

DAPCO[®]

Hydraulic Core Pin Cylinders

DK Series



ø40 mm

ø55 mm

DADCO

DADCO was founded in 1958 and today supplies a wide range of fluid power products for use in molds, dies, and automation equipment. With product ranging from the Micro Nitrogen Gas Spring Series to air/oil accumulators, DADCO provides customers with quality products of unmatched performance.

DADCO's innovative Hydraulic Core Pin Cylinder was developed specifically for use in plastic injection molds. Its compact, one-piece round body and rear porting capability make it the ideal replacement for bulky, square head, tie-rod style cylinders. The one piece body also eliminates the need to seal between multiple body parts, therefore decreasing the potential for leaks.



Models

DADCO's Core Pin Cylinder is optionally available in a non-rotating model for use in applications where the rod alone controls the core pin orientation. The non-rotating model is available in both 13 and 25 mm (Nom. 0.5 and 1") stroke lengths. DADCO's Core Pin Cylinder may also be supplied with a double rod end. The body length of the double rod end cylinder is the same as the standard model. Contact DADCO for information on special cylinders.



DK Series cylinders can be custom designed.

Sealing Features

DADCO's Core Pin Cylinder is constructed with long-lasting, high temperature seals, as standard. Consequently, the Core Pin Cylinder can typically withstand the high temperatures inside plastic molds. As an option, seals are available that provide for zero fluid bypass while standing up to operating pressures as high as 220 bar (3000 psi).

Porting Options

The DADCO Hydraulic Core Pin Cylinder offers numerous porting advantages. Convenient rear porting eliminates the need to provide additional space for piping to the front of the cylinder. However, side ports are also supplied on every cylinder. Every port is sealed with a high-temperature, fluorocarbon elastomer (FPM/FKM) seal to assure zero leakage. Two straight port adapters are supplied as standard with each cylinder.



Quality Construction

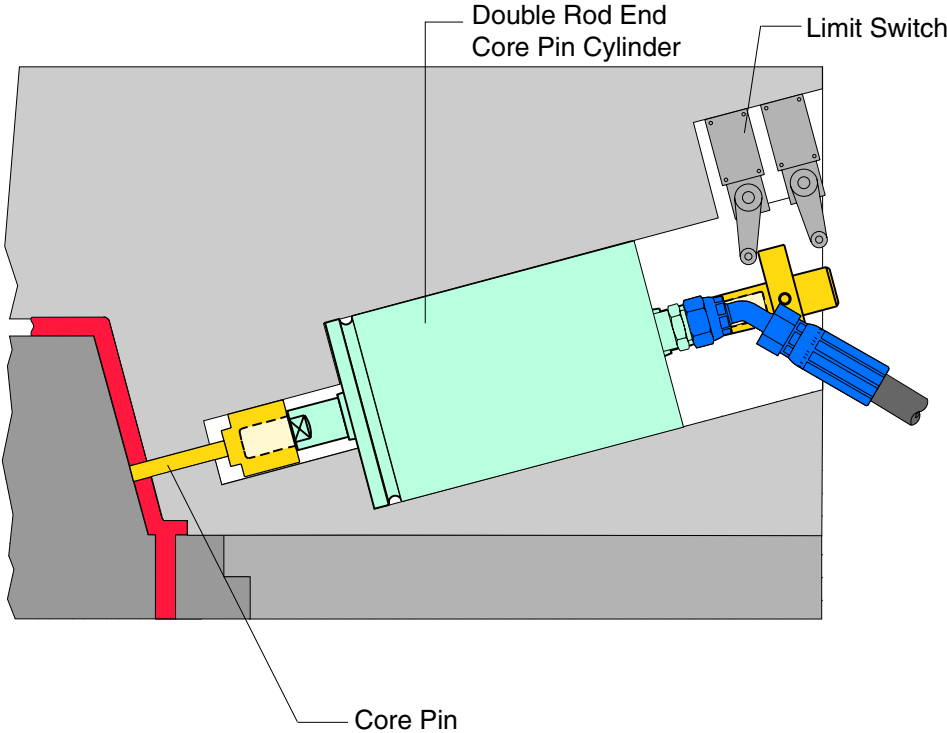
The Core Pin Cylinder's one-piece steel body is machined to close tolerances and corrosion protected. The hard chrome plated piston rod has wrench flats for easy core pin connection. Standard stroke lengths are 13, 25, 50, 80, and 100 mm. (Nom. 0.5", 1", 2", 3", 4"). Various male and female rod end styles are available.

Convenient Mounting

Unlike square head cylinders, DADCO's compact Core Pin Cylinder can be easily inserted into cored pockets within the mold. Simple two bolt mounting through the full body length of the cylinder facilitates fast installation. An attachable front flange mount is also available for the ø40 mm bore size for greater mounting versatility.

Optional Cylinder Styles

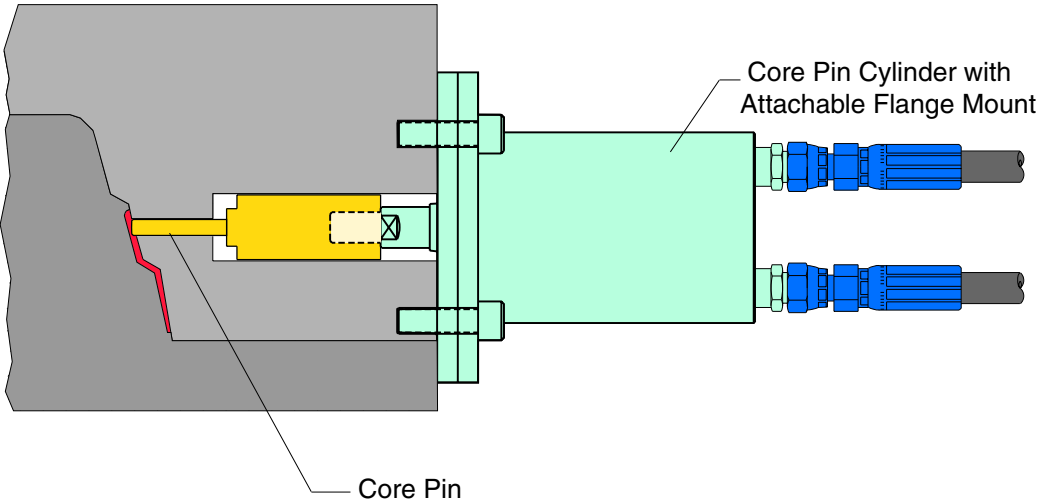
DADCO's Hydraulic Core Pin Cylinder is used to extract the core pin from the formed workpiece. In this application, the double rod end cylinder is used with an adjustable limit switch to achieve the desired cylinder travel within the mold.



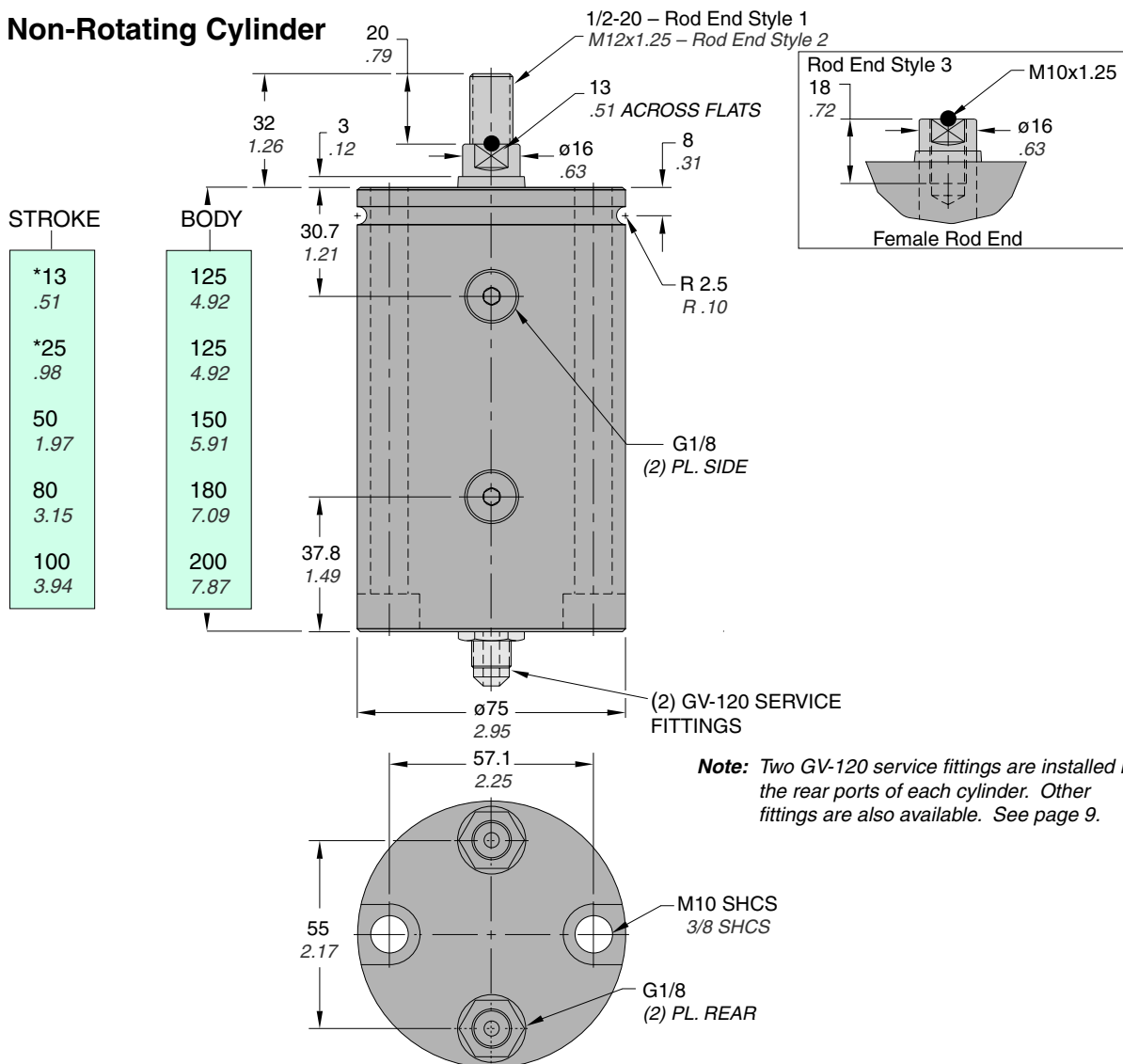
Versatile Mounting

In this application, DADCO's ø40 mm Hydraulic Core Pin Cylinder is mounted outside of the mold with an attachable front flange mount. Four mounting bolts are used to secure the cylinder to the mold.

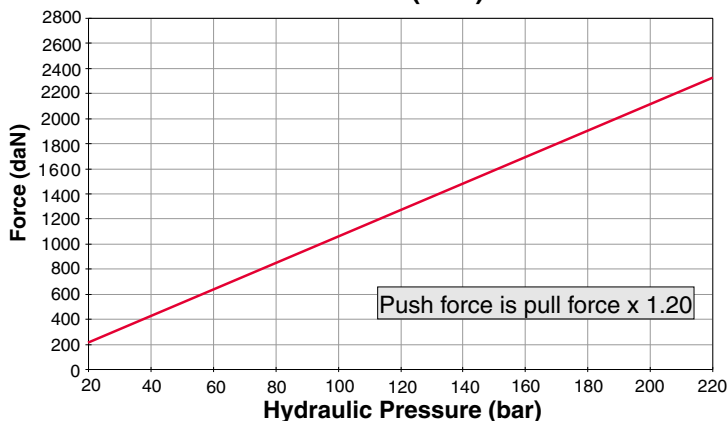
The compact cylinder also can be installed easily in cored pockets within the mold, as shown above. Installation is fast and simple with two mounting bolts through the full body length of the cylinder.



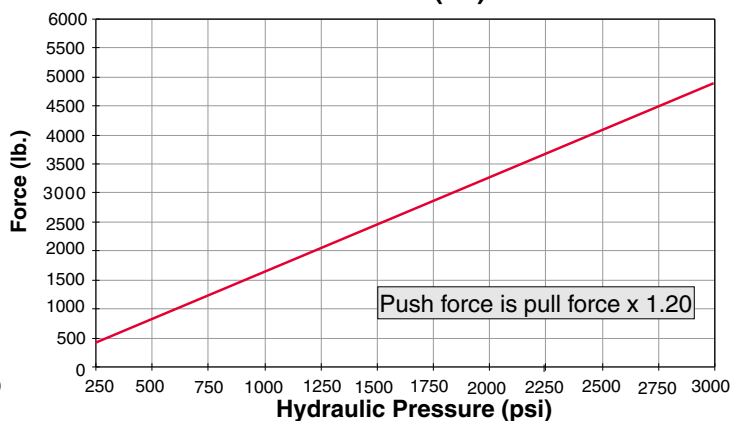
Standard or Non-Rotating Cylinder



Pull Force (daN)



Pull Force (lb.)



Ordering Information:

Model DK.40.25.1

DK-Basic, DKN- Non-Rotating Rod

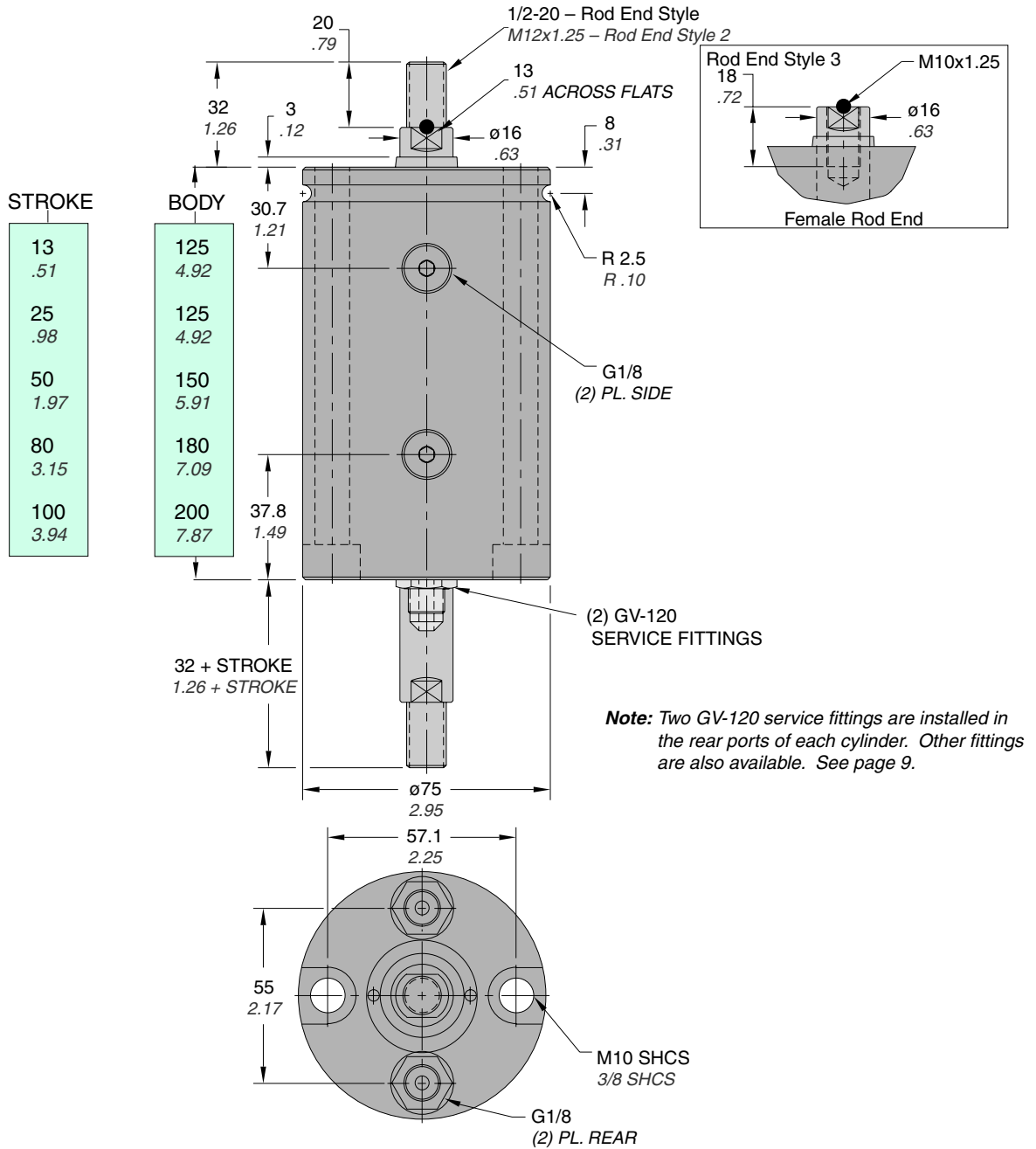
Bore

Stroke DK-13, 25, 50, 80, 100 mm
*DKN-13 and 25 mm only

Rod End Style

- 1 - 1/2-20 Male Rod End
- 2 - M12 x 1.25 Male Rod End
- 3 - Female Rod End (M10 x 1.25)

ø40 mm Double Rod End Cylinder



Note: Force charts can be found on page 4. For the DKD cylinder, the push force equals the pull force.

Ordering Information:

DKD.40.25.1.1

Model
DKD- Double Rod End

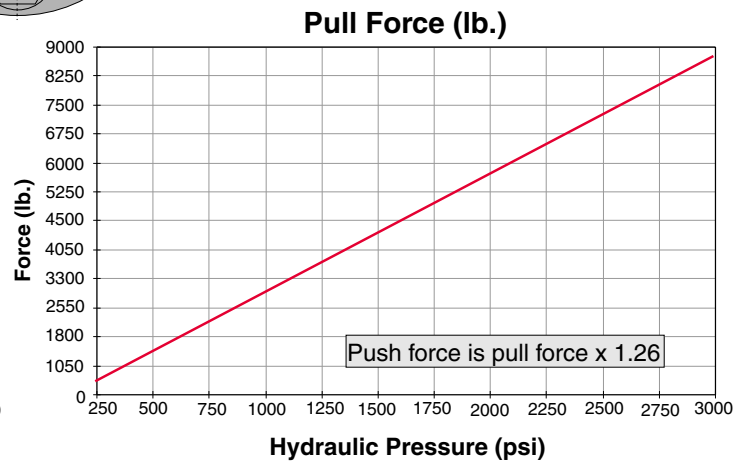
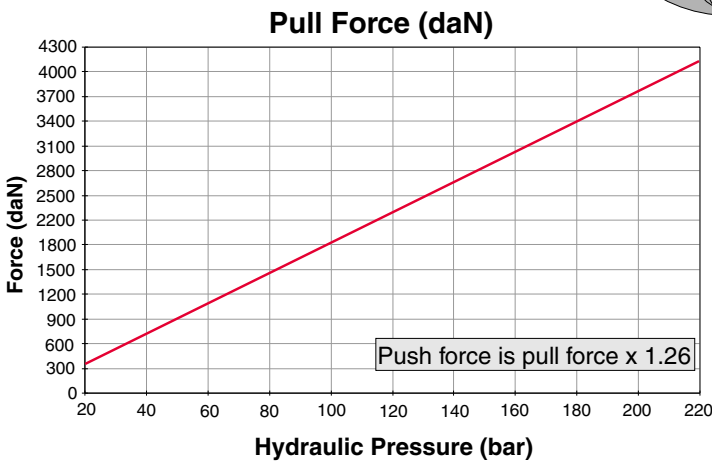
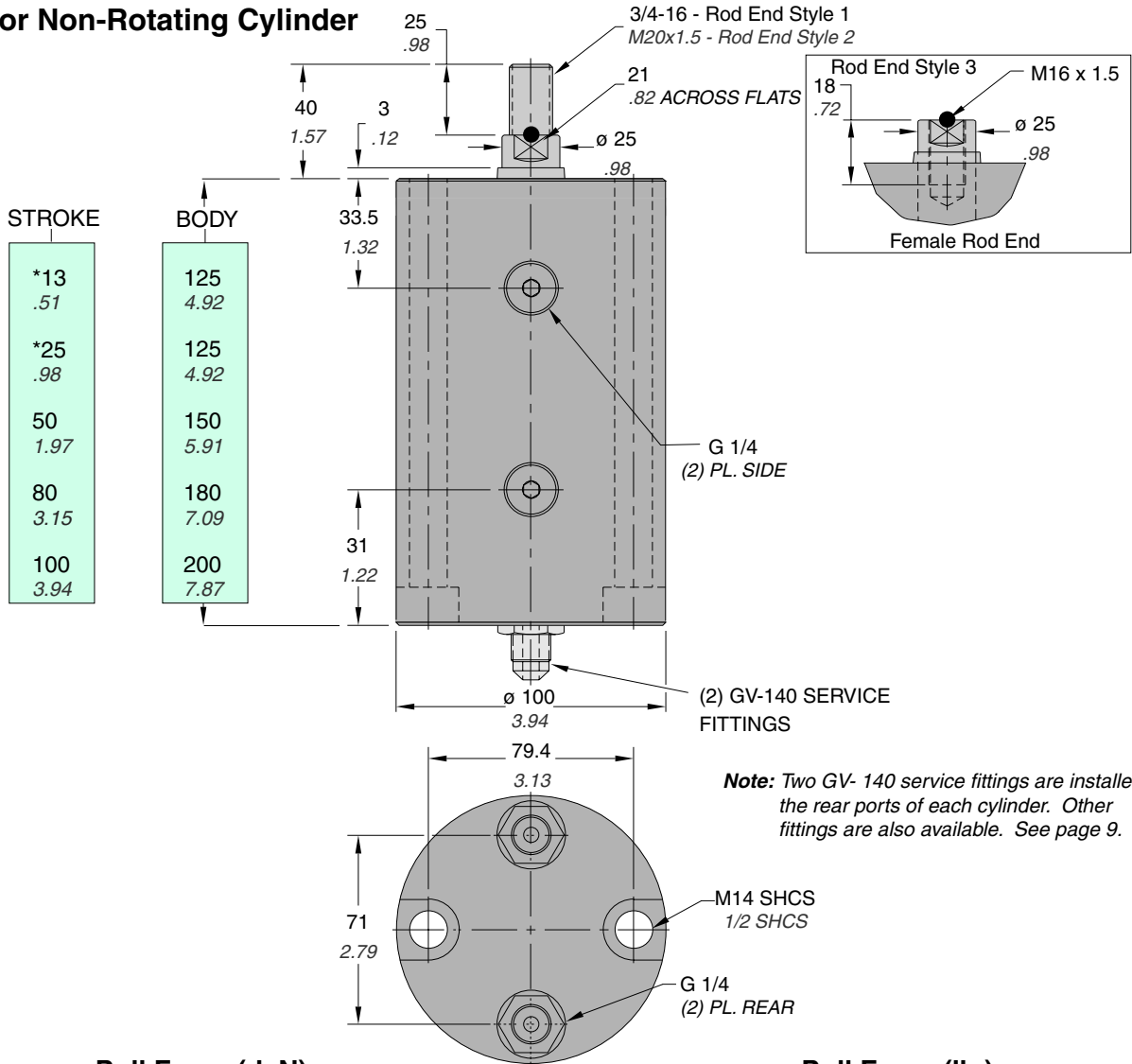
Bore

Stroke
13, 25, 50, 80, 100 mm

Rear Rod End Style
1 - 1/2-20 Male Rod End
2 - M12 x 1.25 Male Rod End
3 - Female Rod End (M10 x 1.25)

Front Rod End Style
1 - 1/2-20 Male Rod End
2 - M12 x 1.25 Male Rod End
3 - Female Rod End (M10 x 1.25)

Standard or Non-Rotating Cylinder



Ordering Information:

DK.55.25.1

Model — DK-Basic, DKN- Non-Rotating Rod

Bore — 55 mm

Stroke — 25 mm

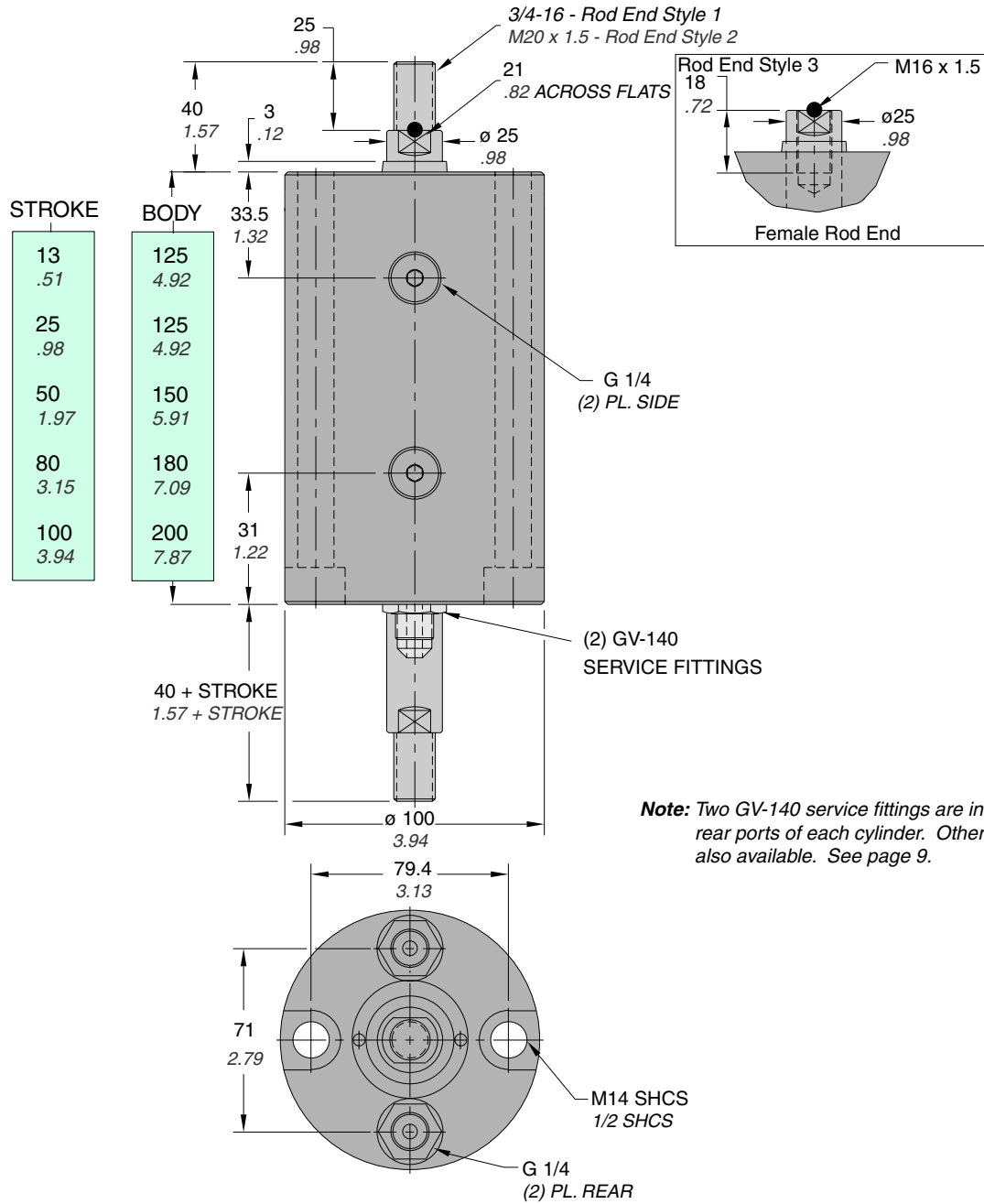
Rod End Style

- 1 - 3/4-16 Male Rod End
- 2 - M20 x 1.5 Male Rod End
- 3 - Female Rod End (M16 x 1.5)

DK-13, 25, 50, 80, 100 mm
*DKN-13 and 25 mm only

ø55 mm Double Rod End Cylinder

Hydraulic Core Pin Cylinders



Note: Two GV-140 service fittings are installed in the rear ports of each cylinder. Other fittings are also available. See page 9.

Note: Force charts can be found on page 6. For the DKD cylinder, the push force equals the pull force.

Ordering Information:

DKD.55.25.1.1

Model
DKD- Double Rod End

Bore

Stroke
13, 25, 50, 80, 100 mm

Rear Rod End Style

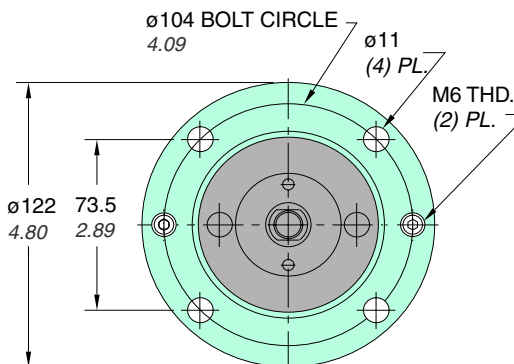
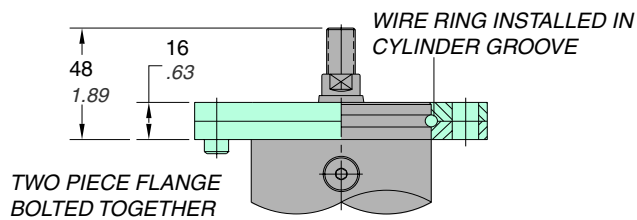
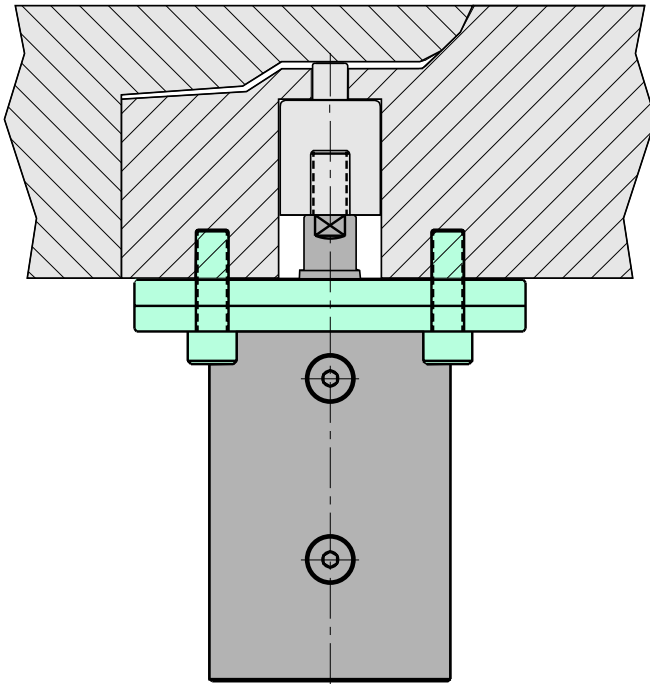
- 1 - 3/4-16 Male Rod End
- 2 - M20 x 1.5 Male Rod End
- 3 - Female Rod End (M16 x 1.5)

Front Rod End Style

- 1 - 3/4-16 Male Rod End
- 2 - M20 x 1.5 Male Rod End
- 3 - Female Rod End (M16 x 1.5)

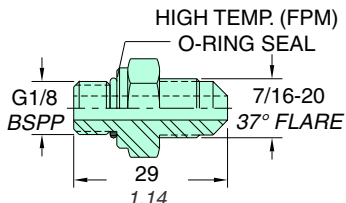
Attachable Front Flange Mount DK40-RF

An attachable front flange mount is available for use with the DADCO 40 mm bore size DK Hydraulic Core Pin Cylinder for increased mounting options. The flange mount allows for fast, easy mounting and is especially useful for securing the Core Pin Cylinder outside the mold.



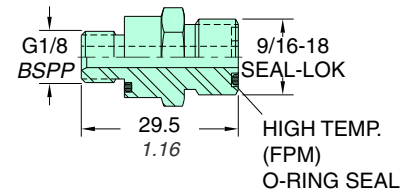
ø40 mm Core Pin Cylinder Port Adapters

37° Flare



Note: Two GV-120 straight service fittings are installed in the rear ports of each Core Pin Cylinder.

9/16-18 SEAL-LOK

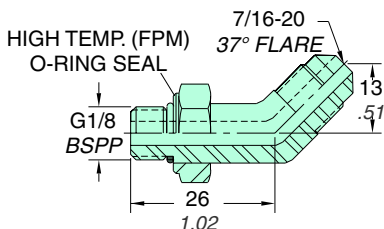


SV-115

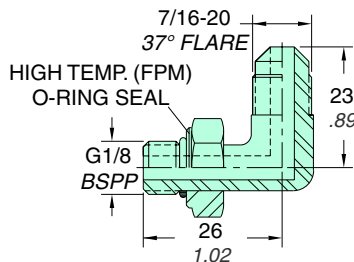
Straight Service Fitting
G1/8 BSPP → 9/16-18 SEAL-LOK

Note: Other fittings are available. Contact DADCO for more information.

GV-120
Straight Service Fitting



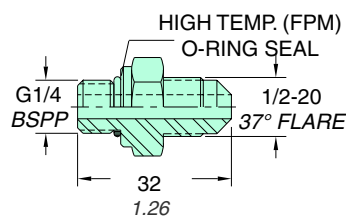
GV-321
45° Elbow Service Fitting



GV-221
90° Elbow Service Fitting

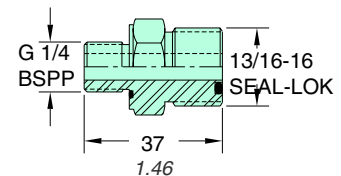
ø55 mm Core Pin Cylinder Port Adapters

37° Flare



Note: Two GV-140 straight service fittings are installed in the rear ports of each Core Pin Cylinder.

13/16-16 SEAL-LOK

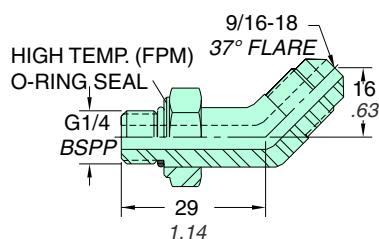


SV-135

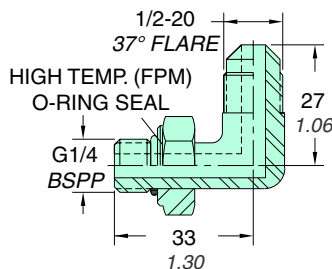
Straight Service Fitting
G1/4 BSPP → 13/16-16 SEAL-LOK

Note: Other fittings are available. Contact DADCO for more information.

GV-140
Straight Service Fitting



GV-341
45° Elbow Service Fitting



GV-241
90° Elbow Service Fitting

CAUTION

Check the compatibility of the hydraulic fluid with the seal material. Use the hydraulic fluid manufacturer's recommendations for the operating temperature.

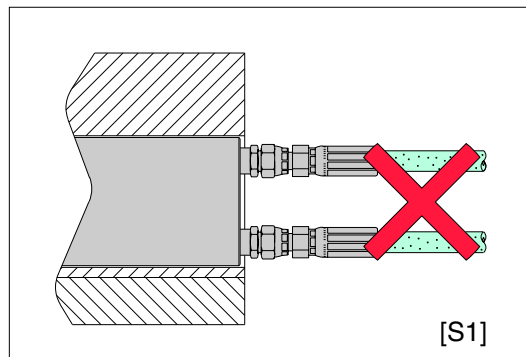
Seal Material Operating Specifications

*Seal Material: Fluorocarbon Elastomer (FPM/FKM)
 Operating Pressure: 20 – 220 bar (250 – 3000 psi)
 Working Temperature: -29°C – 204°C (-20° – 400°F)
 Maximum Temperature: 260°C (500°F) for short duration only

* Check hydraulic fluid compatibility with the seal material. Avoid ketones and Skydrol hydraulic fluids.

General

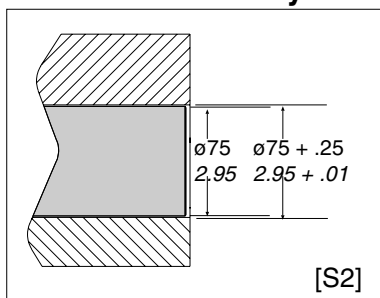
- Proper fluid filtration is necessary in all hydraulic systems to ensure optimal performance. Metal shavings and other particles in hydraulic fluid will damage core pin cylinders. [S1]
- The DADCO Core Pin Cylinder is constructed with high-temperature fluorocarbon elastomer (FPM/FKM) seals.



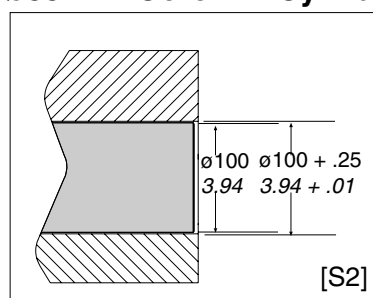
Installation Requirements

- The DADCO Core Pin Cylinder can be installed in the mold in any position. However, side loading can cause increased wear on the bearing and should be avoided. Install the cylinder so it is perpendicular to the mounting surface.
- In high temperature applications, maintain a clearance of 0.25 mm (.010") between the cylinder and the mold pocket to ensure proper heat transfer. [S2]

ø40 mm Core Pin Cylinder



ø55 mm Core Pin Cylinder



Repair Kit

DK40-RK DK55-RK
DKD40-RK DKD55-RK

DADCO DK Series Core Pin Cylinder repair kits allow for simple repair. Each repair kit includes a fully assembled cartridge, two piece piston seal, and step-by-step maintenance instructions.



Starter Tube

ST-40
ST-55

When installing the piston into the body of the cylinder, use this tool to avoid damaging the piston seal.



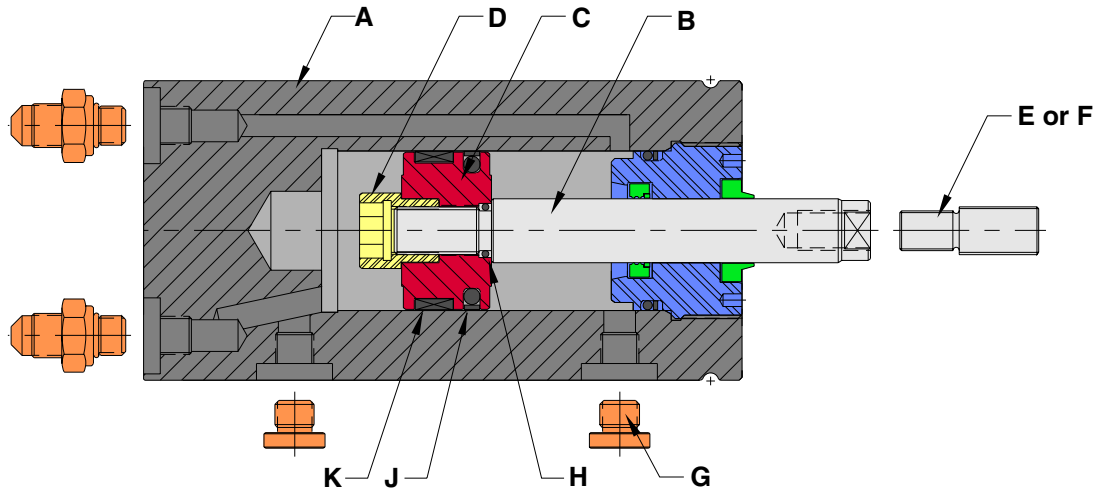
Spanner Wrench

SW-40
SW-55

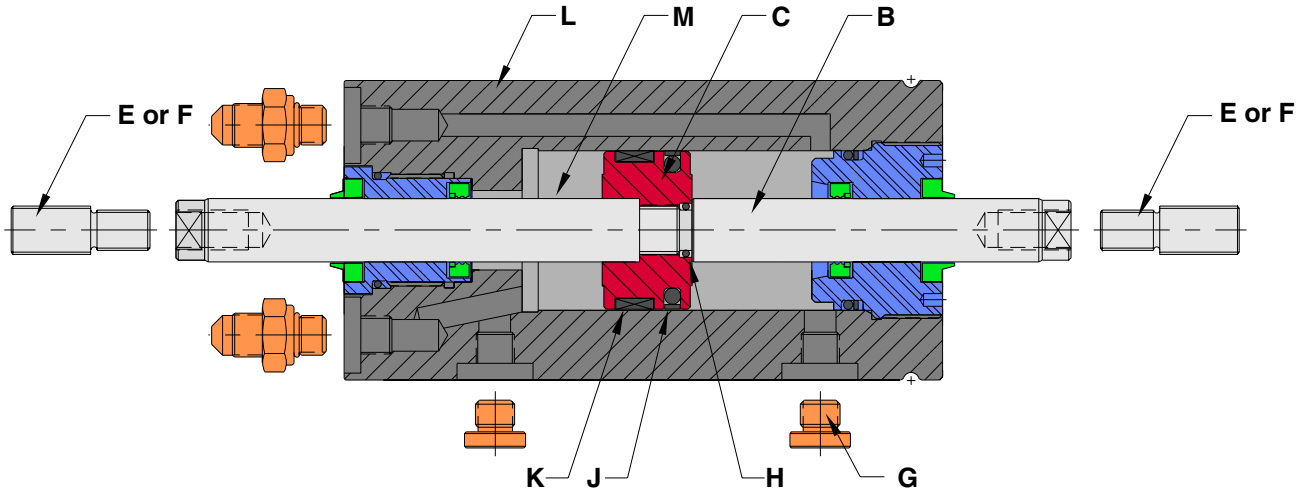
Use this tool when removing the cartridges of both the standard and double rod ends for maintenance.



DK



DKD



Reference	Description	ø40 mm Part Number	ø55 mm Part Number
A	Standard / Non Rotating Cylinder Body	KE05M. __ *	KF05M. __ *
B	Piston Rod	KE15M. __ *	KF15M. __ *
C	Piston	KE256573	KF256641
D	Piston Nut	KE856709	KF856791
	Non Rotating Piston Nut	KE156598	KF156640
E	Metric Rod End Stud	KE156734	KF156793
F	Inch Rod End Stud	KE156774	KF156792
G	Flush Plug	KE86V236	KF86V351
H	Piston Rod O-Ring	KE45V243	KF45V350
J	Piston Seal	KE48V238	KF48V345
K	Piston Rider	KE41V237	KF41V344
L	Double Rod End Cylinder Body	KE05D. __ *	KF05D. __ *
M	Rear Piston Rod	KE15D. __ *	KF15D. __ *

*Must also specify stroke length when ordering these parts.

Other DADCO Products



Micro—C Series

- 19 mm, 25 mm and 32 mm diameters
- Pre-set, color-coded force models from 4.5 daN to 310 daN on contact, adjustable models available
- Full range of standard stroke lengths up to 125 mm
- Threaded body style available



Mini—LJ Series / 90.7

- 38 mm, 44.5 mm and 50 mm diameters
- Force models: 3 kN, 5 kN and 7.5 kN
- Full range of standard stroke lengths up to 125 mm
- Complete piping capabilities with DADCO's *MINILink™* System



Mini—L Series / 90.3

- 38 mm, 44.5 mm and 50 mm diameters
- Force models: 3 kN, 5 kN, and 7.5 kN
- Full range of standard stroke lengths up to 125 mm
- Threaded body and stud mount models



ISO / 90.10 Series

- From 32 mm to 195 mm in diameter
- Forces up to 100 kN
- Full range of standard stroke lengths up to 300 mm
- Bolt-on or welded mounts available
- ISO Standards



HP Air Cylinder

- Complies with NAAMS, ISO and VDMA
- \varnothing 32 mm - \varnothing 250 mm
- Features steel bolt-on mounts
- Optional double rod end and back to back cylinders
- Two Post Direct Lift available

DADCO®

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