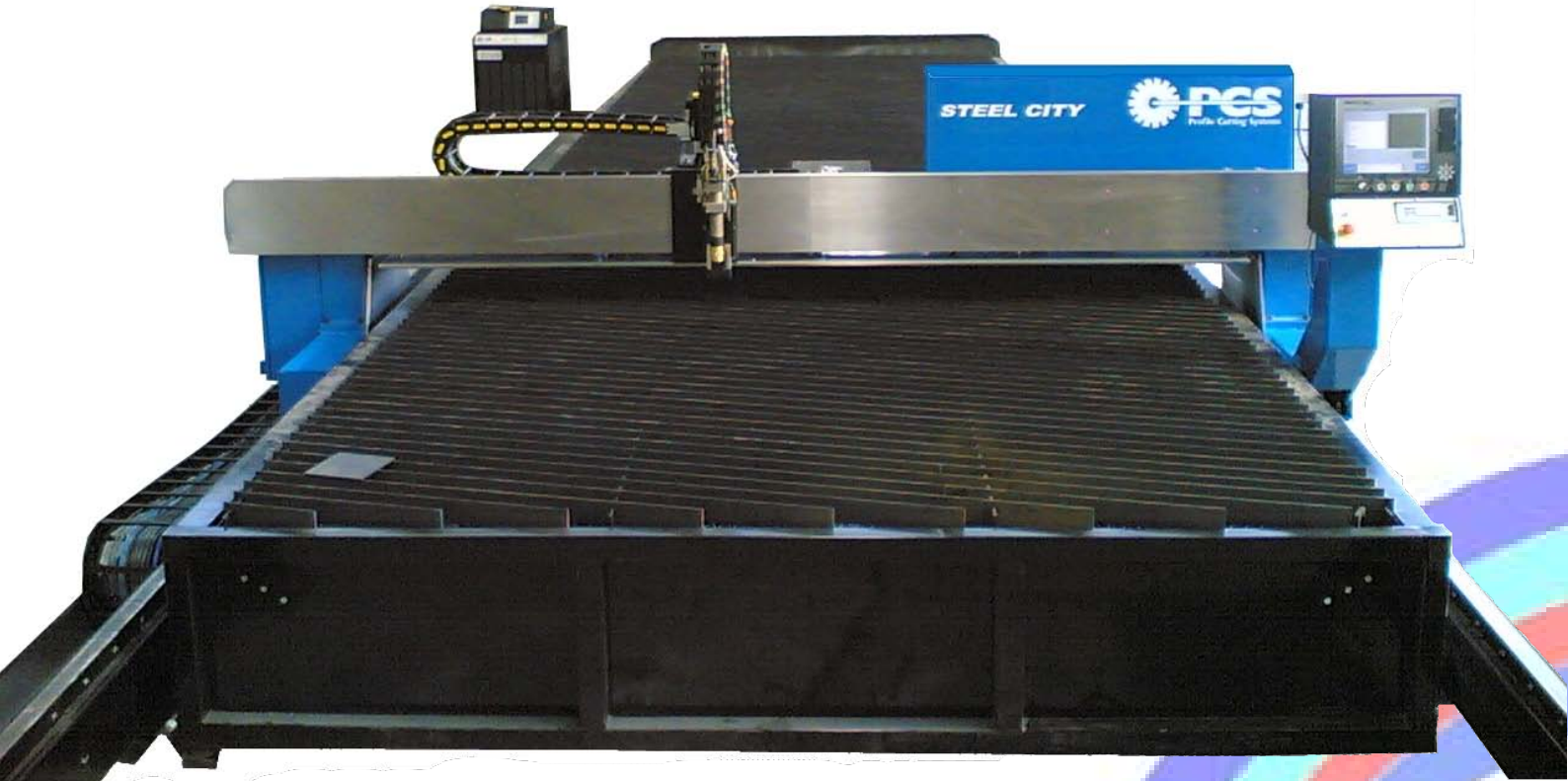


PCS Heavy Duty Series.



The PCS Heavy Duty Machine is PCS's flagship product and has earned PCS a reputation for delivering exceptionally high quality and reliable cutting machines to the steel and metal fabrication industries. Its unmatched performance, reliability and cost make it the smartest solution for your cutting requirements. With options ranging from Drilling, Tapping, Gas cutting, High Density Plasma cutting, Beveling or any combination - you're possibilities are endless!

Specifications:

Machine Dimensions

Effective cutting width	Up to 5.5m (Greater widths require PCS EHD machine)
Effective cutting length	Infinite. Modular 3m and 6m Rail Lengths
Overall Machine width	Effective cutting width + 1.3m including operator console
Overall machine height	1.8 m
Electrical control cabinet	L 1600mm x W 400mm x H 600mm

Drive System and Controller

Controller	Burny® 10 LCD Plus PC based controller. 15" USB touch screen, Windows XP embedded, 1GB DDR3 RAM, 80GB HDD, SERCOS and Ethernet Network ready	
Drive Amplifiers	Independent up to 5-Axis AC digital Rexroth IndraDrive amplifiers. SERCOS optic fiber comms.	
Motors	Longitudinal Axis	2 x 4.32kW AC, 43.5 Nm MAX Torque Rexroth servo motor
	Cross Axis	1.86kW AC, 8.1 Nm MAX Torque Rexroth servo motor
	Bevel Axis	2 x 0.90kW AC, 1.8Nm MAX Torque Rexroth servo motor 1 x 1.86kW AC, 8.1 Nm MAX Torque Rexroth servo motor
Gearbox	Longitudinal Axis	Custom built PCS Heavy Duty oiled <7 arcmin backlash
	Cross Axis	Planetary 16:1, <7 arcmin backlash
	Bevel Axis	Planetary grease packed 1 x 50:1 <9 arcmin 1 x 5:1 <6 arcmin

Plasma Cutting Operation

Power Source	KALIBURN Spirit150a – Spirit400a
Plasma Torch Holder	Static, Manual swivel mount with quick locking mechanism or optional PCS Automatic Bevel Head
Output Current	150a – 800a (800a utilises 2 x Spirit400a units)
Cutting capacity	Up to 75mm production capacity
Plasma torch lifter system	INOVA Torch Height Control System (optional integration of VHC into CNC controller – removes INOVA remote)



KALIBURN Spirit275a Plasma System



INOVA Lifter and Voltage Height Control

Machine Travel

Traverse speed	Limited 25 m/min (1000 inch/min.)
Profiling speed	up to 25 m/min (1000 inch/min)
Max acceleration	1.3 m/s/s
Machine accuracy on axis	0.05 millimeters
Machine repeatability on axis	0.05 millimeters
Rail Rack	SRCPF10-2000 CP Rack Pitch 10mm. Rack has an accuracy of 0.01 Millimeters in 12 meters of length. Material: S45C Steel
Pinions	SSCPG10-20 CP10 teeth grinding spur gears. Pitch: 10mm Material: S45C Steel
Pinion thrust bearings	THK
Cable carrier	Cable carrier standard
Bearings	Linear Bearings on cross axis. High quality, readily available THK bearings used throughout



PCS Heavy Duty Longitudinal Motor Gearbox assembly



PCS Heavy Duty Cross Axis Linear Bearing and Rack/Rail Assembly

PCS use **THK** LM rail Type GSR-R with Integrated Rack. Hardened integrated rack makes the installation simple and accurate by eliminating parallelism adjustment that would otherwise be necessary for a separate rack design. The rack teeth are heat treated to assure durability. The length of motion achieved for each complete rotation of the pinion is an integer value (AKA CP rack). This is convenient when the LM guide is used in combination with servo motors, which is the case with all PCS machines. PCS is the first (and only) company in the cutting machine industry to standardise on this product. Smooth motion of the cross carriage is also a major benefit with the use of this product. PCS use spring steel for the slave carriage bands. It does not bend, gouge, ding, or break like thin stainless steel versions.

Plate Alignment

Laser Spot	Standard on HD machine
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Safety Features

Operator safety	Operator safety shield optional
Machine protection	Heat shields standard
E-Stop	Independent Emergency-Stop circuit
End Limits	Software controlled with fail-safe mechanical limit switches

