BVA®
HYDRAULICS




# Industrial Hydraulic Equipment

# The BVA Advantage

BVA Hydraulics was launched in 2003 and is centrally located in the United States in Kansas City, Missouri. BVA is one of the Shinn Fu of America Companies including; Hein-Werner, Omega Lift, Pro-Lift, Blackhawk, Porto-Power, Bone Creeper, Omega Lighting and Save Phace. Shinn Fu was founded in Taiwan in 1971 and began doing business in the United States in 1978. Shinn Fu has over 2,000 Employees worldwide with its headquarters in Taipei, Taiwan.

# Confidence Built on Quality

## ISO 9001

BVA products are manufactured through an International Quality Assurance System, ISO 9001 which involves consistent observation of administration, management, manufacturing, and production control. Under this system, the related operations are monitored on all aspects from the purchase order to the assembly line and through to shipping the order.

# BVA Products comply with the following industry standards

## ASME B30.1

The cylinders comply with load testing requirements and / or the safety factor for material yield strength while still functioning properly without oil leakage.

## ANSI B40.1

BVA pressure gauges meet the criteria for grade A.

## SAE 100

BVA hydraulic hoses comply with the Material Handling Institute's specification of minimum life cycles and minimum burst pressure rating.

# BVA Limited Lifetime Warranty

BVA products are warranted to be free of defects in materials and workmanship. Any BVA product that does not conform to specification will be repaired or credited (at BVA's option) at BVA's expense for the life of the product. Contact BVA for disposition of this warranty.

This warranty does not cover ordinary wear and tear, abuse, misuse, alteration, or use of improper fluids or maintenance as determined by BVA and its authorized service centers. All electric motors, gas engines, batteries and other parts or materials sold with or part of BVA products but are separately warranted by another manufacturer, are covered by that manufacturer's warranty and not the BVA Lifetime Warranty. BVA shall not be liable for consequential or incidental damage or loss.

**Repair Parts**
We offer a large range of product replacement parts, please contact your BVA dealer for more details.

**Contact Us**
For technical support, call **1-888-332-6419.** For questions about your product, contact your local BVA dealer.

**BVA Website**
To view our most up-to-date catalog or view our new products, visit our website: **www.BVAhydraulics.com**

# Model Number Index

## Cylinders





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## Pumps





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## Combo Kits





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# Cylinder Matrix Chart

| H | DC | 30 | 06 | T |
|---|---|---|---|---|
| *1* | *2* | *3* | *4* | *5* |
| *Cylinder Type* | *Cylinder Options* | *Cylinder Capacity* | *Cylinder Stroke* | *Suffix Code* |



## 1 - Cylinder Type

| | |
|---|---|
| **H** | Hydraulic Cylinder |

## 2 - Cylinder Options

| | |
|---|---|
| **C** | S/A - Hollow Hole |
| **D** | D/A - General Purpose |
| **DC** | D/A - Hollow Hole |
| **DG** | D/A - High Tonnage |
| **F** | S/A - Flat Body |
| **G** | S/A - Load Return High Tonnage |
| **L** | S/A - Low Profile |
| **LN** | S/A - Lock Nut |
| **LNF** | S/A - Lock Nut Low Profile |
| **P** | S/A - Pull |
| **PD** | Precision Double Acting |
| **T** | S/A - Threaded |
| **U** | S/A - Aluminum |
| **UC** | S/A - Aluminum Hollow Hole |
| **UDC** | D/A - Aluminum Hollow Hole |
| **ULN** | S/A - Aluminum Lock Nut |

## 3 - Cylinder Capacity

| | | | |
|---|---|---|---|
| **02** | 2, 2.5 Tons | **75** | 75 Tons |
| **04** | 4 Tons | **100** | 100 Tons |
| **05** | 5 Tons | **150** | 150 Tons |
| **09** | 9 Tons | **160** | 160 Tons |
| **10** | 10 Tons | **200** | 200 Tons |
| **12** | 12 Tons | **250** | 250 Tons |
| **15** | 15 Tons | **300** | 300 Tons |
| **16** | 16 Tons | **400** | 400 Tons |
| **20** | 20 Tons | **500** | 500 Tons |
| **25** | 25 Tons | **600** | 600 Tons |
| **30** | 30 Tons | **700** | 700 Tons |
| **50** | 50 Tons | **800** | 800 Tons |
| **55** | 55 Tons | **1,000** | 1,000 Tons |
| **60** | 60 Tons | **1,500** | 1,500 Tons |
| **75** | 75 Tons | | |

## 4 - Cylinder Stroke

| | |
|---|---|
| **00** | 0.63" |
| **01** | 1" |
| **02** | 2" |
| **04** | 4" |
| **05** | 5" |
| **06** | 6" |
| **08** | 8" |
| **10** | 10" |
| **12** | 12" |
| **13** | 13" |
| **14** | 14" |
| **18** | 18" |
| **20** | 20" |
| **24** | 24" |
| **32** | 32" |

## 5 - Suffix Code

| | | | |
|---|---|---|---|
| **T** | BVA Factory Designation | **XT** | No Internal Threads, HC Series only |
| **US** | US Made Cylinder | **B** | Flat Body Cylinder Kit |



### Cylinder Accessories

See the assortment of accessories designed to work with our products.

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### Safety Practices

**80%**

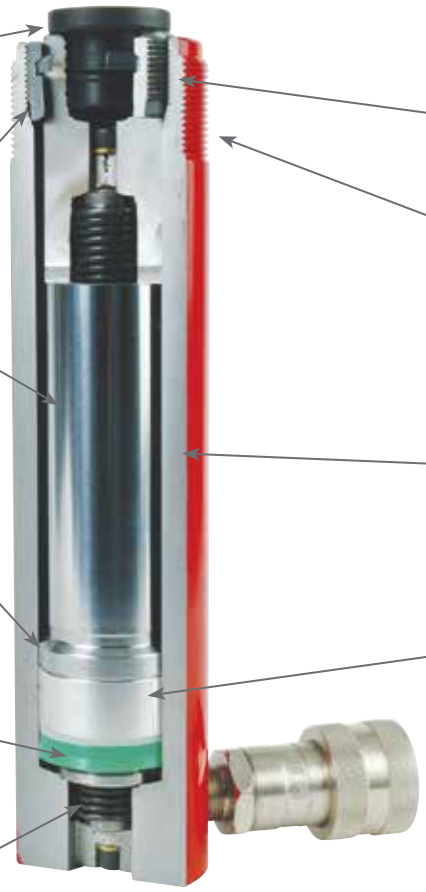
Good industry practice recommends not exceeding 80% of maximum rated capacities of all our products.



### Safety Instructions

Visit our DO'S and DON'TS section to review the best methods of operation. Always be prepared.

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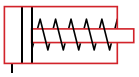
| Cylinder Series | Cylinder Type | Max Capacity Range (tons) | Max Stroke Range (in) | Page Number / Reference Image |
|---|---|---|---|---|
| H | Single Acting Cylinders | 2-100 | 0.63-14.25 |  6-9 |
| HU | Aluminum Single Acting Cylinders | 20-150 | 1.97-10.00 |  10-11 |
| HD | Double Acting Cylinders | 10-500 | 5.90-24.00 |  12-15 |
| HUD | Aluminum Double Acting Cylinders | 30-150 | 1.97-10.00 |  16-17 |
| HG | High Tonnage Single Acting Cylinders | 100-1500 | 1.97-11.81 |  18-21 |
| HDG | High Tonnage Double Acting Cylinders | 100-1500 | 1.97-11.81 |  22-25 |
| HL | Low Profile Cylinders | 10-100 | 1.5-2.44 |  26-27 |
| HF | Flat Body Cylinders | 5-150 | 0.24-0.63 |  28-29 |
| HLN | Lock Nut Cylinders | 55-300 | 1.97-11.81 |  30-31 |
| HULN | Aluminum Lock Nut Cylinders | 30-150 | 1.97-11.81 |  32 |
| HLNF | Low Profile Lock Nut Cylinders | 60-250 | 1.77-1.97 |  33 |
| - | Cylinder Accessories | - | - |  34-35 |
| HC | Hollow Hole Cylinders | 12-100 | 0.31-6.11 |  36-37 |
| HDC | Double Acting Hollow Hole Cylinders | 30-150 | 1.50-10.13 |  38-39 |
| HUC | Aluminum Hollow Hole Cylinders | 30-60 | 3.00-5.91 |  40 |
| HUDC | Aluminum Double Acting Hollow Hole Cylinders | 30-150 | 5.91-9.84 |  40 |
| HP | Pull Cylinders | 2.5-10 | 5.00-5.95 |  41 |
| HT | Threaded Cylinders | 4-20 | 5.07-9.96 |  42 |
| HPD | Precision Double Acting Cylinders | 9-16 | 6 & 10 |  43 |

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# Single Acting Cylinders

***H Series - General Purpose, Spring Return***



## Capacity:

2 - 100 Tons‡

## Stroke:

0.63 - 14.25 Inches

## Max. Operating Pressure:

10,000 psi

## Min. - Max. Height:

1.63 - 32.99 Inches

CE



**‡ Larger Tonnages**

For tonnages that exceed 100, please refer to our HG Section

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*Single Acting Cylinder H1506 in the collapsed position with CB15 cylinder base for safety.*

*Single Acting Cylinder H5513 in the collapsed position ready to lift a load*



- Collar threads and base mounting holes for fixturing
- Hard chrome plated piston rod protects against corrosion and damage
- Polyurethane U-Cup seals provide a sure seal and long life
- Solid one piece alloy steel body
- One piece aluminum alloy bearing protects against cylinder wall damage
- CH38F high flow coupler with dust cap is standard on most cylinders**

**Safety Practices**

**80%**

Good industry practice recommends not exceeding 80% of maximum rated capacities of all our products.

**HU Series – Aluminum Cylinders**



Aluminum cylinders make a great lightweight alternative being up to 60% lighter than comparable steel models.

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# Quick Selection Guide

| Cylinder Capacity (ton) | Stroke (in) | Model Number | Collapsed Height (in) | Oil Capacity ($in^3$) | Weight (lbs) |
|---|---|---|---|---|---|
| 2 | 3.07 | H0203* | 5.39 | 2.28 | 2.0 |
| 5 | 0.63 | H0500** | 1.63 | 0.69 | 1.9 |
| | 1.00 | H0501 | 4.58 | 1.00 | 3.1 |
| | 3.07 | H0503 | 6.65 | 3.07 | 3.2 |
| | 5.08 | H0505 | 8.70 | 5.08 | 3.9 |
| | 7.09 | H0507 | 10.71 | 7.09 | 4.7 |
| | 9.00 | H0509 | 12.75 | 9.03 | 5.5 |
| 10 | 0.98 | H1001 | 3.62 | 2.19 | 3.9 |
| | 2.01 | H1002 | 4.84 | 4.50 | 5.0 |
| | 4.02 | H1004 | 6.85 | 9.00 | 7.7 |
| | 5.94 | H1006 | 9.84 | 13.30 | 9.5 |
| | 7.95 | H1008 | 11.85 | 17.81 | 11.3 |
| | 9.96 | H1010 | 13.86 | 22.31 | 13.1 |
| | 11.97 | H1012 | 15.87 | 26.81 | 15.0 |
| | 14.02 | H1014 | 17.72 | 31.40 | 16.7 |
| 15 | 0.98 | H1501 | 4.88 | 3.07 | 6.9 |
| | 2.01 | H1502 | 5.87 | 6.31 | 8.5 |
| | 3.98 | H1504 | 7.87 | 12.49 | 11.1 |
| | 5.98 | H1506 | 10.63 | 18.77 | 14.8 |
| | 7.99 | H1508 | 12.64 | 25.08 | 17.3 |
| | 10.00 | H1510 | 14.65 | 31.40 | 20.0 |
| | 12.01 | H1512 | 16.65 | 37.71 | 22.5 |
| | 14.02 | H1514 | 18.66 | 44.02 | 25.2 |
| 25 | 1.02 | H2501 | 5.63 | 5.25 | 12.1 |
| | 2.01 | H2502 | 6.61 | 10.35 | 14.0 |
| | 4.02 | H2504 | 8.62 | 20.70 | 18.0 |
| | 6.10 | H2506 | 10.71 | 31.41 | 22.2 |
| | 8.11 | H2508 | 12.72 | 41.77 | 26.3 |
| | 10.12 | H2510 | 14.72 | 52.12 | 30.3 |
| | 12.20 | H2512 | 16.77 | 62.83 | 34.3 |
| | 14.25 | H2514 | 18.74 | 73.39 | 38.3 |
| 30 | 8.27 | H3008 | 15.24 | 53.67 | 40.7 |
| 55 | 2.01 | H5502 | 6.93 | 21.97 | 33.0 |
| | 4.06 | H5504 | 8.94 | 44.57 | 41.0 |
| | 6.26 | H5506† | 11.14 | 68.73 | 57.5 |
| | 10.25 | H5510† | 15.16 | 112.55 | 67.4 |
| | 13.27 | H5513† | 18.15 | 145.70 | 87.0 |
| 75 | 6.14 | H7506† | 11.22 | 98.85 | 74.0 |
| | 13.11 | H7513† | 19.37 | 211.07 | 122.0 |
| 100 | 2.01 | H10002A† | 8.62 | 41.34 | 66.0 |
| | 6.61 | H10006† | 14.06 | 136.03 | 127.0 |
| | 10.24 | H10010† | 17.68 | 210.74 | 153.0 |

*See pages 8-9 for detailed specifications.*

** H0203 load return.*
*** H0500 comes with CRZ14F coupler.*
*† Cylinder is equipped with carrying handle.*



## *H Series*

### Related Product: Gauges



Reduce the risk of overloading your product by using a gauge. A variety of graduations and types to suit any need.

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### Cylinder Accessories



See the assortment of accessories designed to work with our products.

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### Combo Kits



Most cylinders are available in easy to order kits: Cylinder, Gauge, Couplers, Hose and Pump.

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### Safety Instructions



Visit our DO'S and DON'TS section to review the best methods of operation. Always be prepared.

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### High-Flow Couplers



High-Flow Coupler: CH38F is included on all models (except where specified).

### Optional Tilt-Saddles

Saddles tilt to a 5% maximum to adjust to the load. Match up these saddles with the following cylinders:

SDT05 → H05 Cylinders*
SDT10 → H10 Cylinders
SDT15 → H15 Cylinders
SDT25 → H25 Cylinders
SDT55 → H55, H75, H100 Cylinders

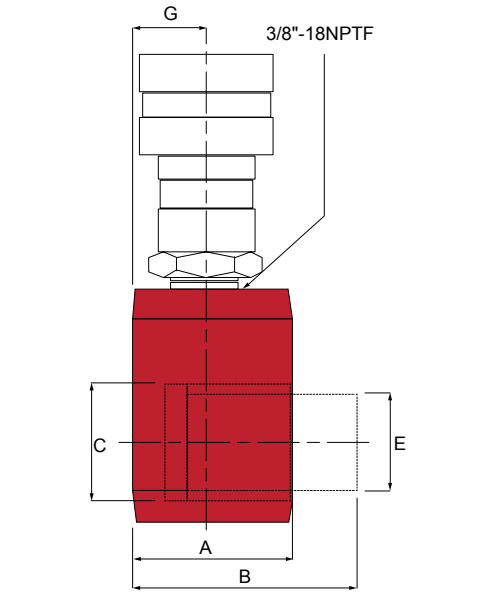


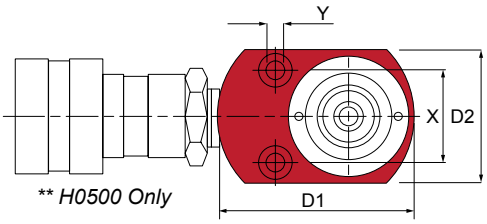
* Except the H0500 cylinder

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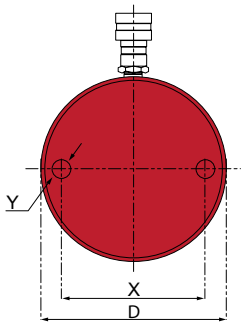
# Single Acting Cylinders

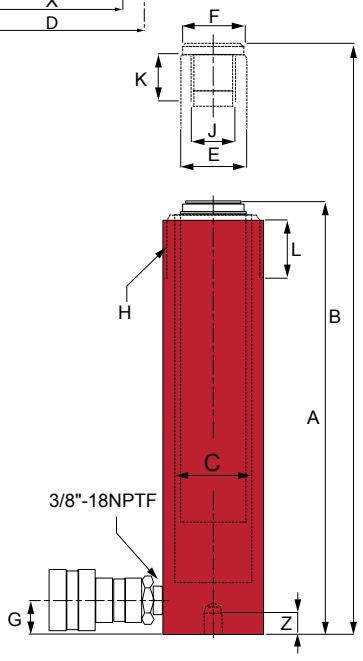
## *H Series - Spring Return*




*** H0500 Only*




| Cylinder Capacity (ton) | Stroke (in) | Model Number | Cylinder Effective Area ($in^2$) | Internal Pressure at Capacity (psi) | Oil Capacity ($in^3$) | Weight (lbs) |
|---|---|---|---|---|---|---|
| 2 | 3.07 | H0203* | 0.76 | 5,263 | 2.28 | 2.0 |
| 5 | 0.63 | H0500** | 1.10 | 9,091 | 0.69 | 1.9 |
| | 1.00 | H0501 | 1.00 | 10,000 | 1.00 | 3.1 |
| | 3.07 | H0503 | 1.00 | 10,000 | 3.07 | 3.2 |
| | 5.08 | H0505 | 1.00 | 10,000 | 5.08 | 3.9 |
| | 7.09 | H0507 | 1.00 | 10,000 | 7.09 | 4.7 |
| | 9.00 | H0509 | 1.00 | 10,000 | 9.03 | 5.5 |
| 10 | 0.98 | H1001 | 2.24 | 8,928 | 2.19 | 3.9 |
| | 2.01 | H1002 | 2.24 | 8,928 | 4.50 | 5.0 |
| | 4.02 | H1004 | 2.24 | 8,928 | 9.00 | 7.7 |
| | 5.94 | H1006 | 2.24 | 8,928 | 13.30 | 9.5 |
| | 7.95 | H1008 | 2.24 | 8,928 | 17.81 | 11.3 |
| | 9.96 | H1010 | 2.24 | 8,928 | 22.31 | 13.1 |
| | 11.97 | H1012 | 2.24 | 8,928 | 26.81 | 15.0 |
| | 14.02 | H1014 | 2.24 | 8,928 | 31.40 | 16.7 |
| 15 | 0.98 | H1501 | 3.14 | 9,554 | 3.07 | 6.9 |
| | 2.01 | H1502 | 3.14 | 9,554 | 6.31 | 8.5 |
| | 3.98 | H1504 | 3.14 | 9,554 | 12.49 | 11.1 |
| | 5.98 | H1506 | 3.14 | 9,554 | 18.77 | 14.8 |
| | 7.99 | H1508 | 3.14 | 9,554 | 25.08 | 17.3 |
| | 10.00 | H1510 | 3.14 | 9,554 | 31.40 | 20.0 |
| | 12.01 | H1512 | 3.14 | 9,554 | 37.71 | 22.5 |
| | 14.02 | H1514 | 3.14 | 9,554 | 44.02 | 25.2 |
| 25 | 1.02 | H2501 | 5.15 | 9,708 | 5.25 | 12.1 |
| | 2.01 | H2502 | 5.15 | 9,708 | 10.35 | 14.0 |
| | 4.02 | H2504 | 5.15 | 9,708 | 20.70 | 18.0 |
| | 6.10 | H2506 | 5.15 | 9,708 | 31.41 | 22.2 |
| | 8.11 | H2508 | 5.15 | 9,708 | 41.77 | 26.3 |
| | 10.12 | H2510 | 5.15 | 9,708 | 52.12 | 30.3 |
| | 12.20 | H2512 | 5.15 | 9,708 | 62.83 | 34.3 |
| | 14.25 | H2514 | 5.15 | 9,708 | 73.39 | 38.3 |
| 30 | 8.27 | H3008 | 6.49 | 9,245 | 53.67 | 40.7 |
| 55 | 2.01 | H5502 | 10.98 | 10,018 | 21.97 | 33.0 |
| | 4.06 | H5504 | 10.98 | 10,018 | 44.57 | 41.0 |
| | 6.26 | H5506† | 10.98 | 10,018 | 68.73 | 57.5 |
| | 10.25 | H5510† | 10.98 | 10,018 | 112.55 | 67.4 |
| | 13.27 | H5513† | 10.98 | 10,018 | 145.70 | 87.0 |
| 75 | 6.14 | H7506† | 16.10 | 9,316 | 98.85 | 74.0 |
| | 13.11 | H7513† | 16.10 | 9,316 | 211.07 | 122.0 |
| 100 | 2.01 | H10002A† | 20.58 | 9,718 | 41.34 | 66.0 |
| | 6.61 | H10006† | 20.58 | 9,718 | 136.03 | 127.0 |
| | 10.24 | H10010† | 20.58 | 9,718 | 210.74 | 153.0 |

** H0203 load return.*
*** H0203 comes with CRZ14F coupler.*

*† Cylinder is equipped with carrying handle.*



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| Model Number | Collapsed Height A (in) | Extended Height B (in) | Cylinder Bore C (in) | Outside Dia. D (in) | Rod Dia. E (in) | Saddle Dia. F (in) | Base to Inlet Port G (in) | Collar Thread H (in) | Collar Thread Length L (in) | Rod Internal Thread J (in) | Rod Thread Length K (in) | Base Mounting Hole (in) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | Bolt Circle X | Thread Y | Thread Depth Z |
| H0203* | 5.39 | 8.46 | 1.00 | 1.31 | 0.87 | 1.00 | 0.46 | 1¼"-16 | 0.54 | - | - | - | - | - |
| H0500** | 1.63 | 2.26 | 1.18 | 2.37x1.59‡ | 0.98 | - | 0.75 | - | - | - | - | 1.10 | - | - |
| H0501 | 4.58 | 5.58 | 1.13 | 1.50 | 1.00 | 0.98 | 0.79 | 1½"-16 | 1.10 | ¾"-16UNF | 0.63 | 1.00 | ¼"-20UNC | 0.55 |
| H0503 | 6.65 | 9.72 | 1.13 | 1.50 | 1.00 | 0.98 | 0.79 | 1½"-16 | 1.10 | ¾"-16UNF | 0.63 | 1.00 | ¼"-20UNC | 0.55 |
| H0505 | 8.70 | 13.78 | 1.13 | 1.50 | 1.00 | 0.98 | 0.79 | 1½"-16 | 1.10 | ¾"-16UNF | 0.63 | 1.00 | ¼"-20UNC | 0.55 |
| H0507 | 10.71 | 17.80 | 1.13 | 1.50 | 1.00 | 0.98 | 0.79 | 1½"-16 | 1.10 | ¾"-16UNF | 0.63 | 1.00 | ¼"-20UNC | 0.55 |
| H0509 | 12.75 | 21.75 | 1.12 | 1.50 | 1.00 | 0.98 | 0.79 | 1½"-16 | 1.10 | ¾"-16UNF | 0.63 | 1.00 | ¼"-20UNC | 0.55 |
| H1001 | 3.62 | 4.60 | 1.69 | 2.26 | 1.49 | - | 0.77 | 2¼"-14 | 1.18 | - | 0.24 | 1.56 | ⅝"-18UNC | 0.55 |
| H1002 | 4.84 | 6.85 | 1.69 | 2.26 | 1.49 | 1.38 | 0.77 | 2¼"-14 | 1.18 | 1"-8UNC | 0.79 | 1.56 | ⅝"-18UNC | 0.55 |
| H1004 | 6.85 | 10.87 | 1.69 | 2.26 | 1.49 | 1.38 | 0.77 | 2¼"-14 | 1.18 | 1"-8UNC | 0.79 | 1.56 | ⅝"-18UNC | 0.55 |
| H1006 | 9.84 | 15.78 | 1.69 | 2.26 | 1.49 | 1.38 | 0.77 | 2¼"-14 | 1.18 | 1"-8UNC | 0.79 | 1.56 | ⅝"-18UNC | 0.55 |
| H1008 | 11.85 | 19.80 | 1.69 | 2.26 | 1.49 | 1.38 | 0.77 | 2¼"-14 | 1.18 | 1"-8UNC | 0.79 | 1.56 | ⅝"-18UNC | 0.55 |
| H1010 | 13.86 | 23.82 | 1.69 | 2.26 | 1.49 | 1.38 | 0.77 | 2¼"-14 | 1.18 | 1"-8UNC | 0.79 | 1.56 | ⅝"-18UNC | 0.55 |
| H1012 | 15.87 | 27.84 | 1.69 | 2.26 | 1.49 | 1.38 | 0.77 | 2¼"-14 | 1.18 | 1"-8UNC | 0.79 | 1.56 | ⅝"-18UNC | 0.55 |
| H1014 | 17.72 | 31.74 | 1.69 | 2.26 | 1.49 | 1.38 | 0.77 | 2¼"-14 | 1.18 | 1"-8UNC | 0.79 | 1.56 | ⅝"-18UNC | 0.55 |
| H1501 | 4.88 | 5.86 | 2.00 | 2.75 | 1.63 | 1.50 | 0.77 | 2¾"-16 | 1.18 | 1"-8UNC | 0.98 | 1.88 | ⅜"-16UNC | 0.51 |
| H1502 | 5.87 | 7.88 | 2.00 | 2.75 | 1.63 | 1.50 | 0.77 | 2¾"-16 | 1.18 | 1"-8UNC | 0.98 | 1.88 | ⅜"-16UNC | 0.51 |
| H1504 | 7.87 | 11.85 | 2.00 | 2.75 | 1.63 | 1.50 | 0.77 | 2¾"-16 | 1.18 | 1"-8UNC | 0.98 | 1.88 | ⅜"-16UNC | 0.51 |
| H1506 | 10.63 | 16.61 | 2.00 | 2.75 | 1.63 | 1.50 | 0.98 | 2¾"-16 | 1.18 | 1"-8UNC | 0.98 | 1.88 | ⅜"-16UNC | 0.51 |
| H1508 | 12.64 | 20.63 | 2.00 | 2.75 | 1.63 | 1.50 | 0.98 | 2¾"-16 | 1.18 | 1"-8UNC | 0.98 | 1.88 | ⅜"-16UNC | 0.51 |
| H1510 | 14.65 | 24.65 | 2.00 | 2.75 | 1.63 | 1.50 | 0.98 | 2¾"-16 | 1.18 | 1"-8UNC | 0.98 | 1.88 | ⅜"-16UNC | 0.51 |
| H1512 | 16.65 | 28.66 | 2.00 | 2.75 | 1.63 | 1.50 | 0.98 | 2¾"-16 | 1.18 | 1"-8UNC | 0.98 | 1.88 | ⅜"-16UNC | 0.51 |
| H1514 | 18.66 | 32.68 | 2.00 | 2.75 | 1.63 | 1.50 | 0.98 | 2¾"-16 | 1.18 | 1"-8UNC | 0.98 | 1.88 | ⅜"-16UNC | 0.51 |
| H2501 | 5.63 | 6.65 | 2.56 | 3.35 | 2.24 | 1.97 | 0.98 | 3⅝"-12 | 1.93 | 1½"-16 | 1.18 | 2.31 | ½"-13UNC | 0.75 |
| H2502 | 6.61 | 8.62 | 2.56 | 3.35 | 2.24 | 1.97 | 0.98 | 3⅝"-12 | 1.93 | 1½"-16 | 1.18 | 2.31 | ½"-13UNC | 0.75 |
| H2504 | 8.62 | 12.64 | 2.56 | 3.35 | 2.24 | 1.97 | 0.98 | 3⅝"-12 | 1.93 | 1½"-16 | 1.18 | 2.31 | ½"-13UNC | 0.75 |
| H2506 | 10.71 | 16.81 | 2.56 | 3.35 | 2.24 | 1.97 | 0.98 | 3⅝"-12 | 1.93 | 1½"-16 | 1.18 | 2.31 | ½"-13UNC | 0.75 |
| H2508 | 12.72 | 20.83 | 2.56 | 3.35 | 2.24 | 1.97 | 0.98 | 3⅝"-12 | 1.93 | 1½"-16 | 1.18 | 2.31 | ½"-13UNC | 0.75 |
| H2510 | 14.72 | 24.84 | 2.56 | 3.35 | 2.24 | 1.97 | 0.98 | 3⅝"-12 | 1.93 | 1½"-16 | 1.18 | 2.31 | ½"-13UNC | 0.75 |
| H2512 | 16.77 | 28.97 | 2.56 | 3.35 | 2.24 | 1.97 | 0.98 | 3⅝"-12 | 1.93 | 1½"-16 | 1.18 | 2.31 | ½"-13UNC | 0.75 |
| H2514 | 18.74 | 32.99 | 2.56 | 3.35 | 2.24 | 1.97 | 0.98 | 3⅝"-12 | 1.93 | 1½"-16 | 1.18 | 2.31 | ½"-13UNC | 0.75 |
| H3008 | 15.24 | 23.51 | 2.87 | 4.00 | 2.24 | 1.97 | 1.97 | 3⅝"-12 | 1.93 | 1½"-16 | 1.18 | 2.20 | - | - |
| H5502 | 6.93 | 8.94 | 3.74 | 5.00 | 3.15 | 2.76 | 1.22 | 5"-12 | 2.17 | - | - | 3.75 | ½"-13UNC | 0.75 |
| H5504 | 8.94 | 13.00 | 3.74 | 5.00 | 3.15 | 2.76 | 1.22 | 5"-12 | 2.17 | - | - | 3.75 | ½"-13UNC | 0.75 |
| H5506† | 11.14 | 17.40 | 3.74 | 5.00 | 3.15 | 2.76 | 1.22 | 5"-12 | 2.17 | - | - | 3.75 | ½"-13UNC | 0.75 |
| H5510† | 15.16 | 25.41 | 3.74 | 5.00 | 3.15 | 2.76 | 1.22 | 5"-12 | 2.17 | - | - | 3.75 | ½"-13UNC | 0.75 |
| H5513† | 18.15 | 31.42 | 3.74 | 5.00 | 3.15 | 2.76 | 1.22 | 5"-12 | 2.17 | - | - | 3.75 | ½"-13UNC | 0.75 |
| H7506† | 11.22 | 18.36 | 4.53 | 5.79 | 3.74 | 2.76 | 1.18 | 5¾"-12 | 1.77 | - | - | - | - | - |
| H7513† | 19.37 | 32.48 | 4.53 | 5.79 | 3.74 | 2.76 | 1.18 | 5¾"-12 | 1.77 | - | - | 3.94 | 2½"-10UNC | 0.85 |
| H10002A† | 8.62 | 10.63 | 5.12 | 6.25 | 4.13 | 2.76 | 1.50 | 6¼"-12 | 2.17 | - | - | - | - | - |
| H10006† | 14.06 | 20.67 | 5.12 | 6.25 | 4.13 | 2.76 | 1.57 | 6¼"-12 | 1.77 | - | - | 5.50 | ¾"-10UNC | 1.00 |
| H10010† | 17.68 | 27.92 | 5.12 | 6.25 | 4.13 | 2.76 | 1.57 | 6¼"-12 | 1.77 | - | - | 5.50 | ¾"-10UNC | 1.00 |

** H0203 load return.*
*** H0500 comes with CRZ14F coupler.*

*† Cylinder is equipped with carrying handle.*
*‡ Length x Width*

# Aluminum Single Acting Cylinders

***HU Series - General Purpose, Spring Return, Lightweight***

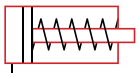



*HU7506*

*HU5006*

*HU2006*

*HU7504*



## Capacity:
20 - 150 Tons

## Stroke:
1.97 - 10.00 Inches

## Max. Operating Pressure:
10,000 psi

## Min. - Max. Height:
6.85 - 15.73 Inches

CE

- Lightweight aluminum alloy construction
- Up to 60% lighter than comparable tonnage steel cylinders
- Convenient carry handle on 50, 75 and 100 ton models
- Hard anodized aluminum rod provides extra protection against corrosion and wear
- Integral steel protective plate
- Maximum working pressure: 10,000 psi / 700 bar

## Aluminum vs. Steel Cylinders

Aluminum cylinders provide a great alternative to the traditional steel cylinder in many applications. Being up to 60% lighter in weight, Aluminum cylinders are highly portable and reduce user fatigue and strain. However, due to the finite properties of Aluminum vs. Steel, these cylinders should NOT be used in high cycle applications. The BVA Aluminum cylinders are designed for a maximum safety rating of 5,000 cycles. Under normal lifting applications this should provide a long service life.




*HU5006T*




*H5506*

### Aluminum Cylinders

- 60% lighter in weight than steel
- Highly portable and reduces user fatigue
- Not used for high cycle applications
- Under normal conditions, the maximum rated safety cycle life is 5,000 cycles
- Base of the cylinder contains a steel plate*

### Steel Cylinders

- Much heavier than aluminum cylinders
- Low portability with heavier cylinders which creates user fatigue and strain
- Will out-perform aluminum cylinders in higher cycle applications
- Can exceed aluminum cylinders maximum safety cycle life of 5,000 cycles.

*The base of the cylinders contain a steel plate with mounting holes that are designed to protect the cylinder from damage and should NOT be used in fixturing applications and ONLY be used to attach larger base mounting plates for lifting stability. They are NOT designed to withstand the full ratings of the cylinders.




### Safety Practices

Good industry practice recommends not exceeding 80% of maximum rated capacities of all our products.

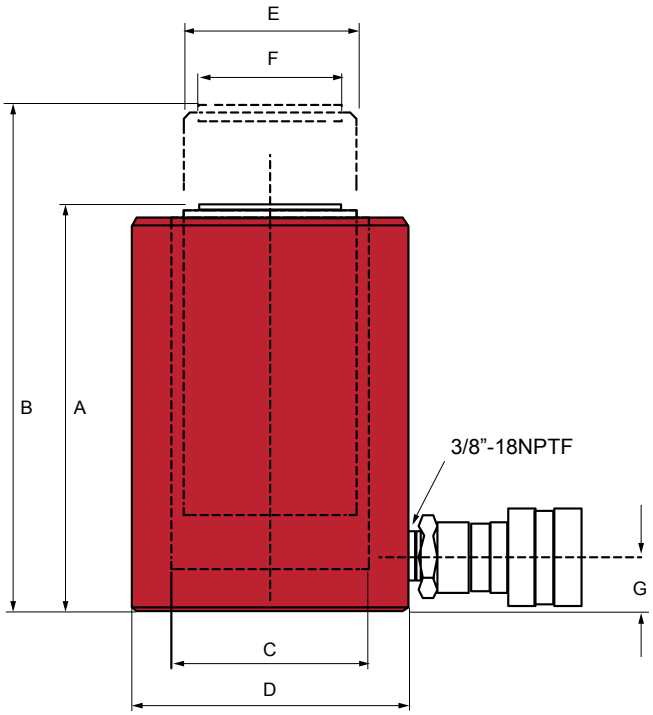


### High-Flow Couplers

High-Flow Coupler: CH38F is included on all models (except where specified).



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## HU Series



### Safety Instructions

Visit our DO'S and DON'TS section to review the best methods of operation. Always be prepared.

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### Related Product: Gauges



Reduce the risk of overloading your product by using a gauge. A variety of graduation's and types to suit any need.

pg 69

### Related Product: Hoses



We offer a variety of hoses, fittings, lengths and materials.

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| Cylinder Capacity (tons) | Stroke (in) | Model Number | Cylinder Effective Area ($in^2$) | Internal Pressure at Capacity (psi) | Oil Capacity ($in^3$) | Collapsed Height A (in) | Extended Height B (in) | Cylinder Bore Dia. C (in) | Outside Dia. D (in) | Rod Dia. E (in) | Saddle Dia. F (in) | Base to Inlet Port G (in) | Weight (lbs) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 20 | 1.97 | HU2002T | 4.83 | 10,000 | 9.51 | 6.85 | 8.82 | 2.48 | 3.35 | 2.00 | 1.56 | 1.08 | 6.6 |
| | 3.94 | HU2004T | 4.83 | 10,000 | 19.02 | 8.82 | 12.76 | 2.48 | 3.35 | 2.00 | 1.56 | 1.08 | 8.1 |
| | 5.91 | HU2006T | 4.83 | 10,000 | 28.53 | 10.79 | 16.69 | 2.48 | 3.35 | 2.00 | 1.56 | 1.08 | 9.6 |
| 30 | 1.97 | HU3002T | 6.85 | 10,000 | 13.48 | 7.13 | 9.09 | 2.95 | 3.94 | 2.36 | 1.56 | 1.32 | 10.4 |
| | 3.94 | HU3004T | 6.85 | 10,000 | 26.96 | 9.09 | 13.03 | 2.95 | 3.94 | 2.36 | 1.56 | 1.32 | 12.0 |
| | 5.91 | HU3006T | 6.85 | 10,000 | 40.44 | 11.06 | 16.97 | 2.95 | 3.94 | 2.36 | 1.56 | 1.32 | 13.5 |
| 50 | 1.97 | HU5002T | 10.99 | 10,000 | 21.63 | 7.32 | 9.29 | 3.74 | 5.12 | 3.15 | 2.76 | 1.20 | 16.8 |
| | 3.94 | HU5004T | 10.99 | 10,000 | 43.25 | 9.29 | 13.23 | 3.74 | 5.12 | 3.15 | 2.76 | 1.20 | 22.6 |
| | 5.91 | HU5006T | 10.99 | 10,000 | 64.88 | 11.26 | 17.17 | 3.74 | 5.12 | 3.15 | 2.76 | 1.20 | 25.5 |
| | 7.87 | HU5008T | 10.99 | 10,000 | 86.51 | 13.23 | 21.10 | 3.74 | 5.12 | 3.15 | 2.76 | 1.20 | 27.1 |
| | 9.84 | HU5010T | 10.99 | 10,000 | 108.13 | 15.20 | 25.04 | 3.74 | 5.12 | 3.15 | 2.76 | 1.20 | 31.3 |
| 75 | 4.0 | HU7504 | 15.00 | 10,000 | 60.10 | 8.73 | 12.73 | 4.37 | 6.50 | 3.88 | 3.00 | 1.50 | 29.0 |
| | 6.0 | HU7506 | 15.00 | 10,000 | 90.20 | 10.73 | 16.73 | 4.37 | 6.50 | 3.88 | 3.00 | 1.50 | 35.0 |
| 100 | 2.0 | HU10002 | 20.70 | 9,662 | 41.40 | 6.50 | 8.50 | 5.10 | 8.00 | 4.30 | 3.50 | 1.50 | 36.0 |
| | 4.0 | HU10004 | 20.70 | 9,662 | 82.80 | 8.50 | 12.50 | 5.10 | 8.00 | 4.30 | 3.50 | 1.50 | 43.0 |
| | 6.0 | HU10006 | 20.70 | 9,662 | 124.40 | 10.50 | 16.50 | 5.10 | 8.00 | 4.30 | 3.50 | 1.50 | 51.0 |
| | 10.0 | HU10010 | 20.70 | 9,662 | 207.00 | 14.50 | 24.50 | 5.10 | 8.00 | 4.30 | 3.50 | 1.50 | 68.0 |
| 150 | 2.00 | HU15002 | 30.70 | 9,662 | 61.40 | 7.73 | 9.73 | 6.26 | 10.00 | 5.00 | 4.50 | 1.50 | 55.0 |
| | 4.00 | HU15004 | 30.70 | 9,662 | 122.70 | 9.73 | 13.73 | 6.26 | 10.00 | 5.00 | 4.50 | 1.50 | 65.0 |
| | 6.00 | HU15006 | 30.70 | 9,662 | 184.10 | 11.73 | 17.73 | 6.26 | 10.00 | 5.00 | 4.50 | 1.50 | 81.0 |
| | 10.00 | HU15010 | 30.70 | 9,662 | 306.80 | 15.73 | 25.73 | 6.26 | 10.00 | 5.00 | 4.50 | 1.50 | 110.0 |

# Double Acting Cylinders

***HD Series - General Purpose***



*HD20013*



*HD3008*



## Capacity:

10 - 500 Tons

## Stroke:

5.90 - 24.00 Inches

## Pressure:

10,000 psi

## Min. - Max. Height:

10.56 - 60.13 Inches

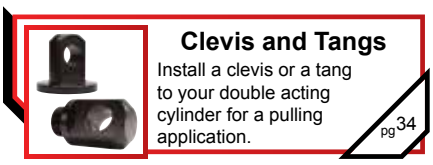
CE

- Rod wiper seals out dirt and contamination
- High strength steel construction from gun drilled solid bar
- High flow 3/8″ NPTF female couplers
- One piece high grade alloy bearing for side load protection and long life
- Ideal for pushing and pulling
- Maximum working pressure: 10,000 psi / 700 bar
- Threaded cylinders, removable saddle, thicker cylinder walls
- Retract under hydraulic power for faster operation




**Safety Practices**

Good industry practice recommends not exceeding 80% of maximum rated capacities of all our products.



**Clevis and Tangs**

Install a clevis or a tang to your double acting cylinder for a pulling application.

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*HD cylinders can be used in pushing and pulling applications. In this photo, we see a HD2506 HD cylinder set up for a pull application using a Rod Clevis cylinder accessory* ▶



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HD20024




HD2506

*With a variety of tonnage and sizes, you can apply our cylinders to a large variety of applications. Custom tonnages and stroke lengths are available upon request.*

### Relief Valve

All double acting cylinders are equipped with a pressure relief valve located next to the retract port. These pressure relief valves help prevent cylinder over pressurization on the return port side of the cylinder.





***HD Series***

### Related Product: Gauges



Reduce the risk of overloading your product by using a gauge. A variety of graduations and types to suit any need.

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### Cylinder Accessories



See the assortment of accessories designed to work with our products.

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### Combo Kits



Most cylinders are available in easy to order kits: Cylinder, Gauge, Couplers, Hose and Pump.

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### Safety Instructions



Visit our DO'S and DON'TS section to review the best methods of operation. Always be prepared.

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### High-Flow Couplers



High-Flow Coupler: CH38F is included on all models (except where specified).

### HUD Series – Aluminum Cylinders



Aluminum cylinders make a great lightweight alternative being up to 60% lighter than comparable steel models.

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## Quick Selection Guide

| Cylinder Capacity (tons) | Stroke (in) | Model Number | Collapsed Height (in) | Oil Capacity | | Weight (lbs) |
|---|---|---|---|---|---|---|
| | | | | Push ($in^3$) | Pull ($in^3$) | |
| 10 | 10.04 | HD1010 | 16.12 | 22.41 | 7.47 | 26.7 |
| | 11.97 | HD1012 | 18.03 | 26.71 | 8.90 | 30.0 |
| 25 | 5.90 | HD2506 | 10.56 | 30.35 | 15.81 | 24.8 |
| 30 | 8.15 | HD3008 | 15.31 | 52.93 | 26.02 | 43.0 |
| | 14.49 | HD3014 | 21.65 | 94.09 | 46.26 | 60.6 |
| 55 | 6.18 | HD5506‡ | 13.03 | 67.93 | 19.74 | 70.5 |
| | 13.19 | HD5513‡ | 20.04 | 144.94 | 42.11 | 104.0 |
| | 20.12 | HD5520‡ | 28.86 | 221.09 | 64.24 | 146.2 |
| 75 | 6.10 | HD7506‡ | 13.70 | 98.10 | 31.21 | 93.7 |
| | 13.11 | HD7513‡ | 20.71 | 210.93 | 67.06 | 136.8 |
| 100 | 6.57 | HD10006‡ | 14.06 | 135.23 | 62.98 | 138.6 |
| | 10.13 | HD10010‡ | 17.67 | 208.30 | 97.10 | 169.2 |
| | 13.11 | HD10013‡ | 20.63 | 269.66 | 125.58 | 193.6 |
| | 18.15 | HD10018‡ | 27.05 | 373.31 | 173.86 | 248.3 |
| 200 | 6.00 | HD20006 | 16.94 | 265.28 | 135.00 | 325.0 |
| | 13.00 | HD20013 | 23.94 | 574.78 | 293.00 | 440.0 |
| | 24.02 | HD20024 | 36.13 | 1061.00 | 528.00 | 616.0 |
| 300 | 6.00 | HD30006 | 19.13 | 425.56 | 228.00 | 441.0 |
| 500 | 6.00 | HD50006 | 22.75 | 678.92 | 378.00 | 953.0 |

*See pages (pg.14-15) for detailed specifications.*

# Double Acting Cylinders

*HD Series - General Purpose*



**Cylinder Accessories**

See the assortment of accessories designed to work with our products.

pg 34



**Related Product: Gauges**

Reduce the risk of overloading your product by using a gauge. A variety of graduations and types to suit any need.

pg 69



**Combo Kits**

Most cylinders are available in easy to order kits: Cylinder, Gauge, Couplers, Hose and Pump.

pg 64



**Safety Instructions**

Visit our DO'S and DON'TS section to review the best methods of operation. Always be prepared.

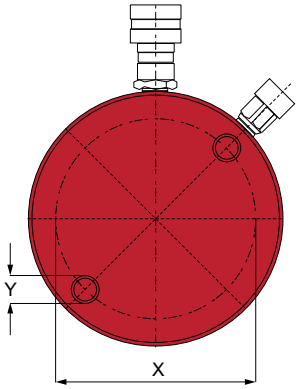
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| Cylinder Capacity (tons) | Stroke (in) | Model Number | Maximum Cylinder Capacity | | Cylinder Effective Area | | Oil Capacity | | Weight (lbs) | Collapsed Height A (in) | Extended Height B (in) | Cylinder Bore Dia. C (in) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Push (ton) | Pull (ton) | Push ($in^2$) | Pull ($in^2$) | Push ($in^3$) | Pull ($in^3$) | | | | |
| 10 | 10.07 | HD1010 | 11.40 | 3.80 | 2.24 | 0.74 | 22.41 | 7.47 | 26.7 | 16.12 | 26.19 | 1.69 |
| | 11.97 | HD1012 | 11.40 | 3.80 | 2.24 | 0.74 | 26.71 | 8.90 | 30.0 | 18.03 | 30.00 | 1.69 |
| 25 | 5.90 | HD2506 | 25.70 | 13.39 | 5.14 | 2.68 | 30.35 | 15.81 | 24.8 | 10.56 | 16.46 | 2.56 |
| 30 | 8.15 | HD3008 | 32.90 | 16.20 | 6.49 | 3.19 | 52.93 | 26.02 | 43.0 | 15.31 | 23.46 | 2.87 |
| | 14.49 | HD3014 | 32.90 | 16.20 | 6.49 | 3.19 | 94.09 | 46.26 | 60.6 | 21.65 | 36.14 | 2.87 |
| 55 | 6.18 | HD5506* | 55.70 | 16.20 | 10.99 | 3.19 | 67.93 | 19.74 | 70.5 | 13.03 | 19.21 | 3.74 |
| | 13.19 | HD5513* | 55.70 | 16.20 | 10.99 | 3.19 | 144.94 | 42.11 | 104.0 | 20.04 | 33.23 | 3.74 |
| | 20.12 | HD5520* | 55.70 | 16.20 | 10.99 | 3.19 | 221.09 | 64.24 | 146.2 | 28.86 | 49.98 | 3.74 |
| 75 | 6.10 | HD7506* | 81.70 | 25.90 | 16.09 | 5.12 | 98.10 | 31.21 | 93.7 | 13.70 | 19.80 | 4.53 |
| | 13.11 | HD7513* | 81.70 | 25.90 | 16.09 | 5.12 | 210.93 | 67.06 | 136.8 | 20.71 | 33.82 | 4.53 |
| 100 | 6.57 | HD10006* | 104.40 | 48.60 | 20.57 | 9.58 | 135.23 | 62.98 | 138.6 | 14.06 | 20.63 | 5.12 |
| | 10.13 | HD10010* | 104.40 | 48.60 | 20.57 | 9.58 | 208.30 | 97.10 | 169.2 | 17.67 | 27.80 | 5.12 |
| | 13.11 | HD10013* | 104.40 | 48.60 | 20.57 | 9.58 | 269.66 | 125.58 | 193.6 | 20.63 | 33.74 | 5.12 |
| | 18.15 | HD10018* | 104.40 | 48.60 | 20.57 | 9.58 | 373.31 | 173.86 | 248.3 | 27.05 | 45.20 | 5.12 |
| 200 | 6.00 | HD20006 | 221.00 | 112.50 | 44.21 | 22.50 | 265.28 | 135.00 | 325.0 | 16.94 | 22.94 | 7.50 |
| | 13.11 | HD20013 | 221.00 | 112.50 | 44.21 | 22.50 | 574.78 | 293.00 | 440.0 | 23.94 | 36.94 | 7.50 |
| | 24.00 | HD20024 | 221.00 | 112.50 | 44.21 | 22.50 | 1061.00 | 528.00 | 616.0 | 36.13 | 60.13 | 7.50 |
| 300 | 6.00 | HD30006 | 354.60 | 190.00 | 70.93 | 38.00 | 425.56 | 228.00 | 441.0 | 19.13 | 25.13 | 9.50 |
| 500 | 6.00 | HD50006 | 565.70 | 315.00 | 113.15 | 63.00 | 678.92 | 378.00 | 953.0 | 22.75 | 28.75 | 12.00 |



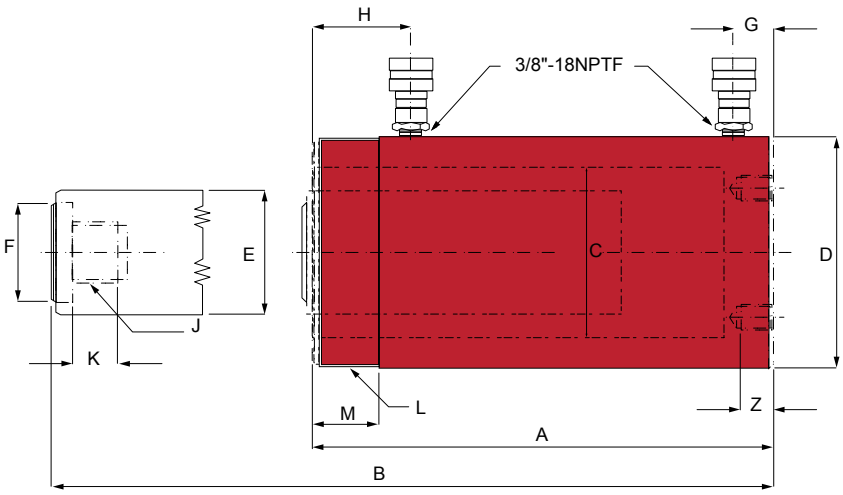
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*HD Series*




## Safety Practices

80%

Good industry practice recommends not exceeding 80% of maximum rated capacities of all our products.

## Relief Valve

All double acting cylinders are equipped with a pressure relief valve located next to the retract port. These pressure relief valves help prevent cylinder over pressurization on the return port side of the cylinder.



## High-Flow Couplers



High-Flow Coupler: CH38F is included on all models (except where specified).

| Model Number | Outside Dia. D (in) | Rod Dia. E (in) | Saddle Dia. F (in) | Base to Adv. Port G (in) | Top to Return Port H (in) | Rod Internal Thread J (in) | Rod Thread Length K (in) | Collar Thread L (in) | Collar Thread Length M (in) | Base Mounting Hole | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Bolt Circle X (in) | Thread Y (in) | Thread Depth Z (in) |
| HD1010 | 2.87 | 1.38 | 1.38 | 1.42 | 2.09 | 1”-8 | 0.98 | 2¼”-14 | 1.02 | 1.30 | 5⁄16”-18 | 0.60 |
| HD1012 | 2.87 | 1.37 | 1.38 | 1.42 | 2.09 | 1”-8 | 0.98 | 2¼”-14 | 1.02 | 1.30 | 5⁄16”-18 | 0.60 |
| HD2506 | 3.62 | 1.77 | 1.50 | 0.98 | 1.93 | 1’-8 | 1.18 | 3⅝”-12 | 0.98 | 2.30 | ½”-13 | 0.70 |
| HD3008 | 3.98 | 2.13 | 1.97 | 1.65 | 2.91 | 1½”-16 | 0.98 | 3⅝”-12 | 1.93 | 2.20 | ½”-13 | 0.70 |
| HD3014 | 3.98 | 2.13 | 1.97 | 1.65 | 2.91 | 1½”-16 | 0.98 | 3⅝”-12 | 1.93 | 2.20 | ½”-13 | 0.70 |
| HD5506* | 5.00 | 3.14 | 2.76 | 1.14 | 2.87 | 1”-12 | 0.98 | 5”-12 | 1.73 | 3.70 | ½”-13 | 0.70 |
| HD5513* | 5.00 | 3.14 | 2.76 | 1.14 | 2.87 | 1”-12 | 0.98 | 5”-12 | 1.73 | 3.70 | ½”-13 | 0.70 |
| HD5520* | 5.00 | 3.14 | 2.76 | 1.14 | 2.87 | 1”-12 | 0.98 | 5”-12 | 1.73 | 3.70 | ½”-13 | 0.70 |
| HD7506* | 5.75 | 3.75 | 2.76 | 1.18 | 2.80 | 1”-12 | 1.50 | 5¾”-12 | 1.50 | 4.00 | ¾”-10 | 0.90 |
| HD7513* | 5.75 | 3.75 | 2.76 | 1.18 | 2.80 | 1”-12 | 1.50 | 5¾”-12 | 1.50 | 4.00 | ¾”-10 | 0.90 |
| HD10006* | 6.97 | 3.75 | 2.95 | 1.22 | 2.95 | 1¾”-12 | 1.38 | 6⅞”-12 | 1.97 | 5.47 | ¾”-10 | 0.98 |
| HD10010* | 6.97 | 3.74 | 2.95 | 1.22 | 2.95 | 1¾”-12 | 1.50 | 6⅞”-12 | 2.01 | 5.50 | ¾”-10 | 0.98 |
| HD10013* | 6.97 | 3.75 | 2.95 | 1.22 | 2.95 | 1¾”-12 | 1.38 | 6⅞”-12 | 1.97 | 5.47 | ¾”-10 | 0.98 |
| HD10018* | 6.97 | 3.75 | 2.95 | 1.50 | 2.95 | 1¾”-12 | 1.38 | 6⅞”-12 | 1.97 | 5.47 | ¾”-10 | 0.98 |
| HD20006 | 9.75 | 5.25 | 5.25 | 2.25 | 3.81 | 2½”-12 | 2.50 | 9¾”-12 | 2.13 | 5.00 | 1”-8 | 1.00 |
| HD20013 | 9.75 | 5.25 | 5.25 | 2.25 | 3.81 | 2½”-12 | 2.50 | 9¾”-12 | 2.13 | 5.00 | 1”-8 | 1.00 |
| HD20024 | 9.75 | 5.25 | 5.25 | 3.38 | 4.00 | 2½”-12 | 2.50 | 9¾”-12 | 2.13 | 5.00 | 1”-8 | 1.00 |
| HD30006 | 12.25 | 6.50 | 6.50 | 3.50 | 4.50 | 2½”-12 | 3.25 | 12¼”-12 | 2.31 | 6.25 | 1¼”-7 | 1.75 |
| HD50006 | 15.63 | 8.00 | 8.00 | 4.75 | 6.00 | 3¼”-12 | 4.25 | 15⅝”-8 | 3.13 | 8.00 | 1¾”-5 | 2.12 |

** 55-100 ton cylinders are equipped with carrying handles.*

# Aluminum Double Acting Cylinders

***HUD Series - General Purpose, Lightweight***




*HUD5006*




*HUD10006*



## Capacity:

30 - 150 Tons

## Stroke:

2 - 13 Inches

## Max. Operating Pressure:

10,000 psi

## Min. - Max. Height:

8.30 - 33.80 Inches

## Aluminum vs. Steel Cylinders

Aluminum cylinders provide a great alternative to the traditional steel cylinder in multiple applications. Being up to 60% lighter in weight, Aluminum cylinders are highly portable and reduce user fatigue and strain. However, due to the finite properties of Aluminum vs. Steel, these cylinders should NOT be used in high cycle applications. The BVA Aluminum cylinders are designed for a maximum safety rating of 5,000 cycles. Under normal lifting applications this should provide a long service life.



*HUD10006*



*HD7513*

### Aluminum Cylinders

- 60% lighter in weight than steel
- Highly portable and reduces user fatigue
- Not used for high cycle applications
- Under normal conditions, the maximum rated safety cycle life is 5,000 cycles
- Base of the cylinder contains a steel plate*

### Steel Cylinders

- Much heavier than aluminum cylinders
- Low portability with heavier cylinders which creates user fatigue and strain
- Will out-perform aluminum cylinders in higher cycle applications
- Can exceed aluminums maximum safety cycle life of 5,000 cycles.

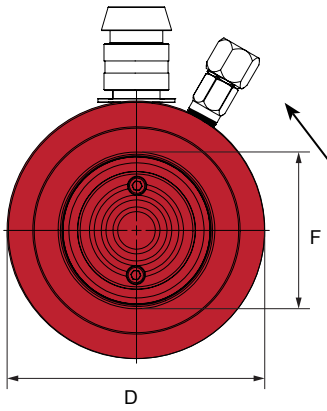
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| Cylinder Capacity (tons) | Stroke (in) | Model Number | Maximum Cylinder Capacity (ton) | | Cylinder Effective Area ($in^2$) | | Oil Capacity ($in^3$) | | Weight (lbs) |
|---|---|---|---|---|---|---|---|---|---|
| | | | Push | Pull | Push | Pull | Push | Pull | |
| 30 | 6.00 | HUD3006 | 30.00 | 12.57 | 6.50 | 2.50 | 39.00 | 15.00 | 18.0 |
| | 8.00 | HUD3008 | 30.00 | 12.57 | 6.50 | 2.50 | 51.90 | 18.00 | 26.0 |
| | 13.00 | HUD3013 | 30.00 | 12.57 | 6.00 | 2.50 | 90.90 | 32.41 | 35.0 |
| 50 | 6.00 | HUD5006 | 50.00 | 13.50 | 10.30 | 2.70 | 61.80 | 16.00 | 28.0 |
| | 8.00 | HUD5008 | 50.00 | 13.50 | 10.30 | 2.70 | 88.30 | 22.00 | 36.0 |
| | 13.00 | HUD5013 | 50.00 | 13.58 | 10.30 | 2.70 | 143.50 | 35.80 | 48.0 |
| 75 | 6.00 | HUD7506 | 75.00 | 27.00 | 15.00 | 5.41 | 90.20 | 19.40 | 41.0 |
| | 8.00 | HUD7508 | 75.00 | 27.00 | 15.00 | 5.41 | 121.00 | 43.30 | 50.0 |
| | 13.00 | HUD7513 | 75.00 | 27.00 | 15.00 | 5.41 | 195.40 | 70.40 | 62.0 |
| 100 | 2.00 | HUD10002 | 100.00 | 23.75 | 20.60 | 4.75 | 41.20 | 9.40 | 42.0 |
| | 6.00 | HUD10006 | 100.00 | 23.75 | 20.60 | 4.75 | 123.70 | 28.30 | 57.0 |
| | 13.00 | HUD10013 | 100.00 | 23.75 | 20.60 | 4.75 | 268.10 | 61.40 | 90.0 |
| 150 | 6.00 | HUD15006 | 100.00 | 34.60 | 30.70 | 6.90 | 184.10 | 41.40 | 87.0 |
| | 13.00 | HUD15013 | 100.00 | 34.60 | 30.70 | 6.90 | 378.80 | 90.10 | 122.0 |

* The base of the cylinders contain a Steel plate with mounting holes and is designed to protect the cylinder from damage and should NOT be used in fixturing applications and ONLY be used to attach a larger base mounting plate for lifting stability. They are NOT designed to withstand the full rating of the cylinder.



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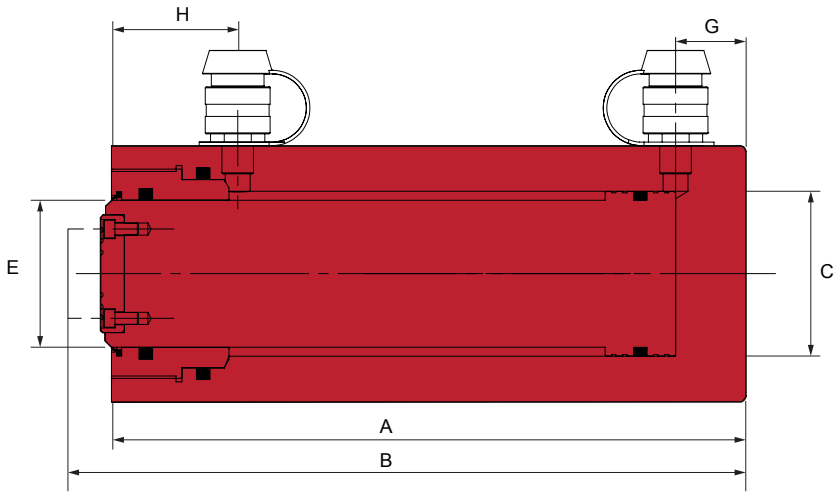

### Relief Valve

All double acting cylinders are equipped with a pressure relief valve located next to the retract port. These pressure relief valves help prevent cylinder over pressurization on the return port side of the cylinder.






***HUD Series***






### Safety Instructions

Visit our DO'S and DON'TS section to review the best methods of operation. Always be prepared.

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### Related Product: Gauges



Reduce the risk of overloading your product by using a gauge. A variety of graduations and types to suit any need.

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### Safety Practices

Good industry practice recommends not exceeding 80% of maximum rated capacities of all our products.



### High-Flow Couplers

High-Flow Coupler: CH38F is included on all models (except where specified).

- Lightweight aluminum alloy construction
- Up to 60% lighter than comparable tonnage steel cylinders
- Convenient carry handle on 50, 75, 100 and 150 ton models
- Hard anodized aluminum rod provides extra protection against corrosion and wear
- Steel protective plate on cylinder base
- Maximum working pressure: 10,000 psi / 700 bar

| Model Number | Collapsed Height A (in) | Extended Height B (in) | Cylinder Bore Dia. C (in) | Outside Diameter D (in) | Rod Dia. E (in) | Saddle Diameter F (in) | Base To Advance Port G (in) | Top To Retract Port H (in) |
|---|---|---|---|---|---|---|---|---|
| HUD3006 | 11.80 | 17.80 | 2.88 | 4.50 | 2.88 | 2.00 | 1.50 | 2.00 |
| HUD3008 | 13.80 | 21.80 | 2.88 | 4.50 | 2.88 | 2.00 | 1.50 | 2.00 |
| HUD3013 | 19.30 | 32.30 | 2.88 | 4.50 | 2.88 | 2.00 | 1.50 | 2.00 |
| HUD5006 | 11.80 | 17.80 | 3.63 | 5.50 | 3.13 | 2.50 | 1.50 | 2.50 |
| HUD5008 | 13.80 | 21.80 | 3.63 | 5.50 | 3.13 | 2.50 | 1.50 | 2.50 |
| HUD5013 | 19.30 | 32.30 | 3.63 | 5.50 | 3.13 | 2.50 | 1.50 | 2.50 |
| HUD7506 | 12.30 | 18.30 | 4.38 | 6.50 | 3.50 | 3.00 | 1.50 | 2.50 |
| HUD7508 | 14.30 | 20.30 | 4.38 | 6.50 | 3.50 | 3.00 | 1.50 | 2.50 |
| HUD7513 | 19.30 | 32.30 | 4.38 | 6.50 | 3.50 | 3.00 | 1.50 | 2.50 |
| HUD10002 | 8.30 | 10.30 | 5.13 | 8.00 | 4.50 | 3.50 | 1.50 | 2.50 |
| HUD10006 | 12.30 | 18.30 | 5.13 | 8.00 | 4.50 | 3.50 | 1.50 | 2.50 |
| HUD10013 | 19.30 | 32.30 | 5.13 | 8.00 | 4.50 | 3.50 | 1.50 | 2.50 |
| HUD15006 | 14.30 | 20.30 | 6.26 | 10.00 | 5.50 | 4.50 | 2.00 | 3.00 |
| HUD15013 | 20.80 | 33.80 | 6.26 | 10.00 | 5.50 | 4.50 | 2.00 | 3.00 |

NOTE: The base of the aluminum cylinders contain a Steel plate with mounting holes and is designed to protect the cylinder from damage and should NOT be used in fixturing applications and ONLY be used to attach larger base mounting plates for lifting stability. The threads are NOT designed to withstand the full rating of the cylinder.

# High Tonnage Single Acting Cylinders

***HG series - Heavy Lifting, Load Return***




*HG10004* *HG15006* *HG20002*

## Capacity:

100-1,500 Tons

## Stroke:

1.97 - 11.81 Inches

## Max. Operating Pressure:

10,000 psi

## Min. - Max. Height:

7.17 - 43.86 Inches

CE



**Related Product: Hoses**

We offer a variety of hoses, fittings, lengths and materials.

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**Flow Control Valves**

Control the speed of your cylinder by adding a flow control valve.

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- Cylinders are burnish rolled creating a smoother surface than honing.
- Rod wiper seals out dirt and contamination
- Base mounting holes on all models
- High strength steel construction from gun drilled solid bar providing extra combine strength for high tonnage applications
- High flow 3/8” NPTF coupler
- Polyurethane cup seal provides optimum performance
- Industrial hard chrome plated rod helps prevent rust and corrosion
- Maximum working pressure: 10,000 psi / 700 bar
- Custom sizes are available upon request
- Load Return

### Gas/Diesel Engine Pumps

These HG cylinders pair up well with a Gas or Diesel Engine pumps. We offer a variety of different flow rates, motor sizes and reservoir sizes. Contact your local BVA dealer for more details.



*PG70M3N05*

- Will provide 10,000 psi. hydraulic force at remote locations
- Industrial grade 5.5 or 10.2 hp Honda gas engine or 7.3 hp HATZ diesel engine.
- Ideal for applications where electricity isn’t easily accessible.
- Two speed pump designed for rapid cylinder advance
- Gas pump features a sturdy protective roll cage for use in the toughest environments
- Electric start standard on PD80 and optional on PG90

### Electric Motor Pumps

These HG cylinders pair up well with Electric Motor pumps. We offer a variety of different flow rates and motor sizes. Contact your local BVA dealer for more details.




*PE50W3N03A*

- Meets OSHA regulations for sound (80dBA)
- Two speed pump designed for rapid cylinder advance
- Internal filter screens contamination to prevent pump damage
- All units are wired as 120 VAC 60 Hz; Optional wiring includes 50 Hz motors and 240VAC 60Hz
- 100% Duty Cycle TEFC motors
- All hand pendants are wired at 24VAC for safety
- Full load starting capability



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# Quick Reference Guide

| Cylinder Capacity (tons) | Stroke (in) | Model Number | Collapsed Height (in) | Oil Capacity ($in^3$) | Weight (lbs) |
|---|---|---|---|---|---|
| 100 | 1.97 | HG10002 | 7.17 | 40.50 | 61.0 |
| | 3.94 | HG10004 | 9.13 | 81.00 | 74.0 |
| | 5.91 | HG10006 | 11.10 | 121.50 | 87.0 |
| | 7.87 | HG10008 | 13.07 | 161.99 | 100.0 |
| | 9.84 | HG10010 | 15.04 | 202.49 | 114.0 |
| | 11.81 | HG10012 | 17.01 | 242.99 | 127.0 |
| 150 | 1.97 | HG15002 | 7.72 | 59.89 | 102.0 |
| | 3.94 | HG15004 | 9.69 | 119.78 | 122.0 |
| | 5.91 | HG15006 | 11.65 | 181.75 | 142.0 |
| | 7.87 | HG15008 | 13.62 | 239.57 | 162.0 |
| | 9.84 | HG15010 | 15.59 | 299.46 | 181.0 |
| | 11.81 | HG15012 | 17.56 | 359.35 | 202.0 |
| 200 | 1.97 | HG20002 | 8.50 | 80.68 | 121.0 |
| | 5.91 | HG20006 | 12.44 | 243.40 | 201.0 |
| | 7.87 | HG20008 | 14.41 | 322.73 | 242.0 |
| | 11.81 | HG20012 | 18.35 | 486.79 | 322.0 |
| 300 | 1.97 | HG30002 | 12.28 | 139.19 | 406.0 |
| | 5.91 | HG30006 | 16.22 | 417.56 | 511.0 |
| | 11.81 | HG30012 | 22.13 | 835.11 | 668.0 |
| 400 | 1.97 | HG40002 | 14.74 | 170.84 | 595.0 |
| | 5.91 | HG40006 | 18.68 | 512.51 | 728.0 |
| | 12.01 | HG40012 | 24.61 | 1042.10 | 928.0 |
| 500 | 1.97 | HG50002 | 16.50 | 222.92 | 884.0 |
| | 5.91 | HG50006 | 20.43 | 668.77 | 1058.0 |
| | 11.81 | HG50012 | 26.34 | 1338.00 | 1321.0 |
| 600 | 1.97 | HG60002 | 16.89 | 260.97 | 1045.0 |
| | 5.91 | HG60006 | 20.83 | 782.90 | 1246.0 |
| | 9.84 | HG60010 | 19.88 | 1408.93 | 948.0 |
| | 11.81 | HG60012 | 26.73 | 1566.00 | 1545.0 |
| 800 | 1.97 | HG80002 | 18.66 | 358.91 | 1634.0 |
| | 5.91 | HG80006 | 22.60 | 1077.00 | 1914.0 |
| | 11.81 | HG80012 | 28.50 | 2153.00 | 2332.0 |
| 1000 | 1.97 | HG100002 | 22.20 | 447.23 | 2341.0 |
| | 5.91 | HG100006 | 26.14 | 1342.00 | 2674.0 |
| | 11.81 | HG100012 | 32.05 | 2683.00 | 3172.0 |
| 1100-1500 | For these higher tonnages, contact your local BVA dealer for pricing and details | | | | |

*See next pages (pg.20-21) to view more detail stats on High Tonnage Single Acting Cylinders.*




***HG Series***

**Safety Practices**

80%

Good industry practice recommends not exceeding 80% of maximum rated capacities of all our products.

**Related Product: Gauges**



Reduce the risk of overloading your product by using a gauge. A variety of graduations and types to suit any need.

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**Safety Instructions**

Visit our DO'S and DON'TS section to review the best methods of operation. Always be prepared.

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**High-Flow Couplers**

High-Flow Coupler: CH38F is included on all models (except where specified).

**Optional Tilt-Saddles**

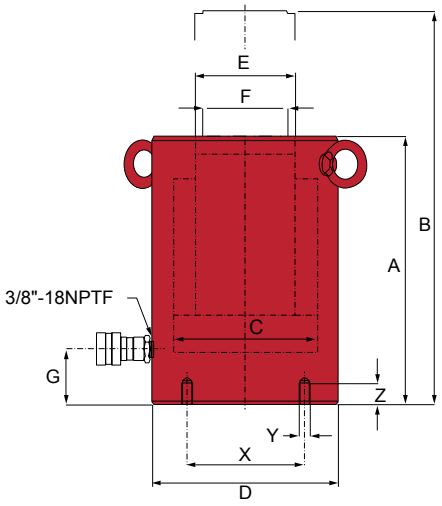


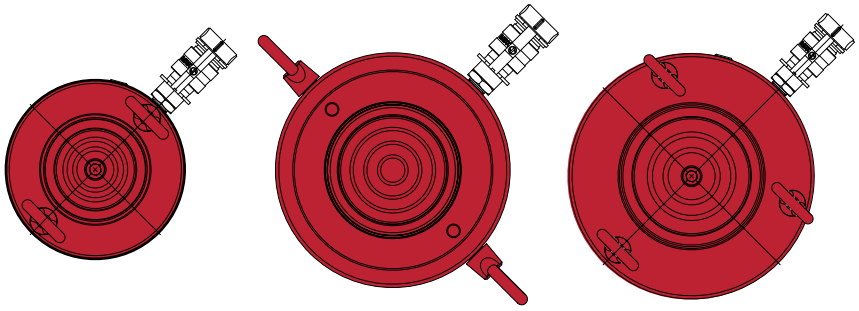
Saddles tilt to a 5% maximum to adjust to the load. View our cylinder accessories page to figure out what saddle best fits these cylinders.

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# High Tonnage Single Acting Cylinders

*HG Series - Heavy Lifting, Load Return*



*HG100* *HG150* *HG200*

| Cylinder Capacity (tons) | Stroke (in) | Model Number | Maximum Cylinder Capacity (ton) | Cylinder Effective Area ($in^2$) | Oil Capacity ($in^3$) | Weight (lbs) |
|---|---|---|---|---|---|---|
| 100 | 1.97 | HG10002 | 102.86 | 20.57 | 40.50 | 61.0 |
| | 3.94 | HG10004 | 102.86 | 20.57 | 81.00 | 74.0 |
| | 5.91 | HG10006 | 102.86 | 20.57 | 121.50 | 87.0 |
| | 7.87 | HG10008 | 102.86 | 20.57 | 161.99 | 100.0 |
| | 9.84 | HG10010 | 102.86 | 20.57 | 202.49 | 114.0 |
| | 11.81 | HG10012 | 102.86 | 20.57 | 242.99 | 127.0 |
| 150 | 1.97 | HG15002 | 152.11 | 30.43 | 59.89 | 102.0 |
| | 3.94 | HG15004 | 152.11 | 30.43 | 119.78 | 122.0 |
| | 5.91 | HG15006 | 153.90 | 30.78 | 181.75 | 142.0 |
| | 7.87 | HG15008 | 152.11 | 30.43 | 239.57 | 162.0 |
| | 9.84 | HG15010 | 152.11 | 30.43 | 299.46 | 181.0 |
| | 11.81 | HG15012 | 152.11 | 30.43 | 359.35 | 202.0 |
| 200 | 1.97 | HG20002 | 204.92 | 40.99 | 80.68 | 121.0 |
| | 5.91 | HG20006 | 206.10 | 41.22 | 243.40 | 201.0 |
| | 7.87 | HG20008 | 204.92 | 40.99 | 322.73 | 242.0 |
| | 11.81 | HG20012 | 206.10 | 41.22 | 486.79 | 322.0 |
| 300 | 1.97 | HG30002 | 353.60 | 70.71 | 139.19 | 406.0 |
| | 5.91 | HG30006 | 353.60 | 70.71 | 417.56 | 511.0 |
| | 11.81 | HG30012 | 353.60 | 70.71 | 835.11 | 668.0 |
| 400 | 1.97 | HG40002 | 433.90 | 86.78 | 170.84 | 595.0 |
| | 5.91 | HG40006 | 433.90 | 86.78 | 512.51 | 728.0 |
| | 12.01 | HG40012 | 433.90 | 86.78 | 1042.10 | 928.0 |
| 500 | 1.97 | HG50002 | 566.30 | 113.25 | 222.93 | 884.0 |
| | 5.91 | HG50006 | 566.30 | 113.25 | 668.78 | 1058.0 |
| | 11.81 | HG50012 | 566.30 | 113.25 | 1337.56 | 1321.0 |
| 600 | 1.97 | HG60002 | 662.90 | 132.57 | 260.97 | 1045.0 |
| | 5.91 | HG60006 | 662.90 | 132.57 | 782.90 | 1246.0 |
| | 9.84 | HG60010 | 670.90 | 134.18 | 1408.93 | 948.0 |
| | 11.81 | HG60012 | 662.90 | 132.57 | 1566.00 | 1545.0 |
| 800 | 1.97 | HG80002 | 911.60 | 182.32 | 358.91 | 1634.0 |
| | 5.91 | HG80006 | 911.60 | 182.32 | 1077.00 | 1914.0 |
| | 11.81 | HG80012 | 911.60 | 182.32 | 2153.00 | 2332.0 |
| 1000 | 1.97 | HG100002 | 1136.00 | 227.19 | 447.23 | 2341.0 |
| | 5.91 | HG100006 | 1136.00 | 227.19 | 1342.00 | 2674.0 |
| | 11.81 | HG100012 | 1136.00 | 227.19 | 2683.00 | 3172.0 |



### Safety Instructions

Visit our DO'S and DON'TS section to review the best methods of operation. Always be prepared.

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### High-Flow Couplers

High-Flow Coupler: CH38F is included on all models (except where specified).

### Related Product: Gauges



Reduce the risk of overloading your product by using a gauge. A variety of graduations and types to suit any need.

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### Optional Tilt-Saddles

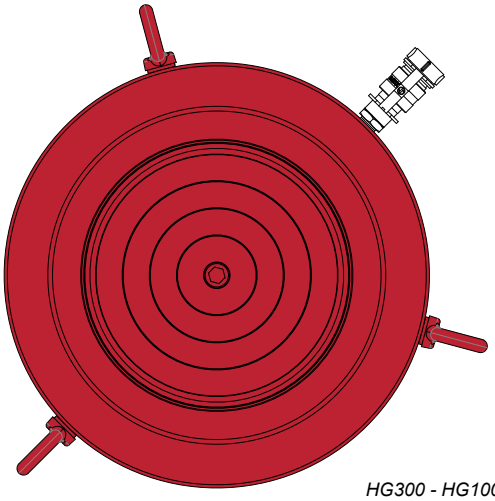


Saddles tilt to a 5% maximum to adjust to the load. View our cylinder accessories page to figure out what saddle best fits these cylinders.

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HG300 - HG1000




## HG Series

**80%**

**Safety Practices**

Good industry practice recommends not exceeding 80% of maximum rated capacities of all our products.

| Model Number | Collapsed Height A (in) | Extended Height B (in) | Cylinder Bore Dia. C (in) | Outside Dia. D (in) | Rod Dia. E (in) | Saddle Dia. F (in) | Base To Adv. Port G (in) | Base Mounting Holes | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Bolt Circle (in) X | Thread Size (mm) | Thread Depth (in) Z |
| HG10002 | 7.17 | 9.14 | 5.12 | 6.50 | 3.74 | 2.95 | 2.13 | 3.74 | M12 | 0.87 |
| HG10004 | 9.13 | 13.07 | 5.12 | 6.50 | 3.74 | 2.95 | 2.13 | 3.74 | M12 | 0.87 |
| HG10006 | 11.10 | 17.01 | 5.12 | 6.50 | 3.74 | 2.95 | 2.13 | 3.74 | M12 | 0.87 |
| HG10008 | 13.07 | 20.94 | 5.12 | 6.50 | 3.74 | 2.95 | 2.13 | 3.74 | M12 | 0.87 |
| HG10010 | 15.04 | 24.88 | 5.12 | 6.50 | 3.74 | 2.95 | 2.13 | 3.74 | M12 | 0.87 |
| HG10012 | 17.01 | 28.82 | 5.12 | 6.50 | 3.74 | 2.95 | 2.13 | 3.74 | M12 | 0.87 |
| HG15002 | 7.72 | 9.69 | 6.22 | 8.07 | 4.33 | 3.70 | 2.40 | 5.12 | M12 | 0.87 |
| HG15004 | 9.69 | 13.62 | 6.22 | 8.07 | 4.33 | 3.70 | 2.40 | 5.12 | M12 | 0.87 |
| HG15006 | 11.65 | 17.56 | 6.22 | 8.07 | 4.33 | 3.70 | 2.40 | 5.12 | M12 | 0.87 |
| HG15008 | 13.62 | 21.50 | 6.22 | 8.07 | 4.33 | 3.70 | 2.40 | 5.12 | M12 | 0.87 |
| HG15010 | 15.59 | 25.43 | 6.22 | 8.07 | 4.33 | 3.70 | 2.40 | 5.12 | M12 | 0.87 |
| HG15012 | 17.56 | 29.37 | 6.22 | 8.07 | 4.33 | 3.70 | 2.40 | 5.12 | M12 | 0.87 |
| HG20002 | 8.50 | 10.47 | 7.22 | 9.25 | 5.31 | 4.45 | 2.62 | 6.50 | M12 | 0.80 |
| HG20006 | 12.44 | 18.35 | 7.24 | 9.25 | 5.31 | 4.45 | 2.62 | 6.50 | M12 | 0.80 |
| HG20008 | 14.41 | 22.28 | 7.22 | 9.25 | 5.31 | 4.45 | 2.62 | 6.50 | M12 | 0.80 |
| HG20012 | 18.35 | 30.16 | 7.24 | 9.25 | 5.31 | 4.45 | 2.62 | 6.50 | M12 | 0.80 |
| HG30002 | 12.28 | 14.25 | 9.49 | 12.20 | 7.76 | 6.97 | 3.98 | 7.09 | M16 | 1.42 |
| HG30006 | 16.22 | 22.13 | 9.49 | 12.20 | 7.76 | 6.97 | 3.98 | 7.09 | M16 | 1.42 |
| HG30012 | 22.13 | 33.94 | 9.49 | 12.20 | 7.76 | 6.97 | 3.98 | 7.09 | M16 | 1.42 |
| HG40002 | 14.74 | 16.71 | 10.51 | 13.78 | 8.50 | 7.72 | 4.49 | 8.07 | M16 | 1.42 |
| HG40006 | 18.68 | 24.59 | 10.51 | 13.78 | 8.50 | 7.72 | 4.49 | 8.07 | M16 | 1.42 |
| HG40012 | 24.61 | 36.61 | 10.51 | 13.78 | 8.50 | 7.72 | 4.49 | 8.07 | M16 | 1.42 |
| HG50002 | 16.50 | 18.46 | 12.01 | 15.75 | 9.76 | 8.98 | 4.49 | 9.84 | M24 | 1.50 |
| HG50006 | 20.43 | 26.34 | 12.01 | 15.75 | 9.76 | 8.98 | 4.49 | 9.84 | M24 | 1.50 |
| HG50012 | 26.34 | 38.15 | 12.01 | 15.75 | 9.76 | 8.98 | 4.49 | 9.84 | M24 | 1.50 |
| HG60002 | 16.89 | 18.86 | 12.99 | 16.93 | 10.51 | 9.72 | 4.49 | 10.83 | M24 | 1.50 |
| HG60006 | 20.83 | 26.73 | 12.99 | 16.93 | 10.51 | 9.72 | 4.49 | 10.83 | M24 | 1.50 |
| HG60010 | 18.00 | 28.50 | 13.07 | 17.05 | 9.00 | 7.87 | 4.49 | 10.83 | M24 | 1.50 |
| HG60012 | 26.73 | 38.54 | 12.99 | 16.93 | 10.51 | 9.72 | 4.49 | 10.83 | M24 | 1.50 |
| HG80002 | 18.66 | 20.63 | 15.24 | 19.88 | 12.48 | 11.69 | 5.87 | 12.99 | M24 | 1.50 |
| HG80006 | 22.60 | 28.50 | 15.24 | 19.88 | 12.48 | 11.69 | 5.87 | 12.99 | M24 | 1.50 |
| HG80012 | 28.50 | 40.31 | 15.24 | 19.88 | 12.48 | 11.69 | 5.87 | 12.99 | M24 | 1.50 |
| HG100002 | 22.20 | 24.17 | 17.01 | 22.05 | 13.50 | 12.72 | 6.85 | 14.76 | M24 | 1.50 |
| HG100006 | 26.14 | 32.05 | 17.01 | 22.05 | 13.50 | 12.72 | 6.85 | 14.76 | M24 | 1.50 |
| HG100012 | 32.05 | 43.86 | 17.01 | 22.05 | 13.50 | 12.72 | 6.85 | 14.76 | M24 | 1.50 |

# High Tonnage Double Acting Cylinders

***HDG Series - Heavy Lifting***






## Capacity:

100-1,500 Tons

## Stroke:

1.97 - 11.81 Inches

## Max. Operating Pressure:

10,000 psi

## Min. - Max. Height:

7.17 - 43.80 Inches

CE



**Safety Instructions**

Visit our DO'S and DON'TS section to review the best methods of operation. Always be prepared.

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**Related Product: Hoses**

We offer a variety of hoses, fittings, lengths and materials.

pg 72



**Flow Control Valves**

Control the speed of your cylinder by adding a flow control valve.

pg 66

- Cylinders are burnish rolled creating a smoother finish than honing
- Industrial hard chrome plated rod prevents scratching and corrosion
- Base mounting holes standard on all models
- Rod wiper seals out dirt and contamination
- High strength steel construction from gun drilled solid bar
- High flow 3/8″ NPTF couplers
- Maximum working pressure: 10,000 psi / 700 bar
- Custom sizes are available upon request

### Gas/Diesel Engine Pumps

These HDG cylinders pair up well with a Gas or Diesel Engine pumps. We offer a variety of different flow rates, motor sizes and reservoir sizes on our gas/diesel engine pumps. Contact your local BVA dealer for more details.



*PG70M4N05*

- Gas engine pump will provide 10,000 psi. hydraulic force at remote locations
- Industrial grade 5.5 or 10.2 hp Honda gas engine or 7.3 hp HATZ diesel engine.
- Ideal for applications where electricity isn't easily accessible.
- Two speed pump designed for rapid cylinder advance
- Gas pump features a sturdy protective roll cage for use in the toughest environments
- Optional electric start

### Electric Motor Pumps

These HDG cylinders pair up well with Electric Motor pumps. We offer a variety of different flow rates and motor sizes on our electric motor pumps. Contact your local BVA dealer for more details.



*PE50W4N03A*

- Meets OSHA regulations for sound (80dBA)
- Two speed pump designed for rapid cylinder advance
- Internal filter screens contamination to prevent pump damage
- All units are wired as 120 VAC 60 Hz; Optional wiring includes 50 Hz motors and 240VAC 60Hz
- 100% Duty Cycle TEFC motors
- All hand pendants are wired at 24VAC for safety
- Full load starting capability



1-888-332-6419
www.BVAhydraulics.com

# Quick Reference Guide

| Cylinder Capacity (tons) | Stroke (in) | Model Number | Collapsed Height (in) | Oil Capacity ($in^3$) | Weight (lbs) |
|---|---|---|---|---|---|
| 100 | 1.97 | HDG10002 | 7.17 | 40.50 | 61.0 |
| | 3.94 | HDG10004 | 9.13 | 81.00 | 74.0 |
| | 5.91 | HDG10006 | 11.10 | 121.50 | 87.0 |
| | 7.87 | HDG10008 | 13.07 | 161.99 | 100.0 |
| | 9.84 | HDG10010 | 15.04 | 202.49 | 114.0 |
| | 11.81 | HDG10012 | 17.01 | 242.99 | 127.0 |
| 150 | 1.97 | HDG15002 | 7.72 | 59.89 | 102.0 |
| | 3.94 | HDG15004 | 9.69 | 119.78 | 122.0 |
| | 5.91 | HDG15006 | 11.65 | 181.75 | 142.0 |
| | 7.87 | HDG15008 | 13.62 | 239.57 | 162.0 |
| | 9.84 | HDG15010 | 15.59 | 299.46 | 181.0 |
| | 11.81 | HDG15012 | 17.56 | 359.35 | 202.0 |
| 200 | 1.97 | HDG20002 | 8.50 | 80.68 | 121.0 |
| | 5.91 | HDG20006 | 12.44 | 243.40 | 201.0 |
| | 7.87 | HDG20008 | 14.41 | 322.73 | 242.0 |
| | 11.81 | HDG20012 | 18.35 | 486.79 | 322.0 |
| 300 | 1.97 | HDG30002 | 12.28 | 139.19 | 406.0 |
| | 5.91 | HDG30006 | 16.22 | 417.56 | 511.0 |
| | 11.81 | HDG30012 | 22.13 | 835.11 | 668.0 |
| 400 | 1.97 | HDG40002 | 14.74 | 170.84 | 595.0 |
| | 5.91 | HDG40006 | 18.68 | 512.51 | 728.0 |
| | 12.01 | HDG40012 | 24.61 | 1042.10 | 928.0 |
| 500 | 1.97 | HDG50002 | 16.50 | 222.92 | 884.0 |
| | 5.91 | HDG50006 | 20.43 | 668.77 | 1058.0 |
| | 11.81 | HDG50012 | 26.34 | 1337.56 | 1321.0 |
| 600 | 1.97 | HDG60002 | 16.89 | 260.97 | 1045.0 |
| | 5.91 | HDG60006 | 20.83 | 782.90 | 1246.0 |
| | 9.84 | HDG60010 | 19.88 | 1408.93 | 948.0 |
| | 11.81 | HDG60012 | 26.73 | 1566.00 | 1545.0 |
| 800 | 1.97 | HDG80002 | 18.66 | 358.91 | 1634.0 |
| | 5.91 | HDG80006 | 22.60 | 1077.00 | 1914.0 |
| | 11.81 | HDG80012 | 28.50 | 2153.00 | 2332.0 |
| 1000 | 1.97 | HDG100002 | 22.20 | 447.23 | 2341.0 |
| | 5.91 | HDG100006 | 26.14 | 1342.00 | 2674.0 |
| | 11.81 | HDG100012 | 32.05 | 2683.00 | 3172.0 |
| 1100-1500 | For these higher tonnages, contact your local BVA dealer for pricing and details | | | | |

*See next pages (pg.20-21) to view more detail stats on High Tonnage Single Acting Cylinders.*



***HDG Series***

### Safety Practices

80%

Good industry practice recommends not exceeding 80% of maximum rated capacities of all our products.

### Related Product: Gauges



Reduce the risk of overloading your product by using a gauge. A variety of graduations and types to suit any need.

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### High-Flow Couplers



High-Flow Coupler: CH38F is included on all models (except where specified).

### Safety Check: CVP3-K



Pilot operated check valve kit. Used to hold the load in the event of a pressure loss in the system.

### Relief Valve

All double acting cylinders are equipped with a pressure relief valve located next to the retract port. These pressure relief valves help prevent cylinder over pressurization on the return port side of the cylinder.



### Optional Tilt-Saddles



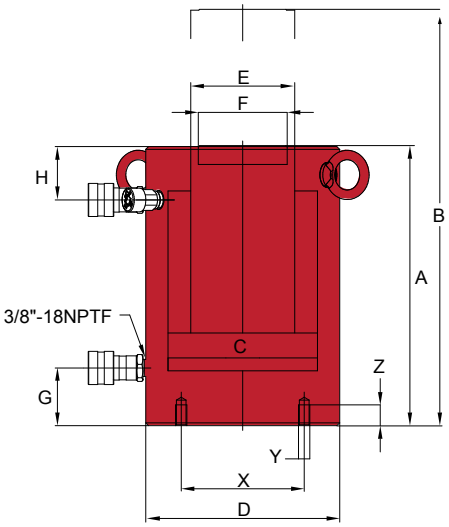
Saddles tilt to a 5% maximum to adjust to the load. View our cylinder accessories page to figure out what saddle best fits these cylinders.

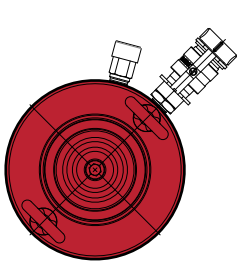
pg 35

# High Tonnage Double Acting Cylinders

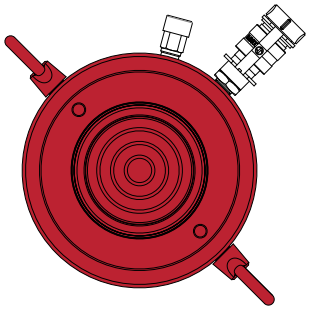


***HDG Series - Heavy Lifting***

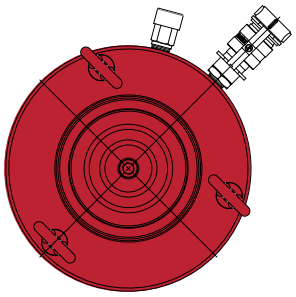


*HDG100*



*HDG150*



*HDG200*

| Cylinder Capacity (tons) | Stroke (in) | Model Number | Maximum Cylinder Capacity (ton) | | Cylinder Effective Area (in²) | | Oil Capacity (in³) | | Weight (lbs) |
|---|---|---|---|---|---|---|---|---|---|
| | | | Push | Pull | Push | Pull | Push | Pull | |
| 100 | 1.97 | HDG10002 | 102.86 | 47.93 | 20.57 | 9.59 | 40.50 | 18.87 | 61.0 |
| | 3.94 | HDG10004 | 102.86 | 47.93 | 20.57 | 9.59 | 81.00 | 37.74 | 74.0 |
| | 5.91 | HDG10006 | 102.86 | 47.93 | 20.57 | 9.59 | 121.50 | 56.61 | 87.0 |
| | 7.87 | HDG10008 | 102.86 | 47.93 | 20.57 | 9.59 | 161.99 | 75.49 | 100.0 |
| | 9.84 | HDG10010 | 102.86 | 47.93 | 20.57 | 9.59 | 202.49 | 94.36 | 114.0 |
| | 11.81 | HDG10012 | 102.86 | 47.93 | 20.57 | 9.59 | 242.99 | 113.23 | 127.0 |
| 150 | 1.97 | HDG15002 | 152.15 | 78.50 | 30.43 | 15.70 | 59.89 | 30.90 | 102.0 |
| | 3.94 | HDG15004 | 152.15 | 78.50 | 30.43 | 15.70 | 119.78 | 61.79 | 122.0 |
| | 5.91 | HDG15006 | 152.15 | 78.50 | 30.43 | 15.70 | 181.75 | 88.32 | 142.0 |
| | 7.87 | HDG15008 | 152.15 | 78.50 | 30.43 | 15.70 | 239.57 | 123.59 | 162.0 |
| | 9.84 | HDG15010 | 152.15 | 78.50 | 30.43 | 15.70 | 299.46 | 154.48 | 181.0 |
| | 11.81 | HDG15012 | 152.15 | 78.50 | 30.43 | 15.70 | 359.35 | 185.38 | 202.0 |
| 200 | 1.97 | HDG20002 | 204.95 | 94.00 | 40.99 | 18.80 | 80.68 | 37.01 | 121.0 |
| | 5.91 | HDG20006 | 204.95 | 94.00 | 40.99 | 18.80 | 243.40 | 116.23 | 201.0 |
| | 7.87 | HDG20008 | 204.95 | 94.00 | 40.99 | 18.80 | 322.73 | 148.03 | 242.0 |
| | 11.81 | HDG20012 | 204.95 | 94.00 | 40.99 | 18.80 | 486.79 | 232.46 | 322.0 |
| 300 | 1.97 | HDG30002 | 353.60 | 117.00 | 70.71 | 23.46 | 139.19 | 46.18 | 406.0 |
| | 5.91 | HDG30006 | 353.60 | 117.00 | 70.71 | 23.46 | 417.56 | 138.55 | 511.0 |
| | 11.81 | HDG30012 | 353.60 | 117.00 | 70.71 | 23.46 | 835.11 | 277.10 | 668.0 |
| 400 | 1.97 | HDG40002 | 433.90 | 152.55 | 86.78 | 30.51 | 170.84 | 59.03 | 595.0 |
| | 5.91 | HDG40006 | 433.90 | 152.55 | 86.78 | 30.51 | 512.51 | 177.09 | 728.0 |
| | 12.01 | HDG40012 | 433.90 | 152.55 | 86.78 | 30.51 | 1042.10 | 366.38 | 928.0 |
| 500 | 1.97 | HDG50002 | 566.30 | 192.00 | 113.25 | 38.37 | 222.92 | 75.54 | 884.0 |
| | 5.91 | HDG50006 | 566.30 | 192.00 | 113.25 | 38.37 | 668.77 | 226.61 | 1058.0 |
| | 11.81 | HDG50012 | 566.30 | 192.00 | 113.25 | 38.37 | 1337.56 | 453.23 | 1321.0 |
| 600 | 1.97 | HDG60002 | 662.90 | 229.00 | 132.57 | 45.79 | 260.97 | 90.13 | 1045.0 |
| | 5.91 | HDG60006 | 662.90 | 229.00 | 132.57 | 45.79 | 782.90 | 270.39 | 1246.0 |
| | 9.84 | HDG60010 | 670.90 | 352.85 | 134.18 | 70.57 | 1408.93 | 740.94 | 948.0 |
| | 11.81 | HDG60012 | 662.90 | 229.00 | 132.57 | 45.79 | 1566.00 | 540.79 | 1545.0 |
| 800 | 1.97 | HDG80002 | 911.60 | 300.00 | 182.32 | 59.99 | 358.91 | 118.09 | 1634.0 |
| | 5.91 | HDG80006 | 911.60 | 300.00 | 182.32 | 59.99 | 1077.00 | 354.28 | 1914.0 |
| | 11.81 | HDG80012 | 911.60 | 300.00 | 182.32 | 59.99 | 2153.00 | 708.57 | 2332.0 |
| 1000 | 1.97 | HDG100002 | 1136.00 | 420.00 | 227.19 | 83.97 | 447.23 | 165.29 | 2341.0 |
| | 5.91 | HDG100006 | 1136.00 | 420.00 | 227.19 | 83.97 | 1342.00 | 495.87 | 2674.0 |
| | 11.81 | HDG100012 | 1136.00 | 420.00 | 227.19 | 83.97 | 2683.00 | 991.75 | 3172.0 |

### Relief Valve

All double acting cylinders are equipped with a pressure relief valve located next to the retract port. These pressure relief valves help prevent cylinder over pressurization on the return port side of the cylinder.



### Safety Instructions



Visit our DO'S and DON'TS section to review the best methods of operation. Always be prepared.

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### Related Product: CVP3-K



Pilot operated check valve kit. Used to hold the load in the event of a pressure loss in the system.

### High-Flow Couplers



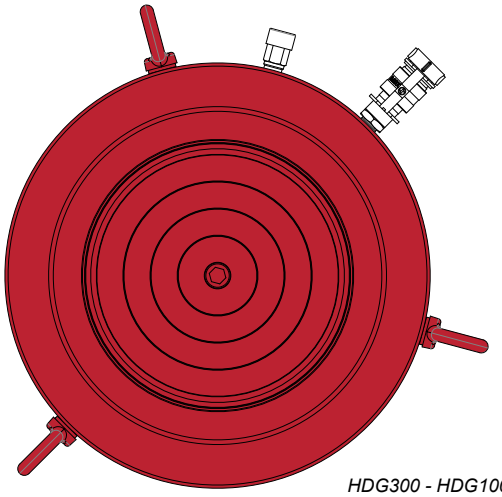
High-Flow Coupler: CH38F is included on all models (except where specified).

### Optional Tilt-Saddles



Saddles tilt to a 5% maximum to adjust to the load. View our cylinder accessories page to figure out what saddle best fits these cylinders.

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HDG300 - HDG1000



## HDG Series

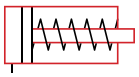
**Safety Practices**

80%

Good industry practice recommends not exceeding 80% of maximum rated capacities of all our products.

| Model Number | Collapsed Height A (in) | Extended Height B (in) | Cylinder Bore Dia. C (in) | Outside Dia. D (in) | Rod Dia. E (in) | Saddle Dia. F (in) | Base To Adv. Port G (in) | Top To Retract Port H (in) | Base Mounting Holes | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Bolt Circle X (in) | Thread Size (mm) | Thread Depth Z (in) |
| HDG10002 | 7.17 | 9.14 | 5.12 | 6.50 | 3.74 | 2.95 | 2.13 | 1.89 | 3.74 | M12 | 0.87 |
| HDG10004 | 9.13 | 13.07 | 5.12 | 6.50 | 3.74 | 2.95 | 2.13 | 1.89 | 3.74 | M12 | 0.87 |
| HDG10006 | 11.10 | 17.01 | 5.12 | 6.50 | 3.74 | 2.95 | 2.13 | 1.89 | 3.74 | M12 | 0.87 |
| HDG10008 | 13.07 | 20.94 | 5.12 | 6.50 | 3.74 | 2.95 | 2.13 | 1.89 | 3.74 | M12 | 0.87 |
| HDG10010 | 15.04 | 24.88 | 5.12 | 6.50 | 3.74 | 2.95 | 2.13 | 1.89 | 3.74 | M12 | 0.87 |
| HDG10012 | 17.01 | 28.82 | 5.12 | 6.50 | 3.74 | 2.95 | 2.13 | 1.89 | 3.74 | M12 | 0.87 |
| HDG15002 | 7.72 | 9.69 | 6.22 | 8.07 | 4.33 | 3.70 | 2.40 | 2.22 | 5.12 | M12 | 0.87 |
| HDG15004 | 9.69 | 13.62 | 6.22 | 8.07 | 4.33 | 3.70 | 2.40 | 2.22 | 5.12 | M12 | 0.87 |
| HDG15006 | 11.65 | 17.56 | 6.22 | 8.07 | 4.33 | 3.70 | 2.40 | 2.22 | 5.12 | M12 | 0.87 |
| HDG15008 | 13.62 | 21.50 | 6.22 | 8.07 | 4.33 | 3.70 | 2.40 | 2.22 | 5.12 | M12 | 0.87 |
| HDG15010 | 15.59 | 25.43 | 6.22 | 8.07 | 4.33 | 3.70 | 2.40 | 2.22 | 5.12 | M12 | 0.87 |
| HDG15012 | 17.56 | 29.37 | 6.22 | 8.07 | 4.33 | 3.70 | 2.40 | 2.22 | 5.12 | M12 | 0.87 |
| HDG20002 | 8.50 | 10.47 | 7.22 | 9.25 | 5.31 | 4.45 | 2.62 | 2.22 | 6.50 | M12 | 0.80 |
| HDG20006 | 12.44 | 18.35 | 7.24 | 9.25 | 5.31 | 4.45 | 2.62 | 2.22 | 6.50 | M12 | 0.80 |
| HDG20008 | 14.41 | 22.28 | 7.22 | 9.25 | 5.31 | 4.45 | 2.62 | 2.22 | 6.50 | M12 | 0.80 |
| HDG20012 | 18.35 | 30.16 | 7.24 | 9.25 | 5.31 | 4.45 | 2.62 | 2.22 | 6.50 | M12 | 0.80 |
| HDG30002 | 12.28 | 14.25 | 9.49 | 12.20 | 7.76 | 6.97 | 3.98 | 2.95 | 7.09 | M16 | 1.42 |
| HDG30006 | 16.22 | 22.13 | 9.49 | 12.20 | 7.76 | 6.97 | 3.98 | 2.95 | 7.09 | M16 | 1.42 |
| HDG30012 | 22.13 | 33.94 | 9.49 | 12.20 | 7.76 | 6.97 | 3.98 | 2.95 | 7.09 | M16 | 1.42 |
| HDG40002 | 14.74 | 16.71 | 10.51 | 13.78 | 8.50 | 7.72 | 4.49 | 4.13 | 8.07 | M16 | 1.42 |
| HDG40006 | 18.68 | 24.59 | 10.51 | 13.78 | 8.50 | 7.72 | 4.49 | 4.13 | 8.07 | M16 | 1.42 |
| HDG40012 | 24.59 | 36.40 | 10.51 | 13.78 | 8.50 | 7.72 | 4.49 | 4.13 | 8.07 | M16 | 1.42 |
| HDG50002 | 16.50 | 18.46 | 12.01 | 15.75 | 9.76 | 8.98 | 4.49 | 5.31 | 9.84 | M24 | 1.50 |
| HDG50006 | 20.43 | 26.34 | 12.01 | 15.75 | 9.76 | 8.98 | 4.49 | 5.31 | 9.84 | M24 | 1.50 |
| HDG50012 | 26.34 | 38.15 | 12.01 | 15.75 | 9.76 | 8.98 | 4.49 | 5.31 | 9.84 | M24 | 1.50 |
| HDG60002 | 16.89 | 18.86 | 12.99 | 16.93 | 10.51 | 9.72 | 4.49 | 5.31 | 10.83 | M24 | 1.50 |
| HDG60006 | 20.83 | 26.73 | 12.99 | 16.93 | 10.51 | 9.72 | 4.49 | 5.31 | 10.83 | M24 | 1.50 |
| HDG60010 | 18.00 | 28.50 | 13.07 | 17.05 | 9.00 | 7.87 | 4.49 | 5.31 | 10.83 | M24 | 1.50 |
| HDG60012 | 26.73 | 38.54 | 12.99 | 16.93 | 10.51 | 9.72 | 4.49 | 5.31 | 10.83 | M24 | 1.50 |
| HDG80002 | 18.66 | 20.63 | 15.24 | 19.88 | 12.48 | 11.69 | 5.87 | 5.31 | 12.99 | M24 | 1.50 |
| HDG80006 | 22.60 | 28.50 | 15.24 | 19.88 | 12.48 | 11.69 | 5.87 | 5.31 | 12.99 | M24 | 1.50 |
| HDG80012 | 28.50 | 40.31 | 15.24 | 19.88 | 12.48 | 11.69 | 5.87 | 5.31 | 12.99 | M24 | 1.50 |
| HDG100002 | 22.20 | 24.17 | 17.01 | 22.05 | 13.50 | 12.72 | 6.85 | 6.69 | 14.76 | M24 | 1.50 |
| HDG100006 | 26.14 | 32.05 | 17.01 | 22.05 | 13.50 | 12.72 | 6.85 | 6.69 | 14.76 | M24 | 1.50 |
| HDG100012 | 32.05 | 43.86 | 17.01 | 22.05 | 13.50 | 12.72 | 6.85 | 6.69 | 14.76 | M24 | 1.50 |

# Low Profile Cylinders



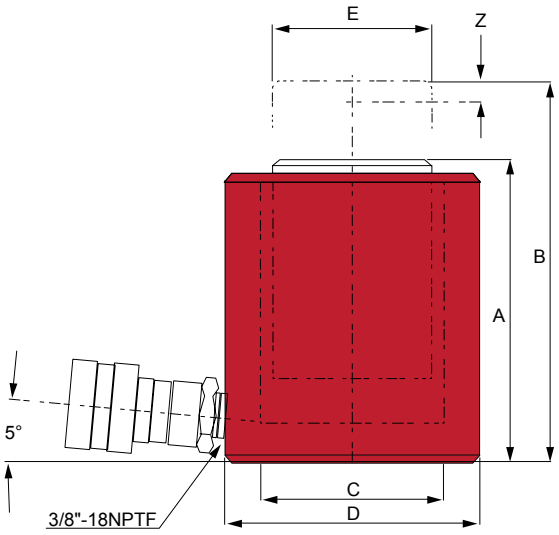
***HL Series - Low Clearance Lifting***

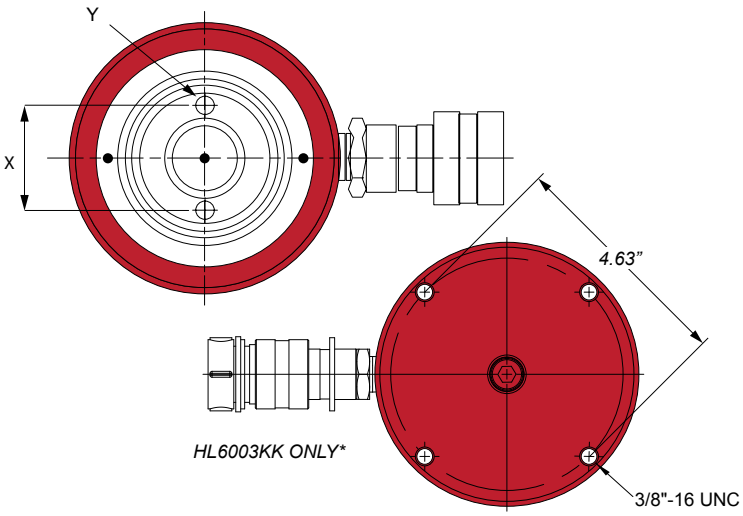
- Compact design for use in confined spaces
- Rod wiper helps seal out dirt and contamination
- Specially designed return spring provides quick retraction and extends the life of the spring
- Hard chrome plated rod helps prevent scratching and corrosion
- Rod end is grooved to reduce load slippage
- Includes high flow coupler and dust cap
- HL1001, HL2002, and HL3002 coupler is tilted 5° for added clearance




***HL Series***

CE




*Low profile cylinders are great for confined spaces.*

| Cylinder Capacity (tons) | Stroke (in) | Model Number | Cylinder Effective Area ($in^2$) | Internal Pressure at Capacity (psi) | Oil Capacity ($in^3$) | Weight (lbs) |
|---|---|---|---|---|---|---|
| 10 | 1.50 | HL1001 | 2.35 | 8,511 | 3.53 | 5.7 |
| 20 | 1.75 | HL2002 | 4.37 | 9,153 | 7.65 | 11.0 |
| 30 | 2.44 | HL3002 | 6.49 | 9,245 | 15.84 | 15.0 |
| 50 | 2.36 | HL5002 | 9.87 | 10,132 | 23.29 | 21.8 |
| 60 | 2.50 | HL6003KK* | 12.57 | 10,183 | 31.40 | 28.0 |
| 100 | 2.24 | HL10002 | 19.64 | 10,183 | 44.07 | 45.4 |




| Model Number | Collapsed Height A (in) | Extended Height B (in) | Cylinder Bore Diameter C (in) | Outside Diameter D (in) | Rod Diameter E (in) | Rod Mounting | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Bolt Circle X (in) | Thread Y (mm) | Thread Depth Z (in) |
| HL1001 | 3.48 | 4.98 | 1.73 | 2.75 | 1.50 | 1.03 | M4 x 0.7 | 0.32 |
| HL2002 | 3.90 | 5.65 | 2.36 | 3.63 | 2.00 | 1.56 | M5 x 0.8 | 0.32 |
| HL3002 | 4.61 | 7.05 | 2.87 | 4.00 | 2.50 | 1.56 | M5 x 0.8 | 0.32 |
| HL5002 | 4.80 | 7.17 | 3.54 | 4.88 | 2.76 | 1.56 | M5 x 0.8 | 0.45 |
| HL6003KK* | 5.63 | 8.13 | 4.00 | 5.26 | 3.15 | - | - | - |
| HL10002 | 5.55 | 7.80 | 5.00 | 6.50 | 3.54 | 2.19 | M8 x 1.25 | 0.60 |

** HL6003KK is equipped with 4x 3/8"-16UMC mounting holes*



1-888-332-6419
www.BVAhydraulics.com

# Low Profile Cylinders Combo Kit

***Low Clearance Lifting***




*J72101*

***HL Series***

- Compact design for use in confined spaces
- Ideal for pushing applications
- Rod wiper helps seal out dirt and contamination
- Return spring ensures a quick retraction and extends the life of the spring
- Industrial hard chrome plated rod helps prevent scratching and corrosion
- Includes stackable 1″, 2″, and 3″ aluminum adapters that conveniently snap into the base of the Cylinder
- Includes high flow CH38F coupler and dust cap
- Convenient storage case




**80%**

**Safety Practices**

Good industry practice recommends not exceeding 80% of maximum rated capacities of all our products.



**Related Product: Hoses**

We offer a variety of hoses, fittings, lengths and materials.

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**High-Flow Couplers**

High-Flow Coupler: CH38F is included on all models (except where specified).

| Cylinder Capacity (ton) | Model Number | Stroke (in) | Cylinder Effective Area ($in^2$) | Collapsed Height (in) | Extended Height w/o adapter (in) | Internal Pressure at Capacity (psi) | Cylinder Housing Diameter (in) | Rod Diameter (in) | Weight (lbs) |
|---|---|---|---|---|---|---|---|---|---|
| 10 | J72101 | 1.50 | 2.35 | 3.48 | 4.98 | 8,511 | 2.75 | 1.50 | 10 .0 |



*SDTL50*

*SDTL100*



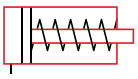
*SDTL10*

## Bolt-On Tilt Saddles

Bolt-On tilt saddles are designed specifically for use with the HL Series Low Profile Cylinders and Low Profile Cylinder Kit. These saddles provide a max. 5° tilt for uneven loads.

| Model Number | Height (in) | Description |
|---|---|---|
| SDTL10 | 0.83 | J72101, HL1001 Cylinder Kit |
| SDTL50 | 1.14 | HL5002 Cylinder |
| SDTL100 | 1.39 | HL10002 Cylinder |

# Flat Body Cylinders

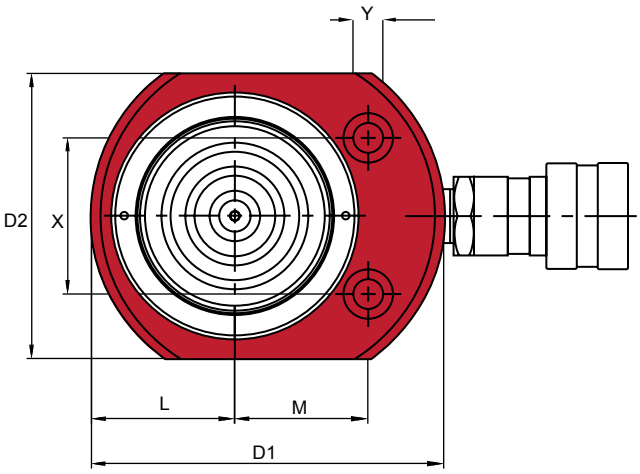


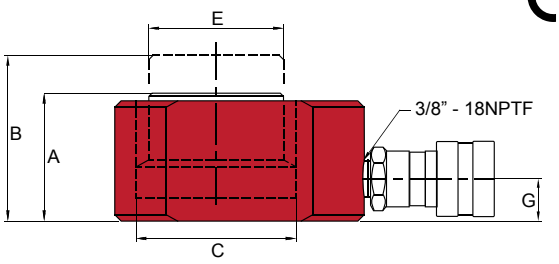
***HF Series - Extremely Low Lifting***

- Extremely low collapsed height for applications with minimal clearance at the lift point
- Maximum working pressure 10,000 psi / 700 bar
- HF0503 and HF0503B come with a 3/8″ regular flow coupler




***HF Series***




*HF5006 in the collapsed position ready to lift a load with a PA1500 foot pump.*




| Cylinder Capacity (tons) | Stroke (in) | Model Number | Cylinder Effective Area ($in^2$) | Internal Pressure at Capacity (psi) | Oil Capacity ($in^3$) | Weight (lbs) |
|---|---|---|---|---|---|---|
| 5 | 0.24 | HF0503* | 1.10 | 9,090 | 0.26 | 1.3 |
| 10 | 0.43 | HF1005 | 2.36 | 8,470 | 1.01 | 3.3 |
| 20 | 0.43 | HF2005 | 4.38 | 9,130 | 1.88 | 5.9 |
| 30 | 0.51 | HF3005 | 6.49 | 9,240 | 3.31 | 9.7 |
| 50 | 0.63 | HF5006 | 9.86 | 10,140 | 6.21 | 14.9 |
| 75 | 0.63 | HF7506 | 16.10 | 9,320 | 10.14 | 25.4 |
| 100 | 0.63 | HF10006 | 19.64 | 10,180 | 12.37 | 31.5 |
| 150 | 0.63 | HF15006 | 30.67 | 9,780 | 19.32 | 53.4 |

| Model Number | Collapsed Height A (in) | Extended Height B (in) | Cylinder Bore Dia. C (in) | Outside Dia. D1 x D2 D (in) | Rod Dia. E (in) | Base to Port G (in) | Rod to Base L (in) | Rod to Mtg. Hole M (in) | Hole Pitch X (in) | Hole Dia. Y (in) | Counter Bore Dia. (in) | Counter Bore Depth (in) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HF0503* | 1.26 | 1.50 | 1.18 | 2.4x1.6 | 0.98 | 0.69 | 0.80 | 0.87 | 1.12 | 0.20 | 0.31 | 0.17 |
| HF1005 | 1.69 | 2.12 | 1.73 | 3.3x2.2 | 1.50 | 0.77 | 1.12 | 1.32 | 1.44 | 0.28 | 0.42 | 0.31 |
| HF2005 | 2.01 | 2.44 | 2.36 | 4.0x3.0 | 2.00 | 0.75 | 1.54 | 1.56 | 1.94 | 0.40 | 0.59 | 0.39 |
| HF3005 | 2.31 | 2.82 | 2.87 | 4.6x3.8 | 2.50 | 0.79 | 1.88 | 1.75 | 2.06 | 0.40 | 0.63 | 0.44 |
| HF5006 | 2.64 | 3.27 | 3.54 | 4.5x4.5 | 2.76 | 0.79 | 2.25 | 2.13 | 2.62 | 0.43 | 0.75 | 0.50 |
| HF7506 | 3.13 | 3.76 | 4.53 | 6.5x5.5 | 3.54 | 0.77 | 2.75 | 2.63 | 3.00 | 0.51 | 0.83 | 0.56 |
| HF10006 | 3.37 | 4.00 | 5.00 | 7.0x6.0 | 3.54 | 0.79 | 3.00 | 2.94 | 3.00 | 0.51 | 0.83 | 0.56 |
| HF15006 | 3.94 | 4.57 | 6.25 | 8.5x7.5 | 4.65 | 0.94 | 3.75 | 3.25 | 4.62 | 0.51 | 0.83 | 0.56 |

**HF0503 comes equipped with the CR38F coupler instead of CH38F*



1-888-332-6419
www.BVAhydraulics.com

# Flat Body Cylinder Kits

***HF Series - Kits***



***HF Series***

- Various height stackable magnetic adapters eliminate dangerous cribbing
- Convenient carrying case
- Magnetic adapters are stackable
- U.S. Patent No.7,237,762 B2

**80%**

**Safety Practices**

Good industry practice recommends not exceeding 80% of maximum rated capacities of all our products.

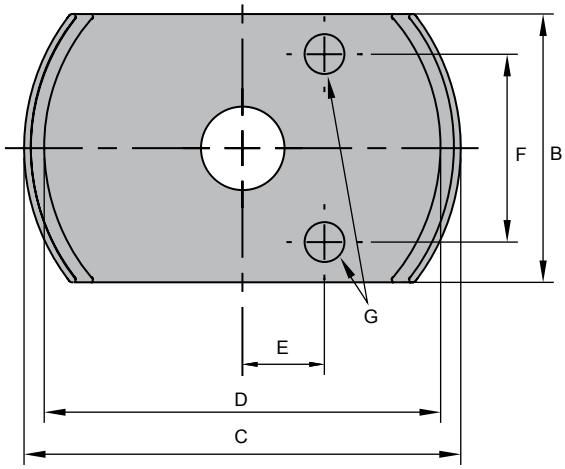


**High-Flow Couplers**

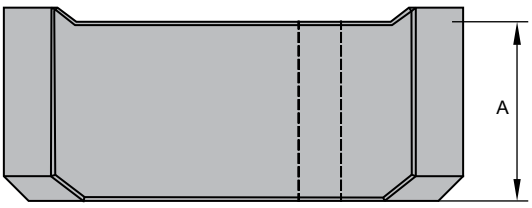
High-Flow Coupler: CH38F is included on all models (except where specified)

CE

*Magnetic Shim*




*Magnetic Shim*




| Cylinder Capacity (tons) | Stroke (in) | Model Number | Cylinder Model | Oil Capacity ($in^3$) | Collapsed Height (in) | Weight (lbs) | Adapter Dimensions | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | A (in) | B (in) | C (in) | D (in) | E (in) | F (in) | G (in) |
| 5 | 0.24 | HF0503B** | HF0503 | 0.26 | 1.26 | 5.5 | 0.17 | 1.61 | 2.56 | 2.32 | 0.48 | 1.10 | 0.24 |
| | | | | | | | 0.42 | 1.61 | 2.56 | 2.32 | 0.48 | 1.10 | 0.24 |
| | | | | | | | 0.92 | 1.61 | 2.56 | 2.32 | 0.48 | 1.10 | 0.24 |
| | | | | | | | 1.17 | 1.61 | 2.56 | 2.32 | 0.48 | 1.10 | 0.24 |
| 10 | 0.43 | HF1005B | HF1005 | 1.01 | 1.69 | 9.2 | 0.39 | 2.20 | 3.54 | 3.23 | 0.81 | 1.46 | 0.28 |
| | | | | | | | 0.79 | 2.20 | 3.54 | 3.23 | - | - | - |
| | | | | | | | 1.57 | 2.20 | 3.54 | 3.23 | - | - | - |
| 20 | 0.43 | HF2005B | HF2005 | 1.88 | 2.01 | 15.0 | 0.39 | 2.99 | 4.25 | 3.94 | 1.08 | 1.93 | 0.39 |
| | | | | | | | 0.79 | 2.99 | 4.25 | 3.94 | - | - | - |
| | | | | | | | 1.57 | 2.99 | 4.25 | 3.94 | - | - | - |
| 30 | 0.51 | HF3005B | HF3005 | 3.31 | 2.31 | 21.0 | 0.39 | 3.75 | 4.76 | 4.45 | 1.32 | 2.06 | 0.39 |
| | | | | | | | 0.79 | 3.75 | 4.76 | 4.45 | - | - | - |
| | | | | | | | 1.57 | 3.75 | 4.76 | 4.45 | - | - | - |
| 50 | 0.63 | HF5006B | HF5006 | 6.21 | 2.64 | 32.3 | 0.39 | 4.49 | 5.89 | 5.57 | 1.61 | 2.62 | 0.43 |
| | | | | | | | 0.79 | 4.49 | 5.89 | 5.57 | - | - | - |
| | | | | | | | 1.57 | 4.49 | 5.89 | 5.57 | - | - | - |

***HF0503B comes equipped with the coupler CR38F*

# Lock Nut Cylinders

***HLN Series - Heavy Lifting w/ Mechanical Lock Nut***




## Capacity:

55-300 Tons

## Stroke:

1.97 - 11.81 Inches

## Max. Operating Pressure:

10,000 psi

## Min. - Max. Height:

6.50 - 33.27 Inches

CE

- Single acting cylinder with mechanical safety lock nut
- Designed to support loads without hydraulic pressure
- Overflow port prevents cylinders from over travel
- Load return
- Solid steel cylinder body
- Electroless nickel plated rod to resist corrosion and rust
- Maximum working pressure: 10,000 psi / 700 bar

**Optional Tilt Saddles**

| | | |
|---|---|---|
| SDT55 | → | HLN55, HLN100 Cylinders |
| SDT200 | → | HLN150, HLN200 Cylinders |



Saddles tilt to a 5° max to adjust to the load.

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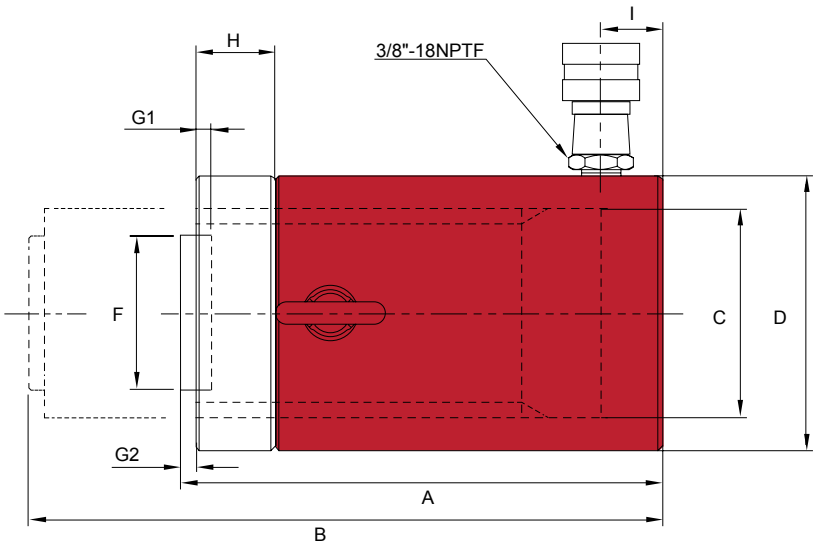
| Cylinder Capacity (tons) | Stroke (in) | Model Number | Cylinder Effective Area ($in^2$) | Oil Capacity ($in^3$) | Weight (lbs) |
|---|---|---|---|---|---|
| 55 | 1.97 | HLN5502 | 10.99 | 21.65 | 34.0 |
| | 3.94 | HLN5504 | 10.99 | 43.27 | 45.0 |
| | 5.91 | HLN5506 | 10.99 | 64.90 | 55.0 |
| | 7.87 | HLN5508 | 10.99 | 86.54 | 66.0 |
| | 9.84 | HLN5510 | 10.99 | 108.17 | 77.0 |
| | 11.81 | HLN5512 | 10.99 | 129.80 | 87.0 |
| 100 | 1.97 | HLN10002 | 20.57 | 40.49 | 67.0 |
| | 3.94 | HLN10004 | 20.57 | 80.98 | 86.0 |
| | 5.91 | HLN10006 | 20.57 | 121.48 | 104.0 |
| | 7.87 | HLN10008 | 20.57 | 161.97 | 123.0 |
| | 9.84 | HLN10010 | 20.57 | 202.46 | 141.0 |
| | 11.81 | HLN10012 | 20.57 | 242.95 | 160.0 |
| 150 | 1.97 | HLN15002 | 31.16 | 61.39 | 116.0 |
| | 3.94 | HLN15004 | 31.16 | 122.79 | 145.0 |
| | 5.91 | HLN15006 | 31.16 | 184.18 | 174.0 |
| | 7.87 | HLN15008 | 31.16 | 245.27 | 202.0 |
| | 9.84 | HLN15010 | 31.16 | 306.66 | 231.0 |
| | 11.81 | HLN15012 | 31.16 | 368.05 | 259.0 |
| 200 | 1.97 | HLN20002 | 41.00 | 80.70 | 181.0 |
| | 3.94 | HLN20004 | 41.00 | 161.38 | 218.0 |
| | 5.91 | HLN20006 | 41.00 | 242.00 | 256.0 |
| | 7.87 | HLN20008 | 41.00 | 323.00 | 293.0 |
| | 9.84 | HLN20010 | 41.00 | 403.50 | 331.0 |
| | 11.81 | HLN20012 | 41.00 | 484.15 | 368.0 |
| 250 | 1.97 | HLN25002 | 56.27 | 110.77 | 253.0 |
| | 5.91 | HLN25006 | 56.27 | 332.32 | 356.0 |
| | 11.81 | HLN25012 | 56.27 | 664.64 | 510.0 |
| 300 | 1.97 | HLN30002 | 70.41 | 138.61 | 379.0 |
| | 5.91 | HLN30006 | 70.41 | 415.83 | 510.0 |
| | 11.81 | HLN30012 | 70.41 | 831.66 | 706.0 |

*(42) HLN5508 lock nut cylinders lifting the Jordan Bridge in Chesapeake, VA.*





1-888-332-6419
www.BVAhydraulics.com






## HLN Series

### Safety Color Band



BVA Lock nut cylinders are equipped with a yellow safety band. Do not extend the ram beyond this point as it may result in a loss of hydraulic oil and damage to the cylinder and/or load.

### Safety Practices

80%

Good industry practice recommends not exceeding 80% of maximum rated capacities of all our products.

| Model Number | Collapsed Height A (in) | Extended Height B (in) | Cylinder Bore Diameter C (in) | Outside Diameter D (in) | Saddle Diameter F (in) | Depth of Rod Hole G1 (in) | Saddle Protrusion From Rod G2 (in) | Lock Nut Length H (in) | Base to Inlet Port I (in) |
|---|---|---|---|---|---|---|---|---|---|
| HLN5502 | 6.50 | 8.40 | 3.70 | 4.90 | 2.80 | 0.51 | 0.08 | 1.40 | 1.10 |
| HLN5504 | 8.40 | 12.40 | 3.70 | 4.90 | 2.80 | 0.51 | 0.08 | 1.40 | 1.10 |
| HLN5506 | 10.40 | 16.30 | 3.70 | 4.90 | 2.80 | 0.51 | 0.08 | 1.40 | 1.10 |
| HLN5508 | 12.40 | 20.20 | 3.70 | 4.90 | 2.80 | 0.51 | 0.08 | 1.40 | 1.10 |
| HLN5510 | 14.30 | 24.20 | 3.70 | 4.90 | 2.80 | 0.51 | 0.08 | 1.40 | 1.10 |
| HLN5512 | 16.30 | 28.10 | 3.70 | 4.90 | 2.80 | 0.51 | 0.08 | 1.40 | 1.10 |
| HLN10002 | 7.40 | 9.30 | 5.10 | 6.50 | 2.80 | 0.51 | 0.08 | 1.80 | 1.10 |
| HLN10004 | 9.30 | 13.30 | 5.10 | 6.50 | 2.80 | 0.51 | 0.08 | 1.80 | 1.10 |
| HLN10006 | 11.30 | 17.20 | 5.10 | 6.50 | 2.80 | 0.51 | 0.08 | 1.80 | 1.10 |
| HLN10008 | 13.30 | 21.10 | 5.10 | 6.50 | 2.80 | 0.51 | 0.08 | 1.80 | 1.10 |
| HLN10010 | 15.20 | 25.10 | 5.10 | 6.50 | 2.80 | 0.51 | 0.08 | 1.80 | 1.10 |
| HLN10012 | 17.20 | 29.00 | 5.10 | 6.50 | 2.80 | 0.51 | 0.08 | 1.80 | 1.10 |
| HLN15002 | 8.23 | 10.20 | 6.30 | 8.07 | 5.12 | 0.98 | 0.08 | 1.73 | 1.54 |
| HLN15004 | 10.20 | 14.13 | 6.30 | 8.07 | 5.12 | 0.98 | 0.08 | 1.73 | 1.54 |
| HLN15006 | 12.17 | 18.07 | 6.30 | 8.07 | 5.12 | 0.98 | 0.08 | 1.73 | 1.54 |
| HLN15008 | 14.13 | 22.01 | 6.30 | 8.07 | 5.12 | 0.98 | 0.08 | 1.73 | 1.54 |
| HLN15010 | 16.10 | 25.94 | 6.30 | 8.07 | 5.12 | 0.98 | 0.08 | 1.73 | 1.54 |
| HLN15012 | 18.07 | 29.88 | 6.30 | 8.07 | 5.12 | 0.98 | 0.08 | 1.73 | 1.54 |
| HLN20002 | 9.57 | 11.50 | 7.22 | 9.25 | 5.12 | 0.98 | 0.08 | 1.97 | 1.97 |
| HLN20004 | 11.54 | 15.47 | 7.22 | 9.25 | 5.12 | 0.98 | 0.08 | 1.97 | 1.97 |
| HLN20006 | 13.50 | 19.50 | 7.22 | 9.25 | 5.12 | 0.98 | 0.08 | 1.97 | 1.97 |
| HLN20008 | 15.50 | 23.40 | 7.22 | 9.25 | 5.12 | 0.98 | 0.08 | 1.97 | 1.97 |
| HLN20010 | 17.40 | 27.30 | 7.22 | 9.25 | 5.12 | 0.98 | 0.08 | 1.97 | 1.97 |
| HLN20012 | 19.41 | 31.22 | 7.22 | 9.25 | 5.12 | 0.98 | 0.08 | 1.97 | 1.97 |
| HLN25002 | 9.80 | 11.77 | 8.46 | 10.83 | 5.91 | 0.98 | 0.08 | 2.20 | 1.97 |
| HLN25006 | 13.74 | 19.65 | 8.46 | 10.83 | 5.91 | 0.98 | 0.08 | 2.20 | 1.97 |
| HLN25012 | 19.65 | 31.46 | 8.46 | 10.83 | 5.91 | 0.98 | 0.08 | 2.20 | 1.97 |
| HLN30002 | 11.61 | 13.58 | 9.47 | 12.20 | 5.47 | 0.98 | 0.20 | 2.36 | 2.32 |
| HLN30006 | 15.55 | 21.46 | 9.47 | 12.20 | 5.47 | 0.98 | 0.20 | 2.36 | 2.32 |
| HLN30012 | 21.46 | 33.27 | 9.47 | 12.20 | 5.47 | 0.98 | 0.20 | 2.36 | 2.32 |

# Lock Nut Aluminum Cylinders

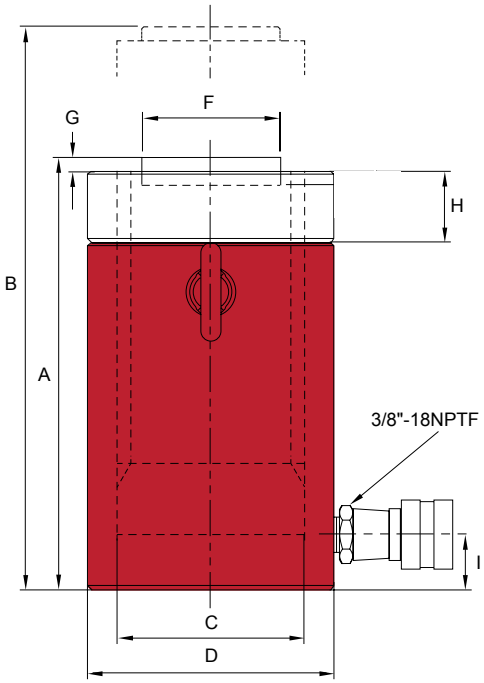
***HULN Series - Heavy Lifting w/ Mechanical Lock Nut***



**80%**

**Safety Practices**

Good industry practice recommends not exceeding 80% of maximum rated capacities of all our product.






***HULN Series***

- Single acting cylinder with mechanical safety lock nut
- Designed to support loads without hydraulic pressure
- Overflow port prevents cylinders from over travel
- Load return
- Lightweight aluminum cylinder body
- Steel saddle
- Hard anodized rod to resist corrosion and rust
- Maximum working pressure: 10,000 psi / 700 bar

| Cylinder Capacity (tons) | Stroke (in) | Model Number | Cylinder Effective Area ($in^2$) | Oil Capacity ($in^3$) | Weight (lbs) | Collapsed Height A (in) | Extended Height B (in) | Cylinder Bore Dia. C (in) | O.D. D (in) | Saddle Dia. F (in) | Saddle Protrusion from Rod G (in) | Lock Nut Length H (in) | Base To Adv Port I (in) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 30 | 2.00 | HULN3002 | 6.50 | 13.00 | 15.0 | 7.75 | 9.75 | 2.88 | 4.50 | 2.00 | 0.10 | 1.25 | 1.50 |
| | 4.00 | HULN3004 | 6.50 | 26.00 | 18.0 | 9.75 | 13.75 | 2.88 | 4.50 | 2.00 | 0.10 | 1.25 | 1.50 |
| | 6.00 | HULN3006 | 6.50 | 39.00 | 21.0 | 11.75 | 17.75 | 2.88 | 4.50 | 2.00 | 0.10 | 1.25 | 1.50 |
| | 8.00 | HULN3008 | 6.50 | 52.00 | 24.0 | 13.75 | 21.75 | 2.88 | 4.50 | 2.00 | 0.10 | 1.25 | 1.50 |
| | 10.00 | HULN3010 | 6.50 | 65.00 | 27.0 | 15.75 | 25.75 | 2.88 | 4.50 | 2.00 | 0.10 | 1.25 | 1.50 |
| 50 | 2.00 | HULN5002 | 11.04 | 21.65 | 21.0 | 8.13 | 10.13 | 3.75 | 5.50 | 2.50 | 0.10 | 1.50 | 1.50 |
| | 4.00 | HULN5004 | 11.04 | 43.30 | 26.0 | 10.13 | 14.13 | 3.75 | 5.50 | 2.50 | 0.10 | 1.50 | 1.50 |
| | 6.00 | HULN5006 | 11.04 | 64.92 | 29.0 | 12.13 | 18.13 | 3.75 | 5.50 | 2.50 | 0.10 | 1.50 | 1.50 |
| | 8.00 | HULN5008 | 11.04 | 86.56 | 34.0 | 14.13 | 22.13 | 3.75 | 5.50 | 2.50 | 0.10 | 1.50 | 1.50 |
| | 10.00 | HULN5010 | 11.04 | 108.20 | 38.0 | 16.13 | 26.13 | 3.75 | 5.50 | 2.50 | 0.10 | 1.50 | 1.50 |
| 100 | 2.00 | HULN10002 | 20.68 | 40.51 | 43.0 | 8.38 | 10.38 | 5.13 | 8.00 | 3.50 | 0.10 | 1.75 | 1.50 |
| | 4.00 | HULN10004 | 20.68 | 81.00 | 51.0 | 10.38 | 14.38 | 5.13 | 8.00 | 3.50 | 0.10 | 1.75 | 1.50 |
| | 6.00 | HULN10006 | 20.68 | 121.50 | 60.0 | 12.38 | 18.38 | 5.13 | 8.00 | 3.50 | 0.10 | 1.75 | 1.50 |
| | 8.00 | HULN10008 | 20.68 | 162.00 | 69.0 | 14.38 | 22.38 | 5.13 | 8.00 | 3.50 | 0.10 | 1.75 | 1.50 |
| | 10.00 | HULN10010 | 20.68 | 202.50 | 77.0 | 16.38 | 26.38 | 5.13 | 8.00 | 3.50 | 0.10 | 1.75 | 1.50 |
| 150 | 2.00 | HULN15002 | 30.68 | 60.60 | 66.0 | 8.38 | 10.38 | 6.25 | 10.00 | 4.50 | 0.10 | 1.75 | 1.50 |
| | 4.00 | HULN15004 | 30.68 | 121.20 | 79.0 | 10.38 | 14.38 | 6.25 | 10.00 | 4.50 | 0.10 | 1.75 | 1.50 |
| | 6.00 | HULN15006 | 30.68 | 181.80 | 92.0 | 12.38 | 18.38 | 6.25 | 10.00 | 4.50 | 0.10 | 1.75 | 1.50 |
| | 8.00 | HULN15008 | 30.68 | 242.40 | 106.0 | 14.38 | 22.38 | 6.25 | 10.00 | 4.50 | 0.10 | 1.75 | 1.50 |
| | 10.00 | HULN15010 | 30.68 | 303.00 | 123.0 | 16.38 | 26.38 | 6.25 | 10.00 | 4.50 | 0.10 | 1.75 | 1.50 |



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www.BVAhydraulics.com

# Low Profile Lock Nut Cylinders

***Low Clearance Lifting w/ Mechanical Lock Nut***




***HLNF Series***

- Single acting cylinder with mechanical safety lock nut
- Designed to support loads without hydraulic pressure
- Low profile for confined spaces
- 5° tilting saddle is standard
- Maximum working pressure: 10,000 psi/700 bar
- Equipped with CH38F high flow coupler
- Load Return



**Safety Instructions**

Visit our DO'S and DON'TS section to review the best methods of operation. Always be prepared.

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**Safety Color Band**



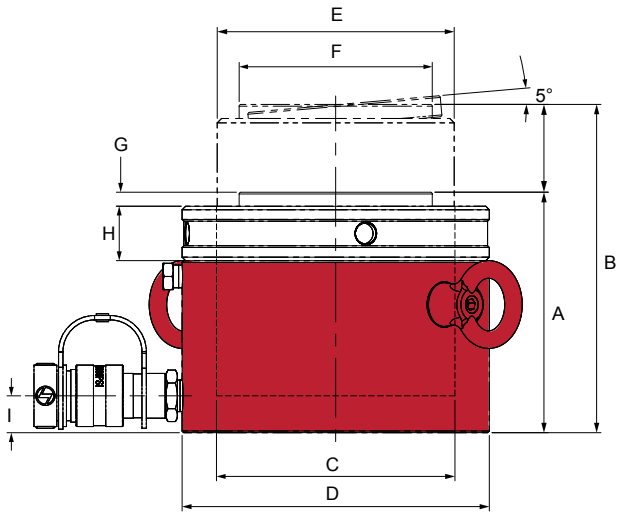
BVA Lock nut cylinders are equipped with a yellow safety band. Do not extend the ram beyond this point as it may result in a loss of hydraulic oil and damage to the cylinder and/or load.

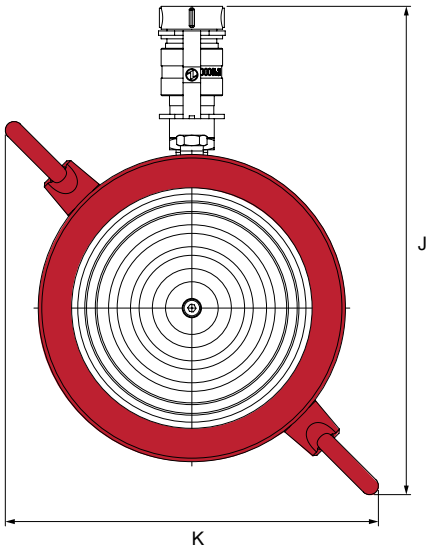
**Related Product: Gauges**



Reduce the risk of overloading your product by using a gauge. A variety of graduations and types to suit any need.

pg 69




| Cylinder Capacity (tons) | Stroke (in) | Model Number | Cylinder Effective Area ($in^2$) | Oil Capacity ($in^3$) | Weight (lbs) |
|---|---|---|---|---|---|
| 60 | 1.97 | HLNF6002 | 13.42 | 26.42 | 31.3 |
| 100 | 1.97 | HLNF10002 | 22.47 | 44.23 | 54.1 |
| 160 | 1.77 | HLNF16002 | 35.51 | 62.91 | 91.0 |
| 200 | 1.77 | HLNF20002 | 43.95 | 77.86 | 118.6 |
| 250 | 1.77 | HLNF25002 | 56.27 | 99.70 | 154.6 |

| Model Number | Collapsed Height A (in) | Extended Height B (in) | Cylinder Bore Dia. C (in) | Outside Dia. D (in) | Rod Outside Thread E | Saddle Dia. F (in) | Saddle Protrusion From Rod G (in) | Lock Nut Length H (in) | Base to Inlet Port I (in) | Coupler to Eylet J (in) | Eyelet to Eyelet K (in) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| HLNF6002 | 4.92 | 6.89 | 4.13 | 5.51 | TW105-4N | 3.23 | 0.24 | 1.10 | 0.75 | 9.78 | 7.39 |
| HLNF10002 | 5.39 | 7.36 | 5.35 | 6.89 | TW135-4N | 4.33 | 0.31 | 1.22 | 0.83 | 10.95 | 8.37 |
| HLNF16002 | 5.83 | 7.60 | 6.72 | 8.66 | TW170-4N | 5.83 | 0.35 | 1.57 | 1.06 | 12.46 | 9.62 |
| HLNF20002 | 6.10 | 7.87 | 7.48 | 9.66 | TW190-4N | 6.30 | 0.39 | 1.69 | 1.18 | 13.30 | 10.31 |
| HLNF25002 | 6.26 | 8.03 | 8.46 | 10.83 | TW215-4N | 7.28 | 0.43 | 1.73 | 1.26 | 14.31 | 11.15 |

# Cylinder Lifting Handles

- Designed for ease of carrying cylinders
- Provides better control for positioning cylinder
- Easy installation

| Model Number | For Cylinders |
|---|---|
| LH25T34 | H2504 through H2514 |
| LH30T40 | H3008, HD3008, HD3014, HC2002T, HC2006T |
| LH30T45 | HC3002T, HC3006T, HD3007, HDC3010 |
| LH55T49 | HLN5504 through HLF5512 |



*LH25T34*

# Clevis and Tangs



*HD cylinders can be used in pushing and pulling applications. In this photo, we see a HD2506 HD cylinder set up for a pull application using a rod clevis cylinder accessory*



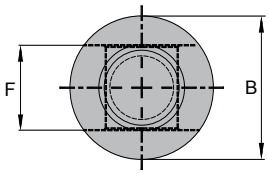
*Rod*

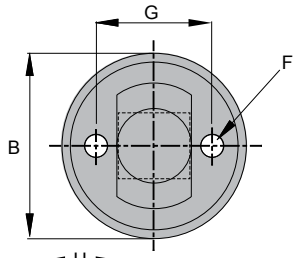
*CEP Series*

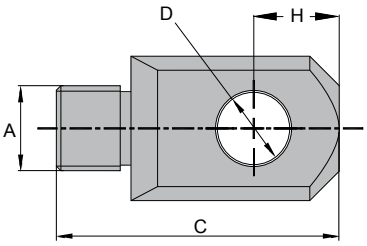


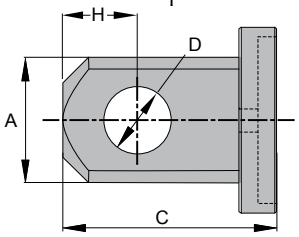
*Base*

*CEB Series*




**80%**

**Safety Practices**

Good industry practice recommends not exceeding 80% of maximum rated capacities of all our products.

| Application | Cylinder Series | Model Number | Dimensions (in) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | A | B | C | D | F | G | H |
| Rod | H05* | CEP05 | ¾"-16N | 1.13 | 2.25 | 0.63 | 0.56 | - | 0.63 |
| | H10**, H15, HD10 | CEP15 | 1"-8UN | 1.69 | 3.31 | 0.88 | 1.00 | - | 1.00 |
| | H25 | CEP25 | 1½"-16UNC | 2.25 | 3.81 | 1.25 | 1.50 | - | 1.25 |
| Base | H05* | CEB05 | 1.52 | 1.75 | 2.13 | 0.63 | 1.13 | 1.00 | 0.63 |
| | H10 | CEB10 | 2.28 | 2.50 | 2.87 | 0.88 | 0.32 | 1.56 | 1.00 |
| | H15 | CEB15 | 2.77 | 3.00 | 2.87 | 0.88 | 0.38 | 1.88 | 1.00 |
| | H25 | CEB25 | 3.40 | 3.75 | 3.37 | 1.25 | 0.56 | 2.31 | 1.25 |

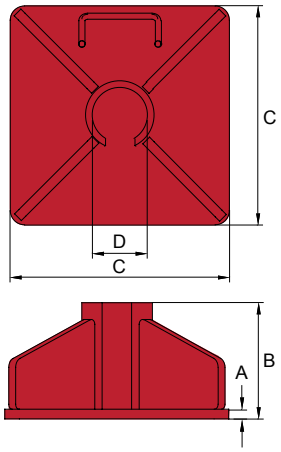
**Except H0500*
***Except H1001*



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# Cylinder Bases






| For use with Cylinder Series | Model Number | Dimensions (in) | | | |
|---|---|---|---|---|---|
| | | A | B | C | D |
| H05* | CB05 | 0.32 | 4.65 | 7.87 | 1.54 |
| H10** | CB10 | 0.39 | 4.72 | 9.06 | 2.28 |
| H15 | CB15 | 0.47 | 4.80 | 10.00 | 2.76 |
| H25 | CB25 | 0.63 | 4.96 | 11.02 | 3.41 |



**Safety Instructions**
Visit our DO'S and DON'TS section to review the best methods of operation. Always be prepared.
pg 92

# Cylinder Saddles

***Grooved, Tilt, and Threaded***



*SD Series*



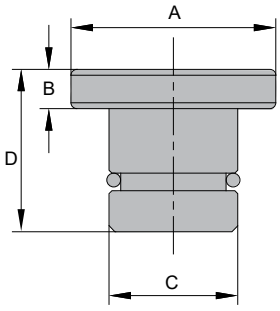
*SDT Series*

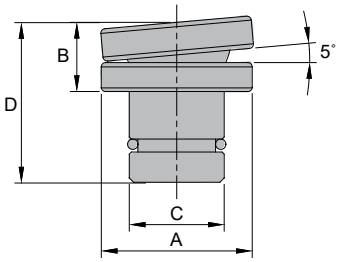


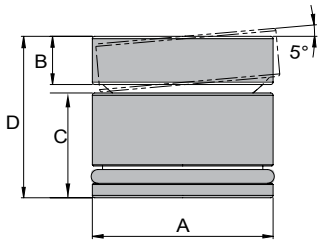
*SDTG Series*

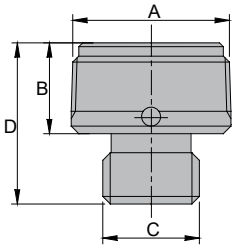


*HTD10*




| Saddle Type | Model Number | Capacity (ton) | For Cylinder(s) | Dimensions (in) | | | |
|---|---|---|---|---|---|---|---|
| | | | | A | B | C | D |
| Tilt | SDT05 | 5 | H05* | 0.98 | 0.67 | 0.67 | 1.20 |
| | SDT10 | 10 | H10** | 1.50 | 0.74 | 0.86 | 1.57 |
| | SDT15 | 15 | H15 | 1.50 | 0.74 | 0.86 | 1.57 |
| | SDT25 | 25 | H25 | 1.97 | 1.13 | 1.40 | 1.60 |
| | SDT55 | 55-100 | H55, HD55, H75, HD75, H100, HLN55 and HLN100 | 2.76 | 1.29 | 2.80 | 1.29 |
| | SDTG100 | 100 | HG100 and HDG100 | 2.95 | 0.79 | 1.71 | 2.64 |
| | SDTG150 | 150 | HG150 and HDG150 | 3.70 | 0.77 | 1.77 | 2.71 |
| | SDTG200 | 200 | HG200 and HDG200 | 4.45 | 1.10 | 1.95 | 3.25 |
| | SDT200 | 150-200 | HLN150 and HLN200 | 5.12 | 0.53 | 1.02 | 1.77 |
| Grooved | SD05 | 5 | H05* | 0.98 | 0.24 | 0.67 | 0.81 |
| | SD10 | 10 | H10** | 1.38 | 0.24 | 0.87 | 1.06 |
| | SD15 | 15 | H15 | 1.50 | 0.28 | 0.87 | 1.18 |
| | SD25 | 25 | H25 | 1.97 | 0.26 | 1.40 | 1.14 |
| Threaded | HTD10 | 10 | HT1006 and HT1010<br>H1002-H1014, HD1010-HD1012 | "1-1/4" - 11.5NPTF" | 1.04 | 1"-8UNC | 1.77 |

**Except H0500*
***Except H1001*

# Hollow Hole Cylinders

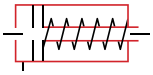
***HC Series***




*HC1201T* *HC6006T* *HC3002T*

*Here is a HC6006T in a pulling application.*



## Capacity:

12-100 Tons

## Stroke:

0.31 - 6.11 Inches

## Max. Operating Pressure:

10,000 psi

## Min. - Max. Height:

2.36 - 19.13 Inches

CE

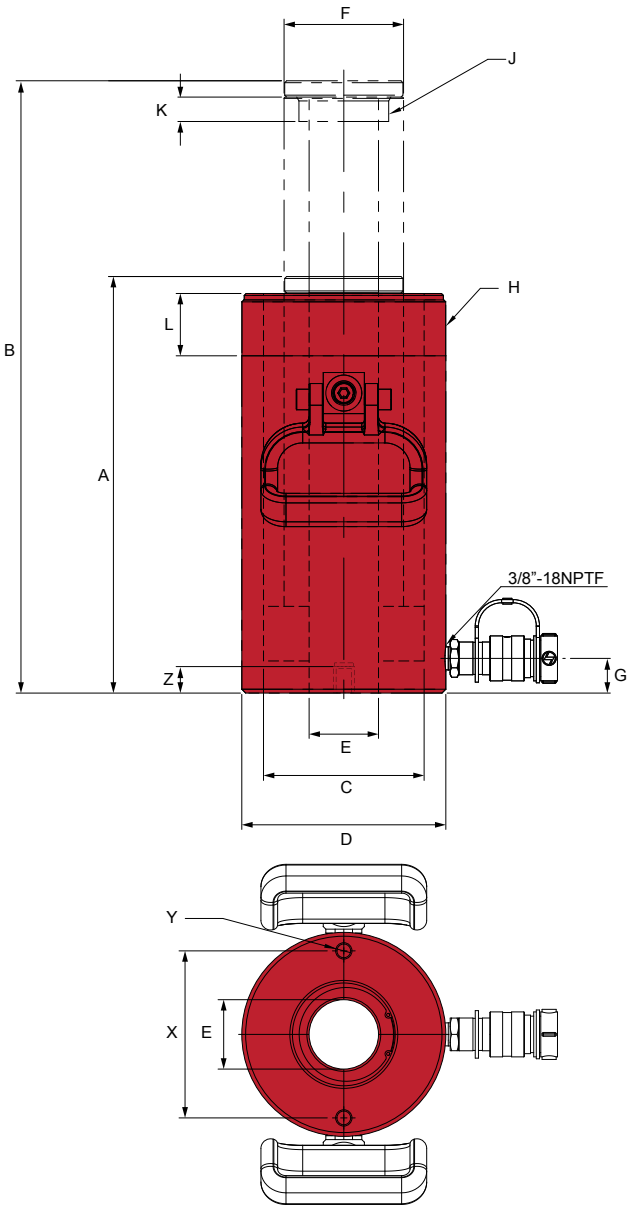
- Ideal for pulling and pushing applications
- Heavy duty compression spring
- Dual wipers help prevent contamination
- Collar thread protector
- High flow coupler with dust cap
- XT cylinders do not come with internal rod threads
- 60 and 100 Ton models are equipped with carrying handles

| Cylinder Capacity (tons) | Stroke (in) | Model Number | Cylinder Effective Area ($in^2$) | Internal Pressure at Capacity (psi) | Oil Capacity ($in^3$) | Weight (lbs) | Collapsed Height A (in) | Extended Height B (in) | Bore Dia. C (in) | O.D. D (in) |
|---|---|---|---|---|---|---|---|---|---|---|
| 12 | 0.31 | HC1201T* | 2.91 | 8,236 | 0.89 | 3.3 | 2.36 | 2.67 | 1.92 | 2.76 |
| | 1.61 | HC1202T* | 2.91 | 8,236 | 4.70 | 6.2 | 4.74 | 6.36 | 1.92 | 2.76 |
| | 1.61 | HC1202XT* | 2.91 | 8,236 | 4.70 | 6.2 | 4.74 | 6.36 | 1.92 | 2.76 |
| | 2.99 | HC1203XT | 2.91 | 8,236 | 8.72 | 8.6 | 7.24 | 10.24 | 1.92 | 2.76 |
| 20 | 2.01 | HC2002T | 4.90 | 8,167 | 9.83 | 15.9 | 6.38 | 8.39 | 2.50 | 3.92 |
| | 6.06 | HC2006T | 4.90 | 8,167 | 29.70 | 29.5 | 12.05 | 18.11 | 2.50 | 3.92 |
| 30 | 2.52 | HC3002T | 6.32 | 9,488 | 15.93 | 22.9 | 7.05 | 9.57 | 2.84 | 4.50 |
| | 6.11 | HC3006T | 6.32 | 9,488 | 38.67 | 43.0 | 13.02 | 19.13 | 2.84 | 4.50 |
| 60 | 3.00 | HC6003T** | 13.05 | 9,195 | 39.10 | 65.7 | 9.77 | 12.77 | 4.08 | 6.25 |
| | 6.00 | HC6006T** | 13.05 | 9,195 | 78.25 | 81.1 | 12.76 | 18.76 | 4.08 | 6.25 |
| 100 | 3.00 | HC10003T** | 22.13 | 9,036 | 66.31 | 113.3 | 10.00 | 13.00 | 5.31 | 8.39 |

** Cylinder comes with a CRZ14F regular flow coupler*
*** Cylinder is equipped with carrying handles*



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## *HC Series*

### Safety Practices

80%

Good industry practice recommends not exceeding 80% of maximum rated capacities of all our products.

### Related Product: Gauges



Reduce the risk of overloading your product by using a gauge. A variety of graduations and types to suit any need.

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### Safety Instructions



Visit our DO'S and DON'TS section to review the best methods of operation. Always be prepared.

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### Combo Kits



Most cylinders are available in easy to order kits: cylinder, gauge, couplers, hose and pump.

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### High-Flow Couplers



High-Flow Coupler: CH38F is included on all models (except where specified).

| Model Number | Rod | | | | Collar Thread | | Base to Inlet Port G (in) | Base Mounting Hole | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | I.D. E (in) | O.D. F (in) | Internal Thread J (in) | Internal Thread Length K (in) | Diameter H (in) | Length L (in) | | Bolt Circle X (in) | Thread Y (in) | Thread Depth Z (in) |
| HC1201T* | 0.77 | 1.38 | ¾"-16UN | 0.63 | 2¾"-16 | 1.81 | 0.57 | 2.00 | 5/16"-18UNC | 0.35 |
| HC1202T* | 0.77 | 1.38 | ¾"-16UN | 0.63 | 2¾"-16 | 1.81 | 0.59 | 2.00 | 5/16"-18UNC | 0.35 |
| HC1202XT* | 0.77 | 1.38 | - | - | 2¾"-16 | 1.81 | 0.59 | 2.00 | 5/16"-18UNC | 0.35 |
| HC1203XT | 0.77 | 1.38 | - | - | 2¾"-16 | 1.81 | 0.75 | 2.00 | 5/16"-18UNC | 0.35 |
| HC2002T | 1.06 | 2.15 | 1-9/16"-16UN | 0.75 | 3⅞"-12 | 1.50 | 0.75 | 3.25 | ⅜"-16UNC | 0.37 |
| HC2006T | 1.06 | 2.15 | 1-9/16"-16UN | 0.75 | 3⅞"-12 | 1.50 | 0.75 | 3.25 | ⅜"-16UNC | 0.37 |
| HC3002T | 1.31 | 2.48 | 1-13/16"-16UN | 0.87 | 4½"-12 | 1.66 | 0.91 | 3.62 | ⅜"-16UNC | 0.55 |
| HC3006T | 1.31 | 2.48 | 1-13/16"-16UN | 0.87 | 4½"-12 | 1.66 | 0.91 | 3.62 | ⅜"-16UNC | 0.55 |
| HC6003T** | 2.13 | 3.66 | 2¾"-16UN | 0.75 | 6¼"-12 | 1.91 | 1.06 | 5.12 | ½"-13UNC | 0.55 |
| HC6006T** | 2.13 | 3.66 | 2¾"-16UN | 0.75 | 6¼"-12 | 1.91 | 1.06 | 5.12 | ½"-13UNC | 0.55 |
| HC10003T** | 3.11 | 4.92 | 4"-16UN | 0.98 | 8⅜"-12 | 2.38 | 1.06 | 7.01 | ⅝"-11UNC | 0.75 |

** Cylinder comes with a CRZ14F regular flow coupler*
*** Cylinder is equipped with carrying handles*

# Double Acting Hollow Hole Cylinders

*HDC Series*



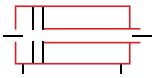

HDC3010



HDC6006



HDC10001



## Capacity:

30 - 150 Tons

## Stroke:

1.50 - 10.13 Inches

## Max. Operating Pressure:

10,000 psi

## Min. - Max. Height:

6.50 - 28.27 Inches

CE

**Related Product: Gauges**



Reduce the risk of overloading your product by using a gauge. A variety of graduations and types to suit any need.

pg 69

**Related Product: Hoses**



We offer a variety of hoses, fittings, lengths and materials.

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**Combo Kits**



Most cylinders are available in easy to order kits: Cylinder, Gauge, Couplers, Hose and Pump.

pg 64

- Ideal for pushing and pulling applications.
- Dual wipers help prevent contamination
- CH38F - 3/8” high flow female coupler
- Hard chrome rod prevents rust and corrosion
- Hardened steel seat

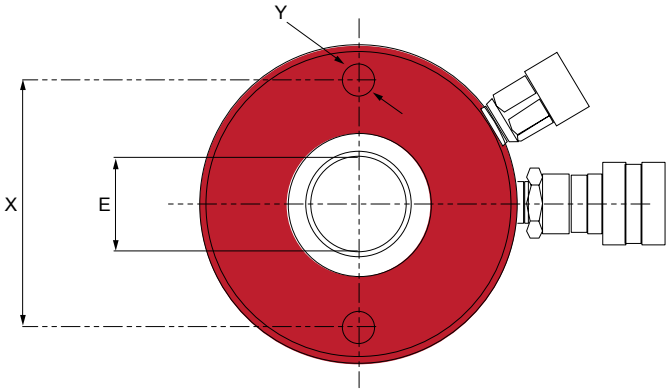
| Cylinder Capacity | | Stroke (in) | Model Number | Oil Capacity | | Collapsed Height (in) | Extended Height (in) | Center Hole I.D. (in) | Rod O.D. (in) | Max Pressure (psi) | Weight (lbs) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Push (ton) | Pull (ton) | | | Push ($in^3$) | Pull ($in^3$) | | | | | | |
| 30 | 20 | 7.00 | HDC3007 | 44.31 | 27.74 | 13.02 | 20.02 | 1.31 | 2.48 | 10.000 | 43.0 |
| | | 10.13 | HDC3010 | 64.15 | 40.16 | 17.00 | 27.13 | 1.31 | 2.48 | 10.000 | 56.7 |
| 60 | 44 | 3.50 | HDC6003 | 45.75 | 30.49 | 9.77 | 13.28 | 2.13 | 3.62 | 10.000 | 65.7 |
| | | 6.50 | HDC6006 | 84.81 | 56.53 | 12.76 | 19.26 | 2.13 | 3.62 | 10.000 | 81.1 |
| | | 10.12 | HDC6010 | 132.10 | 88.04 | 17.25 | 27.37 | 2.13 | 3.62 | 10.000 | 112.4 |
| 100 | 71 | 1.50 | HDC10001 | 33.23 | 21.18 | 6.50 | 8.00 | 3.11 | 4.92 | 10.000 | 73.7 |
| | | 3.00 | HDC10003 | 66.47 | 42.37 | 10.00 | 13.00 | 3.11 | 4.92 | 10.000 | 113.3 |
| | | 6.00 | HDC10006 | 132.39 | 84.73 | 13.49 | 19.49 | 3.11 | 4.92 | 10.000 | 153.2 |
| | | 10.13 | HDC10010 | 224.52 | 143.11 | 18.14 | 28.27 | 3.11 | 4.92 | 10.000 | 198.9 |
| 150 | 82.8 | 8.00 | HDC15008 | 259.19 | 132.44 | 13.75 | 21.75 | 3.94 | 5.91 | 10.000 | 239.2 |

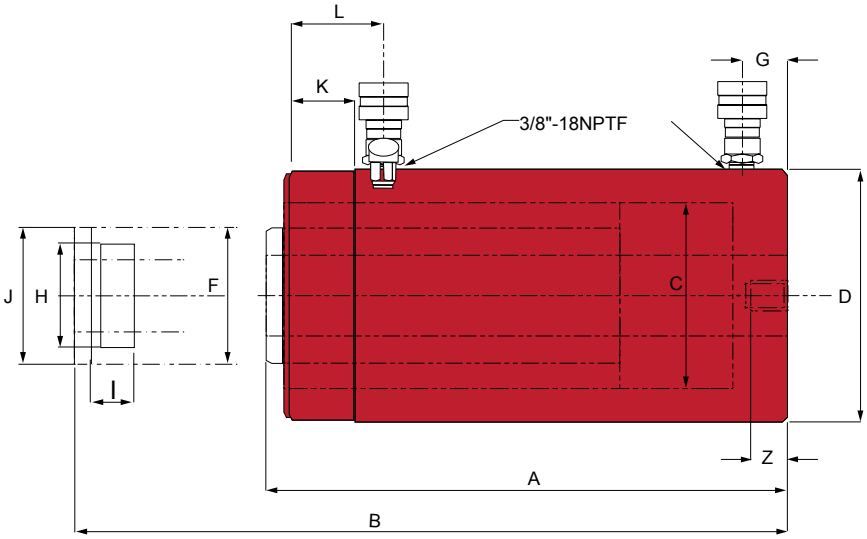


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## HDC Series




### Safety Practices

80%

Good industry practice recommends not exceeding 80% of maximum rated capacities of all our products.

### Relief Valve

All double acting cylinders are equipped with a pressure relief valve located next to the retract port. These pressure relief valves help prevent cylinder over pressurization on the return port side of the cylinder.



### High-Flow Couplers



High-Flow Coupler: CH38F is included on all models (except where specified).

### Safety Instructions

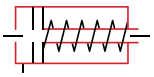


Visit our DO'S and DON'TS section to review the best methods of operation. Always be prepared.

pg 92

| Model Number | Min. Height A (in) | Max. Height B (in) | Dia. of Center Tube C (in) | O.D. D (in) | I.D. E (in) | O.D. F (in) | Base to Inlet Port G (in) | Top to Return Port L (in) | Internal Thread H (in) | Internal Thread Length I (in) | Collar Thread | | Base Mounting Hole | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | Dia. J (in) | Length K (in) | Bolt Circle X (in) | Thread Y (in) | Thread Depth Z (in) |
| HDC3007 | 13.02 | 20.02 | 3.35 | 4.50 | 1.31 | 2.48 | 0.91 | 2.38 | 1 13/16"-16UN | 0.94 | 4½"-12 | 1.66 | 3.62 | ⅜"-16UNC | 0.55 |
| HDC3010 | 17.00 | 27.13 | 3.35 | 4.50 | 1.31 | 2.48 | 0.91 | 2.38 | 1 13/16"-16UN | 0.94 | 4½"-12 | 1.66 | 3.62 | ⅜"-16UNC | 0.55 |
| HDC6003 | 9.77 | 13.28 | 4.92 | 6.25 | 2.13 | 3.62 | 1.06 | 2.64 | 2¾"-16UN | 0.83 | 6¼"-12 | 1.91 | 5.12 | ½" 13UNC | 0.55 |
| HDC6006 | 12.76 | 19.26 | 4.92 | 6.25 | 2.13 | 3.62 | 1.06 | 2.64 | 2¾"-16UN | 0.83 | 6¼"-12 | 1.91 | 5.12 | ½" 13UNC | 0.55 |
| HDC6010 | 17.25 | 27.37 | 4.92 | 6.25 | 2.13 | 3.62 | 1.06 | 2.64 | 2¾"-16UN | 0.83 | 6¼"-12 | 1.91 | 5.12 | ½" 13UNC | 0.55 |
| HDC10001 | 6.50 | 8.00 | 6.50 | 8.39 | 3.11 | 4.92 | 1.06 | 1.75 | 4"- 16UN | 1.06 | - | - | 7.01 | ⅝" 11UNC | 0.75 |
| HDC10003 | 10.00 | 13.00 | 6.50 | 8.39 | 3.11 | 4.92 | 1.06 | 3.39 | 4"- 16UN | 1.06 | 8⅜"-12 | 2.38 | 7.01 | ⅝" 11UNC | 0.75 |
| HDC10006 | 13.49 | 19.49 | 6.50 | 8.39 | 3.11 | 4.92 | 1.06 | 3.39 | 4"- 16UN | 1.06 | 8⅜"-12 | 2.38 | 7.01 | ⅝" 11UNC | 0.75 |
| HDC10010 | 18.14 | 28.27 | 6.50 | 8.39 | 3.11 | 4.92 | 1.06 | 3.39 | 4"- 16UN | 1.06 | 8⅜"-12 | 2.38 | 7.01 | ⅝" 11UNC | 0.75 |
| HDC15008 | 13.75 | 21.75 | 7.48 | 9.75 | 3.94 | 5.91 | 1.50 | 2.38 | - | - | - | - | - | - | - |

# Single Acting Hollow Hole Aluminum Cylinders



*HUC Series - Lightweight, Spring Return*

**Safety Practices**

80%

Good industry practice recommends not exceeding 80% of maximum rated capacities of all our products.

**Related Product: Gauges**



Reduce the risk of overloading your product by using a gauge. A variety of graduations and types to suit any need.

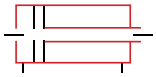
pg 69



*HUC Series*

| Cylinder Capacity (tons) | Stroke (in) | Model Number | Cylinder Effective Area ($in^2$) | Oil Capacity ($in^3$) | Weight (lbs) | Collapsed Height (in) | Extended Height (in) | Center Hole Diameter (in) | Outside Diameter (in) | Base To Advance Port (in) | Handle or Eyelets |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 30 | 3.00 | HUC3003 | 7.21 | 22.00 | 22.0 | 8.68 | 11.68 | 1.31 | 5.50 | 1.00 | H |
| | 6.00 | HUC3006 | 7.21 | 44.00 | 30.0 | 11.68 | 17.68 | 1.31 | 5.50 | 1.00 | H |
| 60 | 3.00 | HUC6003 | 12.3 | 37.00 | 42.0 | 10.25 | 13.25 | 2.13 | 7.50 | 1.00 | H |
| | 6.00 | HUC6006 | 12.3 | 74.00 | 55.0 | 13.25 | 19.25 | 2.13 | 7.50 | 1.00 | H |

# Double Acting Aluminum Hollow Hole Cylinders



*HUDC Series - Lightweight*

**Safety Instructions**



Visit our DO'S and DON'TS section to review the best methods of operation. Always be prepared.

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**Relief Valve**

All double acting cylinders are equipped with a pressure relief valve located next to the retract port. These pressure relief valves help prevent cylinder over pressurization on the return port side of the cylinder.





*HUDC Series*

| Cylinder Capacity (tons) | Stroke (in) | Model Number | Maximum Cylinder Capacity (ton) | | Cylinder Effective Area ($in^2$) | | Oil Capacity ($in^3$) | | Weight (lbs) | Collapsed Height (in) | Extended Height (in) | Cylinder Bore Dia. (in) | Outside Dia. (in) | Base To Adv. Port (in) | Top To Retract Port (in) | Handles or Eyelets |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Push | Pull | Push | Pull | Push | Pull | | | | | | | | |
| 30 | 6.00 | HUDC3006 | 30.00 | 10.12 | 6.35 | 2.02 | 38.07 | 12.15 | 30.0 | 11.50 | 17.50 | 1.50 | 5.50 | 2.00 | 2.00 | H |
| | 10.00 | HUDC3010 | 30.00 | 10.12 | 6.35 | 2.02 | 63.45 | 20.25 | 40.0 | 15.50 | 25.50 | 1.50 | 5.50 | 2.00 | 2.00 | H |
| 50 | 6.00 | HUDC5006 | 50.00 | 17.18 | 10.30 | 3.43 | 61.85 | 20.61 | 50.0 | 11.50 | 17.50 | 2.13 | 7.50 | 2.00 | 2.00 | H |
| | 10.00 | HUDC5010 | 50.00 | 17.18 | 10.30 | 3.43 | 103.08 | 34.36 | 65.0 | 15.50 | 25.50 | 2.13 | 7.50 | 2.00 | 2.00 | H |
| 100 | 6.00 | HUDC10006 | 100.00 | 37.55 | 21.59 | 7.51 | 129.59 | 45.06 | 125.0 | 14.50 | 20.50 | 3.50 | 11.00 | 2.50 | 2.00 | E |
| | 10.00 | HUDC10010 | 100.00 | 37.55 | 21.59 | 7.51 | 215.98 | 75.10 | 142.0 | 18.50 | 28.50 | 3.50 | 11.00 | 2.50 | 2.50 | E |
| 150 | 6.00 | HUDC15006 | 150.00 | 55.00 | 30.00 | 11.00 | 183.73 | 65.97 | 158.0 | 14.50 | 20.50 | 3.50 | 12.00 | 2.50 | 2.00 | E |
| | 10.00 | HUDC15010 | 150.00 | 55.00 | 30.00 | 11.00 | 306.30 | 109.95 | 180.0 | 18.50 | 28.50 | 3.50 | 12.00 | 2.50 | 2.50 | E |



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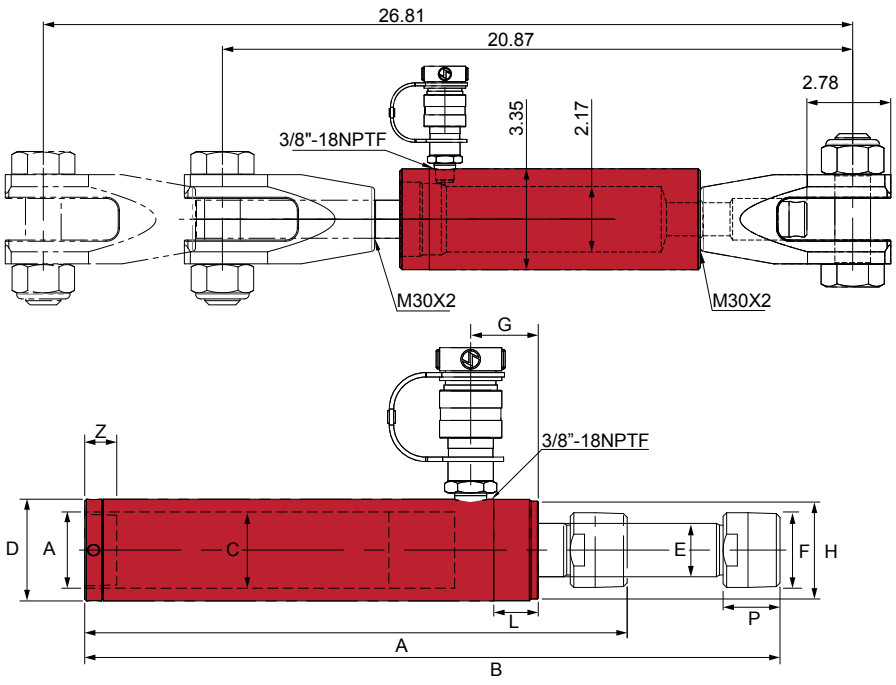


# Pull Cylinders

***HP Series - High-Tonnage Pulling***

- High strength steel construction
- One piece high grade alloy bearing for side load protection and longer life
- Polyurethane cup seal provides optimum performance
- External rod threads and Internal base threads
- Used for pulling and tensioning
- Maximum working pressure: 10,000 psi / 700 bar
- Spring extend return

***HP Series***






**Related Product: Hoses**

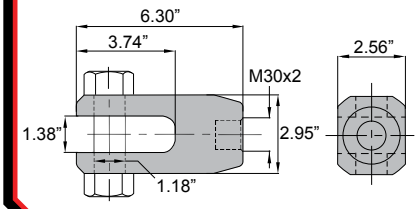
We offer a variety of hoses, fittings, lengths and materials.

pg 72

**CP10**

The CP10* comes was a male/female set. This clevis is designed to aid in pulling applications with all the HP series cylinders.





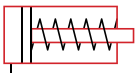

** CP10 only works with HP1006*

| Cylinder Capacity (tons) | Stroke (in) | Model Number | Cylinder Effective Area ($in^2$) | Internal Pressure At Capacity (psi) | Oil Capacity ($in^3$) | Collapsed Height A (in) | Extended Height B (in) | Outside Dia. D (in) | Cylinder Bore Dia. C (in) | Top to Inlet Port G (in) | Collar | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | Thread H | Thread Length L (in) |
| 2.5 | 5.00 | HP0205 | 0.56 | 7,905 | 2.78 | 10.55 | 15.55 | 1.89 | 1.13 | 1.65 | 1½"-16UN | 0.98 |
| 5 | 5.55 | HP0505 | 1.14 | 8,772 | 6.34 | 11.93 | 17.48 | 2.25 | 1.69 | 1.50 | 2¼"-14UN | 1.00 |
| 10 | 5.95 | HP1006* | 2.44 | 7,663 | 14.48 | 11.75 | 17.70 | 3.35 | 2.17 | 1.50 | M85x2 | 1.00 |

| Model Number | Adapter | | Rod | | | Base Mounting Hole | | Weight (lbs) |
|---|---|---|---|---|---|---|---|---|
| | Thread F (in) | Length P (in) | Dia. E (in) | Thread Length K (in) | Thread Q (mm) | Thread Y | Depth Z (in) | |
| HP0205 | ¾"-14NPTF | 1.13 | 0.75 | 0.76 | M16 x 1.5 | ¾"-14NPTF | 0.72 | 6.4 |
| HP0505 | 1¼"-11.5NPTF | 1.25 | 1.18 | 0.93 | M28 x 1.5 | 1¼"-11.5NPTF | 0.95 | 9.3 |
| HP1006* | - | - | 1.26 | 1.02 | M30 x 2 | M30x2 | 0.98 | 20.9 |

** CP10 only works with HP1006*

# Threaded Cylinders



***HT Series***

- Ideal for frame pulling machines
- Threaded rod and base
- Single acting cylinders with spring return
- Removable threaded Rod adapter used to attach accessories to rod end and base
- Maximum working pressure: 10,000 psi / 700 bar




***HT Series***

**Safety Practices**

80%

Good industry practice recommends not exceeding 80% of maximum rated capacities of all our products.

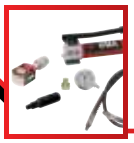
**Safety Instructions**



Visit our DO'S and DON'TS section to review the best methods of operation. Always be prepared.

pg 92

**Combo Kits**



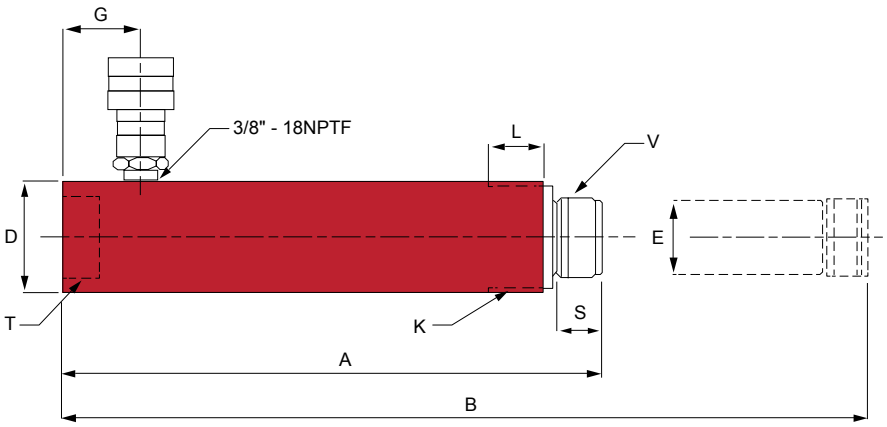
Most cylinders are available in easy to order kits: cylinder, gauge, couplers, hose and pump.

pg 64

**High-Flow Couplers**



High-Flow Coupler: CH38F is included on all models (except where specified).




| Cylinder Capacity (tons) | Stroke (in) | Model Number | Cylinder Effective Area ($in^2$) | Internal Pressure at Capacity (psi) | Oil Capacity ($in^3$) | Collapsed Height A (in) | Extended Height B (in) | Weight (lbs) |
|---|---|---|---|---|---|---|---|---|
| 5 | 5.07 | HT0505* | 1.00 | 10,120 | 5.00 | 10.31 | 15.39 | 5.0 |
| 10 | 5.95 | HT1006 | 2.24 | 8,928 | 13.33 | 11.46 | 17.41 | 10.6 |
| | 9.96 | HT1010 | 2.24 | 8,928 | 22.30 | 15.47 | 25.43 | 14.1 |
| 20 | 5.16 | HT2005 | 5.14 | 10,741 | 25.70 | 11.77 | 16.93 | 22.0 |

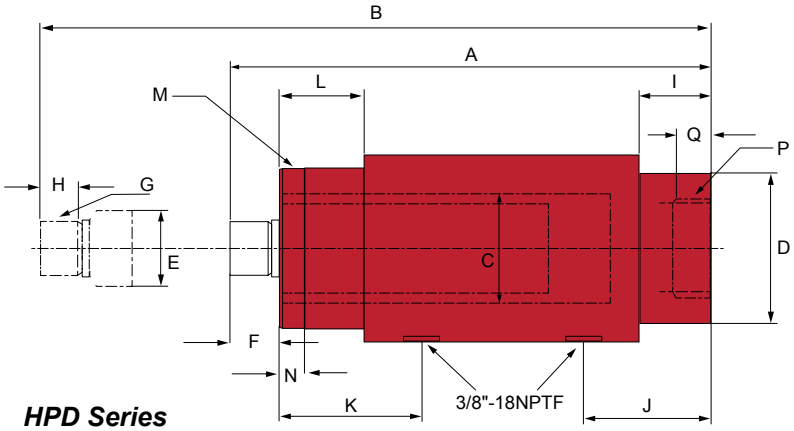
| Model Number | Outside Dia. D (in) | Rod Dia. E (in) | Base to Inlet Port G (in) | Collar K | Collar Thread Length L (in) | Saddle Height S (in) | Base Threads T (in) | Rod Threads V (in) |
|---|---|---|---|---|---|---|---|---|
| HT0505 | 1.50 | 1.33 | 1.33 | 1.5"-16UNF | 0.94 | 1.00 | ¾" - 14 NPSM | 0.75" - 14 NPTF |
| HT1006 | 2.26 | 1.49 | 1.67 | 2.25"-14UN | 1.13 | 0.94 | 1.25" -11.5 NPSM | 1.25" -11.5 NPSM |
| HT1010 | 2.26 | 1.49 | 1.67 | 2.25"-14UN | 1.13 | 0.94 | 1.25" -11.5 NPSM | 1.25" -11.5 NPSM |
| HT2005 | 3.35 | 2.24 | 1.85 | 3.31"-12UN | 1.98 | 1.40 | 2" -11.5 NPTF | 2" -11.5 NPSM |

# Precision Double Acting Cylinders

***HPD Series - High-Cycle Fixtured Application***




***HPD Series***




**Note: Precision double acting cylinders do not come with couplers.*

- Provides hydraulic power on both extend and retract
- Designed for high cycle production applications
- High strength steel construction from gun drilled solid bar
- Rod wiper seals keep dirt and contamination out
- Clevis eye attachments are available
- Maximum working pressure: 10,000 psi / 700 bar



**Related Product: Hoses**

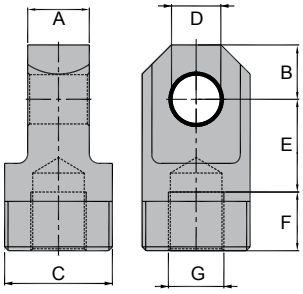
We offer a variety of hoses, fittings, lengths and materials.

pg 72

| Cylinder Capacity (tons) | Model Number | Push Effective Area ($in^2$) | Pull Effective Area ($in^2$) | Collapsed Height A (in) | Extended Height B (in) | Cylinder Bore Dia. C (in) | Outside Dia. D (in) |
|---|---|---|---|---|---|---|---|
| 9 | HPD0906 | 1.77 | 1.01 | 13.78 | 19.88 | 1.50 | 2.52 |
| | HPD0910 | 1.77 | 1.01 | 17.80 | 27.91 | 1.50 | 2.52 |
| 16 | HPD1606 | 3.14 | 1.56 | 15.31 | 21.57 | 2.00 | 2.99 |
| | HPD1610 | 3.14 | 1.56 | 19.29 | 29.53 | 2.00 | 2.99 |

| Model Number | Rod | | | | Base to Adv. Port J (in) | Top to Return Port K (in) | Collar | | | | | Weight (lbs) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Dia. E (in) | Protrusion F (in) | Thread G (in) | Thread Length H (in) | | | Length L (in) | Thread M (in) | Thread Length N (in) | Int. Base Thread P (in) | Int. Base Thread Length Q (in) | |
| HPD0906 | 0.98 | 0.98 | ¾"-16 | 0.75 | 1.50 | 2.20 | 1.50 | 2"-12 | 0.60 | 1-11/16"-18 | 1.37 | 14.6 |
| HPD0910 | 0.98 | 0.98 | ¾"-16 | 0.75 | 1.50 | 2.20 | 1.50 | 2"-12 | 0.60 | 1-11/16"-18 | 1.37 | 18.5 |
| HPD1606 | 1.42 | 1.16 | 1⅛"-12 | 0.98 | 2.12 | 2.87 | 2.12 | 2⅝"-16 | 0.98 | 2-3/16"-16 | 1.61 | 22.0 |
| HPD1606 | 1.42 | 1.16 | 1⅛"-12 | 0.98 | 2.12 | 2.87 | 2.12 | 2⅝"-16 | 0.98 | 2-3/16"-16 | 1.61 | 28.2 |






## CED Series

By attaching this clevis eye to a HPD cylinder, you gain the ability to pull applications. For use with the 9 or 16 ton HPD cylinders only.

| Dimensions (in) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Model Number | A | B | C | D | E | F | G |
| CED09 | 1.00 | 0.90 | 1-11/16"-16N | 0.75 | 1.31 | 0.94 | ¾"-16N |
| CED16 | 1.25 | 1.10 | 2-3/16"-16N | 1.00 | 1.88 | 1.19 | 1⅛"12N |

# Hand Pump Matching Chart

***Hand Pumps***

- Match up the stroke length to the capacity of your cylinder to find the selected hand pump to go with your cylinder

| Stroke (in) | Capacity (tons) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 5 | 10 | 15 | 25 | 30 | 55 | 75 | 100 |
| < 1.0 | 0.69 | - | - | - | - | - | - | - |
| 1.0 | 1.00 | 2.24 | 3.14 | 5.14 | 6.49 | 10.99 | 16.10 | 20.57 |
| 2.0 | 2.00 | 4.48 | 6.28 | 10.28 | 12.98 | 21.98 | 32.20 | 41.14 |
| 3.0 | 3.00 | 6.72 | 9.42 | 15.42 | 19.47 | 32.97 | 48.30 | 61.71 |
| 4.0 | 4.00 | 8.96 | 12.56 | 20.56 | 25.96 | 43.96 | 64.40 | 82.28 |
| 5.0 | 5.00 | 11.20 | 15.70 | 25.70 | 32.45 | 54.95 | 80.50 | 102.85 |
| 6.0 | 6.00 | 13.44 | 18.84 | 30.84 | 38.94 | 65.94 | 96.60 | 123.42 |
| 7.0 | 7.00 | 15.68 | 21.98 | 35.98 | 45.43 | 76.93 | 112.70 | 143.99 |
| 8.0 | 8.00 | 17.92 | 25.12 | 41.12 | 51.92 | 87.92 | 128.80 | 164.56 |
| 9.0 | 9.00 | 20.16 | 28.26 | 46.26 | 58.41 | 98.91 | 144.90 | 185.13 |
| 10.0 | 10.00 | 22.40 | 31.40 | 51.40 | 64.90 | 109.90 | 161.00 | 205.70 |
| 12.0 | 12.00 | 26.88 | 37.68 | 61.68 | 77.80 | 131.88 | 193.20 | 246.84 |
| 13.0 | 13.00 | 29.12 | 40.82 | 66.82 | 84.37 | 142.87 | 209.30 | 267.41 |
| 14.0 | 14.00 | 31.36 | 43.96 | 71.96 | 90.86 | 153.86 | 225.40 | 287.98 |
| Suggested* Hand Pump Models | P350 P601S | P1000 P1201S P1201 | | P2001 P2301 P2301M | | P4301 | | P8701 P8701M |

**The suggested pump model is based on oil capacity requirements of the cylinder.*

# Matching Chart

***Air, Electric, and Gas Engine Pumps***

- Match up the stroke length and capacity of the cylinder to find the suggested pump to work with your application

| Stroke (in) | Capacity (tons) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 5 | 10 | 15 | 25 | 30 | 55 | 75 | 100 |
| < 1.0 | 0.69 | - | - | - | - | - | - | - |
| 1.0 | 1.00 | 2.24 | 3.14 | 5.14 | 6.49 | 10.99 | 16.10 | 20.57 |
| 2.0 | 2.00 | 4.48 | 6.28 | 10.28 | 12.98 | 21.98 | 32.20 | 41.14 |
| 3.0 | 3.00 | 6.72 | 9.42 | 15.42 | 19.47 | 32.97 | 48.30 | 61.71 |
| 4.0 | 4.00 | 8.96 | 12.56 | 20.56 | 25.96 | 43.96 | 64.40 | 82.28 |
| 5.0 | 5.00 | 11.20 | 15.70 | 25.70 | 32.45 | 54.95 | 80.50 | 102.85 |
| 6.0 | 6.00 | 13.44 | 18.84 | 30.84 | 38.94 | 65.94 | 96.60 | 123.42 |
| 7.0 | 7.00 | 15.68 | 21.98 | 35.98 | 45.43 | 76.93 | 112.70 | 143.99 |
| 8.0 | 8.00 | 17.92 | 25.12 | 41.12 | 51.92 | 87.92 | 128.80 | 164.56 |
| 9.0 | 9.00 | 20.16 | 28.26 | 46.26 | 58.41 | 98.91 | 144.90 | 185.13 |
| 10.0 | 10.00 | 22.40 | 31.40 | 51.40 | 64.90 | 109.90 | 161.00 | 205.70 |
| 12.0 | 12.00 | 26.88 | 37.68 | 61.68 | 77.80 | 131.88 | 193.20 | 246.84 |
| 13.0 | 13.00 | 29.12 | 40.82 | 66.82 | 84.37 | 142.87 | 209.30 | 267.41 |
| 14.0 | 14.00 | 31.36 | 43.96 | 71.96 | 90.86 | 153.86 | 225.40 | 287.98 |
| Suggested Air/Electric/Gas Pump Models | PA600 | PA1500 PA1500L PA1500M PA2000 | | | PA3801 PA3801M PE30M3N01A | | PE40M3N02A PE50M3N03A PG70M3N05 | |



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| Power Source | Pump Type | Page Number / Reference Image |
|---|---|---|
| Manual | Single Speed Metal Hand Pumps (P-Series) |  46-47 |
| | Two Speed Metal Hand Pumps (P-Series) |  |
| | Two Speed Aluminum Hand Pumps (P-Series) |  |
| | Double Acting Hand Pumps (P-Series) |  |
| | Low Pressure Hand Pump (P-Series) |  |
| | Two Speed Aluminum Multi Direction Hand Pump (P-Series) |  |
| | Foot Pump (P57-Series) |  48 |
| Air | Rotary Air Pumps (PAR-Series) |  49 |
| | Portable Air Pump (PA-Series) |  50-51 |
| | Metal Air Pumps (PA-Series) |  |
| | Double Acting Air Pump (PA-Series) |  |
| | Remote Control Air Pump (PA-Series) |  |
| Electric | Single Phase Electric Pumps |  52-55 |
| | PE30 0.5 HP Electric Pumps |  |
| | PE40 1.0 HP Electric Pumps |  |
| | PE50 1.5 HP Electric Pumps |  |
| | 3 Phase Electric Pumps |  56-59 |
| | PE40 1.0 HP 3 Phase Electric Pumps |  |
| | PE60 3.0 HP 3 Phase Electric Pumps |  |
| | Universal Motor Pumps (PU-Series) |  63 |
| Gas | PG70 5.5 HP Gas Engine Pump |  60-62 |
| | PG90 10.2 HP Gas Engine Pump |  |
| | PD80 7.3 HP HATZ Diesel Engine Pump |  |

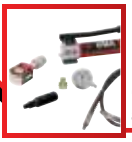
Control Valves and Accessories | Page 66 ▶

# Hand Pumps

## Aluminum and Steel




## P Series



### Combo Kits

Most hand pumps are available in easy to order kits; Pump, Gauge, Couplers, Hose and Cylinder

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### Related Product: Gauges



Reduce the risk of overloading your product by using a gauge. A variety of graduations and types to suit any need.

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### Safety Instructions

Visit our DO'S and DON'TS section to review the best methods of operation. Always be prepared.

pg 92

### Product Information

- Metal reservoirs resist cracking
- Internal pressure relief valve for overload protection
- Good for use with cylinders and hydraulic tools or OEM applications
- Two-Speed pumps reduce user fatigue and increase productivity
- P1000AD can be not only be used in the standard horizontal position, but can also be used with the outlet port facing upwards or downwards positions providing more flexibility in operation
- P1000RP comes with a 7/16"-20 return-to-tank port for applications where this is required

CE

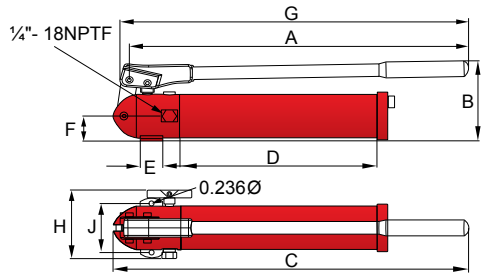
| Model Number | Usable Oil Capacity ($in^3$) | Oil Outlet Port | Pressure Rating/Oil Displacement per Stroke | | Piston Stroke (in) | Handle Operating Force (lbs) | Reservoir Construction |
|---|---|---|---|---|---|---|---|
| | | | 1st Stage (psi/$in^3$) | 2nd Stage (psi/$in^3$) | | | |
| **Single Speed - Single Acting** | | | | | | | |
| P240L | 15 | ¼"-18 NPTF | n/a | 7,200 / 0.09 | 0.63 | 56 | Steel |
| P601S | 37 | ⅜"-18 NPTF | n/a | 10,000 / 0.15 | 0.79 | 109 | Steel |
| P1201S | 67 | ⅜"-18 NPTF | n/a | 10,000 / 0.13 | 0.82 | 89 | Steel |
| **2-Speed - Single Acting** | | | | | | | |
| P350 | 21.4 | ¼"-18 NPTF | 200 / 0.18 | 10,000 / 0.15 | 0.38 | 88 | Aluminum |
| P1000 | 61 | ⅜"-18 NPTF | 200 / 0.81 | 10,000 / 0.14 | 0.82 | 99 | Aluminum |
| P1000AD* | 53-62 | ⅜"-18 NPTF | 200 / 0.81 | 10,000 / 0.14 | 0.82 | 99 | Aluminum |
| P1000RP** | 61 | ⅜"-18 NPTF | 200 / 0.81 | 5,000 / 0.14 | 0.82 | 99 | Aluminum |
| P1201 | 67 | ⅜"-18 NPTF | 200 / 0.81 | 10,000 / 0.14 | 0.82 | 99 | Steel |
| P2001 | 122 | ⅜"-18 NPTF | 200 / 0.81 | 10,000 / 0.14 | 0.82 | 95 | Steel |
| P2301 | 134 | ⅜"-18 NPTF | 200 / 0.81 | 10,000 / 0.14 | 0.82 | 99 | Steel |
| P4301 | 250 | ⅜"-18 NPTF | 200 / 0.81 | 10,000 / 0.14 | 0.82 | 99 | Steel |
| P8701 | 476 | ⅜"-18 NPTF | 290 / 7.71 | 10,000 / 0.29 | 1.69 | 143 | Steel |
| **2-Speed - Double Acting** | | | | | | | |
| P2301M | 134 | ⅜"-18 NPTF | 200 / 0.81 | 10,000 / 0.14 | 0.82 | 99 | Steel |
| P8701M | 476 | ⅜"-18 NPTF | 290 / 7.71 | 10,000 / 0.29 | 1.69 | 143 | Steel |

** Oil capacity varies by position. Pump can be mounted outlet up or down*
*** Unit is equipped with a 7/16"-20 Tank Return Port*

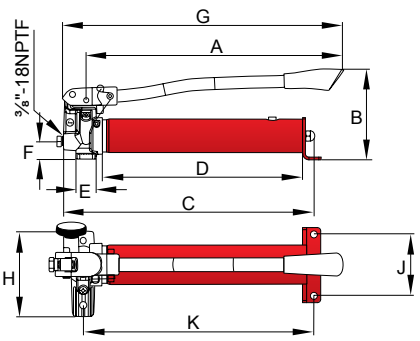


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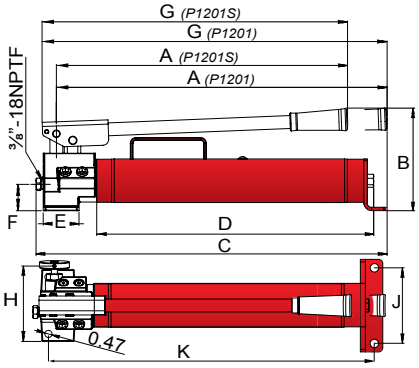
### P240L



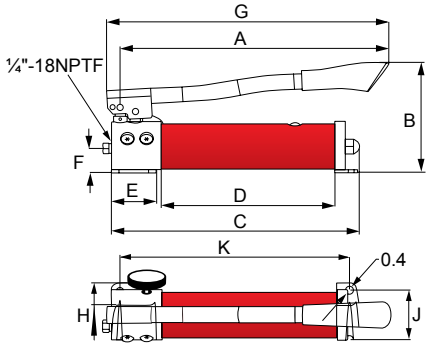

### P601S



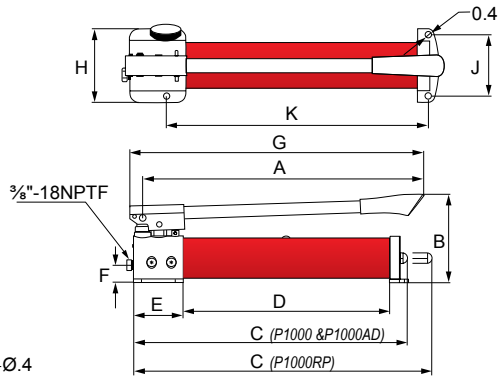

### P1201S, P1201



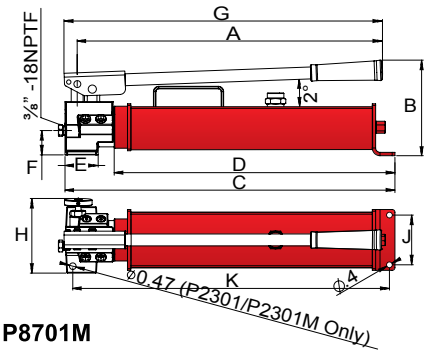

### P350



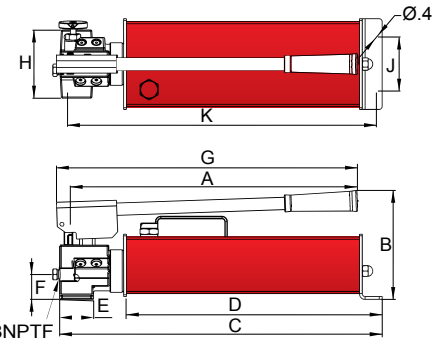

### P1000, P1000AD, P1000RP



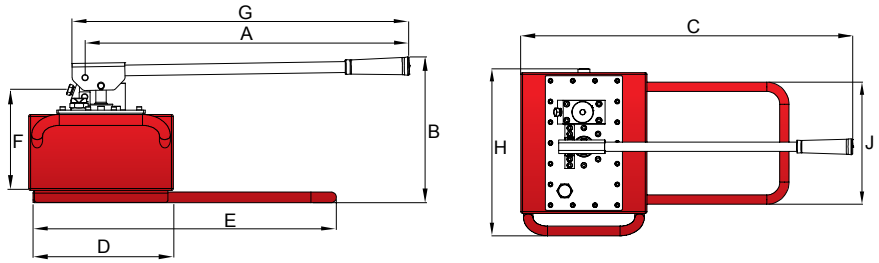

### P2001, P2301, P2301M




### P4301




### P8701, P8701M

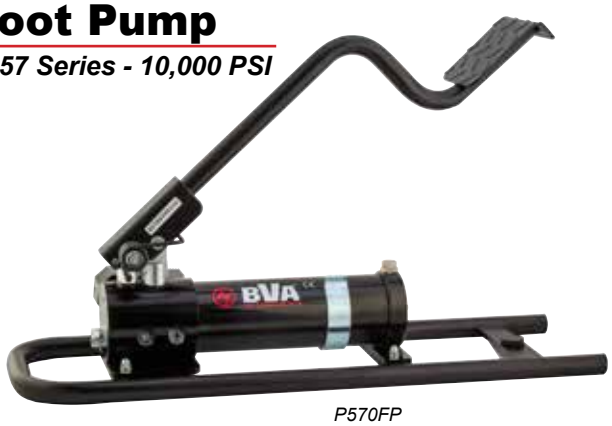



| Model Number | Dimensions | | | | | | | | | | Weight w/Oil (lbs) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | B | C | D | E | F | G | H | J | K | |
| **Single Speed - Single Acting** | | | | | | | | | | | |
| P240L | 14.80 | 4.25 | 15.45 | 8.68 | 1.00 | 1.25 | 15.25 | 3.50 | 2.44 | - | 9.0 |
| P601S | 18.94 | 6.46 | 19.53 | 15.35 | 1.57 | 1.26 | 20.79 | 5.20 | 3.74 | 14.45 | 13.0 |
| P1201S | 20.50 | 6.50 | 21.75 | 17.50 | 2.13 | 1.75 | 22.63 | 5.25 | 3.74 | 21.25 | 20.0 |
| **2-Speed - Single Acting** | | | | | | | | | | | |
| P350 | 13.43 | 5.91 | 13.89 | 9.09 | 2.36 | 1.34 | 14.13 | 3.35 | 2.56 | - | 6.6 |
| P1000 | 21.77 | 6.34 | 23.03 | 14.96 | 3.59 | 1.26 | 19.96 | 4.88 | 3.94 | 16.93 | 13.7 |
| P1000AD* | 21.77 | 6.34 | 23.03 | 14.96 | 3.59 | 1.26 | 19.96 | 4.88 | 3.94 | 16.93 | 13.7 |
| P1000RP** | 21.63 | 6.50 | 20.50 | 15.13 | 3.63 | 1.26 | 22.63 | 4.88 | 3.75 | 15.50 | 13.7 |
| P1201 | 21.73 | 6.73 | 23.07 | 18.38 | 2.13 | 1.73 | 22.63 | 4.92 | 3.74 | 18.27 | 20.5 |
| P2001 | 22.91 | 6.89 | 24.29 | 23.82 | 2.25 | 1.73 | 23.75 | 4.80 | 2.56 | - | 24.2 |
| P2301 | 21.73 | 6.81 | 23.98 | 23.8 | 1.00 | 1.73 | 23.50 | 5.31 | 3.74 | 22.56 | 27.7 |
| P4301 | 21.73 | 7.68 | 22.87 | 17.3 | 1.06 | 1.73 | 22.40 | 5.31 | 3.74 | 21.46 | 37.6 |
| P8701 | 25.79 | 11.61 | 30.35 | 10.75 | 24.17 | 8.25 | 26.94 | 15.24 | 11.18 | - | 76.0 |
| **2-Speed - Double Acting** | | | | | | | | | | | |
| P2301M | 25.45 | 6.81 | 27.44 | 18.37 | 1.06 | 1.50 | 21.76 | 4.72 | 3.54 | 22.56 | 32.3 |
| P8701M | 25.79 | 11.61 | 30.35 | 10.75 | 24.17 | 9.00 | 26.94 | 15.24 | 11.18 | - | 77.4 |

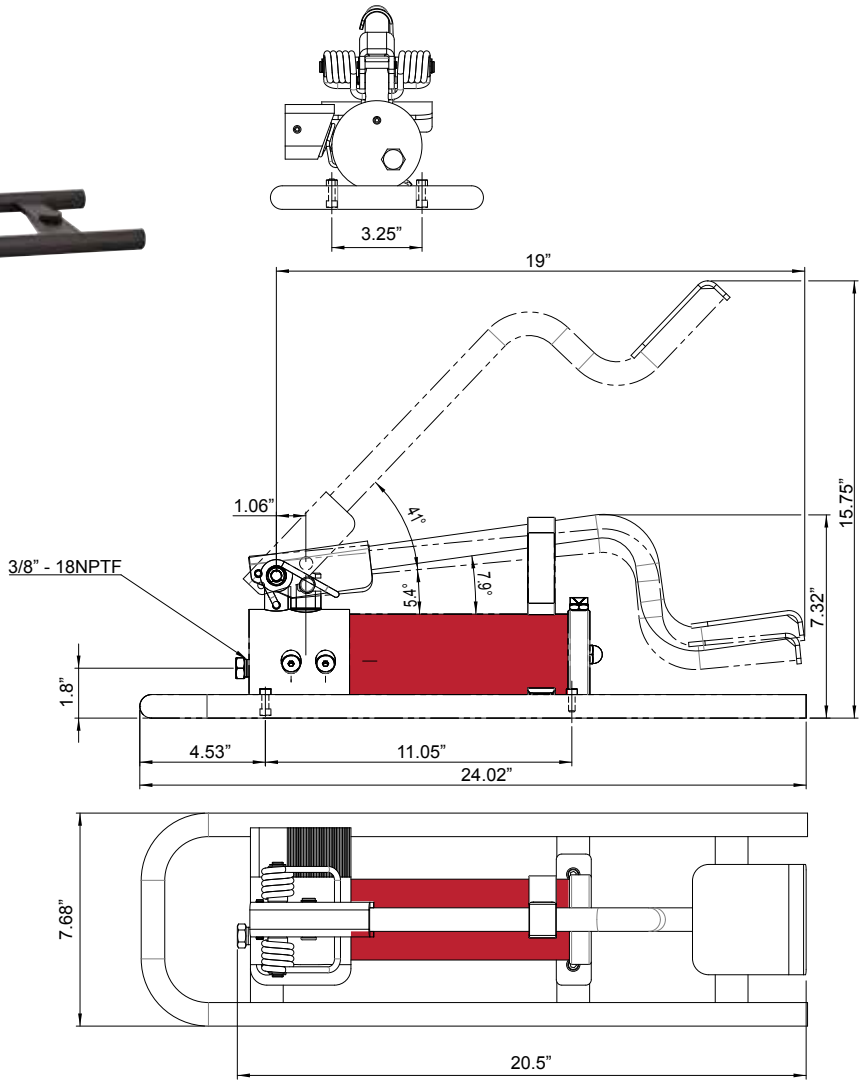
** Oil capacity varies by position. Pump can be mounted outlet up or down and does not need to be horizontal*
*** Unit is equipped with a 7/16"-20 Tank Return Port*

# Foot Pump

***P57 Series - 10,000 PSI***



*P570FP*




## Safety Practices

80%

Good industry practice recommends not exceeding 80% of maximum rated capacities of all our products.

## Related Product: Frac/Oil Industry



Our valve seat puller is designed for removal of valve seats. Use the following model number for ordering purposes:

- HVSP125

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## SP5-3814

This combination kit will work well with this product. See our combo section for more details.



## HF Kits



Consider using our portable HF kits in conjunction with this pump.

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## Safety Instructions



Visit our DO'S and DON'TS section to review the best methods of operation. Always be prepared.

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## High-Flow Couplers



High-Flow Coupler: CH38F is included on all models (except where specified).

## Related Product: Nut Splitters

The HNS nut splitters pair up with this portable foot pump. Our hydraulic nut splitters come in a spacious tool box so its easy to carry around with you from site-to-site. This tool box is large enough to hold small cylinders, saddles, spacers or whatever tool you need to bring with you to your next job site.



| Model Number | Nut Size Capacity ATF | Stud Dimension |
|---|---|---|
| HNS105 | 0.625" - 1.4375" | 0.4375" - 0.875" |
| HNS200 | 1.1875" - 2.375" | 7/16" - 7/8" |
| HNS308 | 2.625" - 3.5" | 1.75" - 2.25" |

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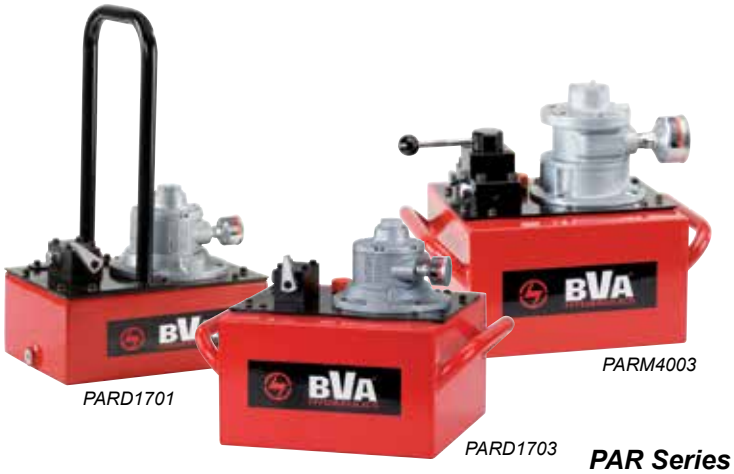
| Usable Oil ($In^3$) | Model Number | Pressure Rating (psi) | | Oil Displacement per Stroke ($In^3$) | | Max. Handle Effort (lbs) | Piston Stroke | Weight (Lbs) |
|---|---|---|---|---|---|---|---|---|
| | | 1st Stage | 2nd Stage | 1st Stage | 2nd Stage | | | |
| 30.50 | P570FP | 200 | 10,000 | 0.81 | 0.14 | 127.2 | 0.82 | 18.0 |



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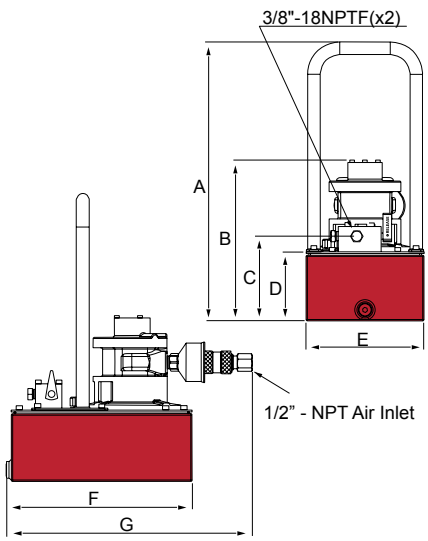
# Rotary Air Pumps

***PAR Series - 10,000 PSI Rated***

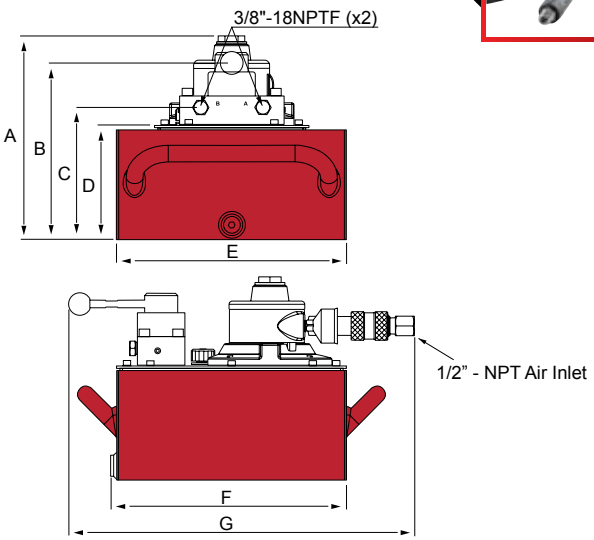



## PAR Series

**PARD1701**




**PAR1703 and PAR4003**




**Related Product: Gauges**



Reduce the risk of overloading your product by using a gauge. A variety of graduations and types of gauges to suit any need.

pg 69

**Related Product: Hoses**



We offer a variety of hoses, fittings, lengths and materials.

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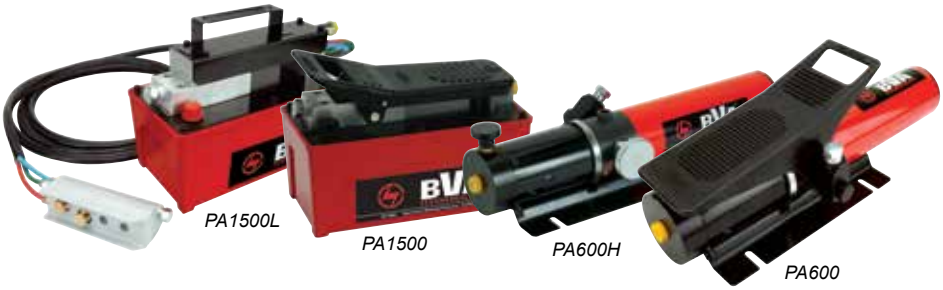
| Used with Cylinder | Motor Size (hp) | Usable Oil Capacity (gal) | Model Number | Pressure Rating (psi) | Pressure Rating | | Oil Output Flow Rate | | Valve Type | Valve Function | Air Pressure Range (psi) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1st Stage (psi) | 2nd Stage (psi) | 1st Stage (in³/min) | 2nd Stage (in³/min) | | | |
| Single Acting | 1.7 | 1 | PARD1701 | 10,000 | 700 | 10,000 | 313 | 22 | Dump | Advance/Return | 60 ~ 80 |
| | 1.7 | 3 | PARD1703 | 10,000 | 700 | 10,000 | 313 | 22 | Dump | Advance/Return | 60 ~ 80 |
| | 1.7 | 3 | PAR1703 | 10,000 | 700 | 10,000 | 417 | 22 | Manual PW3 | Advance/Hold/Return | 60 ~ 80 |
| | 4.0 | 1 | PARD4001 | 10,000 | 700 | 10,000 | 465 | 70 | Dump | Advance/Return | 60 ~ 100 |
| | 4.0 | 3 | PARD4003 | 10,000 | 700 | 10,000 | 465 | 70 | Dump | Advance/Return | 60 ~ 100 |
| | 4.0 | 3 | PAR4003 | 10,000 | 700 | 10,000 | 512 | 70 | Manual PW3 | Advance/Hold/Return | 60 ~ 100 |
| Double Acting | 1.7 | 3 | PARM1703 | 10,000 | 700 | 10,000 | 417 | 22 | Manual PW4 | Advance/Hold/Return | 60 ~ 80 |
| | 4.0 | 3 | PARM4003 | 10,000 | 700 | 10,000 | 512 | 70 | Manual PW4 | Advance/Hold/Return | 60 ~ 100 |

| Model Number | Air Consumption (cfm) | Max Sound Level (dBA) | Dimensions (in) | | | | | | | Weight (lbs) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | A | B | C | D | E | F | G | |
| PARD1701 | 44 | 93 | 19.10 | 9.39 | 5.79 | 4.72 | 8.07 | 12.34 | 15.90 | 42.0 |
| PARD1703 | 44 | 93 | - | 11.95 | 8.35 | 7.28 | 12.01 | 12.34 | 17.96 | 54.0 |
| PAR1703 | 44 | 93 | 11.94 | 10.53 | 8.21 | 7.28 | 12.01 | 12.34 | 18.08 | 55.0 |
| PARD4001 | 95 | 100 | 19.10 | 11.00 | 5.79 | 4.72 | 8.07 | 12.34 | 16.34 | 54.0 |
| PARD4003 | 95 | 100 | - | 13.56 | 8.35 | 7.28 | 12.01 | 12.34 | 18.40 | 66.0 |
| PAR4003 | 95 | 100 | 13.55 | 10.53 | 8.21 | 7.28 | 12.01 | 12.34 | 18.52 | 67.0 |
| PARM1703 | 44 | 93 | 11.94 | 10.53 | 8.21 | 7.28 | 12.01 | 12.34 | 18.08 | 55.0 |
| PARM4003 | 95 | 100 | 13.55 | 10.53 | 8.21 | 7.28 | 12.1 | 12.34 | 18.52 | 67.0 |

# Air Pumps

## *Air Actuated Power*

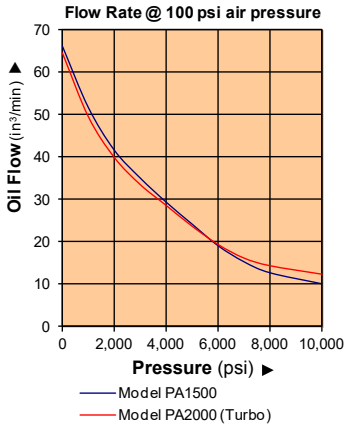
## *PA Series*










*Air Consumption= 7.8cfm*

### Product Information

- Metal reservoirs resist cracking
- US Patent No. 5,946,912, a built in bypass device protects the hydraulic system from over pumping damage
- A compact yet powerful Air Turbo Motor US Patent No. 5,341,723
- Suggested air inlet range: 110-175 psi / 7.6-12.1 bar
- Maximum working pressure: 10,000 psi / 700 Bar

CE

### PA1500A Pressure Adjustment



PA1500A Pressure can be adjusted externally from 1,000 to 10,000 psi.

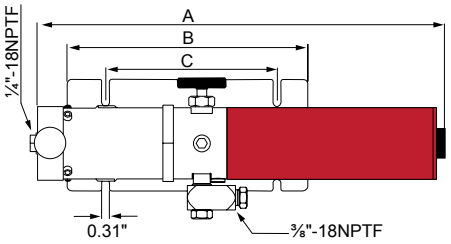
| Model Number | Usable Oil Capacity ($in^3$) | Oil Outlet Port | Output Flow Rate | | Input Air Pressure Required (psi) | Air Consumption (cfm) | Reservoir Construction |
|---|---|---|---|---|---|---|---|
| | | | No Load ($in^3$/min) | Load ($in^3$/min) | | | |
| **Single Acting** | | | | | | | |
| PA600 | 36.6 | ⅜"-18 NPTF | 61 | 9 | 110-175 | 7.8 | Steel |
| PA600H | 36.6 | ⅜"-18 NPTF | 61 | 9 | 110-175 | 7.8 | Steel |
| PA1500 | 91.5 | ⅜"-18 NPTF | 66 | 11 | 110-175 | 7.8 | Aluminum |
| PA1500A* | 91.5 | ⅜"-18 NPTF | 66 | 11 | 110-175 | 7.8 | Aluminum |
| PA1500L** | 91.5 | ⅜"-18 NPTF | 61 | 10 | 110-175 | 7.8 | Aluminum |
| PA2000 | 122.1 | ⅜"-18 NPTF | 65 | 12 | 110-175 | 7.8 | Aluminum |
| PA3801 | 231.9 | ⅜"-18 NPTF | 65 | 11 | 110-175 | 7.8 | Steel |
| PA3801L** | 231.9 | ⅜"-18 NPTF | 61 | 10 | 110-175 | 7.8 | Steel |
| PA7550 | 460.6 | ⅜"-18 NPTF | 65 | 11 | 110-175 | 7.8 | Steel |
| **Double Acting** | | | | | | | |
| PA1500M | 91.5 | ⅜"-18 NPTF | 66 | 11 | 110-175 | 7.8 | Aluminum |
| PA3801M | 231.9 | ⅜"-18 NPTF | 65 | 11 | 110-175 | 7.8 | Steel |
| PA7550M | 460.6 | ⅜"-18 NPTF | 65 | 11 | 110-175 | 7.8 | Steel |

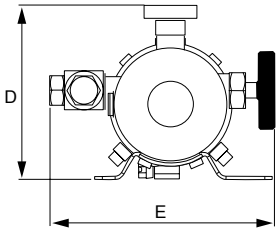
** This unit is equipped with an external pressure adjustment (1,000-10,000psi)*
***These pumps are equipped with a hand held air powered pendant*



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**PA600**



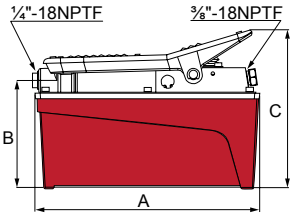



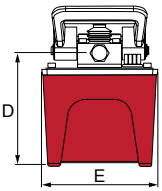


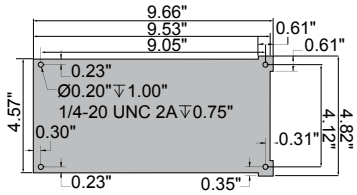


## PA Series

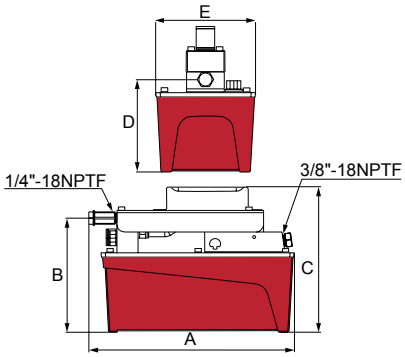
**PA1500**



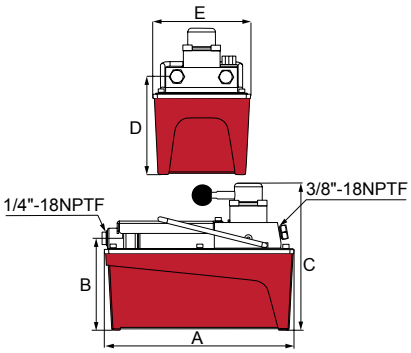



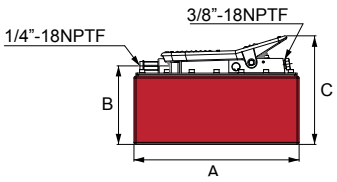

**PA1500L**

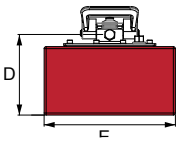


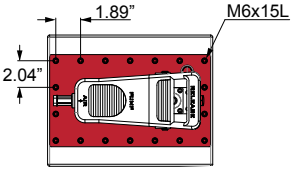

**PA1500M**




**PA3801 and PA7550**




### FRL-145

Use in compressed air lines upstream of all PA series air/hydraulic pumps to provide clean filtered (5um), lubricated air source to ensure long air motor life. Assembly is equipped with a metal bowl with sight glass and a 0-145 PSIG pressure gauge. 145 PSIG maximum working pressure. 3/8" NPT Ports. Use Class-1 Turbine Oil (ISO VG32).



### AD-145

Use in compressed air lines upstream of BVA FRL-145 and all PA series air/hydraulic pumps to remove 99% of free water from the air line to ensure long air motor life. 145 PSIG maximum working pressure. 3/8" NPT Ports.



### Related Product: Hoses



We offer a variety of hoses, fittings, lengths and materials.

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### Air Pump Combo



Most air pumps are available in easy to order kits: pump, gauge, coupler, hose and cylinder

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| Model Number | Base Mounting Holes | Dimensions (in) | | | | | Weight w/ Oil (lbs) |
|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | |
| **Single Acting** | | | | | | | |
| PA600 | yes | 16.77 | 9.84 | 7.01 | 6.18 | 5.59 | 14.1 |
| PA600H | yes | 16.77 | 9.84 | 7.01 | 4.49 | 5.75 | 12.5 |
| PA1500 | yes | 10.35 | 5.00 | 7.28 | 5.16 | 5.35 | 18.1 |
| PA1500A* | yes | 10.35 | 5.00 | 7.28 | 5.16 | 5.35 | 18.1 |
| PA1500L** | yes | 10.96 | 6.30 | 8.03 | 5.12 | 5.35 | 19.4 |
| PA2000 | yes | 12.64 | 6.42 | 8.15 | 5.20 | 7.36 | 20.1 |
| PA3801 | no | 12.64 | 5.08 | 7.36 | 5.24 | 7.36 | 27.1 |
| PA3801L** | no | 12.64 | 6.42 | 8.15 | 5.20 | 7.36 | 30.4 |
| PA7550 | no | 12.64 | 5.00 | 8.31 | 6.14 | 8.43 | 36.0 |
| **Double Acting** | | | | | | | |
| PA1500M | yes | 10.51 | 5.00 | 7.99 | 5.35 | 5.35 | 19.1 |
| PA3801M | no | 12.64 | 5.04 | 8.03 | 5.31 | 7.36 | 24.0 |
| PA7550M | no | 12.64 | 5.98 | 9.02 | 6.34 | 10.04 | 40.0 |

** Unit is equipped with an external pressure adjustment (1,000-10,000psi)*
***These pumps are equipped with a hand held air powered pendant*

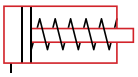
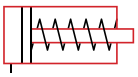
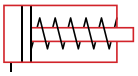
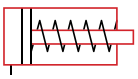
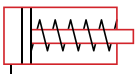
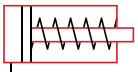
# Electric Pumps

***PE30, PE40, PE50 Series***
***- Single Phase***




*PE50W4N03A*

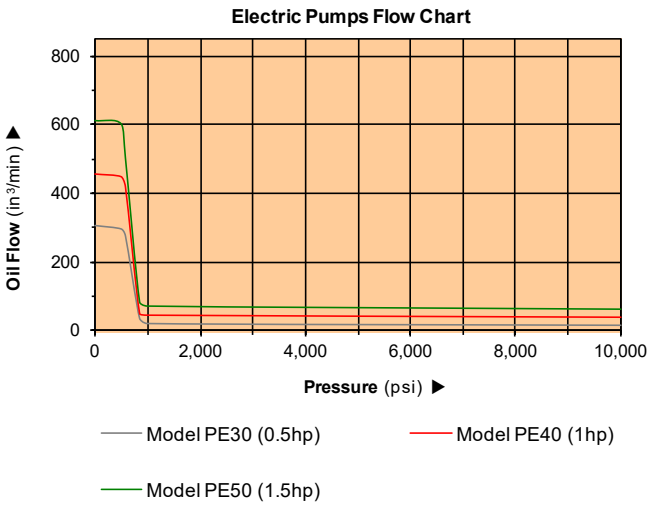
- Meets OSHA regulations for sound (80dBA)
- 2 Stage pumps provide fast run up before the high pressure stage
- Suction strainers screen out contamination to prevent pump damage
- All units are wired as 120 VAC 60 Hz; Optional wiring includes 50 Hz motors and 240 VAC 60 Hz
- 100% Duty Cycle, NEMA 5 Enclosure TEFC motors
- All hand pendants are wired 24 VAC for safety
- Starts under full load

| | Use with Cylinder Type | | Flow Rate 1st Stage in³/min | Flow Rate 1st Stage psi | Flow Rate 2nd Stage in³/min | Flow Rate 2nd Stage psi | Motor Size |
|---|---|---|---|---|---|---|---|
| **Dump Manual Valve w/10 ft. Motor Pendant** | | | | | | | |
|  | 2W/2P Advance/Return |  | 293 | 350 | 18 | 10,000 | 0.5 Hp |
| | | | 311 | 700 | 37 | 10,000 | 1.0 Hp |
| | | | 476 | 700 | 61 | 10,000 | 1.5 Hp |
| **Dump Solenoid Valve w/10 ft. Pendant** | | | | | | | |
|  | 2W/2P Advance /Return (Auto*) |  | 293 | 350 | 18 | 10,000 | 0.5 Hp |
| | | | 311 | 700 | 37 | 10,000 | 1.0 Hp |
| | | | 476 | 700 | 61 | 10,000 | 1.5 Hp |
| | 3W/2P Advance /Return** |  | 293 | 350 | 18 | 10,000 | 0.5 Hp |
| | | | 311 | 700 | 37 | 10,000 | 1.0 Hp |
| | | | 476 | 700 | 61 | 10,000 | 1.5 Hp |
| **Manual Valve** | | | | | | | |
|  | 3W/3P Advance /Hold Return |  | 293 | 350 | 18 | 10,000 | 0.5 Hp |
| | | | 311 | 700 | 37 | 10,000 | 1.0 Hp |
| | | | 476 | 700 | 61 | 10,000 | 1.5 Hp |
| | 4W/3P Advance /Hold/Return |  | 293 | 350 | 18 | 10,000 | 0.5 Hp |
| | | | 311 | 700 | 37 | 10,000 | 1.0 Hp |
| | | | 476 | 700 | 61 | 10,000 | 1.5 Hp |
| **Manual Valve w/10 ft. Motor Pendant** | | | | | | | |
|  | 3W/3P Advance /Hold Return |  | 293 | 350 | 18 | 10,000 | 0.5 Hp |
| | | | 311 | 700 | 37 | 10,000 | 1.0 Hp |
| | | | 476 | 700 | 61 | 10,000 | 1.5 Hp |
| | 4W/3P Advance /Hold/Return |  | 293 | 350 | 18 | 10,000 | 0.5 Hp |
| | | | 311 | 700 | 37 | 10,000 | 1.0 Hp |
| | | | 476 | 700 | 61 | 10,000 | 1.5 Hp |
| **Solenoid Valve w/10 ft. Pendant & Locking Plate** | | | | | | | |
|  | 3W/3P Advance /Hold Return |  | 293 | 350 | 18 | 10,000 | 0.5 Hp |
| | | | 311 | 700 | 37 | 10,000 | 1.0 Hp |
| | | | 476 | 700 | 61 | 10,000 | 1.5 Hp |
| | 4W/3P Advance /Hold/Return |  | 293 | 350 | 18 | 10,000 | 0.5 Hp |
| | | | 311 | 700 | 37 | 10,000 | 1.0 Hp |
| | | | 476 | 700 | 61 | 10,000 | 1.5 Hp |

** Advance position holds pressure with motor running or off. Return retracts cylinder with motor off*
*** Advance position holds pressure with motor running and cylinder Returns when button is released.*



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***PE Series***

**80%**

**Safety Practices**

Good industry practice recommends not exceeding 80% of maximum rated capacities of all our products.

| Usable Oil Capacity | | | | | | |
|---|---|---|---|---|---|---|
| 1 Gal | 2 Gal | 3 Gal | 5 Gal | 10 Gal | 15 Gal | 25 Gal |
| Model Number | Model Number | Model Number | Model Number | Model Number | Model Number | Model Number |
| **Dump Manual Valve w/10 ft. Motor Pendant** | | | | | | |
| PE30DMP01A | PE30DMP02A | PE30DMP03A | - | - | - | - |
| - | PE40DMP02A | PE40DMP03A | PE40DMP05A | PE40DMP10A | - | - |
| - | - | PE50DMP03A | PE50DMP05A | PE50DMP10A | PE50DMP15A | PE50DMP25A |
| **Dump Solenoid Valve w/10 ft. Pendant** | | | | | | |
| PE30H2S01A | PE30H2S02A | PE30H2S03A | - | - | - | - |
| - | PE40H2S02A | PE40H2S03A | PE40H2S05A | PE40H2S10A | - | - |
| - | - | PE50H2S03A | PE50H2S05A | PE50H2S10A | PE50H2S15A | PE50H2S25A |
| PE30DSP01A | PE30DSP02A | PE30DSP03A | - | - | - | - |
| - | PE40DSP02A | PE40DSP03A | PE40DSP05A | PE40DSP10A | - | - |
| - | - | PE50DSP03A | PE50DSP05A | PE50DSP10A | PE50DSP15A | PE50DSP25A |
| **Manual Valve** | | | | | | |
| PE30M3N01A | PE30M3N02A | PE30M3N03A | - | - | - | - |
| - | PE40M3N02A | PE40M3N03A | PE40M3N05A | PE40M3N10A | PE40M3N15A | PE40M3N25A |
| - | - | PE50M3N03A | PE50M3N05A | PE50M3N10A | PE50M3N15A | PE50M3N25A |
| PE30M4N01A | PE30M4N02A | PE30M4N03A | - | - | - | - |
| - | PE40M4N02A | PE40M4N03A | PE40M4N05A | PE40M4N10A | PE40M4N15A | PE40M4N25A |
| - | - | PE50M4N03A | PE50M4N05A | PE50M4N10A | PE50M4N15A | PE50M4N25A |
| **Manual Valve w/10 ft. Motor Pendant** | | | | | | |
| PE30W3N01A | PE30W3N02A | PE30W3N03A | - | - | - | - |
| - | PE40W3N02A | PE40W3N03A | PE40W3N05A | PE40W3N10A | PE40W3N15A | PE40W3N25A |
| - | - | PE50W3N03A | PE50W3N05A | PE50W3N10A | PE50W3N15A | PE50W3N25A |
| PE30W4N01A | PE30W4N02A | PE30W4N03A | - | - | - | - |
| - | PE40W4N02A | PE40W4N03A | PE40W4N05A | PE40W4N10A | PE40W4N15A | PE40W4N25A |
| - | - | PE50W4N03A | PE50W4N05A | PE50W4N10A | PE50W4N15A | PE50W4N25A |
| **Solenoid Valve w/10 ft. Pendant & Locking Plate** | | | | | | |
| PE30S3L01A | PE30S3L02A | PE30S3L03A | - | - | - | - |
| - | PE40S3L02A | PE40S3L03A | PE40S3L05A | PE40S3L10A | PE40S3L15A | PE40S3L25A |
| - | - | PE50S3L03A | PE50S3L05A | PE50S3L10A | PE50S3L15A | PE50S3L25A |
| PE30S4L01A | PE30S4L02A | PE30S4L03A | - | - | - | - |
| - | PE40S4L02A | PE40S4L03A | PE40S4L05A | PE40S4L10A | PE40S4L15A | PE40S4L25A |
| - | - | PE50S4L03A | PE50S4L05A | PE50S4L10A | PE50S4L15A | PE50S4L25A |

** Advance position holds pressure with motor running or off. Return retracts cylinder with motor off*
*** Advance position holds pressure with motor running and cylinder Returns when button is released.*

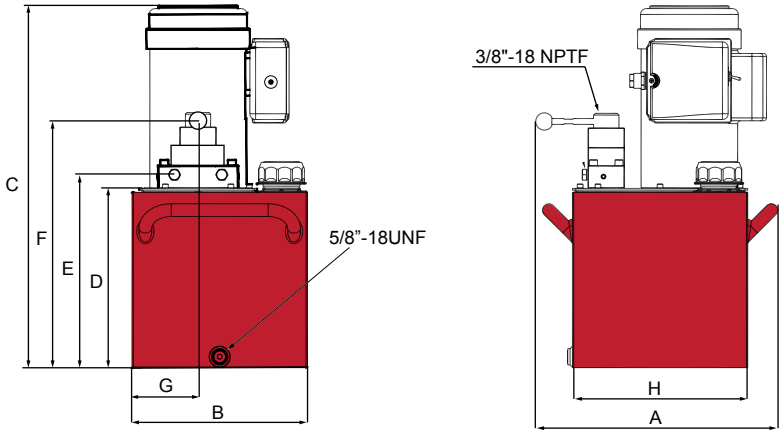
# Electric Pumps

## *Electric Power Source*

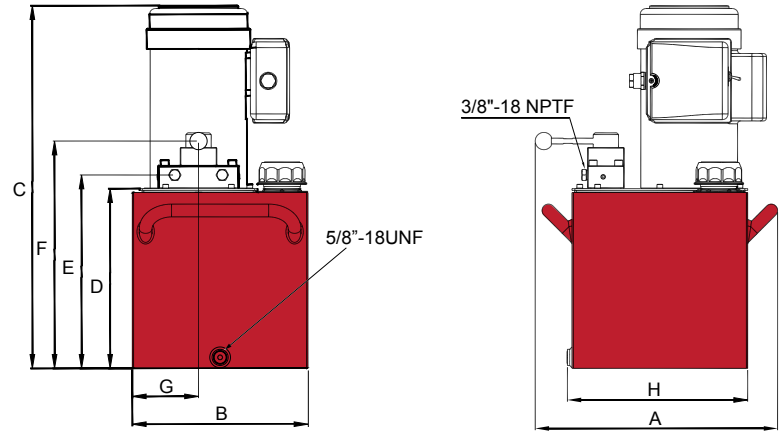



*PE50M4N03A*

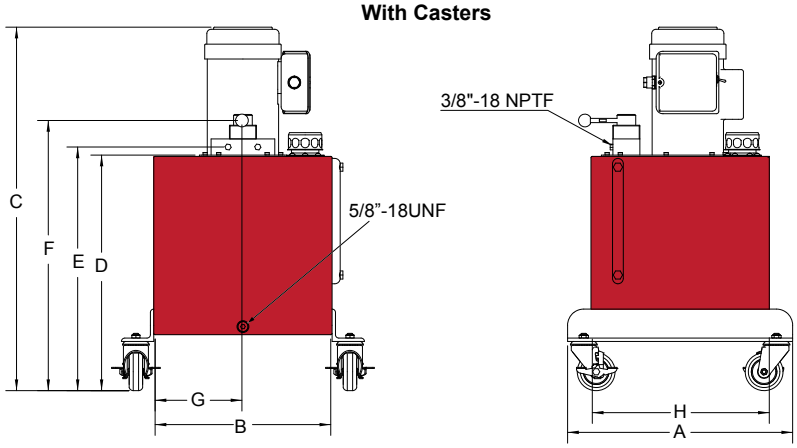
**PE30 Series**




**PE40/PE50 Series**




**PE40/PE50 Series With Casters**




### Pump Accessories

See the assortment of accessories designed to work with these pumps.

pg 69

### Safety Practices

80%

Good industry practice recommends not exceeding 80% of maximum rated capacities of all our products.

### Safety Instructions

Visit our DO'S and DON'TS section to review the best methods of operation. Always be prepared.

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### Pressure Settings

Custom pressure settings available upon request. Contact your local BVA dealer.

### Reservoir Sizing

Recommended reservoir sizing is Extended Cylinder + Hose Volume Oil Capacity x 1.3

| Reservoir Size | Dimensional Table (in) | | | | | | | | Pump Weight by Series* (lbs) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | B | C | D | E | F | G | H | PE30 | PE40 | PE50 |
| 1 Gal | 12.7 | 10.3 | 19.1 | 4.7 | 5.7 | 12.0 | 8.1 | 12.4 | 61.0 | 64.0 | - |
| 2 Gal | 16.7 | 12.0 | 17.9 | 6.0 | 6.9 | 13.2 | 4.5 | 12.4 | 75.0 | 72.0 | - |
| 3 Gal | 16.7 | 12.0 | 19.7 | 7.2 | 8.2 | 10.5 | 4.5 | 12.4 | 84.0 | 81.0 | 91.0 |
| 5 Gal | 16.7 | 12.0 | 24.8 | 12.3 | 13.2 | 15.5 | 4.5 | 12.4 | 100.0 | 102.0 | 112.0 |
| 10 Gal | 20.9 | 16.5 | 31.5 | 19.0 | 19.9 | 22.3 | 8.3 | 16.5 | - | 184.0 | 194.0 |
| 15 Gal | 20.9 | 16.5 | 34.6 | 22.1 | 23.1 | 25.4 | 8.3 | 16.5 | - | 255.0 | 265.0 |
| 25 Gal | 25.6 | 21.3 | 34.6 | 22.1 | 23.1 | 25.4 | 10.6 | 21.3 | - | 362.0 | 372.0 |

** Pump weights include oil.*



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# Single Phase Pump Matrix Chart

If you don't see a pump that would fit your application needs, you can custom build a pump to your desired specifications. Use this Pump Matrix Chart as a guide for creating your very own custom built Electric Pump. For assistance in building your pump, call your local BVA Representative.

| P | E | 30 | S4L | 02 | A | - | A | G |
|---|---|---|---|---|---|---|---|---|
| *1* | *2* | *3* | *4* | *5* | *6* | | *7* | |
| *Product Type* | *Motor Type* | *Flow Group* | *Valve Type /Operation* | *Reservoir Size* | *Voltage* | | *Pump Options* | |

## 1 - Product Type

| | |
|---|---|
| **P** | Pump |

## 2 - Motor Type

| | |
|---|---|
| **E** | Induction Electric Motor, TEFC |

## 3 - Flow Group

| | |
|---|---|
| **30** | 293/18 in3/min @ 350/10,000 psi, 0.5 Hp |
| **40** | 311/37 in3/min @ 700/10,000 psi, 1.0 Hp |
| **50** | 476/61 in3/min @ 700/10,000 psi, 1.5 Hp |

## 4 - Valve Type/Operation

| | |
|---|---|
| **CMR** | Pump Mounted Manifold Block - Pressure & Return Ports Only |
| **WMR** | CMR Block w/10ft Motor Control Pendant |
| **DMP** | Dump Valve w/motor pendant 2W/2P |
| **DSP** | Dump Solenoid Valve w/pendant 3W/2P (Spool Type Valve) |
| **H2S** | Solenoid Valve 2W/2P - Pendant Control On/Off Only (Poppet Type Valve) |
| **M2N** | Manual Valve 3W/2P |
| **M3N** | Manual Valve 3W/3P |
| **M4N** | Manual Valve 4W/3P |
| **M3L** | Manual Valve 3W/3P w/Locking Plate |
| **M4L** | Manual Valve 4W/3P w/Locking Plate |
| **W2N** | Manual Valve 3W/2P w/10ft Motor Control Pendant |
| **W3N** | Manual Valve 3W/3P w/10ft Motor Control Pendant |
| **W4N** | Manual Valve 4W/3P w/10ft Motor Control Pendant |
| **W3L** | Manual Valve 3W/3P w/Locking Plate and 10ft Motor Control Pendant |
| **W4L** | Manual Valve 4W/3P w/Locking Plate and 10ft Motor Control Pendant |
| **S3N** | Solenoid Valve 3W/3P (Spool Type) |
| **S4N** | Solenoid Valve 4W/3P (Spool Type) |
| **S3L** | Solenoid Valve 3W/3P w/Locking Plate (Spool Type Valve) |
| **S4L** | Solenoid Valve 4W/3P w/Locking Plate (Spool Type Valve) |

## 5 - Reservoir Size

| | |
|---|---|
| **01** | 1 Gallon (0.5 HP and 1.0 HP Units Only) |
| **02** | 2 Gallons (0.5 HP and 1.0 HP Units Only) |
| **03** | 3 Gallons |
| **05** | 5 Gallons |
| **10** | 10 Gallons |
| **15** | 15 Gallons |
| **25** | 25 Gallons |

## 6 - Voltage

| | |
|---|---|
| **A** | 120V 1 ph 60 Hz - US Plug NEMA 5-15P |
| **D** | 230V 1 ph 50 Hz - European Plug |
| **E** | 240V 1 ph 60 Hz - No Plug |

## 7 - Pump Options

| | |
|---|---|
| **A** | External Pressure Adjustment Block (available on any models with 3W/3P or 4W/3P) |
| **G** | Gauge w/Gauge Adapter 0-15,000 psi 2-1/2" Wet - Installed "A" Port |
| **M** | Intermittent Motor Option (available on solenoid equipped models only EXCEPT H2S option) |
| **P** | Pressure Switch (available on solenoid equipped models only) |
| **U** | Foot Control Switch (available on solenoid equipped models only) |
| **W** | Wireless Control (available on solenoid equipped models only) |

*Not all options are available in all configurations. Table is for reference only. Please consult your local BVA dealer if you want to order a custom pump or if you have questions.*



***PE Series***

### Ordering Example

**PE30S4L02A-A**

After reviewing this model number, we know that the pump has the following specifications:

- Electric power source
- ½ Hp flow group
- Solenoid Valve w/Locking Plate 4W/3P
- 2 gallon reservoir tank
- External Pressure Adjustment Block



*PE30S4L02A-A*

### Related Product: Gauges



Reduce the risk of overloading your product by using a gauge. A variety of graduations and types to suit any need.

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### Safety Instructions



Visit our DO'S and DON'TS section to review the best methods of operation. Always be prepared.

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### Related Product: Hoses



We offer a variety of hoses, fittings, lengths and materials.

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# 3-Phase Electric Pumps

***Electric Power Source***




*PE60S4L06G*

*PE40DSP02G*

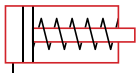
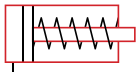
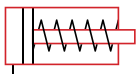
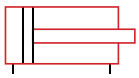
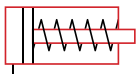


**Pressure Settings**
Custom pressure settings available upon request. Contact your local BVA dealer.



**Safety Instructions**
Visit our DO'S and DON'TS section to review the best methods of operation. Always be prepared.
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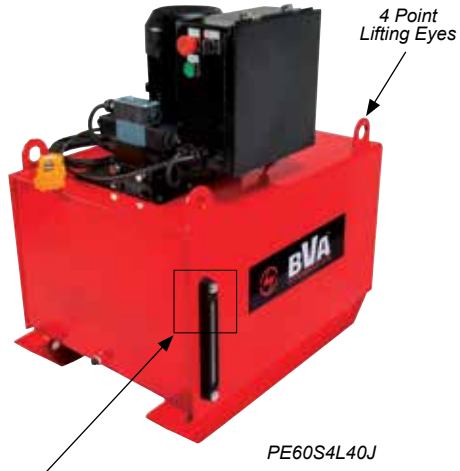
- All hand pendants are wired with 24 VAC
- Quiet operation meets OSHA regulations (80dBA)
- 2 speed operation allows for faster cylinder advance
- Full load starting capacities
- Internal suction strainer keeps contamination from damaging pump
- Rugged durable design meets the demands of industrial applications
- Precision components to minimize wear and improve overall dependability
- Motors are rated 50/60 Hz for voltage
- Reservoirs equipped with sight level gauges
- PE40 models are standard as 240 VAC 60 Hz
- PE60 Models are standard as 480 VAC 60 Hz

| | Use with Cylinder Type | | Flow Rate | | | | Motor Size*** |
|---|---|---|---|---|---|---|---|
| | | | 1st Stage | | 2nd Stage | | |
| | | | in³/min | psi | in³/min | psi | |
| **Dump Solenoid Valve w/10 ft. Pendant** | | | | | | | |
|  | 2W/2P Advance/Return (Auto*) |  | 311 | 700 | 37 | 10,000 | 1.0 Hp |
| | | | 592 | 700 | 110 | 10,000 | 3.0 Hp |
| | 3W/2P Advance/Return** |  | 311 | 700 | 37 | 10,000 | 1.0 Hp |
| | | | 592 | 700 | 110 | 10,000 | 3.0 Hp |
| **Manual Valve** | | | | | | | |
|  | 3W/3P Advance/Hold Return |  | 311 | 700 | 37 | 10,000 | 1.0 Hp |
| | | | 592 | 700 | 110 | 10,000 | 3.0 Hp |
| | 4W/3P Advance/Hold/Return |  | 311 | 700 | 37 | 10,000 | 1.0 Hp |
| | | | 592 | 700 | 110 | 10,000 | 3.0 Hp |
| **Solenoid Valve w/10 ft. Pendant & Locking Plate** | | | | | | | |
|  | 3W/3P Advance/Hold Return |  | 311 | 700 | 37 | 10,000 | 1.0 Hp |
| | | | 592 | 700 | 110 | 10,000 | 3.0 Hp |
| | 4W/3P Advance/Hold/Return |  | 311 | 700 | 37 | 10,000 | 1.0 Hp |
| | | | 592 | 700 | 110 | 10,000 | 3.0 Hp |

** Advance position holds pressure with motor running or off. Return retracts cylinder with motor off*
*** Advance position holds pressure with motor running and cylinder Returns when button is released.*
**** Standard voltage on the 1 Hp pump is 208-240 VAC 60 Hz; 3 Hp pump is 460-480 VAC 60 Hz*


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## 40 Gallon Reservoir Features




*PE60S4L40J*



The 40-Gallon Reservoir is fabricated with a baffle separating return oil from suction oil. Comes standard with an aluminum sight and temperature gauge.



***PE Series***

### Safety Practices

**80%**

Good industry practice recommends not exceeding 80% of maximum rated capacities of all our products.

### Related Product: Gauges



Reduce the risk of overloading your product by using a gauge. A variety of graduations and types to suit any need.

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### Additional Voltages



Additional voltage options are available, see part number matrix for options

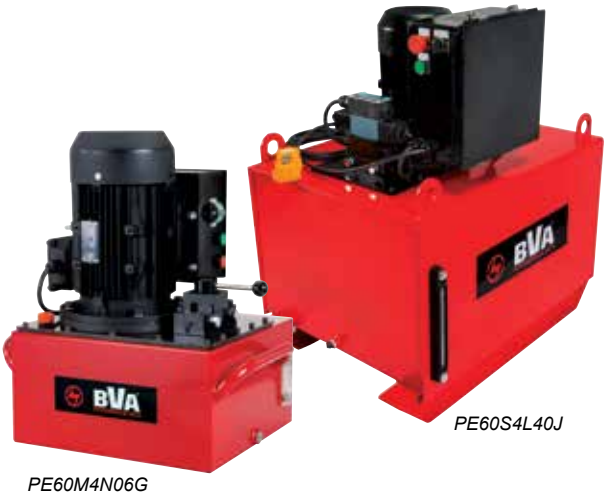
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| Usable Oil Capacity | | | | | | | |
|---|---|---|---|---|---|---|---|
| **2 Gal** | **3 Gal** | **5 Gal** | **6 Gal** | **10 Gal** | **15 Gal** | **25 Gal** | **40 Gal** |
| **Model Number** | | | | | | | |
| **Dump Solenoid Valve w/10 ft. Pendant** | | | | | | | |
| PE40H2S02G | PE40H2S03G | PE40H2S05G | - | PE40H2S10G | PE40H2S15G | PE40H2S25G | - |
| - | - | - | PE60H2S06J | PE60H2S10J | PE60H2S15J | - | PE60H2S40J |
| PE40DSP02G | PE40DSP03G | PE40DSP05G | - | PE40DSP10G | PE40DSP15G | PE40DSP25G | - |
| - | - | - | PE60DSP06J | PE60DSP10J | PE60DSP15J | - | PE60DSP40J |
| **Manual Valve** | | | | | | | |
| PE40M3N02G | PE40M3N03G | PE40M3N05G | - | PE40M3N10G | PE40M3N15G | PE40M3N25G | - |
| - | - | - | PE60M3N06J | PE60M3N10J | PE60M3N15J | - | PE60M3N40J |
| PE40M4N02G | PE40M4N03G | PE40M4N05G | - | PE40M4N10G | PE40M4N15G | PE40M4N25G | - |
| - | - | - | PE60M4N06J | PE60M4N10J | PE60M4N15J | - | PE60M4N40J |
| **Solenoid Valve w/10 ft. Pendant & Locking Plate** | | | | | | | |
| PE40S3L02G | PE40S3L03G | PE40S3L05G | - | PE40S3L10G | PE40S3L15G | PE40S3L25G | - |
| - | - | - | PE60S3L06J | PE60S3L10J | PE60S3L15J | - | PE60S3L40J |
| PE40S4L02G | PE40S4L03G | PE40S4L05G | - | PE40S4L10G | PE40S4L15G | PE40S4L25G | - |
| - | - | - | PE60S4L06J | PE60S4L10J | PE60S4L15J | - | PE60S4L40J |

** Advance position holds pressure with motor running or off. Return retracts cylinder with motor off*
*** Advance position holds pressure with motor running and cylinder Returns when button is released.*
**** Standard voltage on the 1 Hp pump is 208-240 VAC 60 Hz; 3 Hp pump is 460-480 VAC 60 Hz*

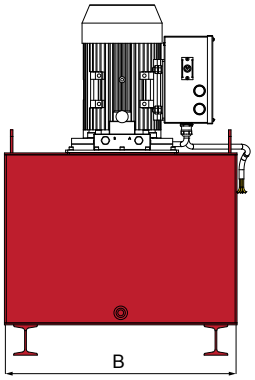
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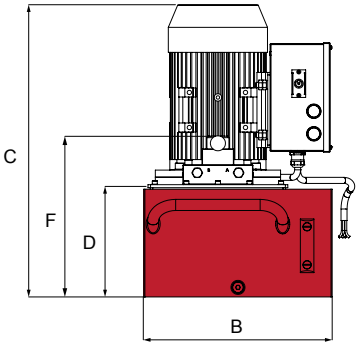
***Electric Power Source***




*PE60S4L40J*

*PE60M4N06G*




**Safety Practices**

**80%**

Good industry practice recommends not exceeding 80% of maximum rated capacities of all our products.

**Related Product: Gauges**

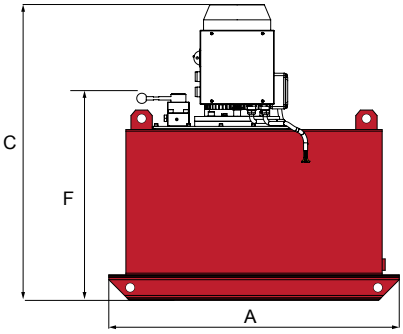


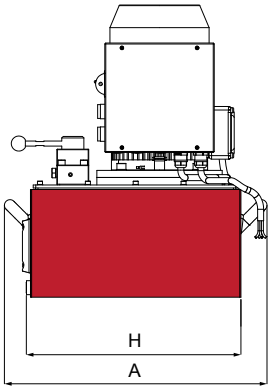
Reduce the risk of overloading your product by using a gauge. A variety of graduations and types to suit any need.

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**Pressure Settings**

Custom pressure settings available upon request. Contact your local BVA dealer.




| Reservoir Size | Dimensional Table (in.) | | | | | | Pump Weight by Series* (lbs.) |
|---|---|---|---|---|---|---|---|
| | A | B | C | D | F | H | PE40 |
| 2 Gal | 16.65 | 12.01 | 21.00 | 5.98 | 13.16 | 12.36 | 72.0 |
| 3 Gal | 16.65 | 12.01 | 22.25 | 7.24 | 10.51 | 12.36 | 81.0 |
| 5 Gal | 16.65 | 12.01 | 27.25 | 12.28 | 15.53 | 12.36 | 102.0 |
| 10 Gal | 20.87 | 16.54 | 28.25 | 18.98 | 22.25 | 16.54 | 184.0 |
| 15 Gal | 20.87 | 16.54 | 37.25 | 22.13 | 25.40 | 16.54 | 255.0 |
| 25 Gal | 25.59 | 21.26 | 39.25 | 22.13 | 25.40 | 21.26 | 362.0 |

| Reservoir Size | Dimensional Table (in.) | | | | | | Pump Weight by Series* (lbs.) |
|---|---|---|---|---|---|---|---|
| | A | B | C | D | F | H | PE60 |
| 6 Gal | 20.63 | 14.80 | 22.95 | 8.82 | 16.04 | 16.87 | 187.0 |
| 10 Gal | 27.13 | 19.53 | 24.82 | 11.75 | 17.91 | 23.13 | 348.0 |
| 15 Gal | 27.13 | 23.46 | 24.82 | 11.75 | 17.91 | 23.13 | 396.0 |
| 40 Gal | 34.50 | 23.13 | 38.58 | 24.00 | 31.67 | - | 628.0 |

** Pump weights include oil.*



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# 3-Phase Pump Matrix Chart

If you don't see a pump that would fit your application needs, you can custom build a pump to your desired specifications. Use this Pump Matrix Chart as a guide for creating your very own custom built Electric Pump. For assistance in building your pump, call your local BVA Representative.

| P | E | 40 | DSP | 02 | G | - | A | G |
|---|---|---|---|---|---|---|---|---|
| *1* | *2* | *3* | *4* | *5* | *6* | | *7* | |
| *Product Type* | *Motor Type* | *Flow Group* | *Valve Type /Operation* | *Reservoir Size* | *Voltage* | | *Pump Options* | |

## 1 - Product Type

| | |
|---|---|
| **P** | Pump |

## 2 - Motor Type

| | |
|---|---|
| **E** | Induction Electric Motor, TEFC |

## 3 - Flow Group

| | |
|---|---|
| **40** | 311/37 $in^3$/min @ 700/10,000 psi, 1.0 Hp |
| **60** | 592/110 $in^3$/min @ 700/10,000 psi, 3.0 Hp |

## 4 - Valve Type/Operation

| | |
|---|---|
| **CMR** | Pump Mounted Manifold Block - Pressure & Return Ports Only |
| **DSP** | Dump Solenoid Valve w/pendant 3W/2P (Spool Type Valve) |
| **M2N** | Manual Valve 3W/2P |
| **M3N** | Manual Valve 3W/3P |
| **M4N** | Manual Valve 4W/3P |
| **M3L** | Manual Valve 3W/3P w/Locking Plate |
| **M4L** | Manual Valve 4W/3P w/Locking Plate |
| **S3N** | Solenoid Valve 3W/3P (Spool Type) |
| **S4N** | Solenoid Valve 4W/3P (Spool Type) |
| **S3L** | Solenoid Valve 3W/3P w/Locking Plate (Spool Type Valve) |
| **S4L** | Solenoid Valve 4W/3P w/Locking Plate (Spool Type Valve) |

## 5 - Reservoir Size

| | |
|---|---|
| **02** | 2 Gallon |
| **03** | 3 Gallons |
| **05** | 5 Gallons (*not available on PE60*) |
| **06** | 6 Gallons |
| **10** | 10 Gallons |
| **15** | 15 Gallons |
| **25** | 25 Gallons |
| **40** | 40 Gallons |

## 6 - Voltage

| | |
|---|---|
| **G** | 208-240V 3 ph 60 Hz - No Plug |
| **W** | 380-415V 3 ph 50 Hz - No Plug |
| **J** | 460-480V 3 ph 60 Hz - No Plug or Wire |

## 7 - Pump Options

| | |
|---|---|
| **A** | External Pressure Adjustment Block *(available on any models with 3W/3P or 4W/3P)* |
| **G** | Gauge w/Gauge Adapter 0-15,000 psi 2-1/2" Wet - Installed "A" Port |
| **P** | Pressure Switch *(available on solenoid equipped models only)* |
| **U** | Foot Control Switch *(available on solenoid equipped models only)* |
| **W** | Wireless Control *(available on solenoid equipped models only)* |

*Not all options are available in all configurations. Table is for reference only. Please consult your local BVA dealer if you want to order a custom pump or if you have questions.*



***PE Series***

### Ordering Example

**PE40DSP02G**

After reviewing this model number, we know that the pump has the following specifications:

- Electric power source
- 1 Hp flow group
- Dump Solenoid Valve w/Pendant 3W/2P
- 2 gallon reservoir tank
- 208-240V 3 ph 60 Hz Voltage - No Plug



*PE40DSP02G*



### Pump Accessories

See the assortment of accessories designed to work with these pumps.

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### Safety Instructions

Visit our DO'S and DON'TS section to review the best methods of operation. Always be prepared.

pg 92



### Related Product: Hoses

We offer a variety of hoses, fittings, lengths and materials.

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# Gas and Diesel Pumps

***PG/PD Series - Portable Power***



*PG90S4L10*



*PG70M4N05*



*PD80S4L05*




## Safety Practices

Good industry practice recommends not exceeding 80% of maximum rated capacities of all our products.



## Safety Instructions

Visit our DO'S and DON'TS section to review the best methods of operation. Always be prepared.

pg 92

## Related Product: Gauges



Reduce the risk of overloading your product by using a gauge. A variety of graduations and types to suit any need.

pg 69



## Related Product: Hoses

We offer a variety of hoses, fittings, lengths and materials.

pg 72

## Gas Pumps

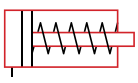
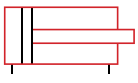


- Gas engine pumps will provide 10,000 psi at remote locations
- Industrial grade 5.5 or 10.2 hp Honda Gas Engine
- Ideal for applications at remote locations
- Two speed pump designed for rapid cylinder advance
- Gas pump features a sturdy protective roll cage for use in the toughest environments
- Manual control valve for use with single or double acting cylinders or tools
- Optional electric start

## Diesel Pumps



- Diesel engine pumps will provide 10,000 psi at remote locations
- Industrial grade 7.3 hp HATZ Diesel engine
- Locking solenoid control valve for use with single or double acting cylinders or tools
- Two speed pump designed for rapid cylinder advance
- Pump features a sturdy protective roll cage for use in the toughest environments
- Ideal for application when diesel fuel in remote environments is required
- Comes standard with electric start

| Valve Function | Valve Type | Use with Cylinder Type | Flow Rate | | | |
|---|---|---|---|---|---|---|
| | | | 1st Stage | | 2nd Stage | |
| | | | in³/min | psi | in³/min | psi |
| 3W/3P Advance/Hold Return | Manual |  | 427 | 700 | 100 | 10,000 |
| | Solenoid | | 600 | 700 | 200 | 10,000 |
| | Solenoid | | 600 | 700 | 200 | 10,000 |
| 4W/3P Advance/Hold Return | Manual |  | 427 | 700 | 100 | 10,000 |
| | Solenoid | | 600 | 700 | 200 | 10,000 |
| | Solenoid | | 600 | 700 | 200 | 10,000 |



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# Gas/Diesel Pump Matrix Chart

If you don't see a pump that would fit your application needs, you can custom build a pump to your desired specifications. Use this Pump Matrix Chart as a guide for creating your very own custom gas/diesel pump. For assistance in building your pump, call your local BVA Representative.

| P | G | 90 | S4L | 10 | - | A | G |
|---|---|---|---|---|---|---|---|
| *1* Product Type | *2* Motor Type | *3* Flow Group | *4** Valve Type /Operation | *5* Reservoir Size | | *7* Pump Options | |

## 1 - Product Type

| | |
|---|---|
| **P** | Pump |

## 2 - Motor Type

| | |
|---|---|
| **G** | Gas Motor |
| **D** | Diesel Motor |

## 3 - Flow Group

| | |
|---|---|
| **70** | 427/100 $in^3$/min @ 700/10,000 psi, 5.5 Hp |
| **80** | 600/200 $in^3$/min @ 700/10,000 psi, 7.3 Hp |
| **90** | 1070/200 $in^3$/min @ 700/10,000 psi, 10.2 Hp |

## 4* - Valve Type/Operation

| | |
|---|---|
| **CMR** | Pump Mounted Manifold Block - Pressure & Return Ports Only |
| **DSP** | Dump Solenoid Valve w/pendant 3W/2P (Spool Type Valve) |
| **M2N** | Manual Valve 3W/2P |
| **M3N** | Manual Valve 3W/3P |
| **M4N** | Manual Valve 4W/3P |
| **M3L** | Manual Valve 3W/3P w/Locking Plate |
| **M4L** | Manual Valve 4W/3P w/Locking Plate |
| **S3N** | Solenoid Valve 3W/3P (Spool Type) |
| **S4N** | Solenoid Valve 4W/3P (Spool Type) |
| **S3L** | Solenoid Valve 3W/3P w/Locking Plate (Spool Type Valve) |
| **S4L** | Solenoid Valve 4W/3P w/Locking Plate (Spool Type Valve) |

## 5 - Reservoir Size

| | |
|---|---|
| **5** | 5 Gallons |
| **10** | 10 Gallons |
| **15** | 15 Gallons |
| **25** | 25 Gallons |
| **40** | 40 Gallons |

## 6 - Pump Options

| | |
|---|---|
| **A** | External Pressure Adjustment Block *(available on any models with 3W/3P or 4W/3P)* |
| **G** | Gauge w/Gauge Adapter 0-15,000 psi 2-1/2" Wet - Installed "A" Port |
| **P** | Pressure Switch *(available on solenoid equipped models only)* |
| **E** | Foot Control Switch *(available on solenoid equipped models only)* |
| **W** | Wireless Control *(available on solenoid equipped models only)* |

* Solenoid options are not available on the PG70 Series Gas Pumps

*Not all options are available in all configurations. Table is for reference only. Please consult your local BVA dealer if you want to order a custom pump or if you have questions.*



*PG/PD Series*

## Ordering Example

**PG90S4L10**

After reviewing this model number, we know that the pump has the following specifications:

- Gasoline power source
- 10.2 Hp flow group
- Solenoid Valve w/Locking Plate 4W/3P
- 10 gallon reservoir tank



*PG90S4L10*

## Roll Cages



All gas and diesel pumps are equipped with roll cages to prevent any damage that might occur on a job site.

## Wireless Controller



**PG90** and **PD80** pumps have an optional wireless controller. Visit the gas/diesel pump matrix and pump accessories page for more details.

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## Optional Electric Start



**PG90** has an optional electric start.
**PD80** comes standard with an electric start.
Refer to the Gas/Diesel Pump Matrix.

| Motor HP / Type | Usable Oil Capacity | | | |
|---|---|---|---|---|
| | 5 Gallons | 10 Gallons | 15 Gallons | 40 Gallons |
| | Model Number | Model Number | Model Number | Model Number |
| Gas - 5.5 Hp Honda | PG70M3N05 | - | - | - |
| Gas - 10.2 Hp Honda | PG90S3L05 | PG90S3L10 | PG90S3L15 | PG90S3L40 |
| Diesel - 7.3 Hp HATZ | PD80S3L05 | PD80S3L10 | PD80S3L15 | PD80S3L40 |
| Gas - 5.5 Hp Honda | PG70M4N05 | - | - | - |
| Gas - 10.2 Hp Honda | PG90S4L05 | PG90S4L10 | PG90S4L15 | PG90S4L40 |
| Diesel - 7.3 Hp HATZ | PD80S4L05 | PD80S4L10 | PD80S4L15 | PD80S4L40 |

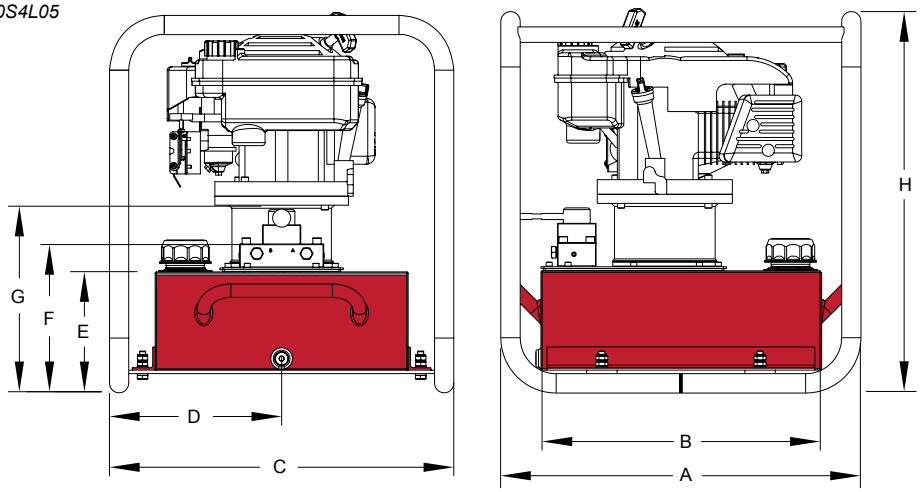
# Gas and Diesel Pumps

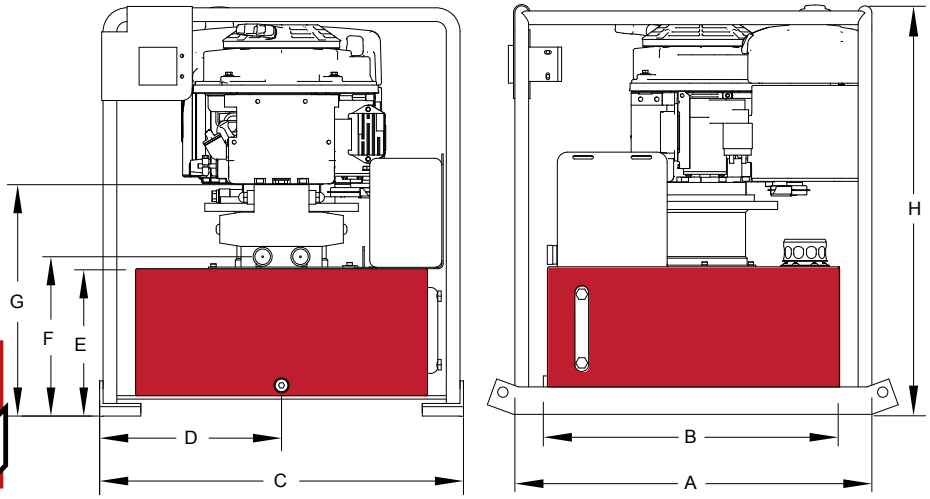
## *PG70/PG90/PD80 Series*



*PD80S4L05*

*PG90M4N10*




### Safety Practices

80%

Good industry practice recommends not exceeding 80% of maximum rated capacities of all our products.

### Related Product: Gauges



Reduce the risk of overloading your product by using a gauge. A variety of graduations and types to suit any need.

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### Safety Instructions



Visit our DO'S and DON'TS section to review the best methods of operation. Always be prepared.

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### Related Product: Hoses



We offer a variety of hoses, fittings, lengths and materials.

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| Model Number* | Dimensions (in) | | | | | | | | Weight** (lbs) |
|---|---|---|---|---|---|---|---|---|---|
| | A | B | C | D | E | F | G | H | |
| **Gas Pumps** | | | | | | | | | |
| PG70xxx05 | 26.57 | 21.50 | 20.94 | 10.47 | 11.50 | 12.43 | 15.47 | 24.70 | 162 |
| PG90xxx10 | 28.25 | 23.37 | 27.00 | 13.50 | 12.00 | 12.93 | 17.38 | 24.70 | 303 |
| PG90xxx15 | 28.25 | 23.37 | 27.00 | 13.50 | 12.00 | 12.93 | 17.38 | 24.70 | 372 |
| **Diesel Pumps** | | | | | | | | | |
| PD80xxx05 | 26.57 | 21.50 | 20.94 | 10.47 | 11.50 | 12.43 | 15.47 | 32.60 | 255 |
| PD80xxx10 | 28.25 | 23.37 | 27.00 | 13.5 | 12.00 | 12.93 | 17.38 | 32.60 | 329 |
| PD80xxx15 | 28.25 | 26.00 | 27.00 | 13.5 | 12.00 | 12.93 | 17.38 | 32.60 | 403 |

** "xxx" in the model number refers to the type of valve you may use on the gas/diesel engine pump. Refer to your local BVA dealer or the Matrix Chart (on page 61) to build your own pump.*
*** Pump weights include oil.*



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# Universal Motor Pumps

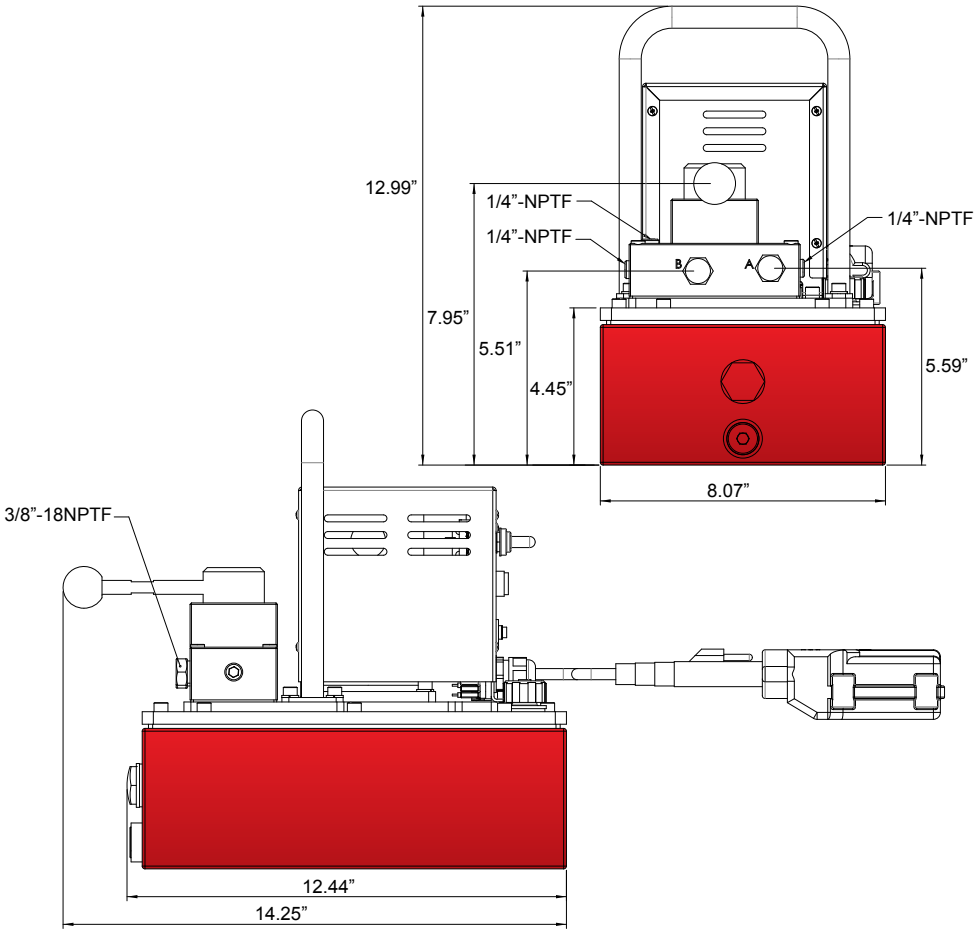
***PU Series - Light-Weight Pumps***

- Portable, light weight and compact design
- Universal Motor, starts under full load and is available in either 120VAC 50/60 HZ or 240VAC 50/60HZ
- 10ft 24 VAC pendant control for safety
- Weighs only 37 lbs. with oil
- External pressure adjustment is available
- Designed for intermittent duty operation
- Gauge port on control valve
- 1 Gallon Reservoir




*PU20DMP01B*

*PU20M4N01B*




## Hydraulic Gear Pullers

5, 10, 15, 25, 50 & 100 Ton Hydraulic Gear Pullers come with a safety cage design help keep the jaws tight to the gear and prevent slippage that can cause injury. Pair these with BVA's PU20M3N01B Lightweight e-pump for portability.

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## Hydraulic Nut Splitters

Available in 3 models, each nut splitter can split a wide range of nut sizes thereby reducing the number of splitters needed. The BVA PU20DMP01B dump style pump works well with these splitters

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## Flange Spreaders

BVA's Pin Type Flange Spreaders are available in both 5 & 10 Ton models and well suited for most environments. For portability and speed the PU20M3N01B would be an ideal choice.

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## HGP-1 Pump Kit

HGP-1 Pump Kit contains: PU20M3N01B, CF3814, GW2514, CS3838C, and CH38M




| Valve Function | Flow Rate | | | | Motor Size | Voltage 50/60 Hz | | Weight (lbs) | Length (in) | Width (in) | Height (in) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1st Stage | | 2nd Stage | | | 120 VAC | 240 VAC | | | | |
| | $in^3$/min | psi | $in^3$/min | psi | | Model # | Model # | | | | |
| 2W/2P Advance/Return | 133 | 200 | 28 | 10,000 | 1.0 Hp | PU20DMP01B | PU20DMP01C | 37.0 | 12.44 | 8.07 | 11.81 |
| 3W/3P Advance/Hold Return | 133 | 200 | 28 | 10,000 | 1.0 Hp | PU20M3N01B | PU20M3N01C | 37.0 | 14.25 | 8.07 | 11.81 |
| 4W/3P Advance/Hold/Return | 133 | 200 | 28 | 10,000 | 1.0 Hp | PU20M4N01B | PU20M4N01C | 37.0 | 14.25 | 8.07 | 11.81 |

# Combinations

***Pump and Cylinder Sets***

**Each set includes:**

- ¼" ID 6 foot Hydraulic Hose
- ⅜" High Flow Male Coupler
- Adapter (SP3 Models Only)
- 2½" Face Diameter Wet Gauge



| Single Acting Cylinder Type | Cylinder | | | | Hand Pump P350 | Hand Pump P1000 | Hand Pump P2301 | Air Pump PA1500 |
|---|---|---|---|---|---|---|---|---|
| | Capacity (Ton) | Model Number | Stroke (in) | Collapsed Height (in) | | | | |
| General Purpose Cylinders  | 5 | H0505 | 5.08 | 8.70 | SP3-0505 | - | - | - |
| | 10 | H1002 | 2.01 | 4.84 | - | SP10-1002 | - | SA15-1002 |
| | | H1004 | 4.02 | 6.85 | - | SP10-1004 | - | SA15-1004 |
| | | H1006 | 5.94 | 9.84 | - | SP10-1006 | - | SA15-1006 |
| | | HT1006 | 5.95 | 11.46 | - | SP10-1006T | - | SA15-1006T |
| | | H1010 | 9.96 | 13.86 | - | SP10-1010 | - | SA15-1010 |
| | | HT1010 | 9.96 | 15.47 | - | SP10-1010T | - | SA15-1010T |
| | 15 | H1504 | 3.98 | 7.87 | - | SP10-1504 | - | SA15-1504 |
| | | H1506 | 5.98 | 10.63 | - | SP10-1506 | - | SA15-1506 |
| | 25 | H2502 | 2.01 | 6.61 | - | SP10-2502 | - | SA15-2502 |
| | | H2504 | 4.02 | 8.62 | - | SP10-2504 | - | SA15-2504 |
| | | H2506 | 6.10 | 10.71 | - | SP10-2506 | - | SA15-2506 |
| | | H2508 | 8.11 | 12.72 | - | - | SP23-2508 | SA15-2508 |
| | | H2514 | 14.25 | 18.74 | - | - | SP23-2514 | SA15-2514 |
| | 55 | H5506 | 6.26 | 11.14 | - | - | SP23-5506 | SA15-5506 |
| | 100 | H10002A | 2.01 | 8.62 | - | - | SP23-10002A | - |
| Flat Body Cylinders  | 5 | HF0503* | 0.24 | 1.26 | SP3-0503F | - | - | - |
| | | HF0503B * | 0.24 | 1.26 | SP3-0503B | - | - | - |
| | 10 | HF1005 | 0.43 | 1.69 | SP3-1005F | - | - | - |
| | | HF1005B | 0.43 | 1.69 | SP3-1005B | - | - | - |
| | 20 | HF2005 | 0.43 | 2.01 | SP3-2005F | - | - | - |
| | | HF2005B | 0.43 | 2.01 | SP3-2005B | - | - | - |
| | 30 | HF3005 | 0.51 | 2.31 | SP3-3005F | - | - | - |
| | | HF3005B | 0.51 | 2.31 | SP3-3005B | - | - | - |
| | 50 | HF5006 | 0.63 | 2.64 | SP3-5006F | - | - | - |
| | | HF5006B | 0.63 | 2.64 | SP3-5006B | - | - | - |
| | 75 | HF7506 | 0.63 | 3.13 | SP3-7506F | - | - | - |
| | 100 | HF10006 | 0.63 | 3.37 | SP3-10006F | - | - | - |
| | 150 | HF15006 | 0.63 | 3.94 | - | SP10-15006F | - | - |

** HF0503 comes with CR38M coupler*
*** HC1202 comes with CRZ14M coupler*



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*We see here our combo kit SA15-3002L getting set up to lift a load. This combo kit includes a HL3002 cylinder, PA1500 air pump, CS3814 hose/CH38M coupler set, CF3814 gauge adapter and a GW2514 pressure gauge.*

# Combinations

## *Pump and Cylinder Sets*



| Single Acting Cylinder Type | Cylinder | | | | Hand Pump P350 | Hand Pump P1000 | Hand Pump P2301 | Air Pump PA1500 |
|---|---|---|---|---|---|---|---|---|
| | Capacity (Ton) | Model | Stroke (in) | Collapsed Height (in) | | | | |
| Hollow Hole Cylinders  | 12 | HC1201T** | 0.31 | 2.36 | SP3-1201T | - | - | - |
| | | HC1202T** | 1.61 | 4.74 | SP3-1202T | - | - | - |
| | | HC1202XT** | 1.61 | 4.74 | SP3-1202XT | - | - | - |
| | | HC1203XT | 2.99 | 7.24 | - | SP10-1203XT | - | - |
| | 20 | HC2002T | 2.01 | 6.38 | - | SP10-2002T | - | SA15-2002T |
| | 30 | HC3002T | 2.52 | 7.05 | - | SP10-3002T | - | - |
| | | HC3006T | 6.11 | 13.02 | - | SP10-3006T | - | SA15-3006T |
| | 60 | HC6003T | 3.00 | 9.77 | - | SP10-6003T | - | SA15-6003T |
| | | HC6006T | 6.00 | 12.76 | - | - | SP23-6006T | SA15-6006T |
| | 100 | HC10003T | 3.00 | 10.00 | - | - | SP23-10003T | SA15-10003T |
| Low Profile Cylinders  | 10 | HL1001 | 1.50 | 3.48 | SP3-1001L | SP10-1001L | - | SA15-1001L |
| | 20 | HL2002 | 1.75 | 3.90 | SP3-2002L | SP10-2002L | - | SA15-2002L |
| | 30 | HL3002 | 2.44 | 4.61 | SP3-3002L | SP10-3002L | - | SA15-3002L |
| | 50 | HL5002 | 2.36 | 4.80 | - | SP10-5002L | - | SA15-5002L |
| | 60 | HL6003KK | 2.50 | 5.63 | - | SP10-6003L | SP23-6003L | SA15-6003L |
| | 100 | HL10002 | 2.24 | 5.55 | - | SP10-10002L | SP23-10002L | SA15-10002L |
| Lock Nut Cylinders  | 55 | HLN5502 | 1.97 | 6.50 | - | - | SP23-5502LN | SA15-5502LN |
| | | HLN5504 | 3.94 | 8.40 | - | - | SP23-5504LN | SA15-5504LN |
| | | HLN5506 | 5.91 | 10.40 | - | - | SP23-5506LN | SA15-5506LN |
| Aluminum Cylinders  | 30 | HU3002T | 2.00 | 6.50 | SP3-3002U | - | - | SA15-3002U |
| | | HU3006T | 6.00 | 10.50 | - | SP10-3006U | - | SA15-3006U |
| | 50 | HU5006T | 6.00 | 10.50 | - | - | SP23-5006U | SA15-5006U |

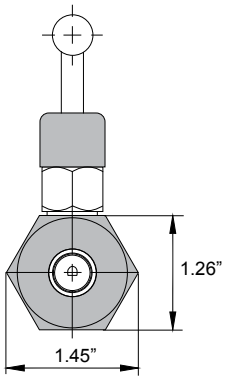
** HF0503 comes with CR38M coupler*
*** HC1202 comes with CRZ14M coupler*

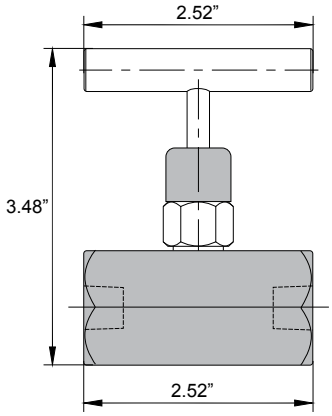
# Flow Control Valves

***10,000 PSI Rated***




*CVN1 and CVN3*

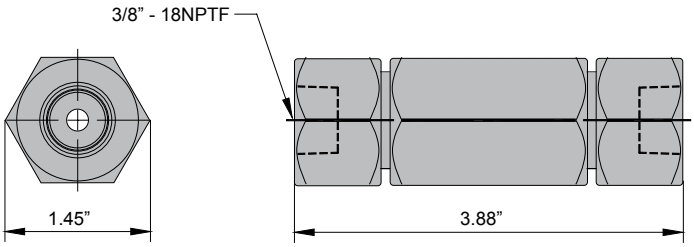




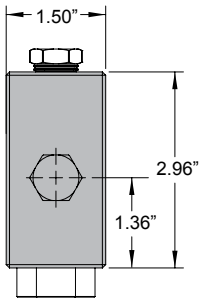


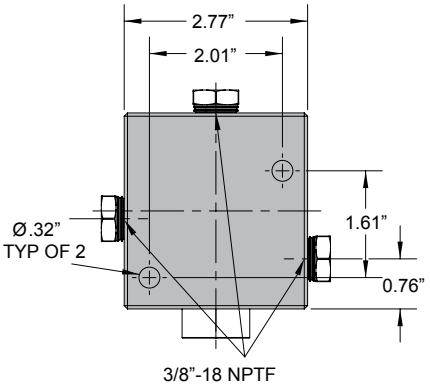
*CVC3*

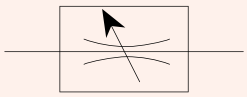
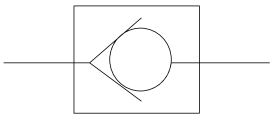
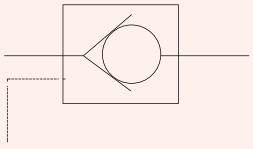





*CVP3*




| Valve Type | Model Number | Ports | Applications | Hydraulic Symbol |
|---|---|---|---|---|
| Needle Valve | CVN1 | ¼"-18NPTF | Controls cylinder speed and acts as temporary shut-off valve for load holding. |  |
| | CVN3 | ⅜"-18NPTF | | |
| Check Valve | CVC3 | ⅜"-18NPTF | Allows flow in one direction only. |  |
| Pilot Operated Check Valve | CVP3 | ⅜"-18NPTF | Mounted in line to a cylinder which will hold pressure in the event of pressure loss in the system. Most often used on double-acting cylinders with pilot port, receiving pressure from a tee off of the cylinder retracting line. Pilot pressure ratio 15% or 6.5:1 |  |



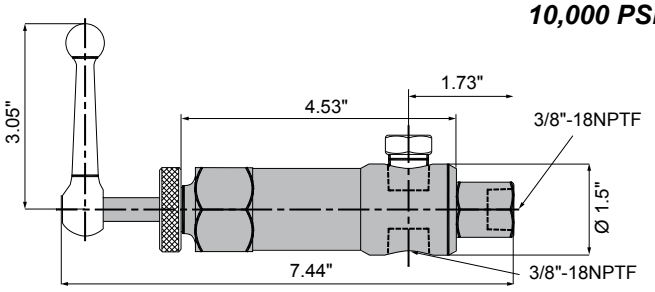
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# Flow Control Valves

***10,000 PSI Rated***

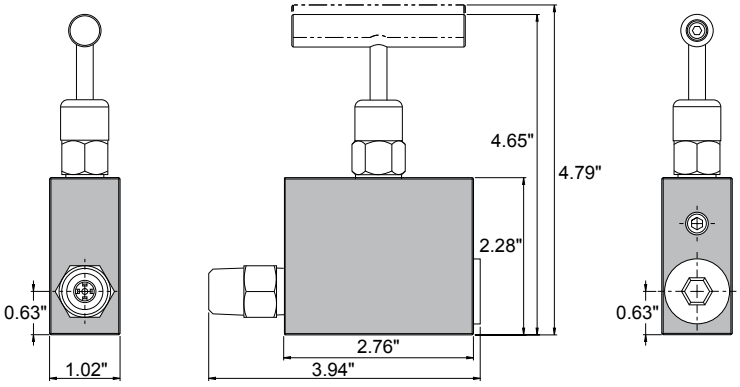


*CVR3*



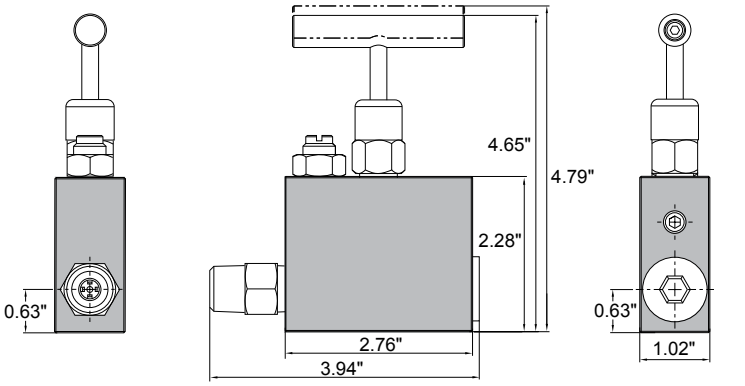


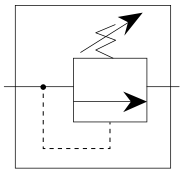
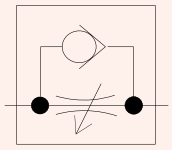
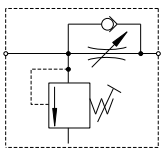

*CVM3*






*CVMS3*




| Valve Type | Model Number | Ports | Applications | Hydraulic Symbol |
|---|---|---|---|---|
| Pressure Relief Valve | CVR3 | ⅜"-18NPTF | Controls pressure developed by the pump in hydraulic loop. By-pass occurs when preset pressure reaches 0-10,000 PSI. Turns clockwise to increase pressure, counter-clockwise to decrease. |  |
| Manual Operated Check Valve | CVM3 | ⅜"-18NPTF | Mounted in line to a cylinder and will hold pressure in the cylinder in the event of pressure loss in the system. Pressure is manually released. |  |
| | CVMS3 | ⅜"-18NPTF | Mounted in line to a cylinder and will hold pressure in the cylinder in the event of pressure loss in the system. This model is equipped with high-pressure bypass. Pressure is manually released. |  |

# Manifolds

***10,000 PSI Rated***



*CMH6*



*CM7*



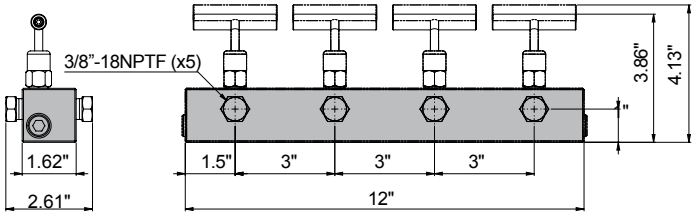
*CM14*

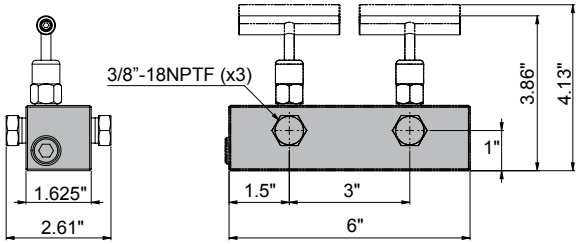


*MFC4*



*MFC2*






*FCMH6*

## FCMH6

- Controls the flow of (5) hydraulic hoses from one central location
- Sturdy design for long product life
- Convenient carry handle

| Manifold Type | Model Number | Number of Ports | Port Size | Mounting Holes |
|---|---|---|---|---|
| 6-Port Hexagon Manifold | CMH6 | 6 | ⅜”-18NPTF | ¼”-20UNC |
| 7” Long Manifold | CM7 | 7 | ⅜”-18NPTF | ¼”-20UNC |
| 14” Long Manifold | CM14 | 7 | ⅜”-18NPTF | ¼”-20UNC |
| Manifold with Two Needle Valves | MFC2 | 3 | ⅜”-18NPTF | 0.28” Dia. |
| Manifold with Four Needle Valves | MFC4 | 5 | ⅜”-18NPTF | 0.28” Dia. |
| Spider Valves | FCMH6 | 6 | ⅜”-18NPTF | - |



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# Hydraulic Pressure Gauge

***Analog***



*GW4014*



*GW2514*

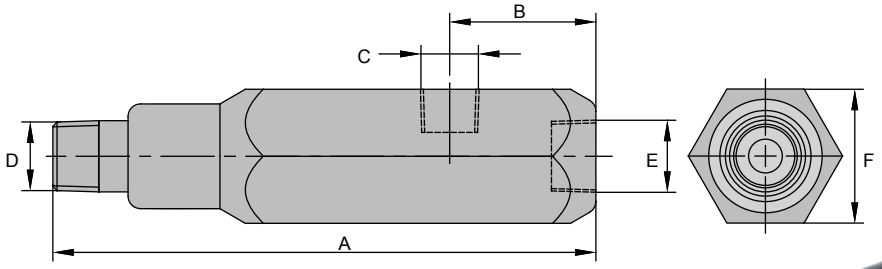


*GD2514*

| Gauge Type | Model Number | Certified Gauge | Face Dia. (in) | Thread (in) | Material | Pressure Range | | Graduation | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | (psi) | (bar) | Major Graduation (psi) | Minor Graduation (psi) | Major Graduation (bar) | Minor Graduation (bar) |
| Dry | GD2514 | - | 2.50 | 1/4"-18 NPTF | Brass | 0 - 15,000 | 0 - 1,034 | 2,000 | 200 | 100 | 20 |
| | GD4014 | - | 4.00 | 1/4"-18 NPTF | Brass | 0 - 15,000 | 0 - 1,034 | 2,000 | 200 | 100 | 20 |
| | GD2512 | - | 2.50 | 1/2"-14 NPTF | Brass | 0 - 10,000 | 0 - 700 | 2,000 | 200 | 100 | 20 |
| | GD4012 | - | 4.00 | 1/2"-14 NPTF | Brass | 0 - 10,000 | 0 - 700 | 2,000 | 200 | 100 | 20 |
| Wet | GW2514 | - | 2.50 | 1/4"-18 NPTF | Brass | 0 - 15,000 | 0 - 1,034 | 2,000 | 200 | 100 | 20 |
| | GW4014 | - | 4.00 | 1/4"-18 NPTF | Brass | 0 - 15,000 | 0 - 1,034 | 2,000 | 200 | 100 | 20 |
| | GW4014-CERT | yes | 4.00 | 1/4"-18 NPTF | Stainless | 0 - 20,000 | 0 - 1,379 | 2,000 | 200 | 100 | 20 |
| | GW2512 | - | 2.50 | 1/2"-14 NPTF | Brass | 0 - 10,000 | 0 - 700 | 2,000 | 200 | 100 | 20 |
| | GW4012 | - | 4.00 | 1/2"-14 NPTF | Brass | 0 - 10,000 | 0 - 700 | 2,000 | 200 | 100 | 20 |

# Gauge Adapter

***10,000 PSI Rated***

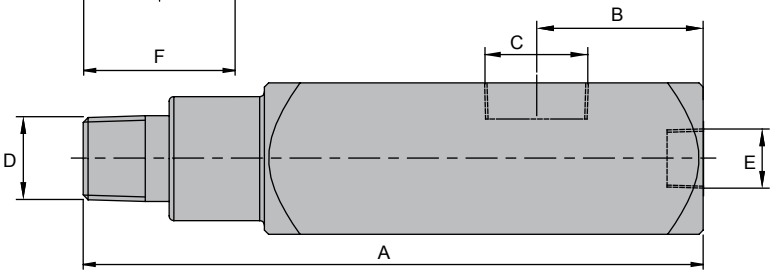





*CF3814*

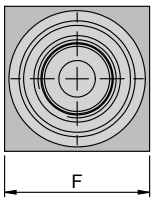


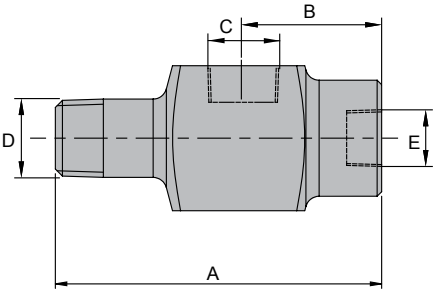
*CF3812E*






*CF3812*




| Model Number | Dimensions (in) | | | | | |
|---|---|---|---|---|---|---|
| | A | B | C | D | E | F |
| CF3814 | 5.12 | 1.38 | ¼"-18NPTF | ⅜"-18NPTF | ⅜"-18NPTF | 1.25 |
| CF3812 | 2.81 | 1.38 | ½"-14NPTF | ⅜"-18NPTF | ⅜"-18NPTF | 1.25 |
| CF3812E | 6.10 | 1.38 | ½"-14NPTF | ⅜"-18NPTF | ⅜"-18NPTF | 1.25 |

# Hydraulic Oil

***ISO 46***

- Recommended for all BVA cylinders and pumps




*FJZ01*

| Volume (gal) | Model Number | Viscosity Index (min) | Viscosity @ 100°F (S.U.S.) | Viscosity @ 210°F (S.U.S.) | ASTM Grade | Flash Point (°F) | Pour Point (°F) | API Gravity |
|---|---|---|---|---|---|---|---|---|
| 1 | FJZ01 | 144 | 234 | 53 | 215 | 356 | -49 | 30.8 |

# Coupler Dust Cover

- Keeps contaminants out of the system

| Model Number | Coupler Compatibility |
|---|---|
| CDC38 | CH38, CH38F, CH38M |



*CDC38*

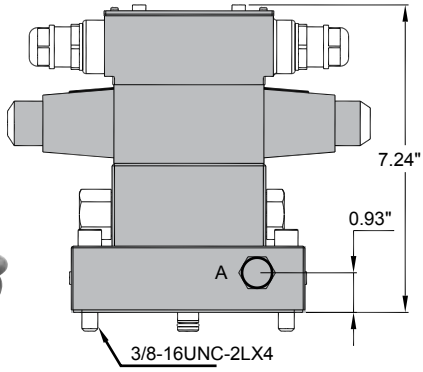
# Solenoid Valves

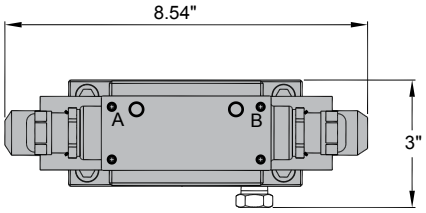
***Pump Mounted***

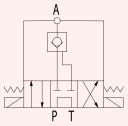
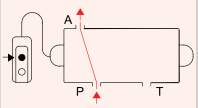
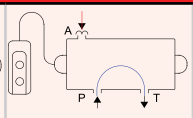
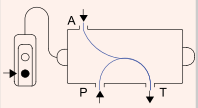
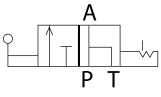
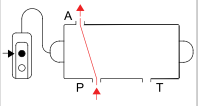
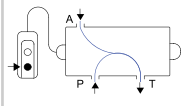
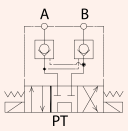
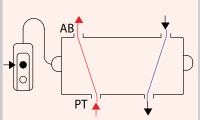
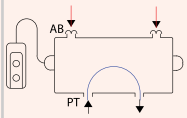
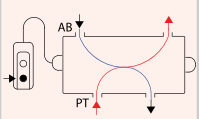
- Pump mounted solenoid kits converts your manual pump to an electrically controlled pump.



*PS33L*




| Use With Cylinder | Model Number | Valve Type | Valve Function | Hydraulic Symbol | Schematic Flow path | | | Weight (lbs) |
|---|---|---|---|---|---|---|---|---|
| Single Acting | PS33L | Solenoid 115VAC | Advance/ Hold/Re-turn |  |  |  |  | 7.0 |
| Single Acting | PD33 | Solenoid 115VAC | Advance/ Return |  |  |  | - | 6.0 |
| Double Acting | PS43L | Solenoid 115VAC | Advance/ Hold/ Return |  |  |  |  | 7.0 |



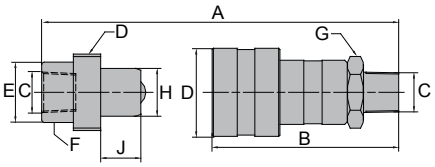
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# Hydraulic Couplers

***10,000 PSI Rated***

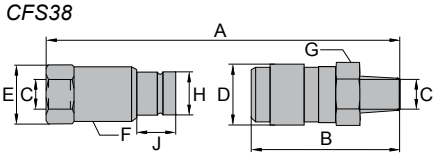


*CH38*



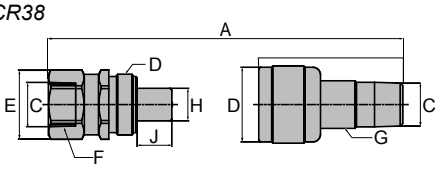



*CFS38*



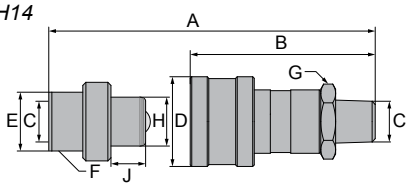



*CR38*



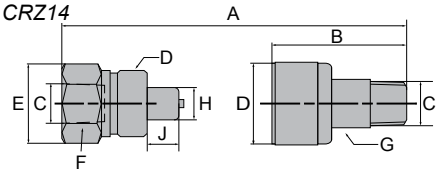



*CH14*






*CRZ14*

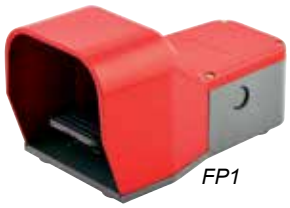



| Coupler Type | Model Numbers | | | Dimensions (in) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Complete Set | Male Half | Female Half | A* | B | C | D | E | F | G | H | J |
| High-Flow Coupler | CH38 | CH38M | CH38F | 3.35 | 2.84 | 3/8"-18NPTF | 1.10 | - | 1.00 | 0.75 | 0.63 | 0.63 |
| Flush-Face Coupler | CFS38 | CFS38M | CFS38F | 4.36 | 2.85 | 3/8"-18NPTF | 1.21 | 1.06 | 1.12 | 0.79 | 0.63 | 0.63 |
| Regular-Flow Coupler | CR38 | CR38M | CR38F | 3.15 | 2.20 | 3/8"-18NPTF | 1.04 | - | 0.73 | 0.50 | 0.53 | 0.53 |
| High-Flow Coupler | CH14 | CH14M | CH14F | 2.83 | 2.35 | 1/4"-18NPTF | 0.87 | - | 0.83 | 0.62 | 0.41 | |
| Zinc Coupler | CRZ14 | CRZ14M | CRZ14F | 2.42 | 1.67 | 1/4"-18NPTF | 0.95 | 0.83 | 0.58 | 0.39 | 0.35 | 0.35 |

** Value A is total length when male and female couplers are connected.*

# Foot Pedals

***Single or Double***



*FP1*



*FP2*

- Hands free pump operation
- Can be used with all pumps equipped with solenoid valves

*Foot controls with 10' cord. This option replaces the hand controls on solenoid equipped models.*

# Wireless Hand Held Control

***WR12K***





*WR12K*

- Allows for increased mobility and safety
- Nominal range of 325 feet (greater w/ unobstructed line of sight)
- Batteries last 100 hours with continuous key press (2 AAA batteries)
- For hands free pump operation
- Contact your local BVA dealer for further information

# External Pressure Adjustment

***Sandwich Mounted***

| Model Number | Pressure Adj. Range (psi) | Interval (psi) | Suitable Model |
|---|---|---|---|
| PW-AS1 | 1,000 ~ 10,000 | 50 | PE Series, 1 Gal. Reservoir |
| PW-AS2 | | | PE Series, 2+ Gal. Reservoir |
| PW-AS3 | | | PU20 Series Pump |
| PW-AS4 | | | PU20DMP Series |



*PW-AS1*

- Pressure can be adjusted externally (1,000-10,000 psi)
- Works with single and double acting cylinders



CMR2

## Pump Mounted Manifold Block

***CMR2***

- Converts BVA pumps with mounted valves for use with remote mounted valves
- Comes with 4 mounting bolts

## Pressure Switch

***CVS1***

- Automatically shuts off electric pump when predetermined system pressure is reached



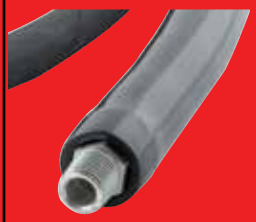
CVS1

| Model Number | Adjustable Pressure Range | Electrical Rating | Port Size | Weight (lbs) |
|---|---|---|---|---|
| CVS1 | 1,000~10,150 psi | 15 amp @ 250V max | ¼"-18NPTF | 1.32 |

## Hydraulic Hoses

***Rubber or Thermoplastic***

- All hoses are designed with a Maximum Working Pressure of 10,000 psi
- Heavy Duty Rubber Hoses are made with 2 layers of steel braids and comply with the Material Handling Institutes IJ-100 standard for hoses and carries a 2:1 safety factor
- Thermoplastic Hoses are made with 2 layers of steel braids with wrapped in a Polyurethane jacket and carries a 4:1 safety factor

| Hose ID (in) | Hose Length (ft) | Hose End 1 | Hose End 2 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | |  1/4"-18 NPTF | |  3/8"-18 NPTF | |  CR38M Coupler | |  CH38M Coupler | |
| | | | Rubber | Thermoplastic | Rubber | Thermoplastic | Rubber | Thermoplastic | Rubber | Thermoplastic |
| | | | Model Number | | Model Number | | Model Number | | Model Number | |
| ¼" | 6 | ¼"-18 NPTF | CS1414 | CT1414 | - | - | - | - | CS1414M | CT1414M |
| | 2 | ⅜"-18 NPTF | - | - | CS3814A | - | CS3814AMR | - | CS3814AM | - |
| | 3 | ⅜"-18 NPTF | - | - | CS3814B | CT3814B | CS3814BRM | - | CS3814BM | - |
| | 6 | ⅜"-18 NPTF | - | - | CS3814 | CT3814 | CS3814MR | - | CS3814M | CT3814M |
| | 10 | ⅜"-18 NPTF | - | - | CS3814C | CT3814C | CS3814CRM | - | CS3814CM | CT3814CM |
| | 20 | ⅜"-18 NPTF | - | - | CS3814D | CT3814D | CS3814DRM | - | CS3814DM | CT3814DM |
| | 30 | ⅜"-18 NPTF | - | - | CS3814G | CT3814E | - | - | CS3814GM | CT3814EM |
| ⅜" | 6 | ⅜"-18 NPTF | - | - | CS3838 | CT3838 | CS3838MR | - | CS3838M | CT3838M |
| | 10 | ⅜"-18 NPTF | - | - | CS3838C | CT3838C | - | - | CS3838CM | CT3838CM |
| | 20 | ⅜"-18 NPTF | - | - | CS3838D | CT3838D | - | - | CS3838DM | CT3838DM |
| | 30 | ⅜"-18 NPTF | - | - | CS3838E | CT3838E | - | - | CS3838EM | CT3838EM |
| | 50 | ⅜"-18 NPTF | - | - | CS3838F | CT3838F | - | - | CS3838FM | CT3838FM |

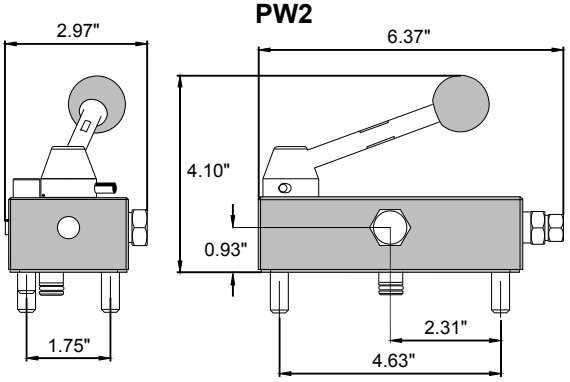


1-888-332-6419
www.BVAhydraulics.com

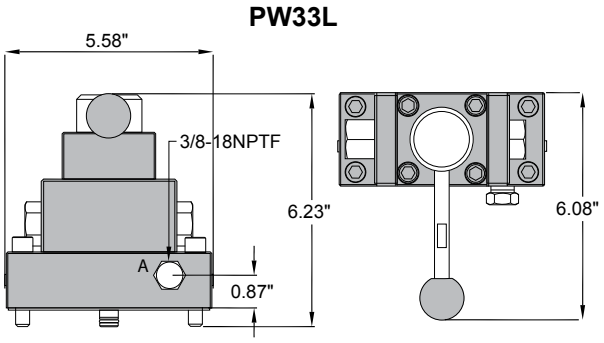
# Pump Mounted Valves

***For PE, PG and PD Pumps Only***

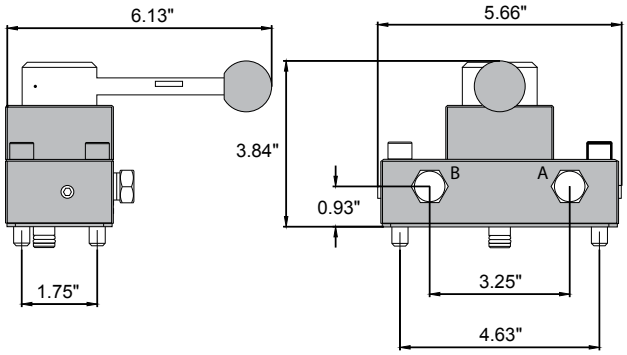
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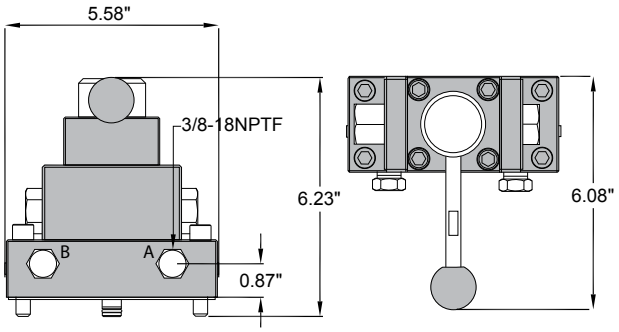

### PW33L

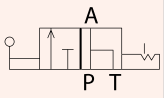
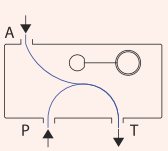
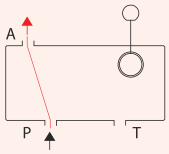
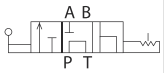
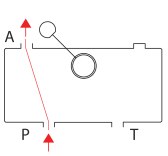
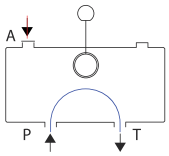
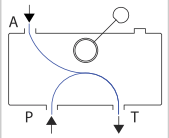
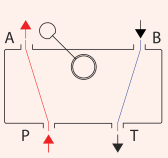
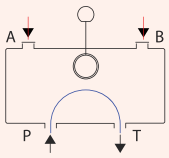
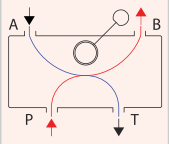
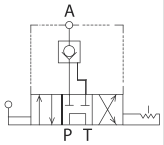
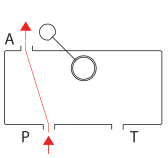
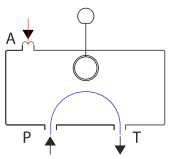
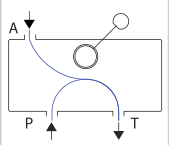
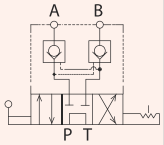
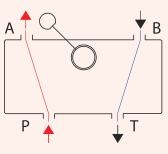
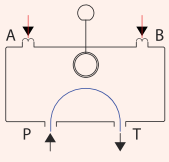
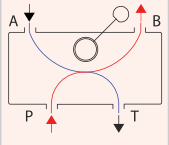



### PW3 and PW4




### PW43L

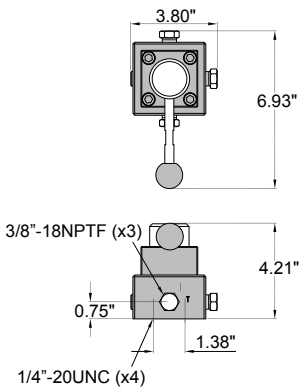



| Valve Operation | Valve Type | Use w/ Cylinder | Model Number | | Hydraulic Symbol | Schematic Flow path | | | Weight (lbs) |
|---|---|---|---|---|---|---|---|---|---|
| Manual | 3-Way, 2-Position | Single Acting | PW2 |  |  |  |  | - | 4 |
| | 3-way, 3-Position, Tandem center | Single Acting | PW3 |  |  |  |  |  | 4 |
| | 4-Way, 3-Position, Tandem center | Double Acting | PW4 |  |  |  |  |  | 3 |
| | 3-Way, 3-Position, Tandem center, Locking | Single Acting | PW33L |  |  |  |  |  | 6 |
| | 4-Way, 3-Position, Tandem center, Locking | Double Acting | PW43L |  |  |  |  |  | 6 |

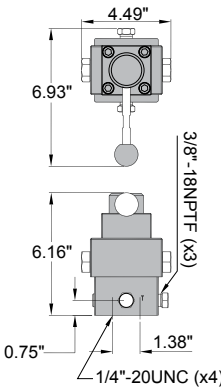
# Remote Mounted Directional Control Valves

***Not to be used with Hand Pumps***

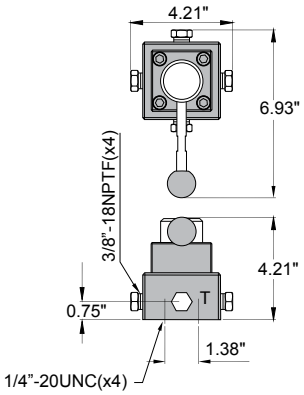
**PR33, PR33C**



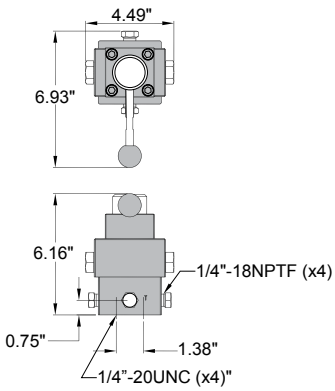

**PR33L , PR33CL**

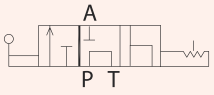
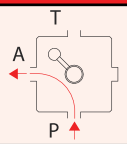
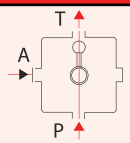
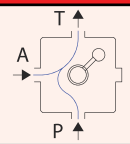
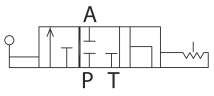
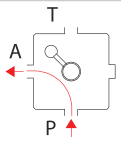
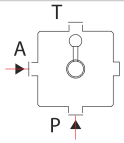
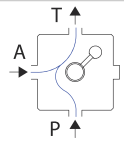
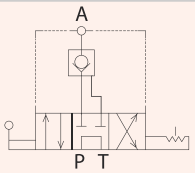
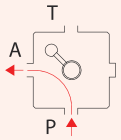
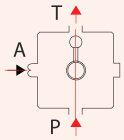
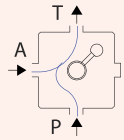
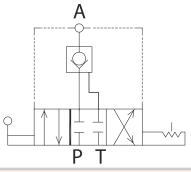
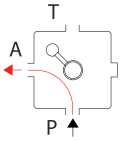
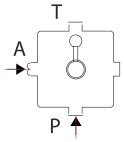
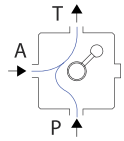
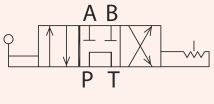
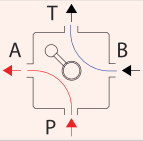
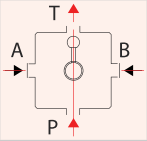
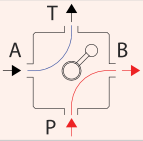
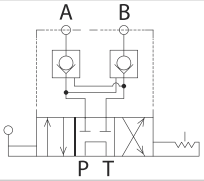
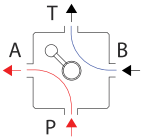
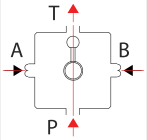
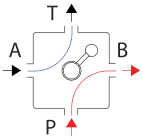
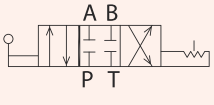
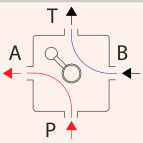
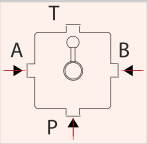
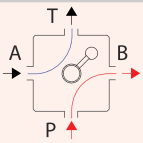
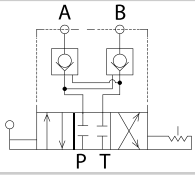
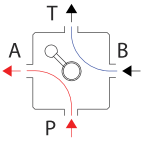
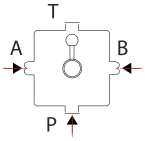
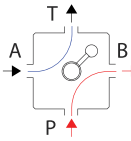



**PR43, PR43C**




**PR43CL**

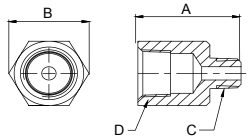
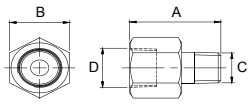
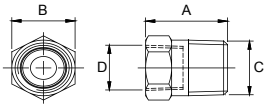
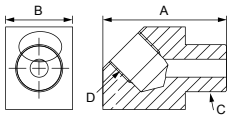
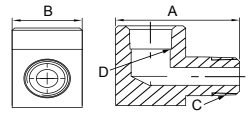
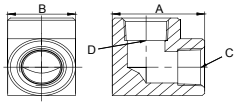
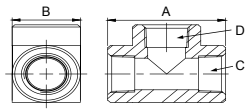
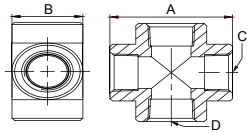
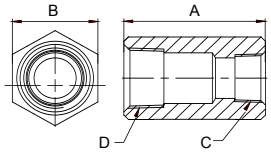
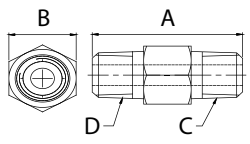



| Valve Operation | Valve Type | Use w/ Cylinder | Model Number | | Hydraulic Symbol | Schematic Flow path | | | Weight (lbs) |
|---|---|---|---|---|---|---|---|---|---|
| Manual | 3-Way, 3 Position, Tandem center | Single Acting | PR33 |  |  |  |  |  | 3.5 |
| | 3-Way, 3 Position, Closed center | | PR33C |  |  |  |  |  | 3.5 |
| | 3-Way, 3 Position, Tandem center, Locking | | PR33L |  |  |  |  |  | 5.7 |
| | 3-Way, 3 Position, Closed center, Locking | | PR33CL |  |  |  |  |  | 5.7 |
| | 4-Way, 3 Position, Tandem center | Double Acting | PR43 |  |  |  |  |  | 3.5 |
| | 4-Way, 3 Position, Tandem center, Locking | | PR43L |  |  |  |  |  | 5.7 |
| | 4-Way, 3 Position, Closed center | | PR43C |  |  |  |  |  | 3.5 |
| | 4-Way, 3 Position, Closed center, Locking | | PR43CL |  |  |  |  |  | 5.7 |

*All valves have a detent in the center position.*



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| Fitting Type | | Model Number | Dimensions | | | | Display Image |
|---|---|---|---|---|---|---|---|
| | | | A (in) | B (in) | C | D | |
| **Adapters** | | | | | | | |
|  | Adapter ½″-14NPTF - Female ⅜″-18NPTF - Male | FT108 | 1.69 | 1.14 | Male ⅜″-18NPTF | Female ½″-14NPTF |  |
| | Adapter ½″-14NPTF - Female ¼″-18NPTF - Male | FT118 | 1.69 | 1.14 | Male ¼″-18NPTF | Female ½″-14NPTF | |
|  | Fitting | CA3814 | 1.38 | 0.91 | Male ¼″-18NPTF | Female ⅜″-18NPTF |  |
| **Bushings/Connectors** | | | | | | | |
|  | Bushing | CB1438 | 0.87 | 0.67 | Male ⅜″-18NPTF | Female ¼″-18NPTF |  |
| | Bushing | CB1412 | 1.10 | 0.87 | Male ½″-14NPTF | Female ¼″-18NPTF | |
| | Bushing | CB3812 | 1.10 | 0.87 | Male ½″-14NPTF | Female ⅜″-18NPTF | |
|  | 2 way 45° Connector Street Elbow, ⅜″ to ⅜″-NPTF | FT045 | 1.89 | 1.02 | Male ⅜″-18NPTF | Female ⅜″-18NPTF |  |
|  | 2 way 90° Connector Street Elbow, ⅜″ to ⅜″-NPTF | FT101 | 1.81 | 1.02 | Male ⅜″-18NPTF | Female ⅜″-18NPTF |  |
|  | 2 way 90° Connector Elbow, ⅜″ to ⅜″ - NPTF | FT107 | 1.40 | 1.02 | Female ⅜″-18NPTF | Female ⅜″-18NPTF |  |
|  | 3 Way Connector ⅜″ to ⅜″ - NPTF | FT106 | 1.77 | 1.02 | Female ⅜″-18NPTF | Female ⅜″-18NPTF |  |
|  | 4 Way Connector Cross, ⅜″ to ⅜″ - NPTF | FT105 | 1.77 | 1.02 | Female ⅜″-18NPTF | Female ⅜″-18NPTF |  |
| **Couplings** | | | | | | | |
|  | Coupling Reducing Connector, ⅜″ to ¼″-NPTF | FT102 | 1.18 | 1.02 | Female ¼″-18NPTF | Female ⅜″-18NPTF |  |
| | Coupling Reducing Connector, ½″ to ⅜″ - NPTF | FT112 | 1.89 | 1.14 | Female ½″-14NPTF | Female ⅜″-18NPTF | |
| | Coupling ⅜″ to ⅜″- NPTF | FT103 | 1.18 | 1.02 | Female ⅜″-18NPTF | Female ⅜″-18NPTF | |
| **Hex Nipples** | | | | | | | |
|  | Male Connector Hex Nipple, ¼″ to ¼″ - NPTF | FT104 | 1.50 | 0.67 | Male ¼″-18NPTF | Male ¼-18NPTF |  |
| | Male Connector Hex Nipple, ⅜″ to ⅜″- NPTF | FT114 | 1.50 | 0.75 | Male ⅜″-18NPTF | Male ⅜″-18NPTF | |
| | Male Connector Hex Nipple, ¼″ to ⅜″- NPTF | FT124 | 1.45 | 0.75 | Male ¼″-18NPTF | Male ⅜″-18NPTF | |

| Presses | Reference Image Page Number | | Presses | Page Number / Reference Image | |
|---|---|---|---|---|---|
| Movable Head Shop Presses |  | 77 | Shop Press Accessories |  | 80 |
| Fixed Head Shop Presses |  | 78-79 | Press Guards |  | 80 |

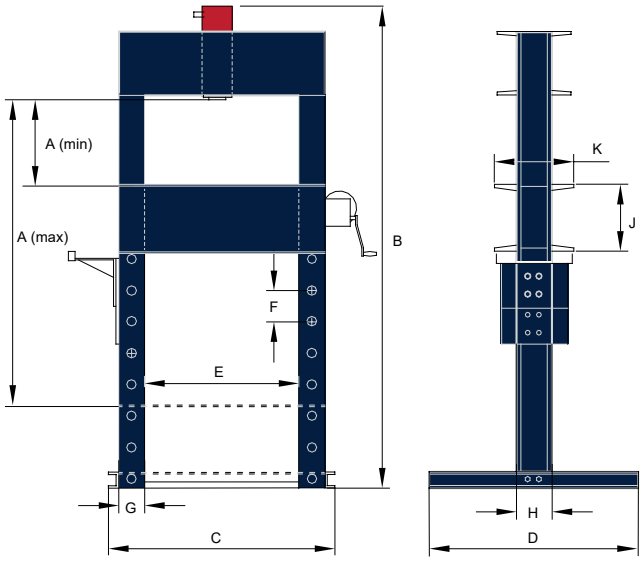
| Tools | Page Number / Reference Image | |
|---|---|---|
| Flange Spreaders |  | 81 |
| Duck Bill Spreaders |  | 81 |
| Oil Field Valve Seat Pullers |  | 82 |
| 50 Ton Cylinder with Base and Needle Valve Kit |  | 82 |
| Hydraulic Bench Vise |  | 82 |
| Hydraulic Gear Pullers |  | 83 |
| Mechanical Gear Pullers |  | 83 |
| Hydraulic Nut Splitters |  | 83 |

Maintenance/Bottle Jacks Page 84 ▶

# 55 Ton Shop Press with Movable Work Head




- Welded steel construction
- Cylinder moves from side to side and locks into position
- Multi-position bed for adjustable work height
- Pump, cylinder, hose, gauge and fittings are included

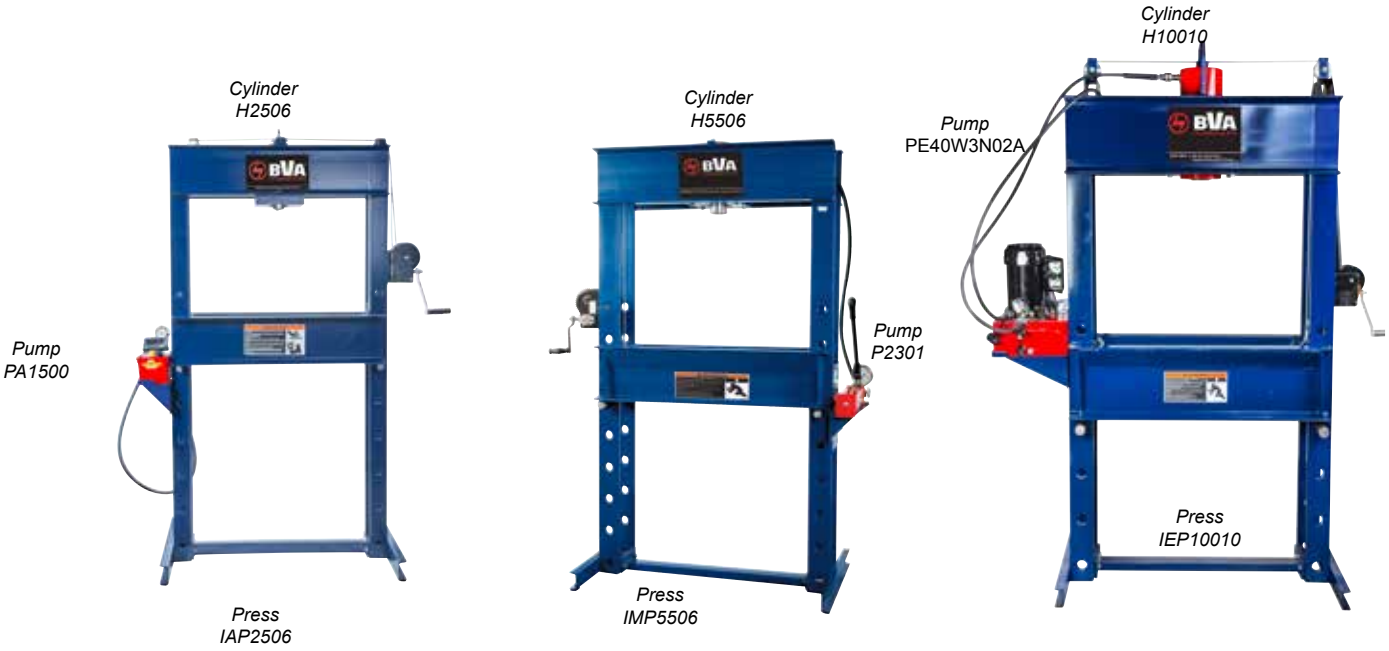



| Capacity (Tons) | Model Number | Pump Type | Pump Model | Cylinder Model | Cylinder Stroke (In) | Bed Positions | Press Dimensions (H x L x W) | Working Space (Min - Max) (in) |
|---|---|---|---|---|---|---|---|---|
| **Single Acting** | | | | | | | | |
| 55 | IAPR5506 | Air | PA2000 | H5506 | 6 | 7 | 78" X 46.5" X 30" | 15.38" X 51.38" |
| | IEPR5506 | Electric | PE40W3N02A | H5506 | 6 | 7 | 78" X 46.5" X 30" | 15.38" X 51.38" |
| | IAPR5513 | Air | PA3801 | H5513 | 13 | 7 | 85" X 46.5" X 30" | 15.38" X 51.38" |
| | IEPR5513 | Electric | PE40W3N02A | H5513 | 13 | 7 | 85" X 46.5" X 30" | 15.38" X 51.38" |
| | IEPRS5513 | Electric/Solenoid | PE40S3L02A | H5513 | 13 | 7 | 85" X 46.5" X 30" | 15.38" X 51.38" |
| **Double Acting** | | | | | | | | |
| 55 | IAPDR5506 | Air | PA3801M | HD5506 | 6 | 7 | 78" X 46.5" X 30" | 15.38" X 51.38" |
| | IEPDR5513 | Electric | PE40W4N02A | HD5513 | 13 | 7 | 85" X 46.5" X 30" | 15.38" X 51.38" |
| | IEPDRS5513 | Electric/Solenoid | PE40S4L02A | HD5513 | 13 | 7 | 85" X 46.5" X 30" | 15.38" X 51.38" |

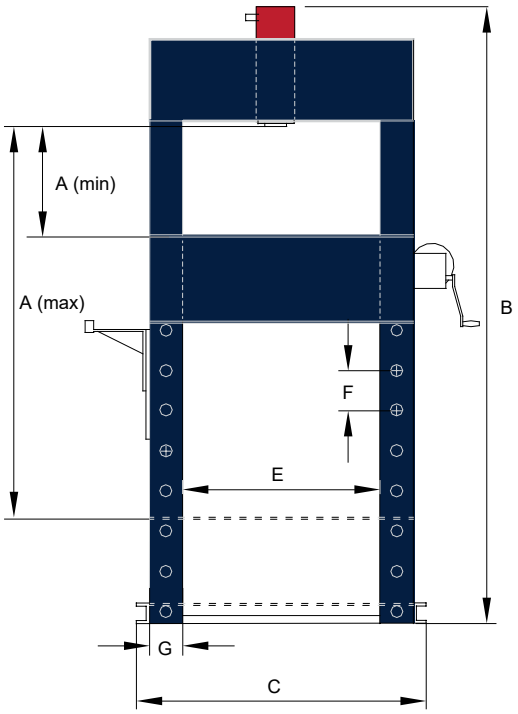
| Model Number | Dimensions (in) | | | | | | | | | | | Weight (lbs) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A (Min.) | A (Max.) | B | C | D | E | F | G | H | J | K | |
| **Single Acting** | | | | | | | | | | | | |
| IAPR5506 | 15.38 | 51.38 | 78 | 46.5 | 30 | 35.75 | 6 | 4 | 9 | 10 | 15 | 950.0 |
| IEPR5506 | 15.38 | 51.38 | 78 | 46.5 | 30 | 35.75 | 6 | 4 | 9 | 10 | 15 | 1015.0 |
| IAPR5513 | 15.38 | 51.38 | 85 | 46.5 | 30 | 35.75 | 6 | 4 | 9 | 10 | 15 | 991.0 |
| IEPR5513 | 15.38 | 51.38 | 85 | 46.5 | 30 | 35.75 | 6 | 4 | 9 | 10 | 15 | 1048.0 |
| IEPRS5513 | 15.38 | 51.38 | 85 | 46.5 | 30 | 35.75 | 6 | 4 | 9 | 10 | 15 | 1050.0 |
| **Double Acting** | | | | | | | | | | | | |
| IAPDR5506 | 15.38 | 51.38 | 78 | 46.5 | 30 | 35.75 | 6 | 4 | 9 | 10 | 15 | 955.0 |
| IEPDR5513 | 15.38 | 51.38 | 85 | 46.5 | 30 | 35.75 | 6 | 4 | 9 | 10 | 15 | 1020.0 |
| IEPDRS5513 | 15.38 | 51.38 | 85 | 46.5 | 30 | 35.75 | 6 | 4 | 9 | 10 | 15 | 1022.0 |

# Shop Presses

- Welded steel construction
- Ideal for the removal or installation of gears, universal joints, pulleys, wrist pins, and other press jobs
- Multi-position bed for work height adjustment
- Excellent for bending, bonding, or straightening applications




| Capacity (Tons) | Model Number | Pump Type | Pump Model | Cylinder Model | Cylinder Stroke (In) | Bed Positions | Press Dimensions (H X L X W) | Working Space (Min - Max) (in) |
|---|---|---|---|---|---|---|---|---|
| **Single Acting** | | | | | | | | |
| 25 | IMP2506 | Manual | P1000 | H2506 | 6 | 8 | 71" X 48" X 28" | 4.5" X 47.25" |
| | IAP2506 | Air | PA1500 | H2506 | 6 | 8 | 71" X 48" X 28" | 4.5" X 47.25" |
| | IEP2506 | Electric | PE30W3N01A | H2506 | 6 | 8 | 71" X 48" X 28" | 4.5" X 47.25" |
| | IMP2514 | Manual | P2001 | H2514 | 14 | 8 | 71" X 48" X 28" | 4.5" X 47.25" |
| | IAP2514 | Air | PA2000 | H2514 | 14 | 8 | 71" X 48" X 28" | 4.5" X 47.25" |
| | IEP2514 | Electric | PE30W3N01A | H2514 | 14 | 8 | 71" X 48" X 28" | 4.5" X 47.25" |
| | IEPS2514 | Electric/Solenoid | PE30S3L01A | H2514 | 14 | 8 | 71" X 48" X 28" | 4.5" X 47.25" |
| 55 | IMP5506 | Manual | P2301 | H5506 | 6 | 9 | 79" X 56" X 30" | 14" X 55.5" |
| | IAP5506 | Air | PA1500 | H5506 | 6 | 9 | 79" X 56" X 30" | 14" X 55.5" |
| | IEP5506 | Electric | PE40W3N02A | H5506 | 6 | 9 | 79" X 56" X 30" | 14" X 55.5" |
| | IAP5513 | Air | PA3801 | H5513 | 13 | 9 | 79" X 56" X 30" | 14" X 55.5" |
| | IEP5513 | Electric | PE40W3N02A | H5513 | 13 | 9 | 79" X 56" X 30" | 14" X 55.5" |
| **Double Acting** | | | | | | | | |
| 25 | IMPD2506 | Manual | P2301M | HD2506 | 6 | 6 | 71" X 48" X 28" | 4.5" X 47.25" |
| | IAPD2506 | Air | PA3801M | HD2506 | 6 | 6 | 71" X 48" X 28" | 4.5" X 47.25" |
| | IEPD2506 | Electric | PE30W4N01A | HD2506 | 6 | 6 | 71" X 48" X 28" | 4.5" X 47.25" |
| | IEPDS2506 | Electric/Solenoid | PE30S4L01A | HD2506 | 6 | 6 | 71" X 48" X 28" | 4.5" X 47.25" |
| 55 | IEPD5513 | Electric | PE40W4N02A | HD5513 | 13 | 9 | 79" X 56" X 30" | 14" X 55.5" |
| 100 | IEPD10010 | Electric | PE40W4N02A | HD10010 | 10 | 8 | 89" X 63" X 30" | 11.25" X 51" |
| | IEPDS10010 | Electric/Solenoid | PE40S4L02A | HD10010 | 10 | 8 | 89" X 63" X 30" | 11.25" X 51" |






***I Series***



**Made in the U.S.A.**
All press frames are made in the USA and meet ISO 9001/2008 and CE certification.



**Press Accessories**
See the assortment of accessories designed to work with these product.
pg 80



**Press Guards**
Add a layer of protection between the operator and the work for extra safety.
pg 80

| Model Number | Dimensions (in) | | | | | | | | | | | Weight (lbs) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A (Min.) | A (Max.) | B | C | D | E | F | G | H | J | K | |
| **Single Acting** | | | | | | | | | | | | |
| IMP2506 | 6.25 | 48.25 | 71.00 | 38.75 | 28.00 | 30.00 | 6.00 | 3.00 | 6.50 | 8.00 | 11.50 | 442.0 |
| IAP2506 | 6.25 | 48.25 | 71.00 | 38.75 | 28.00 | 30.00 | 6.00 | 3.00 | 6.50 | 8.00 | 11.50 | 447.0 |
| IEP2506 | 6.25 | 48.25 | 71.00 | 38.75 | 28.00 | 30.00 | 6.00 | 3.00 | 6.50 | 8.00 | 11.50 | 490.0 |
| IMP2514 | 6.25 | 48.25 | 79.03 | 38.75 | 28.00 | 30.00 | 6.00 | 3.00 | 6.50 | 8.00 | 11.50 | 469.0 |
| IAP2514 | 6.25 | 48.25 | 79.03 | 38.75 | 28.00 | 30.00 | 6.00 | 3.00 | 6.50 | 8.00 | 11.50 | 465.0 |
| IEP2514 | 6.25 | 48.25 | 79.03 | 38.75 | 28.00 | 30.00 | 6.00 | 3.00 | 6.50 | 8.00 | 11.50 | 506.0 |
| IEPS2514 | 6.25 | 48.25 | 79.03 | 38.75 | 28.00 | 30.00 | 6.00 | 3.00 | 6.50 | 8.00 | 11.50 | 508.0 |
| IMP5506 | 8.00 | 55.88 | 80.50 | 46.25 | 30.00 | 35.63 | 6.00 | 3.00 | 9.00 | 10.00 | 14.75 | 847.0 |
| IAP5506 | 8.00 | 55.88 | 80.50 | 46.25 | 30.00 | 35.63 | 6.00 | 3.00 | 9.00 | 10.00 | 14.75 | 837.0 |
| IEP5506 | 8.00 | 55.88 | 80.50 | 46.25 | 30.00 | 35.63 | 6.00 | 3.00 | 9.00 | 10.00 | 14.75 | 880.0 |
| IAP5513 | 8.00 | 55.88 | 87.51 | 46.25 | 30.00 | 35.63 | 6.00 | 3.00 | 9.00 | 10.00 | 14.75 | 876.0 |
| IEP5513 | 8.00 | 55.88 | 87.51 | 46.25 | 30.00 | 35.63 | 6.00 | 3.00 | 9.00 | 10.00 | 14.75 | 910.0 |
| **Double Acting** | | | | | | | | | | | | |
| IMPD2506 | 6.25 | 48.25 | 71.00 | 38.75 | 28.00 | 30.00 | 6.00 | 3.00 | 6.50 | 8.00 | 11.50 | 468.0 |
| IAPD2506 | 6.25 | 48.25 | 71.00 | 38.75 | 28.00 | 30.00 | 6.00 | 3.00 | 6.50 | 8.00 | 11.50 | 459.0 |
| IEPD2506 | 6.25 | 48.25 | 71.00 | 38.75 | 28.00 | 30.00 | 6.00 | 3.00 | 6.50 | 8.00 | 11.50 | 496.0 |
| IEPDS2506 | 6.25 | 48.25 | 71.00 | 38.75 | 28.00 | 30.00 | 6.00 | 3.00 | 6.50 | 8.00 | 11.50 | 498.0 |
| IEPD5513 | 8.00 | 55.88 | 87.51 | 46.25 | 30.00 | 35.63 | 6.00 | 3.00 | 9.00 | 10.00 | 14.75 | 942.0 |
| IEPD10010 | 14.38 | 52.38 | 90.00 | 46.25 | 40.00 | 35.50 | 8.00 | 4.00 | 10.13 | 11.00 | 16.25 | 1198.0 |
| IEPDS10010 | 14.38 | 52.38 | 90.00 | 46.25 | 40.00 | 35.50 | 8.00 | 4.00 | 10.13 | 11.00 | 16.25 | 1200.0 |

## 25 Ton Shop Press Accessories



CS25 includes:
- Rod forcing cap
- V push adapter
- Threaded adapter
- ¾″ push adapter
- 1″ push adapter
- Arbor plates (in pairs)
- Bearing separator
- Single acting presses only

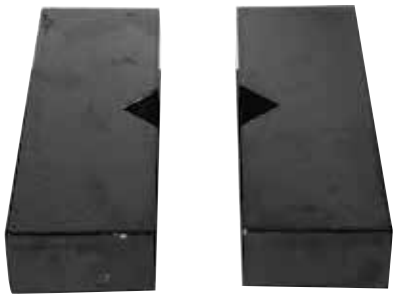
## 55 Ton Shop Press Accessories



CS55 includes:
- Rod forcing cap
- Threaded adapter
- 1½″ push adapter
- 1¼″ push adapter
- V push adapter
- Arbor plates (in pairs)
- Single acting presses only

CS55D includes:
- Same parts as CS55
- Double acting presses only

## 100 Ton Shop Press Accessory



AP100 includes:
- Arbor plates (in pairs)



### Press Guards

Add a barrier layer between the operator and the work for added safety. Press guards help keep hands out of work area and shields flying debris from being ejected from the press and prevents them from becoming a hazard.

- Sturdy construction
- Fits all types of shop presses (single and double acting)

| Model Number | Capacity (tons) | Shop Press Compatibility |
|---|---|---|
| SPG25 | 25 | All Manual, Electric and Air 25 Tons Presses (Single and Double Acting) |
| SPG100 | 55 & 100 | All Manual, Electric and Air 55 and 100 Tons Presses (Single and Double Acting) |




# Flange Spreader

***Pin-Type***

**SP3-3814**

This combination kit works well with our Flange Spreader. See our combo section for more details.



**SP5-3814**

This combination kit works well with our Flange Spreader. See our combo section for more details.









- Designed for heavy duty industrial environment
- Adjustable jaw width for a wide range of applications and ease of use
- Spare wedge attachment comes standard

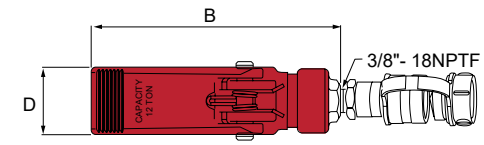
| Capacity (tons) | Model Number | Stroke (in.) | Oil Capacity ($in^3$) | Maximum Flange Thickness (in.) |
|---|---|---|---|---|
| 5 | HFS05 | 1.00 | 1.00 | 2 X 2.3 |
| 10 | HFS10 | 2.01 | 4.50 | 2 X 3.6 |

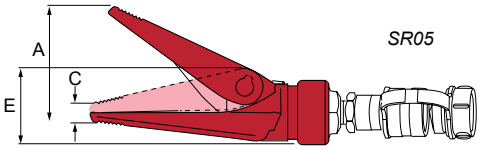


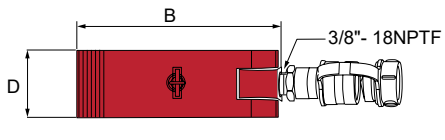

# Spreaders

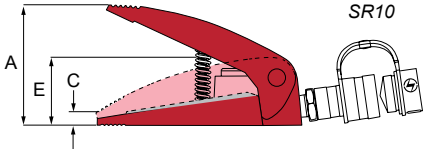
***Duck Bill Spreader***

- Designed to work in confined working spaces
- Ideal for wedging, prying, and opening
- High strength forged steel
- Spring return for easy operation




| Cylinder Capacity (tons) | Model Number | Cylinder Effective Area ($in^2$) | Oil Capacity ($in^3$) | Dimensions (in) | | | | | Weight (lbs) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | A | B | C | D | E | |
| 0.5 | SR05 | 1.22 | 0.58 | 3.54 | 7.57 | 0.51 | 2.05 | 2.36 | 4.8 |
| 1 | SR10 | 1.09 | 0.86 | 3.90 | 6.57 | 0.47 | 2.17 | 2.20 | 5.1 |

# Valve Seat Puller

***Frac Pump Maintenance***

- Pump kit to operate HVSP Series cylinders. Part number: SP12-CSG4
- Pump kit includes: P1201S, CS3814, CH38M, GW4014, and CF3814.




HVSP120




HVSP125

| Cylinder Capacity (tons) | Model Number | Center Hole ID (in) | Stroke (in) | Collapsed Height (in) | Weight (lbs) |
|---|---|---|---|---|---|
| 120 | HVSP120 | 2.13” | 0.607 | 3.63 | 61.7 |
| 125 | HVSP125 | 2.13” | 0.607 | 3.63 | 54.0 |

**SP5-3814**

This combination kit works well with this product. See our combo section for more details.



**80%**

**Safety Practices**

Good industry practice recommends not exceeding 80% of maximum rated capacities of all our products.

# 50 Ton Cylinder w/ Base & Needle Valve

***Hydraulic Truck Jack***




JU506

- Aluminum Cylinder
- Anodized ram with carry handle
- Shutoff valve
- High/low temp functionality
- CH38F 3/8”-18NPTF high flow female coupler
- 50 Ton @ 9,091 PSI

| Cylinder Capacity (tons) | Model Number | Collapsed Height (in) | Extended Height (in) | Stroke (in) | Weight (lbs) |
|---|---|---|---|---|---|
| 50 | JU506 | 11.6 | 17.6 | 6.0 | 28.0 |

# Hydraulic Bench Vise

***5 Ton Holding Force***

- Hands free operation with foot pump control
- Air control valve for variable speed and added safety
- Cast steel construction 52,000 PSI tensile strength
- Hydraulic pressure closes jaws, spring return opens jaws






**Safety Instructions**

Visit our DO’S and DON’TS section to review the best methods of operation. Always be prepared.

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| Model Number | Capacity (tons) | Jaw Width (in) | Jaw Clearance (in) | Jaw Opening (in) |
|---|---|---|---|---|
| HBV5 | 5 | 8.00 | 3.50 | 8.00 |



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# Hydraulic Gear Pullers

***POSILOCK®***




- Safety cage design prevents jaws from slipping
- Cylinders are removable for ease of servicing
- Each puller comes with a lift plate and a ram point set

| Capacity (tons) | Model Number | Reach (in) | Spread Range (in) | Ram Stroke (in) | Jaw Style |
|---|---|---|---|---|---|
| 5 | HGP053 | 6” | 0.5” - 8” | 5” | External |
| 10 | HGP103 | 8” | 0.75” - 12” | 6.13” | External |
| 15 | HGP153 | 10” | 1” - 15” | 10” | External |
| 25 | HGP253 | 12” | 2.5” - 18” | 14” | External |
| 25 | HGP253IE | 12” | 2.5” - 18” | 14” | External/Internal |
| 50 | HGP503 | 14” | 3” - 25” | 13.25” | External |
| 100 | HGP1003 | 50” | 7.5” - 70” | 10.25” | External |

**HGP-1**

This combination kit will work well with the hydraulic gear pullers. See our combo section for more details.



# Mechanical Gear Pullers

***2, 5, 7 Tons***

- Able to use 2 or 3 jaws
- Reversible ratchet jaws
- Forged, heat treated high quality steel
- Designed for heavy duty industrial environment
- Adjustable jaw width for a wide range of applications for ease of use
- Easily transportable




| Capacity (Ton) | Model Number | Maximum Spread (in) | Maximum Reach (in) | Screw Length (in) |
|---|---|---|---|---|
| 2 | MGP02 | 3-1/4” | 2-5/8” | 4-1/2” |
| 5 | MGP05 | 5” | 4” | 8-1/4” |
| 7 | MGP07 | 10” | 10” | 12” |

# Hydraulic Nut Splitter w/ Case

***Compact and Heavy Duty***




- Spacers included
- Straight chisel with a 60/40 angle, and works on all type of materials, including stainless steel
- Chisel can be re-sharpened multiple times
- Comes with a padded tool box to hold the head, cylinder, tips and spacers

| Capacity (tons) | Model Number | Nut Size Capacity ATF | Stud Dimension | Weight (lbs) |
|---|---|---|---|---|
| 25 | HNS105 | 0.625” - 1.4375” | 0.4375” - 0.875” | 20.0 |
| 25 | HNS200 | 1.1875” - 2.375” | 7/16” - 7/8” | 21.0 |
| 100 | HNS308 | 2.625” - 3.5” | 1.75” - 2.25” | 95.0 |

*POSILOCK® is a registered trade mark of Posilock Puller Inc.*



**Safety Instructions**

Visit our DO’S and DON’TS section to review the best methods of operation. Always be prepared.

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**SP5-3814**

This combination kit works well with the hydraulic nut splitter set. See our combo section for more details.





**High-Flow Couplers**

High-Flow Coupler: CH38F is included on all models (except where specified).

| Maintenance Kits / Bottle Jacks | Page Number / Reference Image |
|---|---|
| Rail Car Jack |  85 |
| Maintenance Kits |  85 |
| Lifting Bags |  86 |
| Lifting Bag Accessories |  87 |
| Manual Bottle Jacks |  88 |
| Air/Manual Bottle Jacks |  88 |
| Toe Jacks |  89 |
| Mini Jacks |  89 |


Cross Referencing and Engineering | Page 90 ▶



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*Rail Car Jack, JDR80, lifting the back of a rail car for the operator to start maintenance on the car's wheels.*

# Rail Car Jack

***Double Acting Alum. Cylinder***

- High strength aluminum construction suitable for rough working environments.
- Specially designed saddle
- Rod wiper seals out dirt and contamination
- Connect under pressure flush face quick couplers with pressure relief feature for ease of installation and/or removal
- Max. working pressure: 4200 PSI / 290 Bar



JDR80

## Jack Sets

**JDR8-PE45**

- PE45M4N10A - 1 hp Electric Motor Pump
- 2x CS38JDRF - Extend Hoses (20 Feet)
- 2x CS38JDRM - Retract Hoses (20 Feet)
- 2x JDR80 Cylinders

JDR80



PE45M4N10A



**JDR8-PG95**

- PG95M4N10 - 10.2 hp Gas Engine Pump
- 2x CS38JDRF - Extend Hoses (20 Feet)
- 2x CS38JDRM - Retract Hoses (20 Feet)
- 2x JDR80 Cylinders

JDR80



PG95M4N10



| Model Number | Cylinder Capacity (tons) | Max. Pressure (psi) | Stroke (in) | Cylinder Effective Area ($in^2$) | Oil Capacity ($in^3$) | | Weight (lbs) | Collapsed Ht. A (in) | Extended Ht. B (in) | Cylinder Bore Dia. C (in) | Outside Dia. D (in) | Rod Dia. E (in) | Saddle Dia. F (in) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Extend | Retract | | | | | | | |
| JDR80 | 80 | 4200 | 16.2 | 39.44 | 639.00 | 331.00 | 200.0 | 24.76 | 40.96 | 7.09 | 8.50 | 4.92 | 6.00 |

# Maintenance Kits

***4, 10, 20 Ton***



J50100



*J50040*



*J50200*

- Sets are portable for ease of use on the job site
- Custom fitted, rugged blow molded storage case
- 10 ton set has wheels for ease of transport
- Designed for pushing, spreading, pressing, and more

| Capacity (tons) | Pump Capacity (psi) | Model Number | Rod | | | Number of Attachments | Weight (lbs) |
|---|---|---|---|---|---|---|---|
| | | | Collapsed Height ($in^2$) | Extended Height ($in^3$) | Effective Area ($in^2$) | | |
| 4 | 8,000 | J50040 | 11.00 | 15.75 | 0.998 | 14 | 46.0 |
| 10 | 10,000 | J50100 | 13.63 | 19.75 | 2.411 | 13 | 81.0 |
| 20 | 10,000 | J50200 | 11.77 | 16.93 | 5.14 | 16 | 206.0 |

** When extension tubes and/or offset attachments are used, the capacity is reduced.*

# Lifting Bags

***Aramid Reinforced***



*A lifting bag raising the axle of this train car for maintenance*



*Lifting bags are useful for many different types of applications*

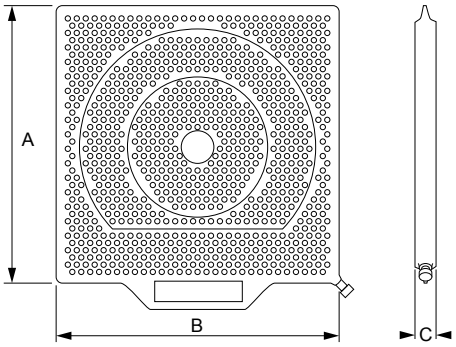


- High pressure air lifting bags require only 1” clearance and can lift up to 86 tons
- 3 or 4 layers of Aramid Fiber on both sides of the bag to create a lifting bag unequaled in strength and durability
- Made in the USA and is ISO 9001/2008 and CE Certified
- Product replacement 3 year unconditional warranty
- Marked with a distinct “bulls eye with tonnage rating”
- Conical, interlocking surface to limit slippage and aid in stacking
- Each bag has either molded carry handles and/or tabs/eyelets
- Each Bag comes with a LB-ACVC Shut-Off valve w safety coupler

**Made in the U.S.A.**
All lifting bags are made in the USA and meet ISO 9001/2008 and CE certification.



LB-50




| Model Number | Capacity (tons) | Max. Lifting Height (in) | Max Working Pressure (psi) | Reinforcing Material | Handles or Eyelets | Dimensions (in) | | | Air Volume ($cu^3$) | Weight (lbs) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Length A | Width B | Deflated Ht C | | |
| LB-1 | 1.5 | 2.5 | 120 | Aramid | 2 Eyelets | 6.0 | 6.0 | 0.75 | 0.20 | 2.0 |
| LB-3 | 3.3 | 3.0 | 120 | Aramid | 4 Eyelets | 12.0 | 6.0 | 0.75 | 0.44 | 3.0 |
| LB-6 | 6 | 4.5 | 120 | Aramid | 4 Eyelets | 10.0 | 10.0 | 1.00 | 0.68 | 4.0 |
| LB-13 | 13 | 7.5 | 120 | Aramid | 4 Eyelets | 15.0 | 15.0 | 1.00 | 2.70 | 12.0 |
| LB-15 | 15 | 7.5 | 120 | Aramid | 2 Eyelets | 15.0 | 21.0 | 1.00 | 3.48 | 15.0 |
| LB-22 | 22 | 9.5 | 120 | Aramid | 1 Handle | 20.0 | 20.0 | 1.00 | 6.67 | 22.0 |
| LB-32 | 32 | 11.0 | 120 | Aramid | 1 Handle | 21.0 | 25.0 | 1.00 | 11.58 | 28.0 |
| LB-37 | 37 | 9.0 | 120 | Aramid | 2 Handles | 40.0 | 105.0 | 1.00 | 13.30 | 34.0 |
| LB-50 | 50 | 15.0 | 120 | Aramid | 2 Handles | 29.0 | 29.0 | 1.00 | 19.78 | 45.0 |
| LB-70 | 70 | 18.0 | 120 | Aramid | 2 Handles | 34.0 | 34.0 | 1.00 | 37.50 | 65.0 |
| LB-86 | 86 | 24.0 | 120 | Steel | 4 Handles | 42.0 | 42.0 | 1.00 | 57.00 | 118.0 |



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# Lifting Bag Accessories

***Aramid Reinforced***

| Reference Image | Model Number | Description |
|---|---|---|
|  | LB-ACVC | Air-Cock Shut-off Valve W/Safety Coupler |
|  | LB-AT80CF | 80 cu ft Air Tank, 3,000psi |
|  | LB-AR1 | Air Bottle Regulator w/safety coupler |
|  | LB-DDC | Dual Deadman Control w/safety coupler |
|  | LB-SDC | Single Deadman Control w/safety coupler |
|  | LB-RH10C | 10 ft Green Regulator Hose w/Safety Couplers |
|  | LB-H16YC | 20 ft Yellow High Pressure Hose w/safety coupler |
| | LB-H32YC | 32 ft Yellow High Pressure Hose w/safety coupler |
| | LB-H16BC | 20 ft Blue High Pressure Hose w/safety coupler |
| | LB-H32BC | 32 ft Blue High Pressure Hose w/safety coupler |
| | LB-H16RC | 20 ft Red High Pressure Hose w/safety coupler |
| | LB-H32RC | 32 ft Red High Pressure Hose w/safety coupler |
|  | LB-MCP3 | Dual Deadman Controller, Air Pressure Regulator, 0-6,000psi , 10' Air Regulator Hose, 20' High Pressure Air Hose w/safety coupler - red/yellow, Water tight Pelican Case 16" x 13" x 6.8" - Yellow |
|  | LB-MCP4 | Dual Deadman Controller, Air Pressure Regulator, 0-6,000psi , 10' Air Regulator Hose, 20' High Pressure Air Hose w/safety coupler - black/blue/red/yellow/green, inline relief valves, glad hand adapter, nipple w/¼" NPT Male/Female threads, nipple w/tire chuck adapter, shut-off adapter w/industrial nipples, "Y" adapter female to male/male to female, shut-off adapter nipple, industrial twist-lock coupling, water tight Pelican Case 20.6" x 16.8" x 8" - Orange |

# Manual Bottle Jacks

***12-50 Ton***

- Hydraulic system is protected from internal damage by a patented by-pass mechanism (U.S. Patent No.5,946,912)
- Machined and polished cylinders with die-cut threads provide non-abrasive leak-free performance
- Fabricated from hard-cast steel with heat-treated critical stress areas
- Unique cross-type forged release valve assures positive load control
- A wide, rugged base provides stability and strength




| Capacity (ton) | Model Number | Min. Height (in) | Max. Height (in) | Hydraulic Lifting (in) | Extension Screw (in) | Base Size (in) | | Weight (lbs) |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Length | Width | |
| 12 | J10125 | 9.5 | 18.6 | 6.0 | 3.1 | 5.3 | 5.1 | 17.5 |
| 12 | J10129 | 6.0 | 10.6 | 3.0 | 1.6 | 5.3 | 5.1 | 14.9 |
| 20 | J10205 | 9.5 | 18.6 | 6.0 | 3.1 | 6.3 | 5.9 | 27.5 |
| 20 | J10209 | 6.5 | 11.3 | 3.1 | 1.6 | 6.3 | 5.9 | 21.8 |
| 30 | J10300 | 11.0 | 18.0 | 7.0 | - | 8.1 | 6.9 | 53.5 |
| 50 | J10500 | 9.5 | 13.9 | 4.4 | - | 10.9 | 7.4 | 103.5 |

# Air/Manual Bottle Jacks

***12-100 Ton***

- Air operation reduces operator fatigue and increases speed
- A compact/powerful air turbo motor (U.S. Patent No. 5,341,723) is equipped to raise the load to the desired height efficiently, effortlessly, and safely
- Hydraulic system is protected from internal damage by a patented by-pass mechanism (U.S. Patent No.5,946,912)
- Versatile "Quick Connector" design provides easy removal of the air hose from the air motor, allowing compact storage or remote operation




| Capacity (ton) | Model Number | Min. Height (in) | Max. Height (in) | Hydraulic Lifting (in) | Extension Screw (in) | Base Size Length (in) | Base Size Width (in) | Input Air Pressure Range (psi) | Weight (lbs) |
|---|---|---|---|---|---|---|---|---|---|
| 12 | J18124 | 9.5 | 18.5 | 5.5 | 3.5 | 7.6 | 6.5 | 110-175 | 28.6 |
| 20 | J18204 | 9.8 | 18.8 | 5.1 | 3.9 | 8.3 | 7.3 | 110-175 | 37.4 |
| 30 | J18302 | 11.0 | 18.0 | 7.0 | - | 10.3 | 8.3 | 110-175 | 60.5 |
| 50 | J18502 | 12.0 | 19.0 | 7.0 | - | 10.9 | 7.4 | 110-175 | 128.5 |
| 100 | J18992* | 12.0 | 18.1 | 6.1 | - | 12.6 | 9.4 | 110-175 | 205.9 |



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# Toe Jacks

***Low Height***

- Heat treated and chrome plated medium-carbon steel cylinder
- Chrome plated rod promotes longer seal life and optimum performance
- U.S. Patented by-pass device protects hydraulic system from over travel damage
- Hydraulic system is protected from internal damage by a patented by-pass mechanism
- (U.S. Patent No.5,946,912)




*J13200*




*J13060*




*J13120*

| Capacity (tons) | Model Number | Toe Saddle | | Head Saddle | | Hydraulic Lifting (in) | Base Size (L x W) (in) | Weight (lbs) |
|---|---|---|---|---|---|---|---|---|
| | | Min. Height (in) | Max. Height (in) | Min. Height (in) | Max. Height (in) | | | |
| 3 | J13060 | 0.6 | 5.8 | 9.0 | 14.1 | 5.1 | 6.0 x 4.4 | 36.1 |
| 6 | J13120 | 0.9 | 6.0 | 10.5 | 15.6 | 5.1 | 11.0 x 7.5 | 55.0 |
| 10 | J13200 | 1.1 | 6.3 | 11.0 | 16.1 | 5.1 | 11.6 x 9.0 | 84.0 |
| 15 | J13300 | 1.1 | 6.6 | 13.1 | 18.6 | 5.5 | 12.5 x 10.8 | 116.6 |

# Mini Jacks

***Compact***

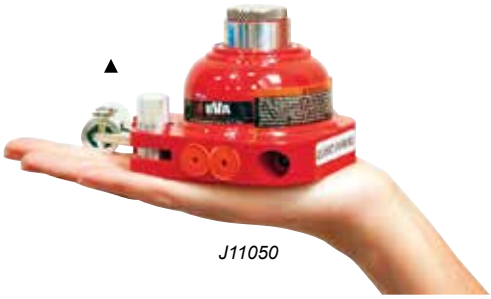
- Low profile mini jack
- Compact and lightweight
- Convenient for storage

*Interchangeable saddle on model J11050 and J11055*




*J11050*




*J11050*

*These mini jacks are lightweight and will fit in the palm of your hand. We see here a J11050 Mini Jack.*

| Capacity (tons) | Model Number | Minimum Height (in) | Maximum Height (in) | Hydraulic Lifting (in) | Base Size (L x W) (in) | Weight (lbs) |
|---|---|---|---|---|---|---|
| 5 | J11050 | 2.8 | 3.1 | 0.8 | 4.1 x 4.0 | 4.6 |
| 5 | J11055 | 3.8 | 4.9 | 1.5 | 4.1 x 4.0 | 5.3 |
| 10 | J11100 | 4.8 | 6.3 | 1.6 | 4.9 x 4.4 | 12.5 |
| 20 | J11200 | 5.1 | 6.8 | 1.6 | 5.4 x 4.8 | 16.7 |

# BVA Cross Reference Chart*

*Compatibility Check*

| Ton | BVA | Enerpac | Power Team | Simplex |
|---|---|---|---|---|
| **Single Acting Cylinders** | | | | |
| 5 | **H0500** | RC-50 | - | R50 |
| | **H0501** | RC-51 | C51C | R51 |
| | **H0503** | RC-53 | C53C | R53 |
| | **H0505** | RC-55 | C55C | R55 |
| | **H0507** | RC-57 | C57C | R57 |
| | **H0509** | RC-59 | C59C | R59 |
| 10 | **H1001** | RC-101 | C101C | R101 |
| | **H1002** | RC-102 | C102C | R102 |
| | **H1004** | RC-104 | C104C | R104 |
| | **H1006** | RC-106 | C106C | R106 |
| | **H1008** | RC-108 | C108C | R108 |
| | **H1010** | RC-1010 | C1010C | R1010 |
| | **H1012** | RC-1012 | C1012C | R1012 |
| | **H1014** | RC-1014 | C1014C | R1014 |
| 15 | **H1501** | RC-151 | C151C | - |
| | **H1502** | RC-152 | C152C | R152 |
| | **H1504** | RC-154 | C154C | R154 |
| | **H1506** | RC-156 | C156C | R156 |
| | **H1508** | RC-158 | C158C | - |
| | **H1510** | RC-1510 | C1510C | R1510 |
| | **H1512** | RC-1512 | C1512C | - |
| | **H1514** | RC-1514 | C1514C | R1514 |
| 25 | **H2501** | RC-251 | C251C | R251 |
| | **H2502** | RC-252 | C252C | R252 |
| | **H2504** | RC-254 | C254C | R254 |
| | **H2506** | RC-256 | C256C | R256 |
| | **H2508** | RC-258 | C258C | R258 |
| | **H2510** | RC-2510 | C2510C | R2510 |
| | **H2512** | RC-2512 | C2512C | R2512 |
| | **H2514** | RC-2514 | C2514C | R2514 |
| 30 | **H3008** | RC-308 | - | R308 |

| Ton | BVA | Enerpac | Power Team | Simplex |
|---|---|---|---|---|
| 55 | **H5502** | RC-502 | C552C | R552 |
| | **H5504** | RC-504 | C554C | R554 |
| | **H5506** | RC-506 | C556C | R556 |
| | **H5513** | RC-5013 | C5513C | R5513 |
| 75 | **H7506** | RC-756 | C756C | R756 |
| | **H7513** | RC-7513 | C7513C | R7513 |
| 100 | **H10006** | RC-1006 | C1006C | R1006 |
| | **H10010** | RC-10010 | C10010C | R10010 |
| **Threaded Cylinders** | | | | |
| 10 | **HT1006** | - | C106CBT | - |
| | **HT1010** | - | C1010CBT | - |
| **Aluminum Cylinders** | | | | |
| 20 | **HU2002T** | RAC-202 | RA202 | - |
| | **HU2004T** | RAC-204 | RA204 | - |
| | **HU2006T** | RAC-206 | RA206 | - |
| 30 | **HU3002** | RAC-302 | RA302 | - |
| | **HU3004** | RAC-304 | RA304 | - |
| | **HU3006** | RAC-306 | RA306 | RAS306B |
| 50 | **HU5002** | RAC-502 | RA552 | RAS502A |
| | **HU5004** | RAC-504 | RA554 | - |
| | **HU5006** | RAC-506 | RA556 | RAS508A |
| | **HU5010** | RAC-5010 | RA5510 | - |
| 75 | **HU7504** | - | - | - |
| | **HU7506** | - | - | - |
| 700 | **HU10002** | RAC-1002 | RA1002 | RAS1002A |
| | **HU10006** | RAC-1006 | RA1006 | RAS1008A |
| | **HU10010** | RAC-10010 | - | - |
| **Low Profile Cylinders** | | | | |
| 10 | **HL1001** | RCS-101 | RSS101 | RLS101 |
| 20 | **HL2002** | RCS-201 | RSS202 | RLS201 |
| 30 | **HL3002** | RCS-302 | RSS302 | RLS302 |
| 50 | **HL5002** | RCS-502 | RSS502 | RLS502 |
| 100 | **HL10002** | RCS-1002 | RSS1002 | RLS1002 |
| **Flat Body Cylinders** | | | | |
| 5 | **HF0503** | RSM-50 | RLS50 | - |
| | **HF0503B kit** | - | - | - |
| 10 | **HF1005** | RSM-100 | RLS100 | RFS10 |
| | **HF1005B kit** | - | - | - |

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*Power Team® is a registered trademark of SPX Corporation.*
*Simplex® is registered of the Actuant Corporation.*

# BVA Cross Reference Chart*

*Compatibility Check*

| Ton | BVA | Enerpac | Power Team | Simplex |
|---|---|---|---|---|
| 20 | **HF2005** | RSM-200 | RLS200 | RFS20 |
| | **HF2005B kit** | - | - | - |
| 30 | **HF3005** | RSM-300 | RLS300 | RFS30 |
| | **HF3005B kit** | - | - | - |
| 50 | **HF5006B** | RSM-500 | RLS500S | RFS50 |
| 75 | **HF7506** | RSM-750 | RLS750S | RFS75 |
| 100 | **HF10006** | RSM-1000 | RLS1000S | RFS100 |
| 150 | **HF15006** | RSM-1500 | RLS1500S | RFS150 |
| **Pull Cylinders** | | | | |
| 2 | **HP0205** | BRC-25 | RP25 | RP25 |
| 5 | **HP0505** | BRC-46 | RP55 | RP55 |
| 10 | **HP1006** | BRC-106 | - | - |
| **Hollow Hole Cylinders** | | | | |
| 12 | **HC1201T** | RCH-120 | RH120 | RC120 |
| | **HC1202T** | RCH-121 | RH121 | RC121 |
| | **HC1202XT** | RCH-1211 | RH121T | RC1211 |
| | **HC1203XT** | RCH-123 | RH123 | RC123 |
| 20 | **HC2002T** | RCH-202 | RH202 | RC202 |
| | **HC2006T** | RCH-206 | RH206 | RC206 |
| 30 | **HC3002T** | RCH-302 | RH302 | RC302 |
| | **HC3006T** | RCH-306 | RH306 | RC306 |
| 60 | **HC6003T** | RCH-603 | RH603 | RC603 |
| | **HC6006T** | RCH-606 | RH606 | RC606 |
| 100 | **HC10003T** | RCH-1003 | RH1003 | RC1003 |
| **Lock Nut Cylinders** | | | | |
| 55 | **HLN5502** | CLL-502 | R552L | RLN502 |
| | **HLN5504** | CLL-504 | - | - |
| | **HLN5506** | CLL-506 | R556L | RLN506 |
| | **HLN5508** | CLL-508 | - | - |
| | **HLN5510** | CLL-5010 | R5510L | RLN5010 |
| | **HLN5512** | CLL-5012 | - | - |
| 100 | **HLN10002** | CLL-1002 | R1002L | RLN1002 |
| | **HLN10004** | CLL-1004 | - | - |
| | **HLN10006** | CLL-1006 | R1006L | RLN1006 |
| | **HLN10008** | CLL-1008 | - | - |
| | **HLN10010** | CLL-10010 | R10010L | RLN10010 |
| | **HLN10012** | CLL-10012 | - | - |

| Ton | BVA | Enerpac | Power Team | Simplex |
|---|---|---|---|---|
| 10 | **HD1010** | RR-1010 | RD1010 | RDA1010 |
| | **HD1012** | RR-1012 | - | - |
| 30 | **HD3008** | RR-308 | - | RDA308 |
| | **HD3014** | RR-3014 | RD2514 | RDA3014 |
| 55 | **HD5506** | RR-506 | RD556 | RDA556 |
| | **HD5513** | RR-5013 | RD5513 | RDA5512 |
| | **HD5520** | RR-5020 | RD5518 | RDA5523 |
| 75 | **HD7506** | RR-756 | - | - |
| | **HD7513** | RR-7513 | - | - |
| 100 | **HD10006** | RR-1006 | RD1006 | RDA1006 |
| | **HD10013** | RR-10013 | RD10013 | RDA10012 |

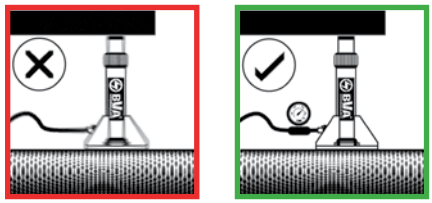
| BVA | Enerpac | Power Team | Simplex |
|---|---|---|---|
| **Hand Pumps** | | | |
| **P601S** | P-39 | P12 | P41 |
| **P1201S** | P-391 | P55 | - |
| **P350** | P-142 | - | - |
| **P1000** | P-392 | P59 | P60 |
| **P2001** | P-80 | P157 | P82 |
| **P2301** | P-80 | P159 | P140 |
| **P4301** | P-801 | P157 | P230 |
| **P8701** | P-462 | P460 | P461 |
| **P2301M** | P-84 | P157D | P230D |
| **P8701M** | P-464 | P460D | P461D |
| **P240L** | P-18 | - | - |
| **Air Pumps** | | | |
| **PA600** | PA-133 | PA9 | - |
| **PA600H** | - | PA9H | - |
| **PA1500** | - | PA6 | GA90 |
| **PA1500L** | PARG-1102N | PA6R | GA90R |
| **PA1500M** | - | PA6DM | - |
| **PA2000** | PATG-1102N | - | - |
| **PA3801** | PATG-1105N | PA6-1 | GA9230 |
| **PA3801L** | - | - | GA9230R |
| **PAR1703** | - | PA174 | - |
| **PAR4003** | ZA4310MX | PA462 | G5733 |
| **PARD1701** | - | PA172 | - |
| **PARD1703** | - | PA174 | - |

*For comparison purposes only. Products are not identical. To view complete cross over list go to *www.BVAhydraulics.com*

# Safety Instructions

*Industry Safety Standards*

## General

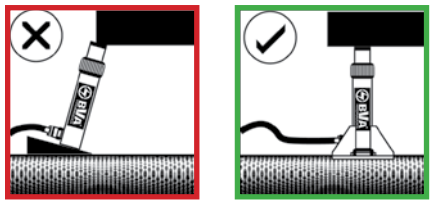


Do not override the factory setting of relief valves. Always use a gauge to check system pressure.

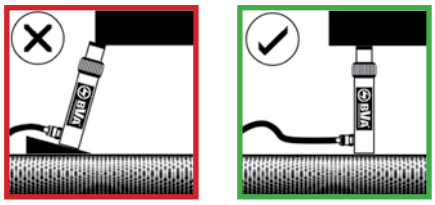
### Safety Instructions

- Read and understand all printed materials provided with and on this cylinder
- Do not exceed rated capacities
- Use only on hard level surface capable of sustaining the load
- Do not connect actuators to pumps with higher pressure ratings
- Always inspect hoses and connections for damage prior to use
- Keep hands and feet clear of work area
- LIFTING DEVICE ONLY! Immediately after lifting, support the load with appropriate means
- Use only manufacturer approved hydraulic fluid
- A flow-restricting component shall not be present between the relief valve and the tank
- No alterations shall be made to this cylinder
- Failure to heed these markings may result in injury and/or property damage
- Each double-acting cylinder shall be fitted with a relief valve on the retract circuit, which bleeds off the smaller effective area of the cylinder

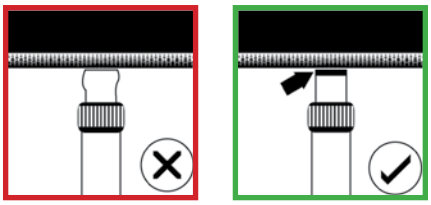
## Cylinders



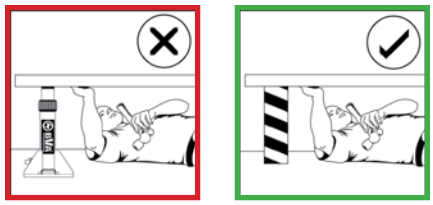
Provide a solid support for the entire cylinder base area. Use cylinder base attachment for more stability.



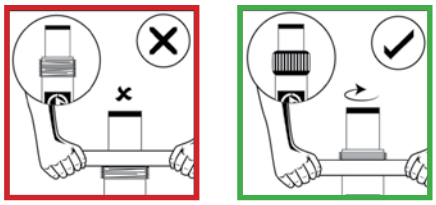
The entire cylinder saddle must be in contact with the load. Movement of the cylinder must be parallel with the movement of the load.



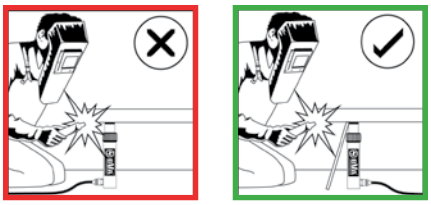
Do not use cylinder without saddle. This will cause rod to “mushroom” Saddles distribute load evenly on the rod.



As with jacks, never place any part of your body under the load. Load must be on cribbing before venturing under.

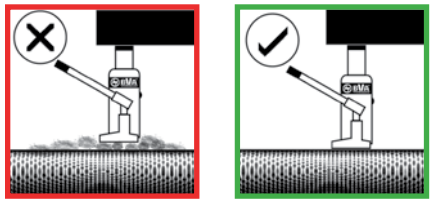


Always protect cylinder threads for use with attachments.

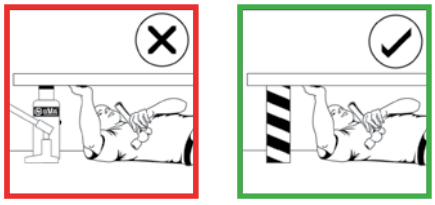


Keep hydraulic equipment away from open fire and temperatures above 150°F (65°C).

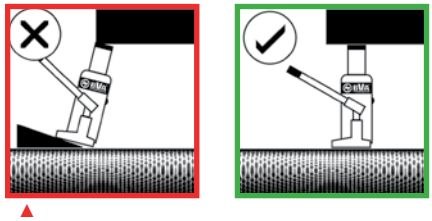
## Jacks



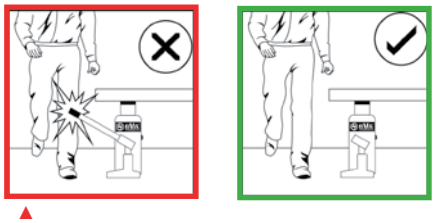
Provide a level and solid support for the entire jack base area.



Never place any part of your body under the load. Ensure the load is solidly supported before venturing under.



The entire jack saddle must be in contact with load. Movement of the load must be in the same direction as jack rod.



Remove the jack handle when not in use.

### 80% Rule

**Good industry practice recommends not exceeding 80% of maximum rated capacities.**

- Use only on hard, level surfaces capable of sustaining the load.
- Immediately after lifting, support the load with appropriate means
- Failure to heed these warnings may result in personal injury as well as property damage.



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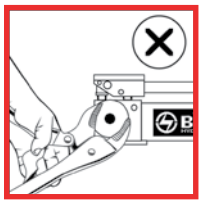
# Hydraulic Pump Safety Instructions

- *READ AND UNDERSTAND ALL WARNINGS, INSTRUCTIONS AND OWNER'S MANUAL INFORMATION BEFORE ATTEMPTING TO USE THIS EQUIPMENT*
- Burst hazard exists if hose or connection pressure exceeds rated pressure.
- Do not exceed the rated capacity of this device. Monitor pressure and load at all times.
- Verify load with calibrated load cell and indicator, accurate pressure gauge or equivalent devices.
- Inspect hoses and connections for damage prior to use. Never attempt to grasp a leaking pressurized hose.
- Release the hydraulic pressure before disconnecting hoses or couplers, and before servicing the pump or accessory.
- Immediately after lifting, support the load with appropriate means. Never rely on hydraulic pressure to support a load.
- Wear protective clothing and eye protection that meets ANSI Z87.1 and OSHA standards when operating this equipment.
- Ensure that the chosen application is stable to work on and around.
- Do not subject the pump and its components to shock loads.
- Do not connect to application which can return more oil to the reservoir than the pump reservoir can hold.
- Ensure that the rated pressure of all applications and fittings be equal to or greater than the rated pressure of this pump.
- Keep hydraulic equipment away from flames and heat.
- No alterations shall be made to this device.
- Failure to heed these warnings may result in personal injury as well as property damage.

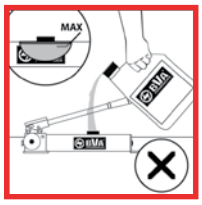
## Pumps



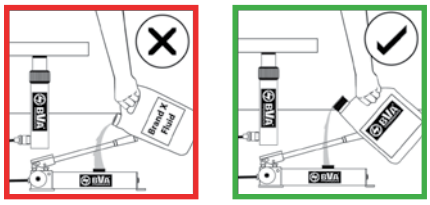
Do not use handle extender. Hand pumps should be easy to operate when used correctly.



Close release valve finger tight. Using force will damage the valve.



Fill pump only to recommended level. Fill only when connected cylinder is fully retracted.



Use only genuine BVA hydraulic oil. The wrong fluid can destroy your seals and pump and will render your warranty null and void.

## Electric Pump Safety Instructions

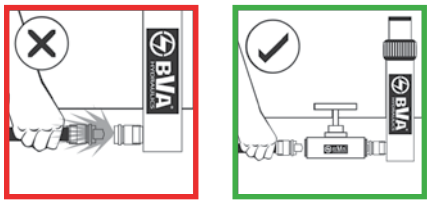
**TO AVOID ELECTROCUTION HAZARD:**

- Owner/Operator must read, understand and follow all printed material provided with this device before use.
- Connect ONLY to properly grounded electrical source. Connect to GFI outlet ONLY! For use in dry locations.
- Avoid the use of extension cords. If used, extension cord lengths up to 25 ft shall be SJT-14X3 or heavier. For cords up to 50 ft, use SJT-12X3 or heavier.
- For extension cord lengths up to 100 ft, use SJT-10X3 or heavier. NEVER use a 3 prong adapter.
- Do not operate this device in an explosive atmosphere or in the presence of conductive liquids.

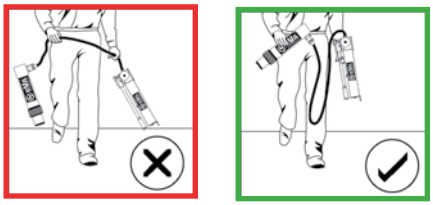
## Hoses and Couplers



Clean both coupler parts before connecting. Use dust caps when coupler parts are not connected.



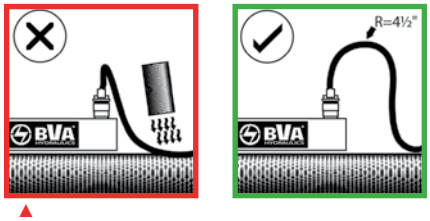
Detach cylinder only when fully retracted or use shut-off valves or safety valves to lock-in cylinder pressure.



Don't lift hydraulic equipment by the hoses.



Keep hoses away from the area beneath loads.




Do not kink hoses. Bending radius should be at least 4½". Do not drive over or drop heavy objects on the hoses.



# Maintaining Your Equipment

***Ensure a longer life span of your equipment***

**Hydraulic Fluids**

- Use only ISO 46 BVA Hydraulic Oil P/N's; F01 (1 gal) or F55 (55 gal) for pumps and cylinders.
- Viscosity @ 100 deg F 234 (S.U.S.); Viscosity @210 deg F=53 (S.U.S.); ASTM Grade 215; Flash Point 356 deg F; Pour Point -49 deg F, API Gravity =30.8.

**Air Line Lubricants**

- Use Class 1 Turbine Oil (ISO VG32) for Air Line Lubricant

**Hydraulic and Pneumatic Filtration**

- Hydraulic fluid must be kept clean, cool and free of water.
- Use Hydraulic Filtration to provide fluid which meets ISO 17/15/12 cleanliness levels.
- Air Line Filtration for solid particulate contamination removal: Use BVA P/N; FRL-145, 5uM Pneumatic Filter.
- Air Line Water Removal; Use BVA P/N; AD-145, Ambient Dryer.

**Proper Operation of Equipment**

- Refer to individual Product Owner's Manuals and BVA Catalogs for; general information, specifications, safety, set up, operation, maintenance, trouble shooting, storage and warnings for all BVA products.

# Formulas

| Key to Measurements | | | |
|---|---|---|---|
| **Weight:** | | **Length** | |
| 1 pound (lb.) | =0.4536 kg | 1 in | =25.4 mm |
| 1 kg | =2.205 lbs | 1 mm | =0.039 in |
| 1 ton (short, US) | =2,000 lbs | 1 in² | =6.452 cm² |
| 1 ton (metric) | =2,205 lbs | 1 cm² | =0.155 in² |
| **Volume:** | | **Pressure:** | |
| 1 in³ | =16.387 cm³ | 1 psi (lb/in²) | =0.69 bar |
| 1 cm³ | =0.061 in³ | 1 bar | =14.5 psi |
| 1 liter | =61.02 in³ | 1 kPa | =0.145 psi |
| | =0.264 gal(US) | | |
| 1 gal (US, liquid) | =3.785 liter | **Temperature:** | |
| | =231 in³ | 0°F | =(0°C x 1.8) + 32 |
| | =3,785 cm³ | 0°C | =(0°F - 32) ÷ 1.8 |

### Cylinder Rod Speed

Formula → $V = \frac{A}{Q} \times 60$

*Cylinder Rod Speed (sec/in)* = $\frac{\textit{Cylinder Effective Area (in}^2\textit{)}}{\textit{Pump Flow Rate (in}^3\textit{/min)}} \times \frac{\textit{60 (sec)}}{\textit{1}}$

### Force

Formula → F = P × A

*Force (lbs) = Hydraulic Working Pressure (lb/in²) × Cylinder Effective Area (in²)*

### Cylinder Oil Capacity

Formula → C = A × L

*Oil Capacity (in³) = Cylinder Effective Area (in²) × Cylinder Stroke (in)*

### ¼" Hose Oil Capacity

Formula → C = 0.5892 × H

*Oil Capacity (in³) = 0.5892 × Length of Hose (ft)*

### ⅜" Hose Oil Capacity

Formula → C = 1.3608 × H

*Oil Capacity (in³) = 1.3608 × Length of Hose (ft)*

### Cylinder Effective Area

Formula → $A = \pi \times \frac{D^2}{4}$

*Cylinder Effective Area* = $\pi \times \frac{\textit{(Cylinder Bore Diameter)}^2}{4}$

$\pi$ = 3.14159265359



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## Cylinders





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## Pumps





| | | | | | | | | | | | | | |
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