



END-OF-ARM TOOLING

TRANSPORTER® SWITCH SERIES

Permanent Magnetic, Air Release Tooling/End Effectors. Transporter® Switch Series (TPS) Magnets are ideal for use where vacuum cups and grippers are typically used for lifting and moving steel sheets, blanks, stamped parts and complete assemblies.



Applications & Benefits:

- » Automated press to press transfer systems
- » Robotic "Pick & Place"
- » Manual and automated machine loading/unloading
- » Outlasts vacuum cups in most applications
- » Grasps odd shaped or perforated parts
- » Increases production and reduces shop air costs
- » Operates effectively in any orientation
- » Will not drop parts if system air-loss occurs
- » Reduces noise
- » Maximum operating temperature 140°F (60°C)
- » Destacks* without double-blanking when the appropriate magnet is selected for the application
- » Double Acting
- » Maintains magnetic state in event of air loss
- » Easy to retrofit on existing tooling
- » Optional low-skid boot protects the surface of parts & prevents shifting
- » Uses less air than vacuum cups
- » Instantaneous pick-up and release
- » Positively holds parts - no dropping or shifting in the event of air loss

Transporter® Switch Series (TPS) Magnets:

Powerful Rare Earth magnets positively hold the parts during transfer, greatly reducing the chance of slipping and shifting of your part due to oily coatings. An optional "low-skid" version with a non-marring contact ring is also available to protect surface finish of the parts during transfer. A 5/3 directional control valve controls the "grip/release" function of the magnet.

- » Powerful Rare Earth magnet positively holds parts - no dropping or shifting in the event of air loss
- » Sensors available to provide gripper state feedback
- » Instantaneous pick-up and release
- » Uses up to 95% less air than vacuum cups

Friction plate option: Non-marring face, lowers holding value, see chart.

NOTE: Supply air pressure must not exceed 80 PSI at the inlet. Operating at pressures above 80 PSI may lead to premature failure of the unit. Air must be clean, dry and non-lubricated.

Air pressure should never be applied to the magnet during a transfer cycle. This will cause the loss of a part. Apply air when in position to release the part. In some applications, air may need to be applied to retract the magnet before contacting the part. If the magnet "reach out" lifts the part from the guides before making contact, causing loss of part position, apply air to the Transporter® LP prior to lifting the part. Another option is to use a Double Acting TPLP.



OPTIONAL EQUIPMENT:

- » V-brackets to keep rounds or 90° degree shapes centered on the magnet. Made of UHMW to provide non-marring contact.
- » Apple core mount
- » Ball mount
- » 3/8" NPT mount

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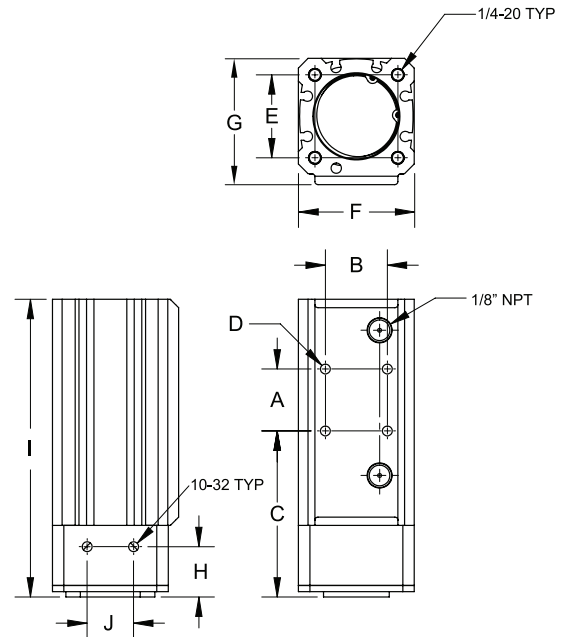


IMPERIAL DIMENSIONS (INCHES)

| | TPS25 | TPS25N | TPS32 | TPS32NM | TPS40 | TPS40NM |
|------------------|-------|--------|--------|---------|--------|---------|
| A | 0.75 | 0.75 | 1.00 | 1.00 | 1.13 | 1.13 |
| B | 0.75 | 0.75 | 1.00 | 1.00 | 1.13 | 1.13 |
| C | 2.66 | 2.66 | 4.68 | 4.68 | 2.93 | 2.93 |
| D | #8-32 | #8-32 | #10-32 | #10-32 | #10-32 | #10-32 |
| E | 1.10 | 1.10 | 1.34 | 1.34 | 1.58 | 1.58 |
| F | 1.63 | 1.63 | 1.87 | 1.87 | 2.25 | 2.25 |
| G | 1.77 | 1.77 | 2.04 | 2.04 | 2.39 | 2.39 |
| H | 0.81 | 0.81 | 0.81 | 0.81 | 0.73 | 0.73 |
| I | 4.59 | 4.59 | 4.81 | 4.81 | 5.18 | 5.18 |
| J | 0.56 | 0.56 | 0.75 | 0.75 | 0.75 | 0.75 |
| Wt. (lbs) | 1.1 | 1.3 | 1.7 | 1.8 | 2.7 | 2.8 |

METRIC DIMENSIONS (CM)

| | TPS25 | TPS25N | TPS32 | TPS32NM | TPS40 | TPS40NM |
|------------------|-------|--------|--------|---------|--------|---------|
| A | 1.91 | 1.91 | 2.54 | 2.54 | 2.87 | 2.87 |
| B | 1.91 | 1.91 | 2.54 | 2.54 | 2.87 | 2.87 |
| C | 6.76 | 6.76 | 11.89 | 11.89 | 7.44 | 7.44 |
| D | #8-32 | #8-32 | #10-32 | #10-32 | #10-32 | #10-32 |
| E | 2.79 | 2.79 | 3.40 | 3.40 | 4.01 | 4.01 |
| F | 4.14 | 4.14 | 4.75 | 4.75 | 5.72 | 5.72 |
| G | 4.50 | 4.50 | 5.18 | 5.18 | 6.07 | 6.07 |
| H | 2.06 | 2.06 | 2.06 | 2.06 | 1.85 | 1.85 |
| I | 11.66 | 11.66 | 12.22 | 12.22 | 13.16 | 13.16 |
| J | 1.42 | 1.42 | 1.91 | 1.91 | 1.91 | 1.91 |
| Wt. (lbs) | 0.5 | 0.59 | 0.77 | 0.82 | 1.22 | 1.27 |



MAXIMUM LIFTING CAPACITY (LBS.)

| THICKNESS OF STEEL | | | TPS25 | TPS25NM | TPS32 | TPS32NM | TPS40 | TPS40NM |
|--------------------|-------|------|-------|---------|-------|---------|-------|---------|
| Ga. | in. | mm | | | | | | |
| 26 | 0.018 | 0.5 | 6.1 | 5.2 | 10.8 | 8.7 | 12.1 | 12.6 |
| 22 | 0.030 | 0.8 | 10.5 | 9.5 | 17.1 | 14.7 | 20.1 | 20.8 |
| 18 | 0.048 | 1.2 | 20.3 | 18.4 | 31.8 | 29.0 | 40.1 | 41.0 |
| 16 | 0.060 | 1.5 | 24.5 | 22.0 | 37.7 | 34.9 | 48.5 | 49.8 |
| 14 | 0.075 | 1.9 | 29.6 | 25.4 | 46.8 | 42.8 | 64.6 | 66.8 |
| 12 | 0.100 | 2.5 | 32.8 | 27.0 | 58.0 | 49.8 | 96.2 | 100.2 |
| | 0.188 | 4.8 | 34.8 | 26.4 | 60.9 | 49.5 | 119.1 | 121.1 |
| | 0.250 | 6.4 | 34.8 | 26.8 | 60.5 | 49.2 | 121.6 | 124.9 |
| | 3.000 | 76.2 | 34.4 | 26.4 | 57.5 | 49.0 | 122.5 | 124.3 |

Double Blanks (DO NOT USE FOR DESTACKING)

Does Not Double Blank

NOTE: Lifting capacity listed is **NOT** derated. Proper system design must include no less than 3/1 safety factor. (Typical systems 3/1 to 6/1)

OPERATION REQUIREMENTS:

To Engage: Move magnet to the metal, apply air pressure to upper port.

To Release: Apply air pressure to lower port. Lift magnet from metal.

Note: Recommended operating pressure is 25 to 80 psi (not to exceed 80 psi).. Note: Maximum operating temperature 140°F (60°C)