

# POWERRAM

HYDRAULIC TOOLS

POWERRAM HYDRAULIC TOOLS

CHIA-LUNN INDUSTRIAL CO., LTD.



**ENGINEERED HYDRAULIC TOOLS**

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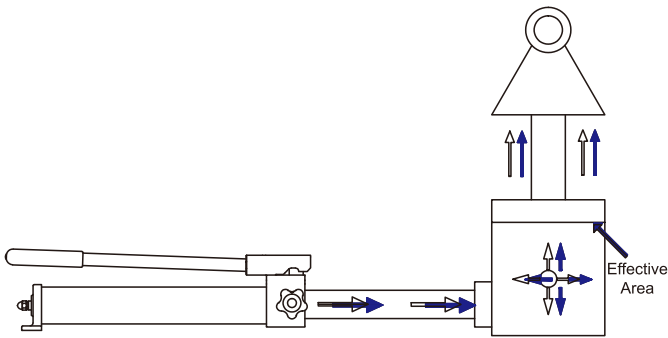
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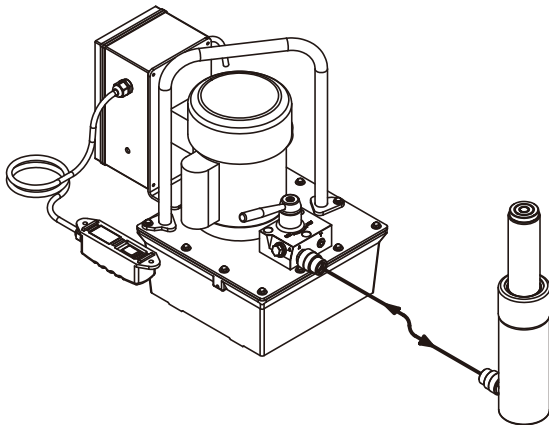
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The basic hydraulic system consists of a single acting cylinder, The pump can be powered by an electric motor, air power and also machanic driven by hand or foot pumps.

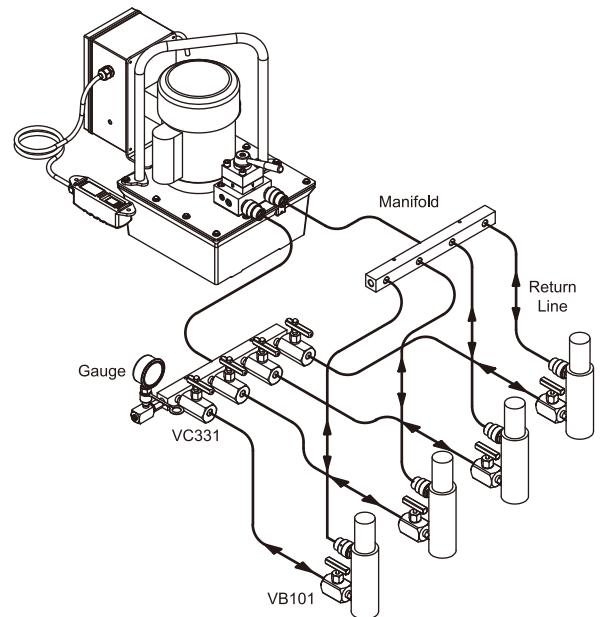


Flow: is created by pump.

Pressure: is created by resistance to flow. This resistance is usually the result of a load.

Force: The amount of force a hydraulic cylinder can be generated is equal to hydraulic pressure times the effective area of the cylinder. (Effective area is the surface of the piston face in cm<sup>2</sup>.)

For mutiple cylinder systems, multiply the effective area times the number of cylinders times pressure to determine the system force.



Many different system arrangements can be achieved by using a remote mounted directional valve. Remote valves are ideal when system control is desired away from the pump. Hydraulic connections are quick and convenient when you use inline manifolds to control upto 4 double-acting cylinders.

## ■ Formula for Calculation of Output Force:

$$\frac{\text{bar} \times \text{Cylinder Effective Area} \times \text{No. of Cylinders}}{1000 \text{ kgs}} = \text{Metric Tons}$$

Speed: When using a " power pump " the speed at which your cylinder will lift is determined by dividing the pump's flow by the cylinder's effective area.

## ■ Formula for Calculation of Lifiting Speed

$$\frac{\text{Pump Flow per Minute}}{\text{Cylinder Effective Area} \times \text{No. of Cylinders}} = \text{Piston Travel ( mm / min )}$$

## ■ Metric Conversion Chart

1 U.S. Gallon = 3.785 Liters  
= 3.785 cu./cm

1Cubic Inch = 16.39 cu./cm  
1 Bar = 14.7 psi

1 Metric Ton = 2,205 lbs  
= 1,000 kgs

1 Ton ( short ) = 2,000 lbs  
= 907.18 kgs

1kPa = 6.9 psi  
1 inch = 2.54 cm  
= 25.4 mm

1 Meter = 39.37 in.  
1 Horsepower = 745.7 Watts

# INTRODUCTION - CYLINDERS



## FEATURES

### 1. Wide Variety

Powerram offers the wide selection of cylinder design, capacity and stroke to match your daily requirements.

### 2. Built for Rugged Industrial/Construction Use

All Powerram cylinders meet worldwide Safety Standards. Stop rings, plated pistons and heavy duty construction provide trouble free operation and long life.

### 3. Spring Return

Heavy duty with steel plated spring provide fast and completed retraction after cycle, and retain the tension longer. Long lasting spring contribute substantially to the cylinder life.

### 4. Versatile Fixtures

Threaded collars and internal plunger threads withstand full loading for maximum flexibility in fixturing.

### 5. Piston Blow-Out Protection

All Powerram cylinders incorporate a positive piston stop to limit piston travel at the end of the stroke, allowing the cylinder to be operated at full stroke. Piston stops add strength and safety to your Powerram cylinder.

### 6. Protection from Contamination

Rod wiper clean the rod surface during retraction, protecting the inner cylinder assembly from dirt, moisture and other contaminants that may reduce the strength of the piston stroke.

### 7. Protection from Outside

**Most POWERRAM cylinders have Black Nitriding Finish which provide sustainable protection against moisture and other contaminant.**

**All aluminum cylinders have hard anodized finish.**

### 8. POWERRAM cylinders fully comply to ANSI/ASME B30.1.

## SUMMARY OF CYLINDERS

| Series | Description                       | Type          | Capacity(Tons) | Stroke (mm) | Page    |
|--------|-----------------------------------|---------------|----------------|-------------|---------|
| NSSS   | Standard, Spring Return           | Single Acting | 4.5 - 100      | 25.4 - 406  | 07      |
| NSHS   | Hollow, Spring Return             | Single Acting | 10 - 100       | 8 - 160     | 09      |
| NSCS   | Compact, Spring Return            | Single Acting | 10 - 100       | 38 - 62     | 10      |
| NSLS   | Flat, Spring Return               | Single Acting | 5 - 150        | 6 - 17      | 11      |
| NSLS   | Telescopic, Load Return           | Single Acting | 10 - 20        | 13 - 25     | 12      |
| JLLC   | Lock Nut, Load Return             | Single Acting | 50 - 1000      | 50 - 300    | 13 - 14 |
| JLPC   | Lock Nut, Low height, Load Return | Single Acting | 60 - 250       | 45 - 50     | 15      |
| SSA    | Aluminum, Standard, Spring Return | Single Acting | 20 - 100       | 50 - 250    | 03      |
| ACHC   | Aluminum, Hollow, Spring Return   | Single Acting | 20 - 60        | 50 - 150    | 04      |
| ALNC   | Aluminum, Lock Nut, Spring Return | Single Acting | 20 - 100       | 50 - 250    | 06      |
| ADHC   | Aluminum, Hollow                  | Double Acting | 30 - 60        | 50 - 250    | 05      |
| NDAC   | Standard                          | Double Acting | 10 - 100       | 150 - 470   | 16      |
| NDAH   | Hollow                            | Double Acting | 30 - 100       | 76 - 257    | 17      |

# ALUMINUM CYLINDERS

**POWERRAM**  
HYDRAULIC TOOLS



## MODEL:SSA-SERIES

Capacity: 20 - 100 Tons

Stroke: 50 - 250 mm

Spring Return, Single Acting

Max. Working Pressure: 700 bar / 10,000 psi

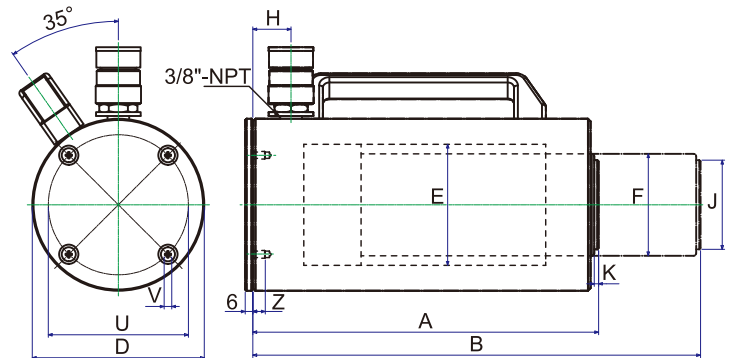


## FEATURES

- Half weight of the steel cylinders.
- Heavy duty spring for fast & full retraction.
- Large saddle surface for side load protection.
- Carrying handles are equipped for all models.
- Hard-Anodized coating reduces wear & corrosion.
- Rod wiper protects inner rod from dirt.
- Stop rings for piston blow-out protection.

Base Plate Mounting Holes Dimensions(mm)

| Model No./<br>Capacity<br>(Tons) | Bolt<br>Circle<br>U<br>(mm) | Thread<br>V<br>(mm) | Thread<br>Depth<br>Z<br>(mm) |
|----------------------------------|-----------------------------|---------------------|------------------------------|
| SSA-20                           | 70                          | M6x1.0              | 20                           |
| SSA-30                           | 80                          | M6x1.0              | 10                           |
| SSA-50                           | 110                         | M6x1.0              | 10                           |
| SSA-100                          | 160                         | M6x1.0              | 10                           |



## SPECIFICATIONS

| Model No. | Capacity (Tons) | Stroke (mm) | Cylinder Effective Area (cm <sup>2</sup> ) | Oil Capacity (cm <sup>3</sup> ) | Collapsed Height A (mm) | Extended Height B (mm) | Outside Diameter D (mm) | Cylinder Bore Diam E (mm) | Plunger Diameter F (mm) | Base to Advance Port H (mm) | Saddle Diameter J (mm) | Saddle Protrusion from Plunger K (mm) | Weight (Kgs) |
|-----------|-----------------|-------------|--------------------------------------------|---------------------------------|-------------------------|------------------------|-------------------------|---------------------------|-------------------------|-----------------------------|------------------------|---------------------------------------|--------------|
| SSA202    | 20              | 50          | 33.2                                       | 166                             | 168                     | 218                    | 92                      | 62                        | 55                      | 25                          | 40                     | 3                                     | 4.3          |
| SSA204    |                 | 100         | 33.2                                       | 332                             | 218                     | 318                    | 92                      | 62                        | 55                      | 25                          | 40                     | 3                                     | 5.0          |
| SSA206    |                 | 150         | 33.2                                       | 498                             | 268                     | 418                    | 92                      | 62                        | 55                      | 25                          | 40                     | 3                                     | 5.7          |
| SSA208    |                 | 200         | 33.2                                       | 664                             | 318                     | 518                    | 92                      | 62                        | 55                      | 25                          | 40                     | 3                                     | 6.5          |
| SSA302    | 30              | 50          | 44.2                                       | 221                             | 175                     | 225                    | 110                     | 75                        | 60                      | 25                          | 40                     | 3                                     | 6.0          |
| SSA304    |                 | 100         | 44.2                                       | 442                             | 225                     | 325                    | 110                     | 75                        | 60                      | 25                          | 40                     | 3                                     | 6.9          |
| SSA306    |                 | 150         | 44.2                                       | 663                             | 275                     | 425                    | 110                     | 75                        | 60                      | 25                          | 40                     | 3                                     | 7.9          |
| SSA308    |                 | 200         | 44.2                                       | 884                             | 325                     | 525                    | 110                     | 75                        | 60                      | 25                          | 40                     | 3                                     | 8.8          |
| SSA502    | 50              | 50          | 70.9                                       | 354.5                           | 171                     | 221                    | 135                     | 95                        | 80                      | 30                          | 70                     | 6                                     | 7.7          |
| SSA504    |                 | 100         | 70.9                                       | 709                             | 221                     | 321                    | 135                     | 95                        | 80                      | 30                          | 70                     | 6                                     | 9.1          |
| SSA506    |                 | 150         | 70.9                                       | 1063.5                          | 271                     | 421                    | 135                     | 95                        | 80                      | 30                          | 70                     | 6                                     | 11.7         |
| SSA508    |                 | 200         | 70.9                                       | 1418                            | 321                     | 521                    | 135                     | 95                        | 80                      | 30                          | 70                     | 6                                     | 13.5         |
| SSA5010   | 100             | 250         | 70.9                                       | 1772.5                          | 371                     | 621                    | 135                     | 95                        | 80                      | 30                          | 70                     | 6                                     | 16.4         |
| SSA1002   |                 | 50          | 143                                        | 715                             | 185                     | 235                    | 200                     | 135                       | 105                     | 45                          | 70                     | 6                                     | 17.2         |
| SSA1004   |                 | 100         | 143                                        | 1430                            | 235                     | 335                    | 200                     | 135                       | 105                     | 45                          | 70                     | 6                                     | 21.0         |
| SSA1006   |                 | 150         | 143                                        | 2145                            | 285                     | 435                    | 200                     | 135                       | 105                     | 45                          | 70                     | 6                                     | 25.1         |
| SSA1008   |                 | 200         | 143                                        | 2860                            | 335                     | 535                    | 200                     | 135                       | 105                     | 45                          | 70                     | 6                                     | 28.5         |
| SSA10010  |                 | 250         | 143                                        | 3575                            | 385                     | 635                    | 200                     | 135                       | 105                     | 45                          | 70                     | 6                                     | 30.7         |

# ALUMINUM CYLINDERS

**POWERRAM**  
HYDRAULIC TOOLS



## MODEL:ACHC-SERIES

Capacity: 20 - 60 Tons

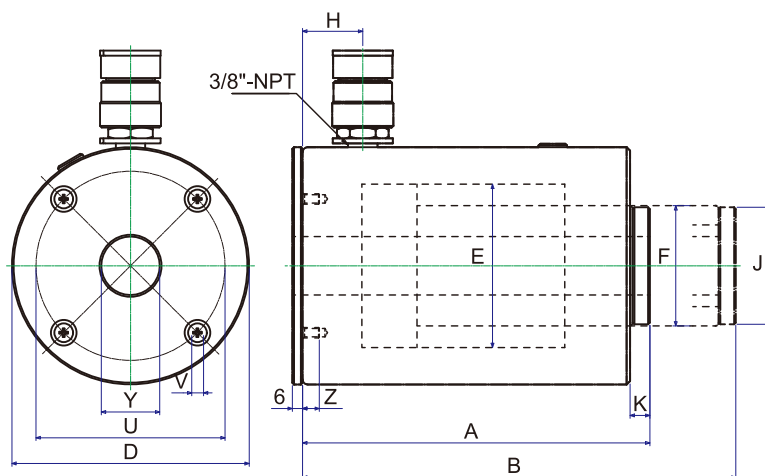
Stroke: 50 - 150 mm

Spring Return, Hollow Type

Max. Working Pressure: 700 bar / 10,000 psi

## FEATURES

- Half weight of the steel cylinders.
- Heavy duty spring for fast & full retraction.
- Chrome plated center hole for extra protection.
- Carrying handles are equipped with all models.
- Hard-Anodized coating reduces wear & corrosion.
- Stop rings for piston blow-out protection.
- Rod wiper protects inner rod from dirt.



Base Plate Mounting Holes Dimensions(mm)

| Model No./<br>Capacity<br>(Tons) | Bolt<br>Circle<br>U<br>(mm) | Thread<br>V<br>(mm) | Thread<br>Depth<br>Z<br>(mm) |
|----------------------------------|-----------------------------|---------------------|------------------------------|
| ACHC-20                          | 80                          | M6×1.0              | 10                           |
| ACHC-30                          | 110                         | M6×1.0              | 10                           |
| ACHC-60                          | 160                         | M6×1.0              | 10                           |

## SPECIFICATIONS

| Model No. | Cylinder Capacity (Tons) | Stroke (mm) | Cylinder Effective Area (cm <sup>2</sup> ) | Oil Capacity (cm <sup>3</sup> ) | Collapsed Height A (mm) | Extended Height B (mm) | Outside Diameter D (mm) | Cylinder Bore Diam E (mm) | Plunger Diameter F (mm) | Base to Advance Port H (mm) | Saddle Diameter J (mm) | Saddle Protrusion from Plunger K (mm) | Center Hole Dia. Y (mm) | Weight (Kgs) |
|-----------|--------------------------|-------------|--------------------------------------------|---------------------------------|-------------------------|------------------------|-------------------------|---------------------------|-------------------------|-----------------------------|------------------------|---------------------------------------|-------------------------|--------------|
| ACHC202   | 20                       | 50          | 34                                         | 170                             | 175                     | 225                    | 110                     | 75                        | 55                      | 30                          | 54                     | 8                                     | 27                      | 4.3          |
| ACHC204   |                          | 100         |                                            | 340                             | 245                     | 345                    | 110                     | 75                        | 55                      | 30                          | 54                     | 8                                     | 27                      | 6.5          |
| ACHC206   |                          | 150         |                                            | 510                             | 315                     | 465                    | 110                     | 75                        | 55                      | 30                          | 54                     | 8                                     | 27                      | 8.0          |
| ACHC302   | 30                       | 50          | 55                                         | 275                             | 202                     | 252                    | 138                     | 95                        | 70                      | 35                          | 68                     | 11.5                                  | 34                      | 8.4          |
| ACHC304   |                          | 100         |                                            | 550                             | 264.5                   | 364.5                  | 138                     | 95                        | 70                      | 35                          | 68                     | 11.5                                  | 34                      | 11.8         |
| ACHC306   |                          | 150         |                                            | 825                             | 327                     | 477                    | 138                     | 95                        | 70                      | 35                          | 68                     | 11.5                                  | 34                      | 12.8         |
| ACHC602   | 60                       | 50          | 89.5                                       | 448                             | 250                     | 300                    | 200                     | 125                       | 100                     | 50                          | 89                     | 14                                    | 54                      | 23.0         |
| ACHC604   |                          | 100         |                                            | 895                             | 300                     | 400                    | 200                     | 125                       | 100                     | 50                          | 89                     | 14                                    | 54                      | 26.3         |
| ACHC606   |                          | 150         |                                            | 1342                            | 350                     | 500                    | 200                     | 125                       | 100                     | 50                          | 89                     | 14                                    | 54                      | 27.0         |

# ALUMINUM CYLINDERS

**POWERRAM**  
HYDRAULIC TOOLS

## MODEL:ADHC-SERIES

Capacity: 30 & 60 Tons

Stroke: 50 - 250 mm

Hollow, Double Acting

Max. Working Pressure: 700 bar / 10,000 psi

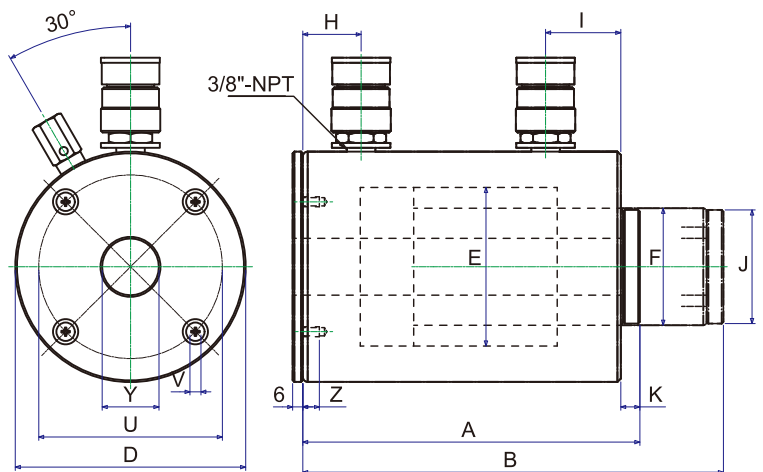


## FEATURES

- Half weight of the steel cylinders.
- Steel piston regarding protection against load damage.
- Chrome plated center sleeve for extra protection.
- Carrying handles are equipped with all models.
- Hard-Anodized coating reduces wear & corrosion.
- Stop rings for piston blow-out protection.
- Rod wiper protects inner rod from dirt.

Base Plate Mounting Holes Dimensions(mm)

| Model No./<br>Capacity<br>(Tons) | Bolt<br>Circle<br>U<br>(mm) | Thread<br>V<br>(mm) | Thread<br>Depth<br>Z<br>(mm) |
|----------------------------------|-----------------------------|---------------------|------------------------------|
| ADHC-30                          | 110                         | M6×1.0              | 10                           |
| ADHC-60                          | 160                         | M6×1.0              | 10                           |



## SPECIFICATIONS

| Model No. | Maximum Cylinder Capacity (Tons) | Stroke (mm) | Maximum Cylinder Capacity (Tons) |      | Cylinder Effective Area (cm <sup>2</sup> ) |      | Oil Capacity (cm <sup>3</sup> ) |      | Collapsed Height A (mm) | Extended Height B (mm) | Outside Diameter D (mm) | Cylinder Bore Diam E (mm) | Plunger Diameter F (mm) | Base to Advance Port H (mm) | Top to Retract Port I (mm) | Saddle Diameter J (mm) | Saddle Protrusion from Plunger K (mm) | Center Hole Diameter Y (mm) | Weight (Kgs) |
|-----------|----------------------------------|-------------|----------------------------------|------|--------------------------------------------|------|---------------------------------|------|-------------------------|------------------------|-------------------------|---------------------------|-------------------------|-----------------------------|----------------------------|------------------------|---------------------------------------|-----------------------------|--------------|
|           |                                  |             | Push                             | Pull | Push                                       | Pull | Push                            | Pull |                         |                        |                         |                           |                         |                             |                            |                        |                                       |                             |              |
| ADHC302   | 30                               | 50          | 38.5                             | 22.7 | 55                                         | 32.4 | 275                             | 162  | 202                     | 252                    | 138                     | 95                        | 70                      | 35                          | 45                         | 68                     | 11.5                                  | 34                          | 9.6          |
| ADHC306   |                                  | 150         |                                  |      |                                            |      | 825                             | 486  | 327                     | 477                    | 138                     | 95                        | 70                      | 35                          | 45                         | 68                     | 11.5                                  | 34                          | 14.8         |
| ADHC3010  |                                  | 250         |                                  |      |                                            |      | 1374                            | 810  | 430                     | 680                    | 138                     | 95                        | 70                      | 35                          | 45                         | 68                     | 11.5                                  | 34                          | 16.0         |
| ADHC602   | 60                               | 50          | 62.6                             | 31   | 89.5                                       | 44.2 | 448                             | 221  | 250                     | 300                    | 200                     | 125                       | 100                     | 50                          | 50                         | 89                     | 14                                    | 54                          | 15.5         |
| ADHC606   |                                  | 150         |                                  |      |                                            |      | 1342                            | 662  | 350                     | 500                    | 200                     | 125                       | 100                     | 50                          | 50                         | 89                     | 14                                    | 54                          | 23.0         |
| ADHC6010  |                                  | 250         |                                  |      |                                            |      | 2237                            | 1104 | 433                     | 683                    | 200                     | 125                       | 100                     | 50                          | 50                         | 89                     | 14                                    | 54                          | 30.5         |



# ALUMINUM CYLINDERS

**POWERRAM**  
HYDRAULIC TOOLS



## MODEL:ALNC-SERIES

Capacity: 20 - 100 Tons

Stroke: 50 - 250 mm

Spring Return, Lock Nut Type

Max. Working Pressure: 700 bar / 10,000 psi

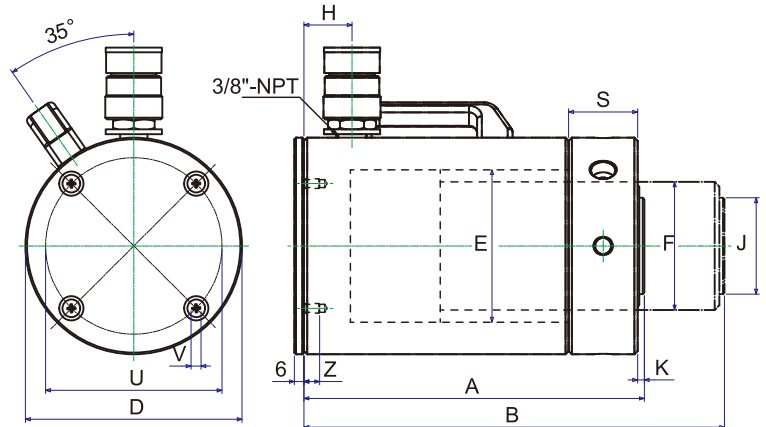


## FEATURES

- Half weight of the steel cylinders.
- Locknut extend load holding period safely.
- Large saddle surface for side load protection.
- Carrying handles are equipped with all models.
- Hard-Anodized coating reduces wear & corrosion.
- Stop rings for piston blow-out protection.
- Heavy duty spring for fast and full retraction.

Base Plate Mounting Holes Dimensions(mm)

| Model No./<br>Capacity<br>(Tons) | Bolt Circle<br>U<br>(mm) | Thread<br>V<br>(mm) | Thread<br>Depth<br>Z<br>(mm) |
|----------------------------------|--------------------------|---------------------|------------------------------|
| ALNC-20                          | 70                       | M6×1.0              | 10                           |
| ALNC-30                          | 80                       | M6×1.0              | 10                           |
| ALNC-50                          | 110                      | M6×1.0              | 10                           |
| ALNC-100                         | 160                      | M6×1.0              | 10                           |



## SPECIFICATIONS

| Model No. | Capacity (Tons) | Stroke (mm) | Cylinder Effective Area (cm <sup>2</sup> ) | Oil Capacity (cm <sup>3</sup> ) | Collapsed Height A (mm) | Extended Height B (mm) | Outside Diameter D (mm) | Cylinder Bore Diam E (mm) | Plunger Diameter (threaded) F (mm) | Base to Advance Port H (mm) | Saddle Diameter J (mm) | Saddle Protrusion from Plunger K (mm) | Lock Nut Height S (mm) | Weight (Kgs) |
|-----------|-----------------|-------------|--------------------------------------------|---------------------------------|-------------------------|------------------------|-------------------------|---------------------------|------------------------------------|-----------------------------|------------------------|---------------------------------------|------------------------|--------------|
| ALNC202   | 20              | 50          | 30.2                                       | 151                             | 193                     | 243                    | 92                      | 62                        | Tr55×3                             | 25                          | 40                     | 3                                     | 25                     | 4.8          |
| ALNC204   |                 | 100         | 30.2                                       | 302                             | 243                     | 343                    | 92                      | 62                        | Tr55×3                             | 25                          | 40                     | 3                                     | 25                     | 5.7          |
| ALNC206   |                 | 150         | 30.2                                       | 453                             | 293                     | 443                    | 92                      | 62                        | Tr55×3                             | 25                          | 40                     | 3                                     | 25                     | 6.3          |
| ALNC208   |                 | 200         | 30.2                                       | 604                             | 343                     | 543                    | 92                      | 62                        | Tr55×3                             | 25                          | 40                     | 3                                     | 25                     | 6.9          |
| ALNC302   | 30              | 50          | 44.2                                       | 221                             | 205                     | 255                    | 110                     | 75                        | Tr60×3                             | 25                          | 40                     | 3                                     | 30                     | 6.9          |
| ALNC304   |                 | 100         | 44.2                                       | 442                             | 255                     | 355                    | 110                     | 75                        | Tr60×3                             | 25                          | 40                     | 3                                     | 30                     | 7.7          |
| ALNC306   |                 | 150         | 44.2                                       | 662                             | 305                     | 455                    | 110                     | 75                        | Tr60×3                             | 25                          | 40                     | 3                                     | 30                     | 8.6          |
| ALNC308   |                 | 200         | 44.2                                       | 883                             | 355                     | 555                    | 110                     | 75                        | Tr60×3                             | 25                          | 40                     | 3                                     | 30                     | 9.6          |
| ALNC502   | 50              | 50          | 70.8                                       | 354                             | 212                     | 262                    | 135                     | 95                        | Tr80×4                             | 30                          | 60                     | 3                                     | 43                     | 9.3          |
| ALNC504   |                 | 100         | 70.8                                       | 708                             | 262                     | 362                    | 135                     | 95                        | Tr80×4                             | 30                          | 60                     | 3                                     | 43                     | 10.7         |
| ALNC506   |                 | 150         | 70.8                                       | 1063                            | 312                     | 462                    | 135                     | 95                        | Tr80×4                             | 30                          | 60                     | 3                                     | 43                     | 14.5         |
| ALNC508   |                 | 200         | 70.8                                       | 1417                            | 362                     | 562                    | 135                     | 95                        | Tr80×4                             | 30                          | 60                     | 3                                     | 43                     | 14.5         |
| ALNC5010  | 100             | 250         | 70.8                                       | 1771                            | 412                     | 662                    | 135                     | 95                        | Tr80×4                             | 30                          | 60                     | 3                                     | 43                     | 16.5         |
| ALNC1002  |                 | 50          | 143                                        | 715                             | 235                     | 285                    | 200                     | 135                       | Tr105×6                            | 45                          | 70                     | 3                                     | 51                     | 21.9         |
| ALNC1004  |                 | 100         | 143                                        | 1431                            | 285                     | 385                    | 200                     | 135                       | Tr105×6                            | 45                          | 70                     | 3                                     | 51                     | 25.2         |
| ALNC1006  |                 | 150         | 143                                        | 2146                            | 335                     | 485                    | 200                     | 135                       | Tr105×6                            | 45                          | 70                     | 3                                     | 51                     | 29.2         |
| ALNC1008  |                 | 200         | 143                                        | 2861                            | 385                     | 585                    | 200                     | 135                       | Tr105×6                            | 45                          | 70                     | 3                                     | 51                     | 33.0         |
| ALNC10010 |                 | 250         | 143                                        | 3577                            | 435                     | 685                    | 200                     | 135                       | Tr105×6                            | 45                          | 70                     | 3                                     | 51                     | 35.4         |

# CYLINDERS



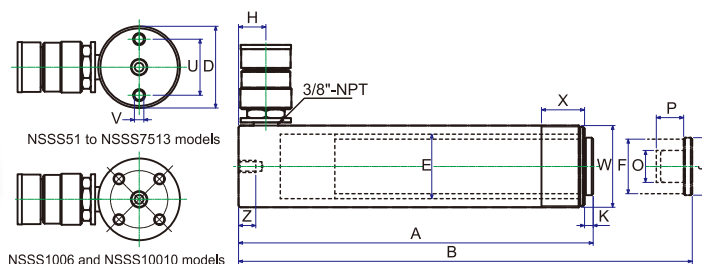
## MODEL:NSSS-SERIES

Capacity: 4.5 - 100 Tons

Stroke: 25.4 - 406 mm

Max. Working Pressure: 700 bar / 10,000 psi

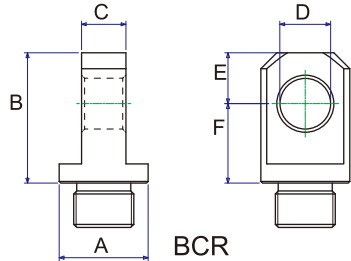
- All cylinders are single acting with spring return.
- Pistons hard chromed.
- Cylinders inside roll-polished.
- Cylinders outside blasted with black nitriding finish.



## NSSS-SERIES

| Model     | Capacity (Ton) | Stroke (mm) | Cylinder Effective Area (cm <sup>2</sup> ) | Oil Cap (cm <sup>3</sup> ) | HEIGHT(mm)  |            | D Ø mm | E Ø mm | F Ø mm | H mm | J mm | K mm | O Ø UN    | P mm | U mm | V Ø UNC  | Z mm | W Ø UN     | X mm | Weight (Kg) |
|-----------|----------------|-------------|--------------------------------------------|----------------------------|-------------|------------|--------|--------|--------|------|------|------|-----------|------|------|----------|------|------------|------|-------------|
|           |                |             |                                            |                            | A RETRACTED | B EXTENDED |        |        |        |      |      |      |           |      |      |          |      |            |      |             |
| NSSS51    | 4.5            | 26          | 6.4                                        | 17                         | 110         | 136        |        | 28.6   |        |      |      |      |           |      |      |          |      |            |      | 1           |
| NSSS53    |                | 76          |                                            | 54                         | 165         | 241        |        |        |        |      |      |      |           |      |      |          |      |            |      | 1.5         |
| NSSS55    | 5              | 127         | 7.1                                        | 90                         | 216         | 343        | 38     | 30     | 25.4   | 19   | 25   | 6    | 3/4"-16   | 14   | 25   | 1/4"-20  | 14   | 1 1/2"-16  | 28   | 1.9         |
| NSSS57    |                | 183         |                                            | 129                        | 273         | 456        |        |        |        |      |      |      |           |      |      |          |      |            |      | 2.4         |
| NSSS59    |                | 232         |                                            | 164                        | 324         | 556        |        |        |        |      |      |      |           | 16   |      |          |      |            |      | 2.8         |
| NSSS101   |                | 25.4        |                                            | 36.5                       | 90          | 115.4      |        |        |        |      | —    | —    | #10-24UN  | 6.5  |      |          |      |            |      | 1.8         |
| NSSS102   |                | 51          | 14.4                                       | 73                         | 121         | 172        |        | 42.8   |        |      |      |      |           |      |      |          |      |            |      | 2.3         |
| NSSS104   |                | 101         |                                            | 145                        | 171         | 272        |        |        |        |      |      |      |           |      |      |          |      |            |      | 3.3         |
| NSSS106   | 10             | 152.5       |                                            | 242                        | 247         | 399.5      | 57     |        | 38     | 19   | 40   | 6    | 1"-8      | 19   | 39   | 5/16"-18 | 13   | 2 1/4"-14  | 30   | 4.4         |
| NSSS108   |                | 203.5       |                                            | 323                        | 298         | 501.5      |        |        |        |      |      |      |           |      |      |          |      |            |      | 5.4         |
| NSSS1010  |                | 255.5       | 15.9                                       | 406                        | 350         | 605.5      |        | 45     |        |      |      |      |           |      |      |          |      |            |      | 6.4         |
| NSSS1012  |                | 305.5       |                                            | 486                        | 400         | 705.5      |        |        |        |      |      |      |           |      |      |          |      |            |      | 6.8         |
| NSSS1014  |                | 356.5       |                                            | 567                        | 451         | 807.5      |        |        |        |      |      |      |           |      |      |          |      |            |      | 8.2         |
| NSSS151   |                | 26.5        |                                            | 63                         | 124         | 150.5      |        |        |        |      |      |      |           |      |      |          |      |            |      | 3.3         |
| NSSS152   |                | 52.5        |                                            | 125                        | 149.6       | 202.1      |        |        |        | 19   |      |      |           |      |      |          |      |            |      | 4.1         |
| NSSS154   |                | 102.5       |                                            | 243                        | 200         | 302.5      |        |        |        |      |      |      |           |      |      |          |      |            |      | 5           |
| NSSS156   |                | 153         |                                            | 363                        | 271.6       | 424.6      |        |        |        |      |      |      |           |      |      |          |      |            |      | 6.8         |
| NSSS158   | 15             | 203.5       | 23.7                                       | 483                        | 322         | 525.5      | 73     | 55     | 40     |      | 38   | 9.6  | 1"-8      | 25.4 | 47.7 | 3/8"-16  | 13   | 2 3/4"-16  | 30   | 8.2         |
| NSSS1510  |                | 254.5       |                                            | 604                        | 373         | 627.5      |        |        |        | 25   |      |      |           |      |      |          |      |            |      | 9.5         |
| NSSS1512  |                | 305         |                                            | 724                        | 424         | 729        |        |        |        |      |      |      |           |      |      |          |      |            |      | 10.9        |
| NSSS1514  |                | 355.7       |                                            | 845                        | 474.6       | 830.3      |        |        |        |      |      |      |           |      |      |          |      |            |      | 11.8        |
| NSSS1516  |                | 406         |                                            | 824                        | 523         | 829        |        |        |        |      |      |      |           |      |      |          |      |            |      | 12.8        |
| NSSS251   |                | 25.5        |                                            | 98                         | 139.5       | 165        |        |        |        |      |      |      |           |      |      |          |      |            |      | 5.9         |
| NSSS252   |                | 51          |                                            | 196                        | 165         | 216        |        |        |        |      |      |      |           |      |      |          |      |            |      | 6.4         |
| NSSS254   |                | 102         |                                            | 392                        | 216         | 318        |        |        |        |      |      |      |           |      |      |          |      |            |      | 8.2         |
| NSSS256   |                | 158.5       |                                            | 610                        | 273         | 431.5      |        |        |        |      |      |      |           |      |      |          |      |            |      | 10          |
| NSSS258   | 25             | 209.5       | 38.5                                       | 806                        | 324         | 533.5      | 88     | 70     | 55     | 25   | 50   | 10.5 | 1 1/2"-16 | 25.4 | 58   | 1/2"-13  | 19   | 3 5/16"-12 | 50   | 12.2        |
| NSSS2510  |                | 260.5       |                                            | 1002                       | 375         | 635.5      |        |        |        |      |      |      |           |      |      |          |      |            |      | 14.1        |
| NSSS2512  |                | 311         |                                            | 1196                       | 425.5       | 736.5      |        |        |        |      |      |      |           |      |      |          |      |            |      | 16.3        |
| NSSS2514  |                | 361.5       |                                            | 1390.5                     | 476         | 837.5      |        |        |        |      |      |      |           |      |      |          |      |            |      | 17.7        |
| NSSS302   | 30             | 60          | 44.2                                       | 265                        | 165         | 225        | 103    | 75     | 56     | 30   | 50   | 10.5 | 1 1/2"-16 | 25.4 | 66   | 1/2"-13  | 19   | 3 7/8"-12  | 48   | 7.9         |
| NSSS308   |                | 209.5       |                                            | 925                        | 387.5       | 597        |        |        | 60     | 57   |      |      |           |      |      |          |      | 4"-12      | 50   | 18.1        |
| NSSS502   |                | 51          |                                            | 361                        | 177         | 228        |        |        |        |      |      |      |           |      |      |          |      |            |      | 15          |
| NSSS504   |                | 101.5       |                                            | 719                        | 229         | 330.5      |        |        |        |      |      |      |           |      |      |          |      |            |      | 19.1        |
| NSSS506   | 50             | 157.5       | 70.8                                       | 1116                       | 283         | 440.5      | 127    | 95     | 80     | 33   | 70   | 3    | —         | —    | 95   | 1/2"-13  | 19   | 5"-12      | 55   | 23.1        |
| NSSS508   |                | 203         |                                            | 1446                       | 349         | 552        |        |        |        |      |      |      |           |      |      |          |      |            |      | 27.1        |
| NSSS5010  |                | 260         |                                            | 1853                       | 385         | 645        |        |        |        |      |      |      |           |      |      |          |      |            |      | 30.4        |
| NSSS5013  |                | 335.5       |                                            | 2377                       | 461         | 796.5      |        |        |        |      |      |      |           |      |      |          |      |            |      | 37.6        |
| NSSS756   | 75             | 155         | 113                                        | 1752                       | 285         | 440        | 152    | 120    | 95     | 30   | 70   | 3    | —         | —    | —    | —        | —    | 5 3/4"-12  | 45   | 29.5        |
| NSSS7513  |                | 333.5       |                                            | 3770                       | 491         | 824.5      |        |        |        |      |      |      |           |      |      |          |      |            |      | 59          |
| NSSS1002  |                | 50          |                                            | 715                        | 238         | 288        |        |        |        |      |      |      |           |      |      |          |      |            |      | 43          |
| NSSS1004  | 100            | 100         | 143.1                                      | 1430                       | 288         | 388        | 177    | 135    | 105    | 40   | 70   | 3    | —         | —    | 139  | 3/4"-10  | 25   | 6 7/8"-12  | 45   | 50          |
| NSSS1006  |                | 170         |                                            | 2432                       | 358         | 528        |        |        |        |      |      |      |           |      |      |          |      |            |      | 59          |
| NSSS10010 |                | 260         |                                            | 3720                       | 448         | 708        |        |        |        |      |      |      |           |      |      |          |      |            |      | 72.6        |

## Accessories for NSSS series

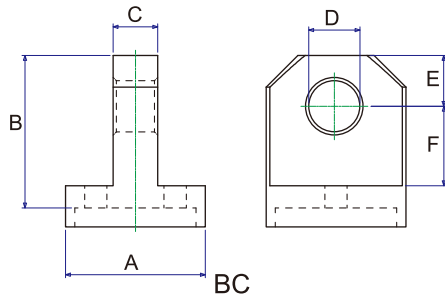


BCR

### For NSSS 5, 10, 15 & 25 Tons

Piston Clevis

| Model | A  | B  | C  | D    | E  | F  |
|-------|----|----|----|------|----|----|
| BCR5  | 28 | 41 | 14 | 16   | 16 | 25 |
| BCR10 | 43 | 59 | 25 | 22.3 | 25 | 34 |
| BCR15 | 43 | 62 | 25 | 22.3 | 25 | 37 |
| BCR25 | 57 | 74 | 38 | 31.8 | 31 | 43 |

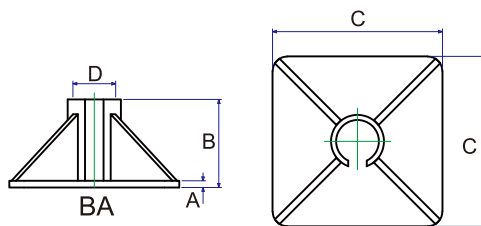


BC

### For NSSS 5, 10, 15 & 25 Tons

Base Clevis

| Model | A    | B  | C  | D    | E  | F  |
|-------|------|----|----|------|----|----|
| BC5   | 44   | 48 | 14 | 16   | 16 | 25 |
| BC10  | 63   | 67 | 25 | 22.3 | 25 | 35 |
| BC15  | 78.5 | 67 | 25 | 22.3 | 25 | 35 |
| BC25  | 95   | 79 | 38 | 31.8 | 31 | 41 |



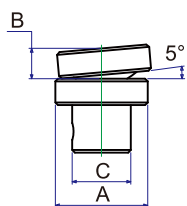
BA

### BA10 for NSSS102 through NSSS1014 BA25 for NSSS252 through NSSS2514

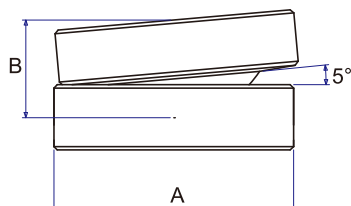
Cylinder Bases

| Model | A  | B   | C   | D  |
|-------|----|-----|-----|----|
| BA10  | 10 | 123 | 230 | 58 |
| BA25  | 16 | 128 | 280 | 89 |

### ATS10 & ATS25



### ATS-100



### ATS10 for NSSS10T ATS25 for NSSS25T through NSSS30T ATS100 for NSSS50T through NSSS100T

Accessories Tilt Saddles

| Model  | A  | B    | C    |
|--------|----|------|------|
| ATS10  | 40 | 11.5 | 22.2 |
| ATS25  | 50 | 14   | 36.3 |
| ATS100 | 70 | 28.5 | -    |

## MODEL: NSHS SERIES

Capacity: 10 - 100 Tons

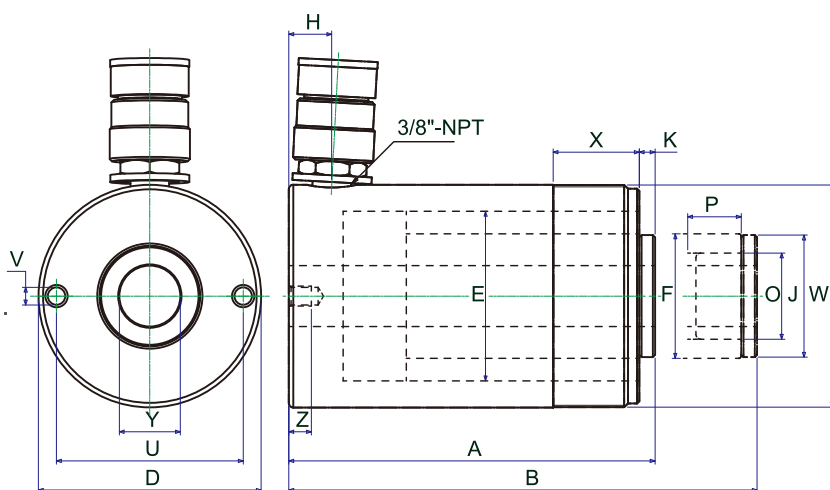
Stroke: 8 - 160 mm

Max. Working Pressure: 700 bar / 10,000 psi



## FEATURES

- All cylinders are single acting with spring return.
- Pistons hard chromed.
- Cylinders inside roll-polished.
- Cylinders outside blasted with black nitriding finish.
- Use in combination with hand / foot pumps (Page 19-30), and accessories (page 73-79)



## NSHS & NRHS SERIES, HOLLOW PLUNGER CYLINDERS

| Model    | Capacity<br>(Tons) | Stroke<br>(mm) | Cylinder<br>Effective<br>Area<br>(cm <sup>2</sup> ) | Oil Cap<br>(cm <sup>3</sup> ) | A B       |          | D<br>Ø mm | E<br>Ø mm | F<br>Ø mm | H<br>mm | J<br>mm | K<br>mm | O<br>Ø UN  | P<br>mm | U<br>mm | V<br>Ø UN | Z<br>mm | W<br>Ø UN | X<br>mm | Y<br>Centre<br>Hole<br>(Ø mm) | Weight<br>(Kgs) |
|----------|--------------------|----------------|-----------------------------------------------------|-------------------------------|-----------|----------|-----------|-----------|-----------|---------|---------|---------|------------|---------|---------|-----------|---------|-----------|---------|-------------------------------|-----------------|
|          |                    |                |                                                     |                               | RETRACTED | EXTENDED |           |           |           |         |         |         |            |         |         |           |         |           |         |                               |                 |
| NSHS120  | 12                 | 8              | 18.5                                                | 14.8                          | 60        | 68       | 73        | 54        | 35        | 12.5    | —       | —       | 3/4"-16    | 16      | 50.8    | 5/16"-18  | 9       | 2 3/4"-16 | 33      | 19.5                          | 1.8             |
| NSHS121  |                    | 42             | 18.9                                                | 79                            | 120       | 162      |           | 55        |           | 19      |         |         | —          | —       |         |           | 12.7    |           |         |                               | 3.1             |
| NSHS1211 |                    | 42             | 18.9                                                | 79                            | 120       | 162      |           | 55        |           | 19      |         |         | 3/4"-16    | 16      |         |           | 12.7    |           |         |                               | 3.1             |
| NSHS123  |                    | 76             | 18.9                                                | 143.2                         | 184       | 260      |           | 55        |           | 19      |         |         | —          | —       |         |           | 12.7    |           |         |                               | 4.5             |
| NSHS202  | 20                 | 51             | 34                                                  | 173                           | 162       | 213      | 98.5      | 75        | 55        | 19      | 54      | 7       | 1 9/16"-16 | 25      | 82.6    | 3/8"-16   | 9.4     | 3 7/8"-12 | 38      | 27                            | 7.5             |
| NSHS206  |                    | 155            | 34                                                  | 527                           | 306       | 461      |           | 75        |           | 19      |         |         | 1 9/16"-16 | 25      |         |           | 9.4     |           |         |                               | 13.5            |
| NSHS302  | 30                 | 65             | 47.8                                                | 310                           | 178.5     | 243.5    | 117       | 90        | 65        | 21.5    | 59.9    | 0.5     | 1 7/8"-16  | 25      | 92      | 3/8"-16   | 14      | 4 1/2"-12 | 42      | 34                            | 11.4            |
| NSHS306  |                    | 160            | 47.8                                                | 763                           | 330       | 490      |           | 90        |           | 21.5    |         |         | 1 7/8"-16  | 25      |         |           | 14      |           |         |                               | 19.7            |
| NSHS603  | 60                 | 76             | 89.6                                                | 680                           | 247.5     | 323.5    | 158.6     | 125       | 90        | 32      | 89      | 12.5    | 2 3/4"-16  | 25      | 130     | 1/2"-13   | 14      | 6 1/4"-12 | 50      | 54                            | 26.8            |
| NSHS606  |                    | 152            | 89.6                                                | 1360                          | 323.5     | 475.5    |           | 125       |           | 32      |         |         | 2 3/4"-16  | 25      |         |           | 14      |           |         |                               | 34              |
| NSHS1003 | 100                | 76             | 143                                                 | 1085                          | 254       | 330      | 213       | 165       | 125       | 38      | 125     | 12      | 4"-16      | 30      | 178     | 5/8"-11   | 19      | 8 3/8"-12 | 60      | 79                            | 50.1            |

## MODEL: NSCS-SERIES

Capacity: 10 - 100 Tons

Stroke: 38 - 62 mm

Max. Working Pressure: 700 bar / 10,000 psi

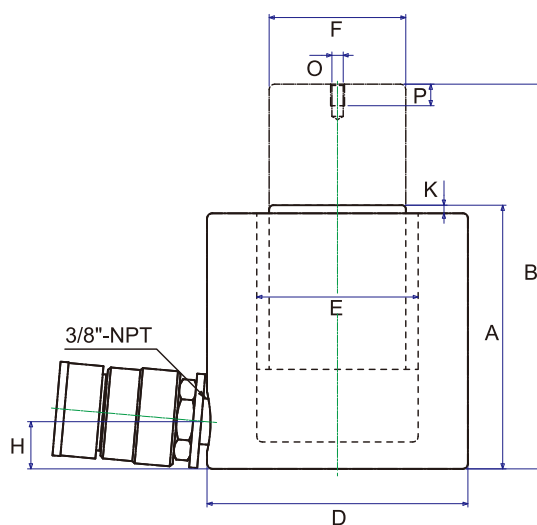
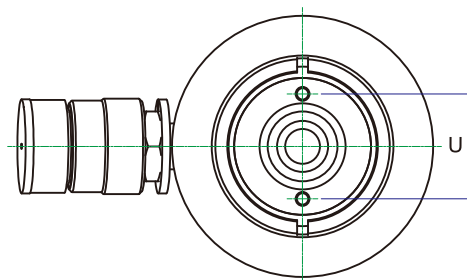
- All cylinders are single acting with spring return.
- Pistons hard chromed.
- Cylinders inside roll-polished.
- Cylinders outside blasted with black nitriding finish.



### Hand / Foot Pumps Page 19-30



### High Pressure Accessories Page 73-79



### NSCS-SERIES, COMPACT CYLINDERS

| Model    | Capacity<br>(Ton) | Stroke<br>(mm) | Effective<br>Area<br>(cm <sup>2</sup> ) | Oil Cap<br>(cm <sup>3</sup> ) | HEIGHT (mm) |          | C<br>mm | D<br>mm | E<br>Ø mm | F<br>Ø mm | H<br>mm | K<br>mm | V<br>Ø mm | G<br>Ø mm | O<br>Ø mm | P<br>Ø mm | U<br>mm | L<br>mm | M<br>mm | Weight<br>(Kg) |
|----------|-------------------|----------------|-----------------------------------------|-------------------------------|-------------|----------|---------|---------|-----------|-----------|---------|---------|-----------|-----------|-----------|-----------|---------|---------|---------|----------------|
|          |                   |                |                                         |                               | RETRACTED   | EXTENDED |         |         |           |           |         |         |           |           |           |           |         |         |         |                |
| NSCS101  | 10                | 38             | 14.4                                    | 55.0                          | 88          | 126      | —       | 78      | 42.8      | 38        | 17.5    | 5       | —         | —         | M4        | 8         | 26      | —       | —       | 4.1            |
| NSCS201  | 20                | 45             | 28.3                                    | 127.0                         | 98          | 143      | —       | 97      | 60        | 50.8      | 17.5    | 3       | —         | —         | M5        | 9         | 39      | —       | —       | 5              |
| NSCS302  | 30                | 62             | 44.2                                    | 274.0                         | 117         | 179      | —       | 107     | 75        | 63.5      | 19      | 3       | —         | —         | M5        | 8         | 39      | —       | —       | 6.8            |
| NSCS502  | 50                | 60.5           | 70.8                                    | 429.0                         | 127         | 187.5    | —       | 127     | 95        | 70        | 19      | 2       | —         | —         | M5        | 8         | 39      | —       | —       | 10.9           |
| NSCS1002 | 100               | 58             | 143.1                                   | 830.0                         | 146.5       | 204.5    | —       | 165     | 135       | 92        | 25      | 1.5     | —         | —         | M8        | 10        | 55      | —       | —       | 22.7           |





## MODEL: NSLS-SERIES

Capacity: 5 - 150 Tons

Stroke: 6 - 17 mm

Max. Working Pressure: 700 bar / 10,000 psi

- All cylinders are single acting with spring return.
- Pistons hard chromed.
- Cylinders inside roll-polished.
- Cylinders outside blasted with black nitriding finish.



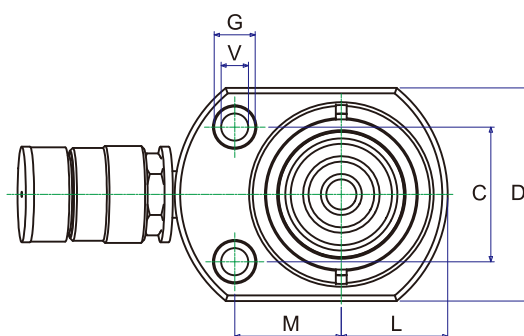
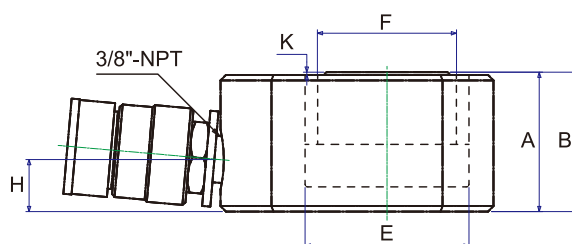
## Hand / Foot Pumps

Page 19-30



## High Pressure Accessories

Page 73-79



## NSLS-SERIES, FLAT CYLINDERS

| Model    | Capacity<br>(Ton) | Stroke<br>(mm) | Effective<br>Area<br>(cm <sup>2</sup> ) | Oil Cap<br>(cm <sup>3</sup> ) | HEIGHT(mm) |          | C<br>mm | D<br>mm  | E<br>Ø mm | F<br>Ø mm | H<br>mm | K<br>mm | V<br>Ø mm | G<br>Ø mm | O<br>Ø mm | P<br>Ø mm | U<br>mm | L<br>mm | M<br>mm | Weight<br>(Kg) |
|----------|-------------------|----------------|-----------------------------------------|-------------------------------|------------|----------|---------|----------|-----------|-----------|---------|---------|-----------|-----------|-----------|-----------|---------|---------|---------|----------------|
|          |                   |                |                                         |                               | RETRACTED  | EXTENDED |         |          |           |           |         |         |           |           |           |           |         |         |         |                |
| NSLS50   | 5                 | 6              | 7.5                                     | 4.5                           | 33         | 39       | 28.5    | 58.5×44  | 31        | 25.4      | 16      | 1       | 5.3       | 9.5       | —         | —         | —       | 22      | 22      | 0.7            |
| NSLS100  | 10                | 12             | 15.2                                    | 18.0                          | 42         | 54       | 36.5    | 82.5×60  | 44        | 38        | 19      | 1       | 7.5       | 11        | —         | —         | —       | 30      | 34      | 1.6            |
| NSLS200  | 20                | 12             | 28.3                                    | 34.0                          | 51         | 63       | 49.3    | 100×78   | 60        | 50.8      | 19      | 1       | 10        | 15        | —         | —         | —       | 39      | 39      | 2.6            |
| NSLS300  | 30                | 13             | 41.8                                    | 54.0                          | 58         | 71       | 52.3    | 117.5×95 | 73        | 63.5      | 19      | 2       | 10        | 16        | —         | —         | —       | 47.5    | 47.5    | 4.5            |
| NSLS500  | 50                | 16             | 70.8                                    | 113.0                         | 66         | 82       | 66.5    | 145×115  | 95        | 70        | 19      | 2       | 11        | 19        | —         | —         | —       | 57.5    | 58      | 6.8            |
| NSLS750  | 75                | 16             | 113.0                                   | 180.0                         | 79         | 95       | 76.2    | 170×145  | 120       | 82.5      | 19      | 2       | 13.5      | 20.5      | —         | —         | —       | 72.5    | 70      | 11.3           |
| NSLS1000 | 100               | 16             | 143.1                                   | 229.0                         | 85         | 101      | 76.2    | 185×160  | 135       | 92        | 19      | 2       | 13.5      | 20.5      | —         | —         | —       | 80      | 78      | 14.5           |
| NSLS1500 | 150               | 17             | 213.7                                   | 363.0                         | 100        | 117      | 117     | 225×195  | 165       | 115       | 23      | 2       | 13.5      | 20.5      | —         | —         | —       | 97.5    | 85      | 26.3           |

## MODEL: NSLS-TELESCOPIC SERIES

Capacity: 10 ~ 35 Tons

Stroke: 13 - 135 mm

Max. Working Pressure: 700 bar / 10,000 psi



NSLS20-10



NSLS10-05



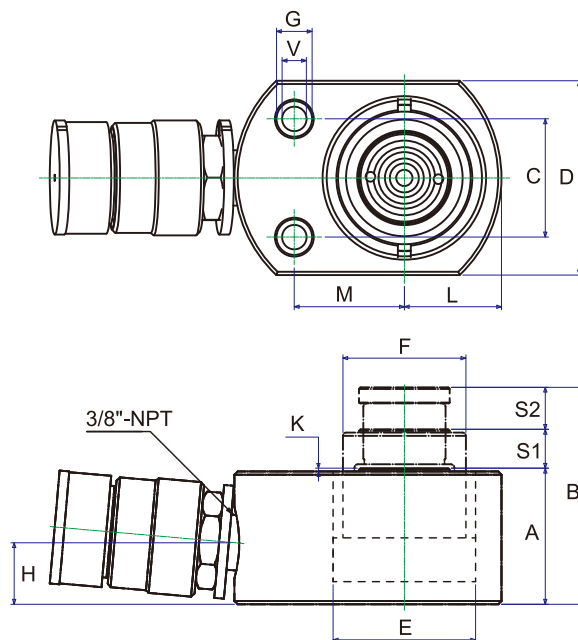
NSLS35-14

## FEATURES

- NSLS Telescopic Cylinders have a build-in matting and long stroke.
- They are perfect for those who works with different types of service job in tight spaces and want to combine large forces with long stroke.
- Available in three different sizes: 10+5 Tons, 20+10 Tons and 35+14 Tons.
- Single Acting, Load Return
- Pistons hard chromed.
- Cylinders inside roll-polished.
- Cylinders outside blasted with black nitriding finish.
- Use in combination with hand / foot pumps (Page 19-30), and accessories (page 73-79)

## CAUTION!

To prevent damage to the compact system, always load the load at the middle of the lifting piston.



## NSLS TELESCOPIC CYLINDERS

| Model No. | Capacity (Tons) |     | Stroke (mm) |     | Effective Area(cm <sup>2</sup> ) |      | Oil Cap (cm <sup>3</sup> ) | A          | B        | C mm | D mm    | E Ø mm | F Ø mm | H mm | K mm | V Ø mm | G Ø mm | L mm | M mm | Weight (Kgs) |
|-----------|-----------------|-----|-------------|-----|----------------------------------|------|----------------------------|------------|----------|------|---------|--------|--------|------|------|--------|--------|------|------|--------------|
|           | 1st             | 2nd | S1          | S2  | 1st                              | 2nd  |                            | Height(mm) |          |      |         |        |        |      |      |        |        |      |      |              |
|           |                 |     |             |     |                                  |      |                            | RETRACTED  | EXTENDED |      |         |        |        |      |      |        |        |      |      |              |
| NSLS10-05 | 10              | 5   | 12          | 13  | 15.2                             | 7.5  | 29                         | 42         | 67       | 36.5 | 82.5×60 | 44     | 38     | 19   | 1    | 7.5    | 11     | 30   | 34   | 1.6          |
| NSLS20-10 | 20              | 10  | 12          | 13  | 28.3                             | 15.2 | 55                         | 51         | 76       | 49.3 | 100×78  | 60     | 50.8   | 19   | 1    | 10     | 15     | 39   | 39   | 2.6          |
| NSLS35-14 | 35              | 14  | 135         | 135 | 50                               | 20   | 944                        | 283        | 553      | —    | —       | 80     | 67     | 20   | 46   | —      | —      | —    | —    | 16.1         |

# LOCK NUT CYLINDERS

## MODEL:JLLC-SERIES

Capacity: 50 - 1,000 Tons

Stroke: 50 - 300 mm

Max. working pressure: 700 bar / 10,000 psi

Load Return, Lock Nut



## FEATURES

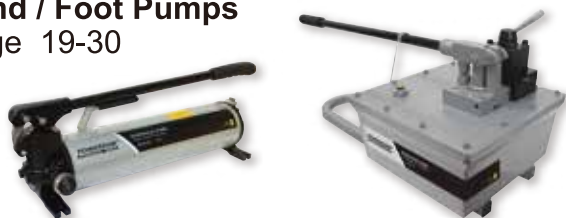
- Single-acting, load return.
- Safety Lock nut for mechanical load holding.
- Chrome plated for preventing corrosion and lower friction for smoother operation.
- Withstands side load forces up to 5% of rated cylinder capacity without scoring.
- Overflow port for piston protection.
- Interchangeable, hardened, grooved saddle are standard.
- High flow coupler and dust cap included on all models.

## SPECIFICATIONS

| Model No.  | Capacity (Tons) | Stroke (mm) | Collapsed Height A (mm) | Extended Height B (mm) | Weight (Kgs) |
|------------|-----------------|-------------|-------------------------|------------------------|--------------|
| JLLC502    | 50              | 50          | 164                     | 214                    | 15           |
| JLLC506    |                 | 150         | 264                     | 414                    | 25           |
| JLLC5010   |                 | 250         | 364                     | 614                    | 35           |
| JLLC1002   | 100             | 50          | 187                     | 237                    | 30           |
| JLLC1006   |                 | 150         | 287                     | 437                    | 48           |
| JLLC10010  |                 | 250         | 387                     | 637                    | 64           |
| JLLC1502   | 150             | 50          | 209                     | 259                    | 53           |
| JLLC1506   |                 | 150         | 309                     | 459                    | 78           |
| JLLC15012  |                 | 300         | 459                     | 759                    | 117          |
| JLLC2002   | 200             | 50          | 243                     | 293                    | 83           |
| JLLC2006   |                 | 150         | 343                     | 493                    | 117          |
| JLLC20012  |                 | 300         | 493                     | 793                    | 170          |
| JLLC3002   | 300             | 50          | 295                     | 345                    | 173          |
| JLLC3006   |                 | 150         | 395                     | 545                    | 233          |
| JLLC30012  |                 | 300         | 545                     | 845                    | 323          |
| JLLC4002   | 400             | 50          | 335                     | 385                    | 250          |
| JLLC4006   |                 | 150         | 435                     | 585                    | 327          |
| JLLC40012  |                 | 300         | 585                     | 885                    | 441          |
| JLLC5002   | 500             | 50          | 375                     | 425                    | 367          |
| JLLC5006   |                 | 150         | 475                     | 625                    | 466          |
| JLLC50012  |                 | 300         | 625                     | 925                    | 617          |
| JLLC6002   | 600             | 50          | 395                     | 445                    | 446          |
| JLLC6006   |                 | 150         | 495                     | 645                    | 562          |
| JLLC60012  |                 | 300         | 645                     | 945                    | 737          |
| JLLC8002   | 800             | 50          | 455                     | 505                    | 709          |
| JLLC8006   |                 | 150         | 555                     | 705                    | 870          |
| JLLC80012  |                 | 300         | 705                     | 1005                   | 1110         |
| JLLC10002  | 1000            | 50          | 495                     | 545                    | 949          |
| JLLC10006  |                 | 150         | 595                     | 745                    | 1141         |
| JLLC100012 |                 | 300         | 745                     | 1045                   | 1430         |

### Hand / Foot Pumps

Page 19-30



### Power Pumps

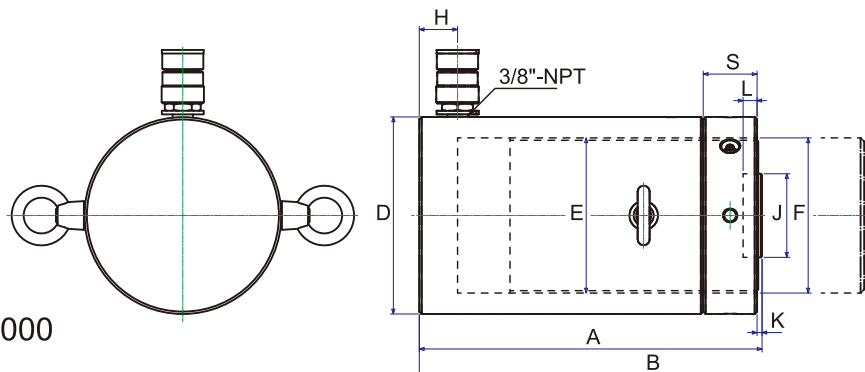
Page 31-42



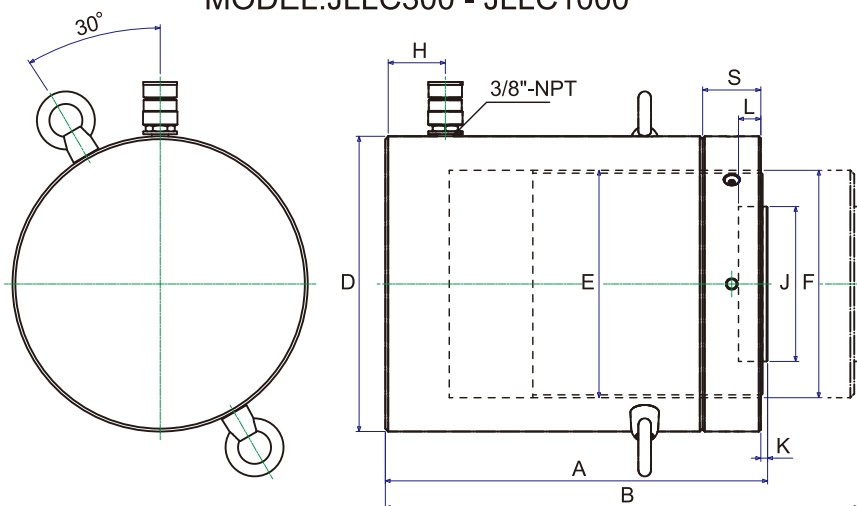
# LOCK NUT CYLINDERS

**POWERRAM**  
HYDRAULIC TOOLS

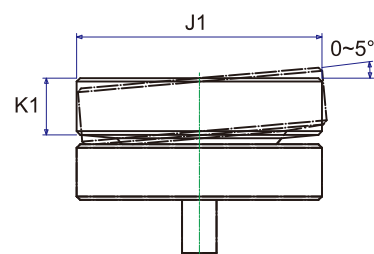
MODEL:JLLC50 - JLLC200



MODEL:JLLC300 - JLLC1000



TSA-Optional Tilt Saddle



| Model No.  | Cylinder Effective Area (cm <sup>2</sup> ) | Oil Capacity (cm <sup>3</sup> ) | Outside Diameter D (mm) | Cylinder Bore Diam E (mm) | Plunger Diameter F (mm) | Base to Advance Port H (mm) | Saddle Diameter J (mm) | Saddle Protrusion from Plunger K (mm) | Depth of Plunger Hole L (mm) | Lock Nut Height S (mm) | Model No.  | Optional Tilt Saddle |                |              |
|------------|--------------------------------------------|---------------------------------|-------------------------|---------------------------|-------------------------|-----------------------------|------------------------|---------------------------------------|------------------------------|------------------------|------------|----------------------|----------------|--------------|
|            |                                            |                                 |                         |                           |                         |                             |                        |                                       |                              |                        |            | Dia. J1 (mm)         | Height K1 (mm) | Model Number |
| JLLC502    | 70.9                                       | 354.5                           | 125                     | 95                        | Tr95×4                  | 20                          | 70                     | 4                                     | 13                           | 35                     | JLLC502    | 70                   | 22             | TSA-100      |
| JLLC506    | 70.9                                       | 1063.5                          | 125                     | 95                        | Tr95×4                  | 20                          | 70                     | 4                                     | 13                           | 35                     | JLLC506    | 70                   | 22             | TSA-100      |
| JLLC5010   | 70.9                                       | 1772.5                          | 125                     | 95                        | Tr95×4                  | 20                          | 70                     | 4                                     | 13                           | 35                     | JLLC5010   | 70                   | 22             | TSA-100      |
| JLLC1002   | 133                                        | 665                             | 165                     | 130                       | Tr130×4                 | 32                          | 70                     | 4                                     | 13                           | 45                     | JLLC1002   | 70                   | 22             | TSA-100      |
| JLLC1006   | 133                                        | 1995                            | 165                     | 130                       | Tr130×4                 | 32                          | 70                     | 4                                     | 13                           | 45                     | JLLC1006   | 70                   | 22             | TSA-100      |
| JLLC10010  | 133                                        | 3325                            | 165                     | 130                       | Tr130×4                 | 32                          | 70                     | 4                                     | 13                           | 45                     | JLLC10010  | 70                   | 22             | TSA-100      |
| JLLC1502   | 201                                        | 1005                            | 205                     | 160                       | Tr160×6                 | 49                          | 125                    | 4                                     | 25                           | 45                     | JLLC1502   | 125                  | 20             | TSA-200      |
| JLLC1506   | 201                                        | 3015                            | 205                     | 160                       | Tr160×6                 | 49                          | 125                    | 4                                     | 25                           | 45                     | JLLC1506   | 125                  | 20             | TSA-200      |
| JLLC15012  | 201                                        | 6030                            | 205                     | 160                       | Tr160×6                 | 49                          | 125                    | 4                                     | 25                           | 45                     | JLLC15012  | 125                  | 20             | TSA-200      |
| JLLC2002   | 269                                        | 1345                            | 235                     | 185                       | Tr185×6                 | 52                          | 125                    | 4                                     | 25                           | 50                     | JLLC2002   | 125                  | 20             | TSA-200      |
| JLLC2006   | 269                                        | 4035                            | 235                     | 185                       | Tr185×6                 | 52                          | 125                    | 4                                     | 25                           | 50                     | JLLC2006   | 125                  | 20             | TSA-200      |
| JLLC20012  | 269                                        | 8070                            | 235                     | 185                       | Tr185×6                 | 52                          | 125                    | 4                                     | 25                           | 50                     | JLLC20012  | 125                  | 20             | TSA-200      |
| JLLC3002   | 433.5                                      | 2167.5                          | 305                     | 235                       | Tr235×6                 | 62                          | 160                    | 5                                     | 25                           | 60                     | JLLC3002   | 195                  | 75             | TSA-300      |
| JLLC3006   | 433.5                                      | 6502.5                          | 305                     | 235                       | Tr235×6                 | 62                          | 160                    | 5                                     | 25                           | 60                     | JLLC3006   | 195                  | 75             | TSA-300      |
| JLLC30012  | 433.5                                      | 13005                           | 305                     | 235                       | Tr235×6                 | 62                          | 160                    | 5                                     | 25                           | 60                     | JLLC30012  | 195                  | 75             | TSA-300      |
| JLLC4002   | 551                                        | 2755                            | 355                     | 265                       | Tr265×6                 | 76                          | 160                    | 5                                     | 25                           | 70                     | JLLC4002   | 225                  | 85             | TSA-400      |
| JLLC4006   | 551                                        | 8265                            | 355                     | 265                       | Tr265×6                 | 76                          | 160                    | 5                                     | 25                           | 70                     | JLLC4006   | 225                  | 85             | TSA-400      |
| JLLC40012  | 551                                        | 16530                           | 355                     | 265                       | Tr265×6                 | 76                          | 160                    | 5                                     | 25                           | 70                     | JLLC40012  | 225                  | 85             | TSA-400      |
| JLLC5002   | 706.5                                      | 3532.5                          | 395                     | 300                       | Tr300×6                 | 81                          | 180                    | 5                                     | 25                           | 80                     | JLLC5002   | 250                  | 90             | TSA-500      |
| JLLC5006   | 706.5                                      | 10597.5                         | 395                     | 300                       | Tr300×6                 | 81                          | 180                    | 5                                     | 25                           | 80                     | JLLC5006   | 250                  | 90             | TSA-500      |
| JLLC50012  | 706.5                                      | 21195                           | 395                     | 300                       | Tr300×6                 | 81                          | 180                    | 5                                     | 25                           | 80                     | JLLC50012  | 250                  | 90             | TSA-500      |
| JLLC6002   | 854.9                                      | 4274                            | 425                     | 330                       | Tr330×6                 | 89                          | 195                    | 5                                     | 25                           | 85                     | JLLC6002   | 275                  | 95             | TSA-600      |
| JLLC6006   | 854.9                                      | 12823                           | 425                     | 330                       | Tr330×6                 | 89                          | 195                    | 5                                     | 25                           | 85                     | JLLC6006   | 275                  | 95             | TSA-600      |
| JLLC60012  | 854.9                                      | 25646                           | 425                     | 330                       | Tr330×6                 | 89                          | 195                    | 5                                     | 25                           | 85                     | JLLC60012  | 275                  | 95             | TSA-600      |
| JLLC8002   | 1194                                       | 5970                            | 505                     | 390                       | Tr390×6                 | 105                         | 225                    | 5                                     | 25                           | 100                    | JLLC8002   | 320                  | 120            | TSA-800      |
| JLLC8006   | 1194                                       | 17910                           | 505                     | 390                       | Tr390×6                 | 105                         | 225                    | 5                                     | 25                           | 100                    | JLLC8006   | 320                  | 120            | TSA-800      |
| JLLC80012  | 1194                                       | 35820                           | 505                     | 390                       | Tr390×6                 | 105                         | 225                    | 5                                     | 25                           | 100                    | JLLC80012  | 320                  | 120            | TSA-800      |
| JLLC10002  | 1451.5                                     | 7257                            | 555                     | 430                       | Tr430×6                 | 108                         | 250                    | 5                                     | 25                           | 110                    | JLLC10002  | 360                  | 135            | TSA-1000     |
| JLLC10006  | 1451.5                                     | 21772                           | 555                     | 430                       | Tr430×6                 | 108                         | 250                    | 5                                     | 25                           | 110                    | JLLC10006  | 360                  | 135            | TSA-1000     |
| JLLC100012 | 1451.5                                     | 43544                           | 555                     | 430                       | Tr430×6                 | 108                         | 250                    | 5                                     | 25                           | 110                    | JLLC100012 | 360                  | 135            | TSA-1000     |



# LOCK NUT CYLINDERS

**POWERRAM**  
HYDRAULIC TOOLS

## MODEL: JLPC-SERIES

Capacity: 60 - 250 Tons

Stroke: 45 & 50 mm

Max. working pressure: 700 bar / 10,000 psi

Load Return



### FEATURES

- Extremely low height for use in confined areas.
- Single-acting, load return.
- Lock nut for positive and safe load holding over a long period of time.
- Chrome plated for preventing corrosion and lower friction for smoother operation.
- Withstands sideload forces up to 3% of rated cylinder capacity without scoring.
- Overflow port functions as a stroke limiter.
- High flow coupler and dust cap included on all models.

### Hand / Foot Pumps

Page 19-30

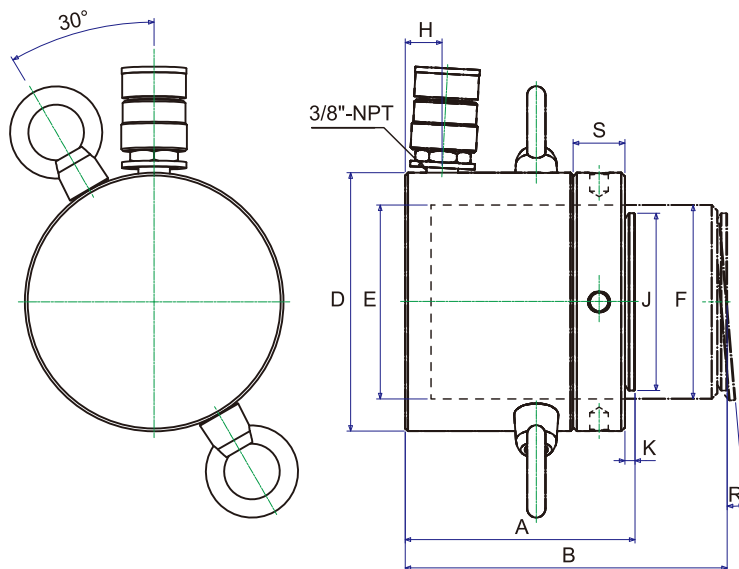


### Power Pumps

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## MODEL: JLPC60 - 250



### SPECIFICATIONS

| Model No. | Cylinder Capacity (Tons) | Stroke (mm) | Cylinder Effective Area (cm <sup>2</sup> ) | Oil Capacity (cm <sup>3</sup> ) | Collapsed Height A (mm) | Extended Height B (mm) | Outside Diameter D (mm) | Cylinder Bore Diam E (mm) | Plunger Diameter F (mm) | Base to Advance Port H (mm) | Saddle Diameter J (mm) | Saddle Protrusion form Plunger K (mm) | Saddle Max. Tilt Angle R | Lock Nut Height S (mm) |
|-----------|--------------------------|-------------|--------------------------------------------|---------------------------------|-------------------------|------------------------|-------------------------|---------------------------|-------------------------|-----------------------------|------------------------|---------------------------------------|--------------------------|------------------------|
| JLPC602   | 60                       | 50          | 86.6                                       | 433                             | 124                     | 174                    | 140                     | 105                       | Tr105x6                 | 20                          | 96                     | 5                                     | 5°                       | 28                     |
| JLPC1002  | 100                      |             | 143                                        | 715                             | 137                     | 187                    | 175                     | 135                       | Tr135x6                 | 21                          | 126                    | 8                                     | 5°                       | 31                     |
| JLPC1502  | 150                      |             | 214                                        | 963                             | 148                     | 193                    | 220                     | 165                       | Tr165x6                 | 27                          | 150                    | 9                                     | 5°                       | 40                     |
| JLPC2002  | 200                      | 45          | 283                                        | 1273.5                          | 155                     | 200                    | 245                     | 190                       | Tr190x6                 | 30                          | 180                    | 10                                    | 5°                       | 43                     |
| JLPC2502  | 250                      |             | 363                                        | 1633                            | 159                     | 204                    | 275                     | 215                       | Tr215x6                 | 32                          | 200                    | 11                                    | 5°                       | 44                     |



# DOUBLE-ACTING CYLINDERS

**POWERRAM**  
HYDRAULIC TOOLS



## MODEL:NDAC-SERIES

Capacity: 10 - 100 Tons

Stroke: 150 - 470 mm

Max. working pressure: 700 bar / 10,000 psi

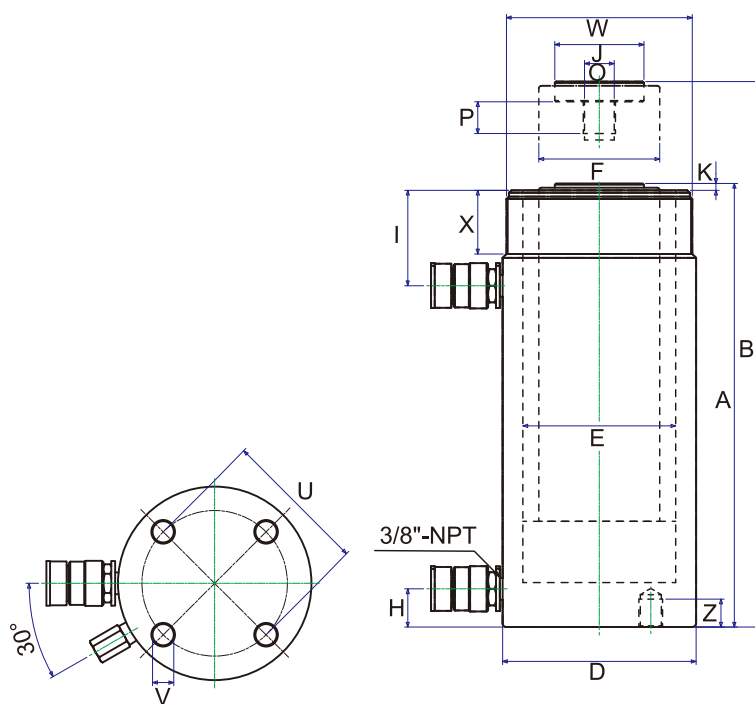
Double-Acting

## FEATURES

- Perfect for construction, shipyard, utility, mining and equipment maintenance shops.
- Piston hard chromed.
- Cylinders inside roll-polished.
- Cylinders outside blasted with black nitriding finish.

## SPECIFICATIONS

| Model No. | Capacity (Ton) |      | Stroke (mm) | Cylinder Effective Area(cm <sup>2</sup> ) |      | Oil Cap. (cm <sup>3</sup> ) |      |
|-----------|----------------|------|-------------|-------------------------------------------|------|-----------------------------|------|
|           | Push           | Pull |             | Push                                      | Pull | Push                        | Pull |
| NDAC1010  | 10             | 4    | 251         | 15.9                                      | 5.7  | 399                         | 144  |
| NDAC1012  |                |      | 301         |                                           |      | 478                         | 172  |
| NDAC308   | 30             | 14   | 209         | 44.2                                      | 20.5 | 923                         | 426  |
| NDAC3014  |                |      | 368         |                                           |      | 1625                        | 751  |
| NDAC506   |                |      | 150         |                                           |      | 1062                        | 309  |
| NDAC5013  | 50             | 14   | 330         | 70.8                                      | 20.6 | 2338                        | 680  |
| NDAC5018  |                |      | 470         |                                           |      | 3330                        | 968  |
| NDAC756   | 75             | 29.5 | 155         | 113                                       | 42.2 | 1752                        | 654  |
| NDAC7513  |                |      | 333         |                                           |      | 3764                        | 1405 |
| NDAC1006  | 100            | 50.6 | 160         | 143.1                                     | 72.3 | 2289                        | 1155 |
| NDAC10013 |                |      | 330         |                                           |      | 4721                        | 2383 |



| Model No. | A          |            | D   | E   | F  | H    | I  | J  | K  | O        | P    | U     | V      | Z  | W        | X  | Weight (Kgs) |
|-----------|------------|------------|-----|-----|----|------|----|----|----|----------|------|-------|--------|----|----------|----|--------------|
|           | Height(mm) | Height(mm) |     |     |    |      |    |    |    |          |      |       |        |    |          |    |              |
| NDAC1010  | 408        | 659        | 78  | 45  | 36 | 36.5 | 55 | 40 | 8  | 1-8      | 25.4 | --    | --     | -- | 2 1/4-14 | 27 | 13           |
| NDAC1012  | 458        | 759        |     |     |    |      |    |    |    |          |      |       |        |    |          |    | 15           |
| NDAC308   | 387        | 596        | 103 | 75  | 55 | 25   | 75 | 50 | 12 | 1 1/2-16 | 25.4 | --    | --     | -- | 4-12     | 50 | 20           |
| NDAC3014  | 547        | 915        |     |     |    |      |    |    |    |          |      |       |        |    |          |    | 29           |
| NDAC506   | 331        | 481        |     |     |    | 30   |    |    |    |          |      |       |        |    |          |    | 29           |
| NDAC5013  | 511        | 841        | 127 | 95  | 80 |      | 70 | 70 | 5  | 1-12     | 25.4 | --    | --     | -- | 5-12     | 50 | 43           |
| NDAC5018  | 675        | 1145       |     |     |    | 52   |    |    |    |          |      | 88.9  | 5/8-11 | 22 |          |    | 59           |
| NDAC756   | 348        | 503        | 152 | 120 | 95 | 30   | 75 | 70 | 5  | 1-12     | 38   | 114.3 | 3/4-10 | 22 | 5 3/4-12 | 45 | 40           |
| NDAC7513  | 526        | 859        |     |     |    |      |    |    |    |          |      |       |        |    |          |    | 58           |
| NDAC1006  | 358        | 518        | 177 | 135 | 95 | 38   | 71 | 80 | 5  | 1 3/4-12 | 35   | 139.7 | 3/4-10 | 25 | 6 7/8-12 | 50 | 59           |
| NDAC10013 | 528        | 858        |     |     |    |      |    |    |    |          |      |       |        |    |          |    | 83           |

# DOUBLE-ACTING CYLINDERS

**POWERRAM**  
HYDRAULIC TOOLS



## MODEL:NDAH-SERIES

Capacity: 30 - 100 Tons

Stroke: 76 - 257 mm

Max. working pressure: 700 bar / 10,000 psi

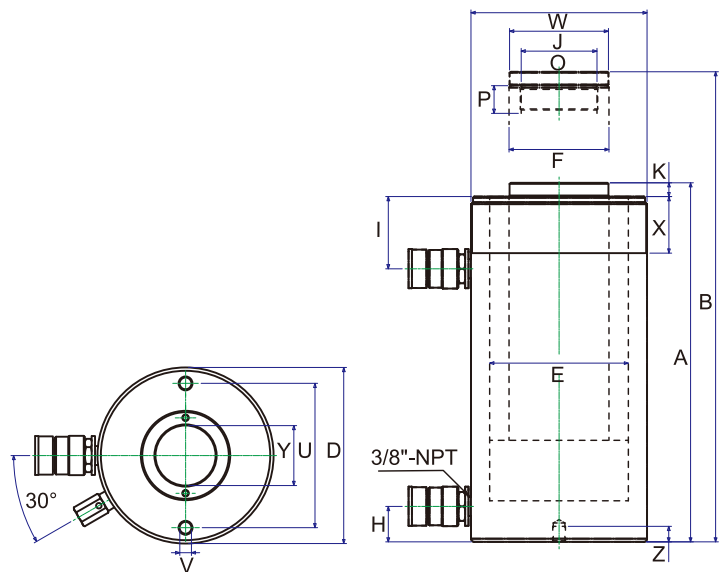
Double-Acting, Hollow Plunger

## FEATURES

- Perfect for construction, shipyard, utility, mining and equipment maintenance shops.
- Piston hard chromed.
- Cylinders inside roll-polished.
- Cylinders outside blasted with black nitriding finish.

## SPECIFICATIONS

| Model No. | Capacity (Ton) |      | Stroke (mm) | Cylinder Effective Area(cm <sup>2</sup> ) |      | Oil Cap. (cm <sup>3</sup> ) |      |
|-----------|----------------|------|-------------|-------------------------------------------|------|-----------------------------|------|
|           | Push           | Pull |             | Push                                      | Pull | Push                        | Pull |
| NDAH307   | 30             | 21   | 178         | 47.7                                      | 30.4 | 849                         | 541  |
| NDAH3010  |                |      | 257         |                                           |      | 1226                        | 782  |
| NDAH603   |                |      | 89          |                                           |      | 797                         | 526  |
| NDAH606   | 60             | 41   | 165         | 89.5                                      | 59.1 | 1477                        | 975  |
| NDAH6010  |                |      | 257         |                                           |      | 2300                        | 1518 |
| NDAH1003  |                |      | 76          |                                           |      | 1086                        | 692  |
| NDAH1006  | 100            | 64   | 152         | 142.9                                     | 91.1 | 2172                        | 1384 |
| NDAH10010 |                |      | 256         |                                           |      | 3656                        | 2331 |



| Model No. | A Height(mm) |          | D Ømm | E Ømm | F Ømm | H mm | I mm | J Ømm | K mm      | O ØUN   | P mm | U Ø mm | V Ø UNC | Z mm | W ØUN   | X mm | Y Center Hole (Ø mm) | Weight (Kgs) |
|-----------|--------------|----------|-------|-------|-------|------|------|-------|-----------|---------|------|--------|---------|------|---------|------|----------------------|--------------|
|           | Retracted    | Extended |       |       |       |      |      |       |           |         |      |        |         |      |         |      |                      |              |
| NDAH307   | 330          | 508      | 117   | 90    | 65    | 21.5 | 60.5 | 60    | 0.5<br>10 | 17/8-16 | 25   | 92     | 3/8-16  | 14   | 41/2-12 | 42   | 34                   | 22           |
| NDAH3010  | 431          | 688      |       |       |       |      |      |       |           |         |      |        |         |      |         |      |                      | 27           |
| NDAH603   | 247.5        | 336.5    |       |       |       |      |      |       |           |         |      |        |         |      |         |      |                      | 28           |
| NDAH606   | 323.5        | 488.5    | 158.6 | 125   | 90    | 32   | 65   | 89    | 12.5      | 23/4-16 | 25   | 130    | 1/2-13  | 14   | 61/4-12 | 50   | 54                   | 35           |
| NDAH6010  | 437.5        | 694.5    |       |       |       |      |      |       |           |         |      |        |         |      |         |      |                      | 45           |
| NDAH1003  | 254          | 330      |       |       |       |      |      |       |           |         |      |        |         |      |         |      |                      | 52           |
| NDAH1006  | 325          | 477      | 213   | 165   | 125   | 38   | 82   | 125   | 12        | 4-16    | 30   | 178    | 5/8-11  | 19   | 83/8-12 | 60   | 79                   | 65           |
| NDAH10010 | 462          | 718      |       |       |       |      |      |       |           |         |      |        |         |      |         |      |                      | 88           |

# INTRODUCTION - PUMPS



P902



HB350



HP80D



AHP703D



P350A



FHB600



AP13



AP3000S



AP921



EP420DS

## Summary of Pumps

| Series        | Description                           | Type            | Pressure Rating (Bar) | Oil Cap. (cm <sup>3</sup> ) | Page    |
|---------------|---------------------------------------|-----------------|-----------------------|-----------------------------|---------|
| P90X          | Heavy Duty Hand Pumps                 | 2 stages        | 700 - 1000            | 450 - 2500                  | 19      |
| AHP / UHP     | Aluminum Hand Pumps                   | 2 stages        | 700 - 2800            | 500 - 2000                  | 20      |
| HA - HF       | Steel Hand Pumps                      | 1 or 2 stages   | 200 - 700             | 350 - 2500                  | 21      |
| PA / PB       | Heavy Duty Hand Pumps                 | 1 or 2 stages   | 200 - 700             | 350 - 700                   | 22      |
| Pump BG       | Hand Pump Packages                    | 2 stages        | 200 - 2800            | 350 - 2500                  | 23      |
| HP            | Big Reservoir & Heavy Duty Hand Pumps | 2 stages        | 700                   | 3500 - 8000                 | 24 - 25 |
| P350/550/1000 | Special Hand Pumps                    | 2 stages        | 700                   | 350 - 1000                  | 26 - 28 |
| PH            | Special Pump Heads                    | 1 stage         | 52 - 827              | -                           | 29      |
| FHA / FHB     | Foot Pumps                            | 1 or 2 stages   | 700                   | 350 - 700                   | 30      |
| AP            | Air Pumps                             | Air / Hydraulic | 700                   | 750 - 8000                  | 31 - 36 |
| EP            | Electric Pumps                        | Brushless       | 700                   | 3000 - 100L                 | 37 - 42 |

# HEAVY-DUTY HAND PUMPS

**POWERRAM**  
HYDRAULIC TOOLS

## MODEL: P90 SERIES

Dual speed models

The unloading valve design at 1st stage

Max. working pressure:

700 - 1000 bar



P901

P902



P903



P904



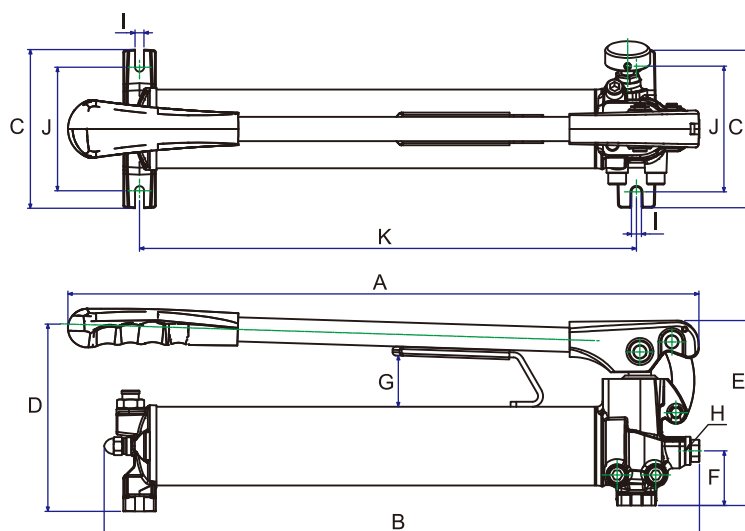
P904D



P905

## FEATURES

- High pressure hydraulic hand pumps are the solution for tough jobs.
- Reduced handle effort and ergonomic grip for less operator fatigue.
- Dual-speed operation for fast and easy operation.
- Vent free reservoir eliminates spills.
- Quick grip handle allows for easy transport.
- Integral reservoir with over-pressurization protection.
- Chrome plated plunger and wiper system for durable, long lasting performance.
- **P904D** equipped with Control valve for applying with double action cylinders.



## SPECIFICATIONS

| Model No.    | Pressure Rating (bar) |           | Oil Capacity (cm <sup>3</sup> ) | Usable Oil Capacity (cm <sup>3</sup> ) | Oil Volume per stroke (cm <sup>3</sup> ) |           | A (mm) | B (mm) | C (mm) | D (mm) | E (mm) | F (mm) | G (mm) | H (mm)  | I (mm) | J (mm) | K (mm) | Weight (Kgs) |
|--------------|-----------------------|-----------|---------------------------------|----------------------------------------|------------------------------------------|-----------|--------|--------|--------|--------|--------|--------|--------|---------|--------|--------|--------|--------------|
|              | 1st stage             | 2nd stage |                                 |                                        | 1st stage                                | 2nd stage |        |        |        |        |        |        |        |         |        |        |        |              |
| P901         | 20                    | 700       | 450                             | 300                                    | 19.4                                     | 1.2       | 447    | 369.5  | 140    | 163    | 164    | 48.5   | 45     | 3/8"NPT | 8      | 112    | 282    | 6.5          |
| P902         | 20                    | 700       | 850                             | 750                                    | 19.4                                     | 2.8       | 560    | 530    | 140    | 167    | 164    | 48.5   | 45     |         | 8      | 112    | 442    | 7.8          |
| P903         | 20                    | 700       | 1600                            | 1400                                   | 19.4                                     | 2.8       | 633    | 597.5  | 140    | 170    | 164    | 48.5   | 36.5   |         | 8      | 112    | 510    | 10           |
| P904         | 27.5                  | 700       | 2500                            | 2200                                   | 39.5                                     | 2.8       | 633    | 578    | 150    | 208    | 195    | 55     | 46     |         | 8      | 121    | 502    | 13.5         |
| <b>P904D</b> | 27.5                  | 700       | 2500                            | 2200                                   | 35.6                                     | 2.8       | 633    | 609    | 150    | 208    | 195    | 38     | 47     |         | 8      | 121    | 502    | 15           |
| P905         | 20                    | 1000      | 850                             | 750                                    | 19.4                                     | 1.2       | 560    | 530    | 140    | 167    | 164    | 48.5   | 45     |         | 8      | 112    | 442    | 7.8          |



# ALUMINUM HAND PUMPS

**POWERRAM**  
HYDRAULIC TOOLS



AHP703D



UHP2800

## MODEL: AHP & UHP SERIES

Dual-speed models

Large 3/8" NPT pressure port for maximum flow

Max. working pressure: 700 - 2800 bar

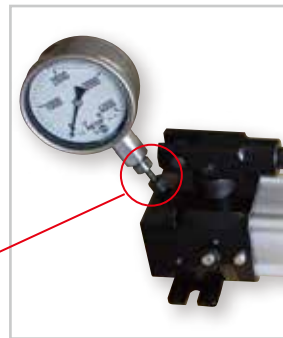
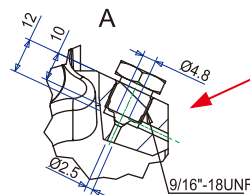


AHP705



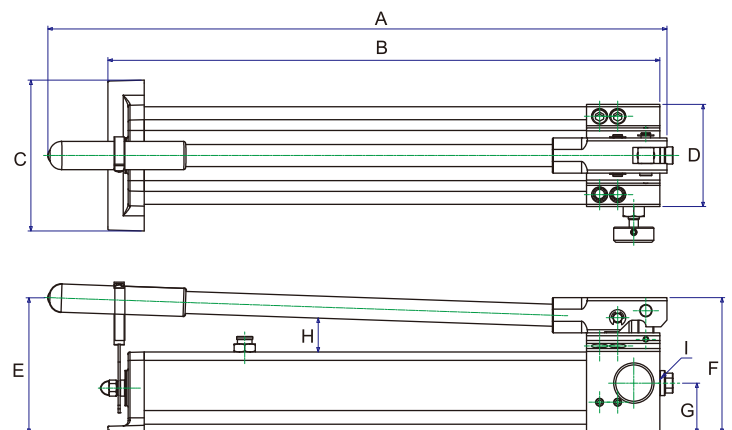
AHP701

The gauge can be mounted directly on **UHP2800JQ**, the cone thread for gauge port is 9/16"-18UNF



## FEATURES

- Rugged construction and light handle efforts.
- Aluminum Alloy construction and handy release knob with anti-losing mechanism are truly suitable to industrial requirements and your daily works.
- The light weight design is ideally for easy operation and portability.
- Double action design on **AHP703D** is ideal for double acting cylinders, no extra control valve and adapters are requested.
- **UHP2800** brings you special ultra high pressure application but with light weight.
- **UHP2800JQ** directly mounted with Pressure gauge and no extra adaptors needed. More efficient and convenient.



## SPECIFICATIONS

| Model No.        | Pressure Rating (bar) |           | Oil Capacity (cm <sup>3</sup> ) | Usable Oil Capacity (cm <sup>3</sup> ) | Oil Volume Per Stroke (cm <sup>3</sup> ) |           | A (mm) | B (mm) | C (mm) | D (mm) | E (mm) | F (mm) | G (mm) | H (mm) | I          | Weight (Kgs) |
|------------------|-----------------------|-----------|---------------------------------|----------------------------------------|------------------------------------------|-----------|--------|--------|--------|--------|--------|--------|--------|--------|------------|--------------|
|                  | 1st stage             | 2nd stage |                                 |                                        | 1st stage                                | 2nd stage |        |        |        |        |        |        |        |        |            |              |
| AHP701           | 20                    | 700       | 500                             | 350                                    | 12.9                                     | 1.65      | 391    | 361    | 110    | 77     | 140    | 127    | 42.5   | 37     | 3/8"-NPT   | 2.3          |
| AHP702           | 20                    | 700       | 1000                            | 750                                    | 12.9                                     | 1.65      | 542    | 513    | 110    | 77     | 130    | 127    | 42.5   |        |            | 3.5          |
| AHP703           | 20                    | 700       | 2000                            | 1620                                   | 12.9                                     | 2.30      | 623    | 556    | 150    | 102    | 135    | 135    | 50     |        |            | 6            |
| <b>AHP703D</b>   | 20                    | 700       | 2000                            | 1620                                   | 12.9                                     | 2.30      | 623    | 556    | 150    | 102    | 135    | 135    | 24/37  |        |            | 7.0          |
| AHP704           | 20                    | 1000      | 1000                            | 750                                    | 12.9                                     | 1.65      | 539    | 501    | 110    | 77     | 145    | 127    | 42.5   |        |            | 3.5          |
| AHP705           | 20                    | 1500      | 2000                            | 1620                                   | 12.9                                     | 1.00      | 699    | 629    | 150    | 102    | 152    | 157    | 50     | 37     | 3/4"-16UNF | 6.7          |
| <b>UHP2800</b>   | 20                    | 2800      | 1000                            | 700                                    | 12.9                                     | 0.65      | 620    | 488    | 79.5   | 140    | 157    | 156.5  | 26     |        | 3/4"-16UNF | 6.7          |
| <b>UHP2800JQ</b> | 20                    | 2800      | 1000                            | 700                                    | 12.9                                     | 0.65      | 617    | 568    | 79.5   | 140    | 157    | 156.5  | 93     |        | G 1/4"     | 6.7          |



# STEEL HAND PUMPS

**POWERRAM**  
HYDRAULIC TOOLS



HA600

## MODEL: HA-HF SERIES

Single & Dual-speed models

Large 3/8" NPT pressure port for maximum flow.

Max. working pressure: 200 & 700 bar



HC1500



HE2000

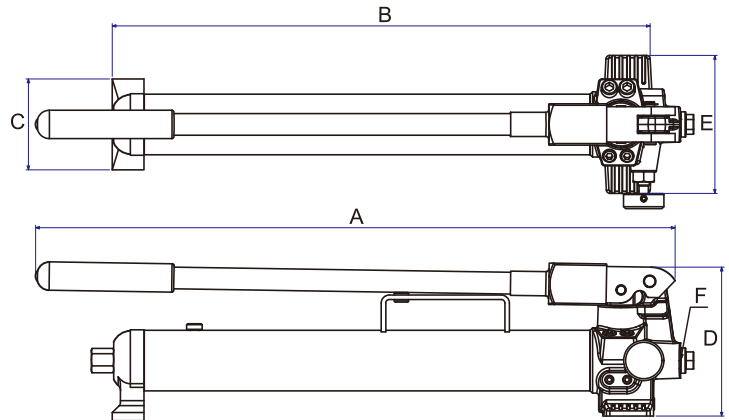
HE2421



HA350

## FEATURES

- Rugged construction and light handle efforts.
- Handy release knobs with anti-leaking mechanism are truly suitable to industrial requirement and your daily works.
- Both single and Dual-speed models are available.
- Internal overload relief valve prevents pump from being used beyond its rated capacity.
- External adjustable relief valve with anti-losing mechanism design.
- Carrying handle for easy portability.
- The **HE2421** is equipped with a control valve for use with a double-acting cylinder.



## SPECIFICATIONS

| Model No.     | Pressure Rating (bar) |           | Oil Capacity (cm <sup>3</sup> ) | Usable Oil Capacity (cm <sup>3</sup> ) | Oil Volume Per Stroke (cm <sup>3</sup> ) |           | A (mm) | B (mm) | C (mm) | D (mm) | E (mm) | Oil Port Thread F | Weight (Kg) |
|---------------|-----------------------|-----------|---------------------------------|----------------------------------------|------------------------------------------|-----------|--------|--------|--------|--------|--------|-------------------|-------------|
|               | 1st Stage             | 2nd Stage |                                 |                                        | 1st Stage                                | 2nd Stage |        |        |        |        |        |                   |             |
| HB350         | 20                    | 200       | 350                             | 250                                    | 13.0                                     | 2.8       | 342    | 310    | 66     | 148    | 137    | 3/8 NPT           | 5.9         |
| HB600         | 20                    | 700       | 750                             | 550                                    | 13.0                                     | 2.8       | 542    | 480    | 90     | 148    | 137    | 3/8 NPT           | 7.6         |
| HB700         | 20                    | 700       | 850                             | 640                                    | 13.0                                     | 2.8       | 633    | 528    | 90     | 148    | 137    | 3/8 NPT           | 8           |
| HC1500        | 20                    | 700       | 1500                            | 1200                                   | 13.0                                     | 2.8       | 633    | 551    | 106    | 200    | 142    | 3/8 NPT           | 11.2        |
| HC2500        | 20                    | 700       | 2500                            | 2200                                   | 13.0                                     | 2.8       | 713    | 632    | 106    | 200    | 142    | 3/8 NPT           | 12          |
| HE2000        | 20                    | 700       | 2100                            | 1800                                   | 13.0                                     | 2.8       | 583    | 500    | 140    | 169    | 149    | 3/8 NPT           | 11.3        |
| <b>HE2421</b> | 20                    | 700       | 2100                            | 1800                                   | 13.0                                     | 2.8       | 583    | 500    | 140    | 169    | 149    | -                 | 16.4        |
| HF350         | 20                    | 700       | 350                             | 280                                    | 7.0                                      | 1.0       | 343    | 310    | 66     | 127    | 142    | 3/8 NPT           | 5.5         |
| HA350         | 200                   |           | 350                             | 280                                    | 3.2                                      |           | 332    | 292    | 90     | 148    | 137    | 3/8 NPT           | 5.7         |
| HA600         | 700                   |           | 750                             | 550                                    | 3.2                                      |           | 542    | 478    | 90     | 148    | 137    | 3/8 NPT           | 7.1         |
| HA700         | 700                   |           | 850                             | 640                                    | 3.2                                      |           | 632    | 526    | 90     | 148    | 137    | 3/8 NPT           | 7.6         |
| HD300         | 700                   |           | 300                             | 200                                    | 2.8                                      |           | 330    | 283    | 90     | 127    | 130    | 1/4 NPT           | 4.4         |
| HD500         | 700                   |           | 500                             | 400                                    | 2.8                                      |           | 530    | 469    | 90     | 127    | 130    | 1/4 NPT           | 5.4         |

# HEAVY-DUTY HAND PUMPS

**POWERRAM**  
HYDRAULIC TOOLS

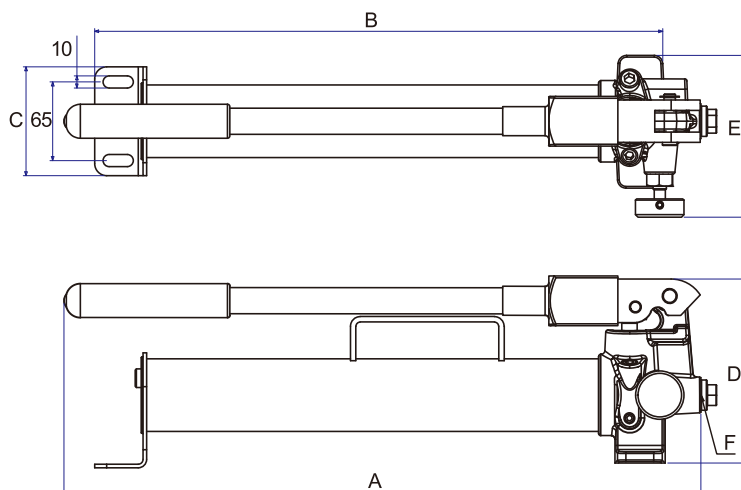
## MODEL: PA & PB SERIES

Single & Dual-speed models  
Large 3/8" NPT pressure port for max. flow  
Low handle force for easy operation  
Max. working pressure: 200 & 700 bar



## FEATURES

- POWERRAM heavy duty hand pumps are feature with forged and welded construction to prevent collision and deformation.
- Professional choice for a wide range of industrial applications.
- Both single and Dual-speed models are available.
- Internal overload valve relief prevents pump from being used beyond its rated capacity.
- External adjustable relief valve with anti-losing mechanism design.
- Carrying handle for easy portability.



## SINGLE-SPEED HEAVY-DUTY HAND PUMPS

| Model No. | Pressure Rating (bar) | Usable Oil Capacity (cm <sup>3</sup> ) | Oil Volume Per Stroke (cm <sup>3</sup> ) | A (mm) | B (mm) | C (mm) | D (mm) | E (mm) | Oil Port Thread F | Weight (Kgs) |
|-----------|-----------------------|----------------------------------------|------------------------------------------|--------|--------|--------|--------|--------|-------------------|--------------|
| PA350     | 200                   | 250                                    | 3.1                                      | 335    | 295    | 90     | 146    | 128    | 3/8 NPT           | 5            |
| PA600     | 700                   | 550                                    | 3.1                                      | 545    | 485    | 90     | 146    | 128    | 3/8 NPT           | 6.1          |
| PA700     | 700                   | 640                                    | 3.1                                      | 632    | 533    | 90     | 146    | 128    | 3/8 NPT           | 6.5          |

## TWO-SPEED HEAVY-DUTY HAND PUMPS

| Model No. | Pressure Rating (bar) |           | Usable Oil Capacity (cm <sup>3</sup> ) | Oil Volume Per Stroke (cm <sup>3</sup> ) |           | A (mm) | B (mm) | C (mm) | D (mm) | E (mm) | Oil Port Thread F | Weight (Kgs) |
|-----------|-----------------------|-----------|----------------------------------------|------------------------------------------|-----------|--------|--------|--------|--------|--------|-------------------|--------------|
|           | 1st Stage             | 2nd Stage |                                        | 1st Stage                                | 2nd Stage |        |        |        |        |        |                   |              |
| PB350     | 20                    | 200       | 250                                    | 13.0                                     | 2.8       | 335    | 303    | 90     | 146    | 128    | 3/8 NPT           | 5.5          |
| PB600     | 20                    | 700       | 550                                    | 13.0                                     | 2.8       | 545    | 493    | 90     | 146    | 128    | 3/8 NPT           | 7            |
| PB700     | 20                    | 700       | 640                                    | 13.0                                     | 2.8       | 590    | 541    | 90     | 146    | 128    | 3/8 NPT           | 7.3          |

# HAND PUMP PACKAGES

**POWERRAM**  
HYDRAULIC TOOLS



## MODEL: PUMP BG SERIES

Dual-speed models

Low handle effort for easy operation

Max. working pressure: 200 - 2,800 bar

## FEATURES

- Packed with steel case for easy storage and portable works.
- 700 bar pump sets are including gauge adaptor, pressure gauge and 1.5mtrs hose.
- 1000 - 2800 bar pump sets are including ultra high pressure gauge and hose for special applications.

## SPECIFICATIONS

| Model No. | Pressure Rating (bar) |           | Oil Capacity (cm <sup>3</sup> ) | Oil Volume Per Stroke (cm <sup>3</sup> ) |           | Pressure Gauge         | Hydraulic Hose       | Weight (Kgs) |
|-----------|-----------------------|-----------|---------------------------------|------------------------------------------|-----------|------------------------|----------------------|--------------|
|           | 1st Stage             | 2nd Stage |                                 | 1st Stage                                | 2nd Stage |                        |                      |              |
| PB350BG   | 13.8                  | 200       | 350                             | 13.0                                     | 2.8       | 1000 bar / 2-1/2" Dial | 3/8NPT / 5 feet long | 12.4         |
| PB600BG   | 13.8                  | 700       | 600                             | 13.0                                     | 2.8       |                        |                      | 13.8         |
| PB700BG   | 13.8                  | 700       | 700                             | 13.0                                     | 2.8       |                        |                      | 14.0         |
| HC1500BG  | 13.8                  | 700       | 1500                            | 13.0                                     | 2.8       |                        |                      | 22.6         |
| HC2000BG  | 13.8                  | 700       | 2000                            | 13.0                                     | 2.8       |                        |                      | 24.8         |
| AHP701BG  | 20                    | 700       | 500                             | 12.9                                     | 1.65      |                        |                      | 10.4         |
| AHP702BG  | 20                    | 700       | 1000                            | 12.9                                     | 1.65      |                        |                      | 11.1         |
| AHP703BG  | 20                    | 700       | 2000                            | 12.9                                     | 2.30      |                        |                      | 18.1         |
| AHP703DBG | 20                    | 700       | 2000                            | 12.9                                     | 2.30      |                        |                      | 21.0         |
| P901BG    | 20                    | 700       | 450                             | 19.4                                     | 1.2       |                        |                      | 14.6         |
| P902BG    | 20                    | 700       | 850                             | 19.4                                     | 2.8       | 1600 bar / 4" Dial     | G1/4 / 6 feet long   | 15.4         |
| P903BG    | 20                    | 700       | 1600                            | 19.4                                     | 2.8       |                        |                      | 22.1         |
| P904BG    | 27.5                  | 700       | 2500                            | 39.5                                     | 2.8       |                        |                      | 34.5         |
| P904DBG   | 27.5                  | 700       | 2500                            | 35.6                                     | 2.8       |                        |                      | 37.0         |
| P905BG    | 20                    | 1000      | 850                             | 19.4                                     | 1.2       |                        |                      | 30.5         |
| AHP704BG  | 20                    | 1000      | 1000                            | 12.9                                     | 1.65      |                        |                      | 24.5         |
| AHP705BG  | 20                    | 1500      | 2000                            | 12.9                                     | 1.00      |                        |                      | 27.0         |
| UHP2800BG | 20                    | 2800      | 1000                            | 12.9                                     | 0.65      |                        |                      | 28.0         |

# HEAVY DUTY HAND PUMPS

**POWERRAM**  
HYDRAULIC TOOLS

## MODEL: HP35 & HP50 Series

Dual-speed model

The unloading valve design at 1st stage

Max. working pressure: 700 bar



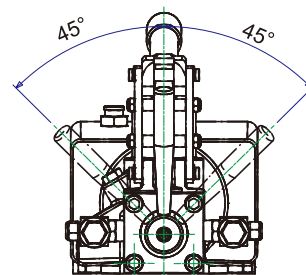
HP35



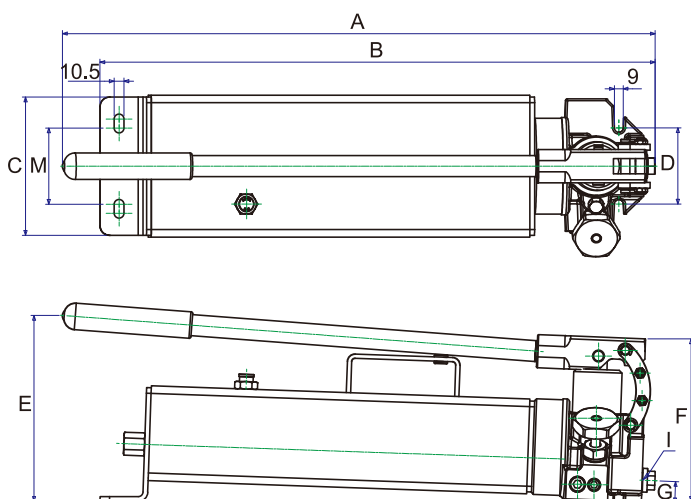
HP35D

### FEATURES

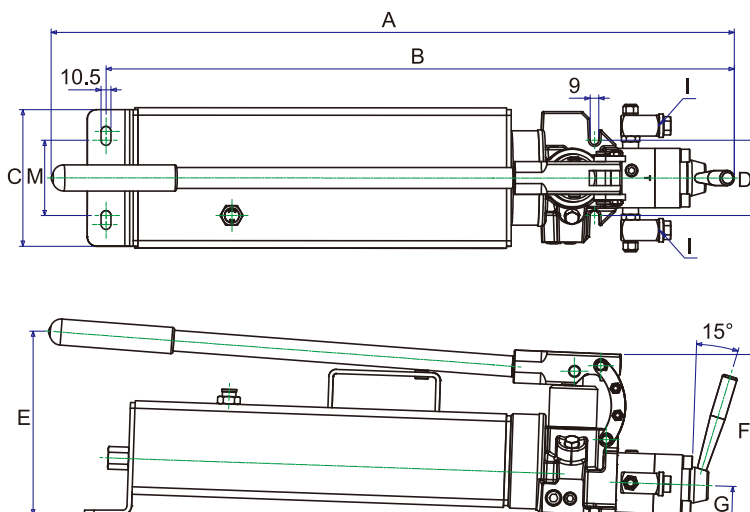
- Steel casting tank.
- Internal overload relief valve prevents pump from being used beyond its rated capacity.
- HP35D & HP50D are ideal for double-acting cylinder without the need for additional control valve.
- Large 3/8" NPT pressure port for maximum flow.



MODEL: HP35 / HP50



MODEL: HP35D / HP50D ( Double-Acting )



### SPECIFICATIONS

| Model No. | Pressure Rating (bar) |           | Oil Capacity (cm <sup>3</sup> ) | Usable Oil Cap. (cm <sup>3</sup> ) | Oil Volume Per Stroke (cm <sup>3</sup> ) |           | A (mm) | B (mm) | C (mm) | D (mm) | E (mm) | F (mm) | G (mm) | I (mm)  | M (mm) | Weight (Kgs) |
|-----------|-----------------------|-----------|---------------------------------|------------------------------------|------------------------------------------|-----------|--------|--------|--------|--------|--------|--------|--------|---------|--------|--------------|
|           | 1st stage             | 2nd stage |                                 |                                    | 1st stage                                | 2nd stage |        |        |        |        |        |        |        |         |        |              |
| HP35      | 28                    | 700       | 3500                            | 2950                               | 30                                       | 3         | 626    | 586    | 146    | 80.5   | 196    | 171.5  | 22.4   | 3/8"NPT | 80.5   | 16.5         |
| HP35D     | 28                    | 700       | 3500                            | 2950                               | 30                                       | 3         | 741    | 680    | 146    | 80.5   | 196    | 171.5  | 35     | 3/8"NPT | 80.5   | 19.0         |
| HP50      | 28                    | 700       | 5000                            | 4450                               | 30                                       | 3         | 626    | 586    | 146    | 80.5   | 196    | 171.5  | 22.4   | 3/8"NPT | 80.5   | 20.0         |
| HP50D     | 28                    | 700       | 5000                            | 4450                               | 30                                       | 3         | 741    | 680    | 146    | 80.5   | 196    | 171.5  | 35     | 3/8"NPT | 80.5   | 22.5         |



# 7L RESERVOIR HAND PUMPS

**POWERRAM**  
HYDRAULIC TOOLS

## MODEL: HP80 & HP80D

Dual-speed models

Large 3/8" NPT pressure port for max. flow

Heavy-Duty, Large reservoir

Max. working pressure: 700 bar



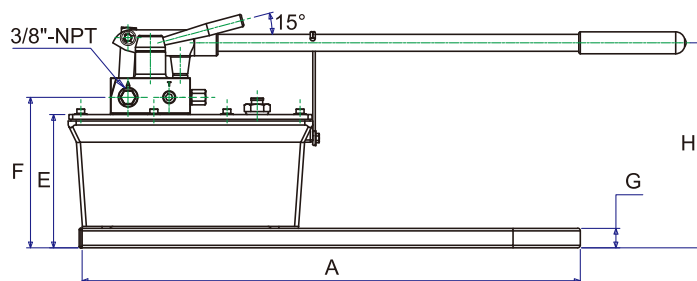
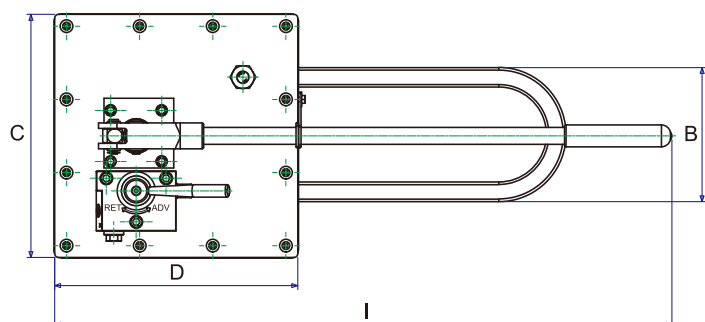
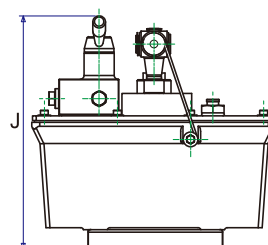
HP80



HP80D

## FEATURES

- Casting tank made of steel.
- Internal overload relief valve prevents pump from being used beyond its rated capacity.
- HP80D is ideal for double-acting cylinders without the need for additional control valve.



## SPECIFICATION

| Model No. | Pressure Rating (bar) |           | Oil Capacity (cm <sup>3</sup> ) | Oil Volume Per Stroke (cm <sup>3</sup> ) |           | A (mm) | B (mm) | C (mm) | D (mm) | E (mm) | F (mm) | G (mm) | H (mm) | I (mm) | J (mm) | Weight (Kgs) |
|-----------|-----------------------|-----------|---------------------------------|------------------------------------------|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------------|
|           | 1st stage             | 2nd stage |                                 | 1st stage                                | 2nd stage |        |        |        |        |        |        |        |        |        |        |              |
| HP80      | 27.5                  | 700       | 8000                            | 113                                      | 4         | 635    | 171    | 310    | 310    | 170    | 192    | 25     | 261    | 787    | 298    | 24.7         |
| HP80D     | 27.5                  | 700       | 8000                            | 113                                      | 4         | 635    | 171    | 310    | 310    | 170    | 196    | 25     | 261    | 787    | 298    | 27.5         |



# SPECIAL HAND PUMPS



P350A



P350B

## MODEL: P350 SERIES

Dual-speed models

Could be operated in any directions

Large 3/8" NPT pressure port for max. flow

Max. working pressure: 700 bar

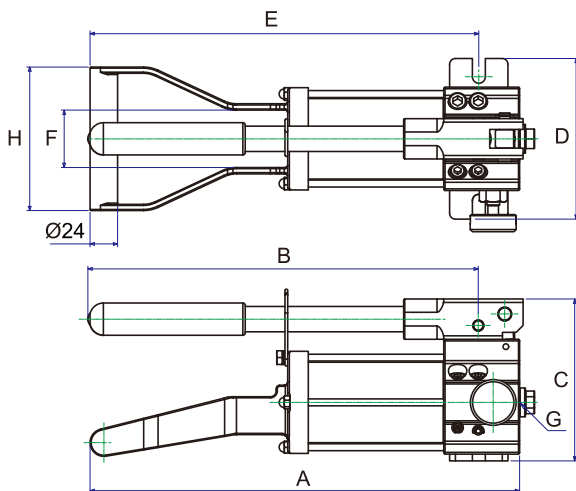


P350D

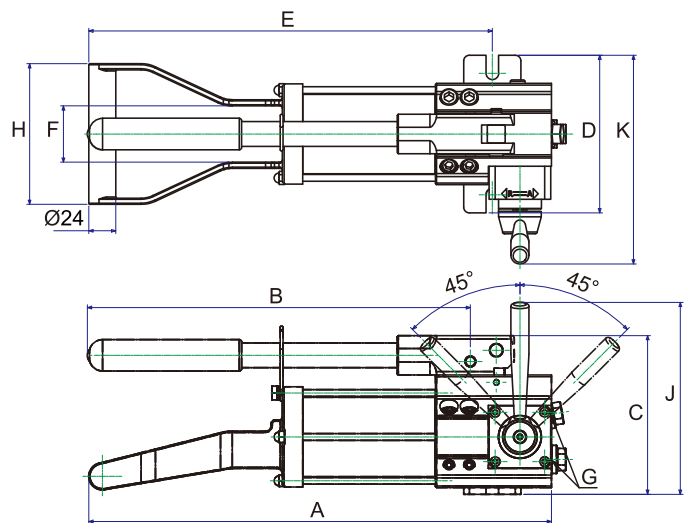
## FEATURES

- Special design with aluminum alloy construction as much light weight is ideally for easy portability and maneuvering.
- The sealed oil reservoir design allows the hand pumps to be operated at all angels without the risk of air contamination and oil spills.
- The best optional hand pumps allow for sub-sea operation.
- Unique design of triangle hand-held base is easy to carry & operate.
- A: Single-port hand pump is used for one single-acting cylinder
- B: Twin-port hand pump is used for two single-acting cylinders simultaneously
- D: Double-acting hand pump is used for one double-acting cylinder

### MODEL: P350A & P350B



### MODEL: P350D



## SPECIFICATIONS

| Model No. | Pressure Rating (bar) |           | Max Oil Volume (cm <sup>3</sup> ) | Usable Oil Capacity (cm <sup>3</sup> ) | Oil Volume Per Stroke (cm <sup>3</sup> ) |           | Max. Handle effort (Kgs) | A (mm) | B (mm) | C (mm) | D (mm) | E (mm) | F (mm) | G (mm)   | H (mm) | J (mm) | K (mm) | Weight (Kgs) |
|-----------|-----------------------|-----------|-----------------------------------|----------------------------------------|------------------------------------------|-----------|--------------------------|--------|--------|--------|--------|--------|--------|----------|--------|--------|--------|--------------|
|           | 1st stage             | 2nd stage |                                   |                                        | 1st stage                                | 2nd stage |                          |        |        |        |        |        |        |          |        |        |        |              |
| P350A     | 20                    | 700       | 380                               | 350                                    | 3.7                                      | 0.6       | 29                       | 374    | 340    | 140    | 140    | 338.5  | 50     | 3/8"-NPT | 125    | —      | —      | 3.4          |
| P350B     | 20                    | 700       | 380                               | 350                                    | 3.7                                      | 0.6       | 29                       | 421    | 340    | 140    | 140    | 363.5  | 50     | 3/8"-NPT | 125    | —      | —      | 4.3          |
| P350D     | 20                    | 700       | 380                               | 350                                    | 3.7                                      | 0.6       | 29                       | 411    | 340    | 140    | 140    | 358.5  | 50     | 3/8"-NPT | 125    | 171    | 185    | 5.5          |

# SPECIAL HAND PUMPS

**POWERRAM**  
HYDRAULIC TOOLS



P550A



P550D

## MODEL: P550 SERIES

Dual-speed models

Could be operated in any directions

Large 3/8" NPT pressure port for max. flow

Max. working pressure: 700 bar

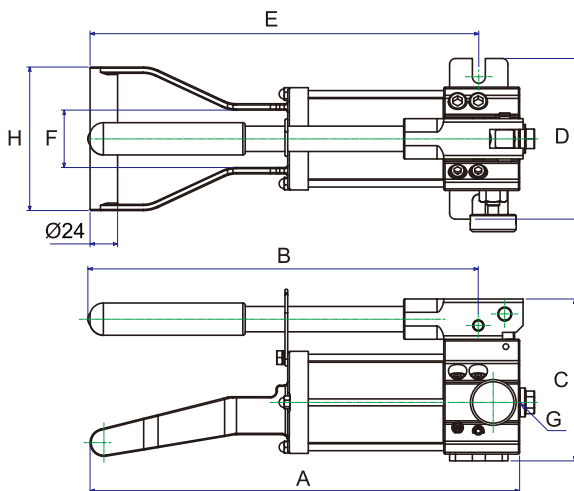


P550B

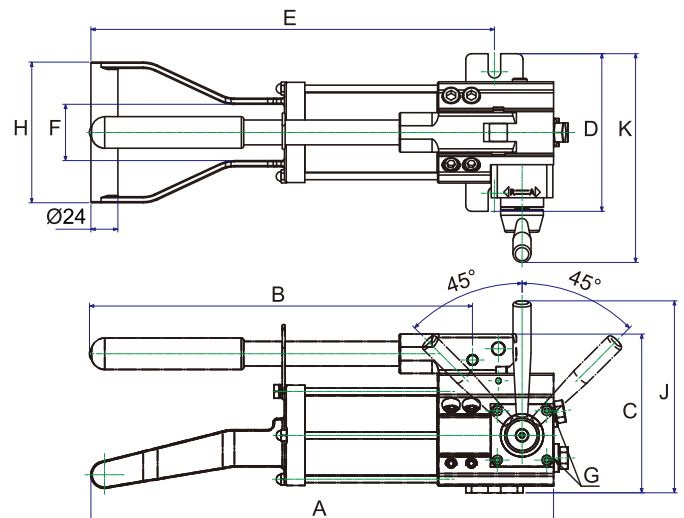
## FEATURES

- Special design with aluminum alloy construction as much light weight is ideally for easy portability and maneuvering.
- The sealed oil reservoir design allows the hand pumps to be operated at all angels without the risk of air contamination and oil spills.
- The best optional hand pumps allow for sub-sea operation.
- Unique design of triangle hand-held base is easy to carry & operate.
- A: Single-port hand pump is used for one single-acting cylinder
- B: Twin-port hand pump is used for two single-acting cylinders simultaneously
- D: Double-acting hand pump is used for one double-acting cylinder

### MODEL: P550A & P550B



### MODEL: P550D



## SPECIFICATIONS

| Model No. | Pressure Rating (bar) |           | Max Oil Volume (cm <sup>3</sup> ) | Usable Oil Capacity (cm <sup>3</sup> ) | Oil Volume Per Stroke (cm <sup>3</sup> ) |           | Max. Handle effort (Kgs) | A (mm) | B (mm) | C (mm) | D (mm) | E (mm) | F (mm) | G (mm)   | H (mm) | J (mm) | K (mm) | Weight (Kgs) |
|-----------|-----------------------|-----------|-----------------------------------|----------------------------------------|------------------------------------------|-----------|--------------------------|--------|--------|--------|--------|--------|--------|----------|--------|--------|--------|--------------|
|           | 1st stage             | 2nd stage |                                   |                                        | 1st stage                                | 2nd stage |                          |        |        |        |        |        |        |          |        |        |        |              |
| P550A     | 20                    | 700       | 580                               | 550                                    | 3.7                                      | 0.6       | 21                       | 494    | 463    | 140    | 140    | 458.5  | 50     | 3/8"-NPT | 125    | —      | —      | 4.0          |
| P550B     | 20                    | 700       | 580                               | 550                                    | 3.7                                      | 0.6       | 21                       | 541    | 463    | 140    | 140    | 483.5  | 50     | 3/8"-NPT | 125    | —      | —      | 5.3          |
| P550D     | 20                    | 700       | 580                               | 550                                    | 3.7                                      | 0.6       | 21                       | 531    | 463    | 140    | 140    | 478.5  | 50     | 3/8"-NPT | 125    | 171    | 185    | 6.5          |

# SPECIAL HAND PUMPS

**POWERRAM**  
HYDRAULIC TOOLS



P1000A



P1000D



P1000B

## MODEL: P1000 SERIES

Dual-speed models

Could be operated in any directions

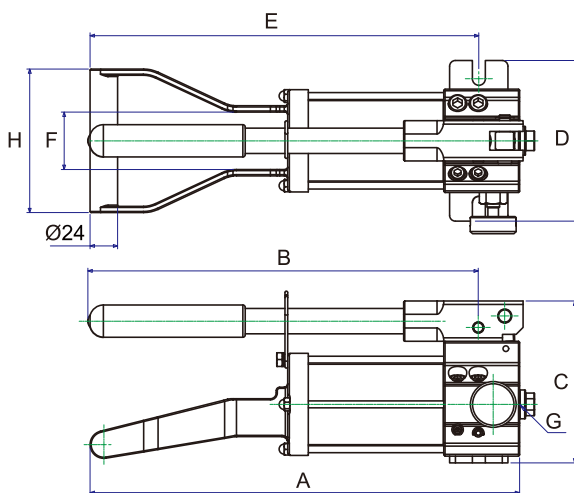
Large 3/8" NPT pressure port for max. flow

Max. working pressure: 700 bar

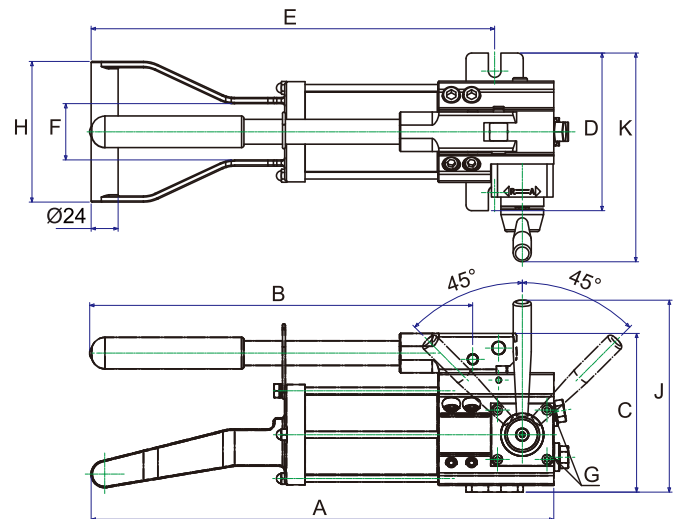
## FEATURES

- Special design with aluminum alloy construction as much light weight is ideally for easy portability and maneuvering.
- The sealed oil reservoir design allows the hand pumps to be operated at all angels without the risk of air contamination and oil spills.
- The best optional hand pumps allow for sub-sea operation.
- Unique design of triangle hand-held base is easy to carry & operate.
- A: Single-port hand pump is used for one single-acting cylinder
- B: Twin-port hand pump is used for two single-acting cylinders simultaneously
- D: Double-acting hand pump is used for one double-acting cylinder

### MODEL: P1000A & P1000B



### MODEL: P1000D



## SPECIFICATIONS

| Model No. | Pressure Rating (bar) |           | Max Oil Volume (cm <sup>3</sup> ) | Usable Oil Capacity (cm <sup>3</sup> ) | Oil Volume Per Stroke (cm <sup>3</sup> ) |           | Max. Handle effort (Kgs) | A (mm) | B (mm) | C (mm) | D (mm) | E (mm) | F (mm) | G (mm)   | H (mm) | J (mm) | K (mm) | Weight (Kgs) |
|-----------|-----------------------|-----------|-----------------------------------|----------------------------------------|------------------------------------------|-----------|--------------------------|--------|--------|--------|--------|--------|--------|----------|--------|--------|--------|--------------|
|           | 1st stage             | 2nd stage |                                   |                                        | 1st stage                                | 2nd stage |                          |        |        |        |        |        |        |          |        |        |        |              |
| P1000A    | 20                    | 700       | 1130                              | 1070                                   | 3.7                                      | 0.6       | 17                       | 694    | 568    | 140    | 140    | 658.5  | 50     | 3/8"-NPT | 125    | —      | —      | 5.3          |
| P1000B    | 20                    | 700       | 1130                              | 1070                                   | 3.7                                      | 0.6       | 17                       | 741    | 568    | 140    | 140    | 683.5  | 50     | 3/8"-NPT | 125    | —      | —      | 6.7          |
| P1000D    | 20                    | 700       | 1130                              | 1070                                   | 3.7                                      | 0.6       | 17                       | 731    | 568    | 140    | 140    | 678.5  | 50     | 3/8"-NPT | 125    | 171    | 185    | 7.6          |

# SPECIAL PUMP HEAD

**POWERRAM**  
HYDRAULIC TOOLS

## MODEL: PH SERIES

Large 3/8" NPT pressure port

Max Volume/Stroke: 2.36 - 34 cm<sup>3</sup>

Max. working pressure: 52 - 827 bar



PH1003



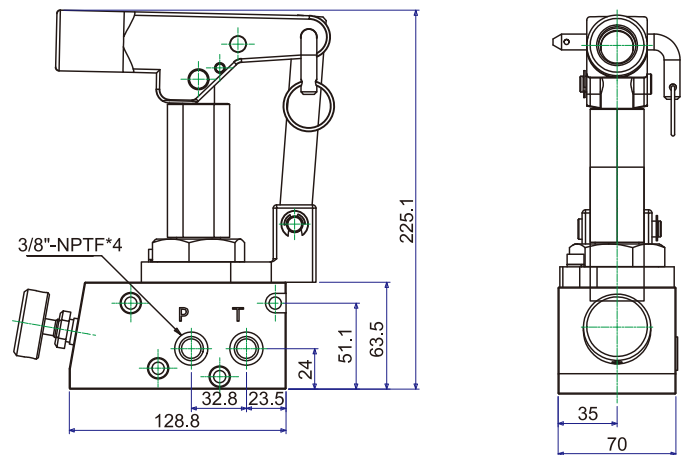
PH1004



PH1006

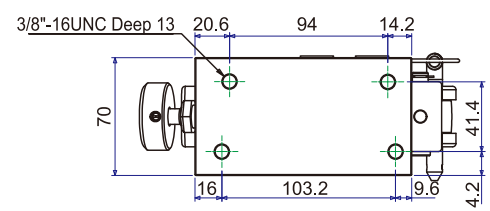
## FEATURES

- The aluminum alloy pump block manifold and forged pump housing are ideally for easy portability maneuvering and flexible fixture.
- Can be used to pressurize water, chemical liquids to run the pipe leakage testing and maintenance jobs.
- Wide range of operating pressure to select from.



## SPECIFICATIONS

| Model No. | Operating Pressure (bar) | Volume per Stroke (cm <sup>3</sup> ) | Max. Handle Effort (Kgs) | Weight (Kgs) |
|-----------|--------------------------|--------------------------------------|--------------------------|--------------|
| PH1003    | 827                      | 2.36                                 | 30                       | 4.4          |
| PH1004    | 448                      | 3.80                                 | 25                       | 5.5          |
| PH1006    | 206                      | 8.50                                 | 26                       | 5.9          |
| PH1008    | 69                       | 14.70                                | 15                       | 6.1          |
| PH1012    | 52                       | 34.0                                 | 26                       | 5.7          |





# STEEL FOOT PUMPS

**POWERRAM**  
HYDRAULIC TOOLS

## MODEL: FHA & FHB SERIES

Single & Dual-speed models

Large 3/8" NPT pressure port for max. flow

Low handle force for easy operation

Max. working pressure: 700 bar



### FEATURES

- Unique foot pumps are characterized by their the exquisite design durability and stability.
- Foot-operated pump and release pedal provide the for operating in different working conditions.
- Both Single and Dual-Speed are available.
- Foot pedal with spring return is convenience and easy to use.
- Internal overload valve prevents pump from being used beyond its rated capacity.

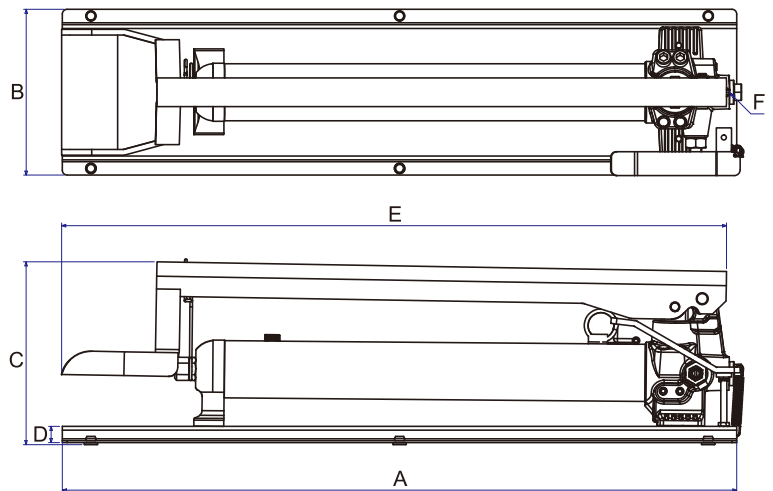
#### Hoses & Adaptors

Page 73-79



#### Manifolds & Control Valves

Page 73-79



### SPECIFICATION

| Model No. | Pressure Rating (bar) |           | Usable Oil Capacity (cm <sup>3</sup> ) | Oil Volume Per Stroke (cm <sup>3</sup> ) |           | A (mm) | B (mm) | C (mm) | D (mm) | E (mm) | Oil Port Thread F | Weight (Kgs) |
|-----------|-----------------------|-----------|----------------------------------------|------------------------------------------|-----------|--------|--------|--------|--------|--------|-------------------|--------------|
|           | 1st Stage             | 2nd Stage |                                        | 1st Stage                                | 2nd Stage |        |        |        |        |        |                   |              |
| FHA350    | 700                   |           | 350                                    | 3.1                                      |           | 474    | 174    | 192    | 17     | 461    | 3/8 NPT           | 8.4          |
| FHA600    | 700                   |           | 600                                    | 3.1                                      |           | 660    | 174    | 192    | 17     | 647    | 3/8 NPT           | 10.3         |
| FHA700    | 700                   |           | 700                                    | 3.1                                      |           | 708    | 174    | 192    | 17     | 695    | 3/8 NPT           | 11.5         |
| FHB350    | 13.8                  | 700       | 350                                    | 13.0                                     | 2.8       | 474    | 174    | 192    | 17     | 461    | 3/8 NPT           | 8.8          |
| FHB600    | 13.8                  | 700       | 600                                    | 13.0                                     | 2.8       | 660    | 174    | 192    | 17     | 647    | 3/8 NPT           | 10.8         |
| FHB700    | 13.8                  | 700       | 700                                    | 13.0                                     | 2.8       | 708    | 174    | 192    | 17     | 695    | 3/8 NPT           | 12           |



# AIR HYDRAULIC FOOT PUMP

**POWERRAM**  
HYDRAULIC TOOLS

## MODEL: AP921 & AP922

Single acting model

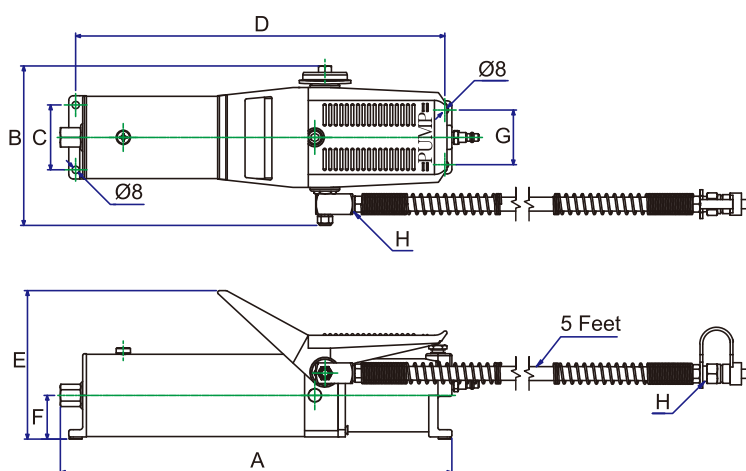
Max. working pressure: 700 bar



AP921

### FEATURES

- Air-power hydraulic pump is designed for using with single-acting cylinders and tools.
- Rugged construction that most components are made of Aluminum alloy and built for long service life, easy operation and portability.
- Automatic overload relief valve setting as 10,000 psi protects components in hydraulic system and ensure work safety.
- New Inlet & Outlet design features low exhausting air volume, quiet effect.



### SPECIFICATION

| Model No. | Acting | Max. Pressure Output (psi) | Valve |          | Oil Del. ( cm <sup>3</sup> /min. @ )* |          |           |            |
|-----------|--------|----------------------------|-------|----------|---------------------------------------|----------|-----------|------------|
|           |        |                            | Type  | Function | 0(psi)                                | 100(psi) | 5000(psi) | 10000(psi) |
| AP921     | Single | 10,000                     | —     | Advance  | 700                                   | —        | —         | 100        |
| AP922     | Single | 10,000                     | —     | Advance  | 700                                   | —        | —         | 100        |

| Model No. | Input Air Pressure (Kgs) | Reservoir Capacity (cm <sup>3</sup> ) | Usable Oil Capacity (cm <sup>3</sup> ) | A (mm) | B (mm) | C (mm) | D (mm) | E (mm) | F (mm) | G (mm) | H (mm)   | Weight (Kgs) |
|-----------|--------------------------|---------------------------------------|----------------------------------------|--------|--------|--------|--------|--------|--------|--------|----------|--------------|
| AP921     | 7-10                     | 850                                   | 750                                    | 423    | 170    | 70     | 399    | 160    | 47     | 59     | 1/4" NPT | 6.1          |
| AP922     | 7-10                     | 850                                   | 750                                    | 423    | 170    | 70     | 399    | 160    | 47     | 59     | 3/8" NPT | 6.1          |

# AIR HYDRAULIC FOOT PUMP

**POWERRAM**  
HYDRAULIC TOOLS

## MODEL: AP1600 & AP3000 SERIES

Single & Double acting models  
Max. working pressure: 700 bar



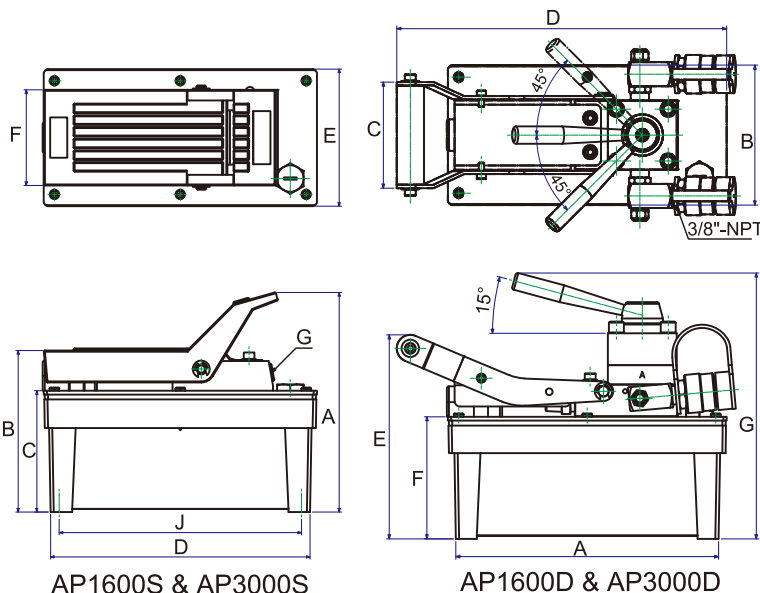
AP1600D



AP3000S

### FEATURES

- Air-power hydraulic pump is designed for using with single-acting cylinders and tools.
- Rugged construction and most components are made of Aluminum alloy and built for long service life, easy operation and portability.
- Automatic overload relief valve setting as 10,000 psi protects components in hydraulic system and ensure work safety.
- New Inlet & Outlet design features low exhausting air volume, quiet effect.
- Oil capacity can be modified according to your specific application.



AP1600S & AP3000S

AP1600D & AP3000D

### SPECIFICATION

| Model No. | Acting | Max. Pressure Output (psi) | Valve              |                        | Oil Del. ( cm <sup>3</sup> /min. @ )* |          |           |            |
|-----------|--------|----------------------------|--------------------|------------------------|---------------------------------------|----------|-----------|------------|
|           |        |                            | Type               | Function               | 0(psi)                                | 100(psi) | 5000(psi) | 10000(psi) |
| AP1600S   | Single | 10,000                     | ---                | Advance                | 1250                                  | ---      | ---       | 195        |
| AP1600D   | Double | 10,000                     | 3 Position / 4 Way | Advance/ Hold/ Retract | 1250                                  | ---      | ---       | 195        |
| AP3000S   | Single | 10,000                     | ---                | Advance                | 1250                                  | ---      | ---       | 195        |
| AP3000D   | Double | 10,000                     | 3 Position / 4 Way | Advance/ Hold/ Retract | 1250                                  | ---      | ---       | 195        |

| Model No. | Input Air Pressure (Kgs) | Reservoir Capacity (cm <sup>3</sup> ) | Usable Oil Capacity (cm <sup>3</sup> ) | A (mm) | B (mm) | C (mm) | D (mm) | E (mm) | F (mm) | G (mm)   | H (mm) | J (mm) | Weight (Kgs) |
|-----------|--------------------------|---------------------------------------|----------------------------------------|--------|--------|--------|--------|--------|--------|----------|--------|--------|--------------|
| AP1600S   | 7-10                     | 1600                                  | 1300                                   | 207    | 152    | 114    | 244    | 129    | 90     | 3/8"-NPT | —      | 228    | 7.3          |
| AP1600D   | 7-10                     | 1600                                  | 1300                                   | 207    | 152    | 114    | 244    | 129    | 98     | 3/8"-NPT | 304    | 228    | 9.3          |
| AP3000S   | 7-10                     | 3000                                  | 2500                                   | 247    | 190    | 114    | 309    | 160    | 90     | 3/8"-NPT | —      | 289    | 9.1          |
| AP3000D   | 7-10                     | 3000                                  | 2500                                   | 247    | 190    | 114    | 309    | 160    | 98     | 3/8"-NPT | 343    | 289    | 12.0         |

# AIR HYDRAULIC FOOT PUMP

**POWERRAM**  
HYDRAULIC TOOLS

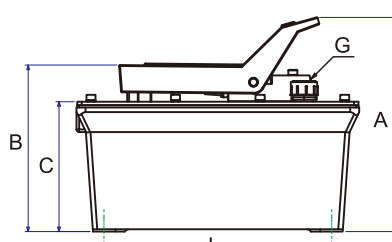
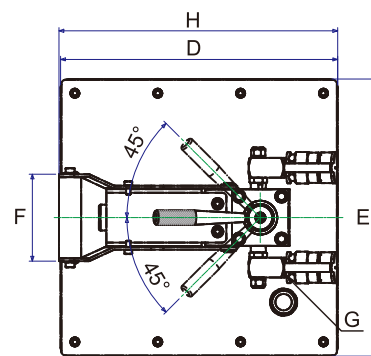
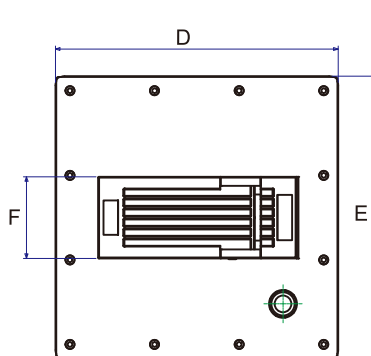
## MODEL: AP8000 SERIES

Single & Double acting models

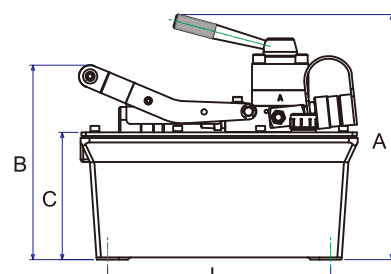
Max. working pressure: 700 bar



AP8000S



AP8000S



AP8000D

## FEATURES

- Air-power hydraulic pump is designed for using with single-acting cylinders and tools.
- Rugged construction and most components are made of Aluminum alloy and built for long service life, easy operation and portability.
- Automatic overload relief valve setting as 10,000 psi protects components in hydraulic system and ensure work safety.
- New Inlet & Outlet design features low exhausting air volume, quiet effect.
- Oil capacity can be modified according to your specific application.

## Hoses & Adaptors

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## Manifolds & Control Valves

Page 73-79



## SPECIFICATION

| Model No. | Acting | Max. Pressure Output (psi) | Valve              |                        | Oil Del. ( cm <sup>3</sup> /min. @ )* |          |           |            |
|-----------|--------|----------------------------|--------------------|------------------------|---------------------------------------|----------|-----------|------------|
|           |        |                            | Type               | Function               | 0(psi)                                | 100(psi) | 5000(psi) | 10000(psi) |
| AP8000S   | Single | 10,000                     | ---                | Advance                | 1250                                  | ---      | ---       | 195        |
| AP8000D   | Double | 10,000                     | 3 Position / 4 Way | Advance/ Hold/ Retract | 1250                                  | ---      | ---       | 195        |

| Model No. | Input Air Pressure (Kgs) | Reservoir Capacity (cm <sup>3</sup> ) | Usable Oil Capacity (cm <sup>3</sup> ) | A (mm) | B (mm) | C (mm) | D (mm) | E (mm) | F (mm) | G (mm)   | H (mm) | J (mm) | Weight (Kgs) |
|-----------|--------------------------|---------------------------------------|----------------------------------------|--------|--------|--------|--------|--------|--------|----------|--------|--------|--------------|
| AP8000S   | 7-10                     | 8000                                  | 7200                                   | 236    | 184    | 143    | 311.6  | 311.6  | 90     | 3/8"-NPT | —      | 251    | 19.1         |
| AP8000D   | 7-10                     | 8000                                  | 7200                                   | 276    | 218    | 143    | 311.6  | 311.6  | 98     | 3/8"-NPT | 313    | 251    | 30.4         |

# AIR HYDRAULIC FOOT PUMP

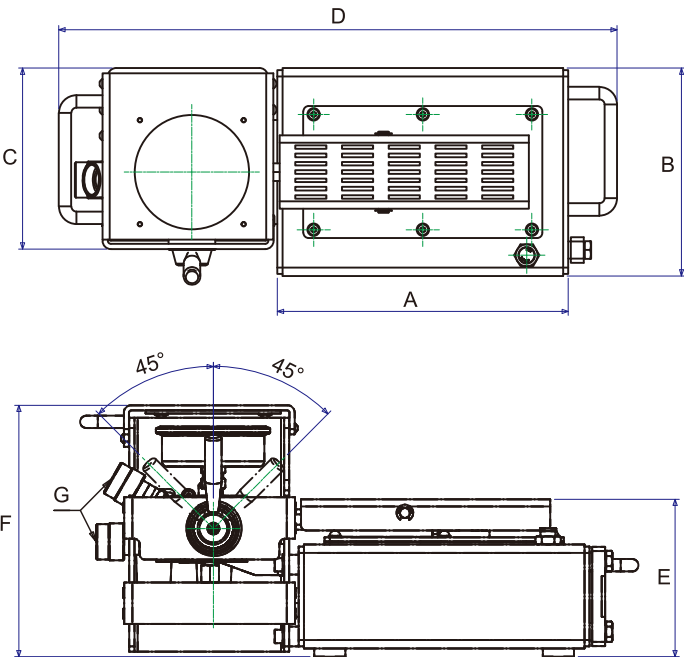
**MODEL: NSAP3000D**

Double acting  
Max. working pressure: 700 bar  
Special design for operating in Mines



**FEATURES**

- Air-power hydraulic pump is designed for using with single and/or double acting cylinders and tools.
- **Non Aliminum content in all components. The special design for operating in the mines, specailly underground.**
- Auto overload relief valve setting as 10,000 psi protects components in hydraulic system and ensure work safety.
- Premounted Pressure and level gauges allow quick and easy Pressure and Oil level monitoring.
- Rugged construction and reservoir for applications in tough environments.
- Premounted Filter-Lubricator provides clean and lubricated air accordingly.



**SPECIFICATION**

| Model No. | Acting | Max. Pressure Output (psi) | Valve              |                        | Oil Del. ( c.c./min. @ )* |          |           |            |
|-----------|--------|----------------------------|--------------------|------------------------|---------------------------|----------|-----------|------------|
|           |        |                            | Type               | Function               | 0(psi)                    | 100(psi) | 5000(psi) | 10000(psi) |
| NSAP3000D | Double | 10,000                     | 3 Position / 4 Way | Advance/ Hold/ Retract | 1250                      | ---      | ---       | 195        |

| Model No. | Input Air Pressure (kg) | Reservoir Capacity (c.c.) | Usable Oil Capacity (c.c.) | A (mm) | B (mm) | C (mm) | D (mm) | E (mm) | F (mm) | G (mm)   | Weight (kg) |
|-----------|-------------------------|---------------------------|----------------------------|--------|--------|--------|--------|--------|--------|----------|-------------|
| NSAP3000D | 7-10                    | 3500                      | 3000                       | 280    | 200    | 174    | 537    | 151.5  | 242    | 3/8"-NPT | 25.3        |

# AIR HYDRAULIC PUMP

**POWERRAM**  
HYDRAULIC TOOLS

## MODEL: AP13 SERIES

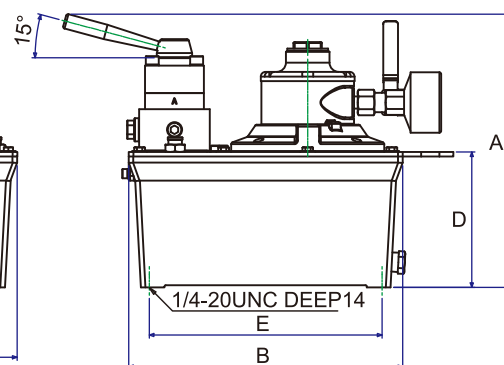
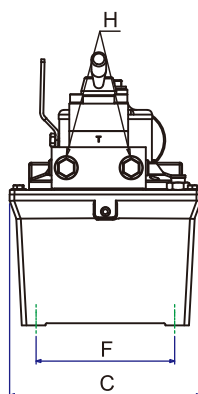
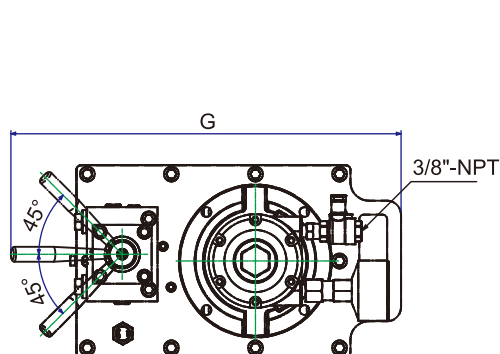
Single & Double acting models

Max. working pressure: 700 bar



### FEATURES

- Dual-speed operation for fast speed cylinder advance.
- 3L durable aluminum reservoir design.
- Air motor capable of starting under full load.
- Automatic over-load relief valve protects components of the hydraulic systems and ensures safe operation.



## SPECIFICATION

| Model No. | Acting | Max. Pressure Output (psi) | Valve              |                        | Oil Del. ( cm <sup>3</sup> /min. @ )* |          |           |            |
|-----------|--------|----------------------------|--------------------|------------------------|---------------------------------------|----------|-----------|------------|
|           |        |                            | Type               | Function               | 0(psi)                                | 100(psi) | 5000(psi) | 10000(psi) |
| AP13S     | Single | 10,000                     | 2 Position / 2 Way | Advance /Retract       | 4000                                  | 2800     | 330       | 280        |
| AP13D     | Double | 10,000                     | 3 Position / 4 Way | Advance/ Hold/ Retract | 4000                                  | 2800     | 330       | 280        |

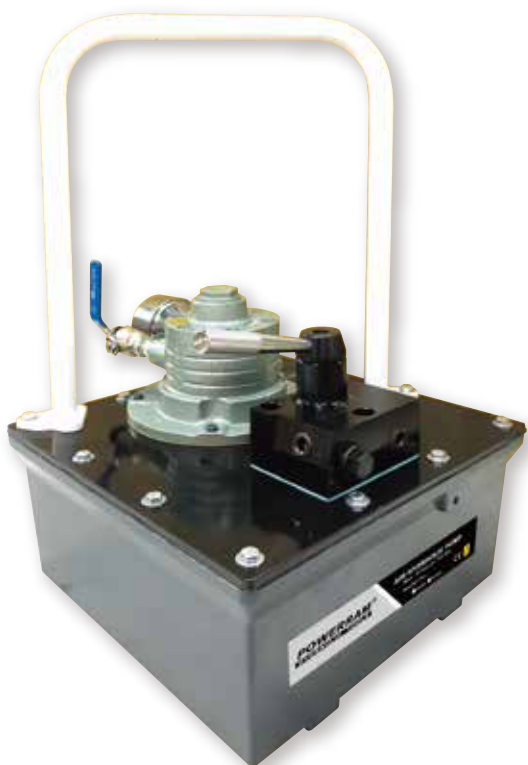
\* Actual flow will vary from the on site conditions.

\* AP13S: Pressure will be held when the motor is shut off.

| Model No. | Reservoir Capacity (cm <sup>3</sup> ) | Usable Oil Capacity (cm <sup>3</sup> ) | A (mm) | B (mm) | C (mm) | D (mm) | E (mm) | F (mm) | G (mm) | H (mm)   | Weight (Kgs) |
|-----------|---------------------------------------|----------------------------------------|--------|--------|--------|--------|--------|--------|--------|----------|--------------|
| AP13S     | 3000                                  | 2400                                   | 287    | 295.5  | 206.5  | 146.2  | 251    | 149.4  | 350    | 3/8"-NPT | 14.4         |
| AP13D     | 3000                                  | 2400                                   | 295    | 295.5  | 206.5  | 146.2  | 251    | 149.4  | 421    | 3/8"-NPT | 15.4         |



# AIR HYDRAULIC PUMP



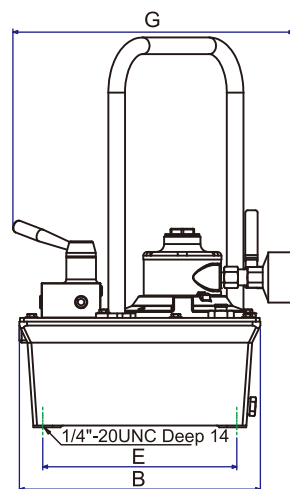
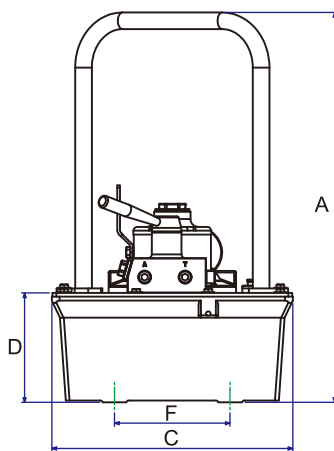
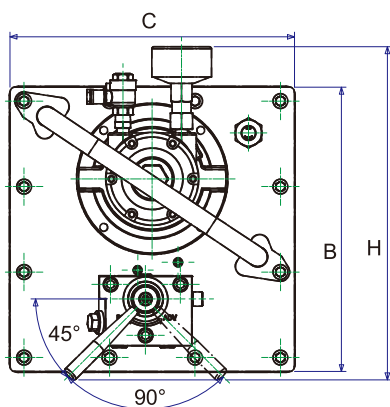
## MODEL: AP18 SERIES

Single & Double acting models

Max. working pressure:700 bar

### FEATURES

- Dual-speed operation for fast speed cylinder advance.
- 8L durable aliminum reservoir design.
- Air motor capable of starting under full load.
- Automatic over-load relief valve protects components of the hydraulic systems and ensures safe operation.



### SPECIFICATION

| Model No. | Acting | Max. Pressure Output (psi) | Valve              |                        | Oil Del. ( cm <sup>3</sup> /min. @ )* |          |           |            |
|-----------|--------|----------------------------|--------------------|------------------------|---------------------------------------|----------|-----------|------------|
|           |        |                            | Type               | Function               | 0(psi)                                | 100(psi) | 5000(psi) | 10000(psi) |
| AP18S     | Single | 10,000                     | 2 Position / 2 Way | Advance /Retract       | 4000                                  | 2800     | 330       | 280        |
| AP18D     | Double | 10,000                     | 3 Position / 4 Way | Advance/ Hold/ Retract | 4000                                  | 2800     | 330       | 280        |

\* Acutal flow will vary from the on site conditions.

\* AP18S: Pressure will be held when the motor is shut off.

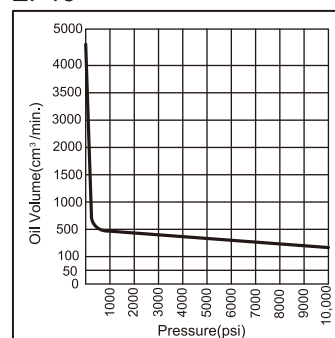
| Model No. | Reservoir Capacity (cm <sup>3</sup> ) | Usable Oil Capacity (cm <sup>3</sup> ) | A (mm) | B (mm) | C (mm) | D (mm) | E (mm) | F (mm) | G (mm) | H (mm)   | Weight (Kgs) |
|-----------|---------------------------------------|----------------------------------------|--------|--------|--------|--------|--------|--------|--------|----------|--------------|
| AP18S     | 8000                                  | 7200                                   | 504    | 312    | 312    | 141.5  | 251    | 149.4  | 363    | 3/8"-NPT | 21.5         |
| AP18D     | 8000                                  | 7200                                   | 504    | 312    | 312    | 141.5  | 251    | 149.4  | 408    | 3/8"-NPT | 22           |

## MODEL: EP13 SERIES

ELECTRIC PUMPS, 3 LITER,  
700 BAR/10,000psi



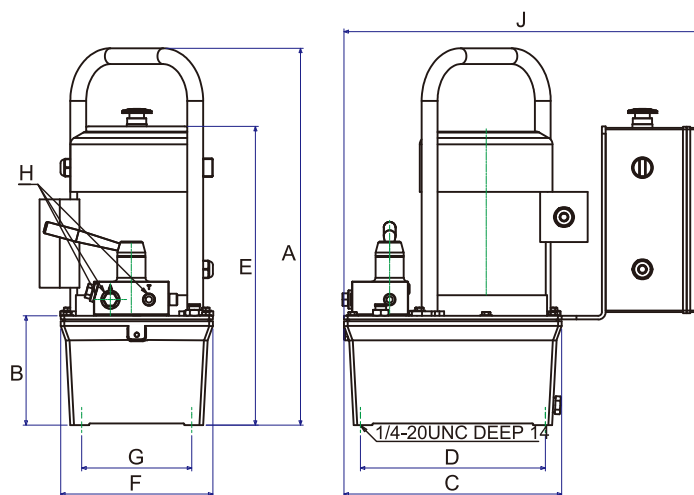
EP13



## FEATURES

- Original pumps are built with 1/2 HP, 220V, 50/60Hz, Single phases universal brushless motor.
- Internal relief valve (700 bars) protects the components and work safety.
- Pumps are included with 24V, 3 meters remote control cord.
- Quiet pumps comply OSHA noise limitation (80dBA at 700bar).
- EP13D specially designed for double-acting cylinders without the need for additional control valve and adapters.
- Conform to CE standards.
- **Both models are available with Solenoid Valve version.**

## MODEL:EP13S



## SPECIFICATION

| Model No. | Acting | RPM<br>50/60 Hz | Reservoir<br>Capacity<br>(cm <sup>3</sup> ) | Usable Oil<br>Capacity<br>(cm <sup>3</sup> ) | Motor                                                | Max. Pressure<br>Output<br>(psi) | Valve                 |                       | Oil Del. (cm <sup>3</sup> /min. @)*(60Hz) |          |           |            |
|-----------|--------|-----------------|---------------------------------------------|----------------------------------------------|------------------------------------------------------|----------------------------------|-----------------------|-----------------------|-------------------------------------------|----------|-----------|------------|
|           |        |                 |                                             |                                              |                                                      |                                  | Type                  | Function              | 0(psi)                                    | 100(psi) | 5000(psi) | 10000(psi) |
| EP13S     | Single | 2860 / 3450     | 3,000                                       | 2,400                                        | 0.45 kW<br>110V / 220V<br>50 / 60 Hz<br>Single Phase | 10,000                           | 2 Position<br>/ 2 Way | Hold<br>/Retract      | 4,000                                     | 2,800    | 330       | 280        |
| EP13SS*   |        |                 |                                             |                                              |                                                      |                                  |                       |                       |                                           |          |           |            |
| EP13D     | Double | 2860 / 3450     | 3,000                                       | 2,400                                        | 0.45 kW<br>110V / 220V<br>50 / 60 Hz<br>Single Phase | 10,000                           | 3 Position<br>/ 4 Way | Adv./Hold<br>/Retract | 4,000                                     | 2,800    | 330       | 280        |
| EP13DS*   |        |                 |                                             |                                              |                                                      |                                  |                       |                       |                                           |          |           |            |

| Model No.   | A<br>(mm) | B<br>(mm) | C<br>(mm) | D<br>(mm) | E<br>(mm) | F<br>(mm) | G<br>(mm) | H        | J<br>(mm) | Weight<br>(Kgs) |
|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|-----------|-----------------|
| EP13 Series | 511.5     | 148.5     | 295.5     | 251       | 406       | 206.5     | 149.4     | 3/8"-NPT | 485       | 27              |

\* Solenoid Valve version.

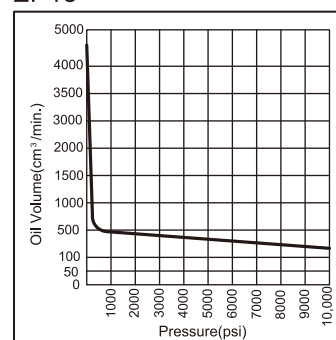
\*\* The weight is excluding the hydraulic oil.



## MODEL: EP18 SERIES

ELECTRIC PUMPS, 8 LITER,  
700 BAR/10,000psi

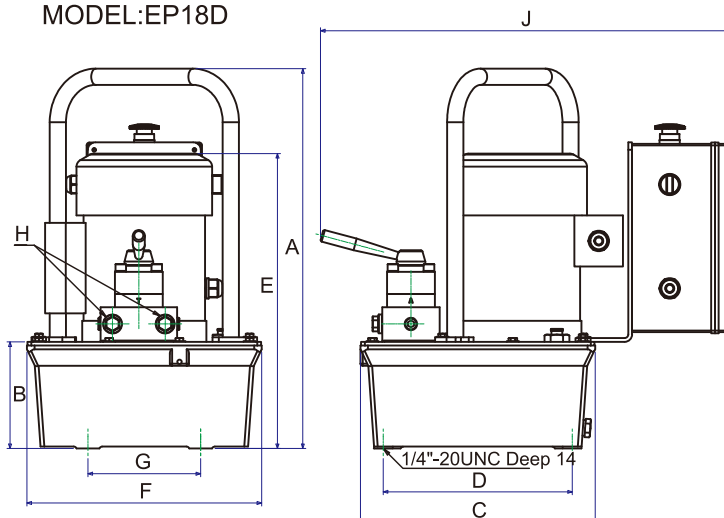
EP18



## FEATURES

- Original pumps are built with 1/2 HP, 220V, 50/60Hz, Single phases universal brushless motor.
- Internal relief valve (700 bars) protects the components and work safety.
- Pumps are included with 24V, 3 meters remote control cord.
- Quiet pumps comply OSHA noise limitation (80dBA at 700bar).
- EP18D specially designed for double-acting cylinders without the need for additional control valve and adapters.
- Conform to CE standards.
- **Both models are available with Solenoid Valve version.**

MODEL:EP18D



## SPECIFICATION

| Model No. | Acting | RPM<br>50/60 Hz | Reservoir<br>Capacity<br>(cm <sup>3</sup> ) | Usable Oil<br>Capacity<br>(cm <sup>3</sup> ) | Motor                                                | Max. Pressure<br>Output<br>(psi) | Valve                 |                       | Oil Del. (cm <sup>3</sup> /min.@)*(60Hz) |          |           |            |
|-----------|--------|-----------------|---------------------------------------------|----------------------------------------------|------------------------------------------------------|----------------------------------|-----------------------|-----------------------|------------------------------------------|----------|-----------|------------|
|           |        |                 |                                             |                                              |                                                      |                                  | Type                  | Function              | 0(psi)                                   | 100(psi) | 5000(psi) | 10000(psi) |
| EP18S     | Single | 2860 / 3450     | 8,000                                       | 7,200                                        | 0.45 kW<br>110V / 220V<br>50 / 60 Hz<br>Single Phase | 10,000                           | 2 Position<br>/ 2 Way | Hold<br>/Retract      | 4,000                                    | 2,800    | 330       | 280        |
| EP18SS*   |        |                 |                                             |                                              |                                                      |                                  |                       |                       | 4,000                                    | 2,800    | 330       | 280        |
| EP18D     | Double | 2860 / 3450     | 8,000                                       | 7,200                                        | 0.45 kW<br>110V / 220V<br>50 / 60 Hz<br>Single Phase | 10,000                           | 3 Position<br>/ 4 Way | Adv./Hold<br>/Retract | 4,000                                    | 2,800    | 330       | 280        |
| EP18DS*   |        |                 |                                             |                                              |                                                      |                                  |                       |                       | 4,000                                    | 2,800    | 330       | 280        |

| Model No.   | A (mm) | B (mm) | C (mm) | D (mm) | E (mm) | F (mm) | G (mm) | H        | J (mm) | Weight (Kgs) |
|-------------|--------|--------|--------|--------|--------|--------|--------|----------|--------|--------------|
| EP18 Series | 504    | 141.5  | 311.6  | 251    | 391.5  | 311.6  | 149.4  | 3/8"-NPT | 543.5  | 32           |

\* Solenoid Valve version.

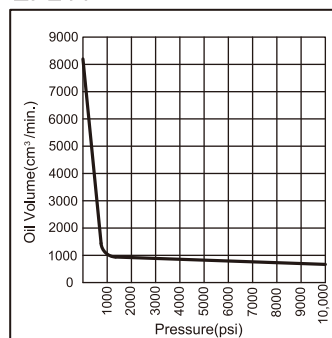
\*\* The weight is excluding the hydraulic oil.

## MODEL: EP211 SERIES

ELECTRIC PUMPS, 11 LITER,  
700 BAR/10,000psi



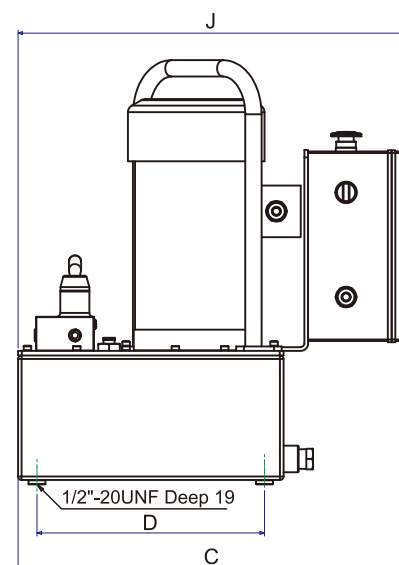
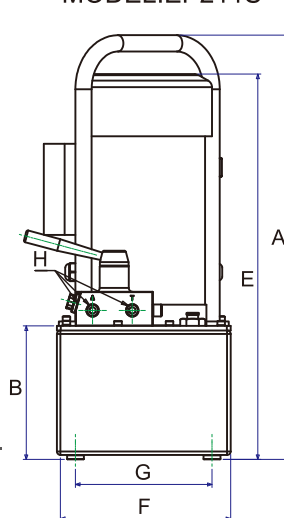
EP211



## FEATURES

- Original pumps are built with 1 1/2 HP, 220V, 50/60Hz, Single phases universal brushless motor.
- Internal relief valve (700 bars) protects the components and work safety.
- Pumps are included with 24V, 3 meters remote control cord.
- Quiet pumps comply OSHA noise limitation (80dBA at 700bar).
- EP211D specially designed for double-acting cylinders without the need for additional control valve and adapters.
- Conform to CE standards.
- **Both models are available with Solenoid Valve version.**

MODEL:EP211S



## SPECIFICATION

| Model No.          | Acting | RPM<br>50/60 Hz | Reservoir Capacity<br>(cm <sup>3</sup> ) | Usable Oil Capacity<br>(cm <sup>3</sup> ) | Motor                                                | Max. Pressure<br>Output<br>(psi) | Valve                 |                       | Oil Del. (cm <sup>3</sup> /min.@)*(60Hz) |          |           |            |
|--------------------|--------|-----------------|------------------------------------------|-------------------------------------------|------------------------------------------------------|----------------------------------|-----------------------|-----------------------|------------------------------------------|----------|-----------|------------|
|                    |        |                 |                                          |                                           |                                                      |                                  | Type                  | Function              | 0(psi)                                   | 100(psi) | 5000(psi) | 10000(psi) |
| EP211S<br>EP211SS* | Single | 2860 / 3450     | 11,000                                   | 9,500                                     | 1.12 kW<br>110V / 220V<br>50 / 60 Hz<br>Single Phase | 10,000                           | 2 Position<br>/ 2 Way | Hold<br>/Retract      | 8,200                                    | 7,400    | 840       | 750        |
| EP211D<br>EP211DS* | Double | 2860 / 3450     | 11,000                                   | 9,500                                     |                                                      | 10,000                           | 3 Position<br>/ 4 Way | Adv./Hold<br>/Retract | 8,200                                    | 7,400    | 840       | 750        |

| Model No.    | A (mm) | B (mm) | C (mm) | D (mm) | E (mm) | F (mm) | G (mm) | H        | J (mm) | Weight (Kgs) |
|--------------|--------|--------|--------|--------|--------|--------|--------|----------|--------|--------------|
| EP211 Series | 559    | 176    | 515.5  | 300    | 391.5  | 224.4  | 180    | 3/8"-NPT | 515.5  | 40           |

\* Solenoid Valve version.

\*\* The weight is excluding the hydraulic oil.

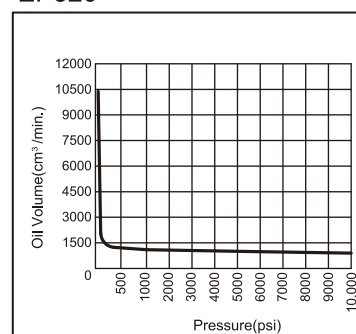


EP320D

## MODEL: EP320 SERIES

ELECTRIC PUMPS, 1.48KW, 20 LITER  
700 BAR/10,000psi

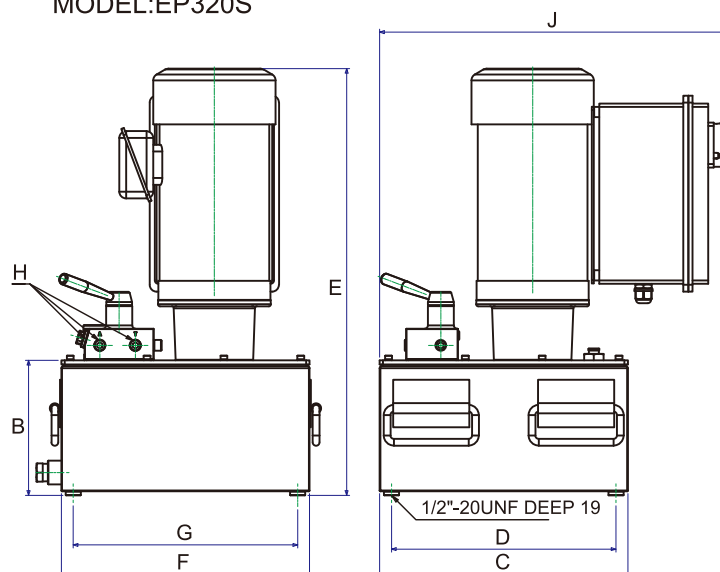
EP320



## FEATURES

- Original pumps are built with 1.48KW, 220/380V, 50/60Hz, 3 phases universal brushless motor.
- Internal relief valve (700 bars) protects the components and work safety.
- Pumps are included with 24V, 3 meters remote control cord.
- Quiet pumps comply OSHA noise limitation (80dBA at 700bar).
- EP320D specially designed for double-acting cylinders without the need for additional control valve and adapters.
- Internal relief valve limits pressure to 10,000 psi. External relief valve is adjustable from 1,000 to 10,000 psi.
- Conform to CE standards.
- Both models are available with Solenoid Valve version.**

MODEL:EP320S



## SPECIFICATION

| Model No.          | Acting | RPM 50/60 Hz | Reservoir Capacity (cm <sup>3</sup> ) | Usable Oil Capacity (cm <sup>3</sup> ) | Motor                  | Max. Pressure Output (psi) | Valve              |                    | Oil Del.(cm <sup>3</sup> /min.@)*(60Hz) |           |           |            |
|--------------------|--------|--------------|---------------------------------------|----------------------------------------|------------------------|----------------------------|--------------------|--------------------|-----------------------------------------|-----------|-----------|------------|
|                    |        |              |                                       |                                        |                        |                            | Type               | Function           | 100(psi)                                | 1000(psi) | 5000(psi) | 10000(psi) |
| EP320S<br>EP320SS* | Single | 1435 / 1735  | 20,000                                | 18,000                                 | 1.48 kW<br>220V / 380V | 10,000                     | 2 Position / 2 Way | Hold /Retract      | 9,500                                   | 1,020     | 980       | 900        |
| EP320D<br>EP320DS* | Double | 1435 / 1735  | 20,000                                | 18,000                                 | 50 / 60 Hz<br>3 Phase  | 10,000                     | 3 Position / 4 Way | Adv./Hold /Retract | 9,500                                   | 1,020     | 980       | 900        |

1.48KW, 220V, 50Hz, Single Phase motor is also available for all models.

| Model No.    | A<br>(mm) | B<br>(mm) | C<br>(mm) | D<br>(mm) | E<br>(mm) | F<br>(mm) | G<br>(mm) | H        | J<br>(mm) | Weight<br>(Kgs) |
|--------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|-----------|-----------------|
| EP320 Series | —         | 198.5     | 365       | 330       | 627.5     | 365       | 330       | 3/8"-NPT | 512       | 56              |

\* Solenoid Valve version.

\*\* The weight is excluding the hydraulic oil.



# ELECTRIC PUMPS

**POWERRAM**  
HYDRAULIC TOOLS

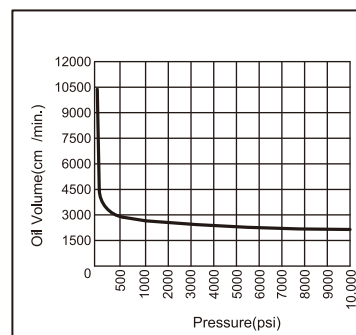
## MODEL: EP420 / EP440 SERIES

ELECTRIC PUMPS, 2.24KW, 20 & 40 LTR.  
700 BAR/10,000psi



EP420DS

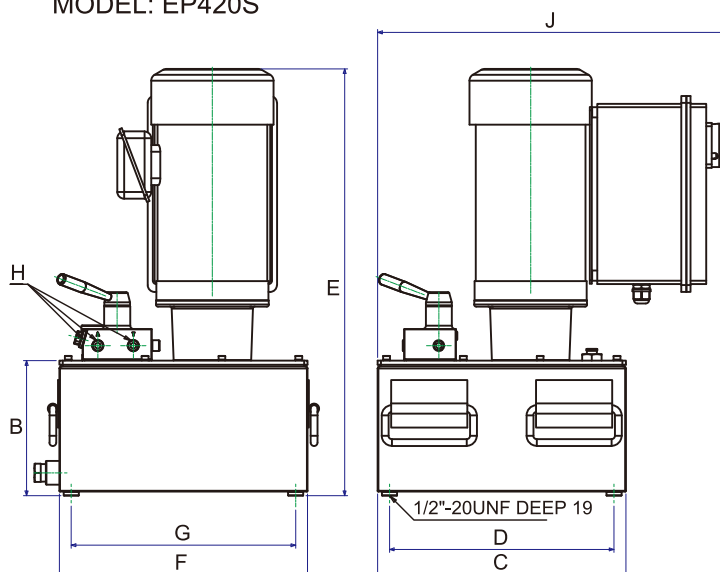
EP420



### FEATURES

- Original pumps are built with 2.24KW, 220/380V, 50/60Hz, 3 phases universal brushless motor.
- Internal relief valve (700 bars) protects the components and work safety.
- Pumps are included with 24V, 3 meters remote control cord.
- Quiet pumps comply OSHA noise limitation (80dBA at 700bar).
- EP420D specially designed for double-acting cylinders without the need for additional control valve and adapters.
- Internal relief valve limits pressure to 10,000 psi. External relief valve is adjustable from 1,000 to 10,000 psi.
- Conform to CE standards.
- Both models are available with Solenoid Valve version.**

MODEL: EP420S



### SPECIFICATION

| Model No.          | Acting | RPM<br>50/60 Hz | Reservoir Capacity<br>(cm³) | Usable Oil Capacity<br>(cm³) | Motor                                         | Max. Pressure Output<br>(psi) | Valve              |                    | Oil Del.(cm³/min. @)*(60Hz) |           |           |            |
|--------------------|--------|-----------------|-----------------------------|------------------------------|-----------------------------------------------|-------------------------------|--------------------|--------------------|-----------------------------|-----------|-----------|------------|
|                    |        |                 |                             |                              |                                               |                               | Type               | Function           | 100(psi)                    | 1000(psi) | 5000(psi) | 10000(psi) |
| EP420S<br>EP420SS* | Single | 1435 / 1735     | 20,000                      | 18,000                       | 2.24 kW<br>220V / 380V<br>50/60 Hz<br>3 Phase | 10,000                        | 2 Position / 2 Way | Hold /Retract      | 9,500                       | 2,450     | 1,950     | 1,800      |
| EP420D<br>EP420DS* | Double | 1435 / 1735     | 20,000                      | 18,000                       |                                               | 10,000                        | 3 Position / 4 Way | Adv./Hold /Retract | 9,500                       | 2,450     | 1,950     | 1,800      |
| EP440S<br>EP440SS* | Single | 1435 / 1735     | 40,000                      | 38,000                       |                                               |                               | 2 Position / 2 Way | Hold /Retract      | 9,500                       | 2,450     | 1,950     | 1,800      |
| EP440D<br>EP440DS* | Double | 1435 / 1735     | 40,000                      | 38,000                       |                                               |                               | 3 Position / 4 Way | Adv./Hold /Retract | 9,500                       | 2,450     | 1,950     | 1,800      |

| Model No.    | A (mm) | B (mm) | C (mm) | D (mm) | E (mm) | F (mm) | G (mm) | H        | J (mm) | Weight (Kgs) |
|--------------|--------|--------|--------|--------|--------|--------|--------|----------|--------|--------------|
| EP420 Series | —      | 198.5  | 365    | 330    | 627.5  | 365    | 330    | 3/8"-NPT | 512    | 65           |
| EP440 Series | —      | 378.5  | 365    | 330    | 807.5  | 365    | 330    | 3/8"-NPT | 512    | 87           |

\* Solenoid Valve version.

\*\* The weight is excluding the hydraulic oil.

# ELECTRIC PUMPS

**POWERRAM**  
HYDRAULIC TOOLS

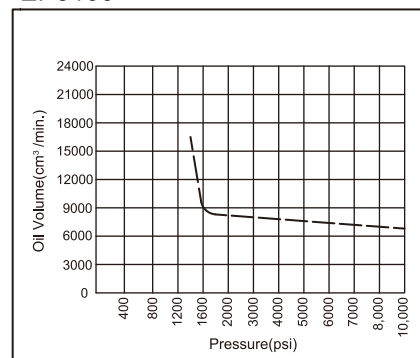


## MODEL: EP5100

USABLE OIL CAP. :80L

OIL CAPACITY: 100L

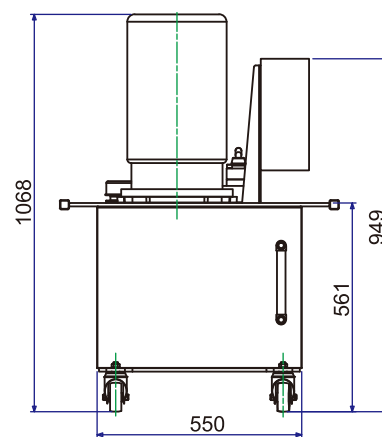
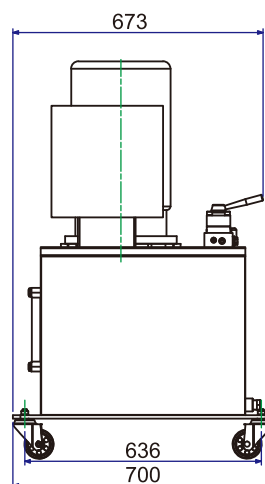
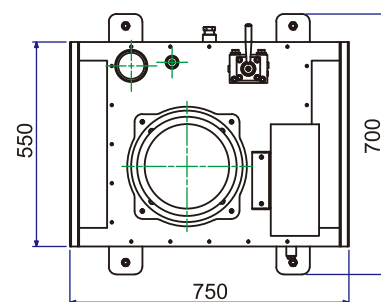
EP5100



EP5100DS

## FEATURES

- Dual-speed high output pump delivers up to 16 l/min of oil.
- Low noise level of 73 - 80 dBA.
- Pump prewired at factory with 7.46kW, 380V, 50 Hz, 3 phase universal brushless motor.
- 24 volt control circuits on units with remote controls for user/operator safety.
- 3 phase motor with thermal overload protection and has all the electric components necessary to operate the pump.
- Power switch are 24 volts. EP5100D has a 4-way/3-position manual valve. EP5100DS has a 4-way/3-position solenoid valve with a 24 volt remote switch.
- 100L ( 80L usable ) reservoir has a low oil level sight gauge.



## SPECIFICATION

| Model No. | RPM  | Reservoir Capacity (liter) | Usable Oil Capacity (liter) | Motor                                 | Max. Pressure Output (psi) | Amp Draw @10,000psi | Valve              |                    | Oil Del. (liter/ min. @)* |           |           |            |
|-----------|------|----------------------------|-----------------------------|---------------------------------------|----------------------------|---------------------|--------------------|--------------------|---------------------------|-----------|-----------|------------|
|           |      |                            |                             |                                       |                            |                     | Type               | Function           | 220(psi)                  | 1300(psi) | 5000(psi) | 10000(psi) |
| EP5100D   | 1437 | 100                        | 80                          | 7.46kW/<br>380V<br>50 Hz /<br>3 phase | 10,000                     | 6                   | 3 Position / 4 Way | Adv./Hold /Retract | 16                        | 14        | 6         | 5.6        |
| EP5100DS  |      |                            |                             |                                       |                            |                     |                    |                    |                           |           |           |            |

| Model No.     | A (mm) | B (mm) | C (mm) | D (mm) | E (mm) | F (mm) | Weight* (Kgs) |
|---------------|--------|--------|--------|--------|--------|--------|---------------|
| EP5100 series | 1069   | 561    | 550    | 700    | 636    | 750    | 240           |

\* The weight is excluding the hydraulic oil.

# MECHANICAL EASY PULLERS (2,3 WAY)

**POWERRAM**  
HYDRAULIC TOOLS



## SIMPLE AND EASY PULLING JOB

The most simple and efficient design, the screw-Operated jaws bring the users to position the puller on the part quickly and precisely with one person operating only.

## USER-FRIENDLY

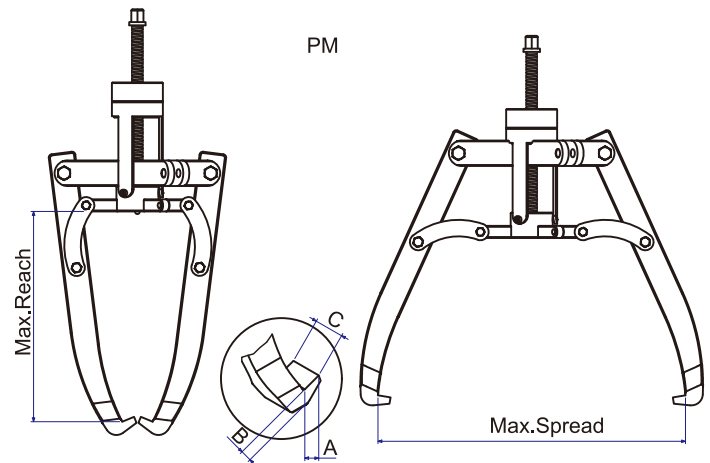
- 3 or 2 fixed jaws for easy positioning and self-centering.
- Available in six sizes with a maximum pulling force from 2 Tons to 10 Tons.

## SAFE

- Self-centering function prevents the damage to the shaft and work piece being pulled.

## SAVING COST

- Easy operating by one person which save time and work efficiently
- The first 2 or 3 way mechanical puller in the world, also a good choice to save cost by one price for two pullers.



## SPECIFICATIONS

| Capacity | Model No. | Jaws | Reach<br>(Max. mm) | Spread<br>(Max. mm) | Shaft Dim. | Jaw Tip (mm) |    |    | Weight<br>(Kgs) |
|----------|-----------|------|--------------------|---------------------|------------|--------------|----|----|-----------------|
|          |           |      |                    |                     |            | A            | B  | C  |                 |
| 2 Tons   | PM50      | 3    | 80                 | 120                 | Ø5/8"x8T   | 8            | 6  | 15 | 1.3             |
| 2 Tons   | PM52      | 2    | 80                 | 120                 | Ø5/8"x8T   | 8            | 6  | 15 | 0.9             |
| 5 Tons   | PM100     | 3    | 160                | 250                 | Ø3/4"x8T   | 11           | 10 | 25 | 3.7             |
| 5 Tons   | PM102     | 2    | 160                | 250                 | Ø3/4"x8T   | 11           | 10 | 25 | 3.1             |
| 10 Tons  | PM150     | 3    | 230                | 380                 | Ø7/8"x6T   | 14           | 10 | 29 | 8.8             |
| 10 Tons  | PM152     | 2    | 230                | 380                 | Ø7/8"x6T   | 14           | 10 | 29 | 6.7             |

Patented in USA, Germany, S. Korea, Taiwan, P.R.C.....etc.

# MANUAL EASY PULLERS - 2/3 WAY

**POWERRAM**  
HYDRAULIC TOOLS



## SIMPLE AND EASY PULLING JOB

The most simple and efficient design, Screw-Operated Jaws bring the users to position the puller on the part quickly and correctly with just one person operating only.

## USER-FRIENDLY

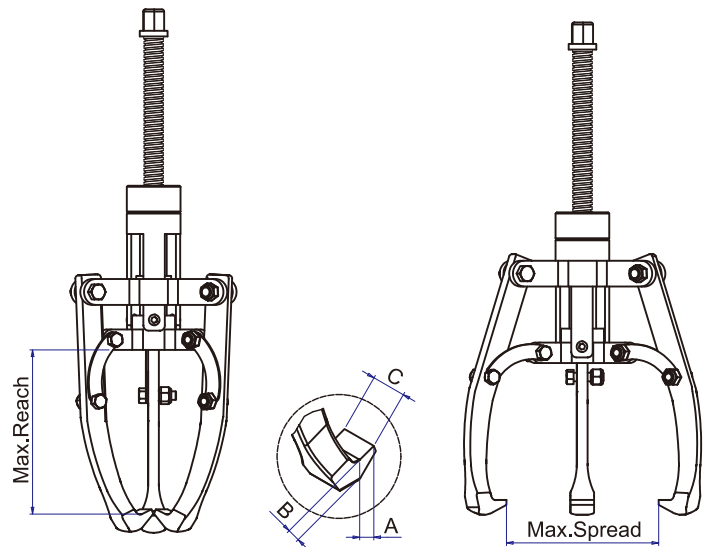
- 3 and/or 2 fixed jaws for easy positioning and self-centering.
- Available in six sizes with a maximum pulling force from 2 Tons to 12 Tons.

## SAFE

- Self-positioning centring prevent the damage to the shaft as well.

## SAVING COST

- Conveniently positioning, efficiently pulling help to save manpower and operating time.
- The first 2 / 3 way manual easy puller in the world which brings users the two options in one model as the best choice to save the cost.



## SPECIFICATIONS

| Capacity | Model No. | Reach<br>(Max. mm) | Spread<br>(Max. mm) | Shaft Dimension |             | Jaw Tip (mm) |    |    | Weight<br>(Kgs) |
|----------|-----------|--------------------|---------------------|-----------------|-------------|--------------|----|----|-----------------|
|          |           |                    |                     | Thread          | Length (mm) | A            | B  | C  |                 |
| 2 Tons   | PM55      | 80                 | 120                 | Ø5/8"x11T       | 24          | 8            | 6  | 15 | 1.6             |
| 3 Tons   | PM85      | 120                | 140                 | Ø5/8"x11T       | 28          | 6            | 7  | 15 | 2.3             |
| 5 Tons   | PM105     | 160                | 270                 | Ø3/4"x10T       | 34          | 11           | 10 | 25 | 4.3             |
| 8 Tons   | PM125     | 210                | 300                 | Ø3/4"x10T       | 39          | 13           | 14 | 27 | 6.1             |
| 10 Tons  | PM155     | 250                | 380                 | Ø7/8"x14T       | 47          | 14           | 10 | 29 | 9.6             |
| 12 Tons  | PM175     | 250                | 440                 | Ø7/8"x14T       | 47          | 14           | 10 | 29 | 11.2            |

Patented in USA, Germany, S. Korea, Taiwan, P.R.C.....etc.

# HYDRAULIC PULLERS

**POWERRAM**  
HYDRAULIC TOOLS

## MODEL:PM SERIES



### FEATURES

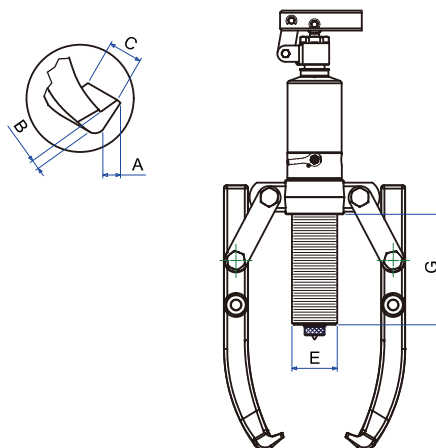
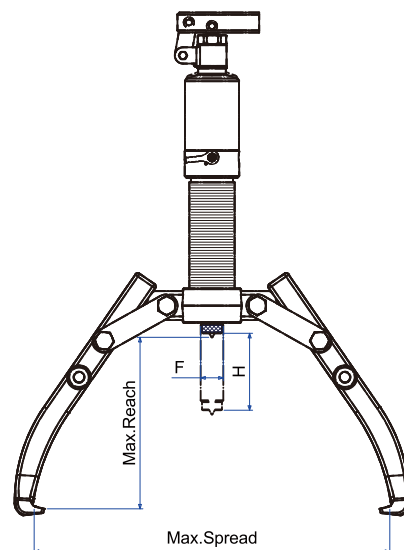
- Exchangeable 2 or 3 arm combination puller is very practical and economical.
- 360° Rotary Socket.
- Self-contained hydraulic pump and puller body with integral safety valve.
- Spring loaded live centering nut for easy job (removable).
- Four stages of foldable & removable handle saves the handle force during operation.
- Patented design of two stages stroking for PM2000 & PM3000, the first stage being as fast stroking for quickly connecting with object, and the second stage being as high hydraulic output for pulling job.
- The extension rods can be used for extra reach when necessary.

### ACCESSORIES

| Model No. | Part No. | Length of Long Arm (mm) | Max. Reach | Max. Spread |
|-----------|----------|-------------------------|------------|-------------|
| PM400     | C0948    | 295                     | 222        | 300         |
| PM600     | C0949    | 335                     | 260        | 363         |
| PM800     | C0950    | 395                     | 308        | 445         |
| PM1200    | C0951    | 435                     | 340        | 420         |
| PM2000    | C0960    | 555                     | 428        | 540         |
| PM3000    | C0961    | 555                     | 428        | 620         |

### SPECIFICATIONS

| Capacity | Model No. | Reach (Max. mm) | Spread (Max. mm) | Stroke (mm) | Pump Tip (mm) |    |     | Jaw Tip (mm) |    |    | Weight (Kgs) |
|----------|-----------|-----------------|------------------|-------------|---------------|----|-----|--------------|----|----|--------------|
|          |           |                 |                  | H           | E             | F  | G   | A            | B  | C  |              |
| 4 Ton    | PM400     | 185             | 255              | 60          | 42            | 22 | 84  | 11           | 6  | 22 | 8.3          |
| 6 Ton    | PM600     | 220             | 330              | 70          | 45            | 23 | 94  | 13           | 10 | 22 | 8.5          |
| 8 Ton    | PM800     | 230             | 350              | 85          | 50            | 25 | 122 | 11           | 10 | 25 | 12.0         |
| 12 Ton   | PM1200    | 270             | 375              | 85          | 60            | 28 | 118 | 14           | 10 | 29 | 17.2         |
| 20 Ton   | PM2000    | 360             | 520              | 111         | 80            | 40 | 160 | 20           | 27 | 33 | 38.2         |
| 30 Ton   | PM3000    | 360             | 550              | 111         | 98            | 50 | 155 | 20           | 27 | 38 | 50.6         |



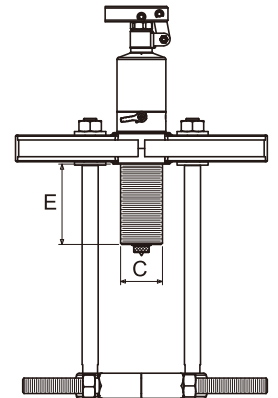
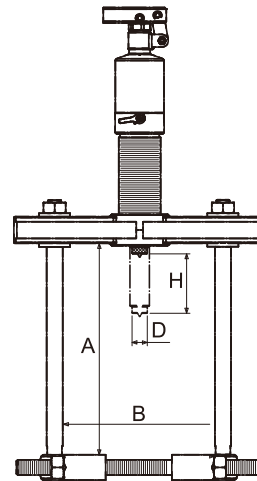


# HYDRAULIC PULLERS - PACKAGE MODELS

**POWERRAM**  
HYDRAULIC TOOLS

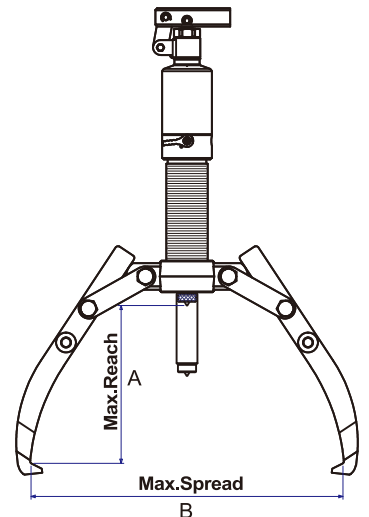
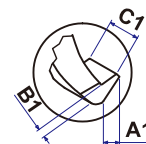
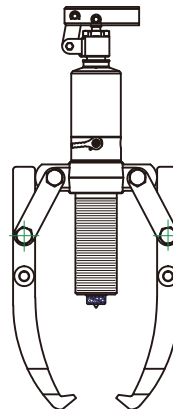


- One completed set (4 ~ 8 Tons) with two kinds of puller for user's convenience.



## FEATURES

- Four stages of foldable & removable handle saves the handle force during operation.
- 360° Rotary Socket.
- Self-contained hydraulic pump and puller body with integral safety valve.
- Spring loaded live centering nut for easy job (removable).
- 2 jaws puller cross head with manganous-phosphate plated for rust proof and durability.
- Package including pump body, jaw assembly, cross bearing, extension bar and blow molded case for practical and safe works.



## SPECIFICATIONS

| Capacity | Model No. | Reach (Max. mm) | Spread (Max. mm) | Stroke (mm) | Pump Tip (mm) |    |     | Jaw Tip (mm) |    |    | Weight (Kgs)                       |
|----------|-----------|-----------------|------------------|-------------|---------------|----|-----|--------------|----|----|------------------------------------|
|          |           | A               | B                | H           | C             | D  | E   | A1           | B1 | C1 |                                    |
| 4 Ton    | PM420     | 185/224         | 255/145          | 60          | 42            | 22 | 84  | 11           | 6  | 22 | 12.4                               |
| 6 Ton    | PM620     | 220/255         | 330/220          | 70          | 45            | 23 | 90  | 13           | 10 | 22 | 17.0                               |
| 8 Ton    | PM820     | 230/255         | 350/230          | 85          | 50            | 25 | 122 | 11           | 10 | 25 | 20.0                               |
| 12 Ton   | PM1220    | 270/298         | 375/310          | 85          | 60            | 28 | 115 | 14           | 10 | 29 | 17.2 / 20.6<br>(puller / acc. set) |

# SEPARATE HYDRAULIC PULLERS

**POWERRAM**  
HYDRAULIC TOOLS

## MODEL:PR SERIES



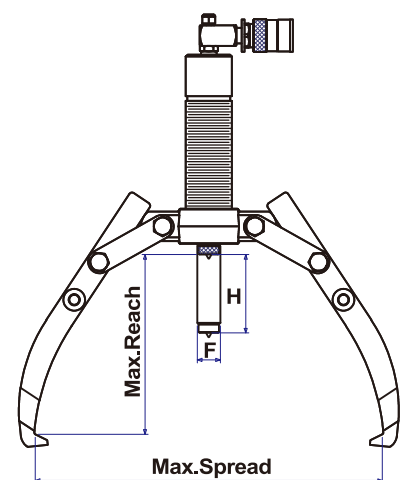
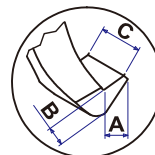
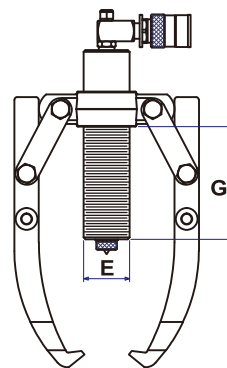
### FEATURES

- Heat treated & chrome plated hydraulic cylinder rod provides linear force.
- Easily release valve.
- Spring loaded live centering nut for easy job (removable).
- 2/3 jaws combination puller cross head with manganous-phosphate plated for rust proof and durability.
- Heat treated forged alloy steel cross bolts & jaws with manganous-phosphate plated for rust proof and long life service.
- Suggested Hand Pumps:  
4 ~ 12 Tons: PB600BG or AHP701BG  
20 ~ 30 Tons: PB700BG or AHP702BG



### ACCESSORIES

| Model No. | Part No. | Length of Long Arm (mm) | Max. Reach | Max. Spread |
|-----------|----------|-------------------------|------------|-------------|
| PR400     | C0948    | 295                     | 222        | 300         |
| PR800     | C0950    | 395                     | 308        | 445         |
| PR1200    | C0951    | 435                     | 340        | 420         |
| PR2000    | C0960    | 555                     | 428        | 540         |
| PR3000    | C0961    | 555                     | 428        | 620         |



### SPECIFICATIONS

| Capacity | Model No. | Reach (Max. mm) | Spread (Max. mm) | Stroke (mm) | Pump Tip (mm) |    |     | Jaw Tip (mm) |    |    | Weight (Kgs) |
|----------|-----------|-----------------|------------------|-------------|---------------|----|-----|--------------|----|----|--------------|
|          |           |                 |                  | H           | E             | F  | G   | A            | B  | C  |              |
| 4 Tons   | PR400     | 185             | 255              | 60          | 42            | 22 | 84  | 11           | 6  | 22 | 8.0          |
| 8 Tons   | PR800     | 230             | 350              | 85          | 50            | 25 | 122 | 11           | 10 | 25 | 12.0         |
| 12 Tons  | PR1200    | 270             | 375              | 85          | 60            | 28 | 118 | 14           | 10 | 29 | 12.7         |
| 20 Tons  | PR2000    | 360             | 520              | 111         | 80            | 40 | 161 | 20           | 27 | 33 | 39.3         |
| 30 Tons  | PR3000    | 360             | 550              | 111         | 98            | 50 | 155 | 20           | 27 | 38 | 51.5         |

# SEPARATE HYDRAULIC PULLERS - PACKAGE MODELS

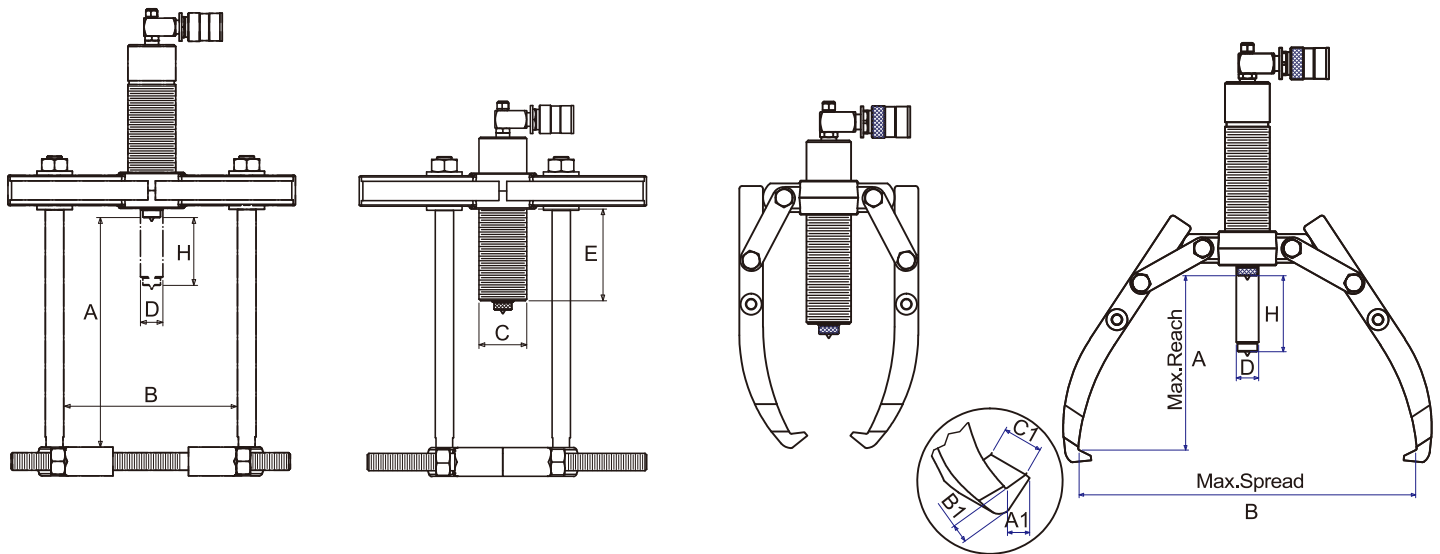
**POWERRAM**  
HYDRAULIC TOOLS

## MODEL: PR420 - PR1220



### FEATURES

- Heat treated & chrome plated hydraulic cylinder rod provides linear force.
- Easily release valve.
- Spring loaded live centering nut for easy job (removable).
- 2 jaws puller cross head with manganous-phosphoate plated for rust proof and durability.
- Heat treated,chrome plated & alloy steel stud for rust proof and free reach.
- Package including puller body, jaw assembly, cross bearing, extension bar and blow molded case for practical and safe works.
- Suggested Hand Pumps:  
4 ~ 12 Tons: PB600BG or AHP701BG  
20 ~ 30 Tons: PB700BG or AHP702BG



### SPECIFICATIONS

| Capacity | Model No. | Reach<br>(Max. mm) | Spread<br>(Max. mm) | Stroke<br>(mm) | Pump Tip (mm) |    |     | Jaw Tip (mm) |    |    | Weight<br>(Kgs) |
|----------|-----------|--------------------|---------------------|----------------|---------------|----|-----|--------------|----|----|-----------------|
|          |           | A                  | B                   | H              | C             | D  | E   | A1           | B1 | C1 |                 |
| 4 Tons   | PR420     | 185/224            | 255/145             | 60             | 42            | 22 | 84  | 11           | 6  | 22 | 10.8            |
| 8 Tons   | PR820     | 230/255            | 350/230             | 85             | 50            | 25 | 122 | 11           | 10 | 25 | 17.9            |
| 12 Tons  | PR1220    | 270/298            | 375/310             | 85             | 60            | 28 | 115 | 14           | 10 | 29 | 12.7 / 21.3     |

# HYDRAULIC EASY PULLERS

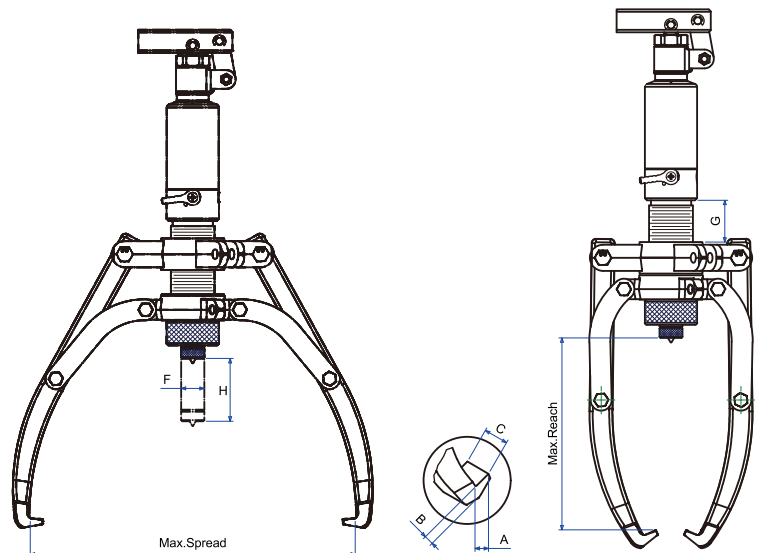
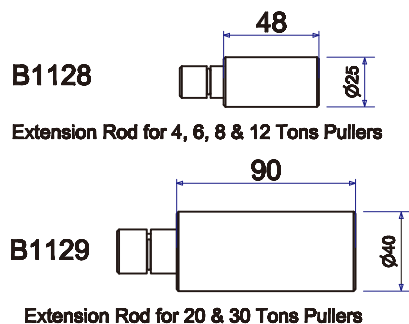
**POWERRAM**  
HYDRAULIC TOOLS

The first 2/3 way Hydraulic Easy Puller in the world !



## FEATURES

- Self-centering and fast-acting jaws are absolutely user-friendly for operating.
- 360° Rotary socket can be operated in all direction.
- The extension rods can be used for extra reach when necessary.
- The self-contained hydraulic pump provide easy job without the necessary of additaional cylinder, pump & hose.
- The integral safety valve can prevent the puller being overloaded.
- The convertible 2 / 3 way hydraulic easy puller provide the best and cost saving choice for the users.



## SPECIFICATIONS

| Capacity | Model No. | Max. Spread (mm) | Min. Reach (mm) | Min. Spread (mm) | Max. Reach (mm) | Stroke (mm) | Pump Tip (mm) |    |     |    | Jaw Tip (mm) |      |      | Weight (Kgs) |
|----------|-----------|------------------|-----------------|------------------|-----------------|-------------|---------------|----|-----|----|--------------|------|------|--------------|
|          |           |                  |                 |                  |                 | H           | E             | F  | G   | A  | B            | C    |      |              |
| 4 Tons   | PME400    | 311              | 150             | 51               | 189             | 60          | 42            | 22 | 40  | 13 | 10           | 22   | 9.3  |              |
| 6 Tons   | PME600    | 370              | 185             | 51               | 230             | 70          | 45            | 23 | 51  | 13 | 10           | 22   | 9.8  |              |
| 8 Tons   | PME800    | 454              | 225             | 98               | 275             | 85          | 50            | 25 | 69  | 13 | 13           | 27.5 | 15.3 |              |
| 12 Tons  | PME1200   | 515              | 240             | 117              | 299             | 85          | 60            | 28 | 62  | 15 | 16.5         | 29   | 18.4 |              |
| 20 Tons  | PME2000   | 520              | 250             | 111              | 306             | 100         | 80            | 40 | 107 | 18 | 20           | 33   | 46.0 |              |
| 30 Tons  | PME3000   | 620              | 330             | 121              | 408             | 100         | 98            | 50 | 101 | 20 | 27           | 38   | 61.8 |              |

Patented in USA, Germany, Taiwan, P.R.C.....etc.

# SEPARATE HYDRAULIC EASY PULLERS

**POWERRAM**  
HYDRAULIC TOOLS

## MODEL:PRE SERIES



PRE800



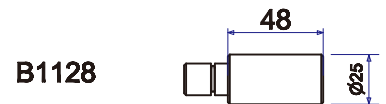
PRE1200



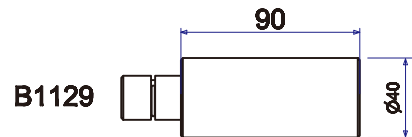
PRE2000

### FEATURES

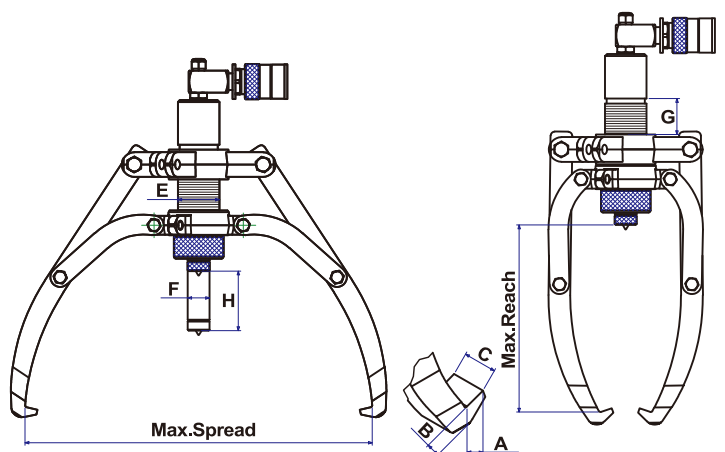
- Self-centering and fast-acting jaws are absolutely user-friendly for operating.
- 360° Rotary socket can be operated in all direction.
- The extension rods can be used for extra reach when necessary.
- The integral safety valve can prevent the puller being overloaded.
- The convertible 2 / 3 way hydraulic easy puller provide the best and cost saving choice for the users.
- Suggested Hand Pumps:  
4 ~ 12 Tons: PB600BG or AHP701BG  
20 ~ 30 Tons: PB700BG or AHP702BG



B1128  
Extension Rod for 4, 6, 8 & 12 Tons Pullers



B1129  
Extension Rod for 20 & 30 Tons Pullers



### SPECIFICATIONS

| Capacity | Model No. | Max. Spread (mm) | Min. Reach (mm) | Min. Spread (mm) | Max. Reach (mm) | Stroke (mm) | Pump Tip (mm) |    |     |    | Jaw Tip (mm) |      |      | Weight (Kgs) |
|----------|-----------|------------------|-----------------|------------------|-----------------|-------------|---------------|----|-----|----|--------------|------|------|--------------|
|          |           |                  |                 |                  |                 | H           | E             | F  | G   | A  | B            | C    |      |              |
| 4 Tons   | PRE400    | 311              | 150             | 51               | 189             | 60          | 42            | 22 | 40  | 13 | 10           | 22   | 7.4  |              |
| 8 Tons   | PRE800    | 454              | 225             | 98               | 275             | 85          | 50            | 25 | 69  | 13 | 13           | 27.5 | 14.0 |              |
| 12 Tons  | PRE1200   | 515              | 240             | 117              | 299             | 85          | 60            | 28 | 62  | 15 | 16.5         | 29   | 17.0 |              |
| 20 Tons  | PRE2000   | 520              | 250             | 111              | 306             | 100         | 80            | 40 | 107 | 18 | 20           | 33   | 36.7 |              |
| 30 Tons  | PRE3000   | 620              | 330             | 121              | 408             | 100         | 98            | 50 | 101 | 20 | 27           | 38   | 56.5 |              |

Patented in USA, Germany, Taiwan, P.R.C.....etc.



# PUSH PULLER / THREE-IN-ONE

**POWERRAM**  
HYDRAULIC TOOLS

The first Three-in-one push puller in the world !



PD12080

## SIMPLE, EASY

The patented unique design provides the users to get the three-in-one tool for installing, outer pulling and inner pulling with the great convenience and safety.

The push puller is specially designed for having combined works on pushing and pulling. This creates one tool to provide the both of most even force for pushing and pulling with great convenience.

The pushing jaw heads on the inner ring of the bearing which prevents the force and/or heat from being transmitted through the outer ring and the rolling parts, minimizing the risk of bearing damaged.

## SAFE

- The built-in safety valve prevents the user being harmed and work object being damaged by rated pressure which can not be reset or adjusted.
- Most parts are forged SCM440 alloy steel, creating a durable and safe product.



INNER PULLING



INSTALLING



OUTER PULLING

## USER-FRIENDLY

- Unique & Patented double action pump body to provide the pushing and pulling force.
- Unique jaw design for installing and outer pulling without removing and changing.
- Three jaw structure provides the even and constant force whenever for installing, outer pulling and inner pulling.
- The extension bars can be used where necessary for reach.
- Self-centering design on inner puller provides the even force and prevent the jaws from sliding off during operating.

## COST SAVING

- The Three-in-One design reduces tool-reset time and duration of operation.
- This push puller is ideal for installing and dismantling a wide variety of press-fit parts, including bushings, wheels, bearings, gears and pulleys.

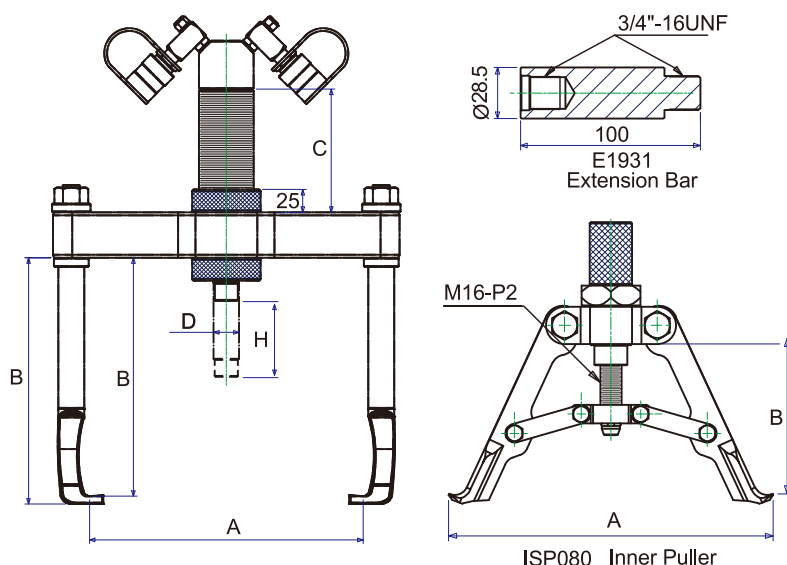
# PUSH PULLER / THREE-IN-ONE

**POWERRAM**  
HYDRAULIC TOOLS

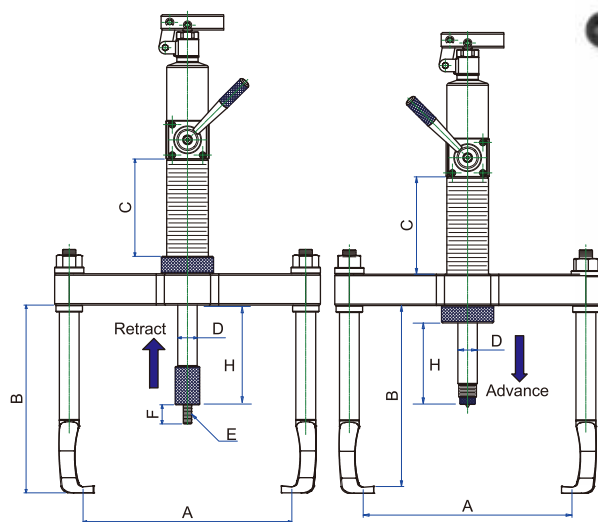
The first Three-in-one push puller in the world !



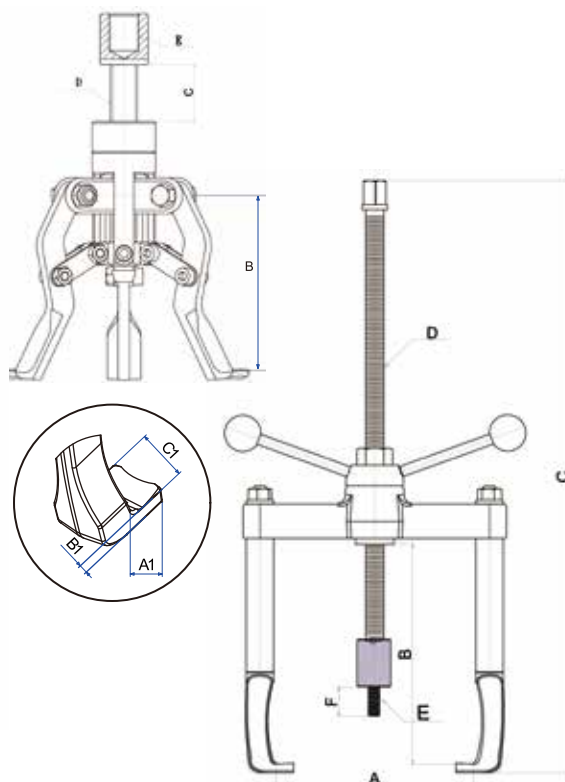
PDR12080



## INSTALLING OUTER PULLING



MD6203



## SPECIFICATIONS

| Model No. | Application   | Output (Ton) | A (mm)  | B (mm)  | C (mm) | D (mm)     | E (mm)     | F (mm) | Stroke H (mm) | Jaw Tip (mm) |     |     | Weight (Kg) |
|-----------|---------------|--------------|---------|---------|--------|------------|------------|--------|---------------|--------------|-----|-----|-------------|
|           |               |              |         |         |        |            |            |        |               | A1           | B1  | C1  |             |
| PD12080   | Installing    | 8            | 44-280  | 270     | 135    | 28         | M12-P1.75  | 34     | 85            | 20           | 10  | 30  | 36          |
|           | Outer Pulling | 12           | 85-300  | 260     | 135    | 28         | ---        | ---    | 85            | 20           | 10  | 30  | ---         |
|           | Inner Pulling | 8            | 135-245 | 130-150 | ---    | ---        | 1"-12UNF   | ---    | ---           | ---          | --- | --- | ---         |
| PDR12080  | Installing    | 8            | 44-280  | 270     | 135    | 28         | M12-P1.75  | 34     | 85            | 20           | 10  | 30  | 34          |
|           | Outer Pulling | 12           | 85-300  | 260     | 135    | 28         | ---        | ---    | 85            | 20           | 10  | 30  | ---         |
|           | Inner Pulling | 8            | 135-245 | 130-150 | ---    | ---        | 1"-12UNF   | ---    | ---           | ---          | --- | --- | ---         |
| MD6203    | Installing    | 8            | 70-206  | 240     | 720    | 3/4"-10UNC | M12-P1.75  | 34     | ---           | 20           | 10  | 30  | 12          |
|           | Outer Pulling | 8            | 29-186  | 230     | 720    | 3/4"-10UNC | ---        | ---    | ---           | 20           | 10  | 30  | ---         |
|           | Inner Pulling | 8            | 52-150  | 130-150 | 34     | 5/8"-11UNC | 3/4"-10UNC | ---    | ---           | ---          | --- | --- | ---         |

Hand pumps suggested for PDR12080: AHP703D or P550D.

# TRI-SECTION PLATES



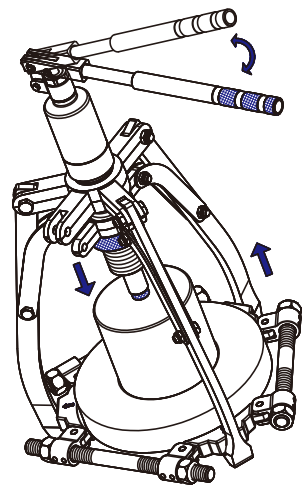
Spreading - Rear Side



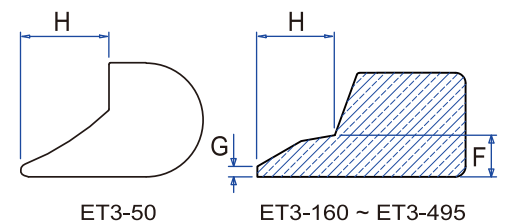
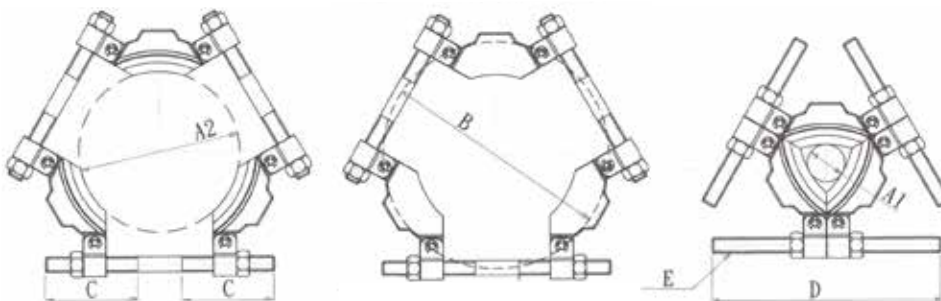
Spreading - Front Side

## USER-FRIENDLY & SAFE

- Unique & patented swivel design creates the max. spread.
- The tri-section construction provides the even force distribution, preventing bearing from locking and/or tilting on the shaft during dismantling.
- Suitable for combination usage with all three-armed hydraulic pullers.
- Available in a wide range, covering the most common shaft sizes.
- The firm grip behind inner and outer rings of bearing ensures the pulling force being transmitted through the moving parts and preventing the damaging of bearing.



Easy Operating



## SPECIFICATIONS ( mm )

| Model No. | Available Shaft Dia. |     | Spread B (Max.) | C    | D   | E            | F  | G | H  | Capacity (Ton) | Weight (Kg) |
|-----------|----------------------|-----|-----------------|------|-----|--------------|----|---|----|----------------|-------------|
|           | A1                   | A2  |                 |      |     |              |    |   |    |                |             |
| ET3-50    | 12                   | 50  | 78              | 24.5 | 88  | M10-P1.25    | 10 | 2 | 13 | 4              | 0.6         |
| ET3-160   | 26                   | 160 | 216             | 105  | 240 | 5/8"-11UNC   | 8  | 2 | 15 | 6              | 3.5         |
| ET3-210   | 50                   | 210 | 280             | 117  | 285 | 7/8"-14UNF   | 10 | 2 | 22 | 8              | 6.0         |
| ET3-340   | 90                   | 340 | 460             | 175  | 430 | 1 1/4"-12UNF | 14 | 2 | 23 | 20             | 20.0        |
| ET3-495   | 140                  | 495 | 660             | 235  | 610 | 1 3/4"-12UNF | 20 | 2 | 40 | 30             | 45.0        |

# TRI-SECTION PULLERS

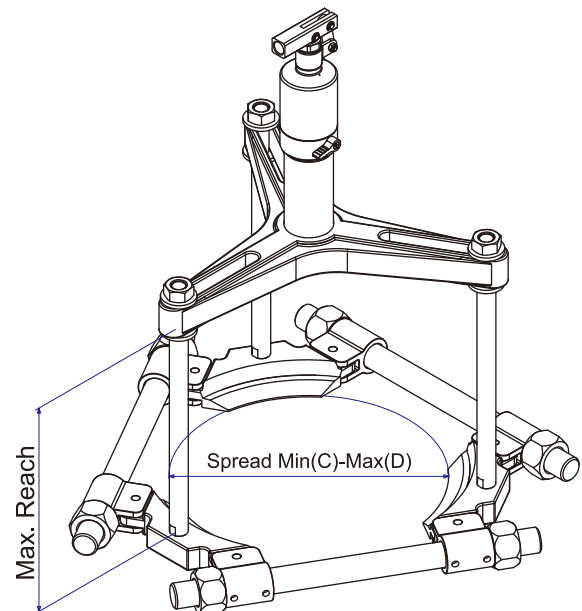
**POWERRAM**  
HYDRAULIC TOOLS



Steel Case - Package

## FEATURES

- The set including Tri-section plate for convenient and safe pulling job.
- Wedge-shaped edge allows removal of the most hard-to-grip components.
- The firm grip behind bearing's inner & outer rings ensures the pulling force not to be transmitted through the rolling parts.
- The tri-section plates design creates the most even force distribution and the maximizing spread.



## SPECIFICATIONS

| Capacity | Model No. | Reach<br>(Max. mm) | Spread (mm) |          | Pump Body<br>Model No. | Overall Width<br>(mm) | Weight<br>(Kgs) |
|----------|-----------|--------------------|-------------|----------|------------------------|-----------------------|-----------------|
|          |           |                    | C (Min.)    | D (Max.) |                        |                       |                 |
| 4 Tons   | P3412     | 211                | 30          | 160      | PM401                  | 290                   | 19              |
| 6 Tons   | P3612     | 243                | 50          | 210      | PM601                  | 360                   | 29              |
| 8 Tons   | P3812     | 243                | 50          | 270      | PM801                  | 420                   | 32              |
| 12 Tons  | P31212    | 284                | 90          | 340      | PM1201                 | 580                   | 65              |



# Universal Bearing Attachments

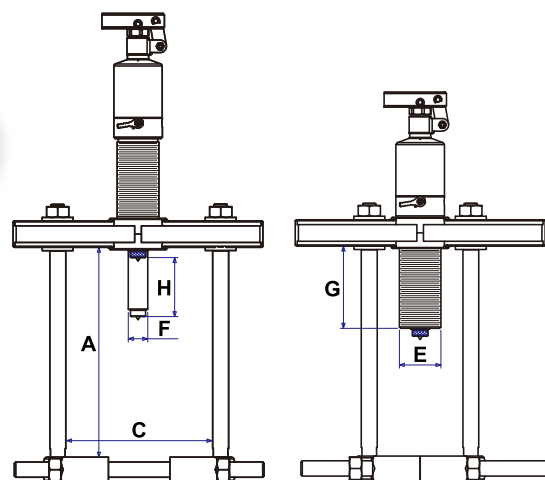
## Cross Bearing Pullers

**POWERRAM**  
HYDRAULIC TOOLS



### FEATURES

- Forged of high strength steel alloy.
- Heat treated, Chrome plated for rust proof and durable life.
- Wedge-shaped edges allow removal of the most hard-to-grip components.
- Cross bearing pullers are easy to be applied on the most difficult parts for fast and efficient removal.



### TECHNICAL DATA - Cross Bearing Pullers

| Model No. | Capacity (Tons) | Reach (Max. mm)<br>A | Spread (Max. mm)<br>C | Stroke (mm)<br>H | Pump Tip (mm) |    |     | Weight (Kg) |
|-----------|-----------------|----------------------|-----------------------|------------------|---------------|----|-----|-------------|
|           |                 |                      |                       |                  | E             | F  | G   |             |
| PM410     | 4               | 224                  | 145                   | 60               | 42            | 22 | 84  | 9.5         |
| PM610     | 6               | 255                  | 220                   | 70               | 45            | 23 | 90  | 14          |
| PM810     | 8               | 255                  | 230                   | 85               | 50            | 25 | 122 | 15.2        |
| PM1210    | 12              | 298                  | 310                   | 85               | 60            | 28 | 115 | 25.6        |

\* Including the hydraulic pump body and bearing attachment.

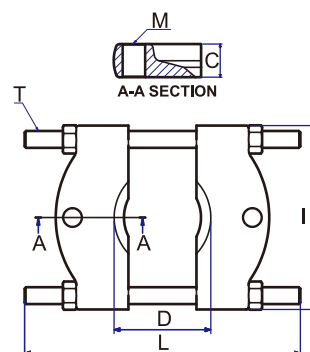
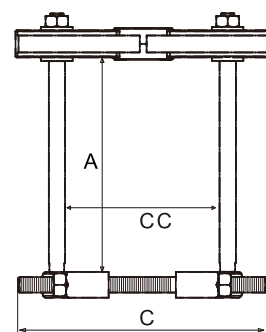
### TECHNICAL DATA - Accessory Set

| Model No. | Capacity (Tons) | A (mm) | D (mm)<br>Min-Max | C (mm) | CC (mm)<br>Min-Max | Thread (inch) | Bearing Attachment | Weight (Kg) |
|-----------|-----------------|--------|-------------------|--------|--------------------|---------------|--------------------|-------------|
| P412      | 4               | 224    | 12 - 70           | 163    | 100 - 145          | 1/2"- 12UNC   | YC9015             | 6.3         |
| P612      | 6               | 255    | 28 - 150          | 260    | 115 - 220          | 5/8"- 11UNC   | YC9025             | 10.5        |
| P812      | 8               | 255    | 28 - 150          | 260    | 110 - 230          | 5/8"- 11UNC   | YC9025             | 10.5        |
| P1212     | 12              | 298    | 40 - 225          | 360    | 140 - 310          | 3/4"- 10UNC   | YC9035             | 11.3        |

\* Excluding the hydraulic pump body.

### TECHNICAL DATA - Bearing Attachments

| Model No. | D<br>Min - Max (mm) | C (mm) | L (mm) | I (mm) | ØT (inch) | ØM (inch) | Weight (Kgs) |
|-----------|---------------------|--------|--------|--------|-----------|-----------|--------------|
| YC9005    | 5-60                | 17     | 120    | 92     | 3/8-24UNF | 3/8-16UNC | 0.7          |
| YC9010    | 15-60               | 20     | 135    | 130    | 1/2-20UNF | 3/8-16UNC | 1.5          |
| YC9015    | 12-70               | 27     | 165    | 156    | 5/8-18UNF | 1/2-12UNC | 2.5          |
| YC9025    | 28-150              | 33     | 275    | 207    | 3/4-16UNF | 5/8-11UNC | 5.5          |
| YC9035    | 40-225              | 38.5   | 350    | 240    | 1-14UN    | 3/4-10UNC | 11           |
| YC9035A   | 40-225              | 38.5   | 350    | 240    | 1-14UN    | 1-14UN    | 11           |





# 50 TONS EASY PULLER

**POWERRAM**  
HYDRAULIC TOOLS



## FEATURES

- Double acting cylinder for holding, opening and closing the jaws for safe and secure grip on job.
- The easy jaw operating system prevent puller jaws from sliding and/or springing off the work object always.
- Self-centering design keeps the arms slide inwards or outwards simultaneously.
- Electric Pump advances and retracts the pushing cylinder only to prevent operating errors from happening.
- 50 Tons Cylinder is single-acting, spring return type with a maximum working pressure of 10,000 psi.
- Electric Hydraulic pump is two stage version ; the low pressure stage provides the fast stroking to save time ; the high pressure stage is controlled by remote hand switch.
- Puller can be adjusted 5 degree vertically.
- The cart has two swivel castors which can provide the movement of cart easily.

- Four extensions are included for the needs on extra stroke.
- PRE50T is designed as the competitive version for costwise option.

**\* This model is patented in Taiwan & Germany, and patent pending in USA & PRC.**

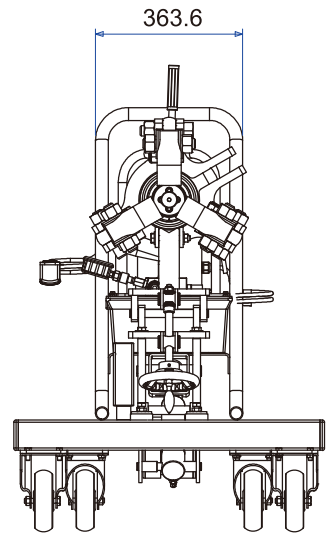
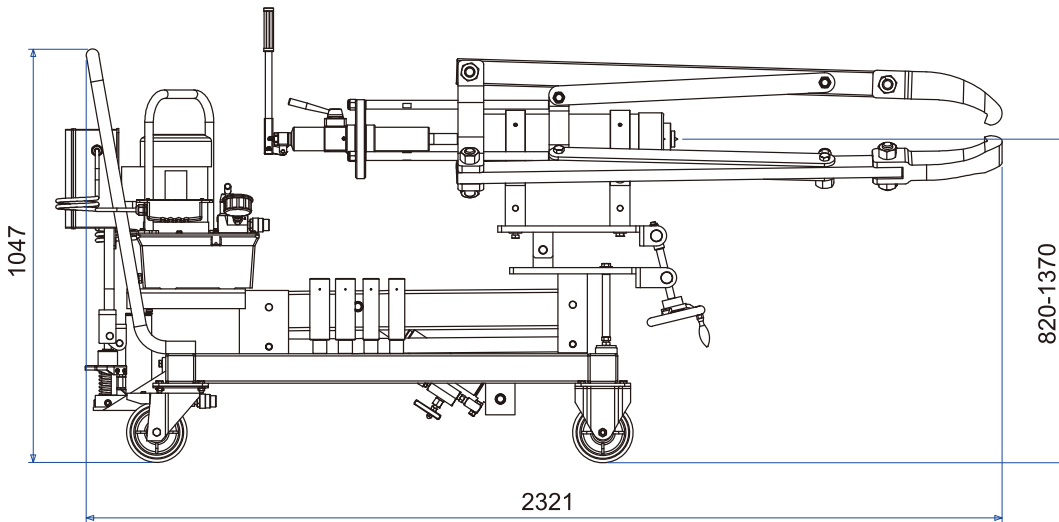
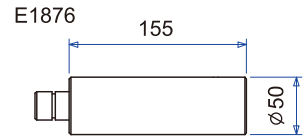
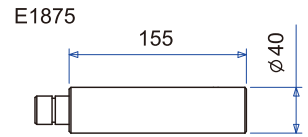
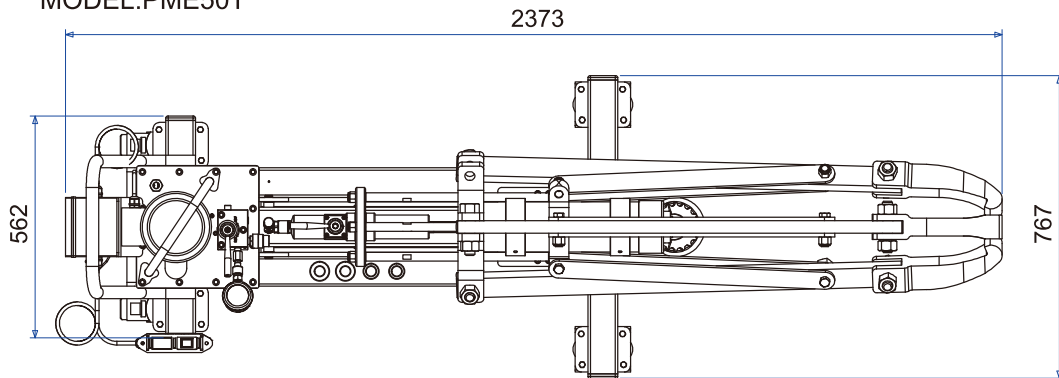
PRE50T  
( Short Jaw Model )



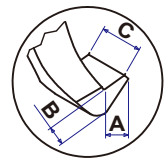
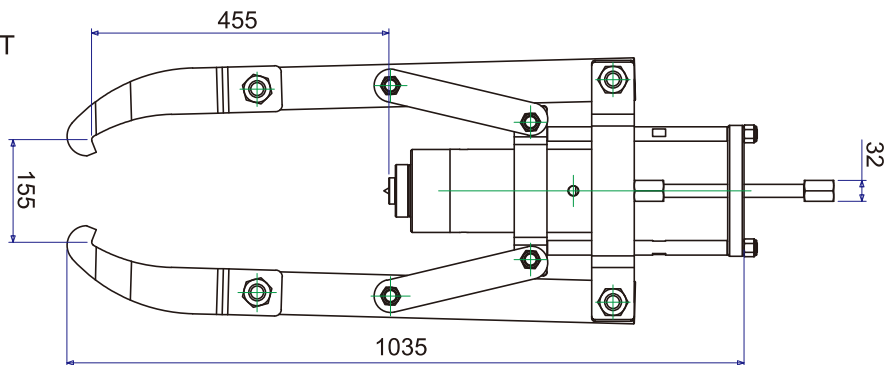
# 50 TONS EASY PULLER

**POWERRAM**  
HYDRAULIC TOOLS

MODEL:PME50T



MODEL:PRE50T



Jaw Tip

## SPECIFICATIONS

| Model No. | Reach (Max/mm) | Spread (Min-Max) | Stroke (mm) | Overall Dimensions (mm) | Power Source | Weight (Kg) | Jaw Tip |    |    | Extension Rod*** |       |
|-----------|----------------|------------------|-------------|-------------------------|--------------|-------------|---------|----|----|------------------|-------|
|           |                |                  |             |                         |              |             | A       | B  | C  | E1876            | E1875 |
| PME50TE*  | 780            | 200-1250         | 330         | 2373x1047x767           | 220V / 50Hz  | 372         |         |    |    | 2                | 2     |
| PME50T    | 780            | 200-1250         | 330         | 2321x1047x767           | ---          | 340         | 23      | 35 | 60 | 2                | 2     |
| PRE50T**  | 455            | 160-860          | 159         | 364x1035                | ---          | 140         |         |    |    | 1                | 1     |

\* PME50TE is equipped with Electric Pump - EP18S.

\*\* PRE50T is not included hand pump, the recommend model is AHP703.

\*\*\* The quantity of extension rod are included.

## ELECTRIC PUMP - Specification

| Model No. | Acting | Reservoir Capacity (cm <sup>3</sup> ) | Function     | Motor                                   | Oil Del. ( cm <sup>3</sup> /min. @ ) |         |          |           | Weight (Kg) |
|-----------|--------|---------------------------------------|--------------|-----------------------------------------|--------------------------------------|---------|----------|-----------|-------------|
|           |        |                                       |              |                                         | 0 psi                                | 100 psi | 5000 psi | 10000 psi |             |
| EP18S     | Single | 8000                                  | Hold/Retract | 0.45KW 220V<br>50/60 Hz<br>Single Phase | 4000                                 | 2800    | 330      | 280       | 32          |

# 100 & 150 TONS EASY PULLER

**POWERRAM**  
HYDRAULIC TOOLS

**Simple & Easy, User-Friendly,  
Safety and Cost Saving - Our Goals Always!**



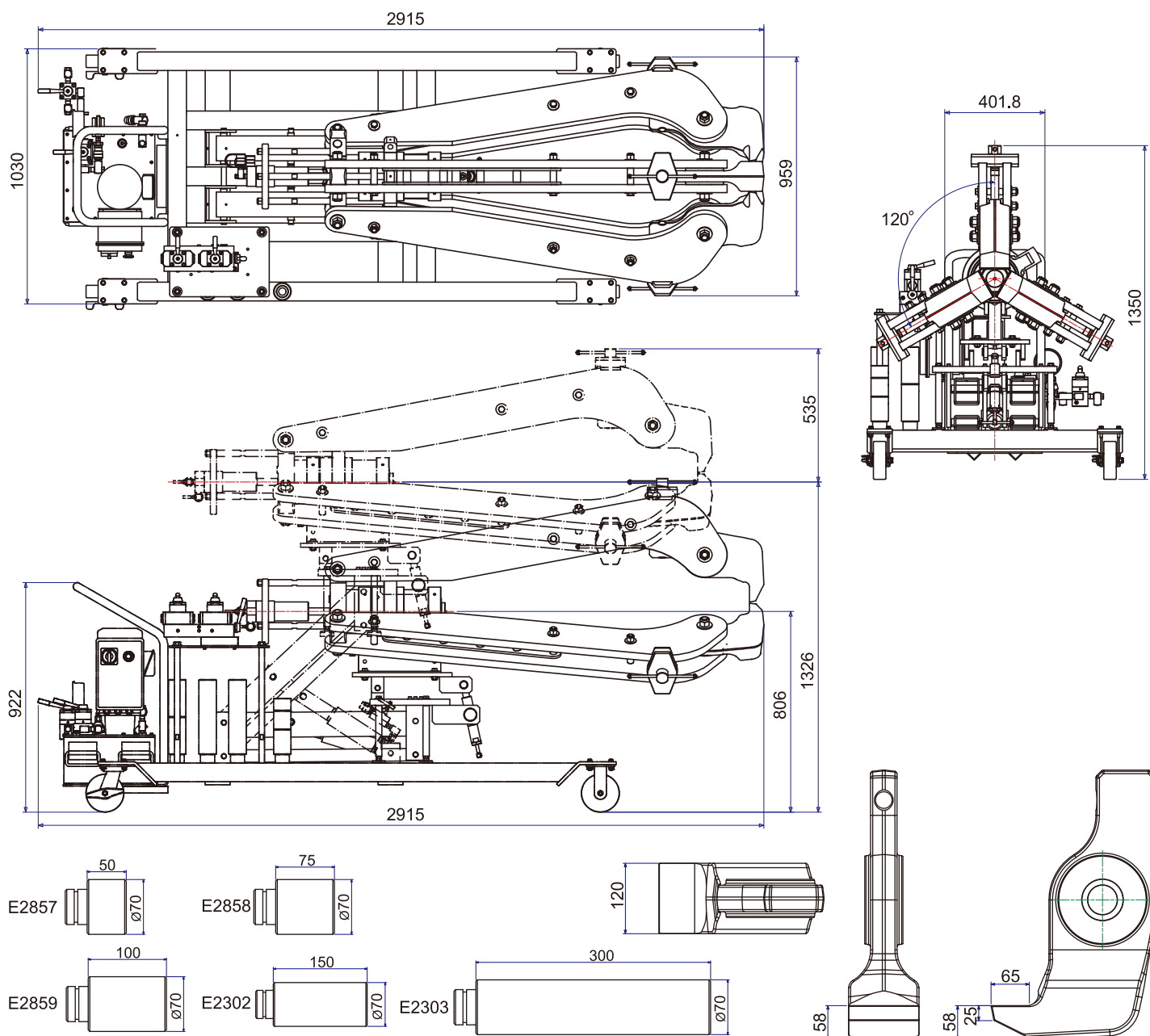
## FEATURES

- Double acting hydraulic system for holding, opening & closing jaws for safe & secure grip on work object always.
- Self-centering design keeps puller jaws clamp work object evenly and automatically.
- Electrical Hydraulic Pump advances and retracts the pushing cylinder only to prevent operating errors from happening.
- The easy jaw head adjusting system prevents puller jaws from sliding and spring off the work object being pulled always.
- 100 Ton Puller can be converted into 2 or 3-Way configurations, while 150 Ton puller is 3-Way configuration only.
- Puller can be adjusted with 5 degree up/down of puller centerline for precisely positioning.
- The cart swivel castors provide movement of cart easily.
- Electrical Hydraulic Pump is two stage version ; the low pressure stage provides the fast stroking to save time ; the high pressure stage is controlled by remote switch.
- 100/150 Ton Cylinders are 2-stages, spring return type with a maximum working pressure of 10,000 psi.
- Five extension adapters are standard attachments for the needs on extra stroke.
- **Integrated Control System for operating Lift and Push easily and efficiently by Electric Pump**

**\* These models are patented in Taiwan, Germany, USA & PRC.**

# 100 TONS EASY PULLER

**POWERRAM**  
HYDRAULIC TOOLS



## EXTENSIONS & JAW TIP

| Part No. | Dia. (mm) | Length (mm) | Qty (pc) | Jaw Tip Dimensions (mm)                                   |
|----------|-----------|-------------|----------|-----------------------------------------------------------|
| E2857    | 70        | 50          | 1        | Tip Depth: 65<br>Tip Clearance: 25 - 58<br>Tip Width: 120 |
| E2858    |           | 75          | 1        |                                                           |
| E2859    |           | 100         | 1        |                                                           |
| E2302    |           | 150         | 2        |                                                           |
| E2303    |           | 300         | 2        |                                                           |

## SPECIFICATIONS

| Model No. | Reach (Min-Max) | Spread (Min-Max) | Stroke (mm) | Overall Dimensions (mm) | Power Sources | Weight (Kgs) |
|-----------|-----------------|------------------|-------------|-------------------------|---------------|--------------|
| PME100T   | 952-1220        | 300-1500         | 270         | 2915x1035x1350          | - - -         | 1083         |
| PME100TE* | 952-1220        | 300-1500         | 270         | 2915x1035x1350          | - - -         | 1189         |

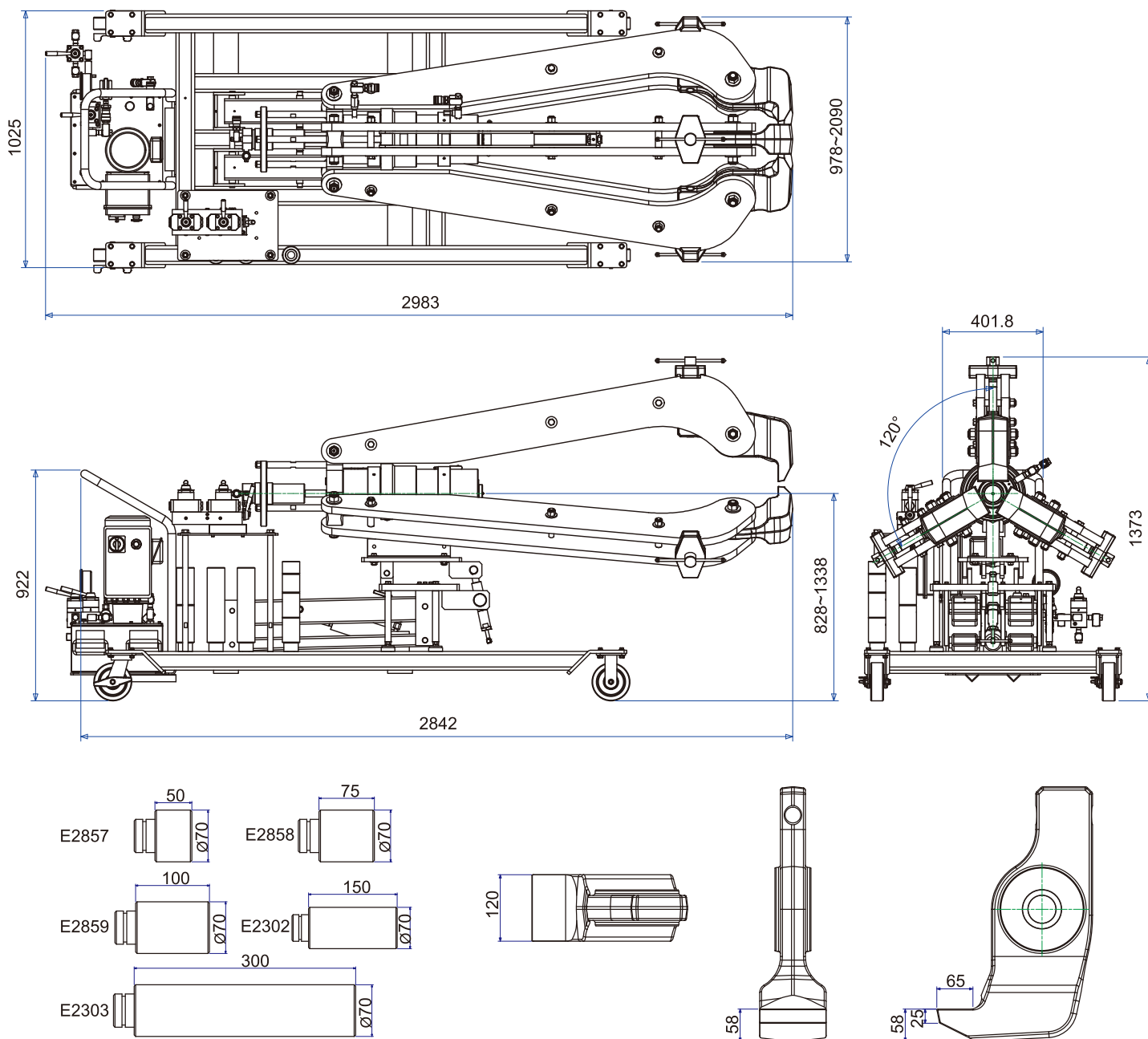
\* This model is equipped with the Electric Pumps according to Customer's requirement.

### \* ELECTRIC PUMPS:

We suggest two models of EP211 & EP420 as the options.  
Please contact with our distributors for further information.

# 150 TONS EASY PULLER

**POWERRAM**  
HYDRAULIC TOOLS



## EXTENSIONS & JAW TIP

| Part No. | Dia. (mm) | Length (mm) | Qty (pc) | Jaw Tip Dimensions (mm)                                   |
|----------|-----------|-------------|----------|-----------------------------------------------------------|
| E2857    | 70        | 50          | 1        | Tip Depth: 65<br>Tip Clearance: 25 - 58<br>Tip Width: 120 |
| E2858    |           | 75          | 1        |                                                           |
| E2859    |           | 100         | 2        |                                                           |
| E2302    |           | 150         | 2        |                                                           |
| E2303    |           | 300         | 2        |                                                           |

## SPECIFICATIONS

| Model No. | Reach (Min-Max) | Spread (Min-Max) | Stroke (mm) | Overall Dimensions (mm) | Power Sources | Weight (Kg) |
|-----------|-----------------|------------------|-------------|-------------------------|---------------|-------------|
| PME150T   | 970-1175        | 300-1650         | 330         | 2842x1373x1025          | ---           | 1158        |
| PME150TE* | 970-1175        | 300-1650         | 330         | 2983x1373x1025          | EP420         | 1223        |

\* This model is equipped with the Electric Pump - EP420 & Control Panel System.



# 100 Tons Push Puller ( Railroad Version )

**POWERRAM**  
HYDRAULIC TOOLS



Accessory Set for Metric & Inch ( Class B ~ F )



Accessory Set for Inch ( Class G ~ GG )

## FEATURES

- Dismantle or Install the tapered roller bearings easily and efficiently.
- Specially designed for the major bearing manufacturers.
- The simple, efficient and easy operation provided with the pulling force - 100 Tons.
- Single Unit with portable design for easy, convenient positioning and saving storage space much.
- The basic equipment in most wheel shops.

## Universal railroad axle journal roller bearing push puller

Now, we are available to provide the basic tool in the most wheel shops for dismantling and installing the axle journal roller bearings. With this proper equipment and know-how, you can save the maximum of time and effort on maintenance for sure.

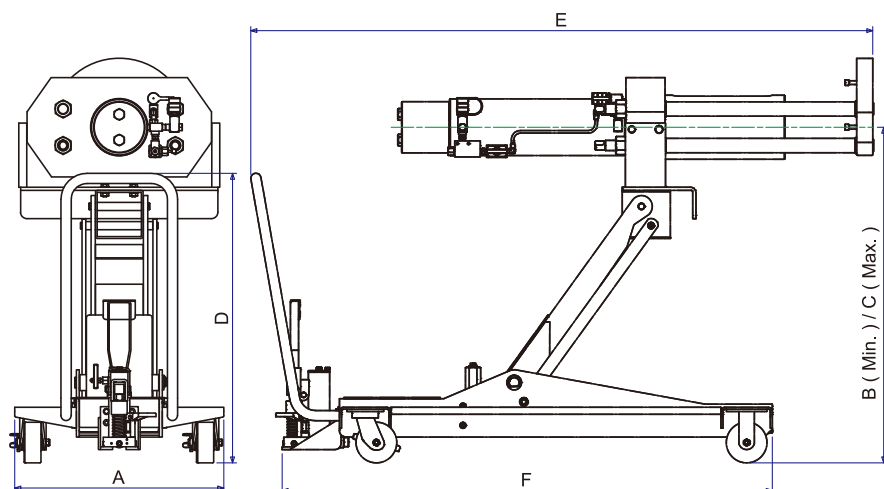
From class B through GG, each unit service a full line of bearings with rotating end caps. Simply remove the end caps, slip the pulling shoe between the bearings and the wheel, start the pump, the bearing being removed within seconds under the pulling force of 100 Tons easily.

The pulling shoe and installing tube ensure the most convenient and fast installation. 100-tons hydraulic cylinder is working under 10,000 psi always.

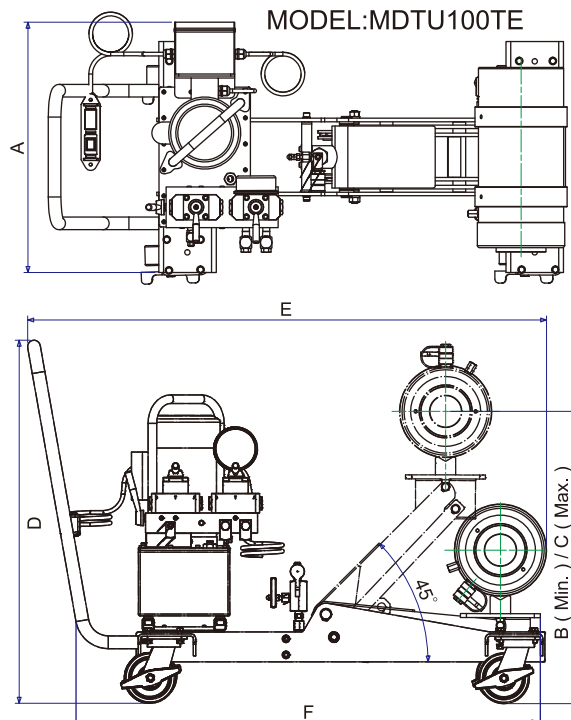
# 100 Tons Push Puller ( Railroad Version )

**POWERRAM**  
HYDRAULIC TOOLS

MODEL: BRBP100T



MODEL: MDTU100TE



## Accessory Set order information - IMPORTANT...

This accessory chart applies only to AAR configuration for vehicle maintenance applications.

### Class & Size of bearing assembly - TBU & SP " Metric Accessories "

| Accessory Description           | #120  | #130  | #140  | #150  |
|---------------------------------|-------|-------|-------|-------|
| Pulling Shoe Insert Adapter     | F0436 | F0437 | F0438 | F0439 |
| Guide Tube & Cap Screw Assembly | E2601 | E2602 | E2603 | E2604 |
| Cap Screw**                     | H0421 | H0421 | H0421 | H0422 |
| Guide Tube Adapter              | B1248 | B1248 | B1248 | B1248 |
| Installing Tube Adapter Ring    | D1031 | D1032 | D1033 | D1034 |

### Class & size ( inch ) of bearing assembly to be serviced

| Accessory Description           | Class B<br>4 1/4" x 8"                         | Class C<br>5" x 9" | Class D<br>5 1/2" x 10" | Class E<br>6" x 11" | Class EE<br>5 1/2" Axle. | Class EE<br>6" Axle. | Class F<br>6 1/2" x 12" | Class G<br>7" x 12" | Class G<br>6 1/2" Axle. | Class GG<br>6 1/2" Axle. |
|---------------------------------|------------------------------------------------|--------------------|-------------------------|---------------------|--------------------------|----------------------|-------------------------|---------------------|-------------------------|--------------------------|
| Pulling Shoe                    | No. F0442 is included as part of basic machine |                    |                         |                     |                          |                      |                         | F0443               | F0443                   | F0443                    |
| Pulling Shoe Insert Adapter     | F0440                                          | F0437              | F0438                   | F0439               | F0439                    | F0441                | F0441                   | ---                 | ---                     | ---                      |
| Guide Tube & Cap Screw Assembly | F0435-1                                        | F0435-2            | E2605                   | E2606               | E2607                    | E2608                | E2609                   | E2611               | E2610                   | E2612                    |
| Cap Screw**                     | H0423                                          | H0424              | H0425                   | H0426               | H0427                    | H0425                | H0428                   | H0430               | H0429                   | H0429                    |
| Guide Tube Adapter              | B1247                                          | B1246              | B1246                   | B1248               | B1248                    | B1248                | B1248                   | B1248               | B1248                   | B1248                    |
| Installing Tube                 | No. D1044 is included as part of basic machine |                    |                         |                     |                          |                      |                         | D1045               | D1045                   | D1045                    |
| Installing Tube Adapter Ring    | B1243                                          | D1037              | D1038                   | D1039               | D1039                    | D1040                | D1040                   | D1042               | D1041                   | D1041                    |

Note: Adapter listed above are for servicing the following roller bearing assemblies: Brenco " Crown-Taper ", New Departure-Hyatt " HyRoll Taper ", SKF " Expediter " and Timken " AP ".

\* Screws are supplied with the guide tube and should be ordered as replacements only.

## SPECIFICATIONS

| Model No.  | Stroke (mm) | Capacity (Tons) |       | A (mm) | B (mm) | C (mm) | D (mm) | E (mm)    | F (mm) | Weight (Kgs) |
|------------|-------------|-----------------|-------|--------|--------|--------|--------|-----------|--------|--------------|
|            |             | Pull            | Inst. |        |        |        |        |           |        |              |
| BRBP100T   | 392         | 100             | 68    | 652    | 370    | 1047   | 900    | 1940-2209 | 1530   | 590          |
| BRBP100TE* | 392         | 100             | 68    | 652    | 370    | 1047   | 900    | 1940-2209 | 1530   | 805          |
| MDTU100TE* | 254         | 100             | 68    | 627    | 384    | 731    | 909    | 1299      | 1175   | 410          |

\* This model is equipped with the Electric Pump - EP211D.

## ELECTRIC PUMP - Specifications

| Model No. | Acting | Reservoir Capacity (cm <sup>3</sup> ) | Function           | Motor                             | Oil Del. ( cm <sup>3</sup> /min. @ ) |          |           |            |
|-----------|--------|---------------------------------------|--------------------|-----------------------------------|--------------------------------------|----------|-----------|------------|
|           |        |                                       |                    |                                   | 0(psi)                               | 100(psi) | 5000(psi) | 10000(psi) |
| EP211D    | Double | 11000                                 | Adv./Hold /Retract | 1.12KW 220V 50/60 Hz Single Phase | 8200                                 | 7400     | 840       | 750        |

# HYDRAULICAL SPREADERS

**POWERRAM**  
HYDRAULIC TOOLS

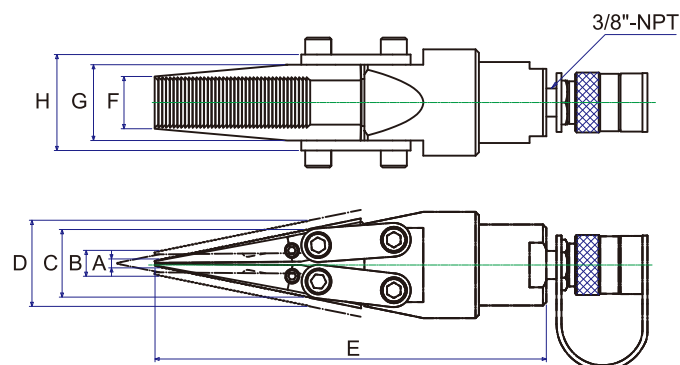
**Loads are lifted vertically!**



## FEATURES

- Ideal for numerous industrial maintenance repair jobs.
- Accurate height adjustments (for instance shaft alignment) can easily be executed by one person.
- Easy, light and very practical to use.
- Particularly suitable when available space is very limited from 5 to 40 mm.
- Due to the reduced thickness of the jaws, made of high quality hardened steel, these multi-functional wedges can be used for jobs where working space is extremely limited.
- **Package models are also available, please contact with the authorized distributors for details.**

SR07-TL07



## SPECIFICATIONS

| Model No.  | Capacity (Tons) | Spread (mm) |         | Stroke (mm) | C (mm) | D (mm) | E (mm) | F (mm) | G (mm) | H (mm) | Weight (Kgs) |
|------------|-----------------|-------------|---------|-------------|--------|--------|--------|--------|--------|--------|--------------|
|            |                 | Min - A     | Max - B |             |        |        |        |        |        |        |              |
| SR07       | 15              | 5           | 15      | 25          | 40     | 50     | 232    | 31     | 45     | 57     | 3.5          |
| SR07BG     | 15              | 5           | 15      | 25          | 40     | 50     | 232    | 31     | 45     | 57     | 14.5         |
| SR07BG MAX | 15 x 2          | 5           | 15      | 25          | 40     | 50     | 232    | 31     | 45     | 57     | 27.0         |
| TL07       | 15              | 5           | 15      | 25          | 36     | 46     | 232    | 31     | 45     | 57     | 3.5          |
| TL07BG     | 15              | 5           | 15      | 25          | 36     | 46     | 232    | 31     | 45     | 57     | 14.5         |
| TL07BG MAX | 15 x 2          | 5           | 15      | 25          | 36     | 46     | 232    | 31     | 45     | 57     | 27.0         |
| SR15       | 25              | 7           | 23      | 65          | 42.5   | 59     | 342    | 50.5   | 70     | 82     | 8.0          |
| SR15BG     | 25              | 7           | 23      | 65          | 42.5   | 59     | 342    | 50.5   | 70     | 82     | 24.0         |
| SR15BG MAX | 25 x 2          | 7           | 23      | 65          | 42.5   | 59     | 342    | 50.5   | 70     | 82     | 36.0         |

# HYDRAULIC FLANGE SPREADER - PFS10T

**POWERRAM**  
HYDRAULIC TOOLS



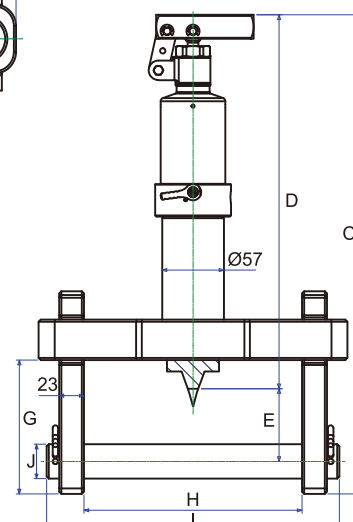
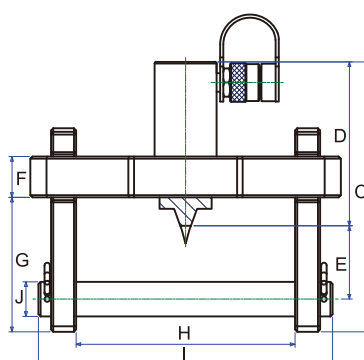
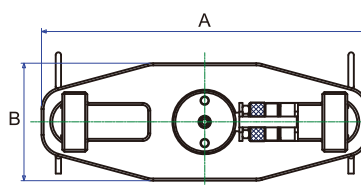
## FEATURES

- Suggest to use in sets for an even and higher spreading force.
- The claw widths are adjustable from 104 mm to 216 mm for wide range usage.
- All models are including safety block to remove the spreader and hold the loading.
- PFS10TI has a built-in hydraulic system, therefore the hand pump, hose and gauge are not necessary.



## SPECIFICATIONS

| Model No.    | Package included |                     |                 |              |            |
|--------------|------------------|---------------------|-----------------|--------------|------------|
|              | Hand Pump        | 1.5M Hose & Coupler | Gauge & Adaptor | Safety Block | Steel Case |
| PFS10T MIN   | --               | --                  | --              | V            | --         |
| PFS10TBG     | V                | V                   | V               | V            | V          |
| PFS10TBG MAX | V                | x 2                 | x 2             | x 2          | V          |
| PFS10TI      | --               | --                  | --              | V            | V          |



## SPECIFICATIONS

| Model No.    | Flange Thickness H (mm) | Stud Size J (mm) | Standard Wedge (mm) | Capacity (Tons) | Stroke (mm) | Oil Capacity (cm <sup>3</sup> ) | A (mm) | B (mm) | C (mm) | D (mm) | E (mm) | F (mm) | G (mm) | I (mm) | Weight (Kgs) |
|--------------|-------------------------|------------------|---------------------|-----------------|-------------|---------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------------|
| PFS10T MIN   | 104-216                 | Ø 31.75          | 3.3 - 28.7          | 10              | 51          | 73                              | 300    | 108    | 248    | 151    | 67     | 37.5   | 123.5  | 285    | 15           |
| PFS10TBG     | 104-216                 | Ø 31.75          | 3.3 - 28.7          | 10              | 51          | 73                              | 300    | 108    | 248    | 151    | 67     | 37.5   | 123.5  | 285    | 25.2         |
| PFS10TBG MAX | 104-216                 | Ø 31.75          | 3.3 - 28.7          | 10 x 2          | 51          | 73                              | 300    | 108    | 248    | 151    | 67     | 37.5   | 123.5  | 285    | 46.6         |
| PFS10TI      | 104-216                 | Ø 31.75          | 3.3 - 28.7          | 10              | 54          | 73                              | 300    | 108    | 442    | 375    | 67     | 37.5   | 123.5  | 285    | 17.5         |



# NUT SPLITTERS

**POWERRAM**  
HYDRAULIC TOOLS

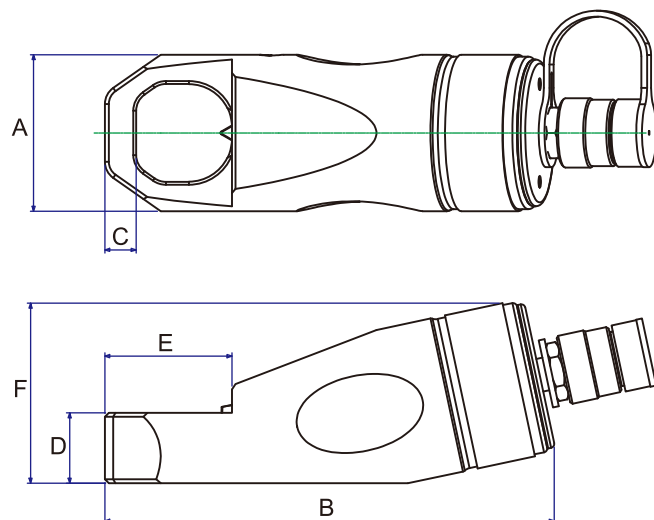
## MODEL: HNS SERIES

Capacity: 10 - 90 Tons



## FEATURES

- Compact design suitable for confined spaces, providing sufficient force to split rusted nuts.
- All models feature the durable & taught one-piece body by integrating the cutting frame and hydraulic cylinder.
- Specially designed "tool steel" cutter blade precisely cuts the nut to the cracking point.
- Unique angled head design ensures full contact with the nut during penetration.
- Unique angled cutter blade with a radius enhances resistance to cutting and breaking nuts.
- Six popular models available to accommodate a wide range of nuts.



## SPECIFICATIONS

| Model No. | Hexagon Nut Range (mm) | Bolt Range (mm) | Capacity (Tons) | Oil Capacity (cm <sup>3</sup> ) | Dimensions(in) |       |       |       |       |       | Weight (Kgs) |
|-----------|------------------------|-----------------|-----------------|---------------------------------|----------------|-------|-------|-------|-------|-------|--------------|
|           |                        |                 |                 |                                 | A(mm)          | B(mm) | C(mm) | D(mm) | E(mm) | F(mm) |              |
| HNS1924   | 19-24                  | M12-M16         | 10              | 18                              | 60             | 171.5 | 10    | 25    | 40    | 68    | 2.3          |
| HNS2432   | 24-32                  | M16-M22         | 15              | 40                              | 70             | 192   | 13    | 30    | 52    | 79    | 3.6          |
| HNS3241   | 32-41                  | M22-M27         | 20              | 68                              | 80             | 230   | 16    | 36    | 65    | 92    | 5.5          |
| HNS4150   | 41-50                  | M27-M33         | 35              | 150                             | 100            | 286   | 21    | 45    | 76    | 116   | 11.1         |
| HNS5060   | 50-60                  | M33-M39         | 50              | 250                             | 117            | 321   | 24    | 54.5  | 92    | 134   | 15.1         |
| HNS6075   | 60-75                  | M39-M48         | 90              | 530                             | 160            | 398   | 27    | 75    | 110   | 178   | 42.0         |

Notes: The Hardness of Nut Material must not excess HRC-44.

Should not be used on stainless steel nuts and/or square shape nuts.



# TOE JACKS

**POWERRAM**  
HYDRAULIC TOOLS

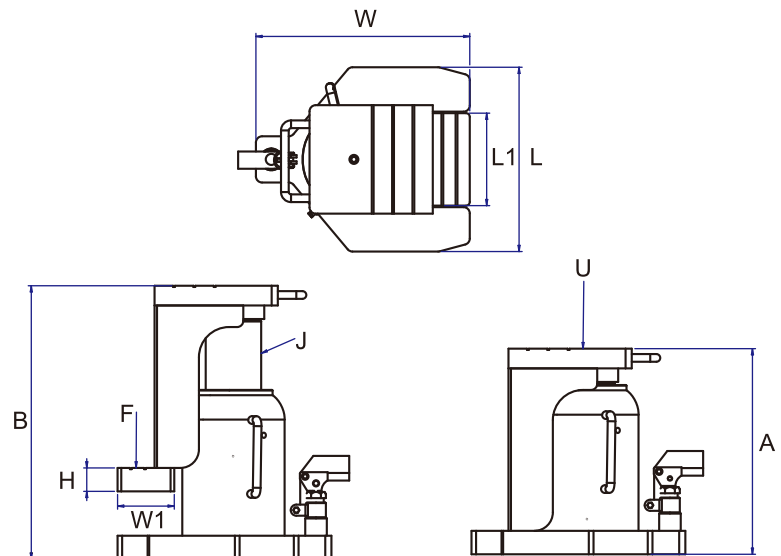
## MODEL: TOE SERIES

Capacity: 2.5 - 50 Tons



### FEATURES

- Heat treated & chrome plated hydraulic rod provide longer seal life and optimum performance.
- Internal safety valve prevents toe jack from being used beyond its rated capacity.
- Housing welding onto the forged base ensures to be free of leakage problem.
- High strength Toe-Lift for long life use.
- Low toe heights fit in tight clearances.
- Swivel sockets for easy operation.
- Can be operated quickly by hand without a loading.
- Removable handle saves the handle force during operation.
- Max. Working Pressure 700 bar / 10,000 psi



### SPECIFICATIONS

| MODEL   | TOP CAP.<br>U(Tons) | TOE-LIFT CAP.<br>F(Tons) | STROKE<br>(mm) | MIN.<br>HEIGHT<br>A(mm) | MAX.<br>HEIGHT<br>B(mm) | PISTON<br>ROD DIA.<br>J(mm) | BASE<br>DIMENSIONS<br>LxW(mm) | HEIGHT<br>H(mm) | TOE-LIFT<br>L1xW1(mm) | WEIGHT<br>(Kgs) |
|---------|---------------------|--------------------------|----------------|-------------------------|-------------------------|-----------------------------|-------------------------------|-----------------|-----------------------|-----------------|
| TOE-025 | 2.5                 | 1.2                      | 100            | 194                     | 294                     | 19                          | 140X190                       | 19              | 65X50                 | 7.8             |
| TOE-040 | 4                   | 2                        | 110            | 204                     | 314                     | 25                          | 150X200                       | 19              | 65X50                 | 9.0             |
| TOE-060 | 6                   | 3                        | 110            | 212                     | 322                     | 36                          | 160X217                       | 19              | 65X50                 | 11.3            |
| TOE-100 | 10                  | 5                        | 130            | 258                     | 388                     | 40                          | 189X242                       | 22              | 75X55                 | 17              |
| TOE-160 | 16                  | 8                        | 131            | 275                     | 406                     | 52                          | 211X256                       | 25              | 90X55                 | 25.7            |
| TOE-200 | 20                  | 10                       | 140            | 303                     | 443                     | 56                          | 228X274                       | 25              | 100X60                | 33.1            |
| TOE-300 | 30                  | 15                       | 147            | 322                     | 469                     | 70                          | 259X305                       | 32              | 110X60                | 52              |
| TOE-500 | 50                  | 25                       | 148            | 333                     | 481                     | 90                          | 299X347                       | 38              | 150X60                | 84              |

# LOW-HEIGHT JACKS

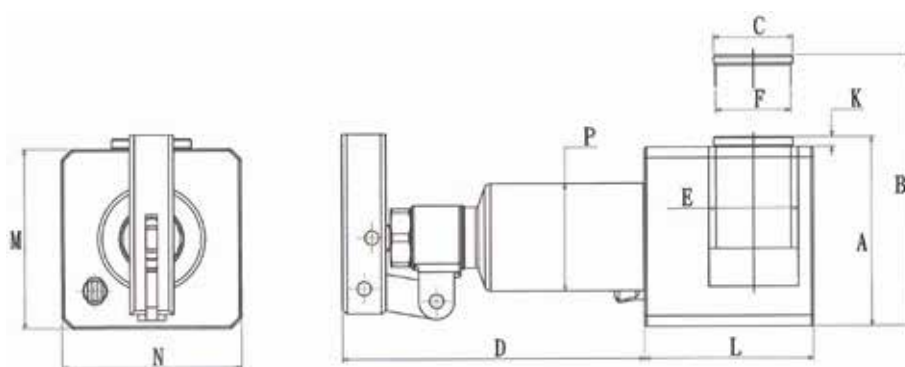
## MODEL: CJ SERIES

Capacity: 10 - 20 Tons



### FEATURES

- Integrated pump & spring return cylinders, with low build-in height.
- Max. working pressure: 10,000 psi / 700 bar.
- Hard chromed piston
- Ram inside roll polished
- Perfect for jobs with limited space, for example: positioning machines, mounting tools or load tests.



### SPECIFICATIONS

| Model No. | Cap. (Tons) | Stroke (mm) | Oil Cap. (cm <sup>3</sup> ) | Height(mm) |          | C Ømm | D mm  | E Ømm | F Ømm | H mm  | K mm | L mm | M mm | N mm | P Ømm | Weight (Kgs) |
|-----------|-------------|-------------|-----------------------------|------------|----------|-------|-------|-------|-------|-------|------|------|------|------|-------|--------------|
|           |             |             |                             | Retracted  | Extended |       |       |       |       |       |      |      |      |      |       |              |
| CJ100     | 10          | 40          | 155                         | 95         | 135      | 40    | 152.5 | 45    | 37.95 | 407.5 | 4.9  | 85   | 90   | 90   | 53.8  | 6.8          |
| CJ200     | 20          | 41          | 250                         | 95         | 136      | 40    | 152.5 | 65    | 50.8  | 407.5 | 4.9  | 110  | 90   | 110  | 69.8  | 9.6          |

# BOTTLE JACKS & AIR / HYDRAULIC JACKS

**POWERRAM**  
HYDRAULIC TOOLS



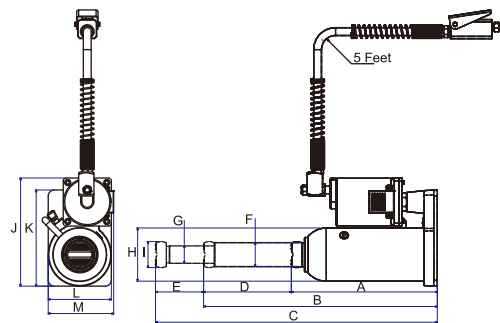
AJB300



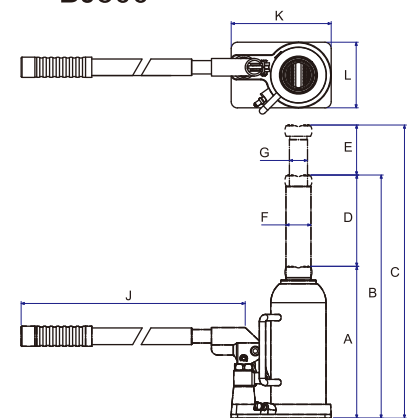
AJ300



BJ500



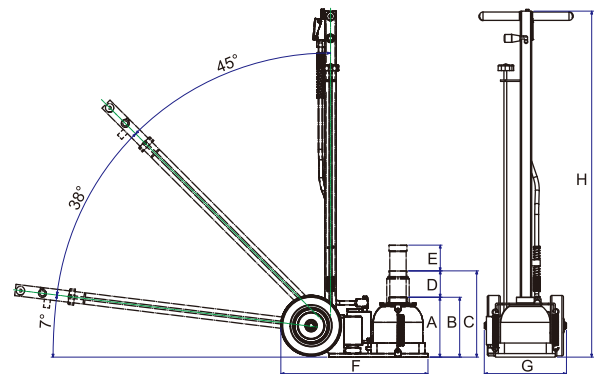
AJ system



BJ system

## FEATURES

- Low profile design for most of Industrial applications.
- Forging base as the strongest construction to catch the needs in Industry market.
- Design of housing welding onto the forged base prevent the leakage problem.
- Telescopic design of AJ120, AJ220, BJ120, BJ220, AJB1527 & AJB2035 reaches the extra height during operating to save time and labor cost.
- AJBseries are equipped with two large Dia. rubber wheels provide easy and well mobility works.
- Air/Hydraulic design make you free from pumping handle also with the most efficiency and time saving.



AJB system

## SPECIFICATIONS

| Model No. | Capacity (Tons) | A (mm) | B (mm) | C (mm) | D (mm) | E (mm) | F (mm) | G (mm) | H (mm) | I (mm) | J (mm) | K (mm) | L (mm) | M (mm) | Handle Length (mm) | Weight (Kgs) |
|-----------|-----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------------------|--------------|
| AJ120     | 12              | 243    | 389    | 469    | 146    | 80     | 40     | 29     | 88.5   | 43     | 180    | 160    | 105    | 109    | 290                | 10.0         |
| AJ220     | 22              | 240    | 369    | 449    | 129    | 80     | 56     | 38     | 114    | 54     | 207    | —      | 130    | —      | 290                | 15.1         |
| AJ300     | 30              | 279    | 423    | —      | 144    | —      | 65     | —      | 140    | —      | 235    | —      | 150    | 154    | 290                | 26.0         |
| AJ500     | 50              | 304    | 452    | —      | 148    | —      | 75     | —      | 165.5  | —      | 260    | —      | 180    | —      | 290                | 39.4         |
| BJ120     | 12              | 243    | 389    | 469    | 146    | 80     | 40     | 29     | 88.5   | 43     | 507    | 160    | 105    | —      | 500                | 8.8          |
| BJ220     | 22              | 240    | 369    | 449    | 129    | 80     | 56     | 38     | 114    | 54     | 507    | 190    | 130    | —      | 500                | 14.0         |
| BJ300     | 30              | 279    | 423    | —      | 144    | —      | 65     | —      | 140    | —      | 507    | 235    | 150    | —      | 500                | 27.0         |
| BJ500     | 50              | 304    | 452    | —      | 148    | —      | 75     | —      | 165.5  | —      | 507    | 260    | 180    | —      | 500                | 36.8         |
| AJB1527   | 15/27           | 200    | 287    | 374    | 87     | 87     | 490    | 274    | 1155   | —      | —      | —      | —      | —      | —                  | 38.5         |
| AJB2035   | 20/35           | 200    | 287    | 374    | 87     | 87     | 490    | 274    | 1155   | —      | —      | —      | —      | —      | —                  | 45.0         |
| AJB300    | 30              | 247    | 345    | —      | 98     | —      | 460    | 274    | 1155   | —      | —      | —      | —      | —      | —                  | 43.0         |
| AJB500    | 50              | 266    | 367    | —      | 101    | —      | 490    | 274    | 1155   | —      | —      | —      | —      | —      | —                  | 53.5         |

\* All handle length is 630mm.

# PORTABLE POWER KITS

**POWERRAM**  
HYDRAULIC TOOLS



## FEATURES

- Quick "snap together" design for fast and easy assembly and disassembly.
- Extra thick extension tubes design for more strength and bendless.
- Blow molded case for organized component storage and easy to carry. The case for 10 Tons kit has wheels for good mobility.
- Single-speed pump delivers 10,000 psi and with automatic overload system against operator injury.
- Flexible hydraulic hose with spring guards at both ends.
- Dropping forged pump base and rugged welded constructions prevent collision and deformation.
- Components are also made by forging with the best rigidity and strength to ensure never broken during operation with high safety.
- Each components are connected through female connector for easy operation.



PA904A

## PA904A

| ITEM | PARTS NO. | DESCRIPTION                   |
|------|-----------|-------------------------------|
| 01   | PA350     | Hydraulic Pump                |
| 02   | HS236     | Hose 6 feet                   |
| 03   | RA404     | 4 Tons Ram, 4" Stroke, 1/4NPT |
| 04   | SR05A     | 1/2 Tons spreader ram         |
| 05   | B0523     | 16" Extension tube            |
| 06   | B0524     | 12" Extension tube            |
| 07   | B0525     | 8" Extension tube             |
| 08   | B0526     | 4" Extension tube             |
| 09   | B0467     | Male connector                |
| 10   | F0180     | Flat base                     |
| 11   | F0181     | 90° "V" base                  |
| 12   | F0182     | Wedge head                    |
| 13   | F0183     | Spreader Plunger Toe          |
| 14   | F0184     | Spreader Ram Toe              |
| 15   | B0013     | Flex head                     |
| 16   | F0179     | Serrated saddle               |
| 17   | G0026     | Blow molded case              |

N.W. 18.6KGS G.W. 19.6KGS CUFT. 1.4'

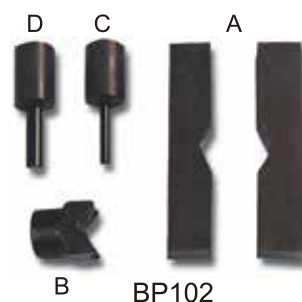
## PA910A

| ITEM | PARTS NO. | DESCRIPTION                    |
|------|-----------|--------------------------------|
| 01   | PA600     | Hydraulic Pump                 |
| 02   | HS336     | Hose 6 feet                    |
| 03   | RA106L    | 10 Tons Ram, 6" Stroke, 3/8NPT |
| 04   | SR05E     | 1/2 Tons spreader ram          |
| 05   | B0519     | 19" Extension tube             |
| 06   | B0520     | 14" Extension tube             |
| 07   | B0521     | 10" Extension tube             |
| 08   | B0522     | 5" Extension tube              |
| 09   | B0406     | Male connector                 |
| 10   | F0174     | Flat base                      |
| 11   | F0175     | 90° "V" base                   |
| 12   | F0176     | Wedge head                     |
| 13   | F0177     | Spreader Plunger Toe           |
| 14   | F0178     | Spreader Ram Toe               |
| 15   | B0083     | Flex head                      |
| 16   | F0173     | Serrated saddle                |
| 17   | G0021     | Blow molded case with wheels   |

N.W. 36.5KGS G.W. 37.5KGS CUFT. 2.6'

## MODEL: SP1301 / SP1401

Capacity: 10 Tons

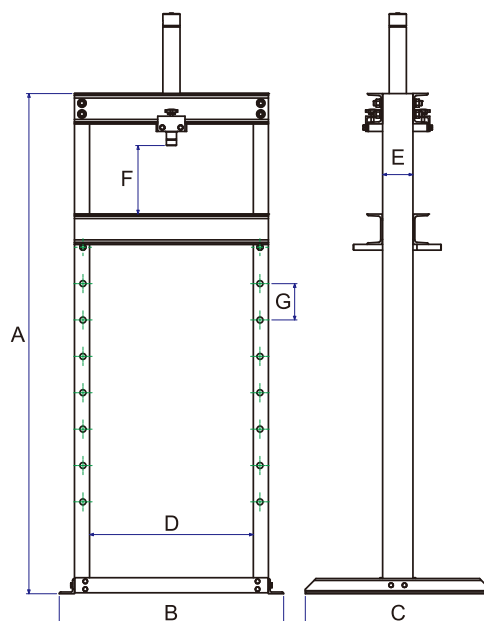


### FEATURES

- Rugged steel frame provides maximum firmness to prevent bending.
- Multiple working position for press bed.
- Steel cross support prevent the frame from bending while loading.
- Single-acting and spring return cylinders with 10" stroke is horizontal movement on head channel.
- Available in 10 Tons models, with optional manual or air-hydraulic pump.

### Accessory Set

|                 | A            | B      | C                   | D                   |              |
|-----------------|--------------|--------|---------------------|---------------------|--------------|
| Part No. / Item | Long V-block | V base | Ram pushing adapter | Ram pushing adapter | Weight (Kgs) |
| BP102           | E0650        | E0175  | B0547 (1/2" shank)  | B0548 (3/4" shank)  | 9.5          |



### SPECIFICATIONS

| Model No. | Capacity (Tons) | Stroke (mm) | Pump Model | A (mm) | B (mm) | C (mm) | D (mm) | E (mm) | F (mm)   | G (mm) | Weight (Kgs) |
|-----------|-----------------|-------------|------------|--------|--------|--------|--------|--------|----------|--------|--------------|
| SP1301    | 10              | 254         | HB700      | 1650   | 740    | 610    | 540    | 100    | 255-1065 | 120    | 87           |
| SP1401    | 10              | 254         | PTS900A    | 1650   | 740    | 610    | 540    | 100    | 255-1065 | 120    | 90           |



# SHOP PRESSES

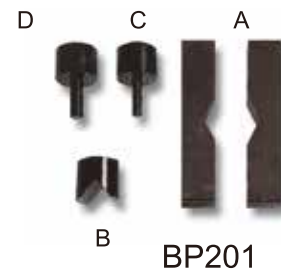
**POWERRAM**  
HYDRAULIC TOOLS

## MODEL: SP2101 / SP2201 / SP3201

Capacity: 20 -30 Tons



SP2201



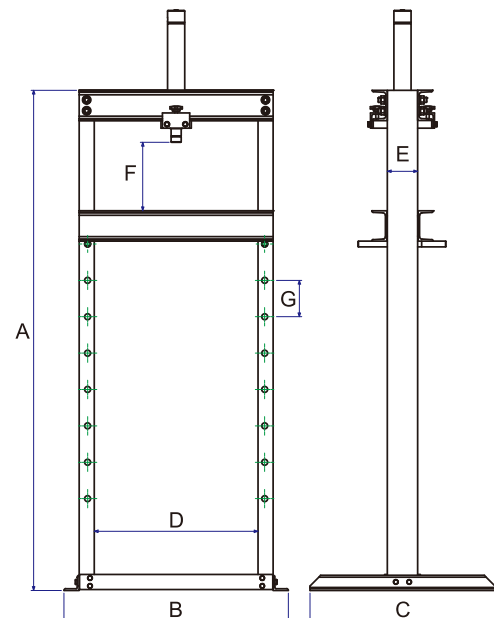
BP201

### FEATURES

- Rugged steel frame provides maximum firmness to prevent bending.
- Multiple working position for press bed.
- Steel cross support prevent the frame from bending while loading.
- Single-acting and spring return cylinders with 5" & 8" stroke is horizontal movement on head channel.

### Accessory Set

|                 | A            | B      | C                   | D                   |              |
|-----------------|--------------|--------|---------------------|---------------------|--------------|
| Part No. / Item | Long V-block | V base | Ram pushing adapter | Ram pushing adapter | Weight (Kgs) |
| BP201           | E0662        | E0064  | B0562 (3/4" shank)  | B0563 (1" shank)    | 17.0         |



### SPECIFICATIONS

| Model No. | Capacity (Tons) | Stroke (mm) | Pump Model | A (mm) | B (mm) | C (mm) | D (mm) | E (mm) | F (mm)   | G (mm) | Weight (Kgs) |
|-----------|-----------------|-------------|------------|--------|--------|--------|--------|--------|----------|--------|--------------|
| SP2101    | 20              | 128         | HB700      | 1650   | 790    | 700    | 510    | 125    | 233-1072 | 120    | 183          |
| SP2201    | 20              | 128         | PTS900A    | 1650   | 790    | 700    | 510    | 125    | 233-1072 | 120    | 186          |
| SP3101    | 30              | 204         | HC1500     | 1631   | 920    | 700    | 620    | 150    | 306-1025 | 120    | 244          |
| SP3201    | 30              | 204         | PTS900A    | 1631   | 920    | 700    | 620    | 150    | 306-1025 | 120    | 249          |

# SHOP PRESSES

**POWERRAM**  
HYDRAULIC TOOLS

## MODEL: HSP50T / HSP100T

Capacity: 50-100 Tons

HSP50T

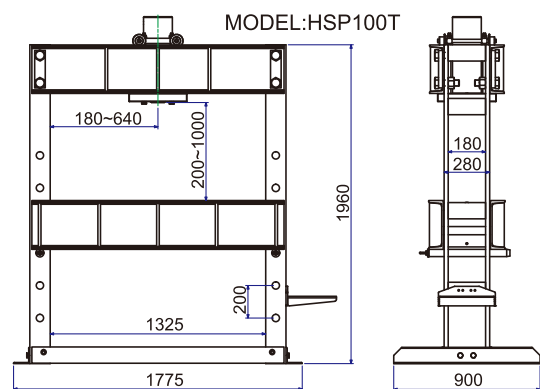
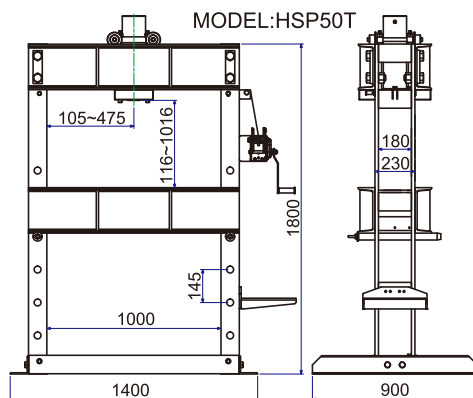


HSP100T



### FEATURES

- Ideal for the pressing job in the workshops.
- Rugged steel frame provide maximum rigidity and never bended.
- Multiple working positions for press bed.
- Steel cross brace prevents the frame from spreading under the load.
- 100 Tons, Single Acting, 13" Stroke Cylinder is available for requesting.
- 100 Tons, Double Acting, 18" Stroke Cylinder is available for requesting.
- 50 Tons shop presses: Hand Pump, Air Pump & Electric Pump are available upon request.
- 100 Tons shop presses: Electric Pump is available as the optional version.



### Specifications for reference:

| Model No. | Capacity (Tons) | Stroke (mm) | Pump Type | Max. Pressure Output (psi) | Reservoir Capacity (cm <sup>3</sup> ) | Motor                               | Weight (Kgs) | Accessory Set *                                      |
|-----------|-----------------|-------------|-----------|----------------------------|---------------------------------------|-------------------------------------|--------------|------------------------------------------------------|
| HSP5013H  | 50              | 330         | HP80      | 10,000                     | 7,000                                 | -                                   | 440          | * Long V-Blocks<br>* V-Base<br>* Ram pushing adaptor |
| HSP5013S  | 50              | 330         | EP18S     | 10,000                     | 8,000                                 | 0.45kW / 220V 50/60 Hz Single Phase | 480          |                                                      |
| HSP5018D  | 50              | 457         | EP18D     | 10,000                     | 8,000                                 | 0.45kW / 220V 50/60 Hz Single Phase | 480          |                                                      |
| HSP10013S | 100             | 330         | EP211S    | 10,000                     | 11,000                                | 1.12kW 220V 50/60 Hz, Single Phase  | 840          | * Long V-Blocks<br>* V-Base                          |
| HSP10018D | 100             | 457         | EP211D    | 10,000                     | 11,000                                | 1.12kW 220V 50/60 Hz, Single Phase  | 840          |                                                      |

\*The above accessory sets will be changed according to the Selected Cylinder.

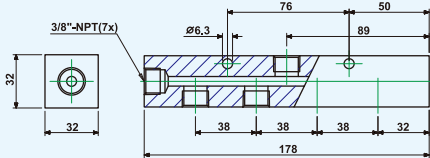
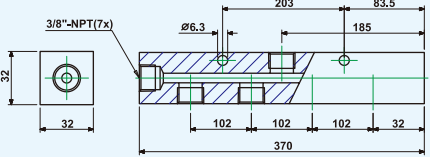
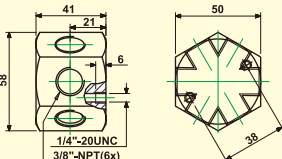
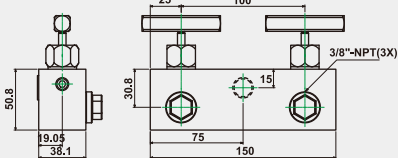
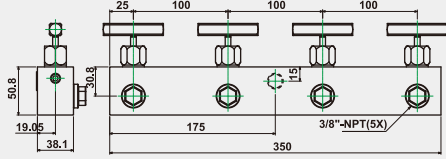
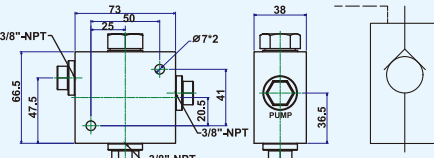
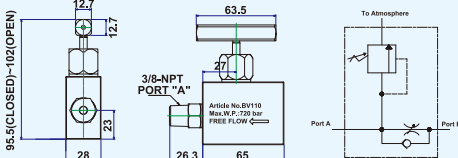
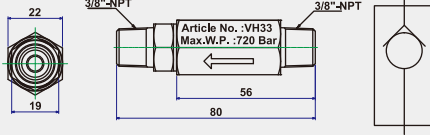
# ACCESSORIES

**Max. Working Pressure - 700 bar / 10,000 psi**

## System Components

With the simple and complete line of hydraulic hoses, couplers, fittings, manifolds, gauges and valves, POWERRAM has the accessories to complete your hydraulic system and ensure the operating efficiency, long life and safety of your hydraulic equipment.

## MANIFOLDS

| Model No. | Dimensions (mm)                                                                     |                                                                                      | Description                                                                                 |
|-----------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| JP64      |    |    | 7 Female ports - 178 mm Long                                                                |
| JP65      |    |    | 7 Female ports - 370 mm long<br>Available directly mounting of control valves               |
| JP66      |   |   | 6-Port Hexagon Type                                                                         |
| VB201     |  |  | Premounted Manifolds                                                                        |
| VB401     |  |  | Available as split-flow valve to control two / four single-acting cylinders simultaneously. |
| BV42      |  |  | Pilot Check Valve                                                                           |
| BV110     |  |  | Restrictor Valve                                                                            |
| VH33      |  |  | Non-return Valve                                                                            |

# ACCESSORIES

**POWERRAM**  
HYDRAULIC TOOLS

Max. Working Pressure - 700 bar / 10,000 psi

## FITTINGS

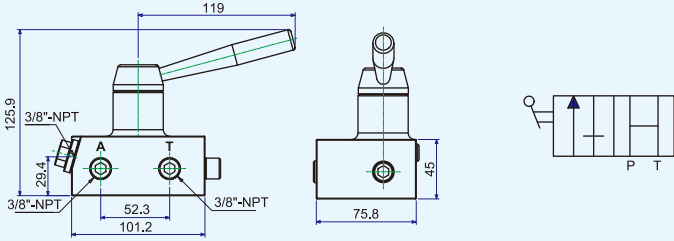
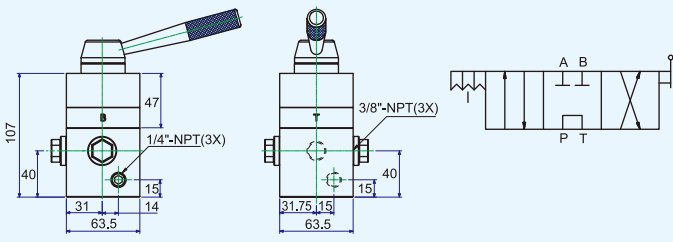
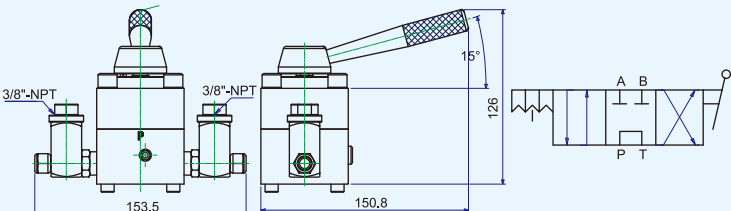
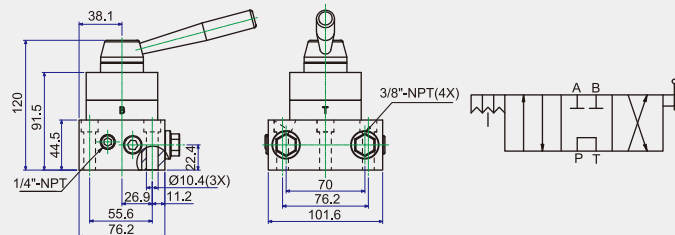
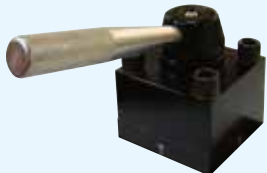
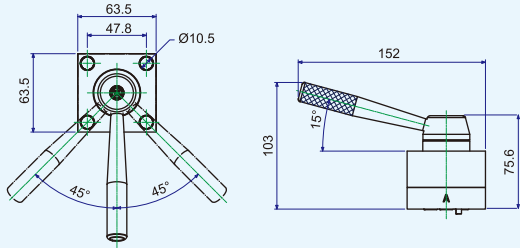
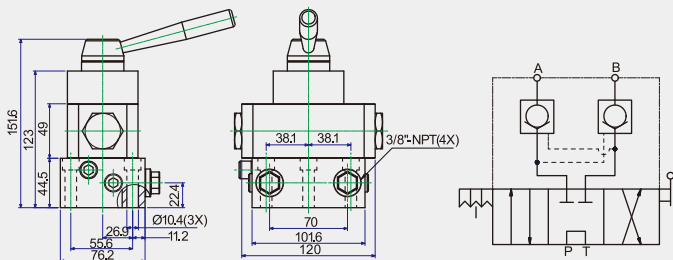
| Model No. | Description | Dimensions (mm) |
|-----------|-------------|-----------------|
| ADL101    | Elbow       |                 |
| ADL102    | Elbow       |                 |
| ADL202    | Elbow       |                 |
| ADL303    | Elbow       |                 |
| ADC303    | Elbow       |                 |
| ADE303    | Elbow       |                 |
| ADT101    | Tee         |                 |
| ADT202    | Tee         |                 |
| ADT303    | Tee         |                 |
| ADG303    | Tee         |                 |
| ADG323    | Tee         |                 |
| ADF102    | Adaptor     |                 |
| ADF203    | Adaptor     |                 |
| ADF302    | Adaptor     |                 |

| Model No. | Description        | Dimensions (mm) |
|-----------|--------------------|-----------------|
| ADF303    | Adaptor            |                 |
| ADF304    | Adaptor            |                 |
| ADI202    | Connector          |                 |
| ADI203    | Connector          |                 |
| ADI303    | Connector          |                 |
| ADO101    | Hexagon Nipple     |                 |
| ADO202    | Hexagon Nipple     |                 |
| ADO2031   | Reducing Connector |                 |
| ADO203    | Reducing Connector |                 |
| ADO204    | Hexagon Nipple     |                 |
| ADO205    | Hexagon Nipple     |                 |
| ADO303    | Hexagon Nipple     |                 |
| BG9705    | Swivel Connector   |                 |

# ACCESSORIES

Max. Working Pressure - 700 bar / 10,000 psi

## Directional Control Valve

| Model No. | Description                                                                                                        | Dimensions (mm)                                                                                                                                                                                                                                                                                                                             |
|-----------|--------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| B1014     | 2 Position / 2 Way Valve<br>No need to hold the pressure                                                           | <br>                                                  |
| BP422     | For using with single- or double acting cylinders. Manual, Advance / Hold / Retract                                | <br>                                         |
| BP421     | BP421 is similar to BP422, but used on HE2000 only.                                                                | <br>                                             |
| BP423     | Manual, Advance / Hold / Retract<br>Available models<br>HP80D, AP13D, AP18D, EP13D, EP18D, EP211D, EP320D & EP420D | <br> |
| BP42R     | BP42R is the upper section of BP423 as enclosed only.                                                              | <br>                                                                                                                                                                 |
| BP425     | Manual, Advance / Hold / Retract, Lock for load holding.                                                           | <br>                                                          |

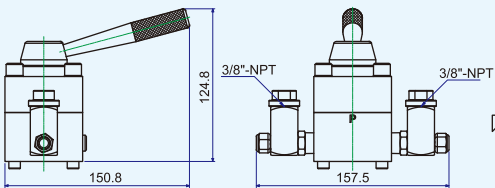
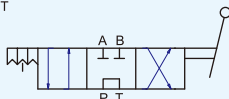
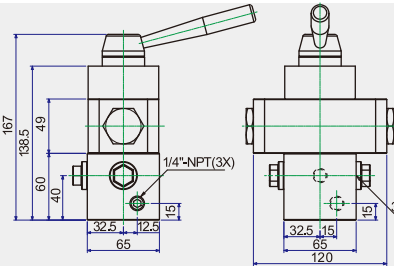
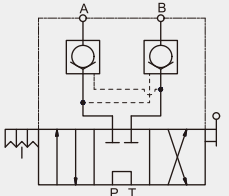
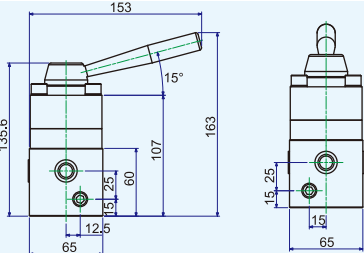
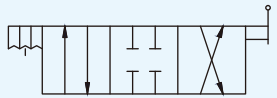
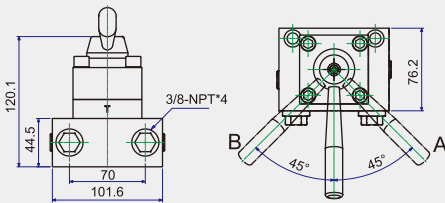
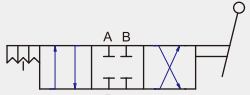
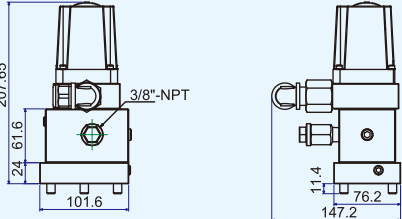
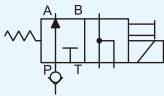
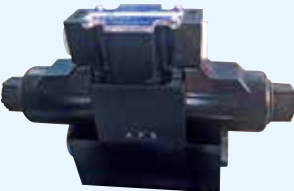
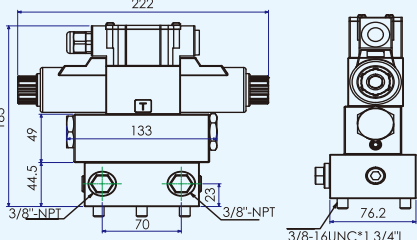
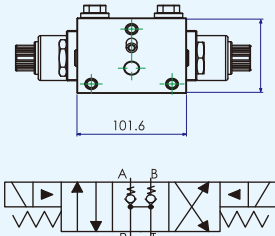


# ACCESSORIES

**POWERRAM**  
HYDRAULIC TOOLS

**Max. Working Pressure - 700 bar / 10,000 psi**

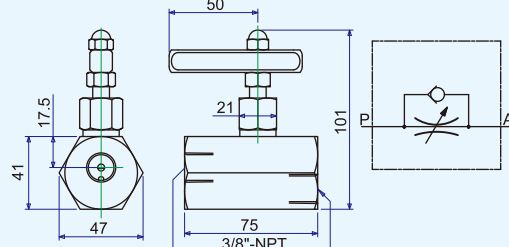
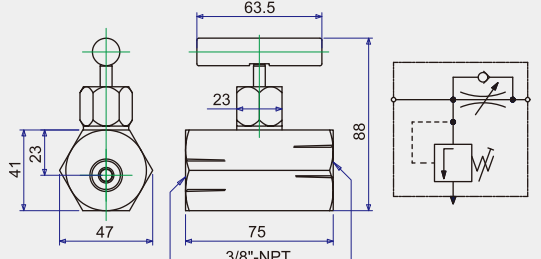
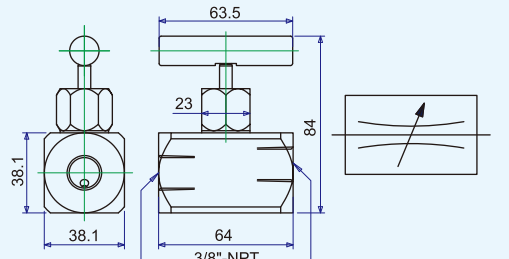
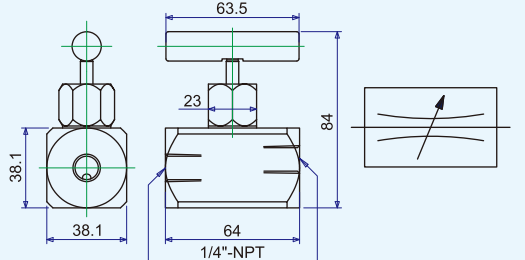
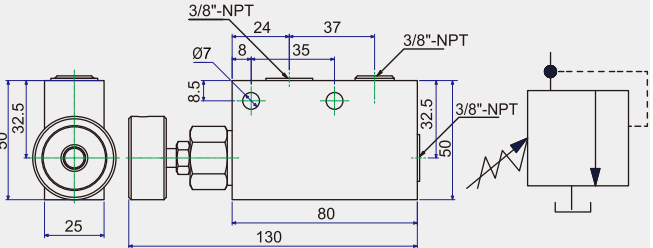
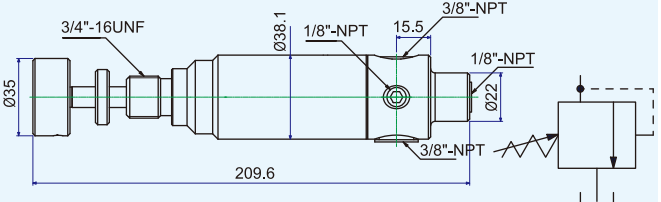
## Directional Control Valves

| Model No. | Description                                                                        | Dimensions (mm)                                                                     |                                                                                      |                                                                                       |
|-----------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| BP426     | BP426 is similar to BP421, but used on HP35D only.                                 |    |    |    |
| BP427     | Manual, Advance / Hold / Retract, Lock for load holding.                           |    |    |    |
| BP430     | BP430 is similar to BP422, but with closed center.                                 |   |   |  |
| BP432     | Overlooking & mounting dimensions is same as BP423, but with closed center.        |  |  |  |
| SV32      | 3 Way / 2 Position Solenoid Valve for Single-acting cylinders<br>24V / 220V        |  |  |  |
| SV43      | 4 Way / 3 Position Solenoid Valve for Double-acting cylinders<br>24V / 110V / 220V |  |  |  |

# ACCESSORIES

**Max. Working Pressure - 700 bar / 10,000 psi**

## Flow Control Valves

| Model No. | Description                                                                                                                                                                                                                             | Dimensions (mm)                                                                                                                                                          |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| VC331     | <b>Needle Valve</b><br>To control cylinder speed, also can be used as shut-off valve for temporary holding.<br>But not recommended to use for precise flow control.                                                                     |       |
| VB66      | <b>Manually Operated Check Valve</b><br>Used with single or double acting cylinders for load holding.<br>Upon cylinder retracting, valve is manually opened to allow oil flowing back to the tank and with auto overload relief design. |       |
| VB101     | <b>Needle Valve (3/8"NPT ports)</b><br>To be used as shut-off valve for temporary holding.<br>Same as VB66, but without auto overload relief design.                                                                                    |   |
| VB102     | <b>Needle Valve (1/4"NPT ports)</b><br>To be used as shut-off valve for temporary holding.<br>Same as VB66 but without auto overload relief design                                                                                      |   |
| BG9623    | <b>In-line Pressure Relief Valve</b><br>Used with single or double acting cylinders for remote locations in a hydraulic circuit where maximum pressure requirements are less than basic overload setting in a pump.                     |   |
| PRV9633   | <b>In-line Pressure Regulator Valve</b><br>Used for single or double acting cylinders to permit adjusting operating pressures at various values below relief valve setting of pump.                                                     |   |

# ACCESSORIES

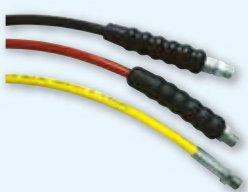
**Max. Working Pressure - 700 bar / 10,000 psi**

## HOSES

- Heavy duty hoses rated at 700 bar, meet IJ-1000 specification as worldwide safety standards.
- Hoses are black rubber coated with two layers of steel braided reinforcement.
- Flexible hoses with spring guard at both ends to protect adaptors.

| Description                                                                                              | Model No. | End One  | End Two  | Length |       | I/D    |      |
|----------------------------------------------------------------------------------------------------------|-----------|----------|----------|--------|-------|--------|------|
|                                                                                                          |           |          |          | (feet) | (mtr) | (inch) | (mm) |
| <b>Rubber Hoses</b><br> | HS225     | 1/4" NPT | 1/4" NPT | 5      | 1.5   | 1/4    | 6.4  |
|                                                                                                          | HS235     | 1/4" NPT | 3/8" NPT | 5      | 1.5   | 1/4    | 6.4  |
|                                                                                                          | HS226     | 1/4" NPT | 1/4" NPT | 6      | 1.8   | 1/4    | 6.4  |
|                                                                                                          | HS236     | 1/4" NPT | 3/8" NPT | 6      | 1.8   | 1/4    | 6.4  |
|                                                                                                          | HS332     | 3/8" NPT | 3/8" NPT | 2      | 0.6   | 1/4    | 6.4  |
|                                                                                                          | HS333     | 3/8" NPT | 3/8" NPT | 3      | 0.9   | 1/4    | 6.4  |
|                                                                                                          | HS335     | 3/8" NPT | 3/8" NPT | 5      | 1.5   | 1/4    | 6.4  |
|                                                                                                          | HS336     | 3/8" NPT | 3/8" NPT | 6      | 1.8   | 1/4    | 6.4  |
|                                                                                                          | HS337     | 3/8" NPT | 3/8" NPT | 7      | 2.1   | 1/4    | 6.4  |
|                                                                                                          | HS338     | 3/8" NPT | 3/8" NPT | 8      | 2.4   | 1/4    | 6.4  |
|                                                                                                          | HS3310    | 3/8" NPT | 3/8" NPT | 10     | 3.0   | 1/4    | 6.4  |
|                                                                                                          | HS3312    | 3/8" NPT | 3/8" NPT | 12     | 3.6   | 1/4    | 6.4  |
|                                                                                                          | HS3315    | 3/8" NPT | 3/8" NPT | 15     | 4.5   | 1/4    | 6.4  |
|                                                                                                          | HS3320    | 3/8" NPT | 3/8" NPT | 20     | 6.0   | 1/4    | 6.4  |

|                                                                                                                       |          |          |          |    |     |     |     |
|-----------------------------------------------------------------------------------------------------------------------|----------|----------|----------|----|-----|-----|-----|
| <b>Rubber Hoses(High Flow)</b><br> | HFHS332  | 3/8" NPT | 3/8" NPT | 2  | 0.6 | 3/8 | 9.4 |
|                                                                                                                       | HFHS333  | 3/8" NPT | 3/8" NPT | 3  | 0.9 | 3/8 | 9.4 |
|                                                                                                                       | HFHS335  | 3/8" NPT | 3/8" NPT | 5  | 1.5 | 3/8 | 9.4 |
|                                                                                                                       | HFHS336  | 3/8" NPT | 3/8" NPT | 6  | 1.8 | 3/8 | 9.4 |
|                                                                                                                       | HFHS338  | 3/8" NPT | 3/8" NPT | 8  | 2.4 | 3/8 | 9.4 |
|                                                                                                                       | HFHS3310 | 3/8" NPT | 3/8" NPT | 10 | 3.0 | 3/8 | 9.4 |

|                                                                                                                 |         |          |          |    |     |     |     |
|-----------------------------------------------------------------------------------------------------------------|---------|----------|----------|----|-----|-----|-----|
| <b>Polyurethane Hose</b><br> | PHS332  | 3/8" NPT | 3/8" NPT | 2  | 0.6 | 1/4 | 6.3 |
|                                                                                                                 | PHS333  | 3/8" NPT | 3/8" NPT | 3  | 1.0 | 1/4 | 6.3 |
|                                                                                                                 | PHS335  | 3/8" NPT | 3/8" NPT | 5  | 1.5 | 1/4 | 6.3 |
|                                                                                                                 | PHS336  | 3/8" NPT | 3/8" NPT | 6  | 1.8 | 1/4 | 6.3 |
|                                                                                                                 | PHS337B | 3/8" NPT | 3/8" NPT | 7  | 2.1 | 1/4 | 6.3 |
|                                                                                                                 | PHS338  | 3/8" NPT | 3/8" NPT | 8  | 2.4 | 1/4 | 6.3 |
|                                                                                                                 | PHS3310 | 3/8" NPT | 3/8" NPT | 10 | 3.0 | 1/4 | 6.3 |
|                                                                                                                 | PHS3312 | 3/8" NPT | 3/8" NPT | 12 | 3.6 | 1/4 | 6.3 |
|                                                                                                                 | PHS3315 | 3/8" NPT | 3/8" NPT | 15 | 4.5 | 1/4 | 6.3 |
|                                                                                                                 | PHS3320 | 3/8" NPT | 3/8" NPT | 20 | 6.0 | 1/4 | 6.3 |
|                                                                                                                 | PHS3330 | 3/8" NPT | 3/8" NPT | 30 | 9.0 | 1/4 | 6.3 |

|                                                                                                                             |          |          |          |    |     |     |     |
|-----------------------------------------------------------------------------------------------------------------------------|----------|----------|----------|----|-----|-----|-----|
| <b>Polyurethane Hose (High Flow)</b><br> | HPHS332  | 3/8" NPT | 3/8" NPT | 2  | 0.6 | 3/8 | 9.7 |
|                                                                                                                             | HPHS333  | 3/8" NPT | 3/8" NPT | 3  | 1.0 | 3/8 | 9.7 |
|                                                                                                                             | HPHS335  | 3/8" NPT | 3/8" NPT | 5  | 1.5 | 3/8 | 9.7 |
|                                                                                                                             | HPHS336  | 3/8" NPT | 3/8" NPT | 6  | 1.8 | 3/8 | 9.7 |
|                                                                                                                             | HPHS338  | 3/8" NPT | 3/8" NPT | 8  | 2.4 | 3/8 | 9.7 |
|                                                                                                                             | HPHS3310 | 3/8" NPT | 3/8" NPT | 10 | 3.0 | 3/8 | 9.7 |
|                                                                                                                             | HPHS3312 | 3/8" NPT | 3/8" NPT | 12 | 3.6 | 3/8 | 9.7 |
|                                                                                                                             | HPHS3315 | 3/8" NPT | 3/8" NPT | 15 | 4.5 | 3/8 | 9.7 |
|                                                                                                                             | HPHS3320 | 3/8" NPT | 3/8" NPT | 20 | 6.0 | 3/8 | 9.7 |
|                                                                                                                             | HPHS3330 | 3/8" NPT | 3/8" NPT | 30 | 9.0 | 3/8 | 9.7 |

# ACCESSORIES

**POWERRAM**  
HYDRAULIC TOOLS

Max. Working Pressure - 700 bar / 10,000 psi



## COUPLERS

| Image | Model No. (Set) | Specification                                                                     | Model No.        |
|-------|-----------------|-----------------------------------------------------------------------------------|------------------|
|       | CP210           | NEEDLE<br>(Plastic caps for both ends)<br>RAM HALF: 1/4 NPT<br>HOSE HALF: 1/4 NPT | CP211<br>CP212   |
|       | CP230           | NEEDLE<br>(Metal cover for Ram half)<br>RAM HALF: 1/4 NPT<br>HOSE HALF: 1/4 NPT   | CP231<br>CP232   |
|       | CP380           | NEEDLE<br>(Plastic caps for both ends)<br>RAM HALF: 3/8 NPT<br>HOSE HALF: 3/8 NPT | CP381<br>CP382   |
|       | CP330B          | BALL<br>(Plastic caps for both ends)<br>RAM HALF: 3/8 NPT<br>HOSE HALF: 3/8 NPT   | CP331B<br>CP332B |
|       | CP350           | NEEDLE<br>(Metal cover for Ram half)<br>RAM HALF: 3/8 NPT<br>HOSE HALF: 3/8 NPT   | CP351<br>CP352   |
|       | CP430           | NO-SPILL<br>RAM HALF: 3/8 NPT<br>HOSE HALF: 3/8 NPT                               | CP431<br>CP432   |

## HYDRAULIC OIL

- Used for 700 bar cylinders / hand pumps (transparent) and electric pumps (blue color).
- Contains anti-rust, anti-wear, anti-oxidant and anti-foaming additives.
- High quality hydraulic oil with low pour point.

| Model No. | Specification            |
|-----------|--------------------------|
| HO1L      | ISO 15 Grade, 1L Package |
| HO2L      | ISO 15 Grade, 2L Package |
| HO4L      | ISO 15 Grade, 4L Package |
| HO5L      | ISO 15 Grade, 5L Package |

## GAUGES

| Description | Model No. | Specification                                                                                                                                                                                                                      |
|-------------|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             | M0039     | Liquid filled dampens needle vibration.<br>Calibrated to read in bar, psi.<br>Dial - 2-1/2" ; Thread Size: 1/4NPT<br>Accuracy, Meet DIN Standard $\pm 1.6\%$ of full scale.                                                        |
|             | M0136     | All Features same as M0039<br>Except with Dial - 100 mm.                                                                                                                                                                           |
|             | P1710     | All Stainless Steel Pressure Gauge<br>Vibration-free display & long service life by filling glycerin.<br>Measuring ranges: 0~1600 bar & 0~4000 bar<br>Dial: 100mm Thread: M16 x 1.5<br>Accuracy class 1.6, meet EN 837-1 standard. |

## GAUGE ADAPTORS

| Model No. | Dimensions (mm) |
|-----------|-----------------|
| E0567     |                 |
| E1336     |                 |
| E1343     |                 |
| E1745     |                 |
| MA323     |                 |

# SAFETY TIPS

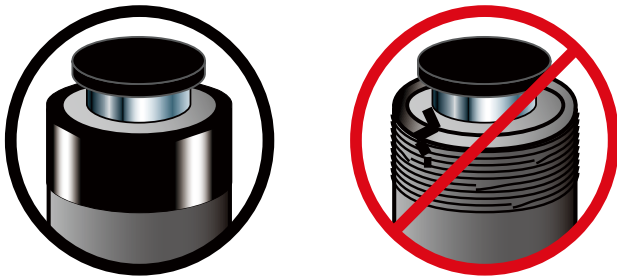
**POWERRAM**  
HYDRAULIC TOOLS

## 1. Choose the right ram.



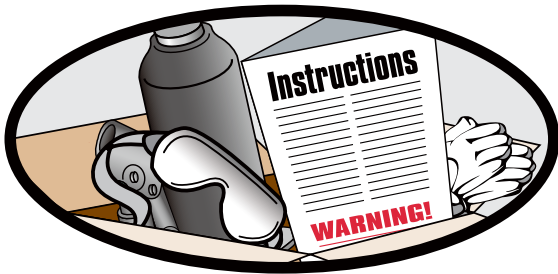
You must know the weight of what you intend to lift and choose a ram with at least 20% more capacity. Be aware of possible load shift requiring more capacity at the particular lifting point.

## 2. Check each components



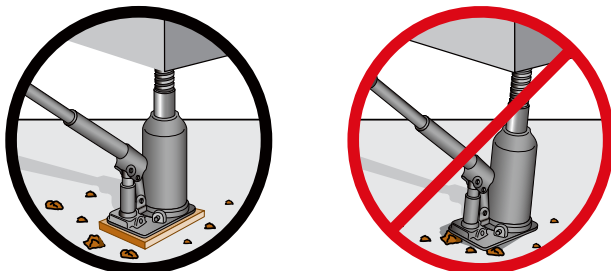
Check each component before you set up your hydraulic system. Do not use damaged or worn components. Turn them in for repair or replacement.

## 3. Safety instructions.



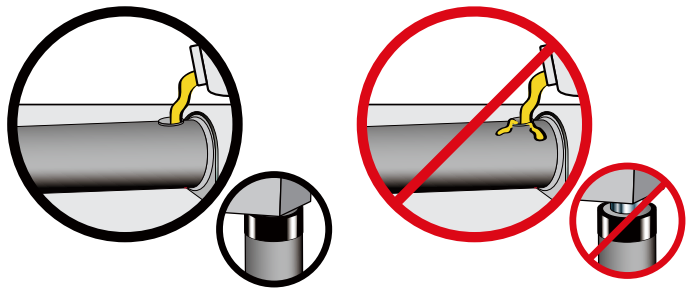
Read all warning labels and instructions. Operating instructions must be understood before using equipment. Never remove labels from equipment. Replace missing, worn, or damaged labels. Always wear safety goggles and protective clothing when using hydraulic equipment.

## 4. Each jack or ram must be fully supported at the base.



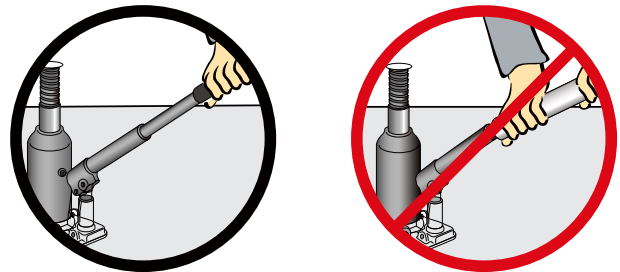
Every jack or ram, whether used individually or in a system, should be completely supported on a solid, firm, non-sliding foundation capable of supporting the load.

## 5. Fill oil reservoirs with cylinder retracted.



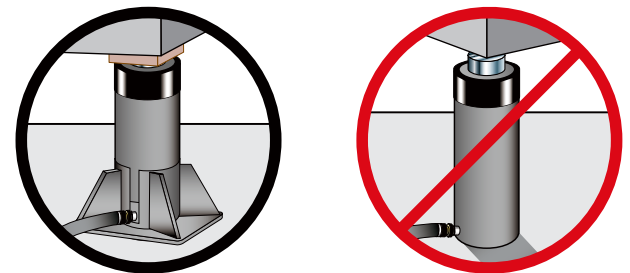
Only fill pump to recommended level, and fill only when the connected cylinder is fully retracted.

## 6. Know how your hydraulics work.



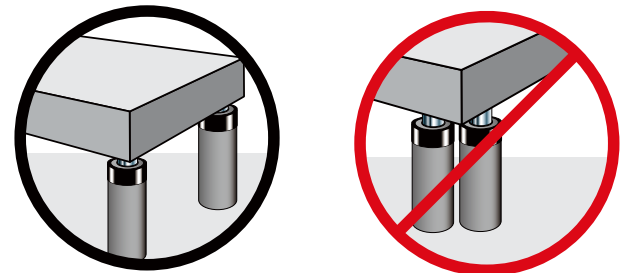
Do not use extensions or cheater bars on hydraulic jacks or hand pumps to raise a load.

## 7. Center the load on the lifting point.



The load must be centered on the ram, or equally distributed on multiple rams. Off center loading can result in the ram slipping out and loss of the load.

## 8. When using multiple rams, distribute the load evenly.



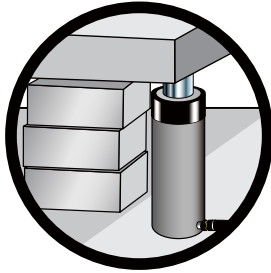
For multiple rams lift, you must be able to determine the location and number of lifting points that will allow the load to be evenly distributed to all the rams. This is called load balance. Size, center of gravity, and load geometry must be considered in order to correctly determine load balance.



# SAFETY TIPS

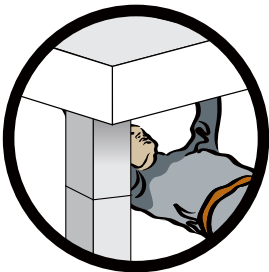
**POWERRAM**  
HYDRAULIC TOOLS

## 9. Block or crib your load as it raises.



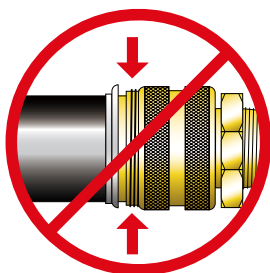
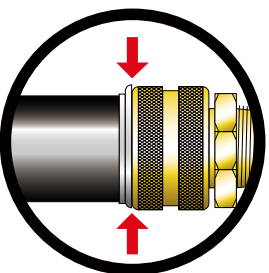
Place blocking or cribbing under the loads as you raise it. Each time you raise it higher, insert more blocking. Position yourself in a manner that will keep you clear of the load, and will not allow your hands or other body parts between the load and the cribbing.

## 10. Do not use rams as permanent supports.



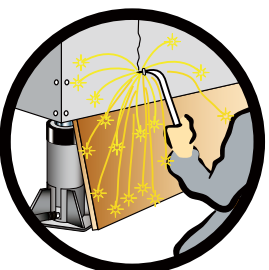
Hydraulic rams are not meant to be used as permanent supports, but are designed to lift and lower. If you need to hold the load for any length of time, cribbing or Powerram locknut cylinders should be used.

## 11. Hydraulic connections.



When making connections with quick couplers, make sure the couplings are fully engaged. Threaded connections such as fittings, gauges, etc. must be securely tightened and leak free. Never use excessive tightening force that may distort the fittings or strip the thread profile.

## 12. Avoid extreme heat or weld splatter.



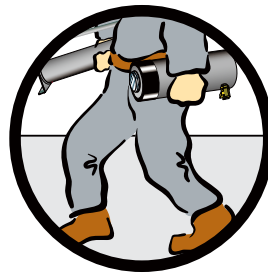
Weld splatter will damage plunger rods and hoses. Hydraulic fluid can ignite if vaporized or exposed to high temperatures.

## 13. Disconnecting the hydraulics.



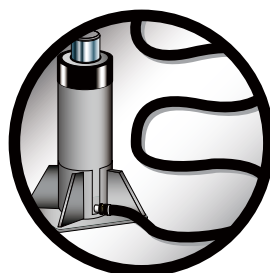
Never attempt to disconnect hydraulic hoses, fittings or couplers under pressure. Unload the ram, open the release screw on the hand pump and shift or open all hydraulic controls several times. If system includes a gauge, double check the gauge to insure pressure has been completely released.

## 14. Do not carry or drag pumps and rams by their hoses.



Dragging or carrying rams or pumps by a connected hose can damage the couplers and hoses. Using damaged couplers and hoses can be dangerous.

## 15. Keep hydraulic hoses free of obstructions.



Do not drop sharp or heavy objects on hose. Keep hose out of heavy traffic areas. This will cause internal damage to hose wire strands. Applying pressure to a damaged hose may cause it to rupture. Avoid sharp bends and kinks when routing hydraulic hoses.



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