

# D85 | P/N: 81401267

The D85 is a narrow-footprint tool intended for use 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 larger magnets can't get a grip.

**WARNING!**  
**Do Not Operate Unless In Contact With Ferrous Target**

## Specifications

Maximum Breakaway Force <sup>1,2</sup>	548 N	
Maximum Shear <sup>1,2</sup>	130 N	
Thickness for De-Stack <sup>3</sup>	0.08 in	2.0 mm
Maximum Allowable Pressure	116 psi	8.0 Bar
On Target Actuation Pressure	55 psi	3.8 Bar
Net Weight	1.46 lb	0.67 kg
Air Port Thread	2x G1/8 (1/8 BSP)	
Mounting Options	Side - 1x NAAMS Ø6-M8-Ø6 Top - 1x 3/8-18 NPT	
Magnetic Pole Footprint	2.13" x 1.12"	54.0mm x 28.5mm



Material Thickness - mm (in)	0.5 (0.020)	0.6 (0.024)	0.7 (0.028)	0.8 (0.031)	0.9 (0.035)	1.0 (0.039)	1.1 (0.043)	1.2 (0.047)	1.3 (0.051)	1.4 (0.055)	1.5 (0.059)	2.0 (0.079)	3.0 (0.118)	4.0 (0.157)	5.0 (0.197)
Maximum Force <sup>1, 2, 5</sup> - (N)	163	177	244	293	356	415	432	456	465	480	494	532	541	545	548
Required Air Pressure <sup>4</sup> - Bar (psi)	2.4 (35)	2.4 (35)	2.8 (40)	2.8 (40)	3.1 (45)	3.1 (45)	3.1 (45)	3.4 (50)	3.4 (50)	3.7 (53)	3.7 (53)	3.8 (55)	3.8 (55)	3.8 (55)	3.8 (55)

<sup>1</sup> 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.

<sup>2</sup> All data applies to standard tool.

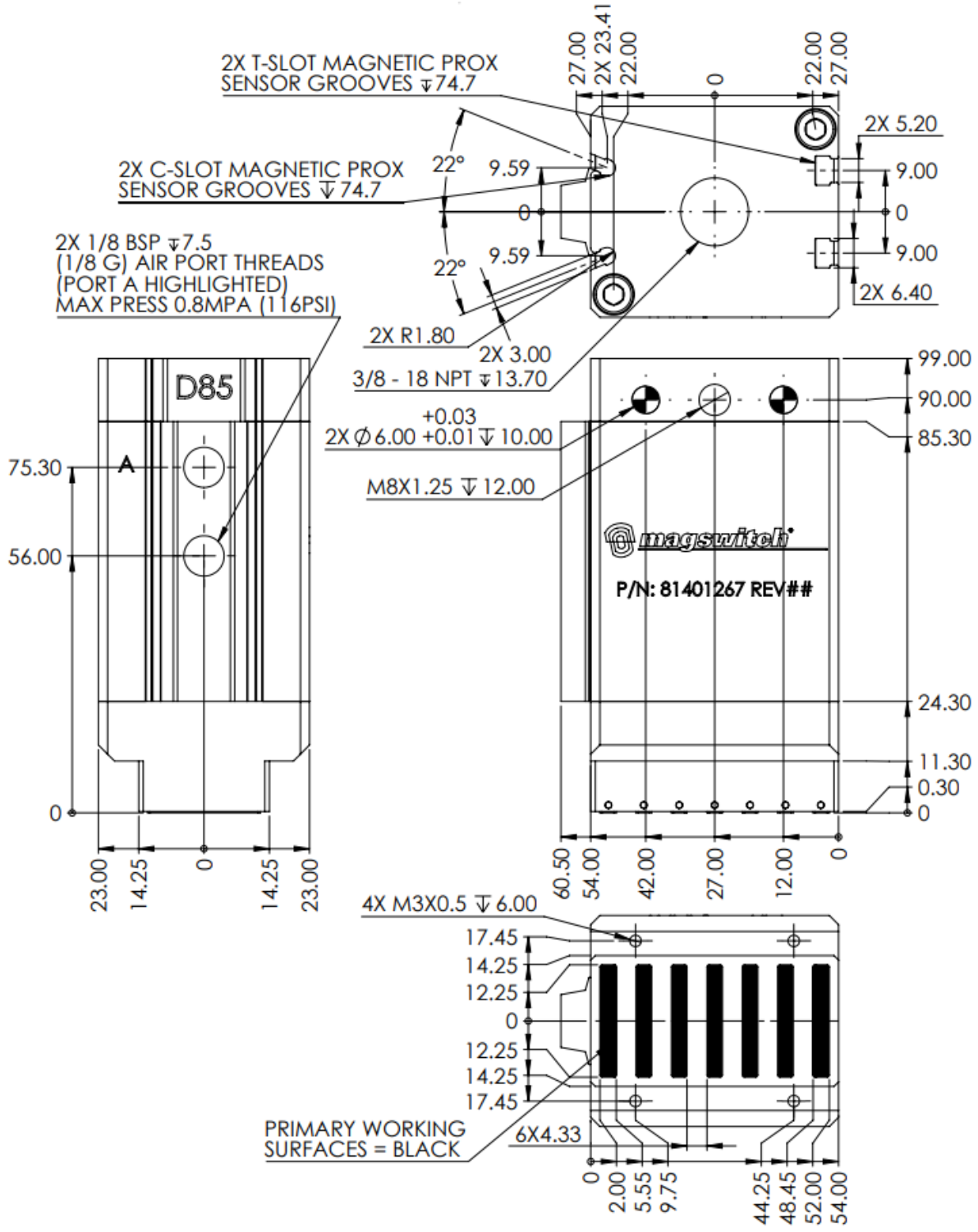
<sup>3</sup> Determined with SAE1018 Steel L=200mm W=200mm Thickness=2mm.

<sup>4</sup> Values may vary by +/- 5%.

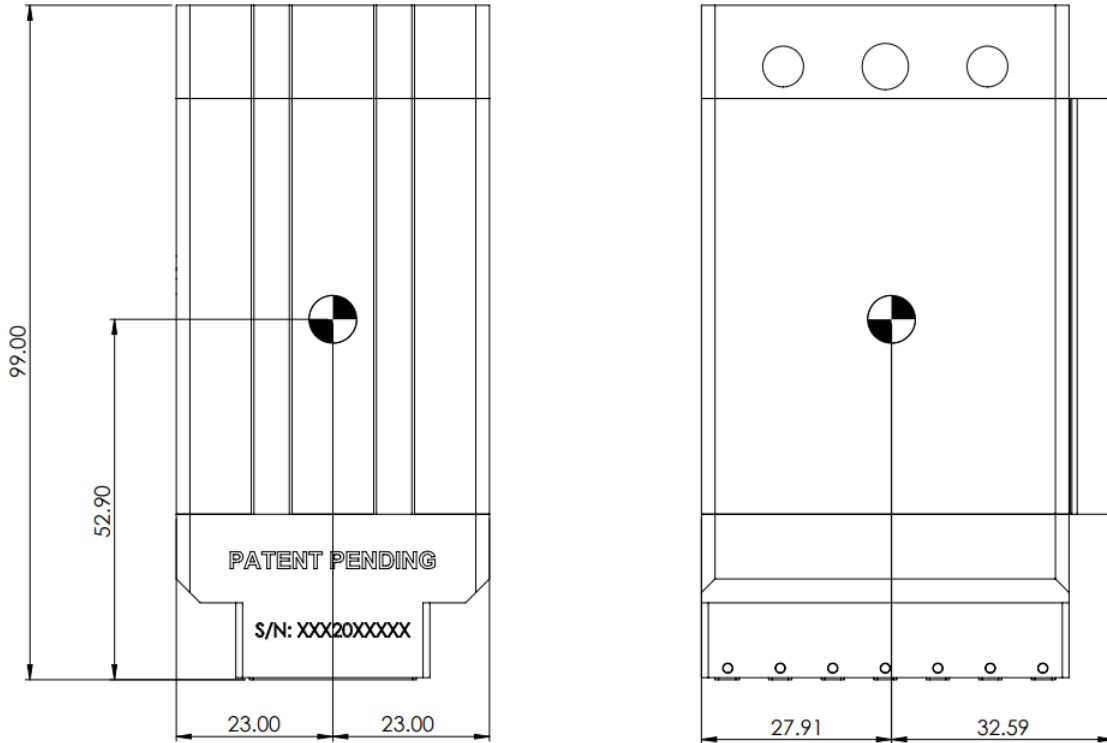
<sup>5</sup> Maximum forces listed above are not safe lifting forces. Designer must take into account safety factor when specifying tool. Magswitch recommends SWL = 5:1 for most applications.

**Standard Kits Available:**

D85 Compliance Device	88001640
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## Center of Gravity (COG) Location



## Sensor Placement

Approximate sensor positions are shown in the image below. Some adjustment may be required. Positions were determined by measuring from the top of the tool to the bottom of the sensor. Turck part number BIM-UNT-AP6X-0.2-RS4T was used to determine the ranges. Using a different sensor may result in a variance in these positions.

