

**STRONGARM**

LIFTING & HYDRAULIC EQUIPMENT

2 0 1 4

# Industrial Pumps and Rams



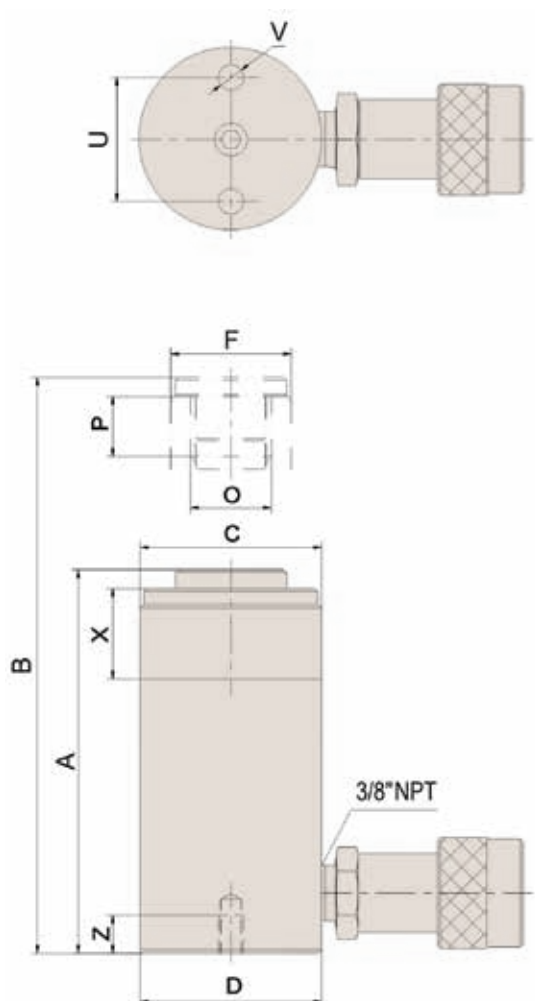


# SINGLE ACTING CYLINDERS

CAPACITY 5-95 TON



INDUSTRIAL



| PRODUCT NO. | MODEL NO.       | Cylinder Capacity @<br>700 Bar (10,000 PSI) | Stroke | Cylinder<br>Effective<br>Area | Oil Capacity    |
|-------------|-----------------|---------------------------------------------|--------|-------------------------------|-----------------|
|             |                 | Metric Ton (US Ton)                         |        | IN <sup>2</sup>               | IN <sup>3</sup> |
| 033001      | <b>SACS50</b>   | 5 (5.5)                                     | 0.63   | 1.10                          | 0.70            |
| 033005      | <b>SACS55</b>   | 5 (5.5)                                     | 5.00   | 1.10                          | 5.50            |
| 033010      | <b>SACS102</b>  | 10 (11)                                     | 2.13   | 2.25                          | 4.78            |
| 033011      | <b>SACS104</b>  | 10 (11)                                     | 4.13   | 2.25                          | 9.29            |
| 033012      | <b>SACS106</b>  | 10 (11)                                     | 6.14   | 2.25                          | 13.80           |
| 033013      | <b>SACS108</b>  | 10 (11)                                     | 7.99   | 2.25                          | 17.96           |
| 033014      | <b>SACS1010</b> | 10 (11)                                     | 10.12  | 2.25                          | 22.73           |
| 033035      | <b>SACS252</b>  | 25 (27.5)                                   | 1.97   | 5.15                          | 10.13           |
| 033036      | <b>SACS254</b>  | 25 (27.5)                                   | 4.02   | 5.15                          | 20.66           |
| 033037      | <b>SACS256</b>  | 25 (27.5)                                   | 6.22   | 5.15                          | 32.00           |
| 033038      | <b>SACS258</b>  | 25 (27.5)                                   | 8.27   | 5.15                          | 42.53           |
| 033039      | <b>SACS2510</b> | 25 (27.5)                                   | 10.28  | 5.15                          | 52.86           |
| 033050      | <b>SACS506</b>  | 50 (55)                                     | 6.26   | 10.99                         | 68.77           |
| 033060      | <b>SACS1006</b> | 95 (104.7)                                  | 6.61   | 20.62                         | 136.30          |

- Complies with ASME B-30.1
- High strength alloy steel for safety and durability
- Inside cylinder treated to enhance durability
- Features collar threads, plunger threads and base mounting holes for optional fixture attachment.
- Heavy duty plunger spring return
- High quality 3/8"-18 NPT quick coupling
- Baked enamel finish for increased corrosion resistance



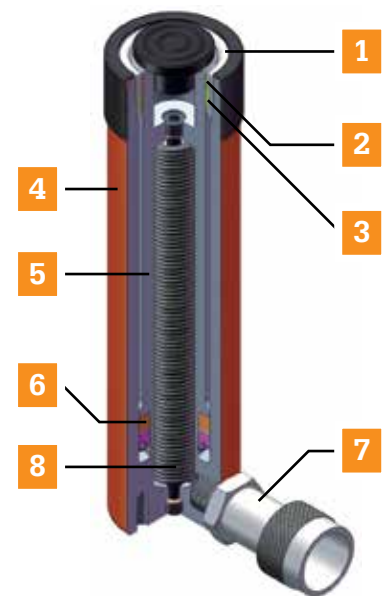
# SINGLE ACTING CYLINDERS

## CAPACITY 5-95 TON



| Collapsed Height | Extended Height | Collar Thread | Collar Thread Length | Outside Diameter | Piston Rod Diameter | Piston Internal Thread | Piston Thread Length | Base Fixturing Holes |              |                | Product Weight |
|------------------|-----------------|---------------|----------------------|------------------|---------------------|------------------------|----------------------|----------------------|--------------|----------------|----------------|
| A                | B               | C             | X                    | D                | F                   | O                      | P                    | BOLT CIRCLE U        | THREAD V     | THREAD DEPTH Z | lbs / kg       |
| IN               | IN              | IN            | IN                   | IN               | IN                  |                        | IN                   | IN                   | IN           | IN             |                |
| 1.65             | 2.28            | -             | -                    | 2.32 x 1.65      | 0.98                | -                      | -                    | 1.10                 | 0.22         | -              | 1.8 / 0.8      |
| 8.46             | 13.46           | 1-1/2 - 16    | 1.10                 | 1.50             | 0.98                | 3/4 - 16UNF            | 0.63                 | 0.98                 | 1/4 - 20UNC  | 0.55           | 3.7 / 1.7      |
| 4.76             | 6.89            | 2-1/4 - 14    | 1.02                 | 2.25             | 1.50                | 1 - 8UNC               | 0.75                 | 1.54                 | 5/16 - 18UNC | 0.47           | 3.7 / 1.7      |
| 6.73             | 10.87           | 2-1/4 - 14    | 1.02                 | 2.25             | 1.50                | 1 - 8UNC               | 0.75                 | 1.54                 | 5/16 - 18UNC | 0.47           | 6.4 / 3        |
| 9.72             | 15.87           | 2-1/4 - 14    | 1.02                 | 2.25             | 1.50                | 1 - 8UNC               | 0.75                 | 1.54                 | 5/16 - 18UNC | 0.47           | 9.0 / 4.1      |
| 11.73            | 19.72           | 2-1/4 - 14    | 1.02                 | 2.25             | 1.50                | 1 - 8UNC               | 0.75                 | 1.54                 | 5/16 - 18UNC | 0.47           | 10.8 / 4.9     |
| 13.74            | 23.86           | 2-1/4 - 14    | 1.02                 | 2.25             | 1.50                | 1 - 8UNC               | 0.75                 | 1.54                 | 5/16 - 18UNC | 0.47           | 12.3 / 5.6     |
| 6.50             | 8.46            | 3-5/16 - 12   | 2.13                 | 3.39             | 2.24                | 1-1/2 - 16UN           | 1.02                 | 2.28                 | 1/2 - 13UNC  | 0.75           | 13.6 / 6.2     |
| 8.46             | 12.48           | 3-5/16 - 12   | 2.13                 | 3.39             | 2.24                | 1-1/2 - 16UN           | 1.02                 | 2.28                 | 1/2 - 13UNC  | 0.75           | 17.6 / 8       |
| 10.75            | 16.97           | 3-5/16 - 12   | 2.13                 | 3.39             | 2.24                | 1-1/2 - 16UN           | 1.02                 | 2.28                 | 1/2 - 13UNC  | 0.75           | 22.7 / 10.3    |
| 12.72            | 20.98           | 3-5/16 - 12   | 2.13                 | 3.39             | 2.24                | 1-1/2 - 16UN           | 1.02                 | 2.28                 | 1/2 - 13UNC  | 0.75           | 26.6 / 12.1    |
| 14.72            | 25.00           | 3-5/16 - 12   | 2.13                 | 3.39             | 2.24                | 1-1/2 - 16UN           | 1.02                 | 2.28                 | 1/2 - 13UNC  | 0.75           | 31.0 / 14.1    |
| 11.10            | 17.36           | 5 - 12        | 2.17                 | 5.00             | 3.15                | -                      | -                    | 3.74                 | 1/2 - 13UNC  | 0.75           | 48.8 / 22.1    |
| 14.06            | 20.67           | 6-7/8 - 12    | 1.73                 | 6.97             | 4.13                | -                      | -                    | 5.47                 | 3/4 - 10UNC  | 0.98           | 131.3 / 159.6  |

1. Guide ring eliminates over travel, and provides support to reduce wear from off-centre loads.
2. Heavy duty wiper ring keeps dust and debris out of cylinder body, improving performance and service life.
3. Bearing ring provides additional support to reduce wear from off-centre loads.
4. All-steel body with baked enamel finish for durability.
5. Hardened and chromed piston increases durability and reduces wear.
6. Secondary gasket and industrial seal ring assembly prevents costly leaks.
7. Standard coupler on all cylinders provided with heavy duty dust cover.
8. High strength return spring.





**Low Height**

# **SINGLE ACTING CYLINDERS**

**CAPACITY 5-50 TON**



**INDUSTRIAL**



- For use in confined spaces
- Complies with ASME B-30.1
- High strength alloy steel for durability
- Mounting holes for fixture attachment
- Heavy duty plunger return springs
- High quality 3/8"-18NPT quick coupling
- Grooved plunger end with threaded hole for mounting tilt saddles
- Baked enamel finish for increased corrosion resistance

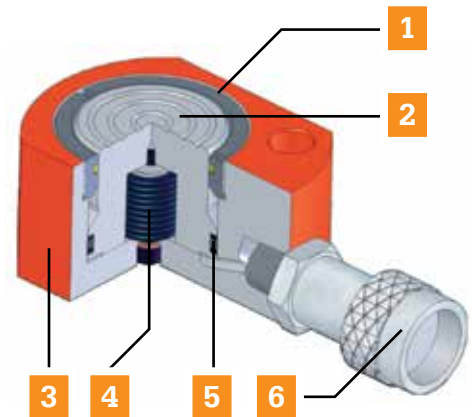
**Low Height**

# **SINGLE ACTING CYLINDERS**

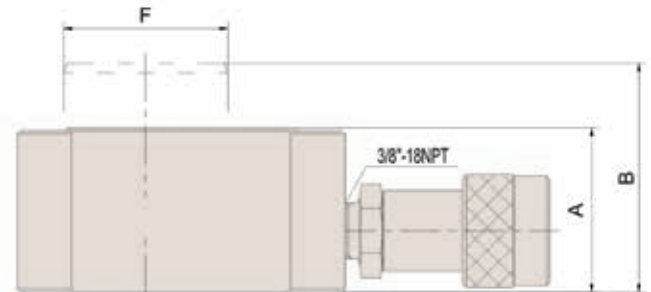
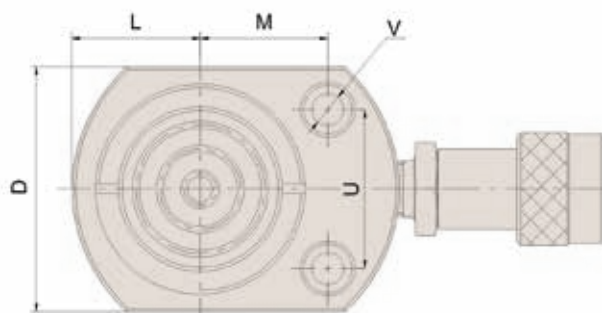
**CAPACITY 5-50 TON**



1. Steel guide ring eliminates over travel and withstands full dead-end load, it also provides support to reduce wear from off-centre loads.
2. Hardened and chromed piston increases durability and reduces wear.
3. All-steel body with baked enamel finish for durability.
4. High strength return spring.
5. Secondary gasket and industrial seal ring assembly prevents costly leaks.
6. Standard coupler on all cylinders provided with heavy duty dust cover.



| PRODUCT NO. | MODEL NO.      | Cylinder Capacity<br>@ 700 Bar<br>(10,000 PSI) | Stroke | Cylinder Effective Area | Oil Capacity | Collapsed Height<br>A | Extended Height<br>B | Outside Diameter<br>D | Piston Rod Diameter<br>F | Top Dimensions |      |      |      | Product Weight |
|-------------|----------------|------------------------------------------------|--------|-------------------------|--------------|-----------------------|----------------------|-----------------------|--------------------------|----------------|------|------|------|----------------|
|             |                |                                                |        |                         |              |                       |                      |                       |                          | M              | L    | V    | U    |                |
|             |                | Metric Ton<br>(US Ton)                         | IN     | IN²                     | IN³          | IN                    | IN                   | IN                    | IN                       | IN             | IN   | IN   | IN   | lbs / kg       |
| 033061      | <b>SACL50</b>  | 5 (5.5)                                        | 0.24   | 1.10                    | 0.26         | 1.30                  | 1.54                 | 2.32 x 1.65           | 0.98                     | 0.91           | 0.83 | 0.22 | 1.12 | 1.30 / 0.6     |
| 033063      | <b>SACL100</b> | 10 (11)                                        | 0.39   | 2.25                    | 0.88         | 1.65                  | 2.09                 | 3.27 x 2.20           | 1.50                     | 1.34           | 1.10 | 0.28 | 1.44 | 3.30 / 1.5     |
| 033065      | <b>SACL200</b> | 20 (22)                                        | 0.43   | 4.39                    | 1.90         | 2.01                  | 2.44                 | 3.98 x 3.00           | 2.01                     | 1.57           | 1.57 | 0.39 | 1.94 | 5.90 / 2.7     |
| 033070      | <b>SACL300</b> | 30 (33)                                        | 0.51   | 6.48                    | 3.31         | 2.30                  | 2.80                 | 4.61 x 3.74           | 2.60                     | 1.77           | 1.89 | 0.39 | 2.05 | 9.50 / 4.3     |
| 033074      | <b>SACL500</b> | 50 (55)                                        | 0.63   | 9.86                    | 6.21         | 2.64                  | 3.27                 | 5.51 x 4.49           | 2.76                     | 2.13           | 2.24 | 0.43 | 2.62 | 14.70 / 6.7    |





## Hollow Centre SINGLE ACTING CYLINDERS

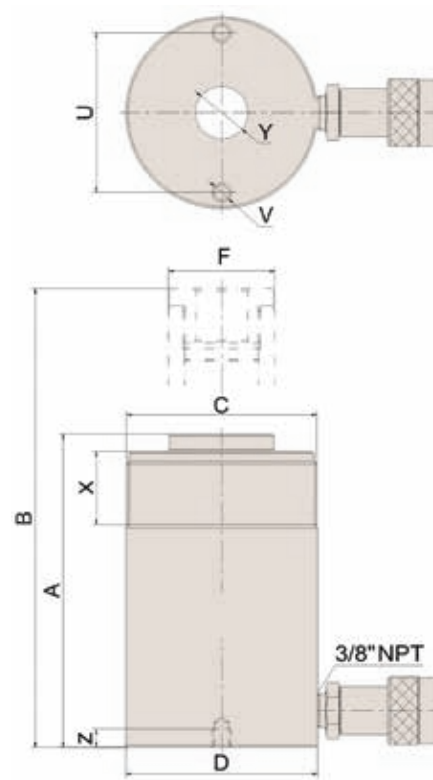
CAPACITY 20-30 TON



INDUSTRIAL



- Hollow plunger design allows for both push and pull forces
- Complies with ASME B-30.1
- High strength alloy steel for durability and added safety
- Single acting spring return
- High quality 3/8"-18NPT quick couplings
- Collar and plunger threads for fixture attachment
- Baked enamel finish for corrosion resistance



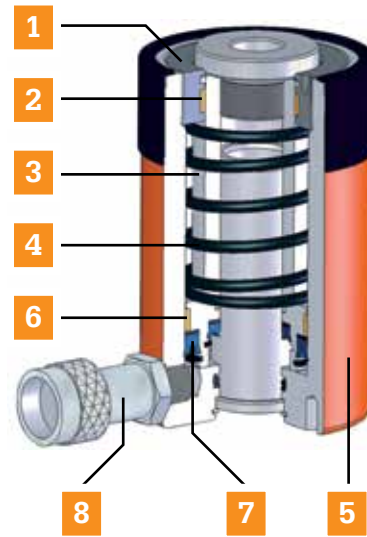
| PRODUCT NO. | MODEL NO.      | Cylinder<br>Capacity @ 700<br>Bar (10,000 PSI) | Stroke | Cylinder<br>Effective Area | Oil Capacity    | Collapsed<br>Height | Extended<br>Height | Collar Thread | Collar Thread<br>Length | Outside<br>Diameter |
|-------------|----------------|------------------------------------------------|--------|----------------------------|-----------------|---------------------|--------------------|---------------|-------------------------|---------------------|
|             |                |                                                |        |                            |                 | A                   | B                  | C             | X                       | D                   |
|             |                | Metric Ton<br>(US Ton)                         | IN     | IN <sup>2</sup>            | IN <sup>3</sup> | IN                  | IN                 | IN            | IN                      | IN                  |
| 033076      | <b>SACH202</b> | 20 (22)                                        | 1.93   | 5.08                       | 9.80            | 6.38                | 8.31               | 3-7/8 - 12    | 1.50                    | 3.90                |
| 033077      | <b>SACH206</b> | 20 (22)                                        | 6.10   | 5.08                       | 31.01           | 12.05               | 18.15              | 3-7/8 - 12    | 1.50                    | 3.90                |
| 033078      | <b>SACH302</b> | 30 (33)                                        | 2.52   | 7.39                       | 18.62           | 7.01                | 9.53               | 4-1/2 - 12    | 1.65                    | 4.53                |
| 033079      | <b>SACH306</b> | 30 (33)                                        | 6.10   | 7.39                       | 45.10           | 12.99               | 19.09              | 4-1/2 - 12    | 1.65                    | 4.53                |

# Hollow Centre SINGLE ACTING CYLINDERS

CAPACITY 20-30 TON



1. Steel guide ring eliminates over travel and withstands full dead-end load, it also provides support to reduce wear from off-centre loads.
2. Bearing ring provides additional support to reduce wear from off-centre loads.
3. Hardened and chromed piston increase durability and reduces wear.
4. High strength return spring.
5. All steel body with baked enamel finish for durability.
6. Industrial bearing ring provides additional support to reduce wear from off-centre loads.
7. Industrial seal ring assembly prevent costly leaks.
8. Standard coupler on all cylinders provided with heavy duty dust cover.



| Piston Rod Diameter | Base Fixturing Holes |             |                | Center Hole Diameter | Product Weight |
|---------------------|----------------------|-------------|----------------|----------------------|----------------|
|                     | BOLT CIRCLE U        | THREAD V    | THREAD DEPTH Z |                      |                |
| F                   | IN                   | IN          | IN             | IN                   | lbs / kg       |
| 2.17                | 3.25                 | 3/8 - 16UNC | 0.37           | 1.06                 | 16.06 / 7.3    |
| 2.17                | 3.25                 | 3/8 - 16UNC | 0.37           | 1.06                 | 29.48 / 13.4   |
| 2.56                | 3.63                 | 3/8 - 16UNC | 0.55           | 1.31                 | 23.10 / 10.45  |
| 2.56                | 3.63                 | 3/8 - 16UNC | 0.55           | 1.31                 | 42.46 / 19.3   |



## AIR/HYDRAULIC FOOT PUMPS



- Can be used with a variety of hydraulic cylinders, presses or other hydraulic equipment
- Provides up to 10,000 PSI of hydraulic pressure (0.6 - 1.0 Mpa)
- Air exhaust muffler for quiet operation
- Internal load limiting device provides overload protection
- Air input port thread 1/4"NPT, Oil output 3/8"-18NPT
- Features both air and oil filters to reduce risk of damage from environmental contaminants

| PRODUCT NO. | MODEL NO. | Pressure Rating | Air Source Pressure | Usable Oil Capacity | Flow                 |      | Dimensions |     |     | Reservoir Material | Control Method | Product Weight |
|-------------|-----------|-----------------|---------------------|---------------------|----------------------|------|------------|-----|-----|--------------------|----------------|----------------|
|             |           | PSI             | PSI                 | IN <sup>3</sup>     | No Load              | Load | L          | W   | H   |                    |                |                |
|             |           |                 |                     |                     | IN <sup>3</sup> /MIN |      | IN         | IN  | IN  |                    |                | lbs / kg       |
| 033125      | AHP002    | 10,000          | 90 -145             | 98                  | 49.5                 | 7.6  | 10.3       | 5.3 | 7.3 | Aluminum alloy     | Foot pedal     | 19 / 9         |
| 033126      | AHP003    | 10,000          | 90 -145             | 275                 | 49.5                 | 7.6  | 12.5       | 7   | 7.5 | Steel              | Foot pedal     | 28 / 13        |
| 033127      | AHP004    | 10,000          | 90 -145             | 442                 | 49.5                 | 7.6  | 11         | 8.8 | 10  | Steel              | Foot pedal     | 36 / 16        |

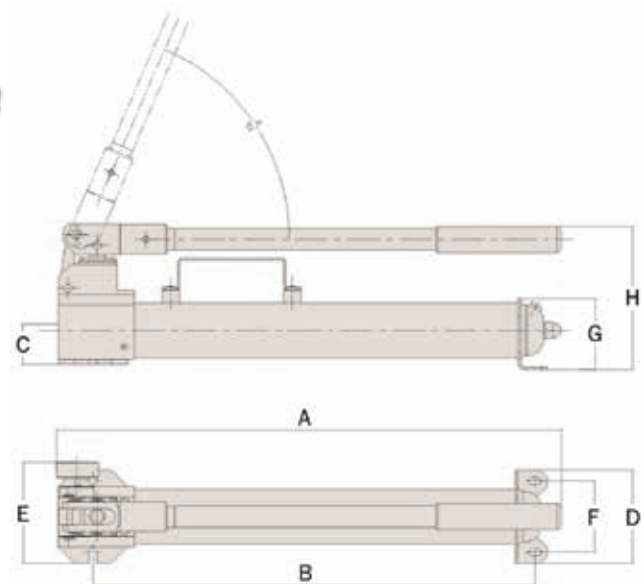
### AIR/HYDRAULIC FOOT PUMP SELECTION

| PRODUCT NO.                                           | MODEL NO. | Stage         | Flow<br>(IN³) | Capacity (TONS) |       |       |       |       |        |        |        |        |
|-------------------------------------------------------|-----------|---------------|---------------|-----------------|-------|-------|-------|-------|--------|--------|--------|--------|
|                                                       |           |               |               | 5               | 10    | 15    | 25    | 30    | 50     | 75     | 100    | 150    |
| Required time ( seconds ) for cylinder to lift 1 inch |           |               |               |                 |       |       |       |       |        |        |        |        |
| 033125                                                | AHP002    | Low Pressure  | 0.81          | 1.30            | 2.90  | 3.90  | 6.40  | 8.30  | 15.00  | 19.50  |        |        |
|                                                       |           | High Pressure | 0.12          | 8.70            | 19.00 | 26.30 | 42.50 | 55.00 | 100.00 | 130.00 |        |        |
| 033126                                                | AHP003    | Low Pressure  | 0.81          | 1.30            | 2.90  | 3.90  | 6.40  | 8.30  | 15.00  | 19.50  | 25.60  |        |
|                                                       |           | High Pressure | 0.12          | 8.70            | 19.00 | 26.30 | 42.50 | 55.00 | 100.00 | 130.00 | 166.00 |        |
| 033127                                                | AHP004    | Low Pressure  | 0.81          | 1.30            | 2.90  | 3.90  | 6.40  | 8.30  | 15.00  | 19.50  | 25.60  | 38.00  |
|                                                       |           | High Pressure | 0.12          | 8.70            | 19.00 | 26.30 | 42.50 | 55.00 | 100.00 | 130.00 | 166.00 | 252.50 |

# SINGLE ACTING HAND PUMPS



- Single acting hand pumps made of high strength alloy steel; corrosion resistant and engineered for use in extreme environments
- Internal pressure relief valve for overload protection
- Compact design for storage and transportation
- Compatible with various cylinders and tools



| PRODUCT NO. | MODEL NO.     | Speed | Usable Oil Volume | Pressure Rating |           | Oil Output Per Stroke |                 | Handle Force | Oil Output Thread | Product Weight |
|-------------|---------------|-------|-------------------|-----------------|-----------|-----------------------|-----------------|--------------|-------------------|----------------|
|             |               |       |                   | 1st Stage       | 2nd Stage | 1st Stage             | 2nd Stage       |              |                   |                |
|             |               |       | IN <sup>3</sup>   | PSI             | PSI       | IN <sup>3</sup>       | IN <sup>3</sup> | lbs          | IN                | lbs / kg       |
| 033101      | <b>HPS55</b>  | Dual  | 55                | 360             | 10,000    | 2.038                 | 0.201           | 108          | 3/8 - 18NPT       | 16.06 / 4.56   |
| 033102      | <b>HPS140</b> | Dual  | 140               | 360             | 10,000    | 2.038                 | 0.201           | 108          | 3/8 - 18NPT       | 22.22 / 10.08  |

## HAND PUMP SELECTION CHART

| PRODUCT NO.                                  | MODEL NO. | Stage     | Flow (IN³) | Capacity (TONS) |    |    |    |    |    |    |
|----------------------------------------------|-----------|-----------|------------|-----------------|----|----|----|----|----|----|
|                                              |           |           |            | 5               | 10 | 15 | 25 | 30 | 50 | 75 |
| Required Strokes for Cylinder to lift 1 inch |           |           |            |                 |    |    |    |    |    |    |
| 033101                                       | HPS55     | 1st Stage | 2.038      | 1               | 2  | 2  | 3  |    |    |    |
|                                              |           | 2nd Stage | 0.201      | 6               | 12 | 16 | 26 |    |    |    |
| 033102                                       | HPS140    | 1st Stage | 2.038      | 1               | 2  | 2  | 3  | 4  | 6  | 8  |
|                                              |           | 2nd Stage | 0.201      | 6               | 12 | 16 | 26 | 31 | 55 | 81 |



INDUSTRIAL

## RUBBER HYDRAULIC HOSES



| PRODUCT NO. | MODEL NO.      | Hose Material | Internal Diameter | Working Pressure | Burst Pressure | Thread    | Length |
|-------------|----------------|---------------|-------------------|------------------|----------------|-----------|--------|
|             |                |               | IN                | PSI              | PSI            | IN        | FT     |
| 033130      | <b>HPH8206</b> | Rubber        | 1/4               | 10,000           | 20,000         | 3/8 - NPT | 6      |
| 033131      | <b>HPH8210</b> | Rubber        | 1/4               | 10,000           | 20,000         | 3/8 - NPT | 10     |
| 033132      | <b>HPH8220</b> | Rubber        | 1/4               | 10,000           | 20,000         | 3/8 - NPT | 20     |
| 033133      | <b>HPH8306</b> | Rubber        | 3/8               | 10,000           | 20,000         | 3/8 - NPT | 6      |
| 033134      | <b>HPH8310</b> | Rubber        | 3/8               | 10,000           | 20,000         | 3/8 - NPT | 10     |
| 033135      | <b>HPH8320</b> | Rubber        | 3/8               | 10,000           | 20,000         | 3/8 - NPT | 20     |



## QUICK COUPLERS

| PRODUCT NO. | MODEL NO.      | Max Pressure | Type      | Thread      | Coupler Type  |
|-------------|----------------|--------------|-----------|-------------|---------------|
|             |                | PSI          |           | IN          |               |
| 033140      | <b>QC201MF</b> |              |           |             | Male / Female |
| 033141      | <b>QC201F</b>  | 10,000       | High flow | 3/8 - 18NPT | Female        |
| 033142      | <b>QC201M</b>  |              |           |             | Male          |



## HYDRAULIC VALVES

### 033165

Needle valve, manually controls the speed of cylinder, can be used as a shut-off valve for temporary load holding

### 033160

Manually operated check valve used to hold load with single or double acting cylinder, manually opened to allow oil to flow back to oil reserve when cylinder retracts.

033160



033165





**INDUSTRIAL**

## PRESSURE GAUGES

| PRODUCT NO. | MODEL NO.      | Pressure Range |            | Thread    | Gauge Diameter |
|-------------|----------------|----------------|------------|-----------|----------------|
|             |                | MPa            | PSI        |           |                |
| 033150      | <b>HPG2510</b> | 0 - 100        | 0 - 15,000 | 1/4 - NPT | 2.5            |
| 033151      | <b>HPG4010</b> | 0 - 100        | 0 - 15,000 | 1/2 - NPT | 4              |



## GAUGE ADAPTORS

| PRODUCT NO. | MODEL NO.    | Female Coupler Thread | Male Coupler Thread | Gauge Thread | A    | B    | C         | D         | E         | F    |
|-------------|--------------|-----------------------|---------------------|--------------|------|------|-----------|-----------|-----------|------|
|             |              | IN                    | IN                  | IN           | IN   | IN   | IN        | IN        | IN        | IN   |
| 033152      | <b>GA001</b> | 3/8 - NPT             | 3/8 - NPT           | 1/2 - NPT    | 2.79 | 1.22 | 1/2 - NPT | 3/8 - NPT | 3/8 - NPT | 1.25 |
| 033153      | <b>GA002</b> | 3/8 - NPT             | 3/8 - NPT           | 1/2 - NPT    | 6.1  | 1.37 | 1/2 - NPT | 3/8 - NPT | 3/8 - NPT | 1.25 |
| 033154      | <b>GA003</b> | 3/8 - NPT             | 3/8 - NPT           | 1/4 - NPT    | 5.23 | 1.88 | 1/4 - NPT | 3/8 - NPT | 3/8 - NPT | 1.25 |
| 033155      | <b>GA004</b> | 3/8 - NPT             | 1/4 - NPT           | 1/2 - NPT    | 4.37 | 1.37 | 1/2 - NPT | 1/4 - NPT | 3/8 - NPT | 1.25 |
| 033156      | <b>GA005</b> | 3/8 - NPT             | 3/8 - NPT           | 1/4 - NPT    | 5.27 | 1.37 | 1/4 - NPT | 3/8 - NPT | 1/4 - NPT | 1.25 |

