

# PLAY50X2 2.0 SH | P/N: 81401734

## Summary

Magswitch 2.0 LAY series of magnetic grippers for robotic automation utilize magnets arranged in a linear array to extend the depth and footprint of the magnetic field. The PLAY 50x2 SH magnetic gripper adds the capability of handling high temperature parts. The large footprint of the array magnets provide stability when handling large parts. Custom pole shoes can be added to allow optimal holding force for parts that are not flat or have irregular features. The PLAY 50x2 2.0 SH magnet combines the power of two magnets in one assembly with the holding force for handling high temperature tubes, rails, billets and castings or welded assemblies.

## Specifications

Maximum Breakaway Force <sup>1,2,4</sup>	4614	N		
Maximum Shear <sup>1,2,4</sup>	1128	N		
Minimum Thickness for De-Stack <sup>3</sup>	0.500	in	12.7	mm
Overall Height (Max)	11.8	in	300.5	mm
Overall Length	11.2	in	285.6	mm
Overall Width	4.9	in	125.0	mm
Net Weight	14.33	lbs	6.5	kg
Air Port Threads	1/4 Rc			
Maximum Application Temperature	302	F	150	C
Magnetic Pole Footprint	3.8x10.0	in	97.6x255	mm
Max Allowable Pressure	145	psi	1.00	MPa



Material Thickness	1	2	3	4	5	6	7	9.53	12.7	19.05	50
- mm (in)	(0.039)	(0.079)	(0.118)	(0.157)	(0.197)	(0.236)	(0.276)	(0.375)	(0.500)	(0.750)	(1.969)
Maximum Force <sup>5</sup> (N)	465	838	1345	1756	2537	3071	3392	4007	4311	4614	4614
Required Air Pressure	2.8	2.4	2.2	2.1	1.9	1.7	1.5	1.4	1.4	1.4	1.4
- bar (psi)	(40)	(35)	(32)	(30)	(27)	(24)	(22)	(20)	(20)	(20)	(20)

<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.

<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.

$$SWL \text{ (Safe Working Load)} = \frac{\text{Maximum Force}^5}{\text{Safety Factor} (\geq 5)}$$



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+ 1(303) 468.0662

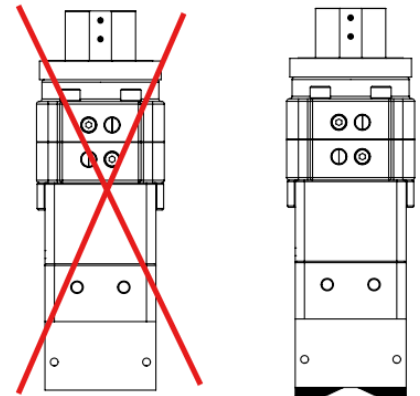
magswitch.com

*Pole shoes required for operation and included in package*

Standard kits available:

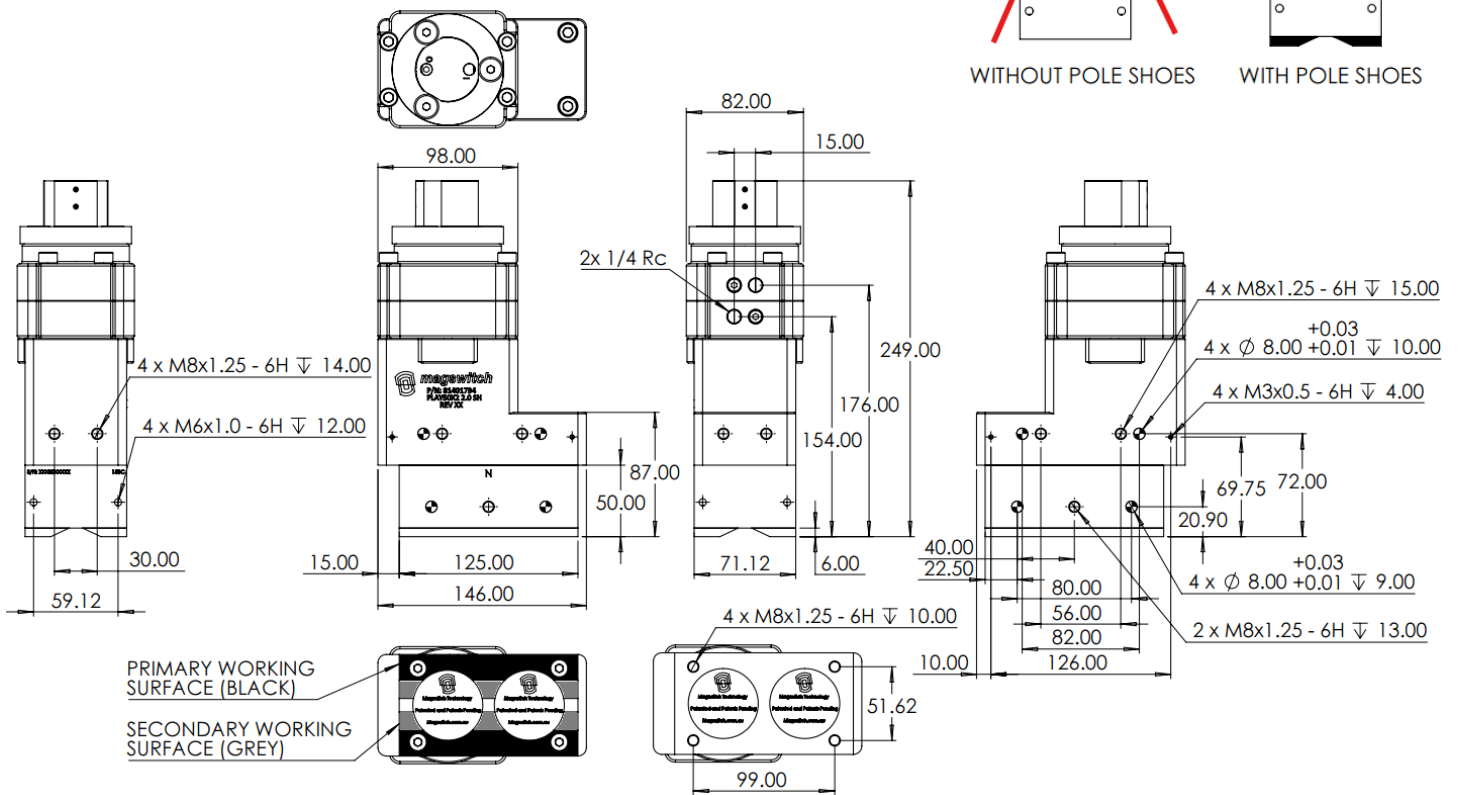
PSK, PLAY50X2 2.0, STANDARD, HIGH HEAT, NICKEL	88002149
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**WARNING!**  
Do Not Operate Unless In Contact With Ferrous Target



WITHOUT POLE SHOES

WITH POLE SHOES



## Center of Mass

