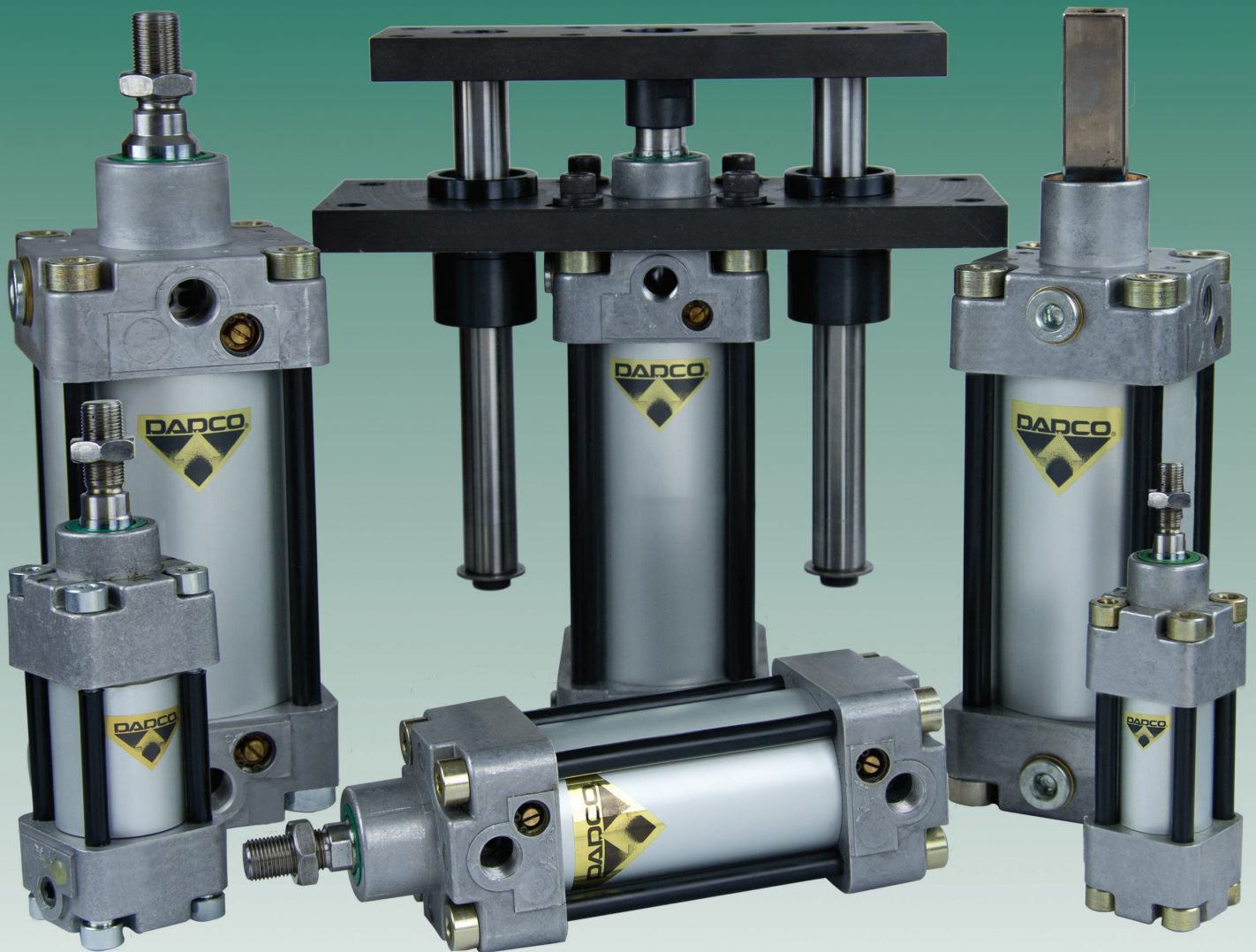


DAPCO

Air Cylinders

HP Series

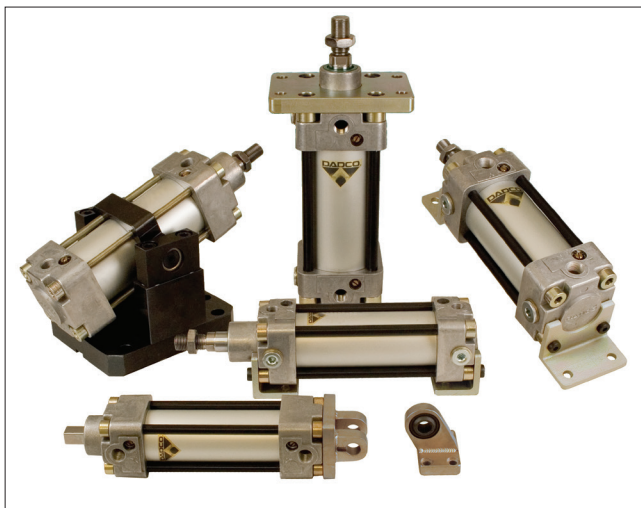


Bore Sizes from 32 – 250 mm

DADCO®

DADCO's HP Series Air Cylinders meet or exceed most worldwide standards. These products comply with the North American Automotive Metric Standards (NAAMS), the International Standards Organization (ISO 15552), and the German Automotive Standards (Verband Deutscher Maschinen – und Anlagenbau e.V. -- VDMA 24-562).

DADCO's air cylinders are quite versatile and, because of a wide array of options, can be supplied to conform to most individual metric cylinder customers' requirements. The HP Series provides force from .27 kN to 49 kN (64 lb. to 9100 lb.). For more precise force information, see cylinder pages 4 – 23.



Mount Options

DADCO HP Series Air Cylinders feature steel bolt-on mounts that fully conform to NAAMS, ISO, and VDMA standards, and are available for each bore size, ranging from 32 – 250 mm.

Mounts can be easily attached or removed in the field to accommodate different needs, such as changing the mount style or rotating the port location, without altering other features of the cylinder.

Fittings

DADCO offers BSPP fittings. A variety of push-in fittings are available for 32 mm – 125 mm bore cylinders. BSPP and NPT adapters are available for all bore sizes. For more detailed fitting information, see page 26.

Position Sensing Capability

The HP Series Air Cylinders can be prepped to accommodate most popular types of sensors. A variety of switches can be installed upon customer specification, including magnetic reed switches and proximity switches. See page 29 for more information.

Non-lube Operation

DADCO HP Cylinders are manufactured to exacting standards and are prelubed at assembly with a high quality, non-dissipating, pneumatic cylinder lubricant to eliminate the need for further lubricants during operation. Special low friction materials are employed to reduce heat and wear. Each cylinder is fully tested to give long, trouble-free operation. When properly applied, field tests have demonstrated that HP Series Air Cylinders often operate for years without requiring service. If the product ever fails to perform to expectation, contact your DADCO service representative for assistance.

Non-Rotating Option

DADCO's HP.N Non-Rotating Air Cylinders have all the features of DADCO's standard air cylinders, while the piston square rod prevents rotation. DADCO offers the HP.N model in bore sizes from 32 mm to 100 mm with a variety of stroke lengths to meet customer requirements.



Two Post Lifters

DADCO offers two post direct lifters utilizing the HP Series. These lifters deliver smooth, consistent, non-lube lifting. They are available in a variety of bore sizes and stroke lengths to accommodate different applications. For more information refer to Two Post Direct Lifter pages 30 – 31.



Delivery

DADCO's modern 13,150 m² main production facility, as well as satellite facilities, provide worldwide support. Products are available both directly and through a network of distributors.

CAD Templates On-line



DADCO's entire product line is available on-line in solid models and 2D CAD formats. For more information, visit our website, www.dadco.net, or contact DADCO.

Adjustable Cushioning

Every HP Series Cylinder is equipped with adjustable cushion control at each end as standard.

Precision Cast Heads

DADCO's HP Series Cylinder heads are precision die cast and contain several built-in features.

Corrosion Resistant Tube

Non-corrosive, high strength, clear anodized aluminum tubing is supplied as standard on the DADCO HP Cylinder. Chrome plated steel tubing is optionally available.

Multiple Port Capability

The HP series has BSPP ports as standard, NPT ports are optional. The HP Series Air Cylinders can also be ordered with multiple ports.

Tie Rod Nuts

DADCO's long, multi-purpose tie rod nuts feature a full length internal thread below the allen key slot. One end secures the tie rods while the other end accepts bolts for attaching mounts to the cylinder. In addition, the large flange diameter of the tie rod nuts provides an excellent mounting surface.

Rod Seal and Wiper Ring

The HP Cylinder's highly effective rod seal/wiper ring combination retains lubricant, seals air pressure, and wipes the rod free of contaminants.

Piston Rod Construction

All standard piston rods are produced from alloy steel with a smooth finish and hard chrome plating to resist wear, optionally available in alternative finishes. Contact DADCO for more information.

Long Life Piston Seals

High quality block vee piston seals are used on all bore sizes for superior performance.

Dampening and Tube Seal

The inner face of each head is covered by a polyurethane bumper which counters impact wear, prevents spalling, and reduces noise from piston-to-head contact. The bumpers also act to retain the cushion seals and provide a positive tube-to-head seal, superior to o-rings, which can cut or pinch.

Durable Piston

DADCO's three piece piston is constructed out of non-corrosive, high strength, anodized aluminum with plastic cushion spears.

Built-in Lubrication System

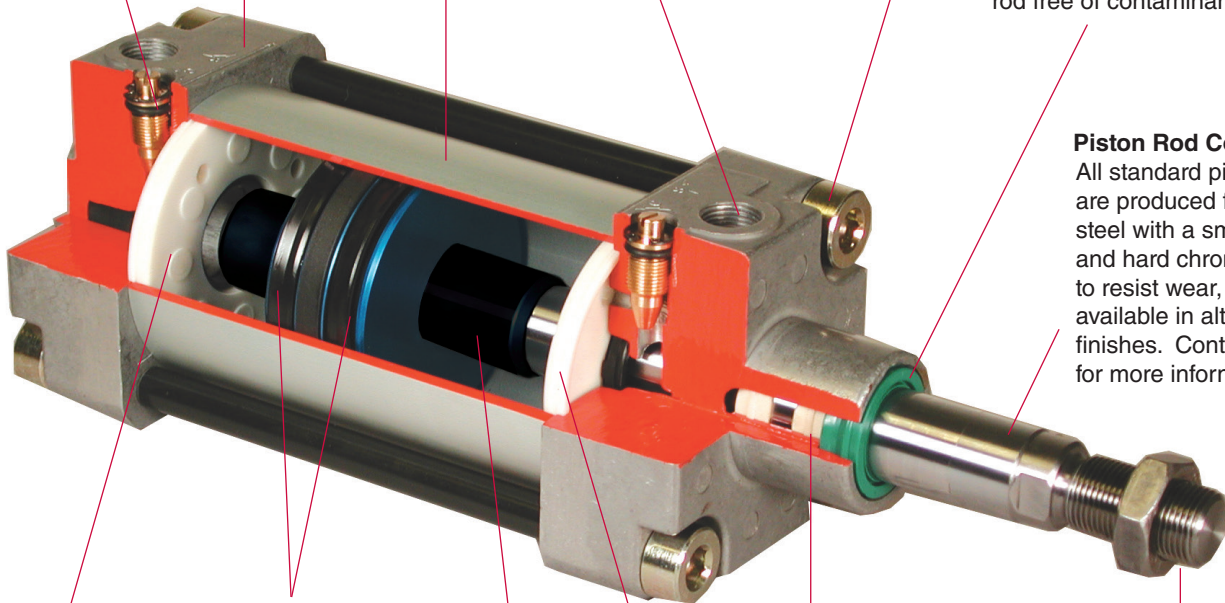
Rod bushing provides continual lubrication and minimizes bearing, seal and rod wear.

Rod Threads

Male threaded rod end standard, with optional female or rod-end stud (ISO 12.9) alternatives available.

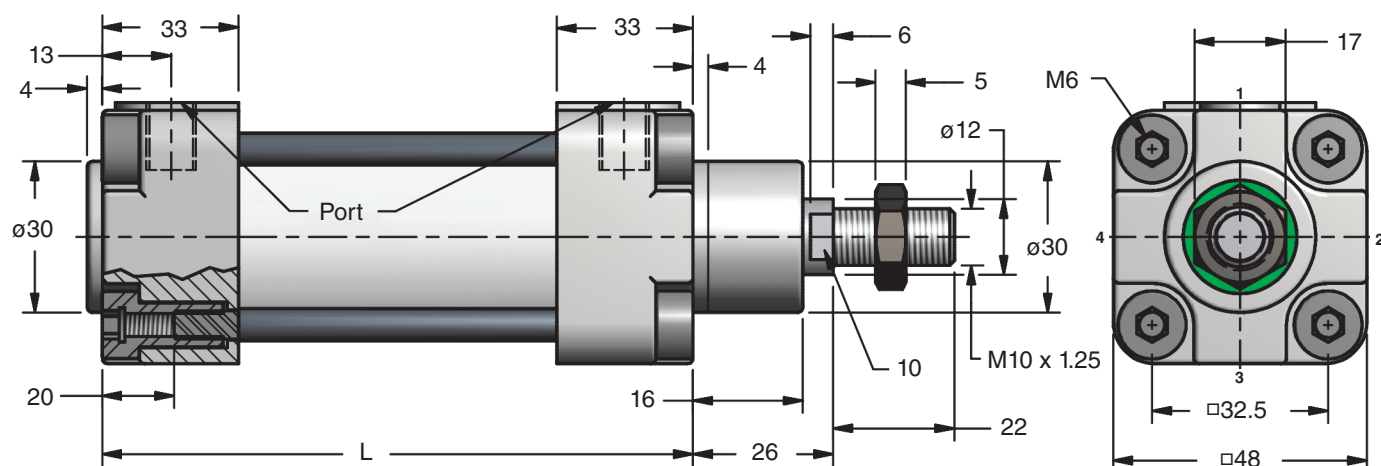
Cushion Seals

A floating cushion seal engages each cushion spear as it enters the head, thereby completely sealing off the main exhaust orifice. The trapped air is metered past the cushion regulating screw, providing a highly repeatable deceleration effect. The cushion seal also operates in place of a cushion ball check so that, even at low pressure, it opens to allow full air flow through the main orifice to facilitate immediate, unrestricted piston movement.



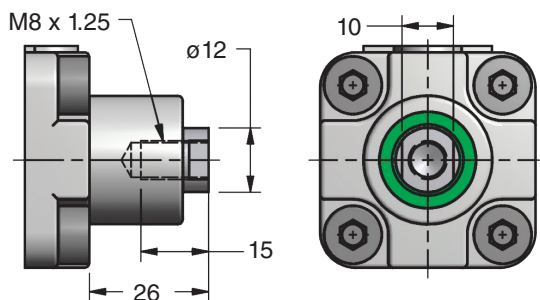
HP Series Air Cylinders

ø32 Air Cylinder



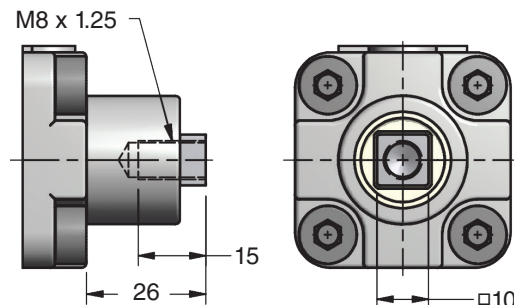
HP.Z = Standard Model

Rod Options



HP.W = Female Rod End Model

Piston rod with a female thread. DADCO offers rod end studs to convert the female thread to the standard male rod end. See page 27.



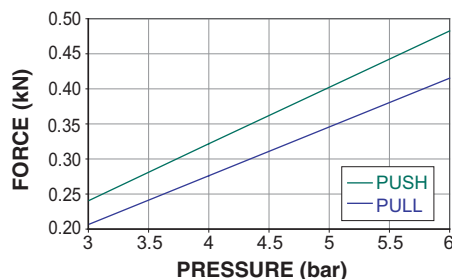
HP.N = Non-Rotating Model

Square piston rod with female thread prevents rotation. DADCO offers rod end studs to convert the female thread to the standard male rod end. See page 27. HP.N standard stroke lengths available up to 200 mm. Contact DADCO for more information.

| Part No. | Stroke | L (mm) |
|------------|--------|--------|
| HP._32.25 | 25 | 119 |
| HP._32.50 | 50 | 144 |
| HP._32.80 | 80 | 174 |
| HP._32.100 | 100 | 194 |
| HP._32.125 | 125 | 219 |
| HP._32.160 | 160 | 254 |
| HP._32.200 | 200 | 294 |
| HP._32.250 | 250 | 344 |

Contact DADCO for special stroke lengths.

Force Charts

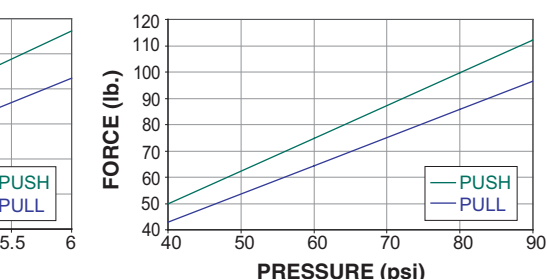


PUSH Force: $P(\text{bar}) = F(\text{kN}) \div 0.080$

$P(\text{psi}) = F(\text{lb.}) \div 1.25$

PULL Force: $P(\text{bar}) = F(\text{kN}) \div 0.069$

$P(\text{psi}) = F(\text{lb.}) \div 1.07$



$F(\text{kN}) = P(\text{bar}) \times 0.080$

$F(\text{lb.}) = P(\text{psi}) \times 1.25$

$F(\text{kN}) = P(\text{bar}) \times 0.069$

$F(\text{lb.}) = P(\text{psi}) \times 1.07$

NOTE:

A cylinder's theoretical force should be 50 - 100% greater than the force required.

Ordering Example:

| | | | | | | | |
|----------------------|-----|----|-----|------|----|----|----|
| Series | HP. | Z. | 32. | 100. | G. | 1. | TO |
| Rod Option | | | | | | | |
| Stroke Length | | | | | | | |
| Port Style | | | | | | | |
| Mount Option (TO-T8) | | | | | | | |
| Port Location (1-4) | | | | | | | |

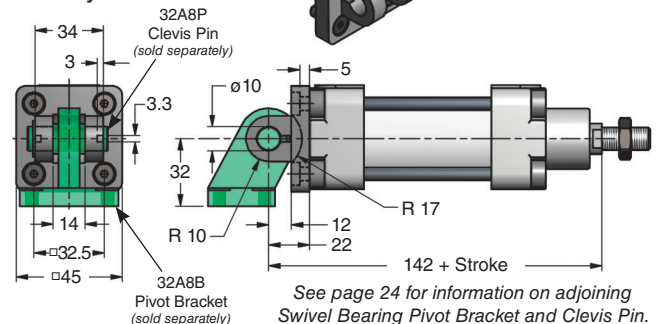
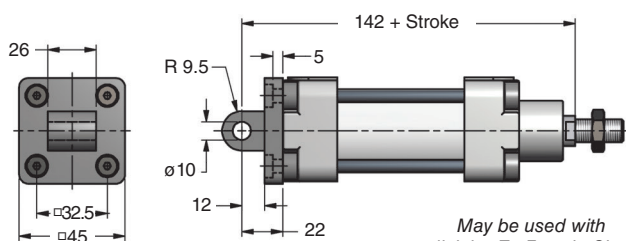
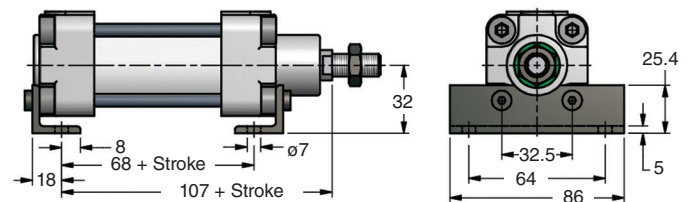
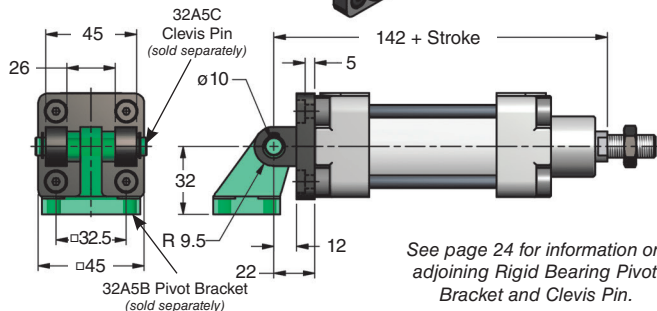
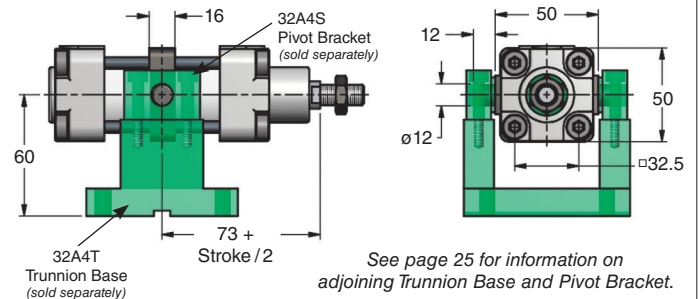
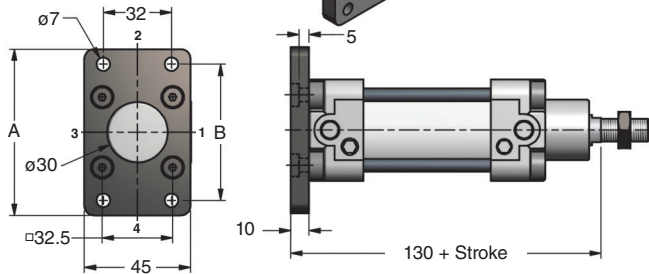
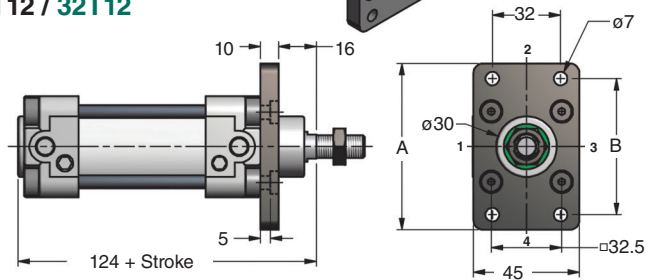
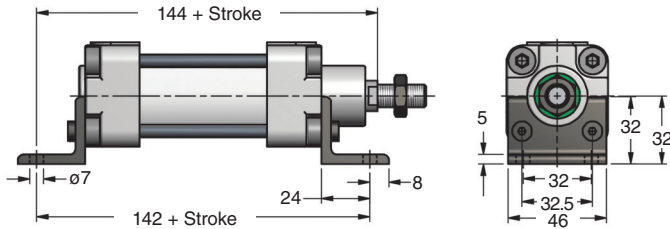
Z = Standard Model, N = Non-Rotating Model, W = Female Rod End Model.
When not specified, default is HP.Z

G = 1/8 BSPP, P = 1/8 NPT

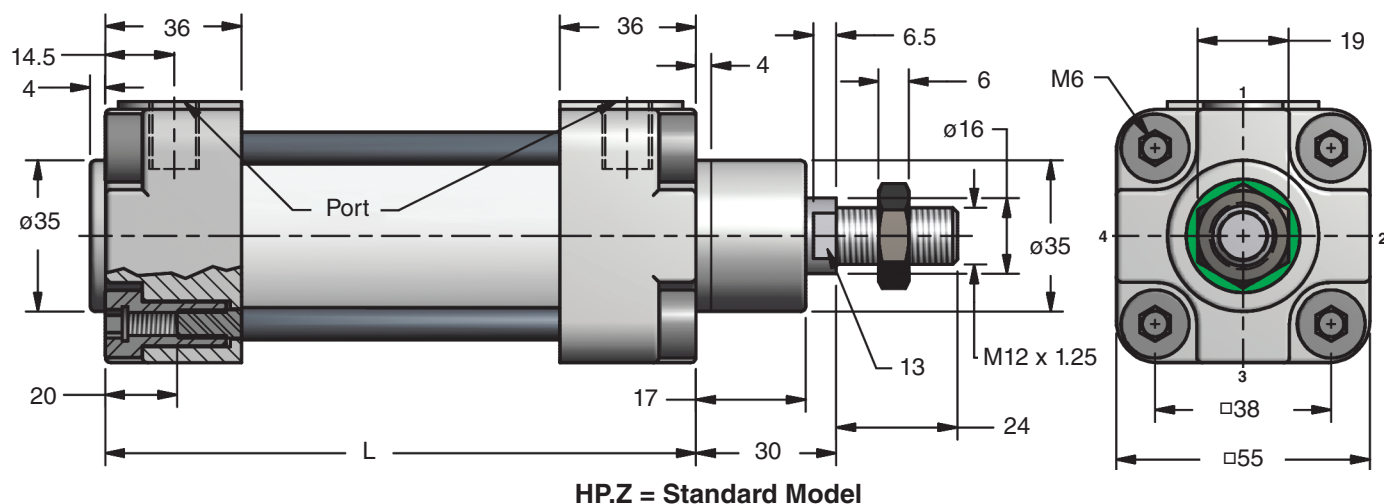
TO = Basic Mount.
When not specified default is TO. Mount ordered with cylinder will be attached at the factory.

Mount Only Example: 32T1

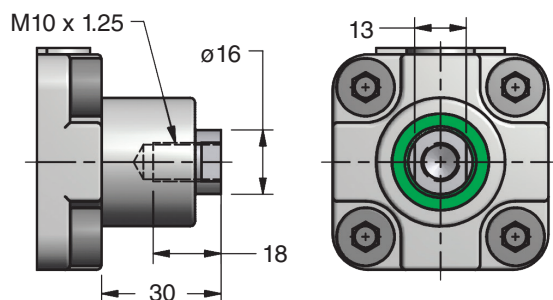
Standard = 1.
When not specified, default is 1. Refer to page 32 for information on proper orientation.



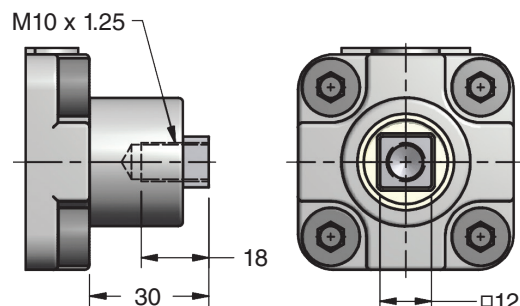
ø40 Air Cylinder



Rod Options



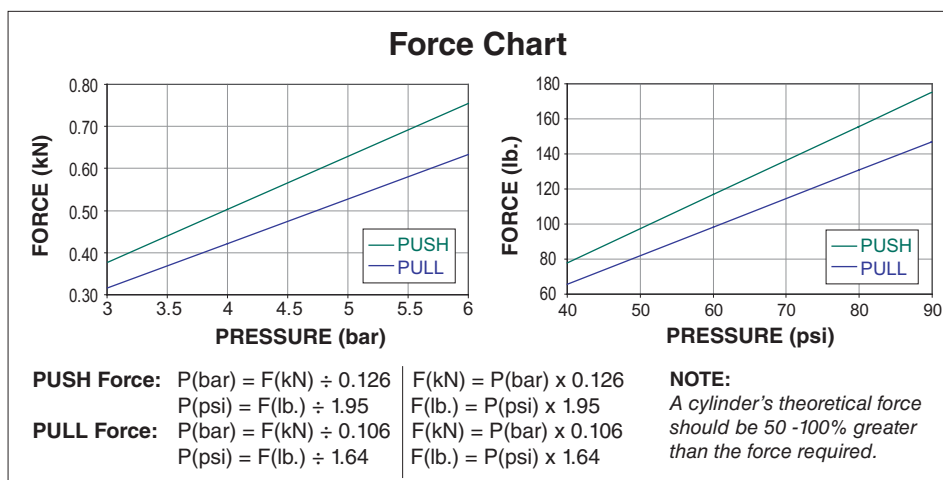
Piston rod with a female thread. DADCO offers rod end studs to convert the female thread to the standard male rod end. See page 27.



Square piston rod with female thread prevents rotation. DADCO offers rod end studs to convert the female thread to the standard male rod end. See page 27. HP.N standard stroke lengths available up to 200 mm. Contact DADCO for more information.

| Part No. | Stroke | L (mm) |
|------------|--------|--------|
| HP._40.25 | 25 | 130 |
| HP._40.50 | 50 | 155 |
| HP._40.80 | 80 | 185 |
| HP._40.100 | 100 | 205 |
| HP._40.125 | 125 | 230 |
| HP._40.160 | 160 | 265 |
| HP._40.200 | 200 | 305 |
| HP._40.250 | 250 | 355 |

Contact DADCO for special stroke lengths.



Ordering Example:

HP. Z. 40. 100. G. 1. TO

Series — HP.

Rod Option — Z

Z = Standard Model, N = Non-Rotating Model,
W = Female Rod End Model.
When not specified, default is HP.Z

Bore — 40

Stroke Length — 100

Port Style — G

G = 1/4 BSPP, P = 1/4 NPT

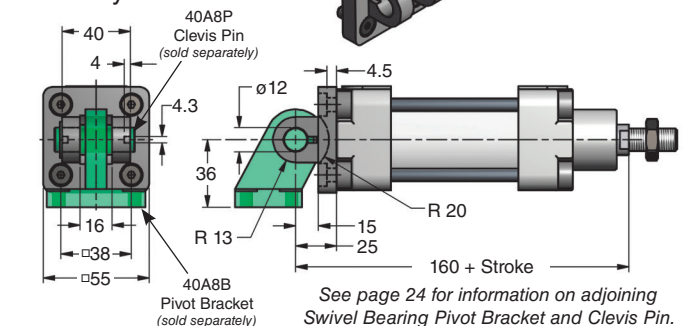
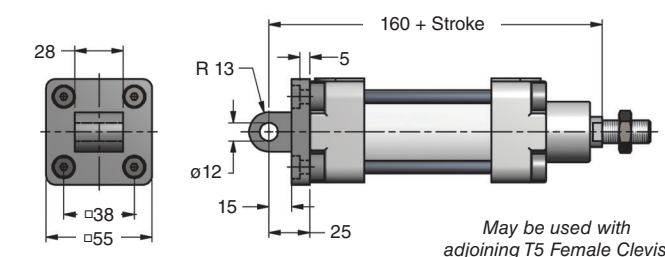
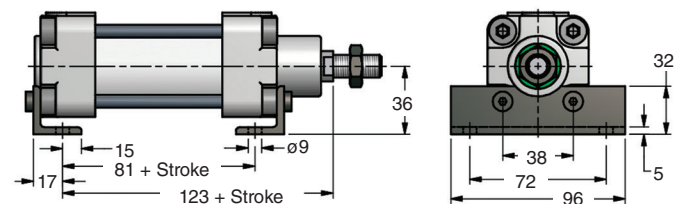
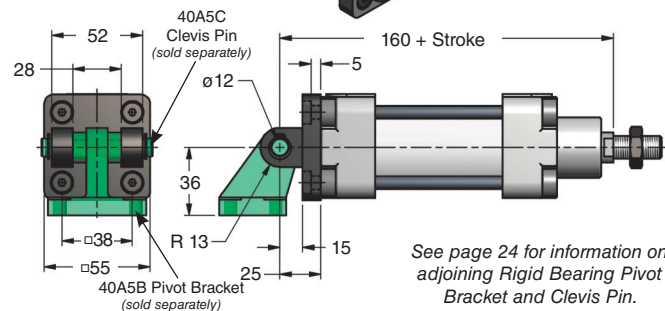
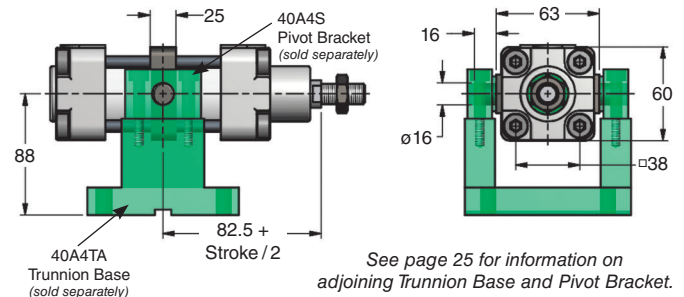
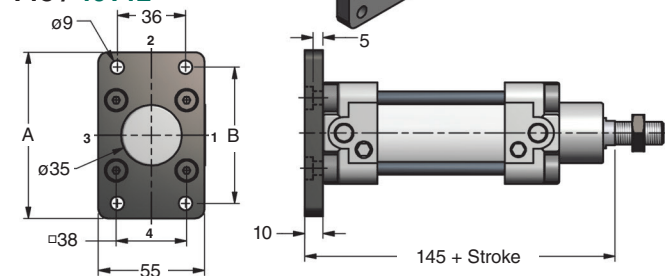
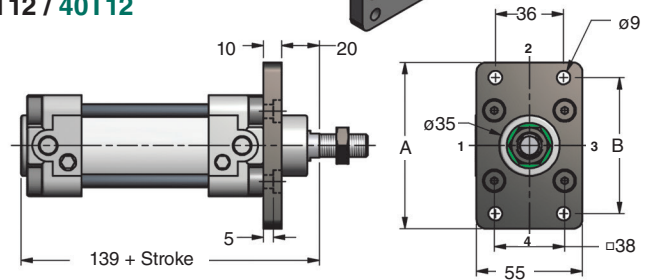
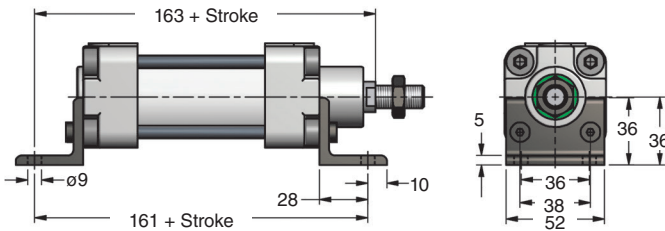
Mount Option (TO-T8)

TO = Basic Mount.
When not specified, default is TO. Mount ordered with cylinder will be attached at the factory.

Mount Only Example: 40T1

Port Location (1-4)

Standard = 1.
When not specified, default is 1. Refer to page 32 for information on proper orientation.



ø50 Air Cylinder



HP.N = Non-Rotating Model

Square piston rod with female thread prevents rotation. DADCO offers rod end studs to convert the female thread to the standard male rod end. See page 27. HP.N standard stroke lengths available up to 200 mm. Contact DADCO for more information. For an oversized non-rotating rod option, please see page 29.

Contact DADCO for special stroke lengths.



Mount Option (TO-T8)

TO = Basic Mount.

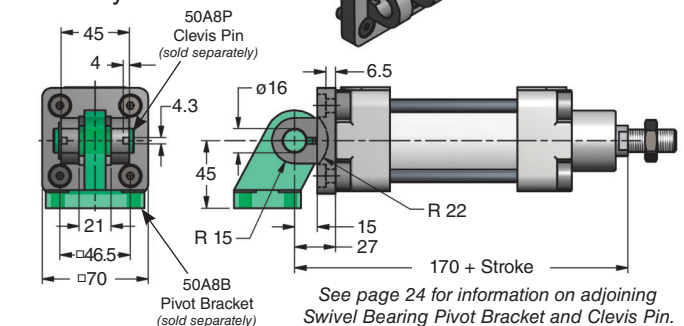
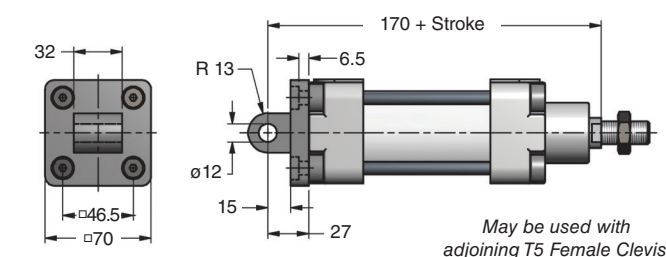
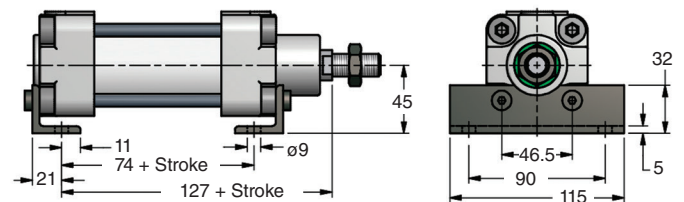
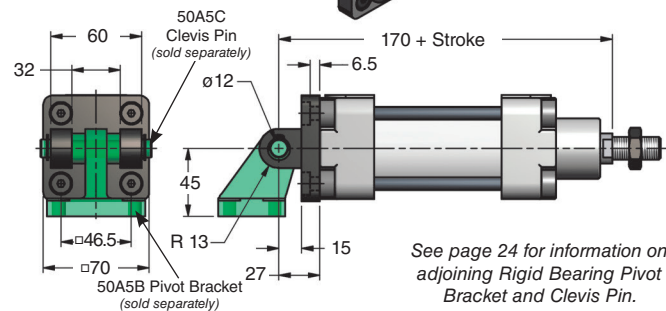
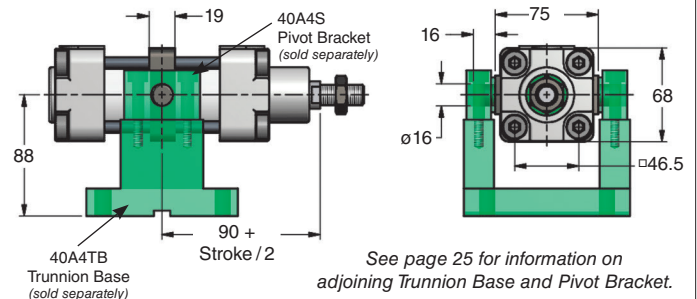
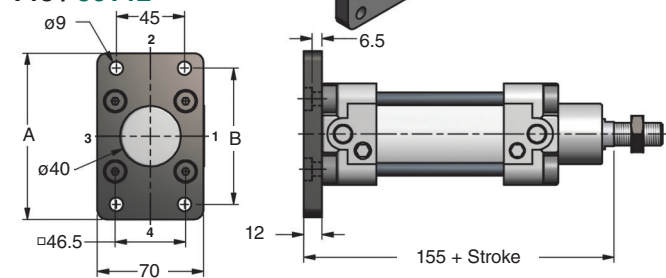
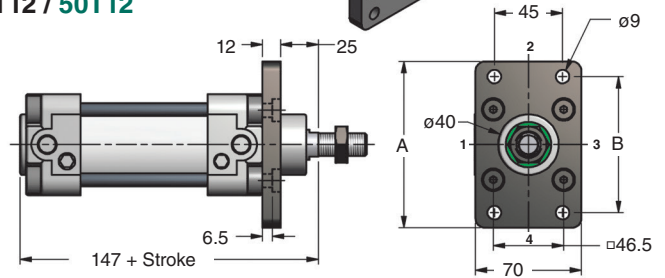
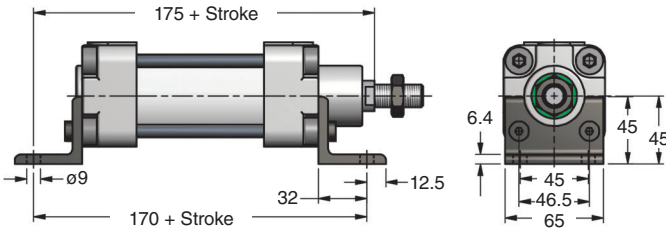
When not specified, default is TO. Mount ordered with cylinder will be attached at the factory.

Mount Only Example: 50T1

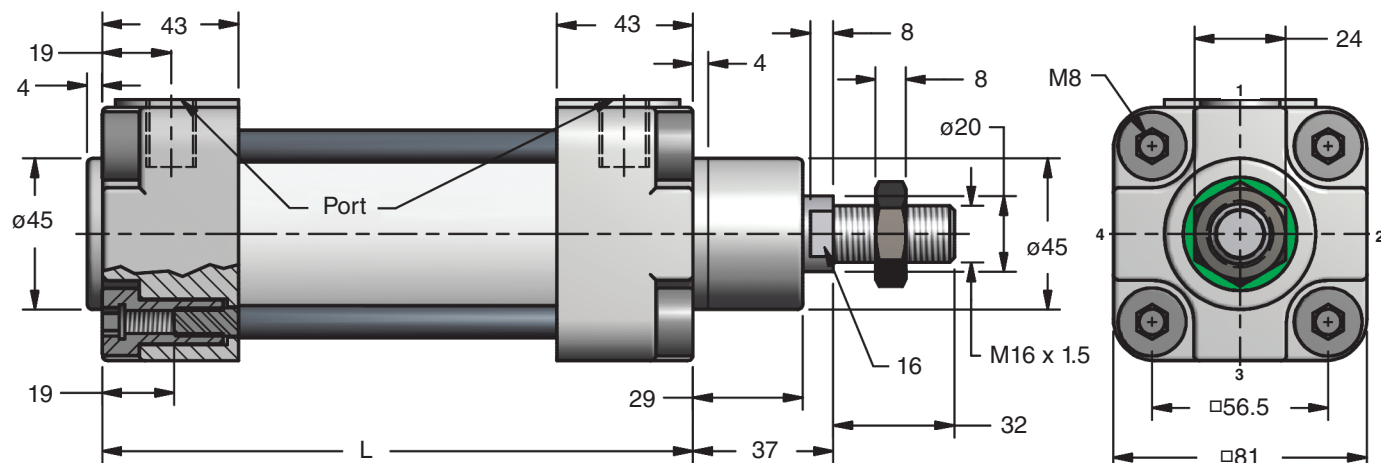
- Port Location (1-4)

Standard = 1.

When not specified, default is 1. Refer to page 32 for information on proper orientation.

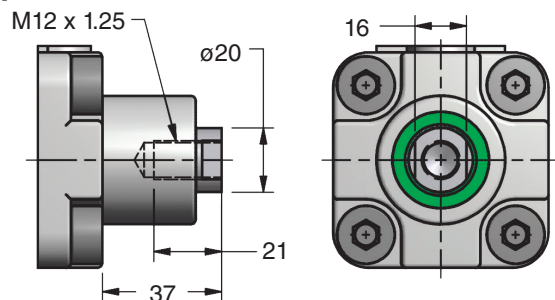


ø63 Air Cylinder



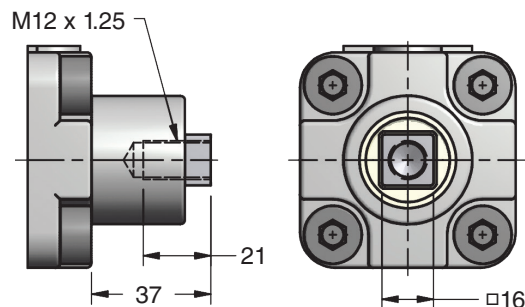
HP.Z = Standard Model

Rod Options



HP.W = Female Rod End Model

Piston rod with a female thread. DADCO offers rod end studs to convert the female thread to the standard male rod end. See page 27.

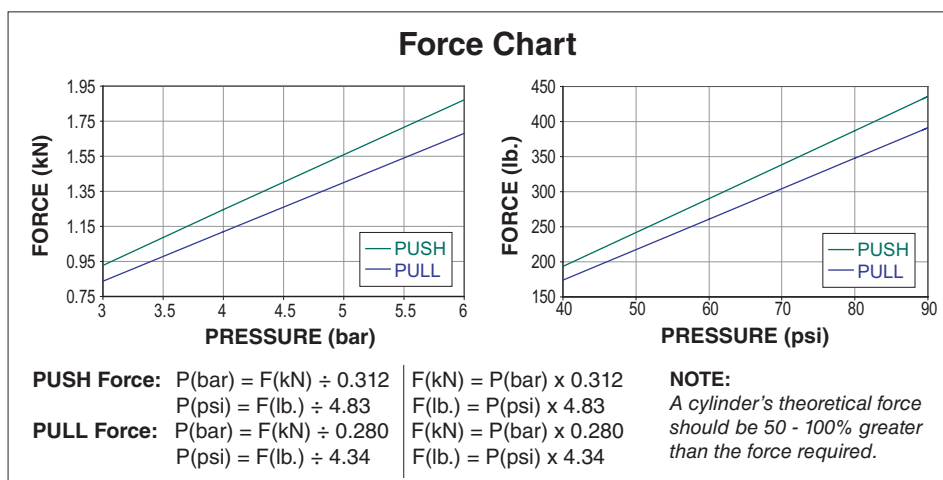


HP.N = Non-Rotating Model

Square piston rod with female thread prevents rotation. DADCO offers rod end studs to convert the female thread to the standard male rod end. See page 27. HP.N standard stroke lengths available up to 200 mm. Contact DADCO for more information.

| Part No. | Stroke | L (mm) |
|------------|--------|--------|
| HP._63.25 | 25 | 146 |
| HP._63.50 | 50 | 171 |
| HP._63.80 | 80 | 201 |
| HP._63.100 | 100 | 221 |
| HP._63.125 | 125 | 246 |
| HP._63.160 | 160 | 281 |
| HP._63.200 | 200 | 321 |
| HP._63.250 | 250 | 371 |
| HP._63.320 | 320 | 441 |
| HP._63.400 | 400 | 521 |
| HP._63.500 | 500 | 621 |

Contact DADCO for special stroke lengths.



Ordering Example:

Series **HP**
Rod Option **Z**
Bore **63**
Stroke Length **100**
Port Style **G**
Mount Option **1**
TO

Z = Standard Model, N = Non-Rotating Model,
W = Female Rod End Model.
When not specified, default is HP.Z

G = 3/8 BSPP, P = 3/8 NPT

Mount Option (TO-T8)

TO = Basic Mount.

When not specified, default is TO. Mount ordered with cylinder will be attached at the factory.

Mount Only Example: 63T1

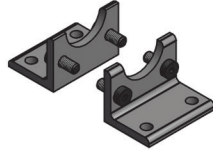
Port Location (1-4)

Standard = 1.

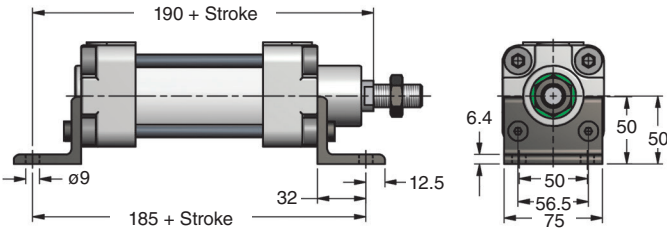
When not specified, default is 1. Refer to page 32 for information on proper orientation.

ø63 Mounts

T1 Foot Mount Part No. 63T1 NFFPA Style MS1

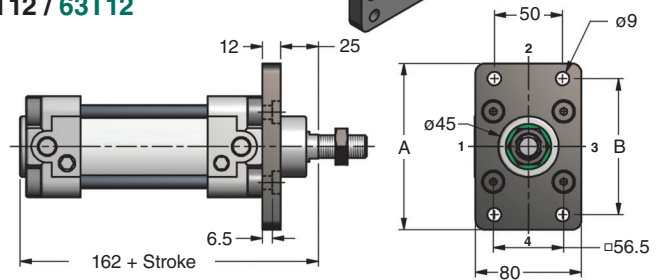
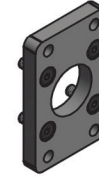


Conforms to NAAMS,
and meets or exceeds
VDMA Requirements.



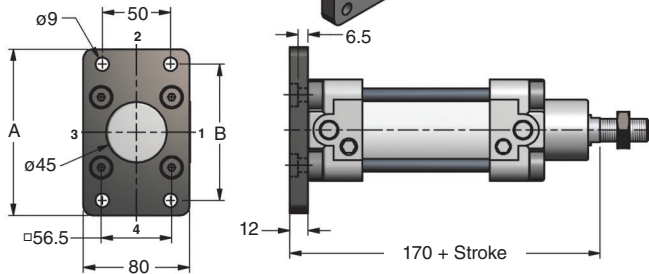
T2 Rectangular Flange – Front Mounted Part No. 63T2 NFFPA Style MF1 T12 / 63T12

| Part No. | A | B |
|----------|-----|-----|
| T2 | 120 | 100 |
| T12 | 155 | 135 |

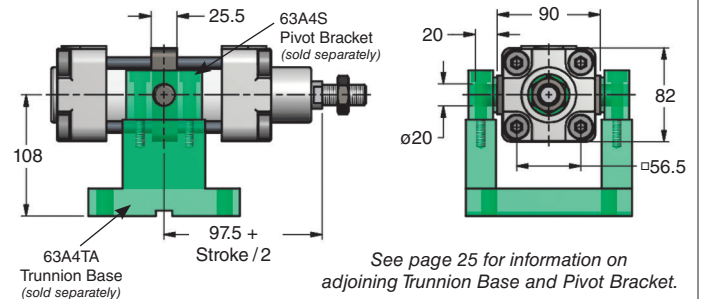
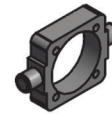


T3 Rectangular Flange – Rear Mounted Part No. 63T2 NFFPA Style MF2 T13 / 63T12

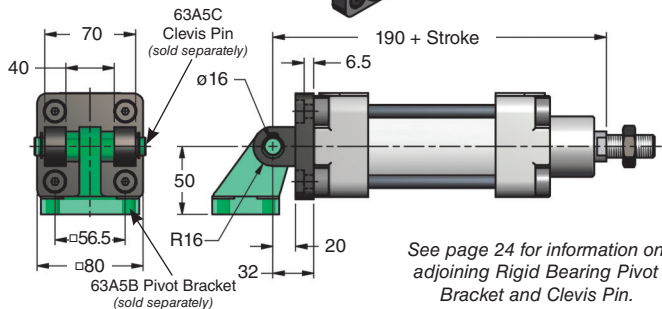
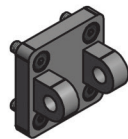
| Part No. | A | B |
|----------|-----|-----|
| T3 | 120 | 100 |
| T13 | 155 | 135 |



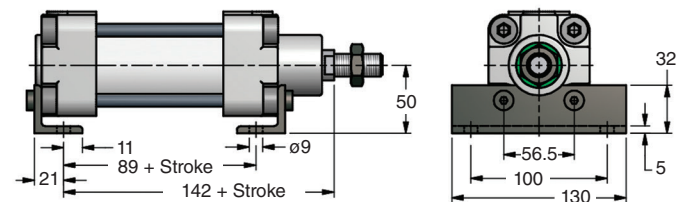
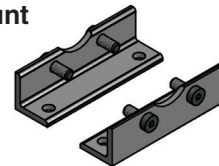
T4 Adjustable Trunnion Part No. 63T4 NFFPA Style MT4



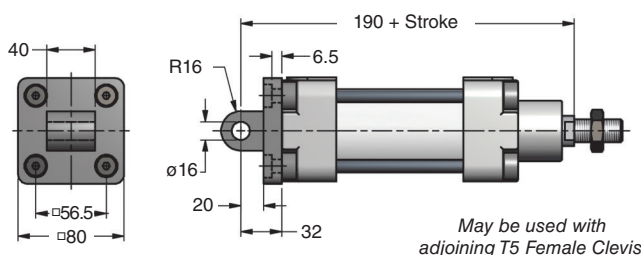
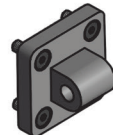
T5 Female Clevis Part No. 63T5 NFFPA Style MP2



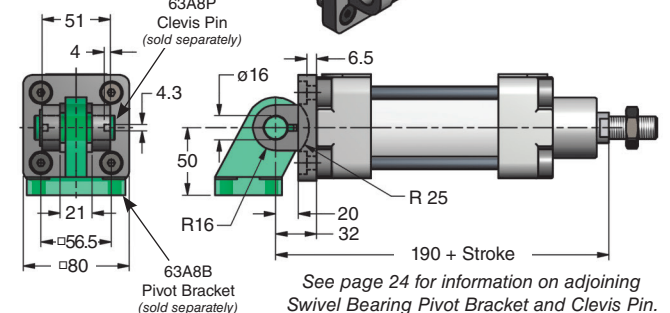
T6 Inverted Foot Mount Part No. 63T6 Style MSB



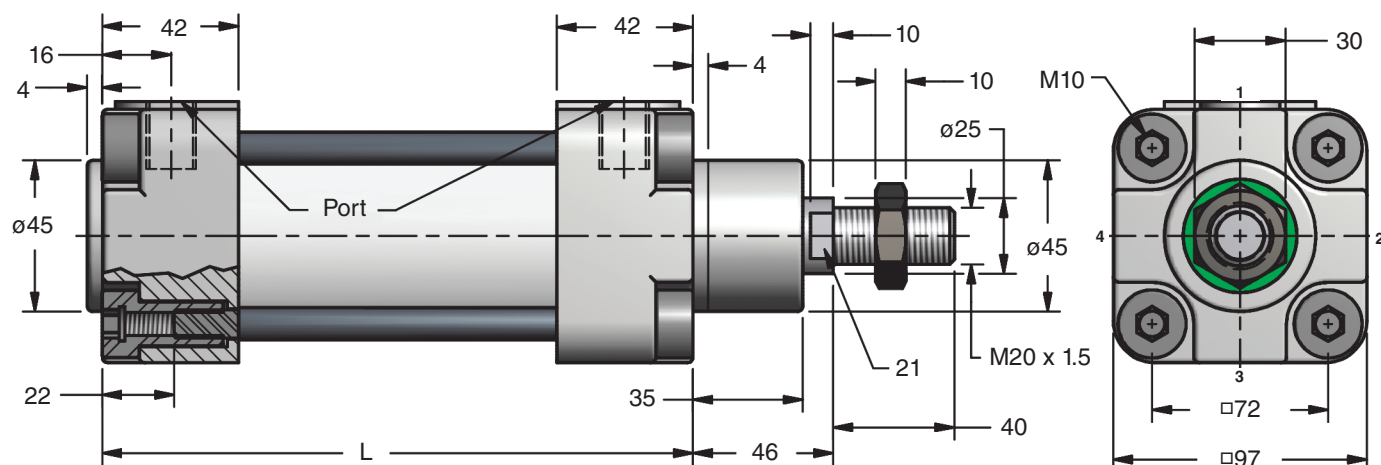
T7 Male Clevis Part No. 63T7 NFFPA Style MP4



T8 Clevis Bracket Part No. 63T8 NFFPA Style GA

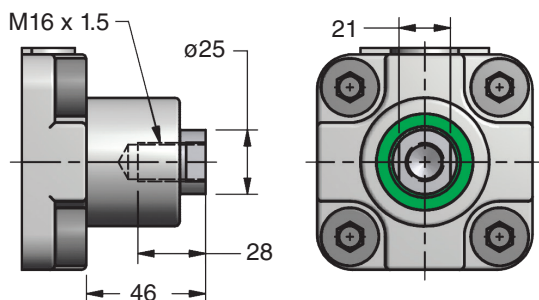


ø80 Air Cylinder



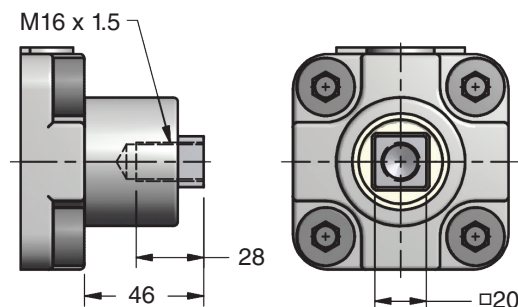
HP.Z = Standard Model

Rod Options



HP.W = Female Rod End Model

Piston rod with a female thread. DADCO offers rod end studs to convert the female thread to the standard male rod end. See page 27.

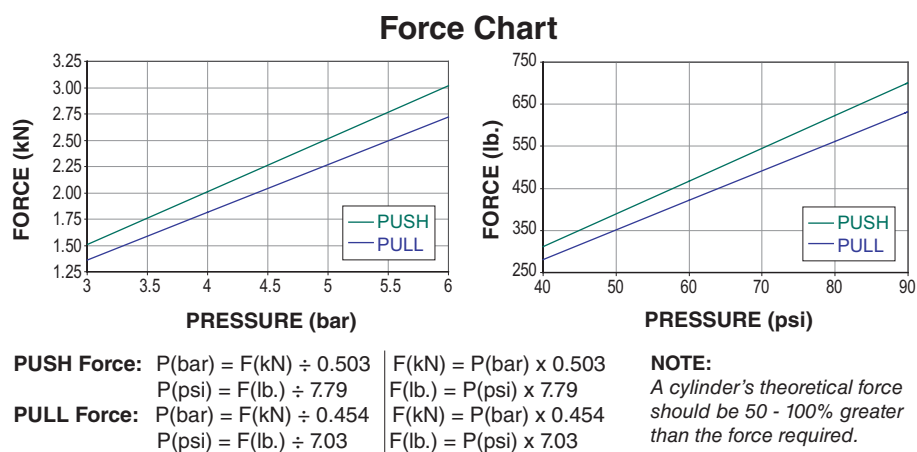


HP.N = Non-Rotating Model

Square piston rod with female thread prevents rotation. DADCO offers rod end studs to convert the female thread to the standard male rod end. See page 27. HP.N standard stroke lengths available up to 200 mm. Contact DADCO for more information.

| Part No. | Stroke | L (mm) |
|------------|--------|-----------|
| HP_.80.25 | 25 | 153 |
| HP_.80.50 | 50 | 178 |
| HP_.80.80 | 80 | 208 |
| HP_.80.100 | 100 | 228 |
| HP_.80.125 | 125 | 253 |
| HP_.80.160 | 160 | 288 |
| HP_.80.200 | 200 | 328 |
| HP_.80.250 | 250 | 378 |
| HP_.80.320 | 320 | 448 |
| HP_.80.400 | 400 | 528 |
| HP_.80.500 | 500 | 628 |

Contact DADCO for special stroke lengths.



Ordering Example:

Ordering Example:

| | <u>HP.</u> | <u>Z.</u> | <u>80.</u> | <u>100.</u> | <u>G.</u> | <u>1.</u> | <u>TO</u> |
|--|------------|-----------|------------|-------------|-----------|-----------|-----------|
| Series | _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| Rod Option | _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| Z = Standard Model, N = Non-Rotating Model, W = Female Rod End Model. <i>When not specified, default is HP.Z</i> | | | | | | | |
| Bore | _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| Stroke Length | _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| Port Style | _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| G = 3/8 BSPP, P = 3/8 NPT | | | | | | | |

Mount Option (TO-T8)

TO = Basic Mount.

When not specified, default is TO. Mount ordered with cylinder will be attached at the factory.

Mount Only Example: 80T1

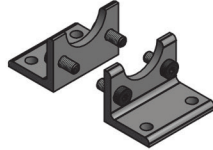
- Port Location (1-4)

Standard = 1.

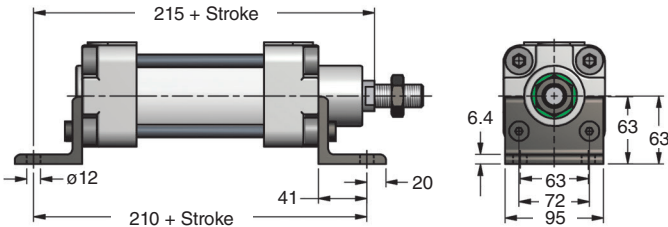
When not specified, default is 1. Refer to page 32 for information on proper orientation.

ø80 Mounts

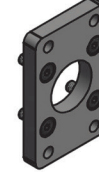
T1 Foot Mount Part No. 80T1 NFFPA Style MS1



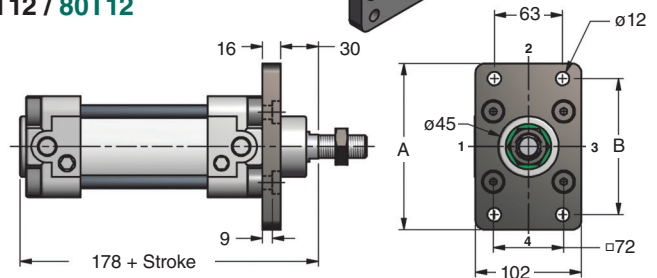
Conforms to NAAMS,
and meets or exceeds
VDMA Requirements.



T2 Rectangular Flange – Front Mounted Part No. 80T2 NFFPA Style MF1 T12 / 80T12



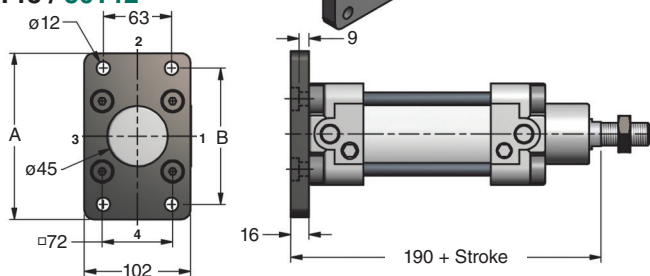
| Part No. | A | B |
|----------|-----|-----|
| T2 | 150 | 126 |
| T12 | 180 | 155 |



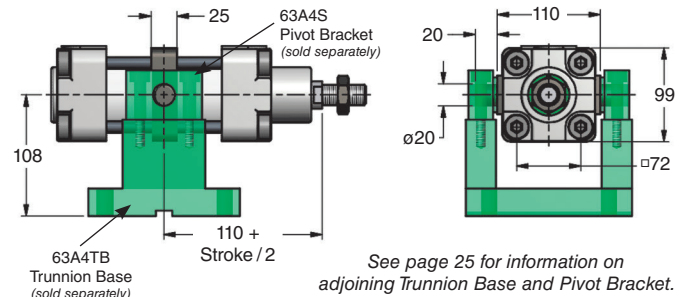
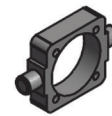
T3 Rectangular Flange – Rear Mounted Part No. 80T2 NFFPA Style MF2 T13 / 80T12



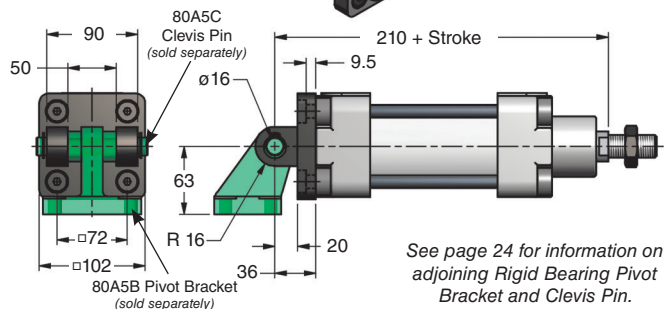
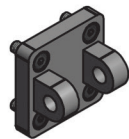
| Part No. | A | B |
|----------|-----|-----|
| T3 | 150 | 126 |
| T13 | 180 | 155 |



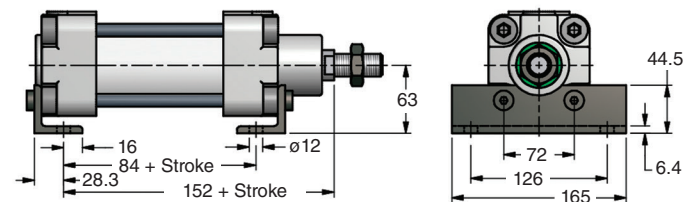
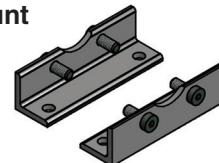
T4 Adjustable Trunnion Part No. 80T4 NFFPA Style MT4



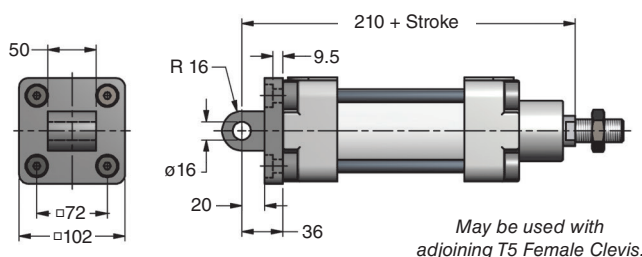
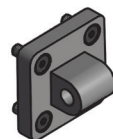
T5 Female Clevis Part No. 80T5 NFFPA Style MP2



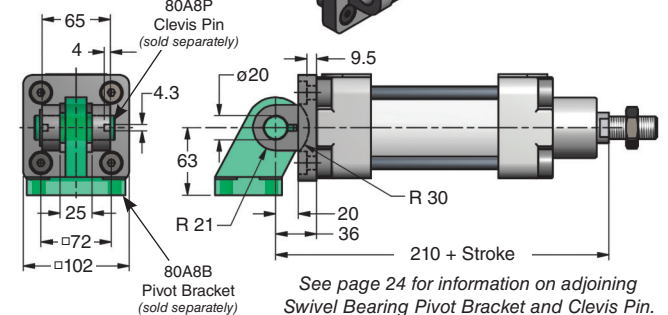
T6 Inverted Foot Mount Part No. 80T6 Style MSB



T7 Male Clevis Part No. 80T7 NFFPA Style MP4

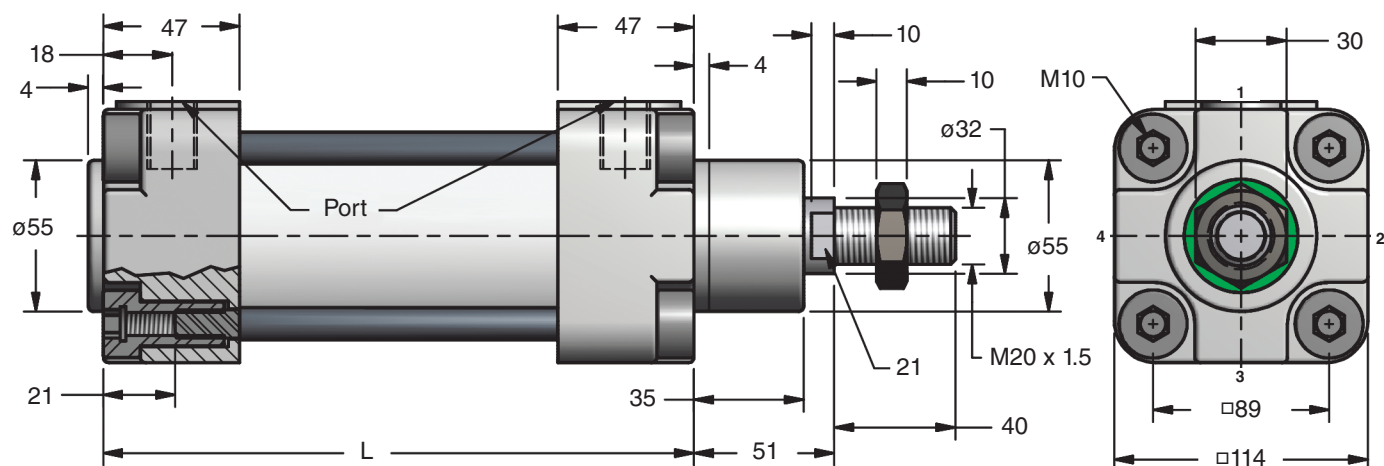


T8 Clevis Bracket Part No. 80T8 NFFPA Style GA



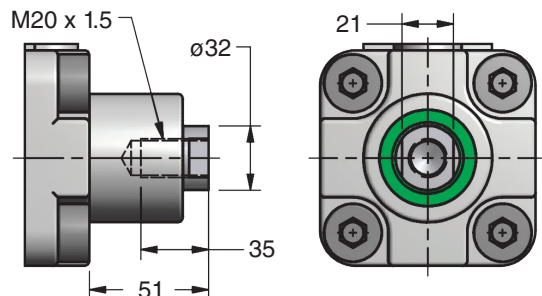
HP Series Air Cylinders

ø100 Air Cylinder



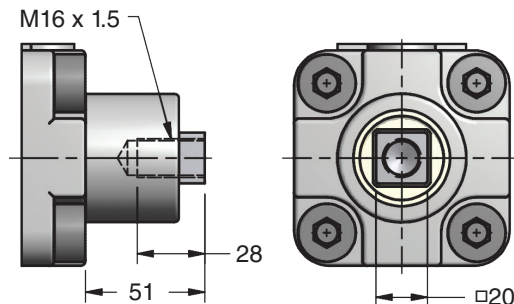
HP.Z = Standard Model

Rod Options



HP.W = Female Rod End Model

Piston rod with a female thread. DADCO offers rod end studs to convert the female thread to the standard male rod end. See page 27.



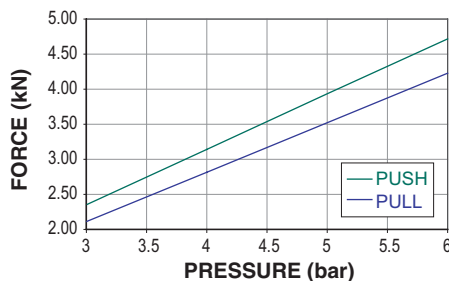
HP.N = Non-Rotating Model

Square piston rod with female thread prevents rotation. DADCO offers rod end studs to convert the female thread to the standard male rod end. See page 27. HP.N standard stroke lengths available up to 200 mm. Contact DADCO for more information.

| Part No. | Stroke | L (mm) |
|--------------|--------|--------|
| HP._.100.25 | 25 | 163 |
| HP._.100.50 | 50 | 188 |
| HP._.100.80 | 80 | 218 |
| HP._.100.100 | 100 | 238 |
| HP._.100.125 | 125 | 263 |
| HP._.100.160 | 160 | 298 |
| HP._.100.200 | 200 | 338 |
| HP._.100.250 | 250 | 388 |
| HP._.100.320 | 320 | 458 |
| HP._.100.400 | 400 | 538 |
| HP._.100.500 | 500 | 638 |

Contact DADCO for special stroke lengths.

Force Charts

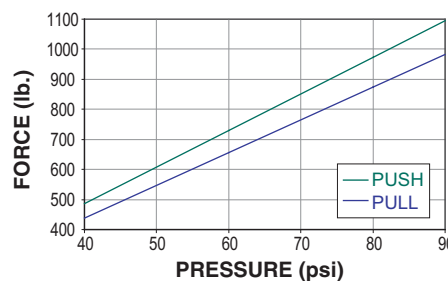


PUSH Force: $P(\text{bar}) = F(\text{kN}) \div 0.785$

$F(\text{kN}) = P(\text{bar}) \times 0.785$

PULL Force: $P(\text{bar}) = F(\text{kN}) \div 0.705$

$F(\text{kN}) = P(\text{bar}) \times 0.705$



NOTE:

A cylinder's theoretical force should be 50 - 100% greater than the force required.

Ordering Example:

HP. Z. 100. 100. G. 1. TO

Series
Rod Option

Z = Standard Model, N = Non-Rotating Model,
W = Female Rod End Model.
When not specified, default is HP.Z

Bore
Stroke Length

Port Style

G = 1/2 BSPP, P = 1/2 NPT

Mount Option (TO-T8)

TO = Basic Mount.

When not specified, default is TO. Mount ordered with cylinder will be attached at the factory.

Mount Only Example: 100T1

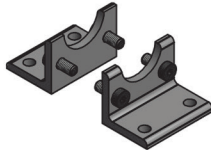
Port Location (1-4)

Standard = 1.

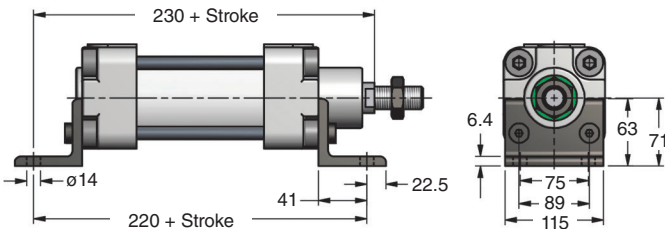
When not specified, default is 1. Refer to page 32 for information on proper orientation.

ø100 Mounts

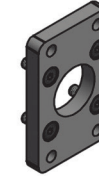
T1 Foot Mount Part No. 100T1 NFFA Style MS1



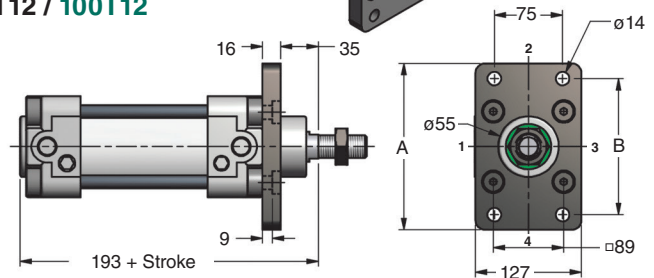
Conforms to NAAMS,
and meets or exceeds
VDMA Requirements.



T2 Rectangular Flange – Front Mounted Part No. 100T2 NFFA Style MF1 T12 / 100T12



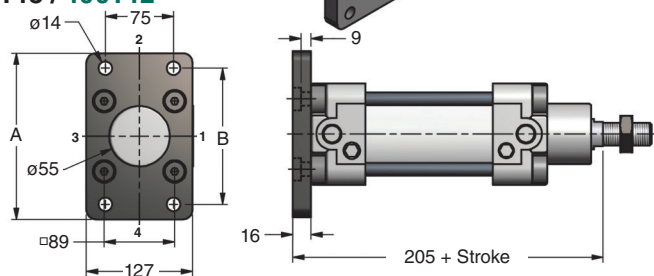
| Part No. | A | B |
|----------|-----|-----|
| T2 | 180 | 150 |
| T12 | 210 | 185 |



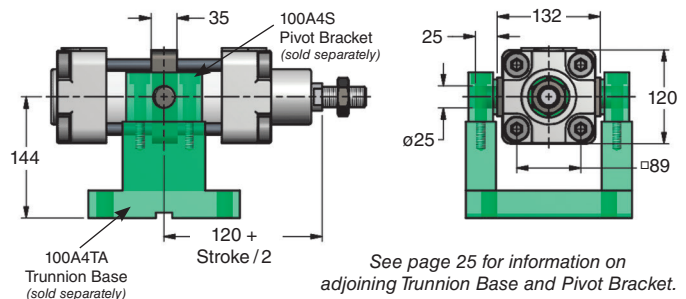
T3 Rectangular Flange – Rear Mounted Part No. 100T2 NFFA Style MF2 T13 / 100T12



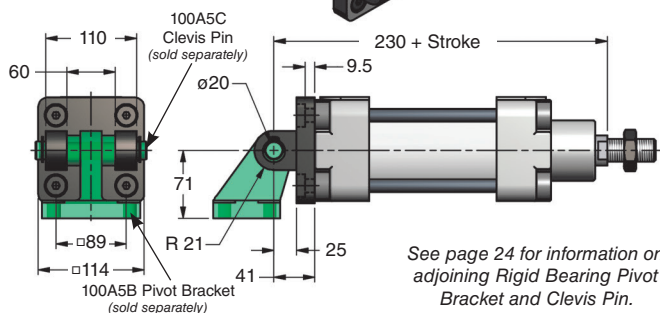
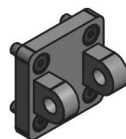
| Part No. | A | B |
|----------|-----|-----|
| T3 | 180 | 150 |
| T13 | 210 | 185 |



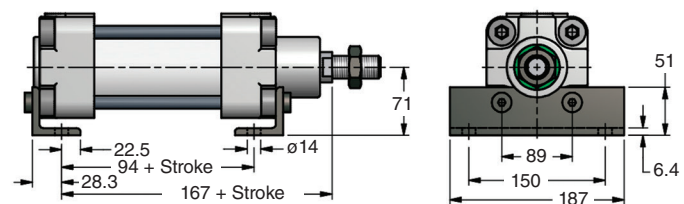
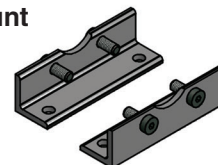
T4 Adjustable Trunnion Part No. 100T4 NFFA Style MT4



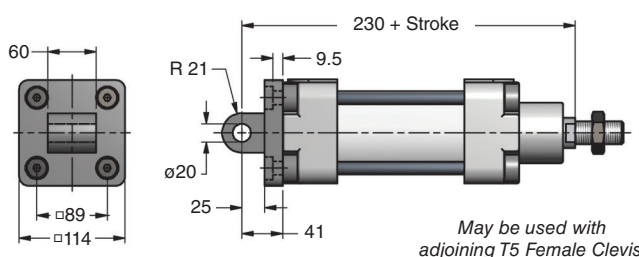
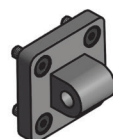
T5 Female Clevis Part No. 100T5 NFFA Style MP2



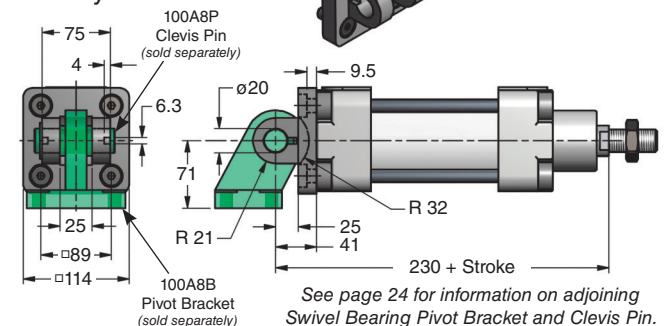
T6 Inverted Foot Mount Part No. 100T6 Style MSB



T7 Male Clevis Part No. 100T7 NFFA Style MP4



T8 Clevis Bracket Part No. 100T8 NFFA Style GA

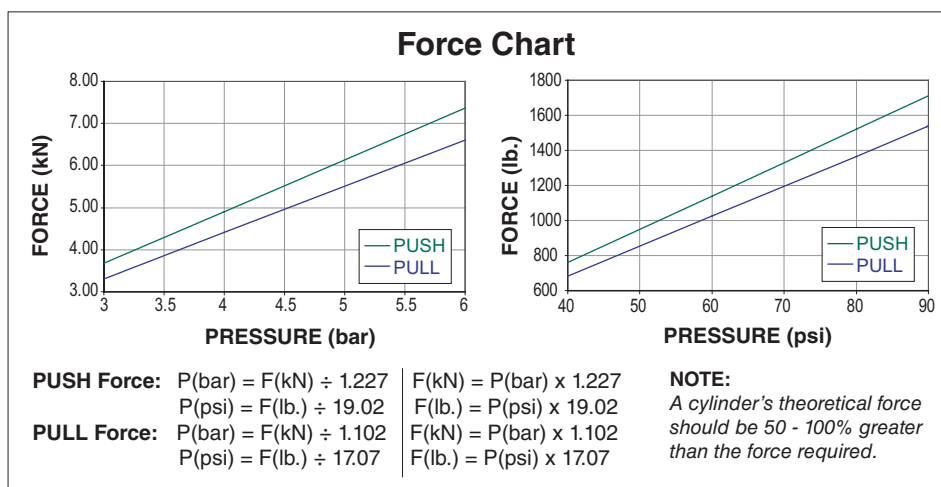


ø125 Air Cylinder



Piston rod with a female thread. DADCO offers rod end studs to convert the female thread to the standard male rod end. See page 27.

Contact DADCO for special stroke lengths.



Series

Rod Option

Z = Standard Model, W = Female Rod End Model.
When not specified, default is HP.Z

Bore

Stroke Length

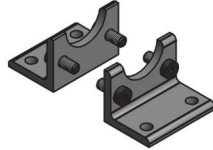
Port Style

G = 1/2 BSPP, P = 1/2 NPT

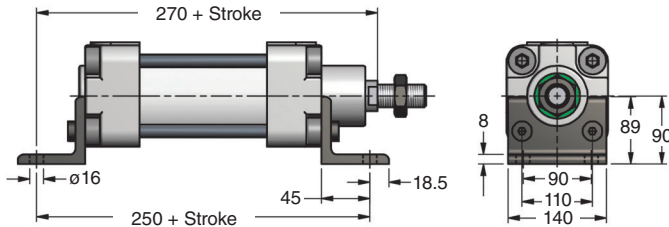
When not specified, default is 1. Refer to page 32 for information on proper orientation.

Ø125 Mounts

T1 Foot Mount
Part No. 125T1
NFPA Style MS1



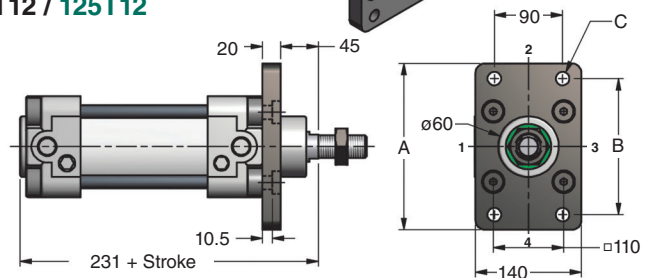
*Conforms to NAAMS,
and meets or exceeds
VDMA Requirements.*



T2 Rectangular Flange
– Front Mounted
Part No. 125T2
 NFPA Style MF1
T12 / 125T12



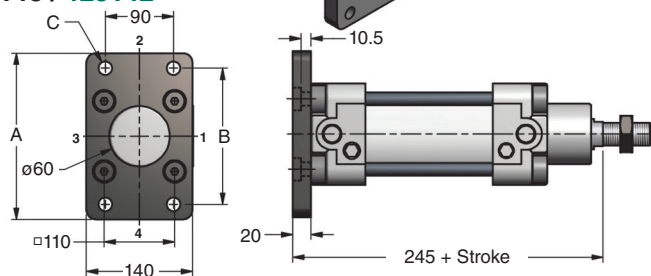
| Part No. | A | B | C |
|----------|-----|-----|-----|
| T2 | 210 | 180 | ø16 |
| T12 | 235 | 210 | ø14 |



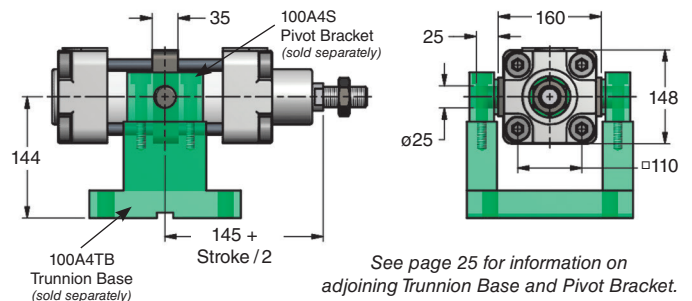
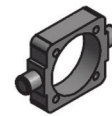
T3 Rectangular Flange
– Rear Mounted
Part No. 125T2
 NFPA Style MF2
T13 / 125T12



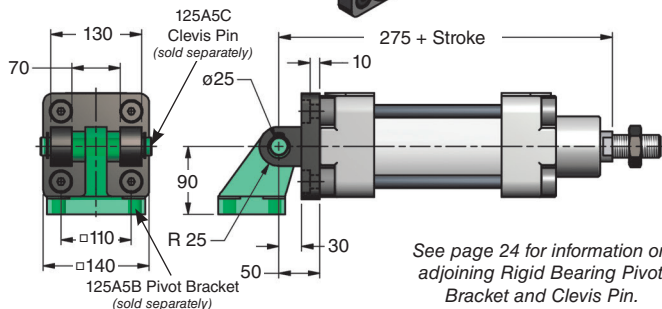
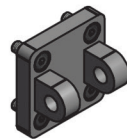
| Part No. | A | B | C |
|----------|-----|-----|-----|
| T3 | 210 | 180 | ø16 |
| T13 | 235 | 210 | ø14 |



T4 Adjustable Trunnion
Part No. 125T4
 NFPA Style MT4

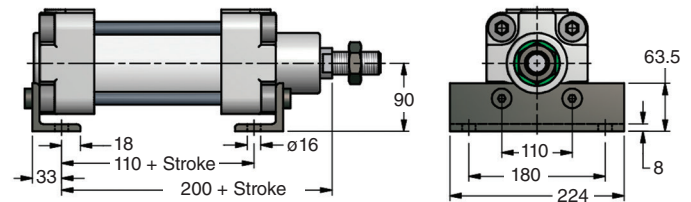
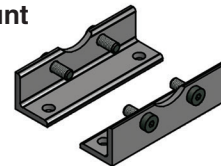


T5 Female Clevis
Part No. 125T5
NFPA Style MP2

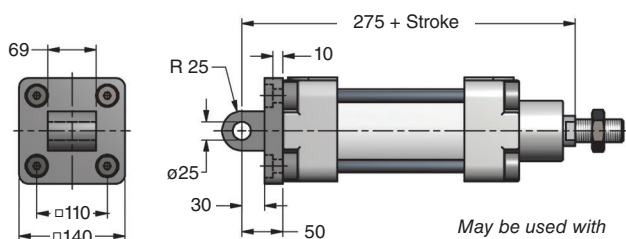
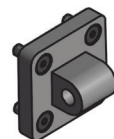


See page 24 for information on adjoining Rigid Bearing Pivot Bracket and Clevis Pin.

T6 Inverted Foot Mount
Part No. 125T6
Style MSB

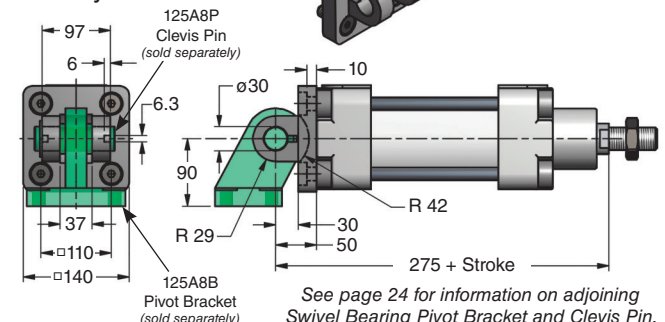


T7 Male Clevis
Part No. 125T7
NFPA Style MP4



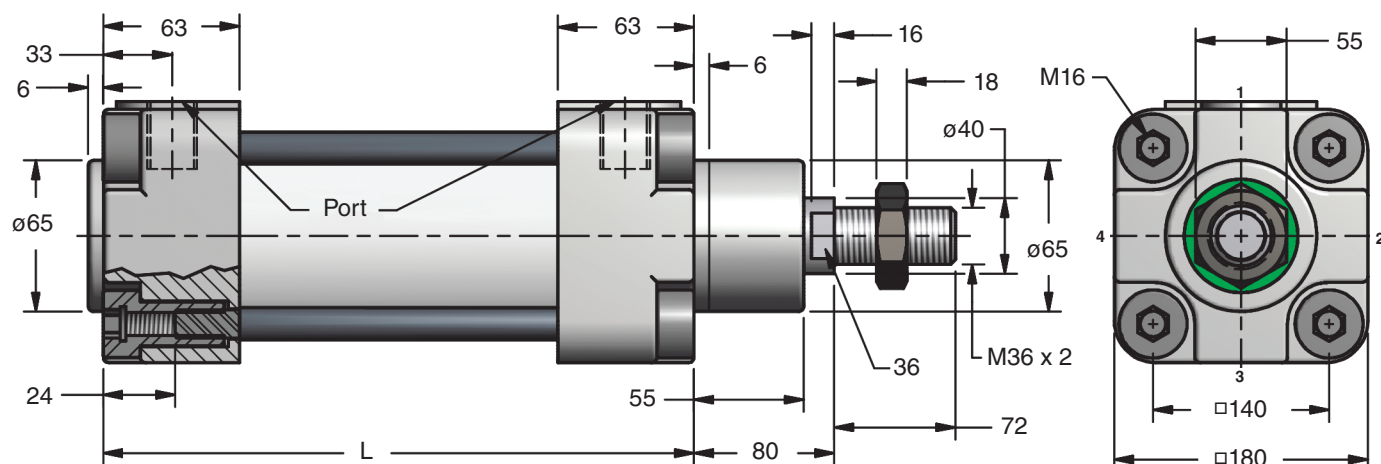
*May be used with
adjoining T5 Female Clevis.*

T8 Clevis Bracket
Part No. 125T8
NFPA Style GA



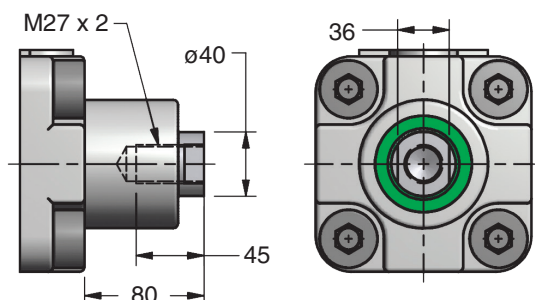
See page 24 for information on adjoining
Swivel Bearing Pivot Bracket and Clevis Pin.

ø160 Air Cylinders



HP.Z = Standard Model

Rod Options

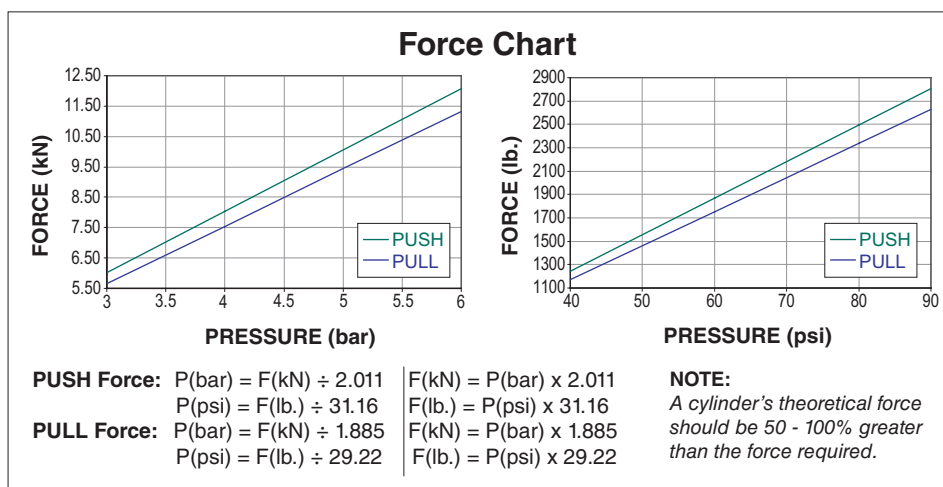


HP.W = Female Rod End Model

Piston rod with a female thread. DADCO offers rod end studs to convert the female thread to the standard male rod end. See page 27.

| Part No. | Stroke | L (mm) |
|-------------|--------|--------|
| HP_.160.25 | 25 | 205 |
| HP_.160.50 | 50 | 230 |
| HP_.160.80 | 80 | 260 |
| HP_.160.100 | 100 | 280 |
| HP_.160.125 | 125 | 305 |
| HP_.160.160 | 160 | 340 |
| HP_.160.200 | 200 | 380 |
| HP_.160.250 | 250 | 430 |
| HP_.160.320 | 320 | 500 |
| HP_.160.400 | 400 | 580 |
| HP_.160.500 | 500 | 680 |

Contact DADCO for special stroke lengths.



Ordering Example:

Series HP. **Rod Option** Z. **Bore** 160. **Stroke Length** 100. **Port Style** G. **Mount Option (TO-T8)** 1. **Port Location (1-4)** TO

Z = Standard Model, W = Female Rod End Model.
When not specified, default is HP.Z

G = 3/4 BSPP, P = 3/4 NPT

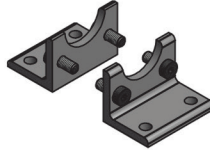
TO = Basic Mount.
When not specified, default is TO. Mount ordered with cylinder will be attached at the factory.

Mount Only Example: 160T1

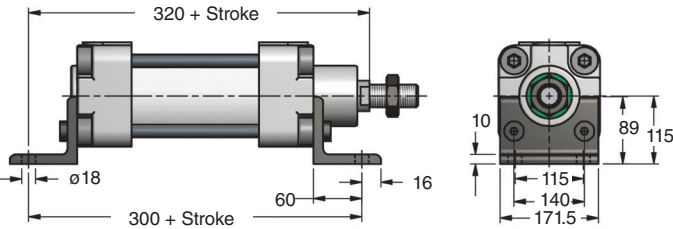
Standard = 1.
When not specified, default is 1. Refer to page 32 for information on proper orientation.

ø160 Mounts

T1 Foot Mount Part No. 160T1 NFFPA Style MS1



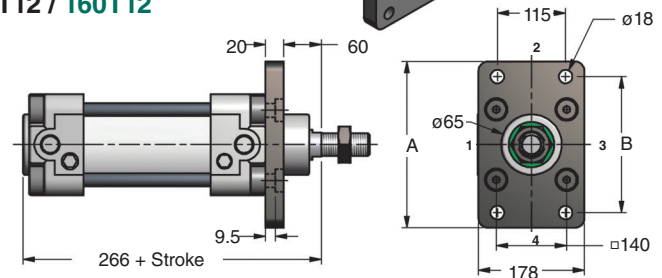
Conforms to NAAMS,
and meets or exceeds
VDMA Requirements.



T2 Rectangular Flange – Front Mounted Part No. 160T2 NFFPA Style MF1 T12 / 160T12



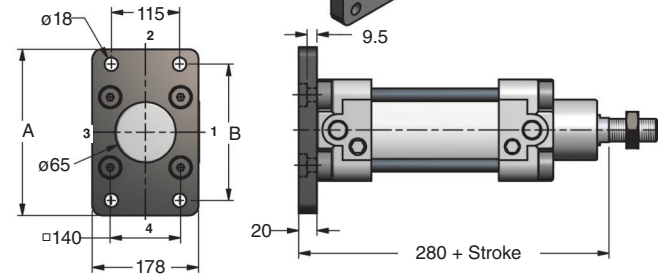
| Part No. | A | B |
|----------|-----|-----|
| T2 | 270 | 230 |
| T12 | 280 | 250 |



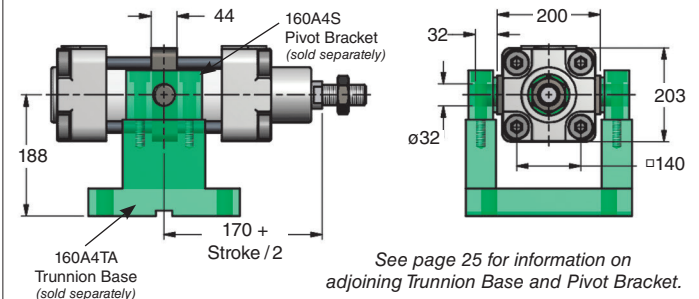
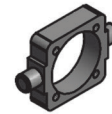
T3 Rectangular Flange – Rear Mounted Part No. 160T2 NFFPA Style MF2 T13 / 160T12



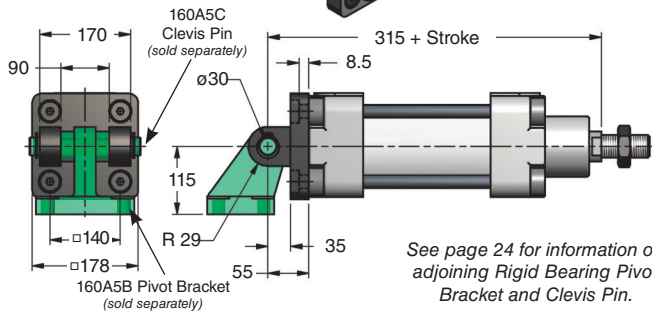
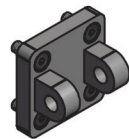
| Part No. | A | B |
|----------|-----|-----|
| T3 | 270 | 230 |
| T13 | 280 | 250 |



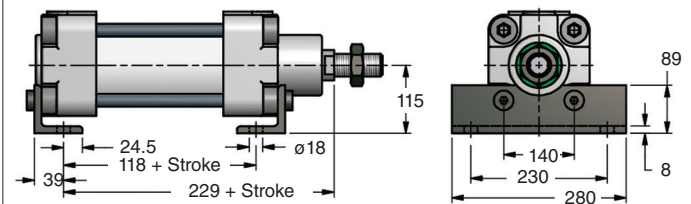
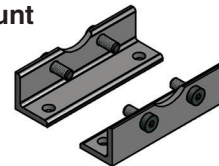
T4 Adjustable Trunnion Part No. 160T4 NFFPA Style MT4



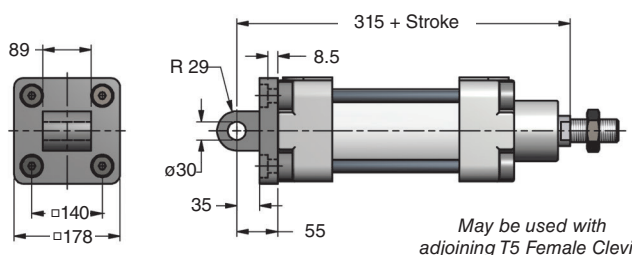
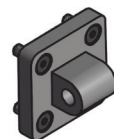
T5 Female Clevis Part No. 160T5 NFFPA Style MP2



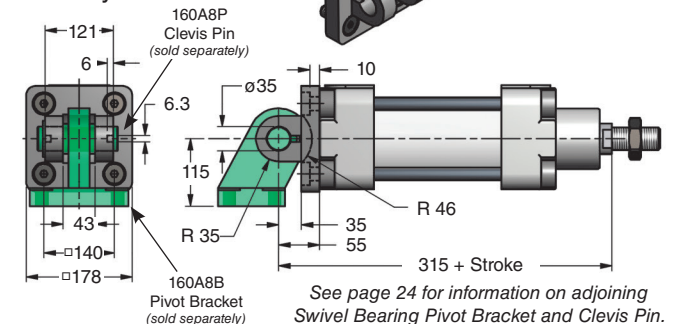
T6 Inverted Foot Mount Part No. 160T6 Style MSB



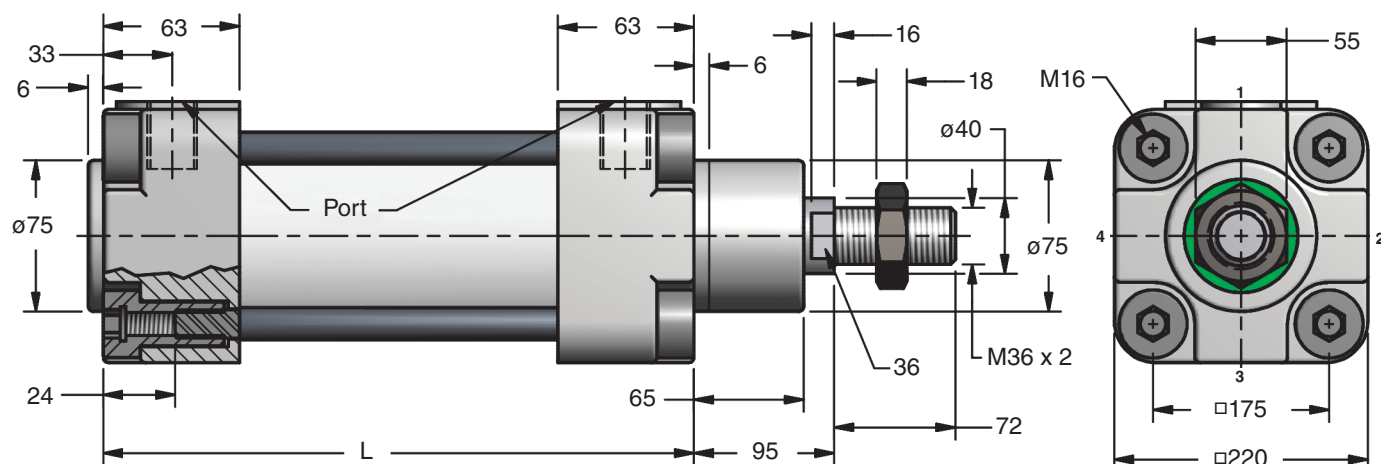
T7 Male Clevis Part No. 160T7 NFFPA Style MP4



T8 Clevis Bracket Part No. 160T8 NFFPA Style GA

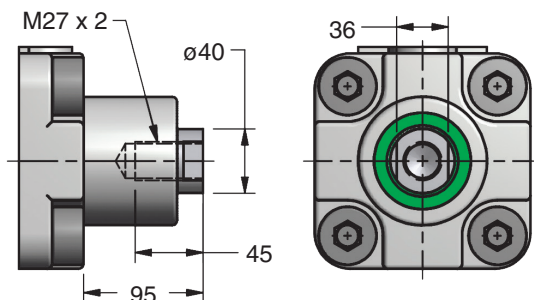


ø200 Air Cylinder



HP.Z = Standard Model

Rod Options



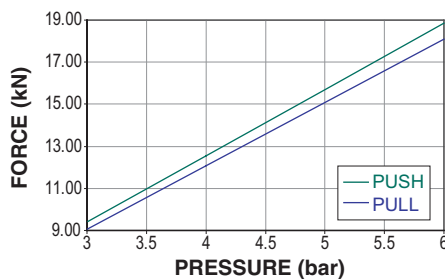
HP.W = Female Rod End Model

Piston rod with a female thread. DADCO offers rod end studs to convert the female thread to the standard male rod end. See page 27.

| Part No. | Stroke | L (mm) |
|--------------|--------|--------|
| HP._.200.25 | 25 | 205 |
| HP._.200.50 | 50 | 230 |
| HP._.200.80 | 80 | 260 |
| HP._.200.100 | 100 | 280 |
| HP._.200.125 | 125 | 305 |
| HP._.200.160 | 160 | 340 |
| HP._.200.200 | 200 | 380 |
| HP._.200.250 | 250 | 430 |
| HP._.200.320 | 320 | 500 |
| HP._.200.400 | 400 | 580 |
| HP._.200.500 | 500 | 680 |

Contact DADCO for special stroke lengths.

Force Chart



PUSH Force: $P(\text{bar}) = F(\text{kN}) \div 3.142$

$P(\text{psi}) = F(\text{lb.}) \div 48.69$

PULL Force: $P(\text{bar}) = F(\text{kN}) \div 3.016$

$P(\text{psi}) = F(\text{lb.}) \div 46.75$

$F(\text{kN}) = P(\text{bar}) \times 3.142$

$F(\text{lb.}) = P(\text{psi}) \times 48.69$

$F(\text{kN}) = P(\text{bar}) \times 3.016$

$F(\text{lb.}) = P(\text{psi}) \times 46.75$

NOTE:

A cylinder's theoretical force should be 50 - 100% greater than the force required.

Ordering Example:

HP. Z. 200. 100. G. 1. TO

Series
Rod Option
Z = Standard Model, W = Female Rod End Model
When not specified, default is HP.Z

Bore
Stroke Length
Port Style
G = 3/4 BSPP, P = 3/4 NPT

Mount Option (TO-T8)

TO = Basic Mount.

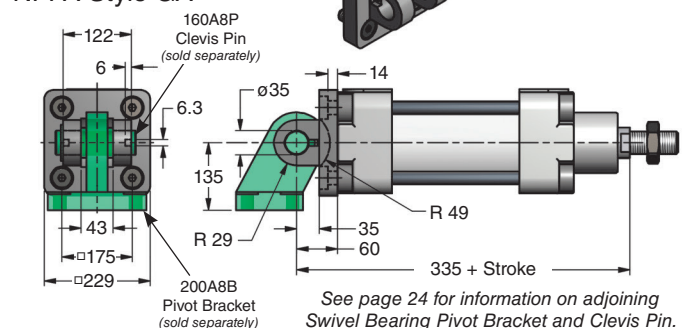
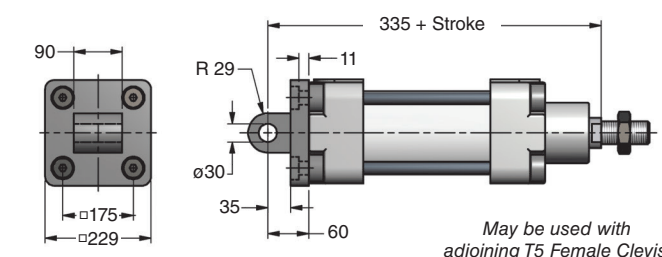
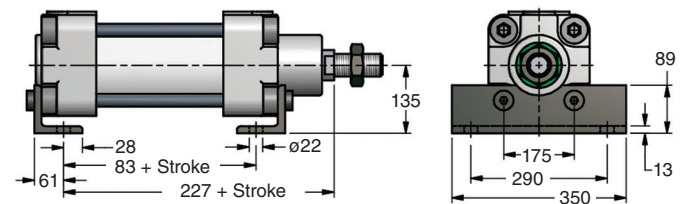
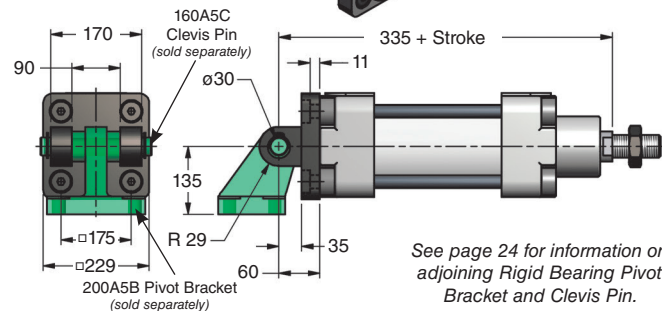
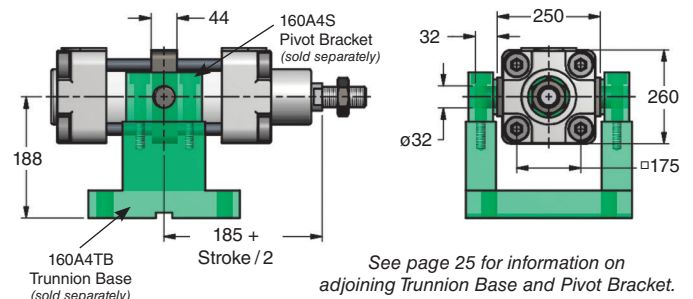
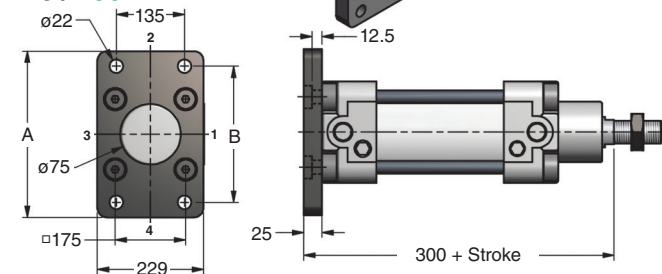
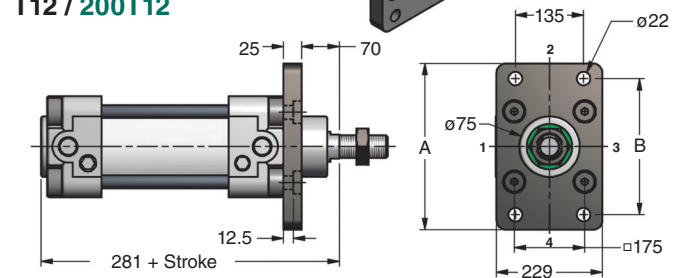
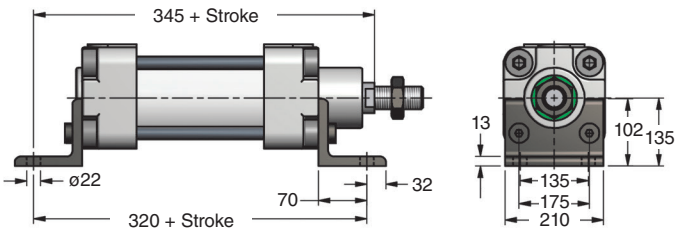
When not specified, default is TO. Mount ordered with cylinder will be attached at the factory.

Mount Only Example: 200T1

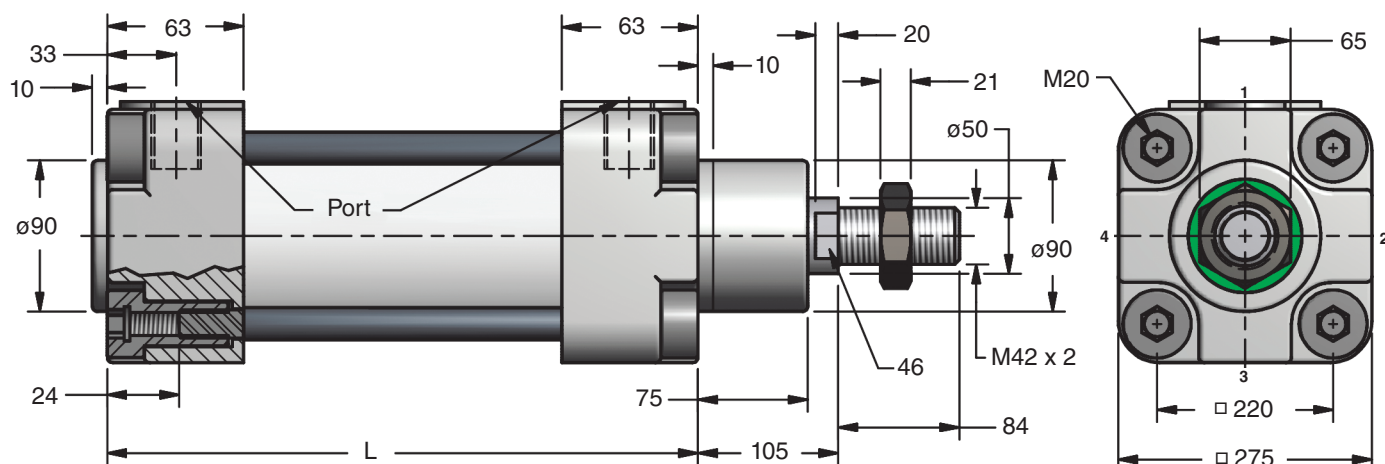
Port Location (1-4)

Standard = 1.

When not specified, default is 1. Refer to page 32 for information on proper orientation.

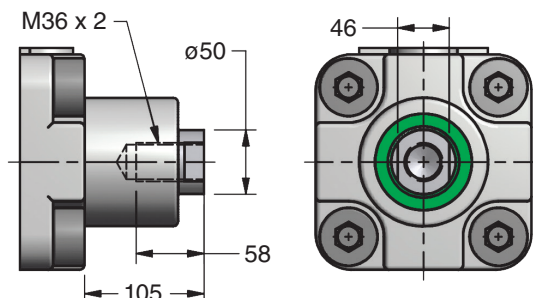


ø250 Air Cylinders



HP.Z = Standard Model

Rod Options



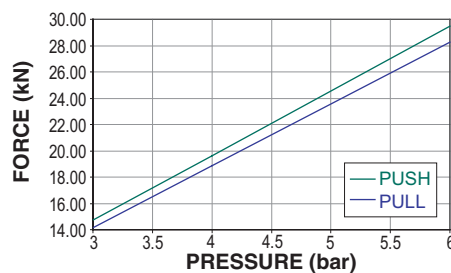
HP.W = Female Rod End Model

Piston rod with a female thread. DADCO offers rod end studs to convert the female thread to the standard male rod end. See page 27.

| Part No. | Stroke | L (mm) |
|--------------|--------|--------|
| HP._.250.25 | 25 | 225 |
| HP._.250.50 | 50 | 250 |
| HP._.250.80 | 80 | 280 |
| HP._.250.100 | 100 | 300 |
| HP._.250.125 | 125 | 325 |
| HP._.250.160 | 160 | 360 |
| HP._.250.200 | 200 | 400 |
| HP._.250.250 | 250 | 450 |
| HP._.250.320 | 320 | 520 |
| HP._.250.400 | 400 | 600 |
| HP._.250.500 | 500 | 700 |

Contact DADCO for special stroke lengths.

Force Chart



PUSH Force: $P(\text{bar}) = F(\text{kN}) \div 4.909$

$P(\text{psi}) = F(\text{lb.}) \div 76.09$

PULL Force: $P(\text{bar}) = F(\text{kN}) \div 4.712$

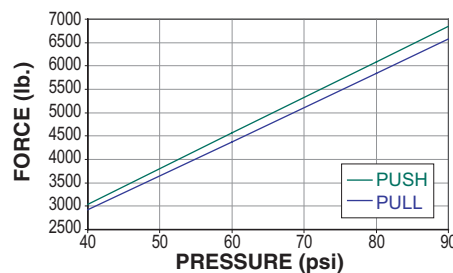
$P(\text{psi}) = F(\text{lb.}) \div 73.04$

$F(\text{kN}) = P(\text{bar}) \times 4.909$

$F(\text{lb.}) = P(\text{psi}) \times 76.09$

$F(\text{kN}) = P(\text{bar}) \times 4.712$

$F(\text{lb.}) = P(\text{psi}) \times 73.04$



NOTE:

A cylinder's theoretical force should be 50 - 100% greater than the force required.

Ordering Example:

Series HP. **Rod Option** Z. **Bore** 250. **Stroke Length** 100. **Port Style** G. **Mount Option (TO-T8)** 1. **Mount Only Example:** 250T1
 Z = Standard Model, W = Female Rod End Model.
 When not specified, default is HP.Z
 G = 1.0 BSPP, P = 1.0 NPT

Mount Option (TO-T8)

TO = Basic Mount.

When not specified, default is TO. Mount ordered with cylinder will be attached at the factory.

Mount Only Example: 250T1

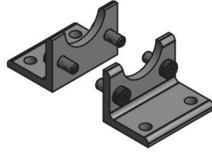
Port Location (1-4)

Standard = 1.

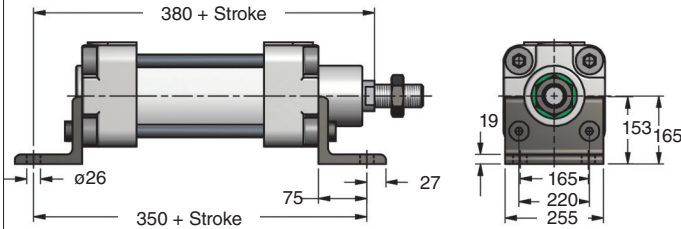
When not specified, default is 1. Refer to page 32 for information on proper orientation.

Ø250 Mounts

T1 Foot Mount
Part No. 250T1
NFPA Style MS1

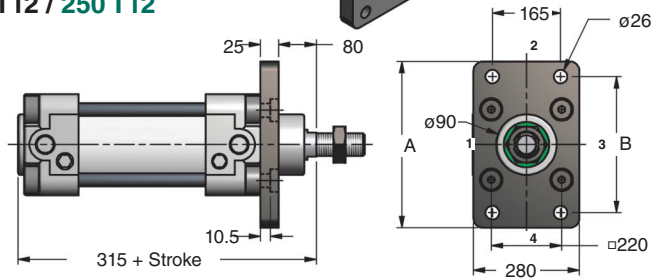


*Conforms to NAAMS,
and meets or exceeds
VDMA Requirements.*



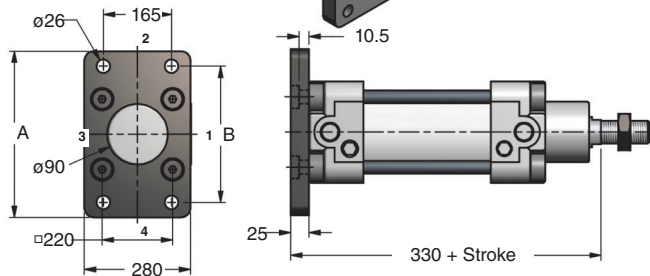
T2 Rectangular Flange
– Front Mounted
Part No. 250T2
 NFPA Style MF1
T12 / 250 T12

| Part No. | A | B |
|----------|-----|-----|
| T2 | 380 | 330 |
| T12 | 395 | 355 |

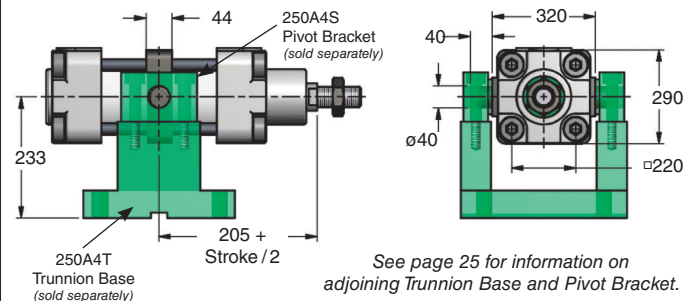


T3 Rectangular Flange
– Rear Mounted
Part No. 250T2
 NFPA Style MF2
T13 / 250T12

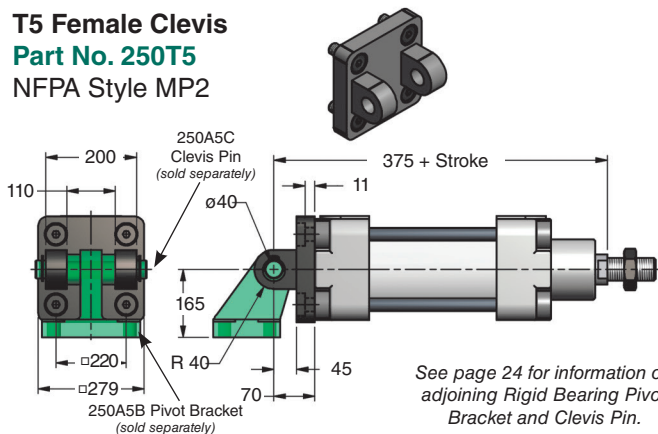
| Part No. | A | B |
|----------|-----|-----|
| T3 | 380 | 330 |
| T13 | 395 | 355 |



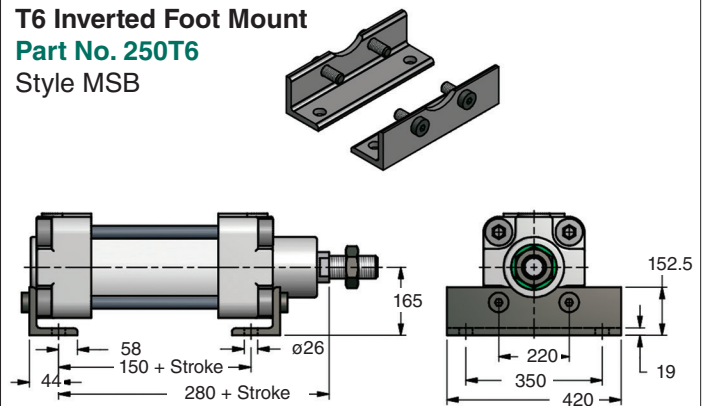
T4 Adjustable Trunnion
Part No. 250T4
 NFPA Style MT4



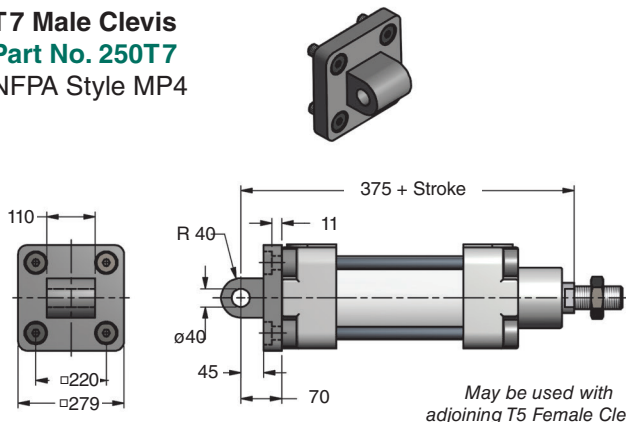
T5 Female Clevis
Part No. 250T5
NFPA Style MP2



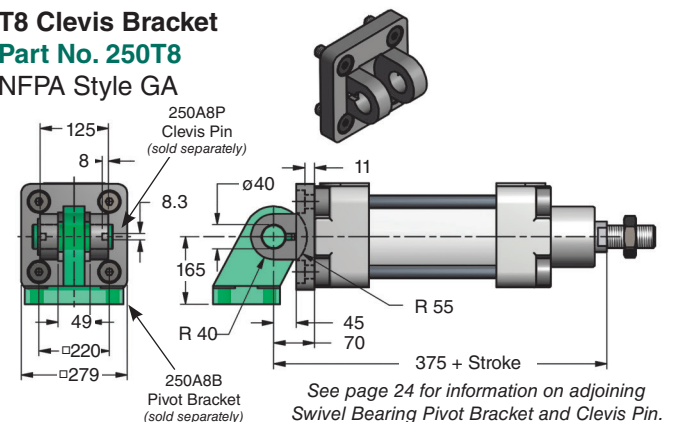
T6 Inverted Foot Mount
Part No. 250T6
Style MSB



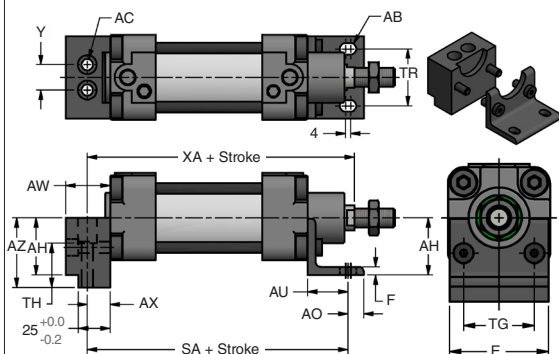
T7 Male Clevis
Part No. 250T7
NFPA Style MP4



T8 Clevis Bracket
Part No. 250T8
NFPA Style GA



T19 Foot Mount

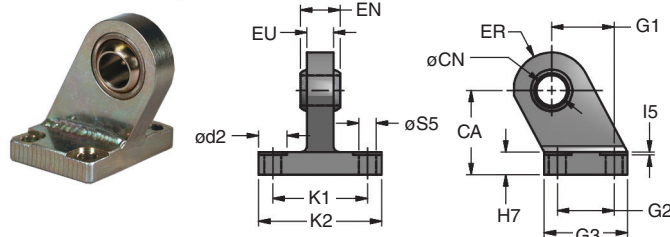
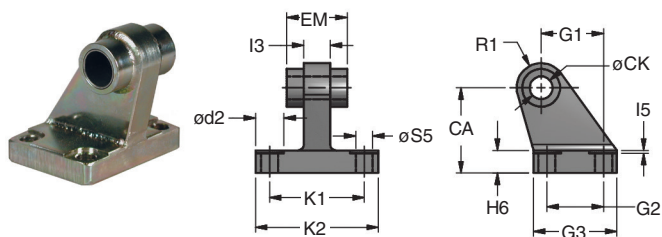


| BORE | AB | AC | AH | AO | AU | AW | AX | AZ | E | F | TG | TH | TR | SA | XA | Y |
|------|------|-----|-----|------|----|----|----|-----|-------|-----|------|----|-----|-----|-----|-----|
| 40 | 9 | M8 | 36 | 10 | 28 | 30 | 17 | 46 | 52 | 6.4 | 38 | 35 | 36 | 150 | 152 | 20 |
| 50 | 9 | M8 | 45 | 12.5 | 32 | 35 | 18 | 55 | 65 | 6.4 | 46.5 | 35 | 45 | 156 | 161 | 20 |
| 63 | 11 | M10 | 50 | 12.5 | 32 | 35 | 20 | 60 | 75 | 6.4 | 56.5 | 45 | 50 | 173 | 178 | 28 |
| 80 | 11 | M10 | 63 | 22.5 | 41 | 55 | 18 | 73 | 95 | 8 | 72 | 45 | 63 | 187 | 192 | 40 |
| 100 | 13.5 | M12 | 71 | 22.5 | 41 | 55 | 18 | 81 | 127 | 8 | 89 | 60 | 75 | 197 | 207 | 60 |
| 125 | 13.5 | M12 | 90 | 18.5 | 45 | 55 | 20 | 100 | 140 | 13 | 110 | 80 | 90 | 225 | 245 | 75 |
| 160 | 17.5 | M16 | 115 | 29 | 60 | 62 | 20 | 125 | 171.5 | 16 | 140 | 75 | 115 | 260 | 280 | 90 |
| 200 | 22 | M20 | 135 | 32 | 70 | 75 | 25 | 145 | 210 | 16 | 175 | 70 | 135 | 275 | 300 | 110 |
| 250 | 26 | M24 | 165 | 36.5 | 75 | 85 | 30 | 175 | 255 | 19 | 220 | 85 | 165 | 305 | 335 | 150 |

A5B Pivot Bracket with Rigid Bearing (for use with the T5 Female Clevis)



A8B Pivot Bracket with Swivel Bearing (for use with the T8 Clevis Bracket)



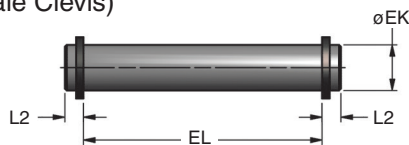
Note: Optional A5BF and A8BF versions available to comply with Ford Standards. Contact DADCO for more information.

| Bore | CA | d2 | G1 | G2 | G3 | K1 | K2 | I5 | S5 |
|------|-----|----|-----|-----|-----|-----|-----|-----|-----|
| 32 | 32 | 11 | 21 | 18 | 31 | 38 | 51 | 1.5 | 6.6 |
| 40 | 36 | 11 | 24 | 22 | 35 | 41 | 54 | 1.5 | 6.6 |
| 50 | 45 | 15 | 33 | 30 | 44 | 50 | 65 | 1.5 | 9 |
| 63 | 50 | 15 | 37 | 35 | 50 | 52 | 67 | 1.5 | 9 |
| 80 | 63 | 18 | 47 | 40 | 59 | 66 | 86 | 2.5 | 11 |
| 100 | 71 | 18 | 55 | 50 | 70 | 76 | 95 | 2.5 | 11 |
| 125 | 90 | 20 | 70 | 60 | 89 | 94 | 124 | 2.5 | 14 |
| 160 | 115 | 20 | 97 | 88 | 124 | 118 | 152 | 3 | 14 |
| 200 | 135 | 26 | 105 | 90 | 124 | 122 | 152 | 3 | 18 |
| 250 | 165 | 33 | 128 | 110 | 159 | 150 | 197 | 4 | 22 |

| Part No. | CK | EM | H6 | I3 | R1 |
|----------|----|-----|----|----|----|
| 32A5B | 10 | 26 | 8 | 8 | 10 |
| 40A5B | 12 | 28 | 10 | 11 | 11 |
| 50A5B | 12 | 32 | 12 | 14 | 13 |
| 63A5B | 16 | 40 | 12 | 14 | 15 |
| 80A5B | 16 | 50 | 14 | 16 | 15 |
| 100A5B | 20 | 60 | 15 | 16 | 19 |
| 125A5B | 25 | 70 | 20 | 25 | 23 |
| 160A5B | 30 | 90 | 25 | 25 | 32 |
| 200A5B | 30 | 90 | 30 | 25 | 32 |
| 250A5B | 40 | 110 | 35 | 32 | 40 |

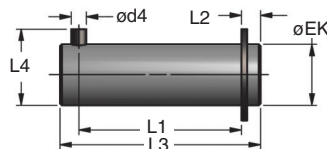
| Part No. | CN | EN | ER | EU | H7 |
|----------|----|----|----|-----|----|
| 32A8B | 10 | 14 | 14 | 9.5 | 10 |
| 40A8B | 12 | 16 | 16 | 11 | 10 |
| 50A8B | 16 | 21 | 21 | 14 | 12 |
| 63A8B | 16 | 21 | 22 | 14 | 12 |
| 80A8B | 20 | 25 | 27 | 16 | 14 |
| 100A8B | 20 | 25 | 27 | 16 | 15 |
| 125A8B | 30 | 37 | 38 | 25 | 20 |
| 160A8B | 35 | 43 | 43 | 25 | 25 |
| 200A8B | 35 | 43 | 44 | 25 | 30 |
| 250A8B | 40 | 49 | 51 | 32 | 35 |

A5C Clevis Pin (for use with the T5 Female Clevis & T7 Male Clevis)



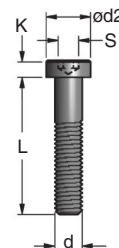
| Part No. | Bore | EK | EL | L2 |
|----------|---------|----|-----|-----|
| 32A5C | 32 | 10 | 48 | 4.5 |
| 40A5C | 40 | 12 | 55 | 5 |
| 50A5C | 50 | 12 | 63 | 5 |
| 63A5C | 63 | 16 | 73 | 5 |
| 80A5C | 80 | 16 | 93 | 5 |
| 100A5C | 100 | 20 | 113 | 5 |
| 125A5C | 125 | 25 | 135 | 7 |
| 160A5C | 160/200 | 30 | 175 | 7 |
| 250A5C | 250 | 40 | 205 | 7 |

A8P Clevis Pin (for use with the T8 Clevis Bracket)



| Part No. | Bore | d4 | EK | L1 | L2 | L3 | L4 |
|----------|---------|----|----|------|-----|-----|----|
| 32A8P | 32 | 3 | 10 | 32.5 | 4.5 | 42 | 14 |
| 40A8P | 40 | 4 | 12 | 38 | 5 | 48 | 16 |
| 50A8P | 50 | 4 | 16 | 43 | 5 | 53 | 20 |
| 63A8P | 63 | 4 | 16 | 49 | 5 | 59 | 20 |
| 80A8P | 80 | 4 | 20 | 63 | 5 | 73 | 24 |
| 100A8P | 100 | 4 | 20 | 73 | 5 | 83 | 24 |
| 125A8P | 125 | 6 | 30 | 94 | 7 | 108 | 36 |
| 160A8P | 160/200 | 6 | 35 | 119 | 7 | 133 | 41 |
| 250A8P | 250 | 8 | 40 | 121 | 7 | 135 | 48 |

A1M Mounting Screws

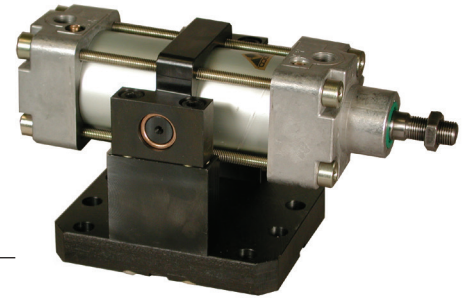


| Part No. | Bore | d | d2 | K | L | S |
|----------|---------|-----|----|----|----|----|
| 32A1M | 32/40 | M6 | 10 | 4 | 18 | 4 |
| 50A1M | 50/63 | M8 | 13 | 5 | 20 | 5 |
| 80A1M | 80/100 | M10 | 16 | 6 | 20 | 7 |
| 125A1M | 125 | M12 | 18 | 7 | 25 | 8 |
| 160A1M | 160/200 | M16 | 24 | 9 | 30 | 12 |
| 250A1M | 250 | M20 | 30 | 11 | 30 | 14 |

Trunnion Base & Brackets

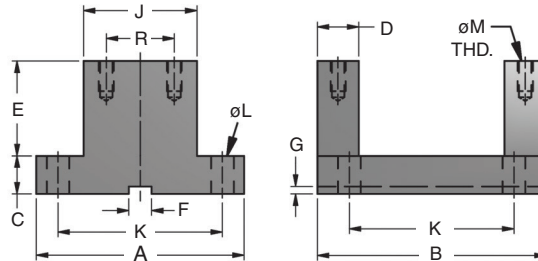
HP Series Air Cylinders

DADCO offers a prefabricated base and sideposts that accept standard pivot brackets used to secure a trunnion mounted cylinder. The A4T Trunnion Base will accept either the Single Height Pivot Bracket (A4S) or the Dual Height Pivot Bracket (A4D), both shown below. The Dual Height Pivot Bracket is reversible. When mounted in the "low" position, the pivot centerline coincides with the single height pivot bracket. When mounted in the "high" position, the pivot centerline is doubled.



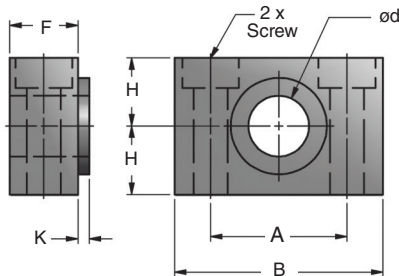
Single Height Pivot Bracket (A4S)
attached to Trunnion Base (A4T).

Trunnion Base A4T



| Part No. | Bore | A | B | C (max) | D | E | F | G | J | K | L | M | R |
|----------|------|-----|-----|------------|----|-----|----|-----|-----|-----|----|------------|----|
| 32A4T | 32 | 90 | 91 | 20 | 20 | 25 | 12 | 4 | 50 | 71 | 9 | M6 x 1 | 32 |
| 40A4TA | 40 | 121 | 110 | 20 | 22 | 50 | 12 | 4 | 60 | 87 | 12 | M8 x 1.25 | 36 |
| 40A4TB | 50 | 110 | 121 | 20 | 22 | 50 | 12 | 4 | 60 | 87 | 12 | M8 x 1.25 | 36 |
| 63A4TA | 63 | 160 | 140 | 25 | 24 | 63 | 14 | 4.5 | 70 | 116 | 14 | M10 x 1.5 | 42 |
| 63A4TB | 80 | 140 | 160 | 25 | 24 | 63 | 14 | 4.5 | 70 | 116 | 14 | M10 x 1.5 | 42 |
| 100A4TA | 100 | 228 | 200 | 30 | 35 | 89 | 14 | 4.5 | 90 | 164 | 18 | M12 x 1.75 | 50 |
| 100A4TB | 125 | 200 | 228 | 30 | 35 | 89 | 14 | 4.5 | 90 | 164 | 18 | M12 x 1.75 | 50 |
| 160A4TA | 160 | 332 | 282 | 38 | 37 | 120 | 20 | 6 | 100 | 241 | 18 | M16 x 2 | 60 |
| 160A4TB | 200 | 282 | 332 | 38 | 37 | 120 | 20 | 6 | 100 | 241 | 18 | M16 x 2 | 60 |
| 250A4TA | 250 | 381 | 434 | 38 | 52 | 160 | 20 | 6 | 150 | 330 | 22 | M20 x 2.5 | 90 |

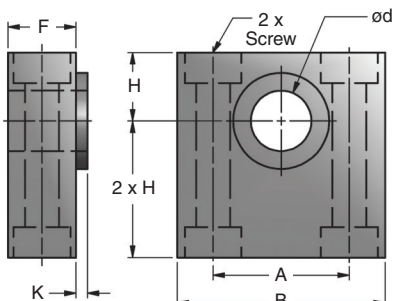
Single Height Pivot Bracket A4S



Note: Mounting screws included with pivot bracket.

| Part No. | Bore | A | B | F | d | H | K | Screw Size |
|----------|---------|----|-----|----|----|----|-----|------------|
| 32A4S | 32 | 32 | 46 | 15 | 12 | 15 | 3 | M6 x 35 |
| 40A4S | 40/50 | 36 | 55 | 18 | 16 | 18 | 3 | M8 x 40 |
| 63A4S | 63/80 | 42 | 65 | 20 | 20 | 20 | 3 | M10 x 45 |
| 100A4S | 100/125 | 50 | 75 | 25 | 25 | 25 | 3.5 | M12 x 55 |
| 160A4S | 160/200 | 60 | 92 | 36 | 32 | 30 | 4 | M16 x 70 |
| 250A4S | 250 | 90 | 140 | 51 | 40 | 35 | 5 | M20 x 80 |

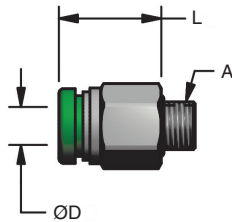
Dual Height Pivot Bracket A4D



Note: Mounting screws included with pivot bracket.

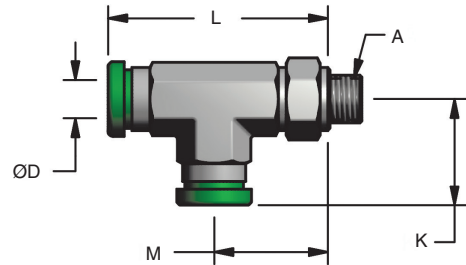
| Part No. | Bore | A | B | F | d | H | K | Screw Size |
|----------|---------|----|-----|----|----|----|-----|------------|
| 32A4D | 32 | 32 | 46 | 15 | 12 | 15 | 3 | M6 x 50 |
| 40A4D | 40/50 | 36 | 55 | 18 | 16 | 18 | 3 | M8 x 60 |
| 63A4D | 63/80 | 42 | 65 | 20 | 20 | 20 | 3 | M10 x 65 |
| 100A4D | 100/125 | 50 | 75 | 25 | 25 | 25 | 3.5 | M12 x 80 |
| 160A4D | 160/200 | 60 | 92 | 36 | 32 | 30 | 4 | M16 x 100 |
| 250A4D | 250 | 90 | 140 | 51 | 40 | 35 | 5 | M20 x 120 |

Straight Port Adapter



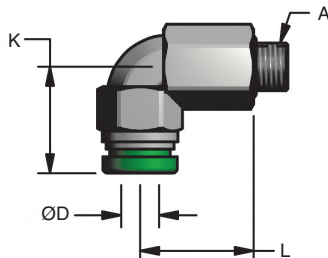
| Part No. | Bore | A | D | L |
|---------------|---------|-------|----|------|
| FT.10.G02.T08 | 32 | G 1/8 | 8 | 21.4 |
| FT.10.G04.T10 | 40/50 | G 1/4 | 10 | 26.4 |
| FT.10.G06.T12 | 63/80 | G 3/8 | 12 | 26.7 |
| FT.10.G08.T14 | 100/125 | G 1/2 | 14 | 25.4 |

Run Tee Port Adapter



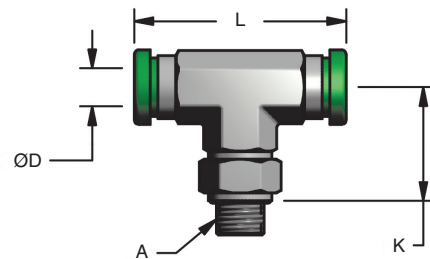
| Part No. | Bore | A | D | K | L | M |
|---------------|---------|-------|----|----|------|------|
| FT.50.G02.T08 | 32 | G 1/8 | 8 | 22 | 46 | 24 |
| FT.50.G04.T10 | 40/50 | G 1/4 | 10 | 28 | 58 | 30 |
| FT.50.G06.T12 | 63/80 | G 3/8 | 12 | 30 | 63 | 33 |
| FT.50.G08.T14 | 100/125 | G 1/2 | 14 | 34 | 72.5 | 38.5 |

Elbow Port Adapter



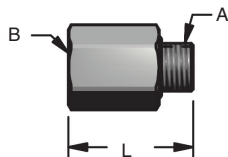
| Part No. | Bore | A | D | K | L |
|---------------|---------|-------|----|----|------|
| FT.20.G02.T08 | 32 | G 1/8 | 8 | 22 | 24 |
| FT.20.G04.T10 | 40/50 | G 1/4 | 10 | 28 | 30 |
| FT.20.G06.T12 | 63/80 | G 3/8 | 12 | 30 | 33 |
| FT.20.G08.T14 | 100/125 | G 1/2 | 14 | 34 | 38.5 |

Branch Tee Port Adapter



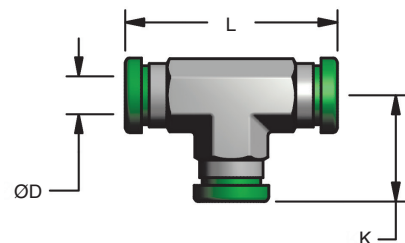
| Part No. | Bore | A | D | K | L |
|---------------|---------|-------|----|------|----|
| FT.40.G02.T08 | 32 | G 1/8 | 8 | 24 | 44 |
| FT.40.G04.T10 | 40/50 | G 1/4 | 10 | 30 | 56 |
| FT.40.G06.T12 | 63/80 | G 3/8 | 12 | 33 | 60 |
| FT.40.G08.T14 | 100/125 | G 1/2 | 14 | 38.5 | 68 |

BSPP → NPT Port Adapter



| Part No. | Bore | A | B | L |
|---------------|---------|-------|---------|----|
| FR.10.G02.N02 | 32 | G 1/8 | 1/8 NPT | 25 |
| FR.10.G04.N04 | 40/50 | G 1/4 | 1/4 NPT | 33 |
| FR.10.G06.N06 | 63/80 | G 3/8 | 3/8 NPT | 34 |
| FR.10.G08.N08 | 100/125 | G 1/2 | 1/2 NPT | 44 |
| FR.10.G12.N12 | 160/200 | G 3/4 | 3/4 NPT | 45 |
| FR.10.G16.N16 | 250 | G 1.0 | 1.0 NPT | 55 |

Union Tee

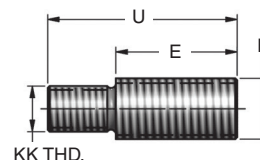


| Part No. | Bore | D | K | L |
|-----------|---------|----|----|----|
| FT.40.T08 | 32 | 8 | 22 | 44 |
| FT.40.T10 | 40/50 | 10 | 28 | 56 |
| FT.40.T12 | 63/80 | 12 | 30 | 60 |
| FT.40.T14 | 100/125 | 14 | 34 | 68 |

Rod End Studs

DADCO offers rod end studs (ISO 12.9) to convert the female thread back to a standard male rod end. See ordering example below.

In addition to the standard rod ends, special metric and inch threads are available. Contact DADCO for more information.



HP.WY.50.100 G. 1. TO

Part Number
Includes Series, Rod End Style, Bore and Stroke Length

Mount Option

Port Location

Port Style

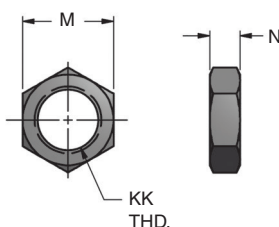
Rod End Stud Designation
WY = Female Rod End (HP.W) model with ISO 12.9 Stud Installed.
NY = Non-Rotating (HP.N) model with ISO 12.9 Stud Installed.

| Stud Part No. | Bore | B | E | KK | U |
|---------------|---------|------------|----|------------|-----|
| 32RES | 32 | M10 x 1.25 | 22 | M8 x 1.25 | 34 |
| 40RES | 40 | M12 x 1.25 | 24 | M10 x 1.25 | 39 |
| 50RES | 50/63 | M16 x 1.5 | 32 | M12 x 1.25 | 50 |
| 80RES | 80 | M20 x 1.5 | 40 | M16 x 1.5 | 64 |
| 100RES | 100* | M20 x 1.5 | 40 | M20 x 1.5 | 70 |
| 125RES | 125 | M27 x 2 | 54 | M20 x 1.5 | 95 |
| 160RES | 160/200 | M36 x 2 | 72 | M27 x 2 | 113 |
| 250RES | 250 | M42 x 2 | 84 | M36 x 2 | 138 |

*For the HP.N.100 model order Stud Part No. 80RES.

Jam Nuts

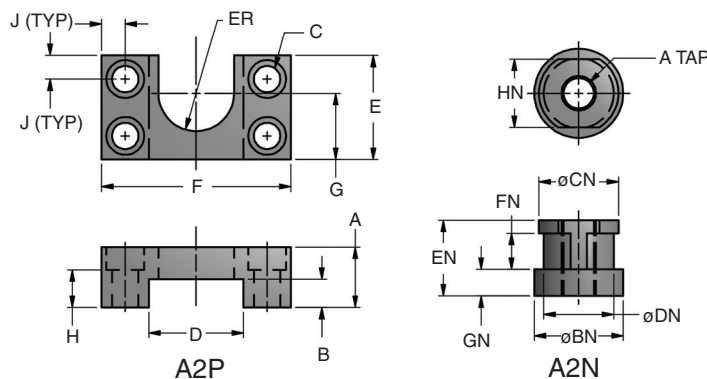
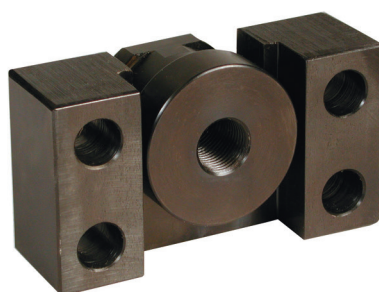
A2J



| Part No. | Bore | KK | M | N |
|----------|---------|------------|----|------|
| 32A2J | 32 | M10 x 1.25 | 17 | 5 |
| 40A2J | 40 | M12 x 1.25 | 19 | 6 |
| 50A2J | 50/63 | M16 x 1.5 | 24 | 8 |
| 80A2J | 80/100 | M20 x 1.5 | 30 | 10 |
| 125A2J | 125 | M27 x 2 | 41 | 13.5 |
| 160A2J | 160/200 | M36 x 2 | 55 | 18 |
| 250A2J | 250 | M42 x 2 | 65 | 21 |

Coupling Nut and Plate

A2K

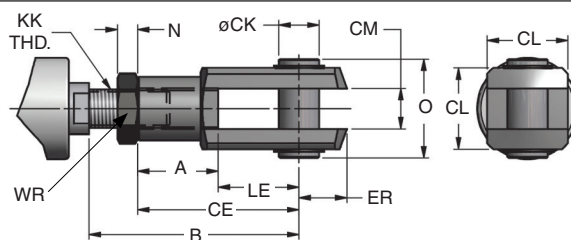
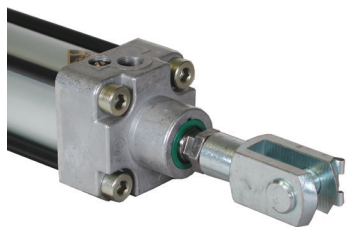


| Set Part No. | Plate Part No. | Nut Part No. | Bore | A | B | C | D | ER | E | F | G | H | J | A Tap | BN | CN | DN | EN | FN | GN | HN |
|--------------|----------------|--------------|---------|----|----|-----|----|----|-----|-----|----|----|------|------------|----|----|----|----|----|----|----|
| 32A2K | 32A2P | 32A2N | 32 | 25 | 11 | M10 | 38 | 14 | 50 | 80 | 30 | 15 | 11.5 | M10 x 1.25 | 35 | 30 | 25 | 30 | 16 | 10 | 24 |
| 40A2K | 32A2P | 40A2N | 40 | 25 | 11 | M10 | 38 | 14 | 50 | 80 | 30 | 15 | 11.5 | M12 x 1.25 | 35 | 30 | 25 | 30 | 16 | 10 | 24 |
| 50A2K | 50A2P | 50A2N | 50/63 | 32 | 15 | M12 | 50 | 20 | 55 | 100 | 35 | 20 | 12.5 | M16 x 1.5 | 47 | 42 | 37 | 40 | 19 | 14 | 36 |
| 80A2K | 50A2P | 80A2N | 80/100 | 32 | 15 | M12 | 50 | 20 | 55 | 100 | 35 | 20 | 12.5 | M20 x 1.5 | 47 | 42 | 37 | 40 | 19 | 14 | 36 |
| 125A2K | 125A2P | 125A2N | 125 | 40 | 20 | M16 | 60 | 25 | 65 | 120 | 45 | 24 | 16 | M27 x 2 | 57 | 52 | 47 | 50 | 24 | 19 | 46 |
| 160A2K | 125A2P | 160A2N | 160/200 | 40 | 20 | M16 | 60 | 25 | 65 | 120 | 45 | 24 | 16 | M36 x 2 | 57 | 52 | 47 | 50 | 24 | 19 | 46 |
| 250A2K | 250A2P | 250A2N | 250 | 45 | 20 | M20 | 80 | 33 | 100 | 150 | 64 | 19 | 18 | M42 x 2 | 76 | 64 | 59 | 76 | 50 | 19 | 60 |

HP Series Air Cylinders

Clevis A2C/A2CH*

GLOBAL STANDARD COMPONENTS
NAAMS
STAMPING

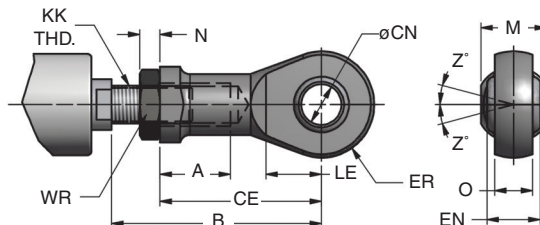
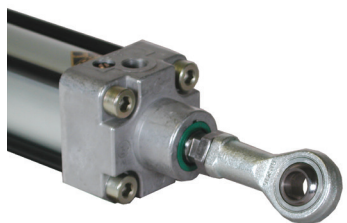


NOTE: Photo above depicts the product as it was at the time this catalog was printed. Slight product changes may occur during the life of this catalog without prior notice, but products supplied will remain functionally interchangeable.

| Part No. | Bore | A | B (max) | CE | CK | CL | CM | ER | KK | LE | N | O | WR |
|-------------|---------|----|---------|-----|----|----|----|----|------------|----|------|-------|----|
| 32A2C/A2CH | 32 | 20 | 52 | 40 | 10 | 20 | 10 | 12 | M10 x 1.25 | 20 | 5 | 26 | 17 |
| 40A2C/A2CH | 40 | 24 | 60 | 48 | 12 | 24 | 12 | 14 | M12 x 1.25 | 24 | 6 | 31 | 19 |
| 50A2C/A2CH | 50/63 | 32 | 80 | 64 | 16 | 32 | 16 | 19 | M16 x 1.5 | 32 | 8 | 39 | 24 |
| 80A2C/A2CH | 80/100 | 40 | 100 | 80 | 20 | 40 | 20 | 25 | M20 x 1.5 | 40 | 10 | 53 | 30 |
| 125A2C/A2CH | 125 | 56 | 137 | 110 | 30 | 55 | 30 | 38 | M27 x 2 | 54 | 13.5 | 74 | 41 |
| 160A2C/A2CH | 160/200 | 72 | 180 | 144 | 35 | 70 | 35 | 44 | M36 x 2 | 72 | 18 | 90.5 | 55 |
| 250A2C/A2CH | 250 | 84 | 210 | 168 | 40 | 86 | 40 | 64 | M42 x 2 | 84 | 21 | 109.5 | 65 |

*Standard Hardened Clevis Pin (.A2CH) available. For diameters 10mm and 12mm pins are hardened to 25-32 Rc. For diameters 16-40mm pins are hardened to 28-35 Rc. Contact DADCO for more information.

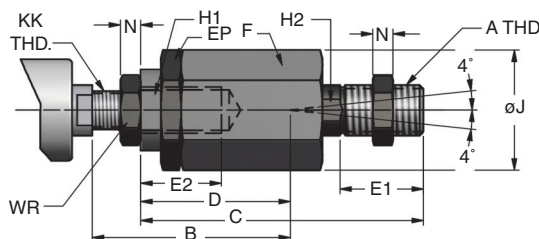
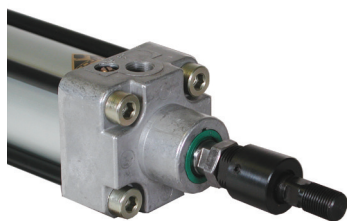
Swivel Rod Eye A2E



NOTE: Photo above depicts the product as it was at the time this catalog was printed. Slight product changes may occur during the life of this catalog without prior notice, but products supplied will remain functionally interchangeable.

| Part No. | Bore | A | B (max) | CE | CN | EN | ER | KK | LE | N | M | O | Z | WR |
|----------|---------|----|---------|-----|----|----|----|------------|----|------|----|------|----|----|
| 32A2E | 32 | 20 | 55 | 43 | 10 | 14 | 14 | M10 x 1.25 | 15 | 5 | 17 | 10.5 | 13 | 17 |
| 40A2E | 40 | 22 | 62 | 50 | 12 | 16 | 16 | M12 x 1.25 | 17 | 6 | 19 | 12 | 13 | 19 |
| 50A2E | 50/63 | 28 | 80 | 64 | 16 | 21 | 21 | M16 x 1.5 | 22 | 8 | 22 | 15 | 15 | 24 |
| 80A2E | 80/100 | 33 | 97 | 77 | 20 | 25 | 25 | M20 x 1.5 | 26 | 10 | 32 | 18 | 15 | 30 |
| 125A2E | 125 | 51 | 137 | 110 | 30 | 37 | 35 | M27 x 2 | 36 | 13.5 | 41 | 25 | 15 | 41 |
| 160A2E | 160/200 | 56 | 161 | 125 | 35 | 43 | 40 | M36 x 2 | 41 | 18 | 50 | 28 | 16 | 55 |
| 250A2E | 250 | 60 | 184 | 142 | 40 | 49 | 45 | M42 x 2 | 46 | 21 | 55 | 33 | 16 | 65 |

Alignment Coupler A2L



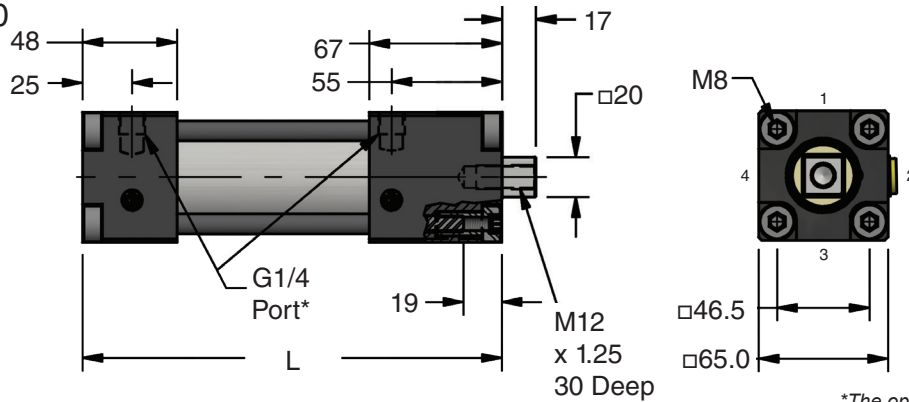
NOTE: Photo above depicts the product as it was at the time this catalog was printed. Slight product changes may occur during the life of this catalog without prior notice, but products supplied will remain functionally interchangeable.

| Part No. | Bore | A | B (max) | C | D | E1 | E2 | EP | F | H1 | H2 | J | KK | N | WR |
|----------|---------|------------|---------|-----|-----|----|----|----|----|----|----|----|------------|------|----|
| 32A2L | 32 | M10 x 1.25 | 38 | 70 | 31 | 20 | 23 | 30 | 30 | 19 | 12 | - | M10 x 1.25 | 5 | 17 |
| 40A2L | 40 | M12 x 1.25 | 37 | 67 | 31 | 23 | 23 | 30 | 30 | 19 | 12 | - | M12 x 1.25 | 6 | 19 |
| 50A2L | 50/63 | M16 x 1.5 | 53 | 112 | 45 | 40 | 32 | 41 | 41 | 30 | 19 | - | M16 x 1.5 | 8 | 24 |
| 80A2L | 80/100 | M20 x 1.5 | 66 | 123 | 56 | 39 | 42 | 41 | 41 | 30 | 19 | - | M20 x 1.5 | 10 | 30 |
| 125A2L | 125 | M27 x 2 | 73.5 | 145 | 60 | 48 | 48 | 55 | 55 | 32 | 24 | - | M27 x 2 | 13.5 | 41 |
| 160A2L | 160/200 | M36 x 2 | 128 | 250 | 110 | 65 | 50 | 75 | - | 50 | 32 | 80 | M36 x 2 | 18 | 55 |
| 250A2L | 250 | M42 x 2 | 141 | 271 | 120 | 82 | 88 | 80 | - | 60 | 36 | 90 | M42 x 2 | 21 | 65 |

Optional Cylinder Styles

Oversized Non-Rotating Rod

HP.STB.50



*The open port allows for maximum air flow.

| Part No. | Stroke | L (mm) |
|---------------|--------|--------|
| HP.STB.50.125 | 125 | 286 |
| HP.STB.50.160 | 160 | 321 |
| HP.STB.50.180 | 180 | 341 |
| HP.STB.50.200 | 200 | 361 |

Operating Specifications:

| | |
|----------------------------------|------------------|
| Max. Working Pressure: | 10 bar (140 psi) |
| Push Force* at 5.5 bar (80 psi): | 1080 N (243 lb) |
| Pull Force* at 5.5 bar (80 psi): | 860 N (194 lb) |

*Theoretical

Ordering Example:

| | | | | | | |
|------------------------|-----|---------|-----|----|----|----|
| Series | HP. | STB (.) | 50. | G. | 1. | TO |
| Rod Option | | | | | | |
| Bore | | | | | | |
| Stroke Length | | | | | | |
| Mount Option (TO, T13) | | | | | | |
| Port Location (1-4) | | | | | | |
| Port Style | | | | | | |

STB = Oversized Non-Rotating Rod Option
X = Optional Stud Attachment

When not specified, default is TO. T13 Mount ordered with cylinder will be attached at the factory.

Standard = 1

G = 1/4 BSPP

For more information on mount options and stud attachment, please reference Bulletin B16126B.

Sensors

DADCO's Sensors can be used with HP Cylinders to properly synchronize the timing of motion. DADCO offers two different types of switches, magnetic and proximity switches. Since there are a wide array of switches available, it is best to contact DADCO for information on switch selection and cylinder preparation.

Magnetic Switches are typically affixed to the tie rod and rest tightly against the non-magnetic tube. The switch senses a magnetic piston as the piston passes the switch. To receive a magnetic ring mounted within the piston, specify an "M" in the HP ordering code.

Proximity Switches are sometimes designed specifically for cylinder use. Most conventional switches can be adapted to pneumatic cylinders. The cylinder must be manufactured with a proximity port for a probe to be installed. The end of the probe must nearly contact the target it is sensing. The target (the cushion spear) must contain ferrous metal to interrupt the radial field of the switch; therefore, modified cushion spears are required. To receive an HP Cylinder prepped for proximity switches, specify an "E _ _ E" along with the desired proximity port location and head selection (i.e. front, rear, or both) in the HP ordering code. The proximity switch manufacturer and model number are also required for proper cylinder preparation.

Ordering Example:

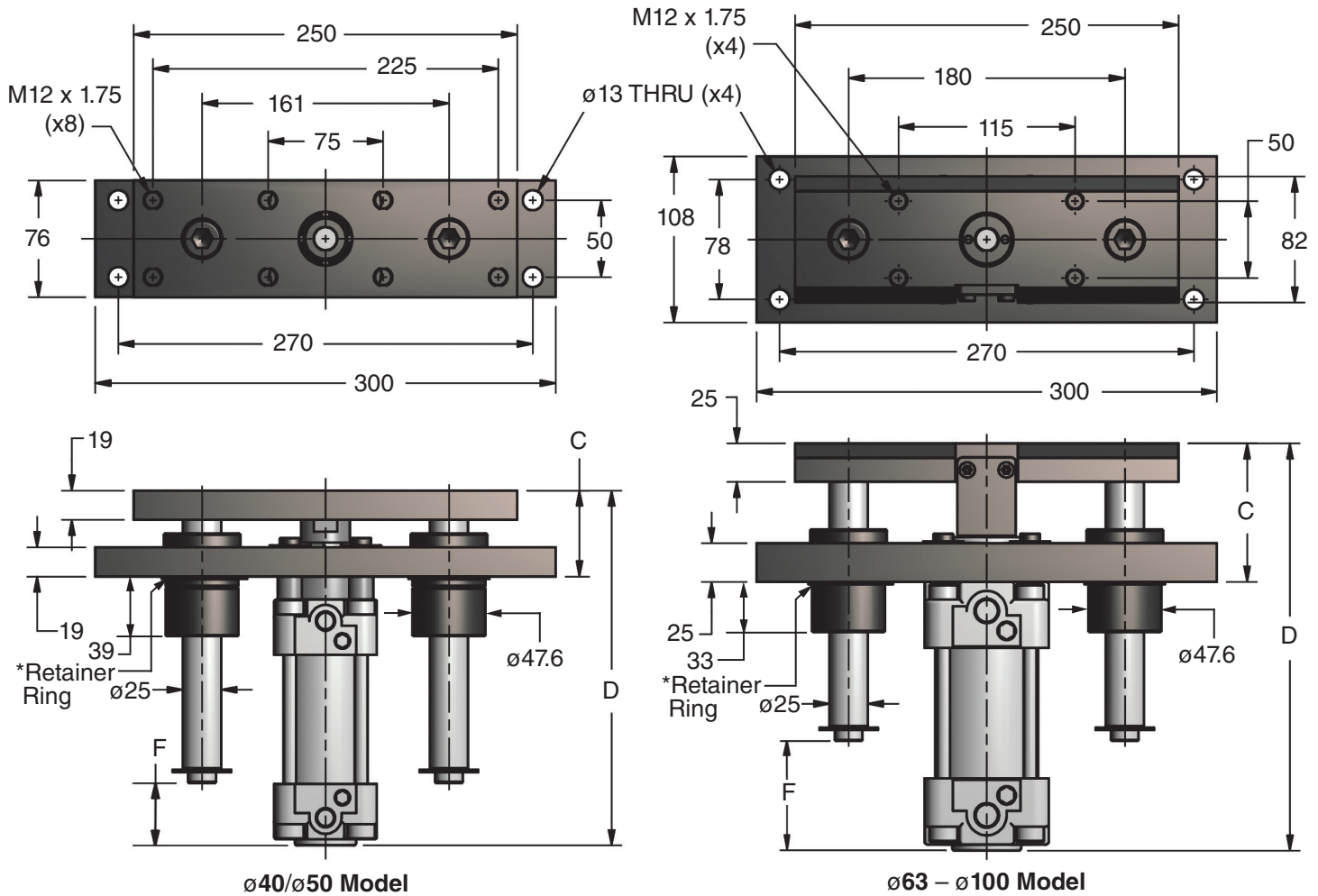
| | | | | | | |
|------------------------|-------|-----|------|----|----|----|
| Series and Rod Option: | HP.Z. | 63. | 100. | G. | 2. | TO |
| Cylinder Style: | | | | | | |
| Mount Option | | | | | | |
| Port Location | | | | | | |
| Port Style | | | | | | |
| Stroke | | | | | | |
| Bore | | | | | | |

M = Magnetic Ring on Piston
E11E = Proximity Switch Designation
E1 = Front Head Prep at Location 1
1E = Rear Head Prep at Location 1
(0 = No Prep)

Cannot be same as sensor designation.

TDL2C - Two Post Direct Lifter

DADCO's TDL2C delivers smooth, consistent lifting action and conforms with the Chrysler (080.90.07-08) and Ford (WDX 18-80) Die Standards. It is available in $\varnothing 40 - \varnothing 100$ mm bore sizes with a variety of stroke lengths to accommodate different applications. The TDL2C has M12 bolt holes in the upper plate to easily mount fixtures in place; no welding or extra machining is required.

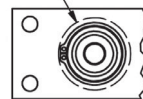


| Bore Size | C | D | F | Port Style G or P |
|-----------|----|---------|------|----------------------|
| ø40 | 56 | 165 + S | 22.1 | 1/4 |
| ø50 | 56 | 181 + S | 38.1 | 1/4 |
| ø63 | 90 | 215 + S | 68.9 | 3/8 |
| ø80 | 90 | 222 + S | 75.9 | 3/8 |
| ø100 | 95 | 237 + S | 90.9 | 1/2 |

*Retainer Ring Installation Detail

Spotface required for retainer ring clearance.

ø61 x 2 Thick Ret. Ring



Ordering Example:

HP. Z. 50. 100. G. 1. TDL2C

Series — HP
Rod Option — Z = Standard Model.
TDL2C requires HP.Z configuration.
Bore — 50
Stroke Length — 100
25, 50, 80, 100, 125, 160, 200, 320, 400
Port Style — G
G = BSPP, P = NPT

Mount Option

TDL2C = Two Post Direct Lift with Linear Bearings and Guide Shafts.

Port Location (1-4)

Standard = 1.

When not specified, default is 1. Refer to page 32 for information on proper orientation.

TDL4 - Two Post Direct Lifter

HP Series Air Cylinders

DADCO's TDL4 is available in a $\varnothing 40$ mm bore size and boasts the same high quality construction as the TDL2C. The TDL4's compact upper and mounting plates, make it ideal for placement in tighter spaces.

TDL2C and TDL4 Upper Plate Modification

DADCO's HP Two Post Direct Lifters feature an upper plate with a convenient bolt pattern. If necessary, the plate can be removed and machined to accommodate various applications.



Spanner Tools

DADCO offers Spanner Tools to aid in the removal of the plate. Refer to bulletin #B01126 for step by step instruction on how to use the tools.

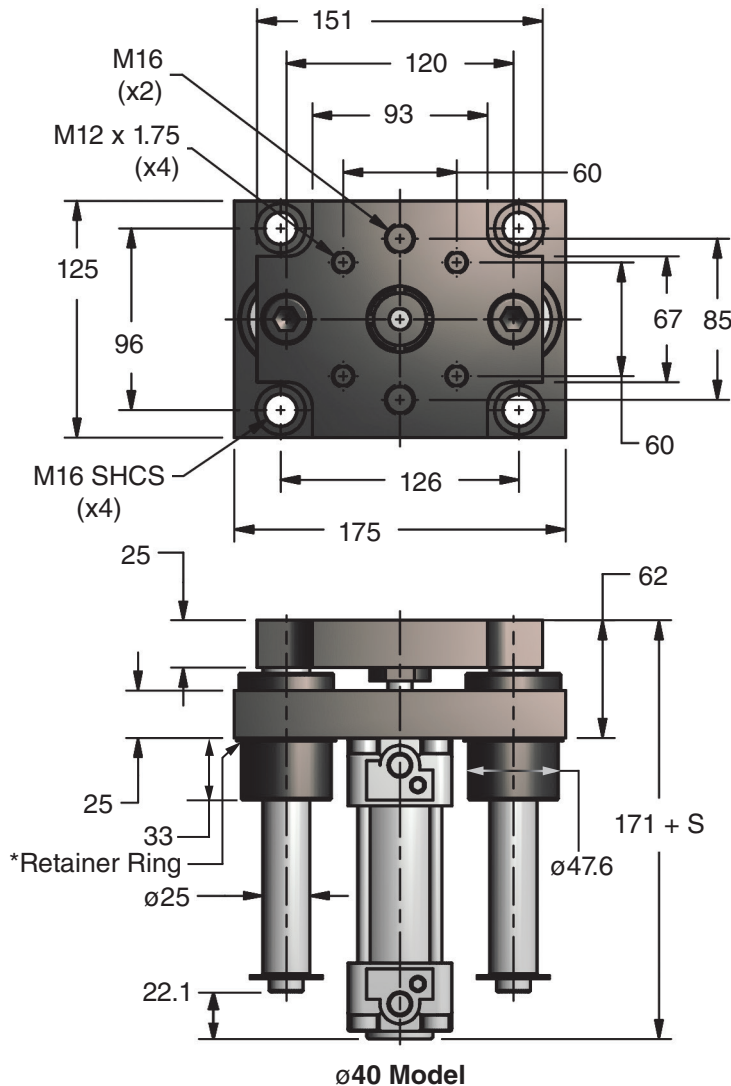
HP.325 (for use with $\varnothing 40$, $\varnothing 50$, $\varnothing 80$ and $\varnothing 100$)



Use with a 5/8" (16 mm)
Socket Wrench
(not included)



SW-55 (for use with $\varnothing 63$)

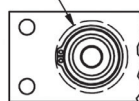


$\varnothing 40$ Model

*Retainer Ring Installation Detail

Spotface required for retainer ring clearance.

$\varnothing 61 \times 2$ Thick
Ret. Ring



Ordering Example:

| | | | |
|----------------|--|---------------------|--|
| Series | HP. Z. 40. 100. G. 1. TDL4 | Mount Option | TDL4 = Two Post Direct Lift with Linear Bearings and Guide Shafts. |
| Rod Option | | Port Location (1-4) | Standard = 1. When not specified, default is 1. |
| Bore | | | |
| Stroke Lengths | 25, 50, 80, 100, 125, 160, 200 and 250 | | |
| Port Style | G = 1/4 BSPP, P = 1/4 NPT | | |

Operating Specifications

Charging Medium: Air
Temperature: -20°C – 80°C (-4°F – 176°F)
Max. Working Pressure: 10 bar (140 psi) [1 MPa]

Max. Speed (HP.Z / HP.W): 1 m/sec. (3.28 ft/sec.)
Max. Speed (HP.N): 0.2 m/sec. (0.66 ft/sec.)
NOTE: Refer to cylinder pages for PUSH and PULL Forces.

Force Chart

| Model | Work Action | Force (lb.) | | Force (kN) | |
|---------|-------------|-------------|--------|------------|-------|
| | | 60 psi | 80 psi | 4 bar | 6 bar |
| HP...32 | PUSH | 75 | 100 | .322 | .483 |
| | PULL | 64 | 86 | .276 | .415 |
| HP...40 | PUSH | 117 | 156 | .503 | .754 |
| | PULL | 98 | 131 | .422 | .633 |
| HP...50 | PUSH | 183 | 243 | .785 | 1.18 |
| | PULL | 153 | 204 | .660 | .990 |
| HP...63 | PUSH | 290 | 387 | 1.25 | 1.87 |
| | PULL | 261 | 348 | 1.12 | 1.68 |
| HP...80 | PUSH | 467 | 623 | 2.01 | 3.02 |
| | PULL | 422 | 562 | 1.81 | 2.72 |

| Model | Work Action | Force (lb.) | | Force (kN) | |
|----------|-------------|-------------|--------|------------|-------|
| | | 60 psi | 80 psi | 4 bar | 6 bar |
| HP...100 | PUSH | 730 | 974 | 3.14 | 4.71 |
| | PULL | 656 | 874 | 2.82 | 4.23 |
| HP...125 | PUSH | 1141 | 1522 | 4.91 | 7.36 |
| | PULL | 1024 | 1366 | 4.41 | 6.61 |
| HP...160 | PUSH | 1870 | 2493 | 8.04 | 12.06 |
| | PULL | 1753 | 2337 | 7.54 | 11.31 |
| HP...200 | PUSH | 2922 | 3896 | 12.57 | 18.85 |
| | PULL | 2805 | 3740 | 12.06 | 18.10 |
| HP...250 | PUSH | 4565 | 6087 | 19.64 | 29.45 |
| | PULL | 4383 | 5843 | 18.85 | 28.27 |

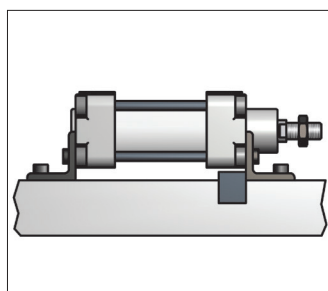
NOTE: A cylinder's theoretical force should be 50–100% greater than the force required.

General

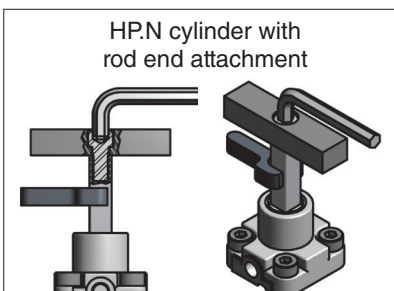
Do not use an air cylinder as a single acting spring. DADCO offers a full line of nitrogen gas springs and special single acting air cylinders which are specifically designed to provide concentrated spring forces.

DADCO air cylinders are prelubed at assembly and require only filtered air when operated at under 1 m/sec. Lubricated air may be required when operating at speeds exceeding 1 m/sec. Only provide lubed, compressed air when necessary. The cylinder must be operated with only that type of air it is introduced to.

Recommendations

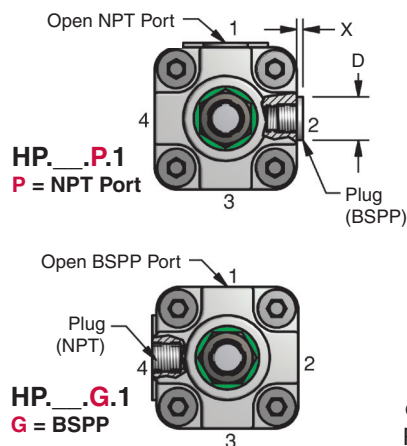


When providing key support for the **T1** mount, use the back of the front mount.



Always use a wrench to hold the rod when attaching items to the rod end. Do not torque against the bearing. Never use channel locks, and be careful not to scratch the rod surface during attachment.

Port Orientation



When the NPT Port option is chosen, the BSPP Port will be plugged, see dimensions below.

| Bore | X | D |
|------|----|----|
| | mm | mm |
| ø32 | 5 | 16 |
| ø40 | 5 | 20 |
| ø50 | 5 | 20 |
| ø63 | 5 | 24 |
| ø80 | 5 | 24 |
| ø100 | 7 | 29 |
| ø125 | 7 | 29 |
| ø160 | 7 | 36 |
| ø200 | 7 | 36 |
| ø250 | 5 | 40 |

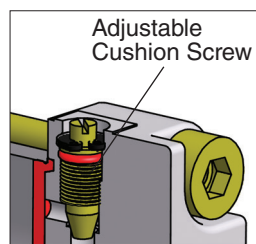
When the BSPP Port option is chosen, the NPT Port will be plugged and is flush to the head.

NOTE: Customers may receive a head with just their individual chosen port option.

Adjustable Cushions

Every HP Series Cylinder is equipped with adjustable cushion control at each end as standard. The regulating screw in the front head controls cushioning on the extension stroke. The regulating screw in the rear head controls cushioning on the retracting stroke. A clockwise rotation closes the cushioning valve to produce more cushion effect; a counter clockwise rotation opens the cushioning valve to minimize cushion effect. The fully open position will provide no cushion effect. The cushion control can be disabled permanently by removing the cushion seals inside the heads. DADCO provides two cushion lengths; for shorter stroke air cylinders a short cushion is installed, for longer strokes a long cushion is installed. Refer to chart for cushion length and availability.

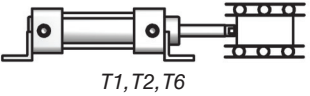
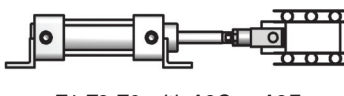
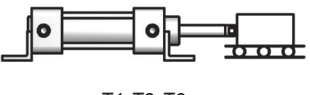
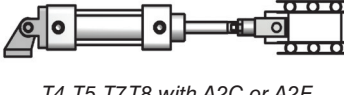
NOTE: When using proximity sensors the cylinder will need to use long cushion spears regardless of stroke size.



| Bore | Effective Short Cushion Length | Effective Long Cushion Length | Short Cushion Used Through |
|------|--------------------------------|-------------------------------|----------------------------|
| | mm | mm | Stroke (mm) |
| ø32 | 7 | 18 | 63 |
| ø40 | 7 | 18 | 63 |
| ø50 | 7 | 22 | 63 |
| ø63 | 7 | 22 | 63 |
| ø80 | 7 | 26 | 63 |
| ø100 | 17 | 30 | 80 |
| ø125 | 17 | 30 | 80 |
| ø160 | 17 | 30 | 100 |
| ø200 | 17 | 43 | 100 |
| ø250 | 17 | 50 | 100 |

Maximum Rod Thrust for Long Strokes

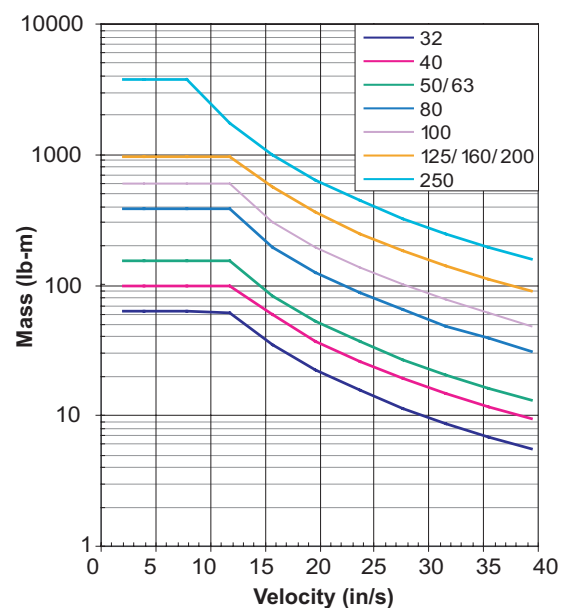
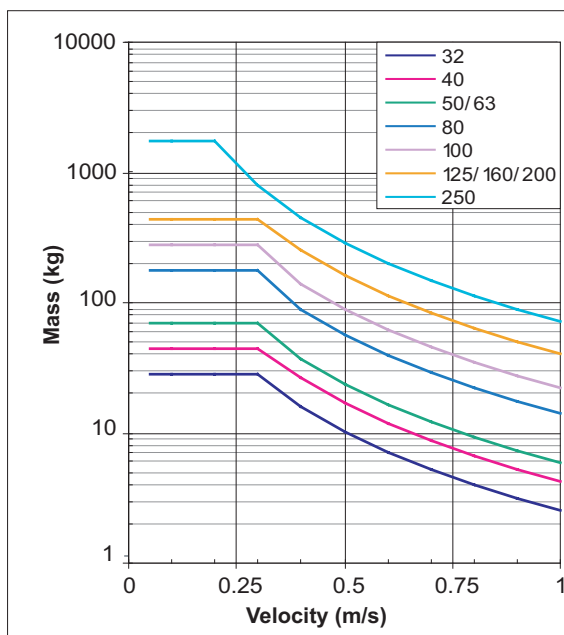
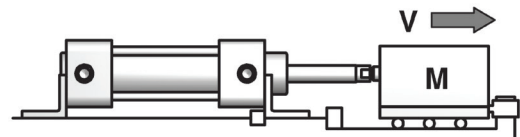
HP Series Cylinders have different load ratings for long strokes based on the mounting style and stroke length. Refer to the table below to determine the maximum thrust by cylinder model, bore size, mounting style and stroke length.

| | | Model | HP.Z / HP.W | | | | | HP.N | | | |
|----------------|---|----------------------------------|--------------|------------|-------------|--------------|----------------------------------|------------|-------------|-------------|--------------|
| | | Bore | ø32 | ø40 | ø50/ ø63 | ø80/ ø100 | | ø32 | ø40 | ø50/ ø63 | ø80 |
| | | Rod | ø12 | ø16 | ø20 | ø25 | | □10 | □12 | □16 | □20 |
| | | Max. PUSH Thrust Load - kN (lb.) | | | | | Max. PUSH Thrust Load - kN (lb.) | | | | |
| Mounting Style |  | 1 | 2000 78.7 | 0.38 86 | OK | OK | OK | 0.31 70 | 0.65 146 | 2.05 460 | 5.00 1124 |
| | | | | | | | | | | | |
| |  | 2 | 1500 59.1 | 0.35 78 | 1.09 246 | 2.07 601 | OK | 0.28 64 | 0.59 132 | 1.86 418 | 4.54 1020 |
| | | | 2000 78.7 | 0.19 44 | 0.62 138 | 1.50 338 | OK | 0.16 36 | 0.33 74 | 1.05 235 | 2.55 574 |
| |  | 3 | 500 19.7 | 0.38 86 | OK | OK | OK | 0.31 70 | 0.65 146 | 2.05 460 | 5.00 1124 |
| | | | 1000 39.4 | 0.10 21 | 0.30 68 | 0.74 166 | 1.80 404 | 0.08 18 | 0.16 36 | 0.51 115 | 1.25 281 |
| |  | 4 | 500 19.7 | 0.38 86 | OK | OK | OK | 0.31 70 | 0.65 146 | 2.05 460 | 5.00 1124 |
| | | | 1000 39.4 | 0.10 21 | 0.30 68 | 0.74 166 | 1.80 404 | 0.08 18 | 0.16 36 | 0.51 115 | 1.25 281 |

Dynamic Load Capacity per Cylinder

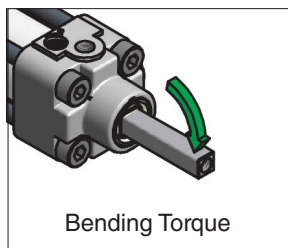
For moving larger masses consider kinetic energy and provide external stops, bumpers or shock absorbers where internal cushioning is insufficient or cushioning cannot be used.

If external stops or cushions cannot be used, reduce the load capacity per cylinder. To avoid damage to the cylinder, reference the graphs for the recommended load capacity based on the velocity of operation.

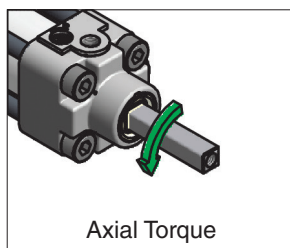


HP.N Load Capacity for Maximum Reliability

To maximize the reliability of the HP.N cylinders, avoid side loading. Good design practice should minimize the length and locate the force on the centerline of the cylinder. Increased wear on the bearing will occur if torque resulting from axial or bending loads exceeds the values referenced below.

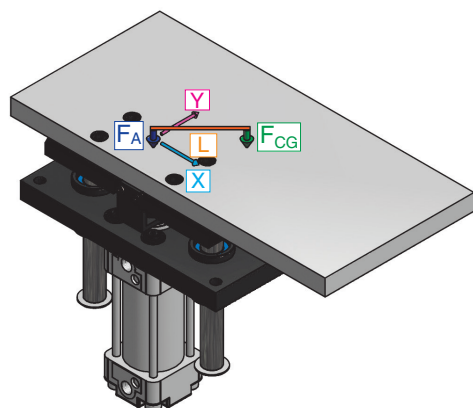


| HP.N Bore | Square | Maximum Bending at .25 m/sec (10 in/sec) | |
|-----------|--------|--|-----|
| mm | mm | lb-in | Nm |
| 32 | 10 | 42 | 4.7 |
| 40 | 12 | 100 | 11 |
| 50/60 | 16 | 197 | 22 |
| 80/100 | 20 | 376 | 43 |



| HP.N Bore | Square | Maximum Axial at .25 m/sec (10 in/sec) | |
|-----------|--------|--|-----|
| mm | mm | lb-in | Nm |
| 32 | 10 | 28 | 3.1 |
| 40 | 12 | 40 | 4.5 |
| 50/60 | 16 | 71 | 8.0 |
| 80/100 | 20 | 110 | 12 |

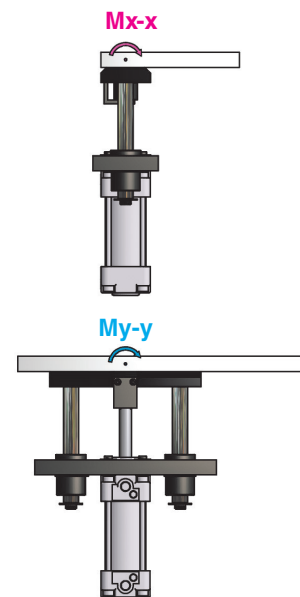
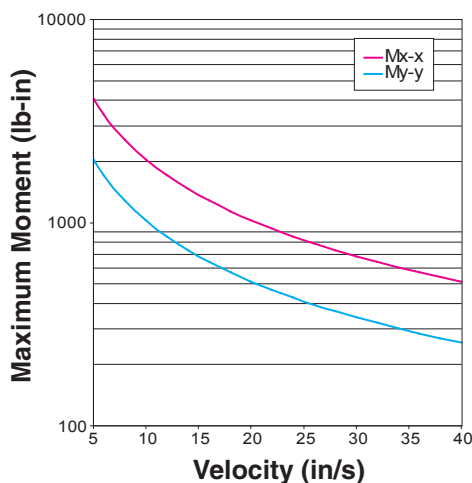
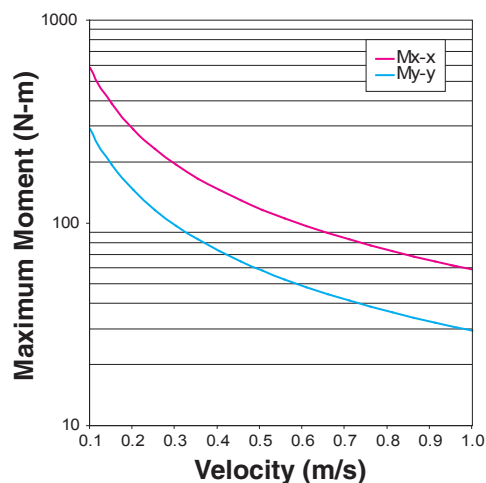
Two Post Direct Lifter Loading Capacity for Maximum Reliability



To maximize the reliability of the lifter, locate F_{CG} as close to F_A as possible. Good design practice should minimize L . As L increases, the likelihood of increased bearing wear and vibration increases. If a large offset is required, reduce the attachment load being lifted or add additional lifters. To determine Maximum Moment at a given velocity, refer to the graphs below.

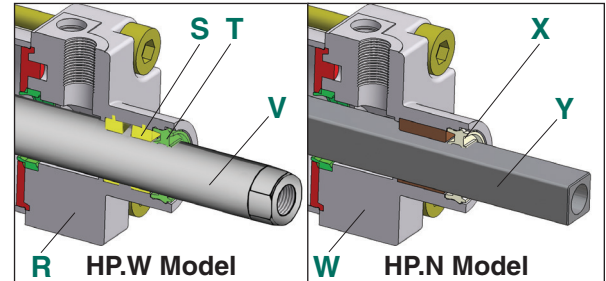
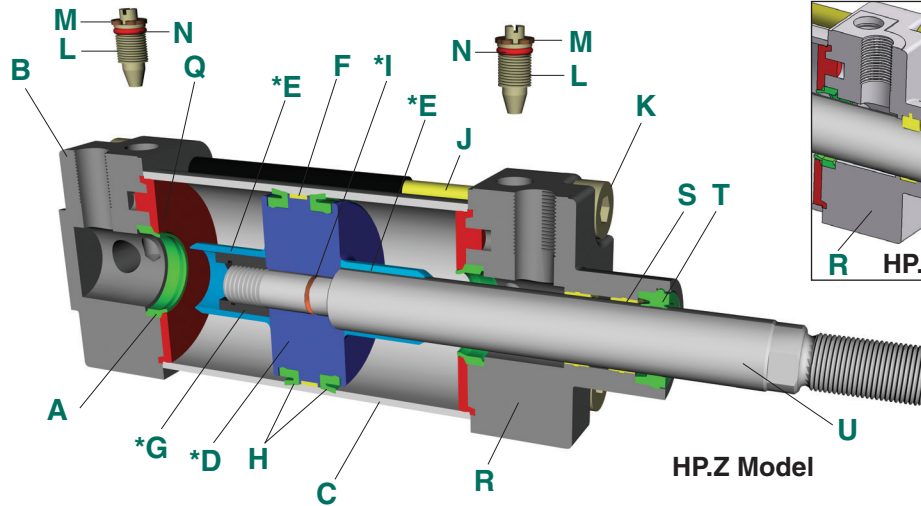
- F_A = Compression force to depress the lifter on the lifter centerline
- F_{CG} = Load caused at the center of gravity of the attachment
- L = Distance from F_A to F_{CG}
- X = Reference axis, use M_{y-y} loading for forces on this axis
- Y = Reference axis, use M_{x-x} loading for forces on this axis

$$\text{Maximum Moment} = F_{CG} \times L$$



Parts List

HP Series Air Cylinders



NOTE: For bore diameters $\phi 160$ - $\phi 250$, please contact DADCO.

| Parts List | Quantity Required | Part Number | | | | | | |
|----------------------------------|-------------------|-------------|--------------|--------------|--------------|--------------|--------------|---------------|
| | | $\phi 32$ | $\phi 40$ | $\phi 50$ | $\phi 63$ | $\phi 80$ | $\phi 100$ | $\phi 125$ |
| A Cushion Seal | 2 | IP470949 | IQ470950 | IR470951 | IS470951 | IT470953 | IU470954 | IV470955 |
| B Rear Head | 1 | IP600460 | IQ600461 | IR600462 | IS600463 | IT600214 | IU600215 | IV600216 |
| C Tube | 1 | IP05Z____ | IQ05Z____ | IR05Z____ | IS05Z____ | IT05Z____ | IU05Z____ | IV05Z____ |
| F Guide Tape | 1 | IP417725 | IQ417726 | IR417727 | IS417728 | IT417521 | IU417467 | IV41V360 |
| H Piston Seal | 2 | IP480969 | IQ480970 | IR480971 | IS480972 | IT480973 | IU480974 | IV47V359 |
| J Tie Rod | 4 | IP75M____ | IQ75M____ | IR75M____ | IS75M____ | IT75M____ | IU75M____ | IV75M____ |
| K Tie Rod Nut | 8 | IP852201 | IP852201 | IR852203 | IS852203 | IT852205 | IT852205 | IV850313 |
| L Regulating Screw | 2 | IP502240 | IQ502241 | IR502242 | IS502243 | IT502244 | IU502245 | IV502246 |
| M Retaining Ring | 2 | IP857278 | IP857278 | IR857279 | IS857280 | IS857280 | IU857281 | IV857282 |
| N Adj. Screw O-Ring | 2 | IP450979 | IP450979 | IR450981 | IS450982 | IT450983 | IU450984 | IV450985 |
| Q Dampening Washer | 2 | IP450860 | IQ450861 | IR450862 | IS450863 | IT450864 | IU450865 | IV450866 |
| HP.Z Model | | | | | | | | |
| R Front Head | 1 | IP600450 | IQ600451 | IR600452 | IS600453 | IT600204 | IU600205 | IV600206 |
| S Rod Bearing | 2 | IP400939*** | 90.240.00300 | 90.240.00500 | 90.240.00500 | 90.240.00750 | 90.240.01500 | 90.240.U.2600 |
| T Rod Seal/Wiper/Ring | 1 | IP47V229 | IQ47V230 | IR47V231 | IS47V231 | IT47V232 | IU47V233 | IV47V234 |
| **U Piston Rod Assembly | 1 | IP00Z____ | IQ00Z____ | IR00Z____ | IS00Z____ | IT00Z____ | IU00Z____ | IV00Z____ |
| HP.W Model | | | | | | | | |
| **V Piston Rod Assembly | 1 | IP00W____ | IQ00W____ | IR00W____ | IS00W____ | IT00W____ | IU00W____ | IV00W____ |
| HP.N Model | | | | | | | | |
| ****W Front Head Assembly | 1 | IP307646 | IQ307647 | IR307648 | IS307648 | IT307649 | IU307657 | --- |
| X Rod Seal/Wiper/Ring | 1 | IP477646 | IQ477647 | IR477648 | IS477648 | IT477649 | IT477649 | --- |
| **Y Piston Rod Assembly | 1 | IP00N____ | IQ00N____ | IR00N____ | IS00N____ | IT00N____ | IU00N____ | --- |

* Not sold separately: Piston (D), Piston O-Ring (I), Piston Nut (G) and Cushion Spears (E).

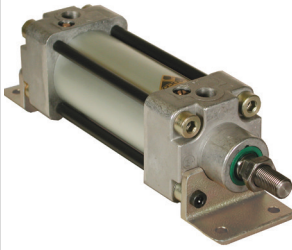
** Includes D, I, G and E. When ordering, please note the stroke length in addition to the part number.

*** The $\phi 32$ mm bore cylinder uses only one rod bearing.

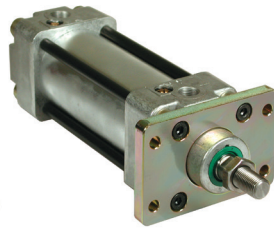
**** Includes Front Head with Rod Bearing, Rod Seal/Wiper/Ring, Regulating Screw, Retaining Ring, Adj. Screw O-Ring, Dampening Washer, and Cushion Seal.

Every effort has been made to have all illustrations and drawings accurately represent the product as it was at the time this catalog was printed. However, so that we effectively may continue to meet the requirements of DADCO customers, some product changes may occur during the life of this catalog without prior notice.

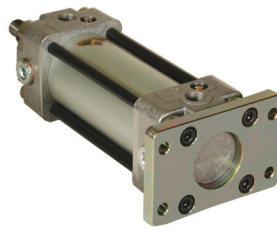
Ordering Review and Repair Information



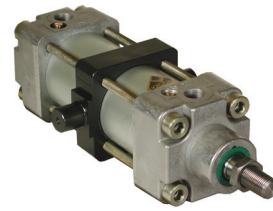
Foot Mount (T1)



Front Flange (T2)



Rear Flange (T3)



Adjustable Trunnion (T4)



Female Clevis (T5)

Ordering Information

Series _____

Rod Option _____

Z = Standard Model
N = Non-Rotating Model (up to 200mm stroke)
NY = ISO 12.9 Stud Installed
W = Female Rod End Model
WY = ISO 12.9 Stud Installed
When not specified, default is HP.Z.

Cylinder Options _____

F = Chrome Plated Steel Tube
R = Stainless Steel Piston Rod
Other tube materials are available.
Contact DADCO for more information.
Leave blank for no option selected.

Sensor Designation _____

E__E = Prep for Proximity Switches
M = Magnetic Ring on Piston
Leave blank for no option selected.

Bore _____

Stroke Length _____

Mount Type _____

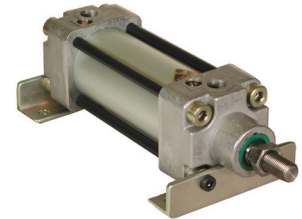
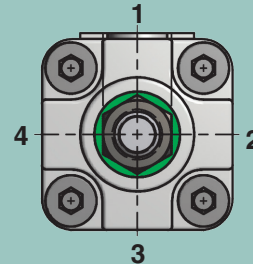
TO = Basic Model
T_ = Attached Mount Code
When not specified, default is TO.
Mount Only Example: 32T1

Port Location _____

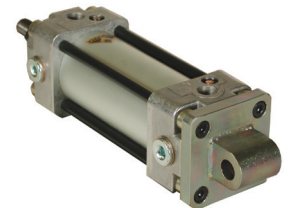
1 = Standard
When not specified, default is 1.

Port Style _____

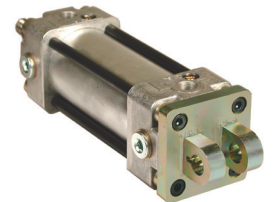
G = BSPP
P = NPT
When not specified, default is G.



Inverted Foot Mount (T6)



Male Clevis (T7)



Clevis Bracket (T8)

HP.Z and HP.W Model Repair Kits

Seal Kit

Contains Piston Seals, Cushion Seals, Rod Seal/Wiper/Ring and Maintenance Instructions.

Repair Kit

Contains Piston Seals, Cushion Seals, Rod Seal/Wiper/Ring, Rod Bearings and Maintenance Instructions.

| Model (Z or W) | Seal Kit Number | Repair Kit Number |
|----------------|-----------------|-------------------|
| HP._32 | IP009180 | IP009190 |
| HP._40 | IQ009181 | IQ009191 |
| HP._50 | IR009182 | IR009192 |
| HP._63 | IS009183 | IS009193 |
| HP._80 | IT009184 | IT009194 |
| HP._100 | IU009185 | IU009195 |
| HP._125 | IV009186 | IV009196 |

NOTE: For bore diameters ø160–ø250, please contact DADCO.

HP.N Model Repair Kits

Seal Kit

Contains Piston Seals, Cushion Seals, Rod Seal/Wiper/Ring and Maintenance Instructions.

| Model | Seal Kit Number |
|----------|-----------------|
| HP.N.32 | IP007646 |
| HP.N.40 | IQ007647 |
| HP.N.50 | IR007648 |
| HP.N.63 | IS007648 |
| HP.N.80 | IT007649 |
| HP.N.100 | IU007657 |

For more information on the repair of HP Series Air Cylinders, refer to bulletin #B04117B, bulletin #B04118B and bulletin #B05119A.



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