

D120

P/N: 81401457

Tool Features

The D120 is a tool intended for picking sheet metal. Featuring multipole shallow field array technology, it is a mighty pneumatic tool which excels at de-stacking and lifting thin materials when most powerful magnets can't get a grip.



WARNING!
DO NOT OPERATE UNLESS IN
CONTACT WITH FERROUS TARGET

Specifications

Maximum Breakaway Force ^{1,2}	1133 N								
Maximum Shear Force ^{1,2}	296 N			32 kg					
Thickness for De-Stack ³	0.08 in			2.0 mm					
Maximum Allowable Pressure	87 psi			8 Bar					
On Target Actuation Pressure	58.0 psi			4.0 Bar					
Net Weight	2.8 lb			1.3 kg					
Air Port Thread	2x G1/8 (1/8 BSP)								
Mounting Options	Top - 2x NAAMS Ø6-M8-Ø6 Side - 2x Ø5-M6-Ø5								
Magnetic Pole Footprint	2.13" x 1.97"			54.0mm x 50.0mm					
Material Thickness - mm (in)	0.5 (0.020)	0.6 (0.024)	0.7 (0.028)	0.8 (0.031)	1.0 (0.039)	2.0 (0.079)	3.0 (0.118)	4.0 (0.157)	5.0 (0.197)
Maximum Force ^{1,2,5} - N	304	401	471	538	843	1130	1133	1133	1133
Required Air Pressure ⁴ - bar (psi)	2.0 (29.0)	2.4 (34.8)	2.5 (36.3)	2.8 (40.6)	3.3 (47.9)	4.0 (58.0)	4.0 (58.0)	4.0 (58.0)	4.0 (58.0)

1. Determined in laboratory environment on 2" thick SAE1018 Steel with surface roughness 63 micro inches. Many factors contribute to the actual breakaway force and safe working load in each application. Consult a Magswitch Applications Engineer and test the Magswitch in each application before deployment.

2. All data applies to standard tool.

3. Determined with SAE1018 Steel L=200mm W=200mm.

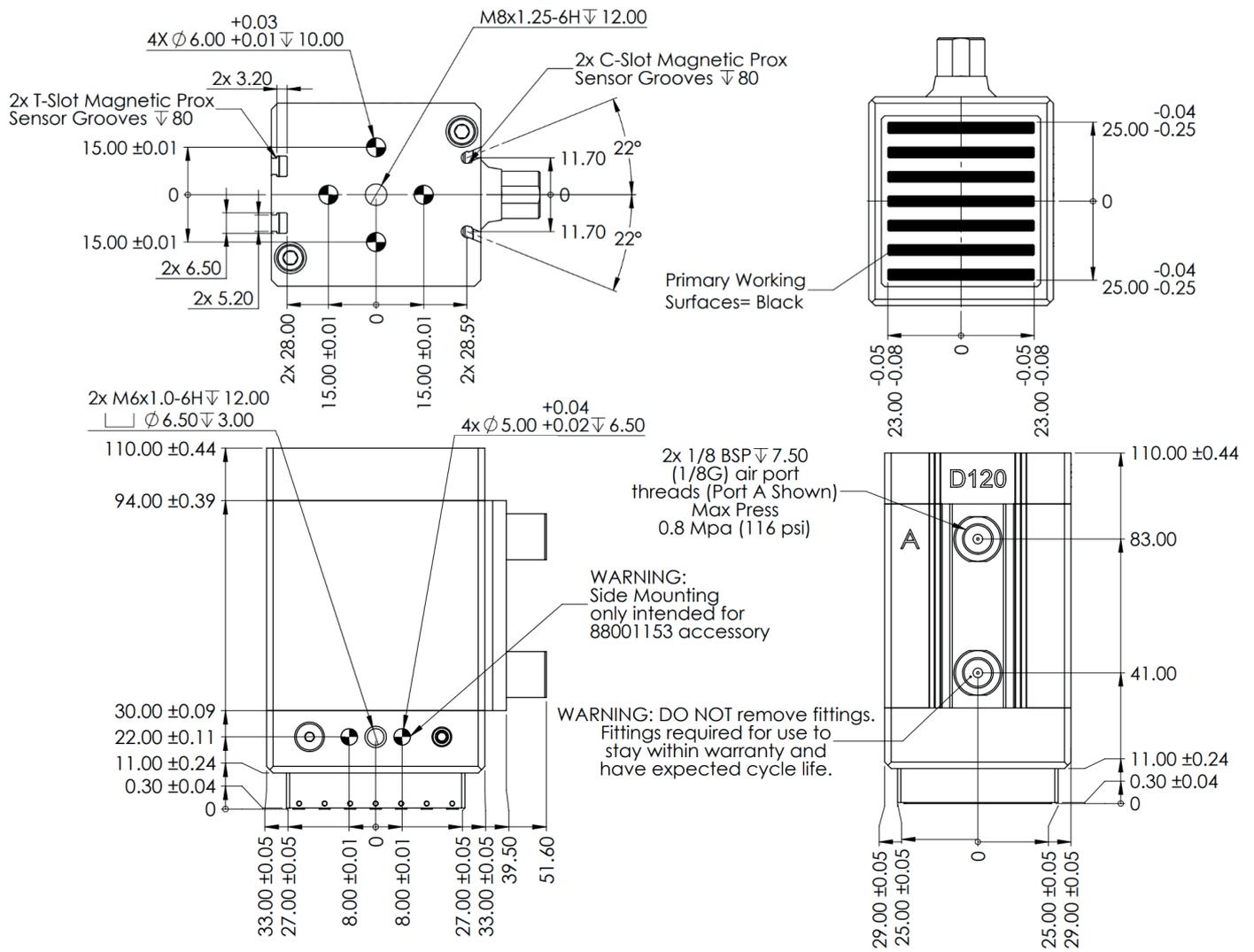
4. Values may vary by +/- 5%.

5. Maximum forces listed above are not safe lifting forces. Designer must take into account safety factor when specifying tool. Magswitch recommends SWL = 5:1 for most applications.

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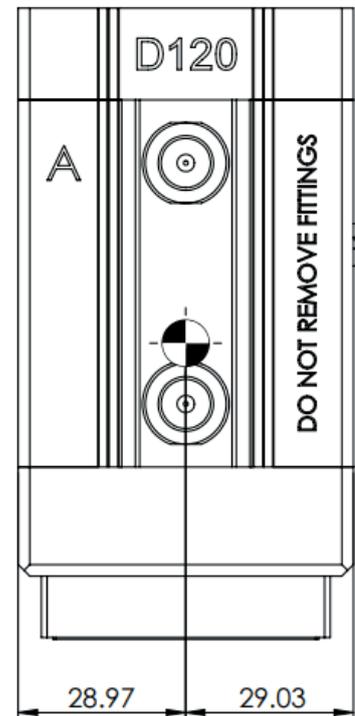
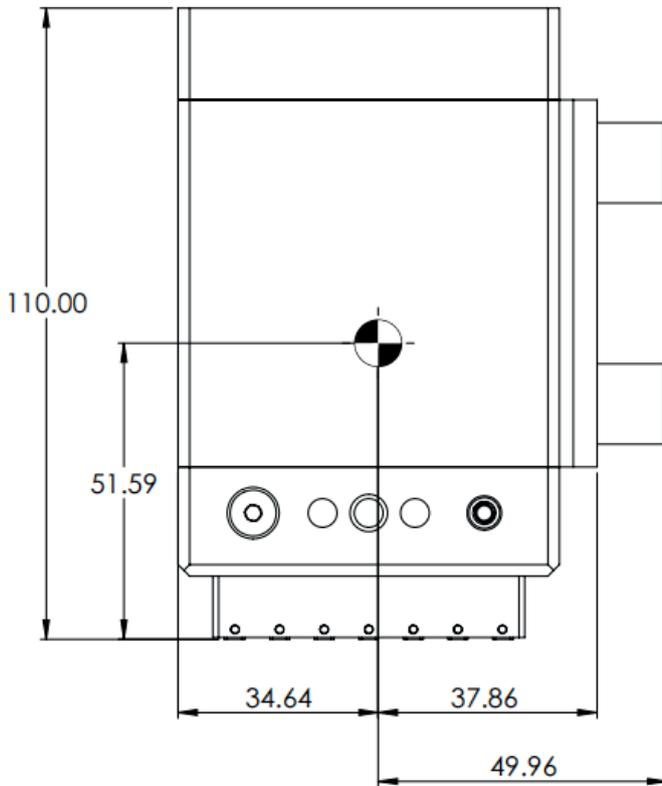
Drawings



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Drawings - Center of Gravity (COG) Location



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Short version of the operating instructions

- The product is designed for conveyor technology and is suitable for carrying loads
- Surface properties and material have an influence on the specified breakaway force and load-bearing capacities. Detailed information can be found in the product manual on page 25 in chapters 5.3.1 & 5.3.2.
- Only trained personnel may carry out commissioning. Specifications for trained personnel can be found in the product manual pages 10 & 11 in chapters 3.10.1 - 3.10.3. In this case, the responsibility of the security query lies with the robot programming and must be selected according to the required performance level.
- The product can be used up to a temperature of -20 - +80 C°. At higher temperatures, the magnets can be used with the EH version (High temperatures version). The selection must be made by trained personnel from Magswitch.
- In accordance with the established safety guidelines and specifications, it is strictly prohibited to carry out the transport of loads or materials over people. This measure serves the protection and safety of all persons involved and must be strictly always adhered to.
- The product is fail-safe according to the definition of DIN EN ISO13155:2009-08 – section 7.1.2.3.

The instructions can be requested free of charge if required:

<https://magswitch.com/pages/contact-magswitch>

or

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