



FORZA

Compressor Z

V250811

Datasheet
Model Z10P13



FORZA Compressor Z

High-pressure compressor designed for use with laser machinery

COMPRESSED AIR

The FORZA Compressor Z10 is a complete 4-in-1 unit for air compression: tank, compressor, dryer, and filters. It ensures a clean compressed air output at constant pressure and flow thanks to its variable speed control (VSC) motor technology.

It's ideal for working with laser machinery since compressed air is needed at a constant pressure and flow to prevent damage and achieve clean cuts, removing any burrs produced.

Main Features

FEATURES	DETAIL
Application	Compressed air
Maximum output pressure	188.5 psi 13 bar
Output air flow/quantity	30 cfm 0.85 m³/min
Main motor power	10 HP 7.5 kW
Air tank capacity	74 gal 280L
Operating voltage	220V 1ph 50/60 Hz
Ideal laser machinery to supply	1500W



Special Features

Ultra High Pressure Technology



All components and connections are designed to operate at high pressures without any difficulty.

Variable Speed Driver (VSD)



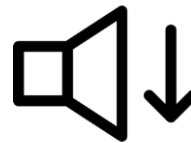
The Variable Speed Control technology maintains a constant output pressure by adjusting the motor's revolutions

4 in 1



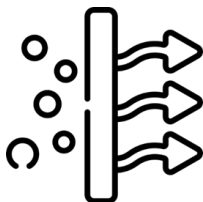
It comprises a complete 4-in-1 air compression station: Tank, Compressor, Dryer, and Filters

Quiet Operation



The air compression is generated by a screw-driven motor, which ensures quieter operation compared to other types of compressors.

Multi-stage Filtration



It features multiple filtration stages to ensure clean and pure compressed air output, which is essential for working with laser cutting machines.

HMI Touch Screen



It includes a built-in touchscreen as the control interface between the user and the machine. The control is intuitive and user-friendly for the operator.

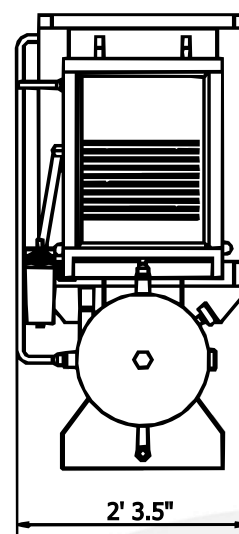
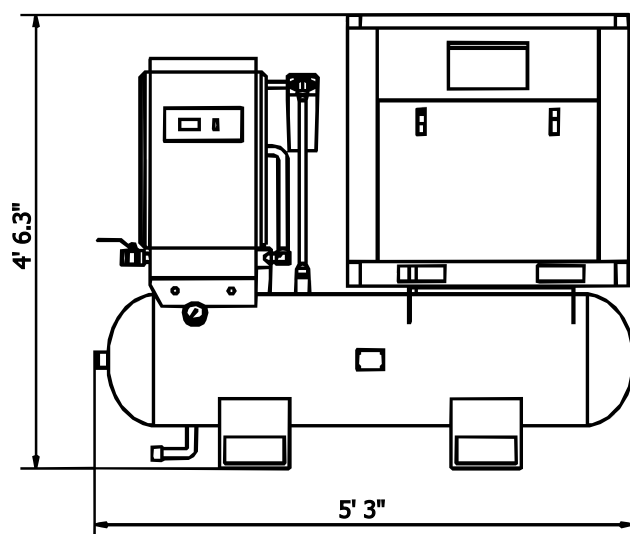
General Specifications

SPECIFICATION	DETAIL
Model	FORZA COMPRESSOR Z10 – Z10P13
Compressor technology type	Screw drive
Supply medium	Air
4-in-1 unit	Compressor, tank, dryer, filters
Cooling system	Air-cooled
Output air flow/quantity	30 cfm 0.85 m ³ /min
Maximum output pressure	188.5 psi 13 bar
Output pressure accuracy	±0.1 MPa
Maximum air supply humidity	< 60%
Nominal atmospheric pressure	14.5 psi 0.1 MPa
Operating temperature	35.6 – 113 °F 2 – 45 °C
Noise level	≤70 dB
Vibration level	≤7 mm/s
Output connection diameter	3/4 in
Air output impurity level	≤0.01 um
Oil content in the air output	≤0.003 ppm
Nominal speed of the main motor	2400 rpm
Main motor starting mode	Variable speed (VSD)
Motor insulation class	F
Air tank volume	74 gal 280 L
Operating voltage	220V 1ph 50-60 Hz
Main motor power	10 HP 7.5 kW
Air dryer power	1 kW
Power for electrical system design	8.5 kW
Average energy consumption	7.65 kWh

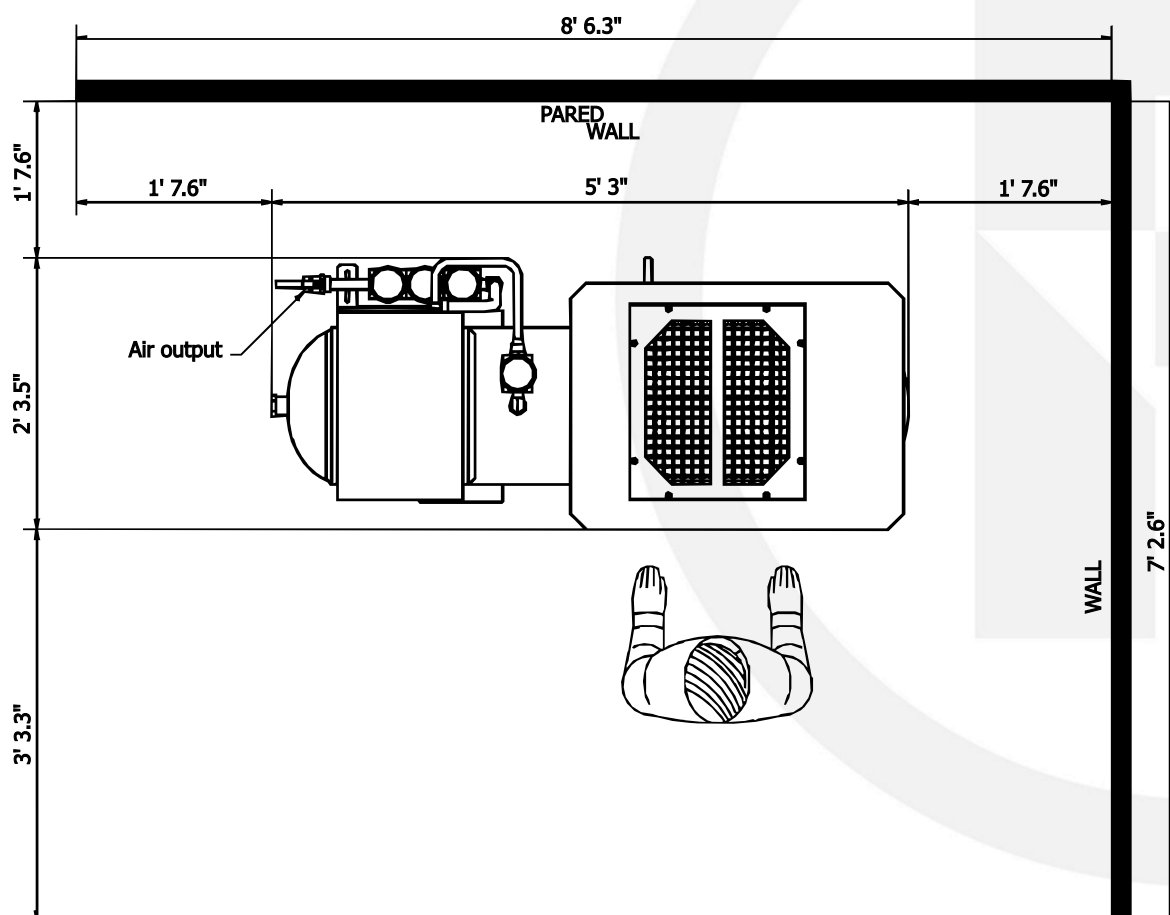
Maximum line current	43A @ 220VAC 1ph		
Conductor wire gauge to the thermal - magnetic circuit breaker ⁽¹⁾	Up to 60°C (TW, UF)	Up to 90°C (THHW, THHN)	Voltage
	2 x 6AWG	2 x 8AWG	220VAC 1ph
Recommended MCCB and grounding conductor	MCCB	PE Conductor (Copper)	Voltage
	60A	10AWG	220VAC 1ph
Total equipment weight	882 lb 400 kg		
Total equipment dimensions	5.2x2.3x4.5 ft 1600x700x1380 mm		
IP protection	IP55		
Certifications	CE, RoHS		

1. The cable gauge sizing was done based on NEC 310-16 for maximum conductor temperatures of 140°F and 194°F, considering conduit installation. If installing cables in open air, a smaller gauge may be used upon consultation with FORZA Laser's technical department.

Machine Dimensions

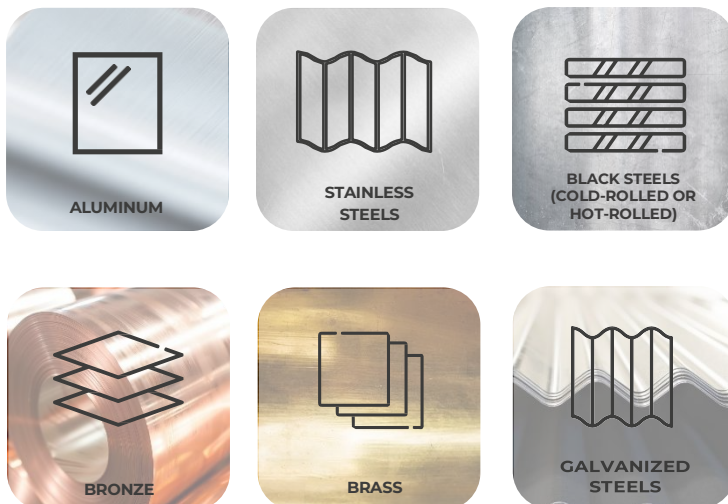


Required Space



Applicable Materials

All materials that can be cut with compressed air are described; the cutting thickness depends on the power of the laser equipment.



Black Steel should be cut with oxygen; however, thin thickness can be cut on using compressed air.


Cutting Thickness by Material

Cutting thickness depends on the machine's laser power; the following table corresponds to work with a 1500W machine.



MATERIAL	IDEAL THICKNESS ⁽¹⁾		
	mm	in	gauge
ASTM A36 STEEL ("Black or Mild")	1.5	1/16	16
ASTM 304 STAINLESS STEEL	4	5/32	8
ASTM 6061 STRUCTURAL ALUMINUM	3	1/8	10
C27200 BRASS	2	5/64	14
ASTM A653 GALVANIZED STEEL	1.25	3/64	18

1. This is the maximum limit at which a burr-free and clean cut can be obtained. Up to this thickness, cutting can be performed continuously.















Packing List:

- 1 x Compressor Z 10 (Tank, Compressor, Dryer, Filters) ₍₁₎

- POWER CABLES AND TRAYS -

- 7m x Cable 2x6AWG + 1x10AWG, (T:Ring-Spade) @220v1ph 
- 1 x PU hoses 32.81 ft x 5/16 in (10mx8mm) 

- INSTALLATION KIT -

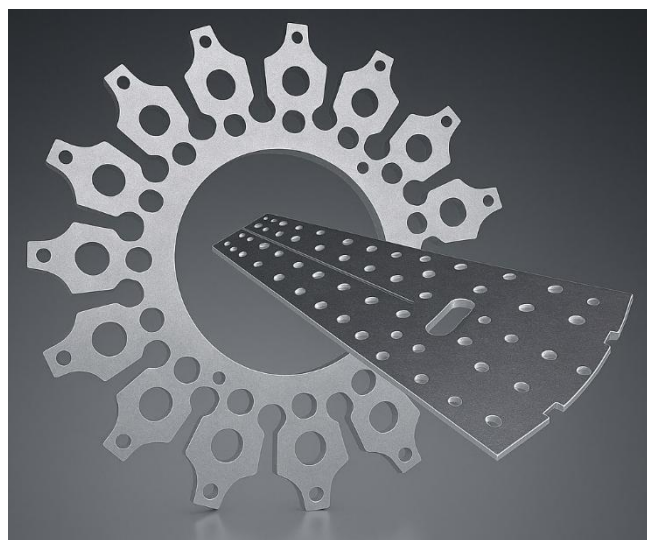
- 1 x 3/4in to 1/2in reductor 
- 1 x 1/2in to 1/4in reductor 
- 2 x 1/4in hexagonal steel nipple 
- 1 x 1/2in steel tee 
- 1 x 1/4in steel tee 
- 1 x 1/2in ball valve 
- 1 x Pressure reducing valve 
- 1 x Pressure gauge 
- 3 x 8mm to 1/2in quick connect couples 
- 3 x 8mm to 1/4in quick connect couples 
- 1 x Pipe wrench 
- 1 x Blow gun 
- 1 x 8mm PU spiral hose roll 
- 1 x Terminal set 

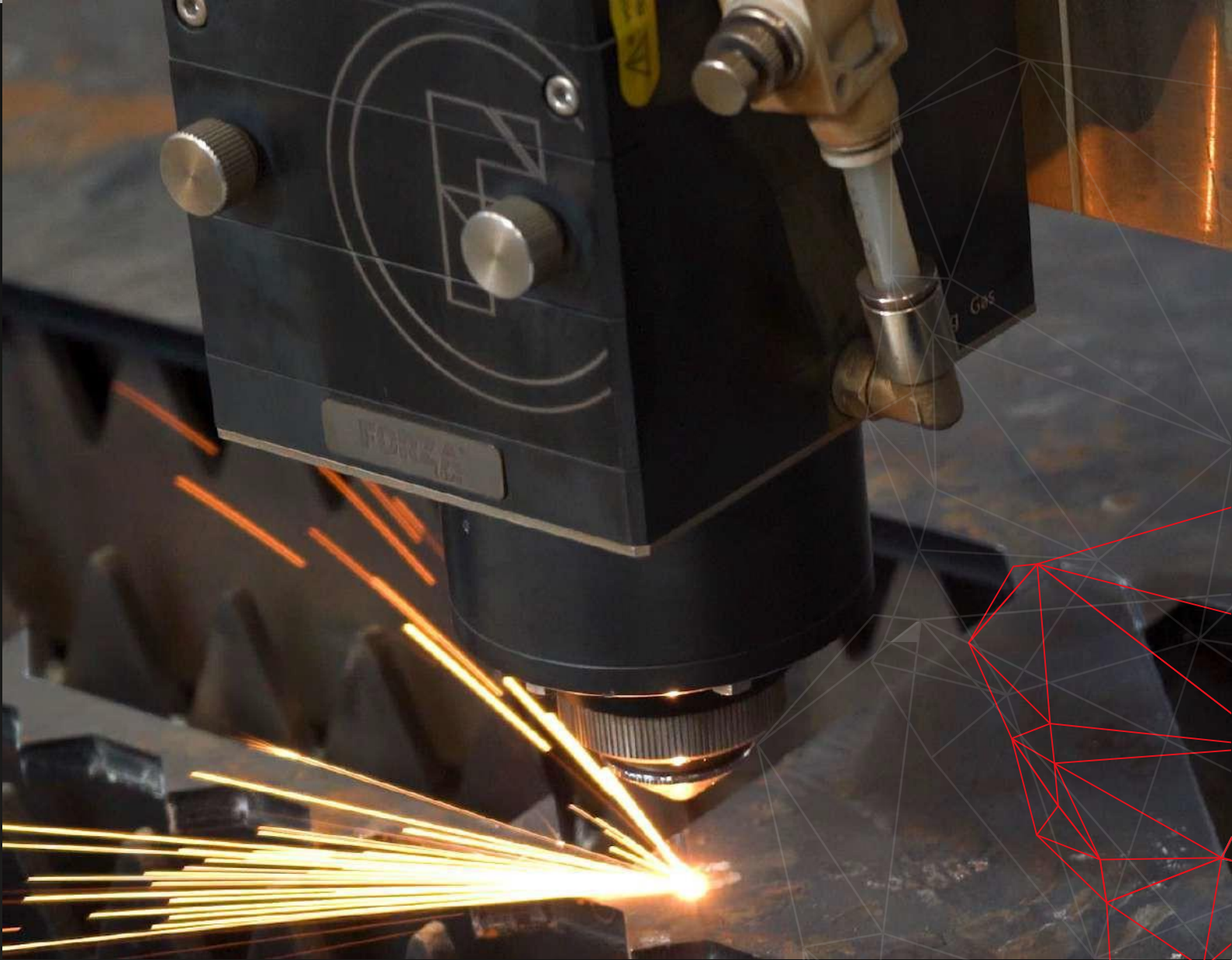
Transport symbols:  (Package),  (Inside the package),  (Installed on the machine).

Consumables:

IMAGEN	ITEM	DESCRIPTION	LIFETIME
	Synthetic Hydraulic Oil ISO 46 (1.32gal 5L)	It enables the compression process through the motor and screw drive	First 500 hours of use and then every 2000 hours
	Air filter	Internal filter for air intake during compression	First 500 hours of use and then every 2000 hours
	Oil filter	Filters impurities from the oil used in the compression process	First 500 hours of use and then every 2000 hours
	Air-oil separator	Separates the oil content from the air after the compression process	First 500 hours of use and then every 2000 hours
	010C type precision filter cartridge	First filtration stage (removes impurities up to 3 microns and oil residue up to 3 ppm)	First 500 hours of use and then every 2000 hours
	010T type precision filter cartridge	Second filtration stage (removes impurities up to 1 micron and oil residue up to 1 ppm)	
	010A type precision filter cartridge	Third filtration stage (removes impurities up to 0.01 microns and oil residue up to 0.01 ppm)	
	010X type precision filter cartridge	Fourth filtration stage (removes oil residue up to 0.003ppm)	

Manufactured Parts:





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