

STONE[®]

AC Power Units

DC Power Units

Motor Pump Assemblies

Gear Pumps

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BECAUSE OF OUR PEOPLE**

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LIMITED WARRANTY

FOR A PERIOD OF TIME STATED BELOW, SPX FLUID POWER will repair or replace, free of charge, any products SPX Fluid Power has determined, upon inspection by SPX Fluid Power, to be faulty due to defective material and/or workmanship. SPX Fluid Power may, at its discretion, issue credit in lieu of repair or replacement.

This warranty shall not apply to any loss or damage resulting from: (i) normal wear and tear; (ii) alteration, misuse, abuse or improper installation, operation or maintenance by Buyer or a third party; (iii) accident, fire, flood or acts of God; or (iv) inaccurate or incomplete information or data supplied or approved by the Buyer. Buyer shall defend and indemnify SPX Fluid Power for any loss or damage of SPX Fluid Power arising out of (i) through (iv) above and any breach by Buyer of its covenants and obligations under the SPX Fluid Power Terms and Conditions of Purchase.

THIS WARRANTY IS LIMITED TO REPLACEMENT OR REPAIR AND IS IN LIEU OF AND EXCLUSIVE OF ALL OTHER REMEDIES. No claim by a Buyer, other than a demand for replacement or repair, shall be honored by SPX Fluid Power; and, SPX Fluid Power shall not be liable for contingent liabilities arising out of the improper function of any product, nor shall SPX Fluid Power be liable for any claims for labor or inconsequential damage or incidental damages resulting from, arising out of or in connection with the testing, use, operation, replacement or repair of any SPX Fluid Power product or part.

SPX FLUID POWER DOES NOT WARRANT THE PRODUCT FOR MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE AND THERE IS NO WARRANTY, EXPRESSED OR IMPLIED, EXCEPT THAT THE PRODUCT SHALL BE OF THE KIND AND QUALITY DESCRIBED IN OUR SPECIFICATIONS. SPX Fluid Power has not authorized anyone to make representation of warranty other than the warranty contained herein. Under no circumstances shall SPX Fluid Power be liable for any special or consequential damages whether based upon lost goodwill, lost resale profits, work stoppage, impairment of other goods or otherwise and whether arising out of breach of warranty, breach of contract, negligence or otherwise, except only in the case of personal injury where applicable law requires such liability.

WARRANTY PERIOD

STONE® PRODUCTS, STANDARD AND OEM, a period of twelve (12) months from the date of manufacture.

STONE® PRODUCTS, AUTO HOIST POWER UNITS, a period of twenty-four (24) months from date of manufacture.

PRODUCTS NOT COVERED UNDER WARRANTY.

An inspection fee may be applied to all returns determined by SPX Fluid Power to be not under warranty. Charges for labor and applicable repair parts will be in addition to the aforementioned inspection fee. Repair estimates will be

communicated to the Buyer. SPX Fluid Power will allow a maximum of two weeks (10 working days) from the date of notification for the Buyer to advise SPX Fluid Power whether to: 1) Return, 2) Repair or 3) Scrap the product. If SPX Fluid Power does not receive written notification within this two-week period, SPX Fluid Power will, at its discretion, scrap the product in question.

RETURNS

Returns of product will be accepted only for the purpose set forth above and will not be accepted without a Return Authorization (RA) Number. An RA number can be obtained by calling Customer Service at 800-541-1418.

WARNINGS

- People who work on and around hydraulic systems of any kind without formal training expose themselves, and others, to serious safety hazards. An accident with a hydraulic system can result in severe injury, death, or substantial property damage.
- Always wear eye protection and protective clothing when working on and around hydraulic systems.
- Some hydraulic power units contain pumps that can generate pressures in excess of 5000 PSI (345 Bar). A pressure relief valve is used to set the pressure at the desired level. Tampering with, adjusting, modifying or removing the relief valve is extremely dangerous and is not recommended.
- Hydraulic fluid poses a fire hazard, and can cause skin irritation or burning if not properly handled.
- Never exhaust hydraulic fluid under pressure to atmosphere.
- Hydraulic fluid can reach high temperatures under normal operating conditions and can burn exposed skin.
- Fluid pressure (even as low as 100 PSI) can penetrate skin and cause death or serious injury.
- Hydraulic devices should be properly "Locked-Out" or "Tagged-Out" before being worked on, including the release of any stored energy and mechanically locking the device in place when appropriate.
- Remove any jewelry and/or objects that are electrical conductors before working on power units.
- Properly contain and dispose of fluids according to local codes and regulations.
- SPX Fluid Power is not responsible for misuse or misapplication of product.











SPX FLUID POWER QUALITY POLICY

At SPX FLUID POWER we are committed to meeting or exceeding Customer defined expectations by continuously improving the Quality of our Products, Processes, and Services.

SPX Fluid Power is an ISO 9001:2000 certified facility.



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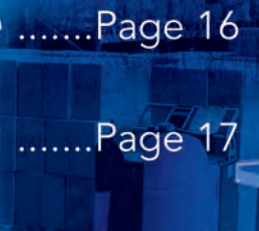
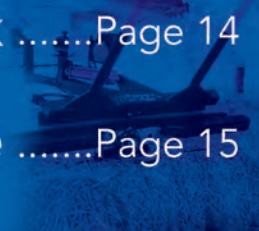
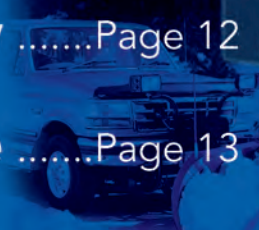
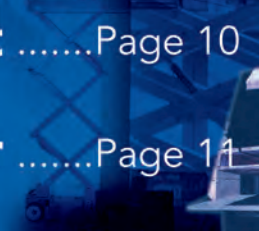


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What makes our power units so versatile, enabling such a wide range of uses is our modular end head, hydraulic circuits for a variety of application uses, easy field service and interchangeable cartridge valves, exclusive patented engineered seal fitting, fixed relief valve that the lift cannot be overloaded, and quick push button motor starts. We have engineered our products for a wide range of applications ensuring a power unit will fit your need.



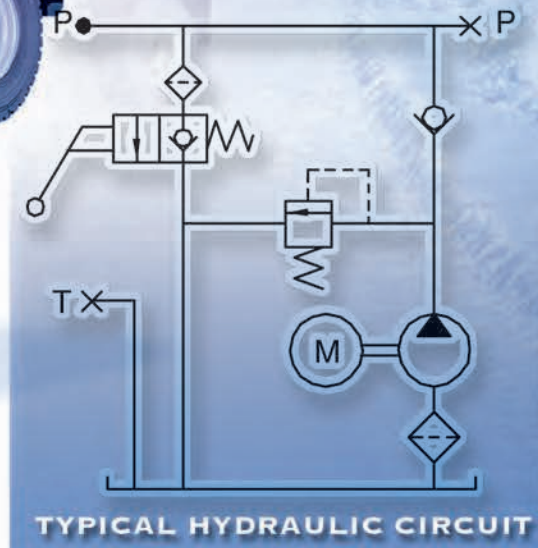
AC/DC Hydraulic Power Unit Applications

Auto Hoist

This power unit is designed specifically for use on 2 and 4 post auto hoists. This is for raise-hold-lower of the lift, with manual control of the lowering speed. A push-button, mounted on the unit, starts the motor to raise the lift. The unit features a fixed relief valve, so the lift cannot be overloaded, but (depending on the cylinder size) can be used on most 7000 to 9000 lbs. (3175 to 4082 kg) capacity lifts. Cartridge valves are used, allowing easy field service and interchangeability. Air motor driven models also available.

Typical units for this application:

- AC-10AH •AC-10KS •AC-10FP



AC/DC Hydraulic Power Unit Applications

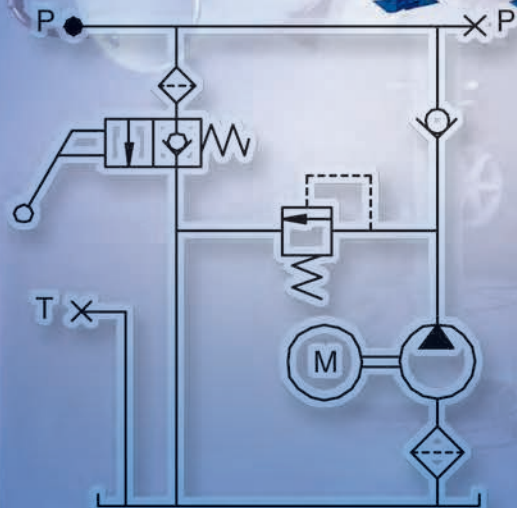
Tire Changer

Typical units for this application:

- AC-10TC



This power unit is designed for smaller, low-rise auto hoists and can be mounted either horizontally or vertically, operating on AC power. A push button on the motor starts the unit to raise the vehicle on the lift. To lower, a manually operated cartridge-style release valve is used for fingertip control of lowering speed.



TYPICAL HYDRAULIC CIRCUIT

Power Unit shown is a representation of a typical unit. Actual unit may vary.

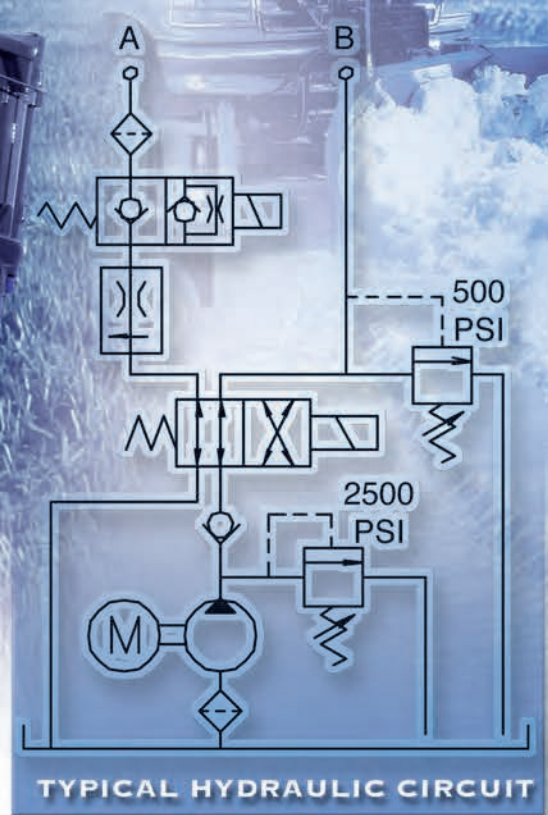
AC/DC Hydraulic Power Unit Applications

Dump Trailer

This power unit is designed for use on a double acting dump trailer or dump bed applications. Provides power lift-hold-power down operation. Two models available, with and without corded hand control, allowing the unit to be used as a replacement or as original equipment.

Typical units for this application:

•DC-41DT • DC-41DTC



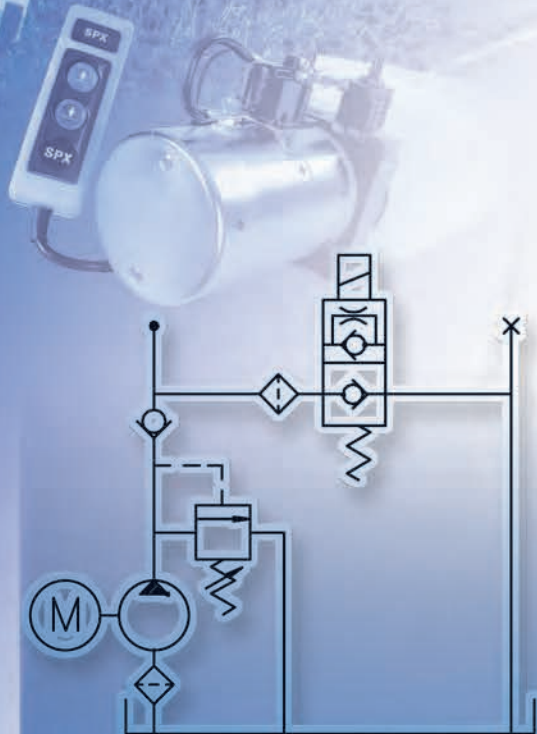
Tail Gate

Typical units for this application:

- DC-20SF

The most common, rugged and reliable piece of truck equipment is the tail gate. The original Stone unit, now manufactured by SPX Fluid Power, has been used by manufacturers of this equipment since the industry began.

Our 12V and 24V DC power packs come in manual or solenoid-operated versions for basic power up/gravity down tail gates. Power packs also available for cantilever and tuck-away designs of tail gates. Two button hand control is available for many DC lift/hold/lower applications. Steel or poly tanks available for custom design.



TYPICAL HYDRAULIC CIRCUIT

Power Unit shown is a representation of a typical unit. Actual unit may vary.



AC/DC Hydraulic Power Unit Applications

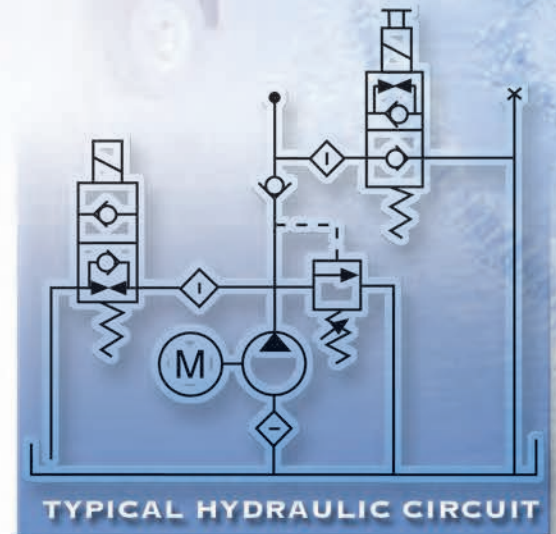
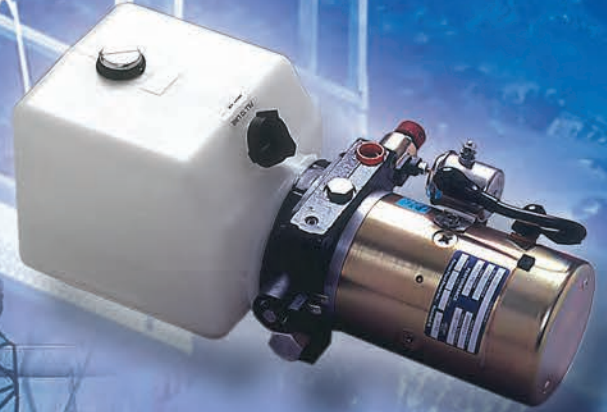
Man Lift AC & DC

These power units are designed for use on elevated work platforms using a raise-hold and gravity lower circuit. The following additional features include:

- Normally open valve to protect operators from run-on in case of motor contactor failures
- Manual override to allow the platform to be lowered in case of power failure
- **AC ONLY:** Electronic load delay for reliable operation in degraded voltage areas

Typical units for this application:

•AC-20ML •DC-20ML



STONE[®]

Power Unit shown is a representation of a typical unit. Actual unit may vary.

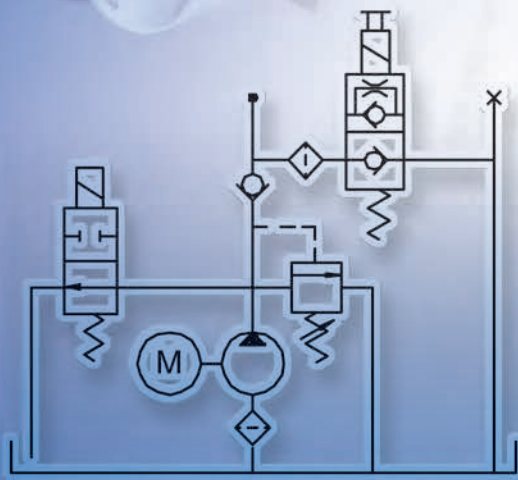
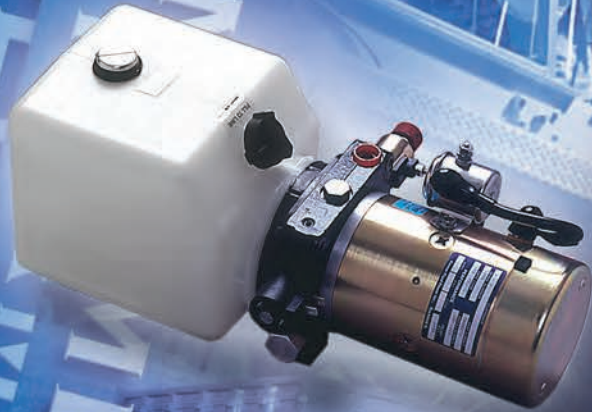
AC/DC Hydraulic Power Unit Applications

Scissor Lift

Typical units for this application:

- DC-20ML
- AC-20ML

The power raise/gravity lowering circuit is ideal for Scissor Lift applications. While the circuit below will cover a wide range of scissor lifts, other pump, motor and tank capacities are available to suit various sizes.



TYPICAL HYDRAULIC CIRCUIT



Power Unit shown is a representation of a typical unit. Actual unit may vary.

AC/DC Hydraulic Power Unit Applications

Dock Leveler

This hydraulic circuit has been specifically designed for Dock Levelers with a hydraulic lip. After powering the platform to its full height a sequence valve operates to redirect the oil flow to extend the lip. The valving ensures the lip remains extended until the pressure on the main lift ram has ceased.

Power units vary from application to application. Submit application specifications to your distributor and our customer application engineering team can provide a specific quotation.

Typical units for this application:
Contact Stone Technical Service



TYPICAL HYDRAULIC
CIRCUIT NOT SHOWN.
CONTACT STONE TECHNICAL
SERVICE FOR YOUR
SPECIFIC APPLICATION.

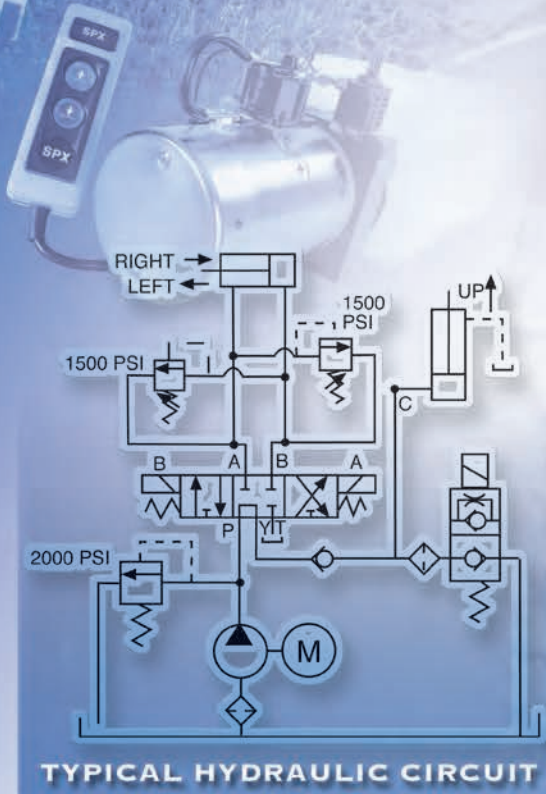
AC/DC Hydraulic Power Unit Applications

Snow Plow

Typical units for this application:

- DC-80SP

This power unit is designed to operate all functions of a power operated angling snow plow. The unit includes a lift-hold-gravity-lower function for the blade, with a continuous "float" capability. A directional valve controls angling of the blade, two cross-over reliefs protect the system from damage should the blade be obstructed while plowing.

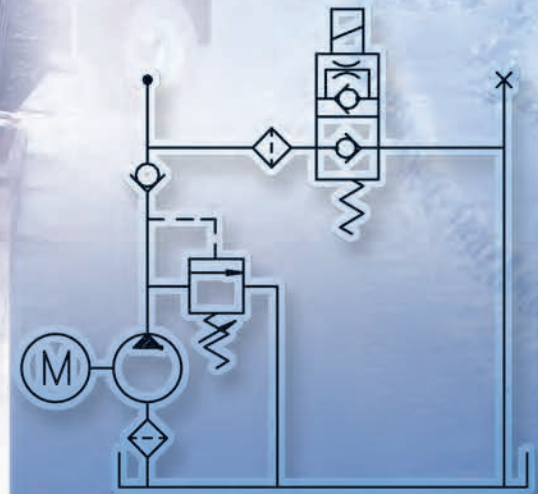


Power Unit shown is a representation of a typical unit. Actual unit may vary.

AC/DC Hydraulic Power Unit Applications Truck Mounted Crane

The DC power unit has been designed for truck applications with power lift, hold and gravity lower via a solenoid or manual release valve. Various tank sizes can be supplied to suit hydraulic cylinder capacities.

Typical units for this application:
•DC-20SF



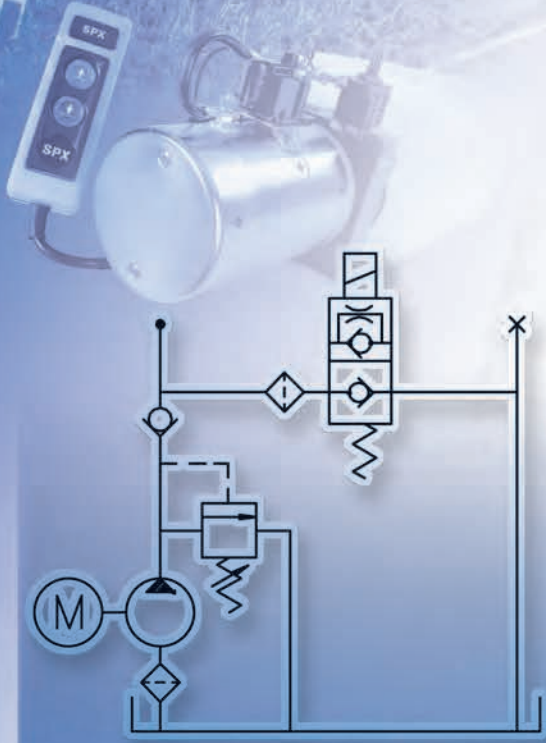
TYPICAL HYDRAULIC CIRCUIT

Dump Truck

Typical units for this application:

- DC-20SF •UD2431

The power unit has been designed for Dump Truck applications with power lift, hold and gravity lowering via a solenoid or manual release valve. Various tank sizes can be supplied to suit hydraulic cylinder capacities. An option to add a "tipper up" indication or warning pressure switch is available.



TYPICAL HYDRAULIC CIRCUIT

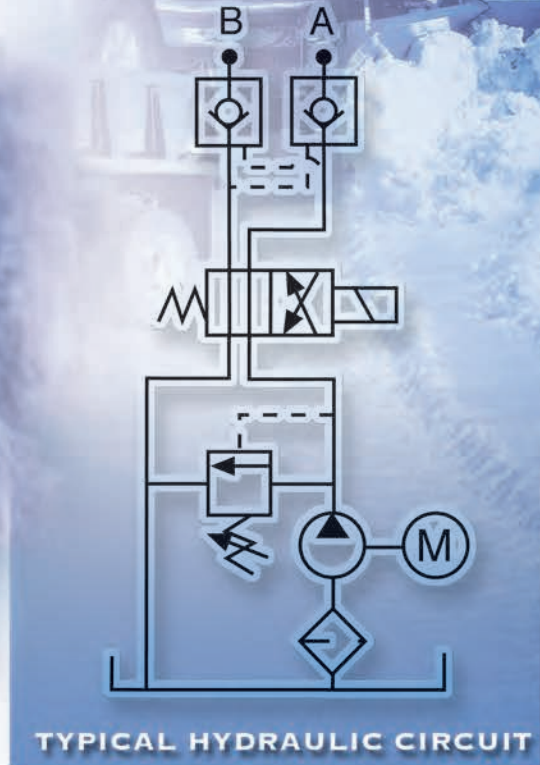
Power Unit shown is a representation of a typical unit. Actual unit may vary.

AC/DC Hydraulic Power Unit Applications

Bale Spike

The power unit is designed primarily to operate tines (or "spikes") which pick up round bales and allow these to be hauled by a pickup truck, tractor or other vehicle. The unit incorporates a two position, four way cartridge valve and double pilot-operated checks to control a double acting cylinder, to lift, hold and then lower (under power) the round bale. It may also be used to power any double-acting, intermittent duty application.

Typical units for this application:
•DC-70BS



Power Unit shown is a representation of a typical unit. Actual unit may vary.

AC/DC Hydraulic Power Unit Applications Recreational Vehicle

Typical units for this application:
Contact Stone Technical Service

This power unit design will operate the leveling and slide out systems for recreational vehicles. The circuit allows for the use of a hand pump for emergency purposes.



TYPICAL HYDRAULIC
CIRCUIT NOT SHOWN.
CONTACT STONE TECHNICAL
SERVICE FOR YOUR
SPECIFIC APPLICATION.

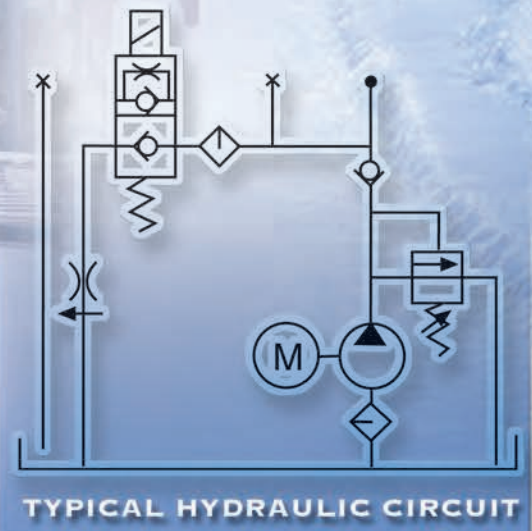
Power Unit shown is a representation of a typical unit. Actual unit may vary.

AC/DC Hydraulic Power Unit Applications

Material Handling 12V & 24V

These power units are designed primarily for low-lift pallet trucks. The units have a three way circuit for raise-hold-lower functions and are used with a single acting cylinder. Lowering speed is controlled over the entire load range by a built-in, pressure-compensated flow control. This unit is plumbed for vertical mounting (motor up) and is interchangeable with other manufacturer's power packs.

Typical units for this application:
•DC-20MH



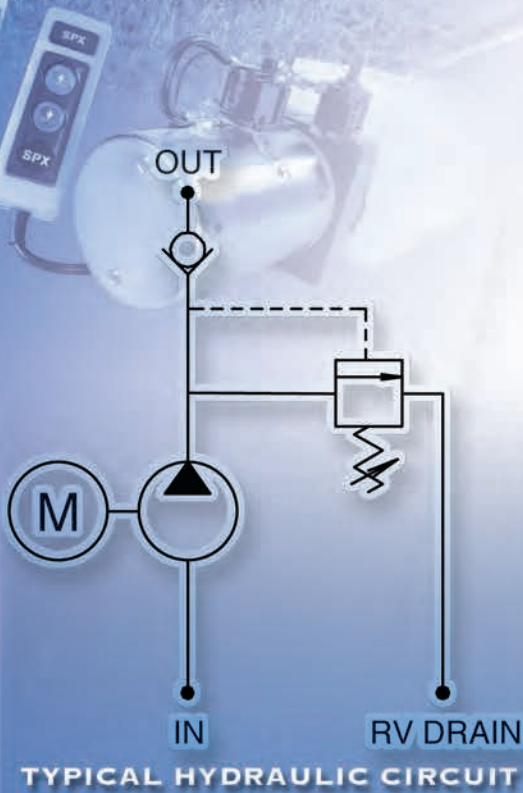
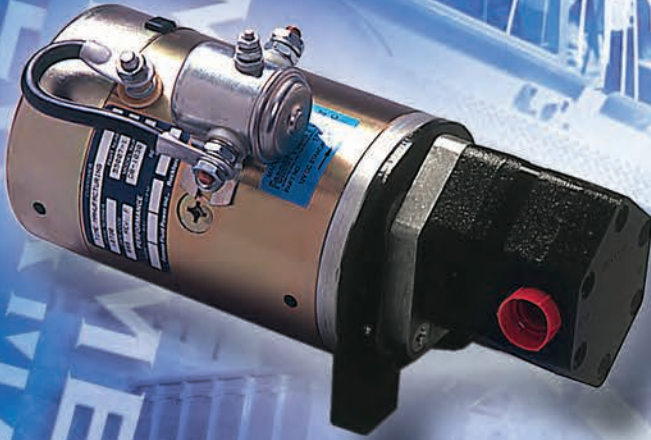
AC/DC Hydraulic Power Unit Applications

Auxiliary Power Unit

Typical units for this application:

- DC-30APU

The power unit is intended to be used with remote directional control valving and reservoir. This unit has an adjustable relief valve and outlet check valve. They are designed for applications such as back-up (auxiliary) hydraulic power for truck mounted or other mobile equipment, including emergency power steering for off-highway vehicles, elevated platforms, aerial buckets and manlifts. It can also be used to power material handling functions and other intermittent duty applications.



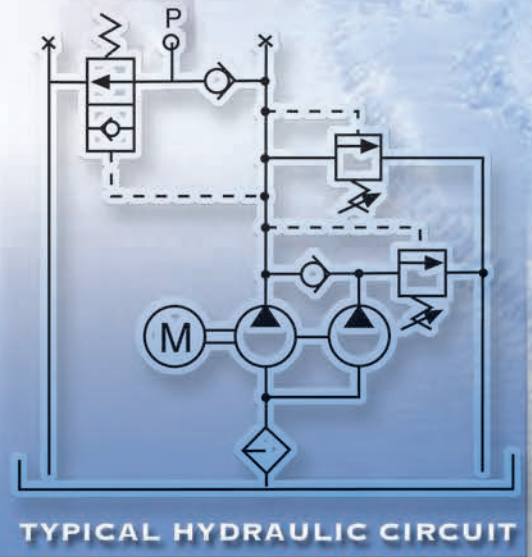
Power Unit shown is a representation of a typical unit.
Actual unit may vary.

AC/DC Hydraulic Power Unit Applications Filter Crusher/Compactor

This power unit incorporates a high-low pump for maximum output of oil for a fast extension of the cylinder, as well as a high pressure/low volume flow for the work portion of the cycle. Standard design is 1 phase operation. Air driven, 3 phase designs also available. For use with single acting spring return cylinders only.

Typical units for this application:

•AC-40FC



STONE[®]

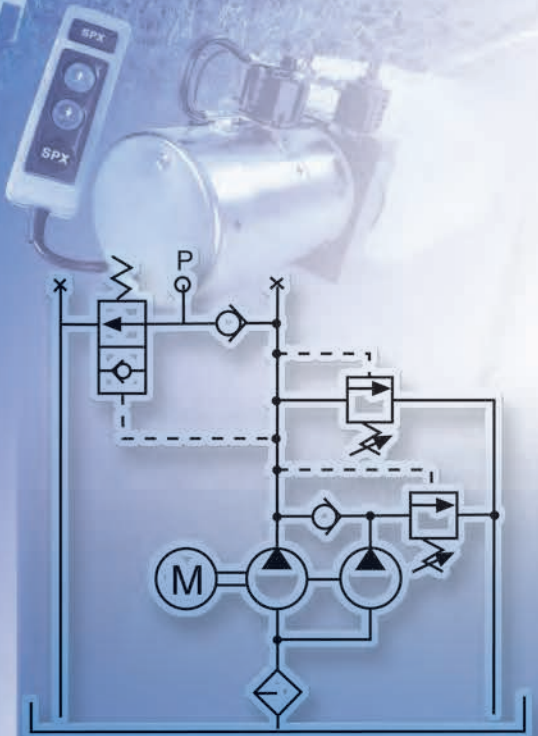
Power Unit shown is a representation of a typical unit. Actual unit may vary.

Hose Crimper

Typical units for this application:

- AC-40FC

This power unit incorporates a pilot operated control valve to operate a single acting circuit. Momentary toggle switch to start cylinder extension, upon release of toggle unit will automatically allow retraction of single-acting spring return cylinder.



TYPICAL HYDRAULIC CIRCUIT

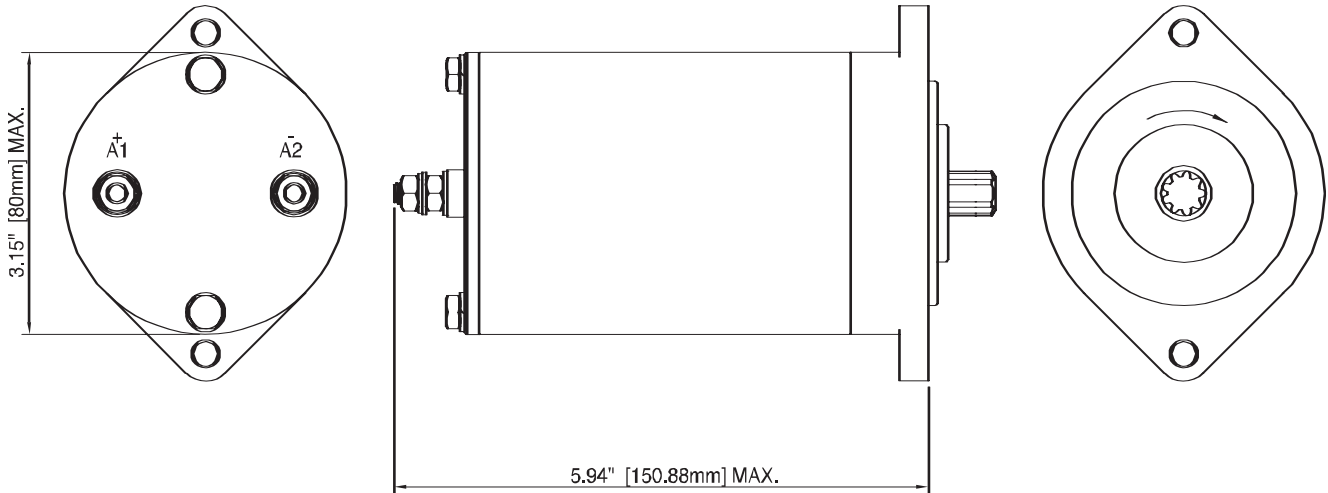
Power Unit shown is a representation of a typical unit. Actual unit may vary.

Motors

| Kit Number | Description | Page Number |
|-------------------|---|--------------------|
| KM05-09 | 3.0" 12/24V DC Motor Performance | Page 25 |
| KM05-08 | 3.0" 12V DC Motor Performance | Page 26 |
| KM06-09 | 3.0" 12-24V DC Motor Performance | Page 27 |
| KM96 | Motor Adaptor 182/184 Nema C Face | Page 28 |
| KM97 | Motor Adaptor 56/143/145 Nema C Face | Page 29 |
| KM98-80 | Motor Adaptor IEC Motors 80 Frame 80 C Face | Page 30 |
| KM98-90 | Motor Adaptor IEC Motors 90 Frame 95 C Face | Page 31 |
| KM98-100 | Motor Adaptor IEC Motors 100 Frame 100 C Face | Page 32 |
| KMC16-17 | Continuous Duty 1PH AC Motors | Page 33 |
| KMC21-23 | Continuous Duty 1 PH AC Motors | Page 34 |
| KMC18-20 | Continuous Duty 3 PH AC Motors | Page 35 |
| KMC22-24 | Continuous Duty 3 PH AC Motors | Page 36 |
| KMC29 | Continuous Duty 3 PH AC Motors | Page 37 |
| KMC30 | Continuous Duty 3 PH AC Motors | Page 38 |
| KMD1-6 | 4.5" Field Wound DC Motors | Page 39 |
| KMD1-3 | 4.5" 12V DC Motor (Std. & Ext. Duty) Performance & Duty Cycle | Page 40 |
| KMD4-6 | 4.5" 24V DC Motor (Std. & Ext. Duty) Performance & Duty Cycle | Page 41 |
| KMD8 | 5.0" 12/24V DC Heavy Duty Motor | Page 42 |
| KMP2 | 12V DC 50in-LB Permanent Magnet Motor | Page 44 |
| KMP5 | 24V DC 80in-LB Permanent Magnet Motor | Page 45 |

For continuous applications, Stone® recommends changing the coupling every 5,000 hours of use.

3.0" 12-24V DC MOTOR PERFORMANCE



| KIT NO. | VOLTAGE | POWER | UL RECOGNIZED | BRUSH KIT |
|---------|---------|-------|---------------|-----------|
| KM05 | 12 VDC | 500W | YES | K-77 |
| KM06 | 24 VDC | 500W | YES | K-78 |
| KM08 | 12 VDC | 800W | YES | K-77 |
| KM09 | 24 VDC | 800W | YES | K-78 |

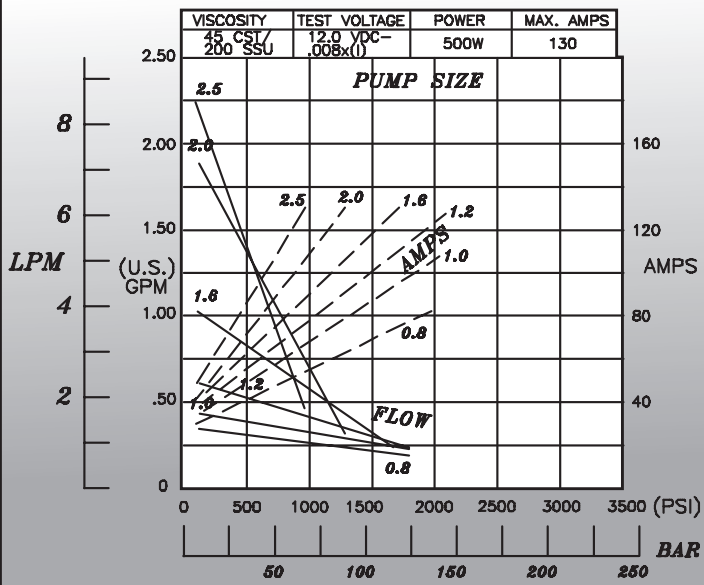
If using KS5 Smart Start, you must order K-104 and 5199-AA.

Note: Stone uses a network of qualified suppliers to ensure availability. There are minor dimensional and cosmetic differences between vendor's products.

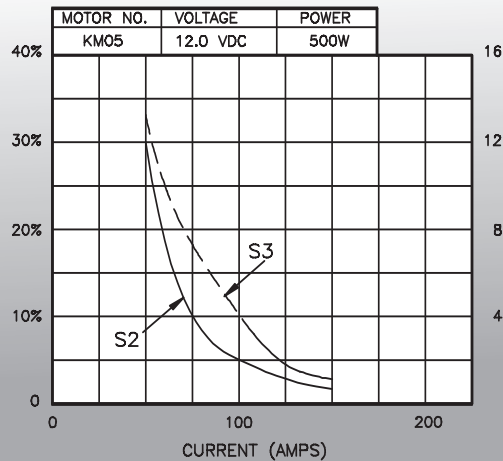
KM05-08

3.0" 12V DC MOTOR PERFORMANCE

KM05 Flow/AMP vs. Pressure Curve

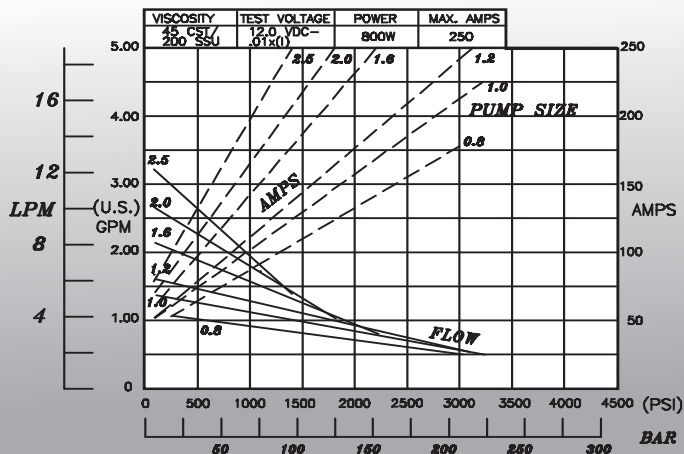


KM05 Motor Duty Cycle

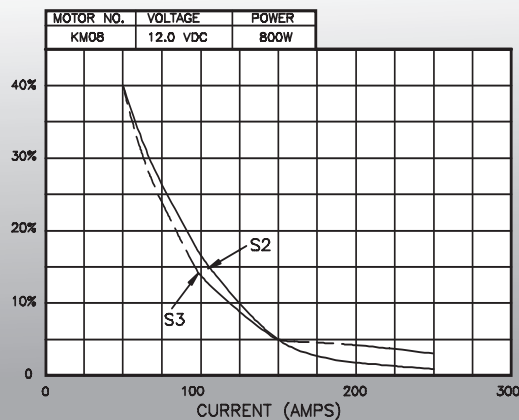


S2 Duty Rating in minutes.
S3 Duty Rating on time. (% of 5 minutes)

KM08 Flow/AMP vs. Pressure Curve

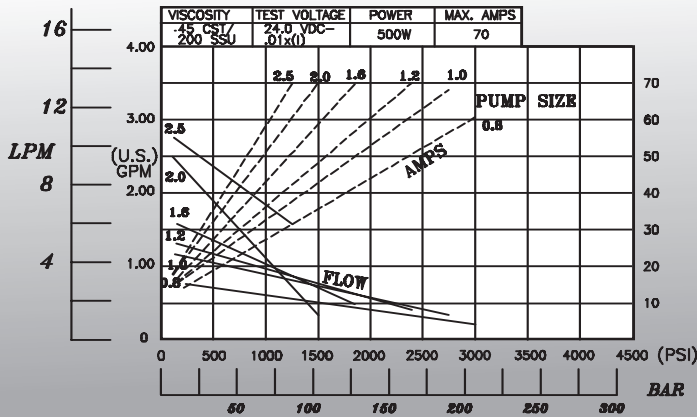


KM08 Motor Duty Cycle

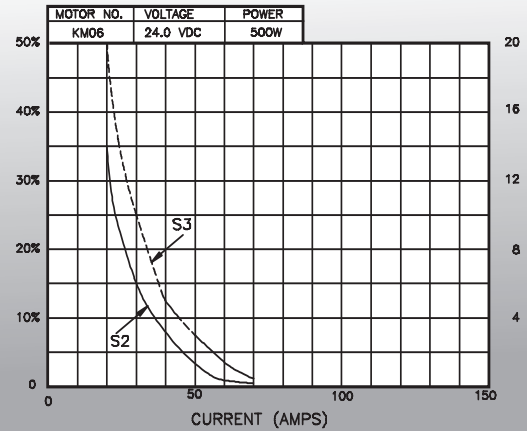


3.0" 12-24V DC MOTOR PERFORMANCE

KM06 Flow/AMP vs. Pressure Curve

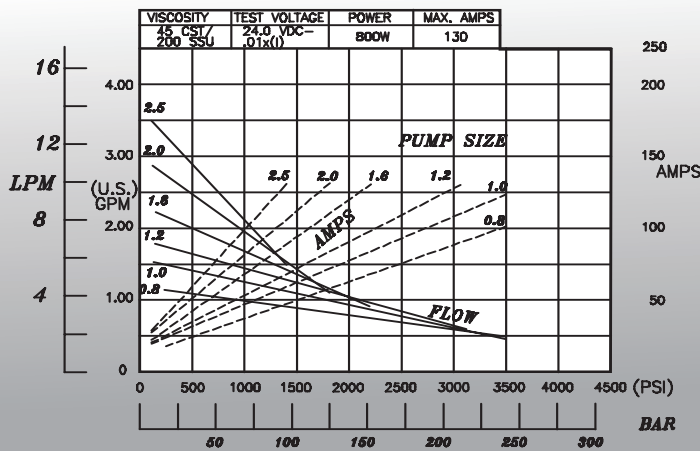


KM06 Motor Duty Cycle

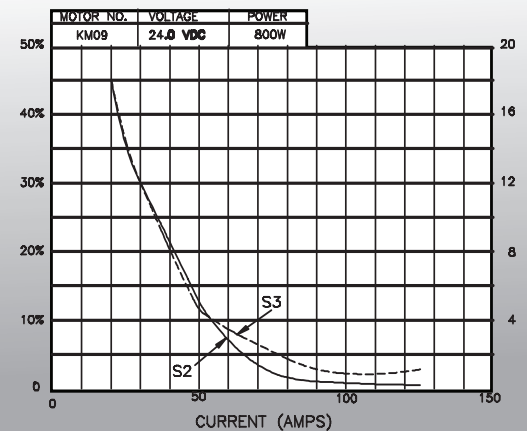


S2 Duty Rating in minutes.
S3 Duty Rating on time. (% of 5 minutes)

KM09 Flow/AMP vs. Pressure Curve

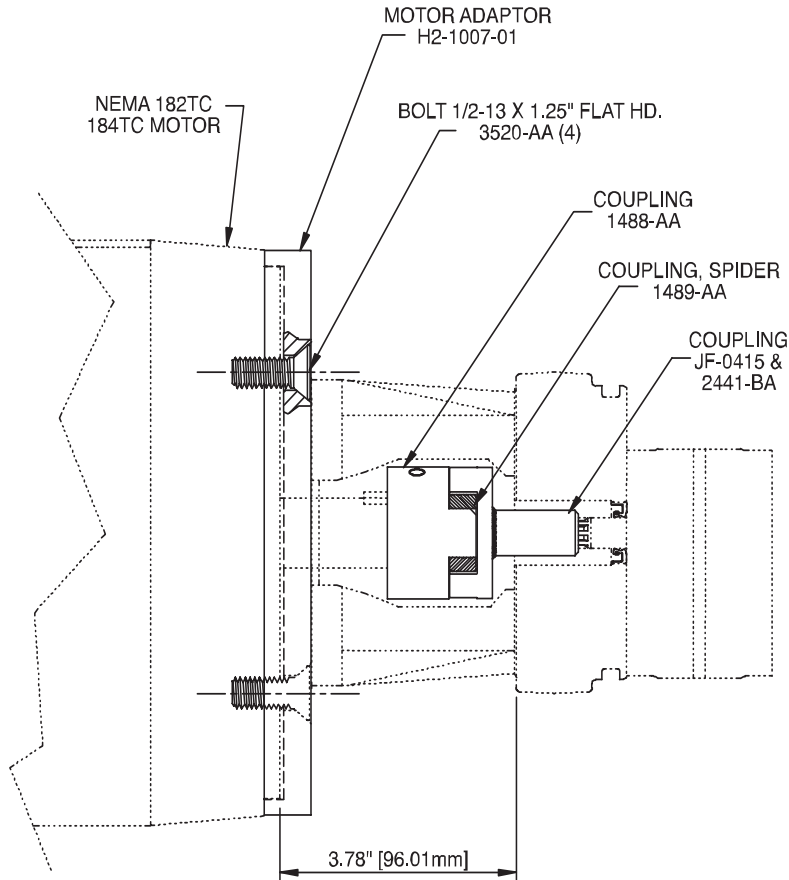


KM09 Motor Duty Cycle



KM96

MOTOR ADAPTOR 182/184 NEMA C FACE

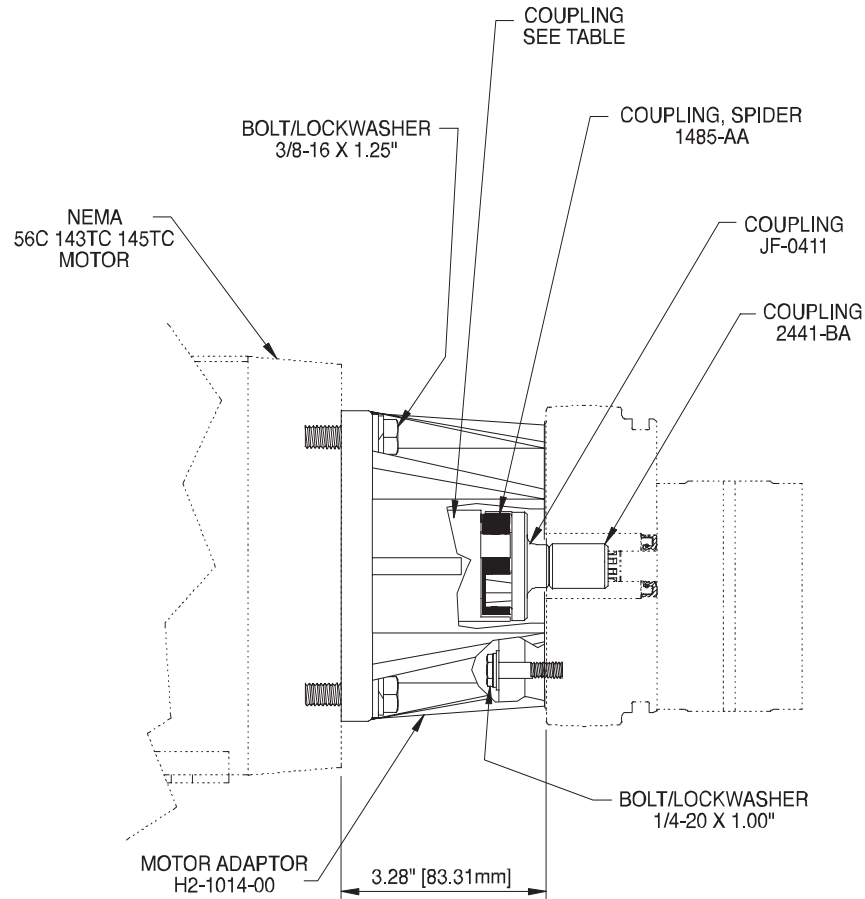


Mount H2-1007-01 to motor before assembling to KM97.

Must be ordered with KM97.

For use with 182TC and 184TC.

MOTOR ADAPTOR 56/143/145 NEMA C FACE

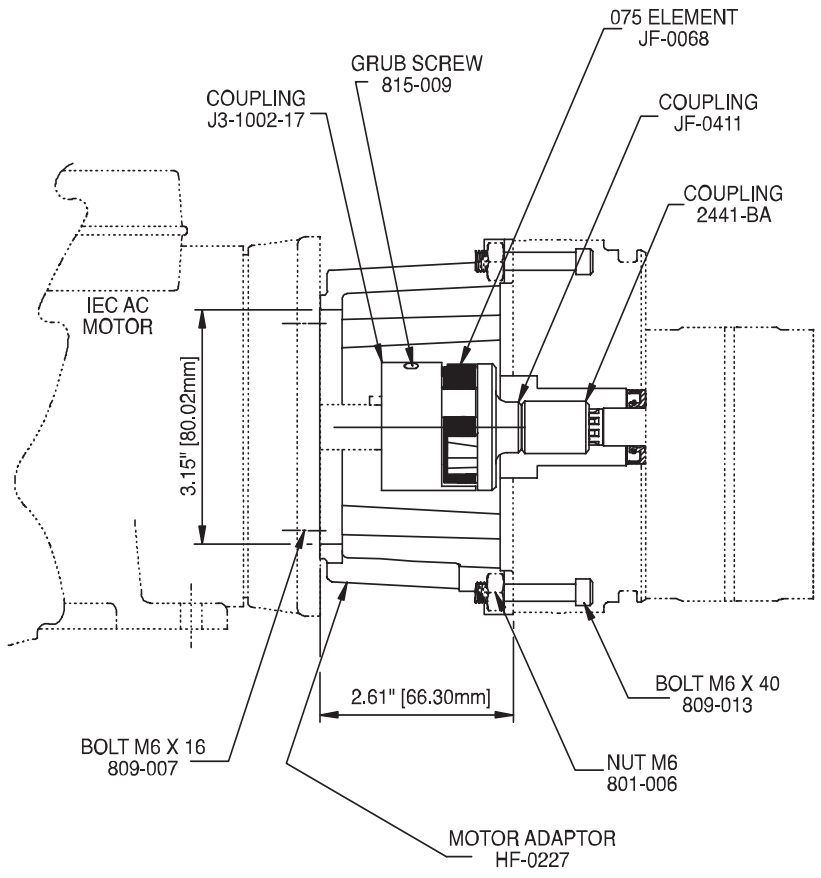


| Motor Shaft | Motor Type | Part No. |
|------------------|-------------|----------|
| .625" [15.87 mm] | 56C | 1487-AA |
| .875" [22.22mm] | 143TC/145TC | 1486-AA |

Mounting motors of 3 hp or larger requires motor be mounted to rigid structure or adaptor failure may occur.

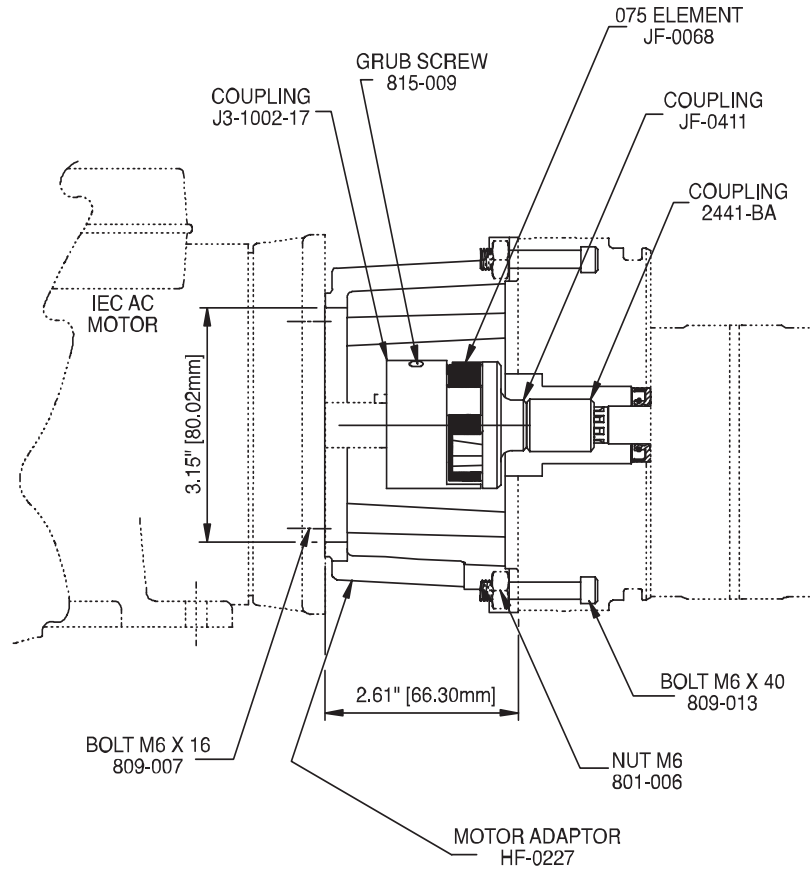
KM98-80

MOTOR ADAPTOR IEC MOTORS 80 FRAME 80 C FACE



Suitable for use with IEC 80 Frame motors with an 80C (B14) interface and a 19mm diameter shaft, measuring 40mm long from mounting face.

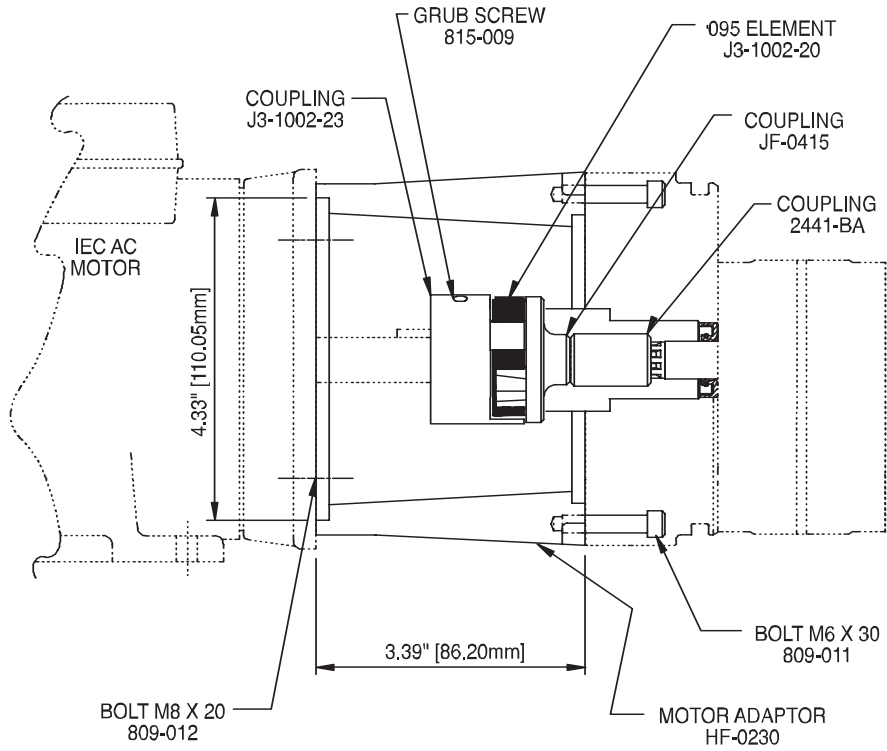
MOTOR ADAPTOR IEC MOTORS 90 FRAME 95 C FACE



Suitable for use with IEC 90 Frame motors with an 95C (B14) interface and a 24mm diameter shaft, measuring 50mm long from mounting face.

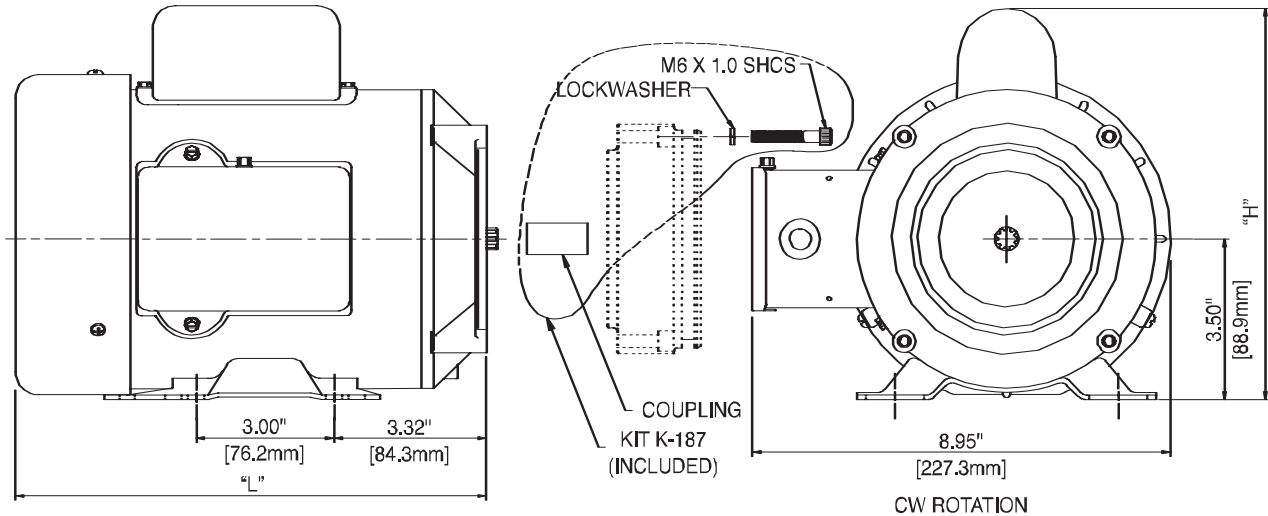
KM98-100

MOTOR ADAPTOR IEC MOTORS 100 FRAME 100 C FACE



Suitable for use with IEC 100 frame motors with an 110C (B14) interface and a 28mm diameter shaft, measuring 60mm long from mounting face.

CONTINUOUS DUTY 1PH AC MOTORS



| Motor Shaft | "L" | "H" |
|-------------|------------------|---------------|
| KMC16 | 10.38" [263.5mm] | 8.52" [216mm] |
| KMC17 | 11.75" [298.5mm] | 8.52" [216mm] |

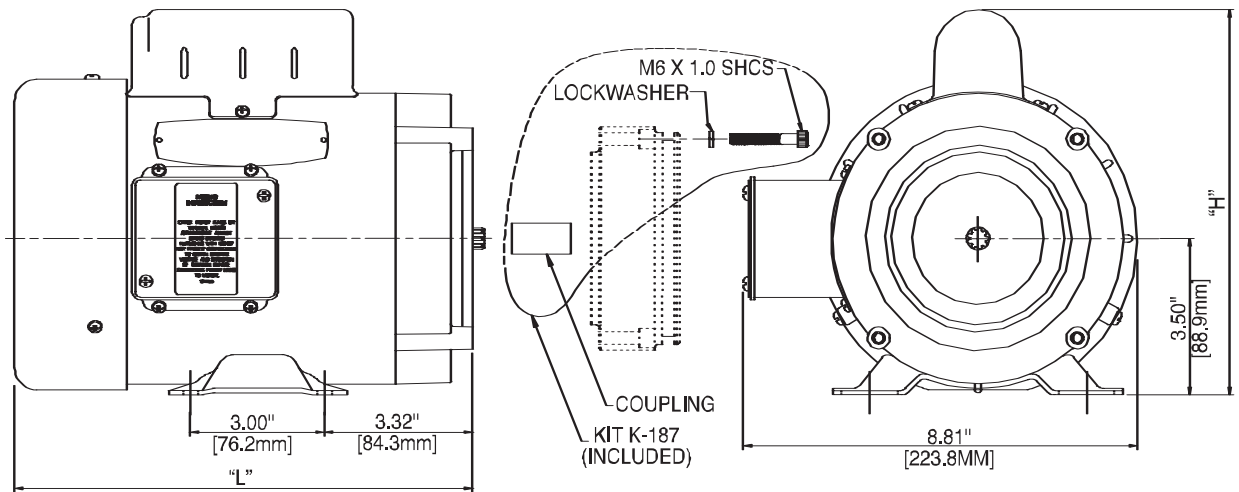
| Motor/Pump | KP08 | KP10 | KP12 | KP16 | KP20 | KP25 | KP31 | KP40 | KP50 | KP63 | KP80 |
|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|--------------------|----------------------------|------|
| KMC16 1HP 3450 RPM, 1PH 115/230v 60Hz | .65 GPM 2150 PSI | .8 GPM 1700 PSI | .99 GPM 1400 PSI | 1.4 GPM 1050 PSI | 1.7 GPM 800 PSI | 2.2 GPM 650 PSI | 2.7 GPM 450 PSI | 3.5 GPM 300 PSI | 4.4 GPM 200 PSI | NOT RECOMMENDED | |
| | 2.5 LPM 150 BAR | 3.1 LPM 120 BAR | 3.8 LPM 100 BAR | 5.3 LPM 75 BAR | 6.7 LPM 55 BAR | 8.5 LPM 45 BAR | 11 LPM 30 BAR | 14 LPM 20 BAR | 17 LPM 14 BAR | | |
| KMC17 2HP 3450 RPM, 1PH 115/230v 60Hz | .58 GPM 4300 PSI | .79 GPM 3625 PSI | .91 GPM 2850 PSI | 1.3 GPM 2150 PSI | 1.7 GPM 1700 PSI | 2.1 GPM 1300 PSI | 2.6 GPM 1000 PSI | 3.5 GPM 750 PSI | 4.4 GPM 500 PSI | | |
| | 2.3 LPM 300 BAR | 2.7 LPM 240 BAR | 3.5 LPM 200 BAR | 5.1 LPM 150 BAR | 6.6 LPM 115 BAR | 8.4 LPM 90 BAR | 10 LPM 70 BAR | 13 LPM 50 BAR | 16 LPM 35 BAR | | |

Performance at 45 CST (200 SSU) and 90% mechanical efficiency. GPM's are U.S. values.

For flows over 3 U.S. GPM (11 LPM), use a 1413-AA filter

KMC21-23

CONTINUOUS DUTY 1 PH AC MOTORS



| Motor Shaft | "L" | "H" |
|-------------|------------------|-----------------|
| KMC21 | 9.25" [234.9mm] | 8.31" [211.1mm] |
| KMC23 | 10.25" [260.3mm] | 8.62" [218.9mm] |

| Motor/Pump | KP08 | KP10 | KP12 | KP16 | KP20 | KP25 | KP31 | KP40 | KP50 | KP63 | KP80 |
|--|---------------------|---------------------|---------------------|---------------------|--------------------|---------------------|---------------------|--------------------|--------------------|--------------------|--------------------|
| KMC21 1/2 HP 1725 RPM, 1PH 115/230v 60Hz | .29 GPM 2150 PSI | .35 GPM 1700 PSI | .46 GPM 1400 PSI | .65 GPM 1050 PSI | .84 GPM 850 PSI | 1.1 GPM 650 PSI | 1.3 GPM 500 PSI | 1.7 GPM 400 PSI | 2.2 GPM 300 PSI | 2.8 GPM 200 PSI | 3.5 GPM 100 PSI |
| | 1.1 LPM 150 BAR | 1.4 LPM 120 BAR | 1.8 LPM 100 BAR | 2.5 LPM 75 BAR | 3.3 LPM 60 BAR | 4.2 LPM 45 BAR | 5.2 LPM 35 BAR | 6.7 LPM 25 BAR | 8.5 LPM 20 BAR | 11 LPM 14 BAR | 14 LPM 7 BAR |
| KMC23 1 HP 1725 RPM, 1PH 115/230v 60Hz | .22 GPM 4300 PSI | .26 GPM 3450 PSI | .38 GPM 2850 PSI | .59 GPM 2150 PSI | .8 GPM 1700 PSI | 1.0 GPM 1350 PSI | 1.3 GPM 1100 PSI | 1.7 GPM 800 PSI | 2.2 GPM 650 PSI | 2.7 GPM 450 PSI | 3.5 GPM 300 PSI |
| | .9 LPM 300 BAR | 1.0 LPM 240 BAR | 1.5 LPM 200 BAR | 2.3 LPM 150 BAR | 3.1 LPM 115 BAR | 4.0 LPM 95 BAR | 5.0 LPM 75 BAR | 6.5 LPM 55 BAR | 8.3 LPM 45 BAR | 11 LPM 30 BAR | 14 LPM 20 BAR |

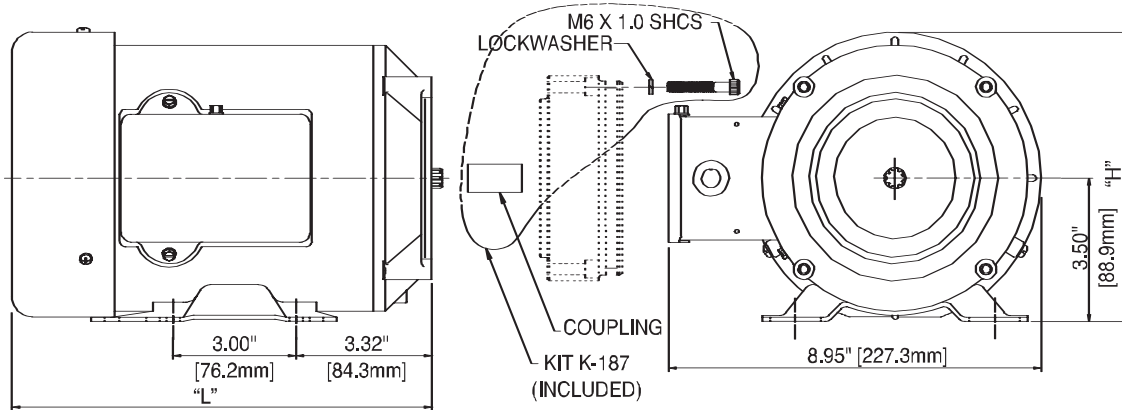
Performance at 45 CST (200 SSU) and 90% mechanical efficiency. GPM's are U.S. values.

Motors are continuous duty but cannot be used above their rated kilowatts, regardless of duty cycle and must have full voltage to achieve rated kilowatts.

For flows over 3 U.S. GPM (11 LPM), use 1413-AA filter.

Note: Stone uses a network of qualified suppliers to ensure availability. There are minor dimensional and cosmetic differences between vendor's products.

CONTINUOUS DUTY 3 PH AC MOTORS



| Motor Shaft | "L" | "H" |
|-------------|------------------|-----------------|
| KMC18 | 10.38" [263.5mm] | 7.04" [178.8mm] |
| KMC19 | 11.75" [298.5mm] | 7.04" [178.8mm] |
| KMC20 | 12.48" [317.0mm] | 8.74" [222.0mm] |

| Motor/Pump | KP8 | KP10 | KP12 | KP16 | KP20 | KP25 | KP31 | KP40 | KP50 | KP63 | KP80 |
|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|------|
| KMC18 2 HP 3450 RPM, 3PH 230/460v 60Hz | .58 GPM 4300 PSI | .7 GPM 3450 PSI | .91 GPM 2850 PSI | 1.3 GPM 2150 PSI | 1.7 GPM 1700 PSI | 2.2 GPM 1300 PSI | 2.7 GPM 1000 PSI | 3.5 GPM 750 PSI | 4.4 GPM 500 PSI | NOT RECOMMENDED | |
| | 2.3 LPM 300 BAR | 2.7 LPM 240 BAR | 3.5 LPM 200 BAR | 5.1 LPM 150 BAR | 6.6 LPM 115 BAR | 8.4 LPM 90 BAR | 10 LPM 70 BAR | 14 LPM 50 BAR | 17 LPM 35 BAR | | |
| KMC19 3 HP 3450 RPM, 3PH 230/460v 60Hz | .56 GPM 5000 PSI | .62 GPM 5000 PSI | .83 GPM 4300 PSI | 1.2 GPM 3200 PSI | 1.6 GPM 2550 PSI | 2.1 GPM 2000 PSI | 2.6 GPM 1600 PSI | 3.4 GPM 1200 PSI | 4.3 GPM 900 PSI | | |
| | 2.2 LPM 350 BAR | 2.4 LPM 350 BAR | 3.2 LPM 300 BAR | 4.8 LPM 225 BAR | 6.4 LPM 175 BAR | 8.2 LPM 140 BAR | 10 LPM 110 BAR | 13 LPM 80 BAR | 17 LPM 60 BAR | | |
| KMC20 5 HP 3450 RPM, 3PH 230/460v 60Hz | .56 GPM 5000 PSI | .62 GPM 5000 PSI | .79 GPM 5000 PSI | 1.2 GPM 5000 PSI | 1.5 GPM 4300 PSI | 2.0 GPM 3400 PSI | 2.5 GPM 2700 PSI | 3.3 GPM 2050 PSI | 4.2 GPM 1600 PSI | | |
| | 2.2 LPM 350 BAR | 2.4 LPM 350 BAR | 3.1 LPM 350 BAR | 4.5 LPM 350 BAR | 6.0 LPM 295 BAR | 7.9 LPM 235 BAR | 9.8 LPM 185 BAR | 13 LPM 140 BAR | 16 LPM 110 BAR | | |

Performance at 45 CST (200 SSU) and 90% mechanical efficiency. GPM's are U.S. values. All motors are totally enclosed, fan-cooled (TEFC).

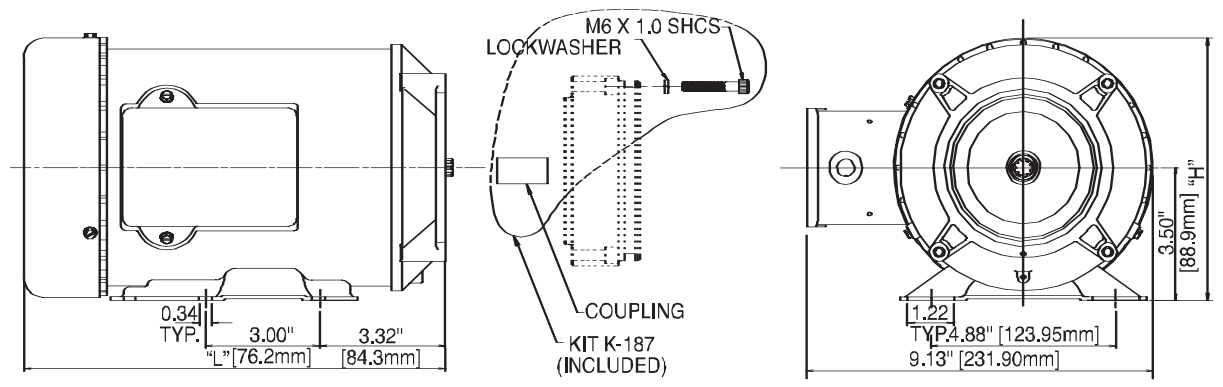
Motors are continuous duty but cannot be used above their rated kilowatts, regardless of duty cycle and must have full voltage to achieve rated kilowatts.

For flows over 3 U.S. GPM (11 LPM), use 1413-AA filter.

Note: Stone uses a network of qualified suppliers to ensure availability. There are minor dimensional and cosmetic differences between vendor's products.

KMC22-24

**CONTINUOUS DUTY
3 PH AC MOTORS**



| Motor Shaft | "L" | "H" |
|-------------|------------------|-----------------|
| KMC22 | 9.75" [247.7mm] | 9.13" [231.9mm] |
| KMC24 | 10.23" [259.8mm] | 9.13" [231.9mm] |

| Motor/Pump | KP08 | KP10 | KP12 | KP16 | KP20 | KP25 | KP31 | KP40 | KP50 | KP63 | KP80 |
|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|--------------------|--------------------|--------------------|
| KMC22 1/2 HP 1725 RPM, 3PH 230/460v 60Hz | .29 GPM 2150 PSI | .35 GPM 1700 PSI | .46 GPM 1200 PSI | .65 GPM 1050 PSI | .84 GPM 850 PSI | 1.1 GPM 650 PSI | 1.3 GPM 500 PSI | 1.7 GPM 400 PSI | 2.2 GPM 300 PSI | 2.8 GPM 200 PSI | 3.5 GPM 100 PSI |
| | 1.1 LPM 150 BAR | 1.4 LPM 120 BAR | 1.8 LPM 100 BAR | 2.5 LPM 75 BAR | 3.3 LPM 60 BAR | 4.2 LPM 45 BAR | 5.2 LPM 35 BAR | 6.7 LPM 25 BAR | 8.5 LPM 20 BAR | 11 LPM 14 BAR | 14 LPM 7 BAR |
| KMC24 1HP 1725 RPM, 3PH 230/460v 60Hz | .22 GPM 4300 PSI | .26 GPM 3450 PSI | .38 GPM 2850 PSI | .59 GPM 2150 PSI | .80 GPM 1700 PSI | 1.0 GPM 1350 PSI | 1.3 GPM 1100 PSI | 1.7 GPM 800 PSI | 2.2 GPM 650 PSI | 2.7 GPM 450 PSI | 3.5 GPM 300 PSI |
| | 0.9 LPM 300 BAR | 1.0 LPM 240 BAR | 1.5 LPM 200 BAR | 2.3 LPM 150BAR | 3.1 LPM 115 BAR | 4.0 LPM 95 BAR | 5.0 LPM 75 BAR | 6.5 LPM 55 BAR | 8.3 LPM 45 BAR | 11 LPM 30 BAR | 14 LPM 20 BAR |

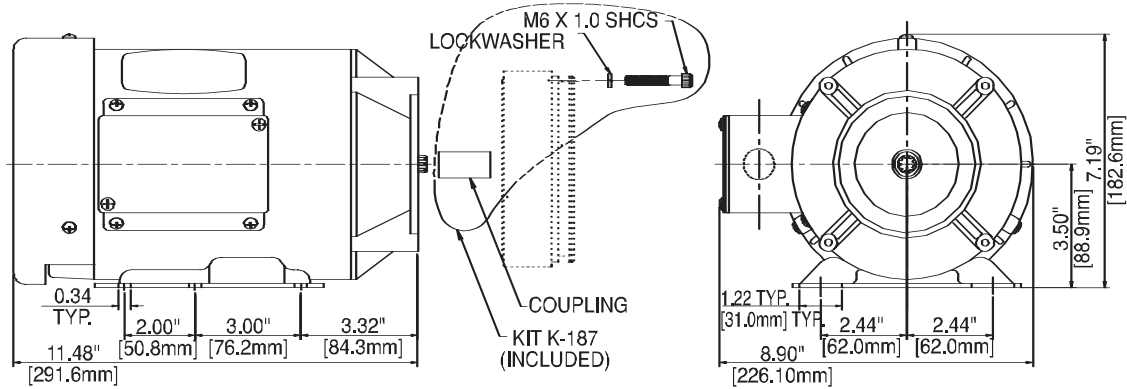
Performance at 45 CST (200 SSU) and 90% mechanical efficiency. GPM's are U.S. values.

Motors are continuous duty but cannot be used above their rated kilowatts, regardless of duty cycle and must have full voltage to achieve rated kilowatts.

For flows over 3 U.S. GPM (11 LPM), use 1413-AA filter.

Note: Stone uses a network of qualified suppliers to ensure availability. There are minor dimensional and cosmetic differences between vendor's products.

CONTINUOUS DUTY 3 PH AC MOTORS



| Motor/Pump | KP08 | KP10 | KP12 | KP16 | KP20 | KP25 | KP31 | KP40 | KP50 | KP63 | KP80 |
|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|--------------------|------|
| KMC29 3HP 3450 RPM, 3PH 575v 60Hz | .56 GPM 5000 PSI | .62 GPM 5000 PSI | .83 GPM 4300 PSI | 1.2 GPM 3200 PSI | 1.6 GPM 2550 PSI | 2.1 GPM 2000 PSI | 2.6 GPM 1600 PSI | 3.4 GPM 1200 PSI | 4.3 GPM 900 PSI | Not Recommended | |
| | 2.2 LPM 350 BAR | 2.4 LPM 350 BAR | 3.2 LPM 300 BAR | 4.8 LPM 225 BAR | 6.4 LPM 175 BAR | 8.2 LPM 140 BAR | 10 LPM 110 BAR | 13 LPM 80 BAR | 17 LPM 60 BAR | | |

Performance at 45 CST (200 SSU) and 90% mechanical efficiency. GPM's are U.S. values.

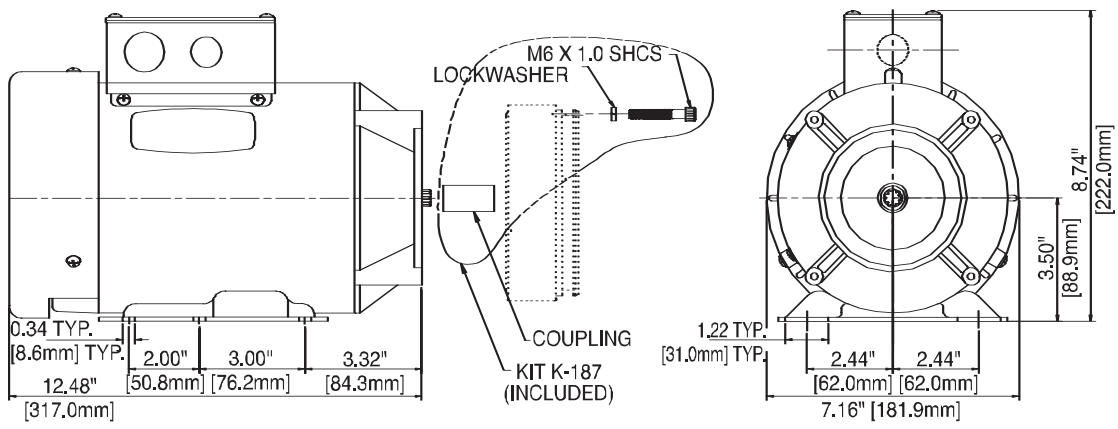
Motors are continuous duty but cannot be used above their rated kilowatts, regardless of duty cycle and must have full voltage to achieve rated kilowatts.

For flows over 3 U.S. GPM (11 LPM), use 1413-AA filter.

Note: Stone uses a network of qualified suppliers to ensure availability. There are minor dimensional and cosmetic differences between vendor's products.

KMC30

**CONTINUOUS DUTY
3 PH AC MOTORS**



| Motor/Pump | KP08 | KP10 | KP12 | KP16 | KP20 | KP25 | KP31 | KP40 | KP50 | Not Recommended | |
|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-----------------|--|
| KMC30 5HP 3450 RPM, 5PH 575v 60Hz | .56 GPM 5000 PSI | .62 GPM 5000 PSI | .79 GPM 5000 PSI | 1.2 GPM 5000 PSI | 1.5 GPM 4300 PSI | 2.0 GPM 3400 PSI | 2.5 GPM 2700 PSI | 3.3 GPM 2050 PSI | 4.2 GPM 1600 PSI | Not Recommended | |
| | 2.2 LPM 350 BAR | 2.4 LPM 350 BAR | 3.1 LPM 350 BAR | 4.5 LPM 350 BAR | 6.0 LPM 295 BAR | 7.9 LPM 235 BAR | 9.8 LPM 185 BAR | 13 LPM 140 BAR | 16 LPM 110 BAR | | |

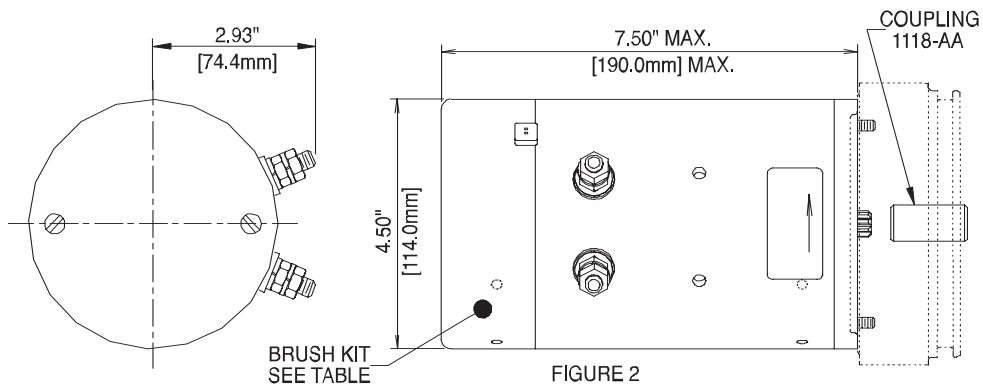
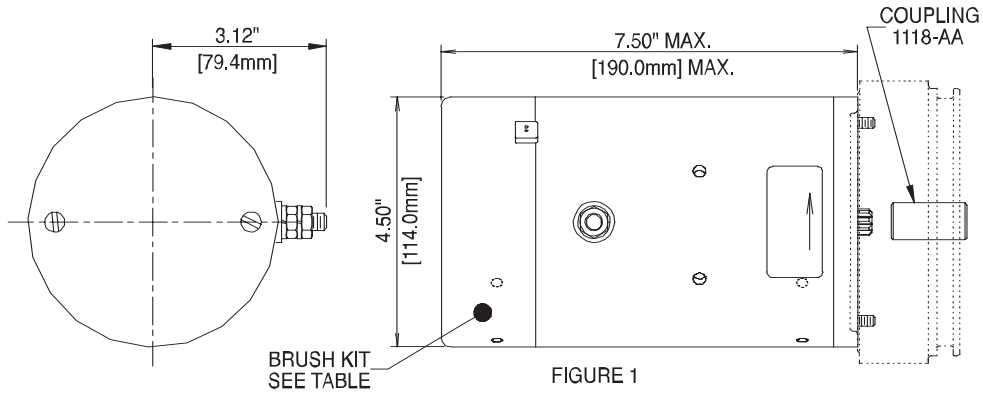
Performance at 45 CST (200 SSU) and 90% mechanical efficiency. GPM's are U.S. values.

Motors are continuous duty but cannot be used above their rated kilowatts, regardless of duty cycle and must have full voltage to achieve rated kilowatts.

For flows over 3 U.S. GPM (11 LPM), use 1413-AA filter.

Note: Stone uses a network of qualified suppliers to ensure availability. There are minor dimensional and cosmetic differences between vendor's products.

4.5" FIELD WOUND DC MOTORS

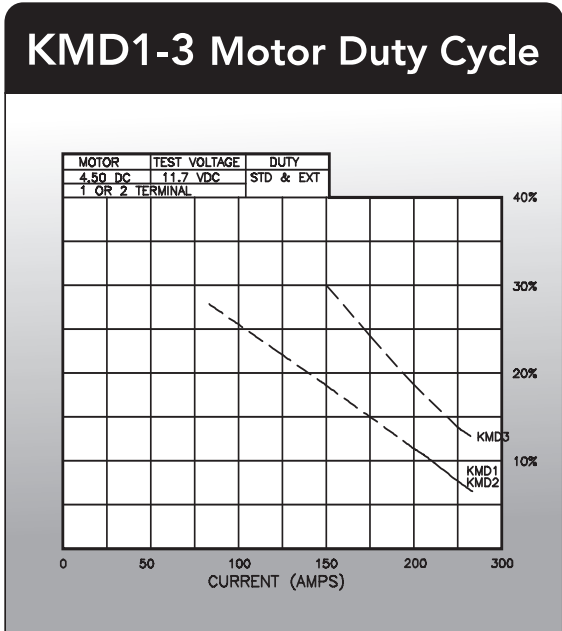
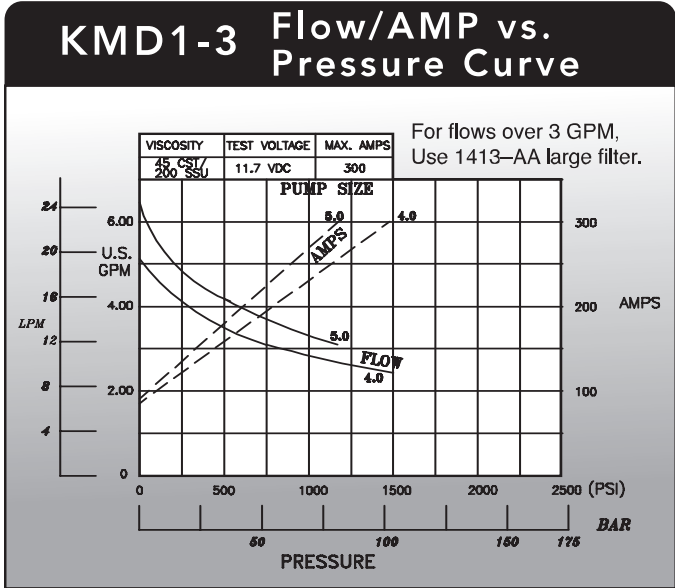
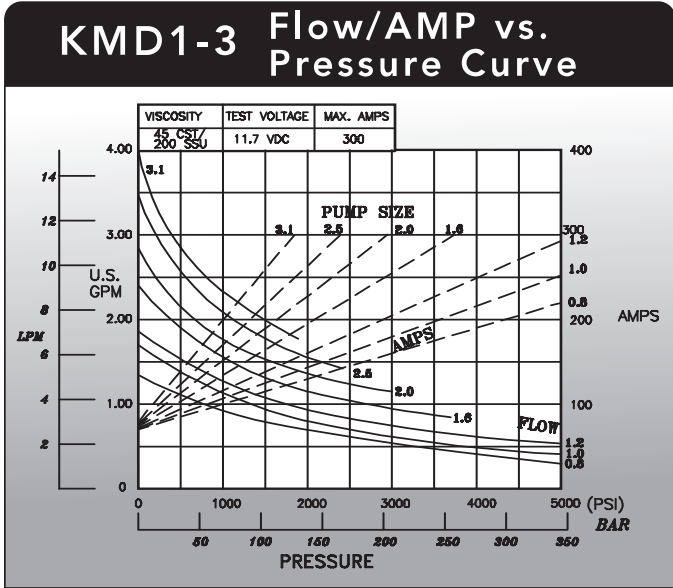


| KIT NO. | VOLTAGE | DUTY | CONFIG. | UL RECOGNIZED | BRUSH KIT |
|---------|---------|------|---------|---------------|-----------|
| KMD1 | 12V | STD | FIG. 1 | NO | K-90 |
| KMD2 | 12V | STD | FIG. 2 | YES | K-97 |
| KMD3 | 12V | EXT | FIG. 1 | NO | K-91 |
| KMD4 | 24V | EXT | FIG. 1 | NO | K-98 |
| KMD5 | 24V | STD | FIG. 2 | YES | K-92 |
| KMD6 | 24V | STD | FIG. 1 | NO | K-92 |

Note: Stone uses a network of qualified suppliers to ensure availability. There are minor dimensional and cosmetic differences between vendor's products.

KMD1-3

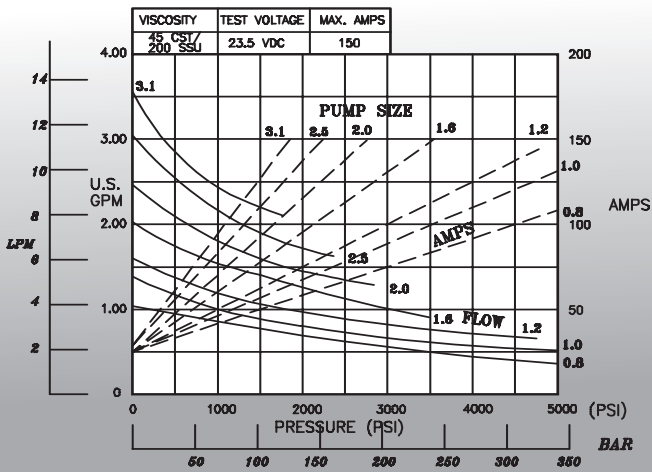
**4.5" 12V DC MOTOR (STD. & EXT. DUTY)
PERFORMANCE & DUTY CYCLE**



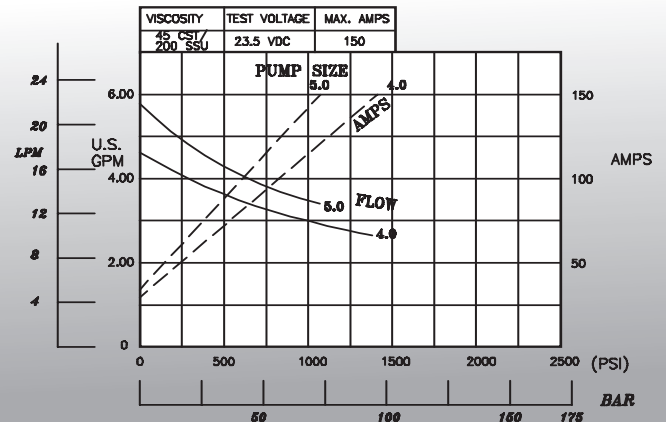
S3 Duty Rating on time. (% of 5 minutes)

4.5" 24V DC MOTOR (STD. & EXT. DUTY) PERFORMANCE & DUTY CYCLE

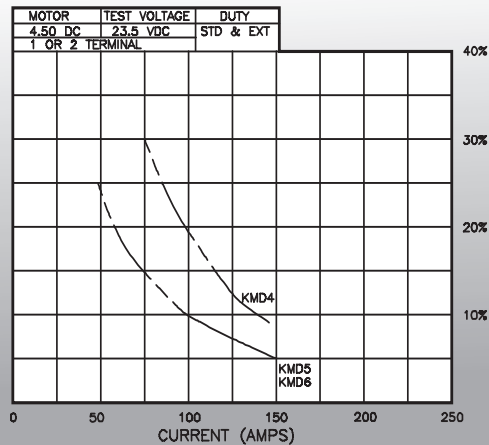
KMD4-6 Flow/AMP vs. Pressure Curve



KMD4-6 Flow/AMP vs. Pressure Curve



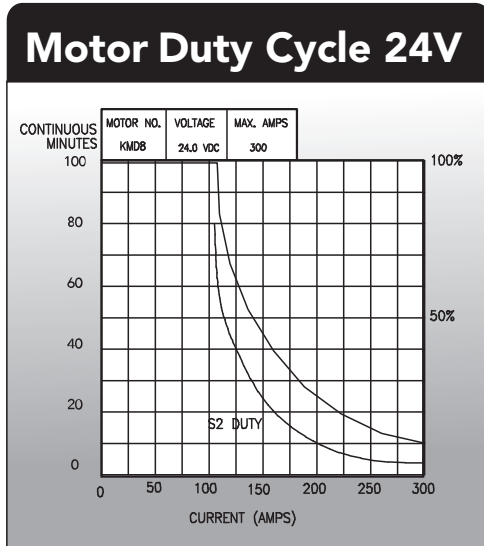
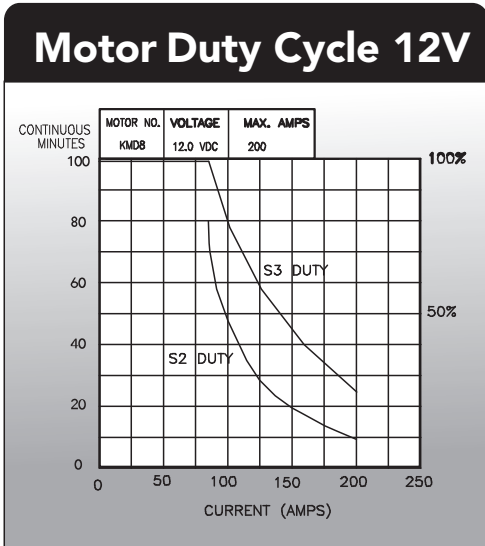
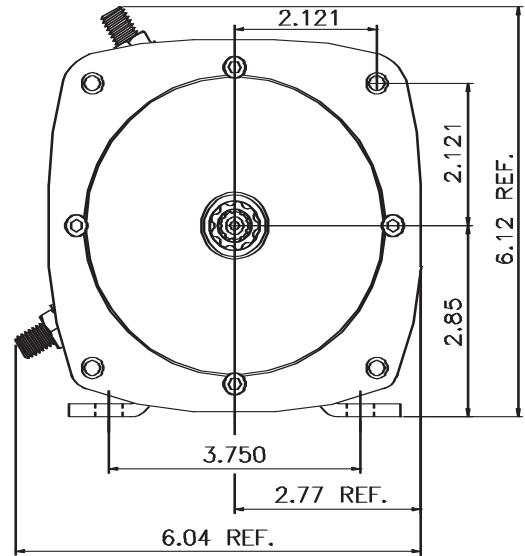
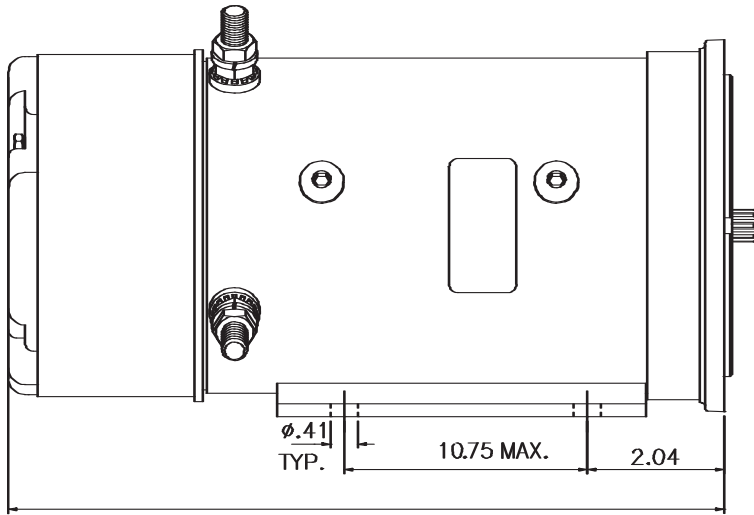
KMD4-6 Motor Duty Cycle



S3 Duty Rating on time. (% of 5 minutes)

KMD8

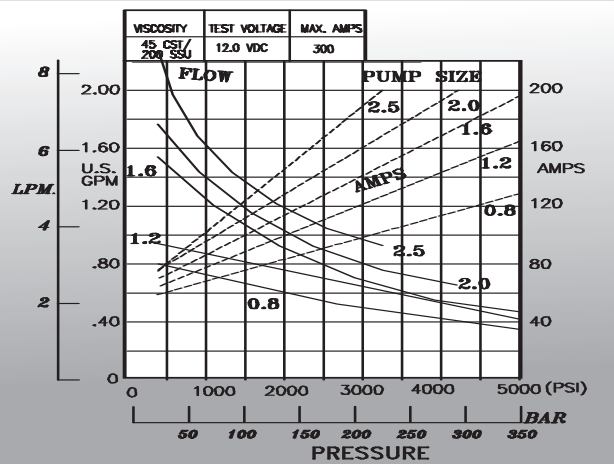
5.0" 12/24V DC HEAVY DUTY MOTOR



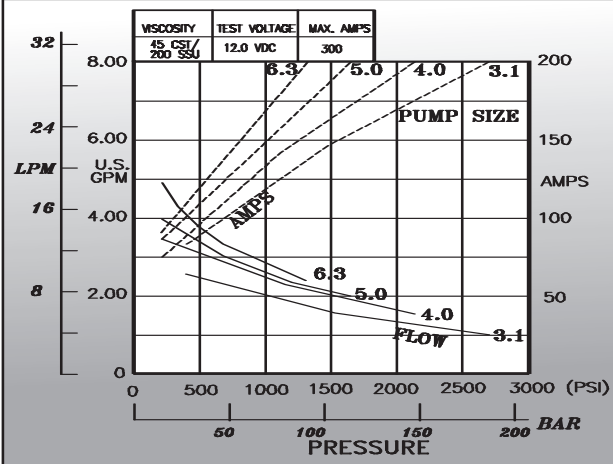
S3 Duty Rating on time. (% of 5 minutes)

5.0" 12/24V DC HEAVY DUTY MOTOR PERFORMANCE

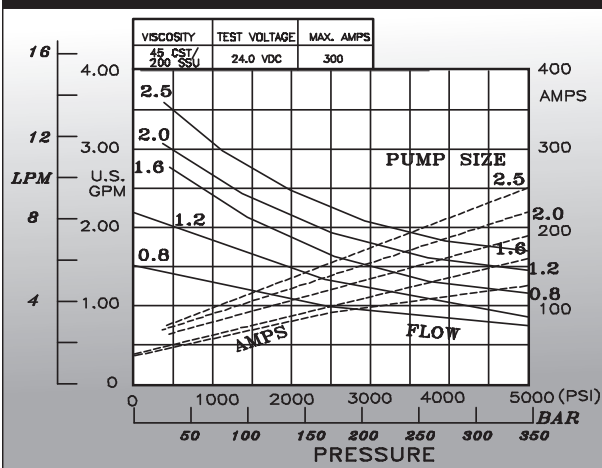
KMD8 12V Flow/Amp vs. Pressure Curve



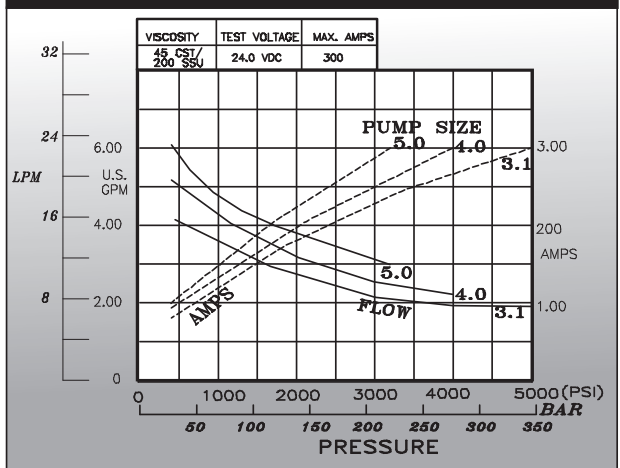
KMD8 12V Flow/Amp vs. Pressure Curve



KMD8 24V Flow/Amp vs. Pressure Curve



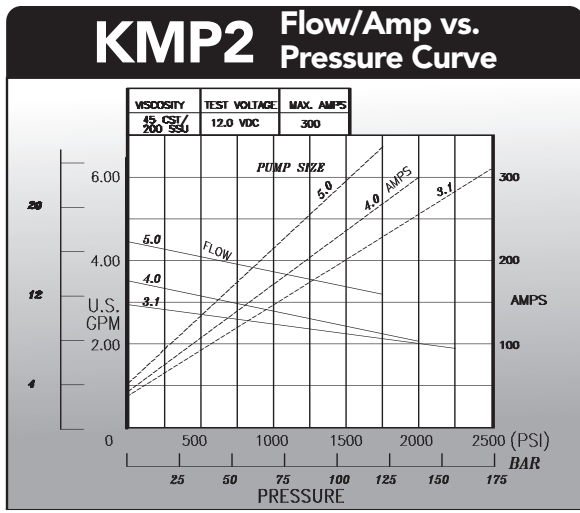
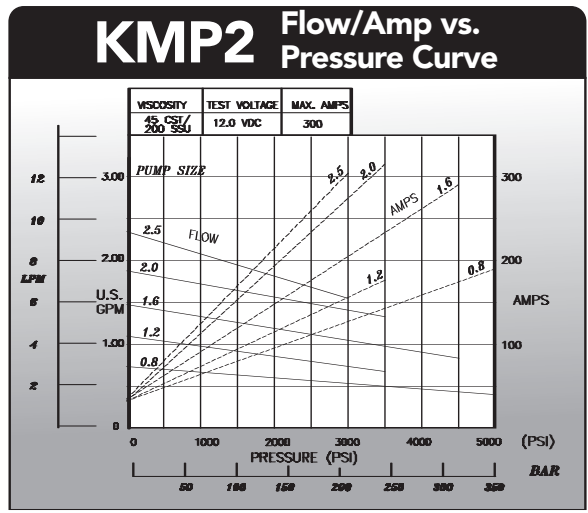
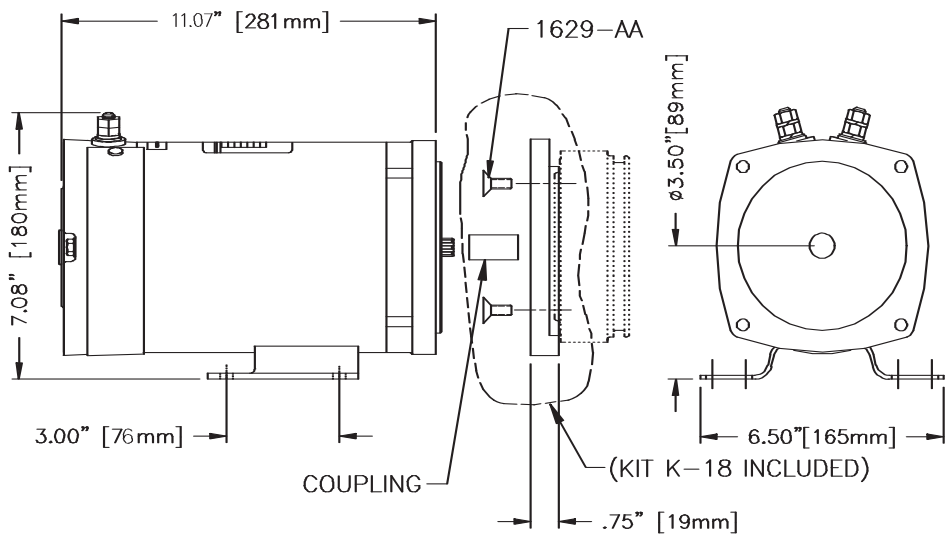
KMD8 24V Flow/Amp vs. Pressure Curve



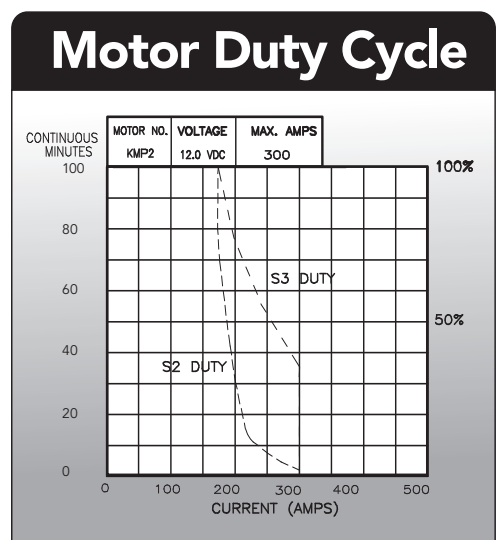
For flows over 3 U.S. GPM (11 LPM), use 1413-AA filter

KMP2

HI-POWER 12V DC 50 IN-LB PERMANENT MAGNET MOTOR

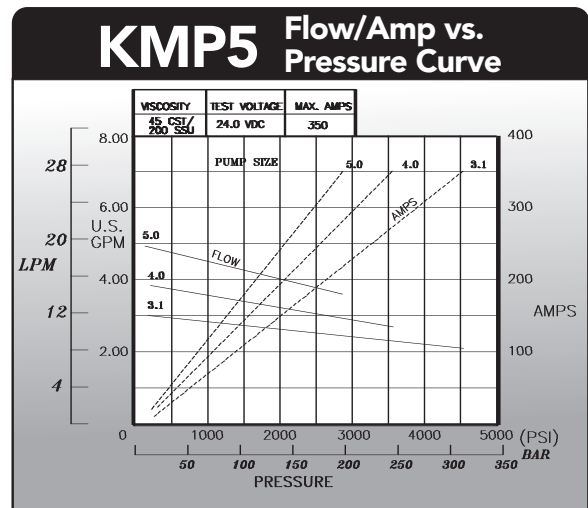
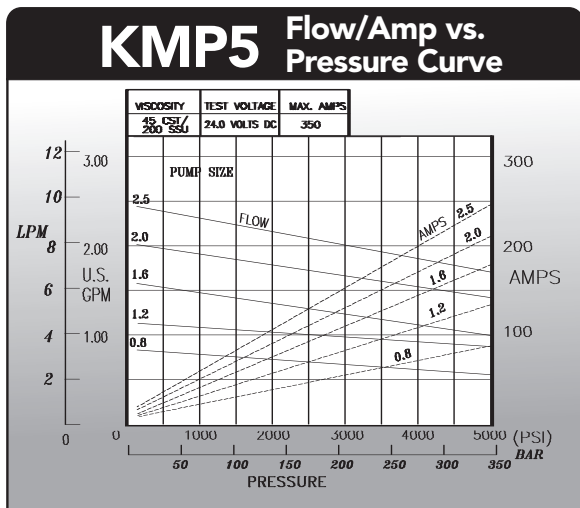
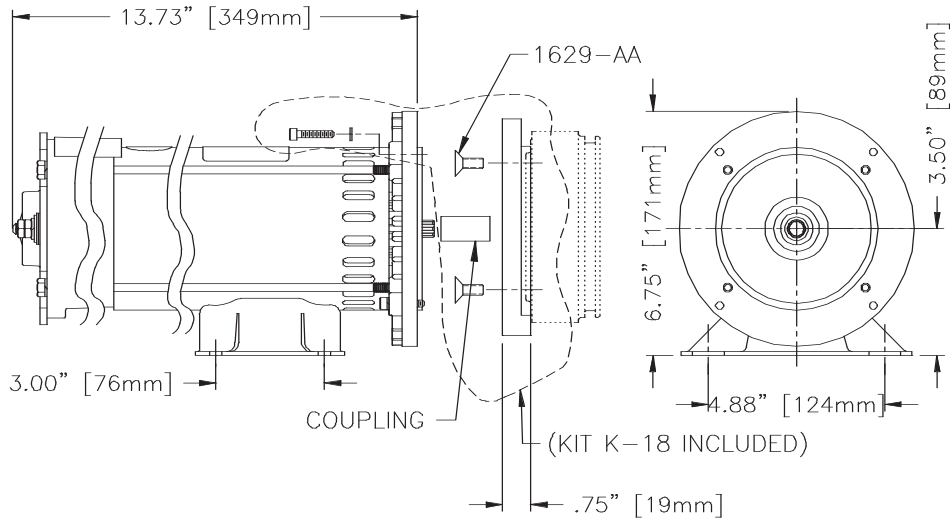


For flows over 3 U.S. GPM (11 LPM) use 1413-AA filter

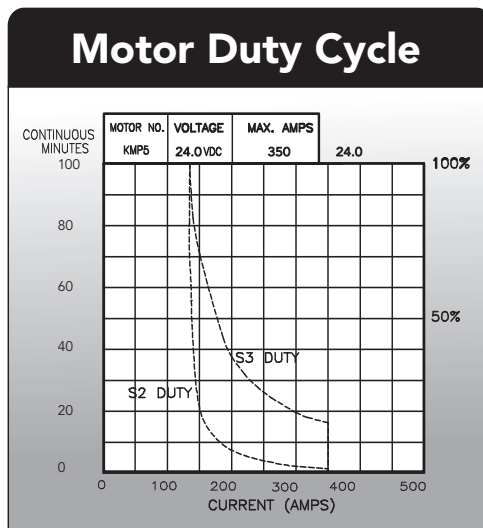


S3 Duty Rating On Time (% of 5 minutes)

HI-POWER 24V DC 80 IN-LB PERMANENT MAGNET MOTOR



For flows over 3 U.S. GPM (11 LPM) use 1413-AA filter



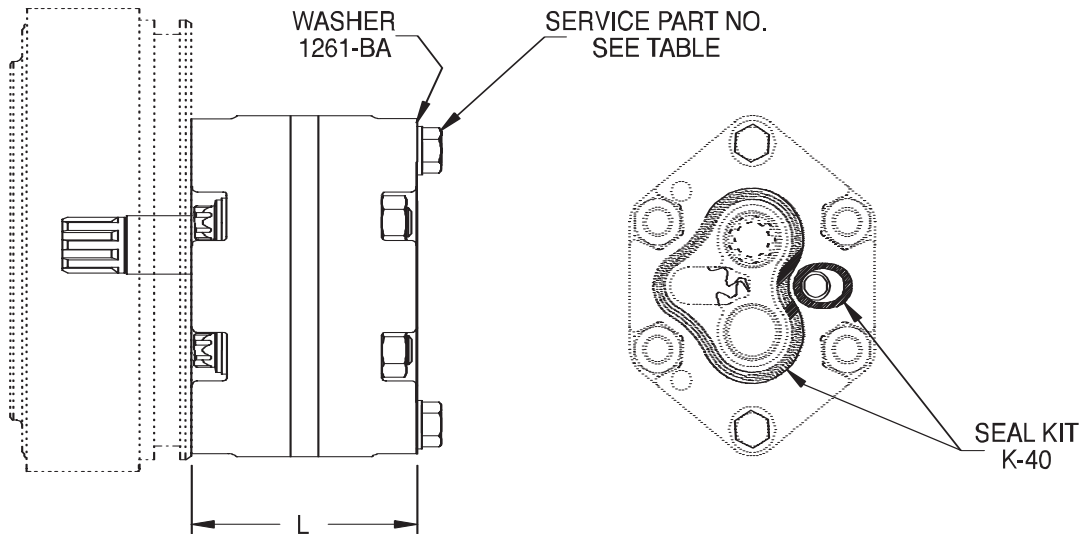
S3 Duty Rating On Time (% of 5 minutes)

Pumps

| Kit Number | Description | Page Number |
|-------------------|----------------------|--------------------|
| KP08-80 | Pump Kits AFC Series | Pages 47 |
| KPJ08-80 | Pump Kits AFC Series | Page 49 |
| KU2-4 | Unload Assembly | Page 50 |

E-Series Externally Mounted Version PG Pumps are available. For more information, contact Stone Technical Service.

PUMP KITS AFC SERIES



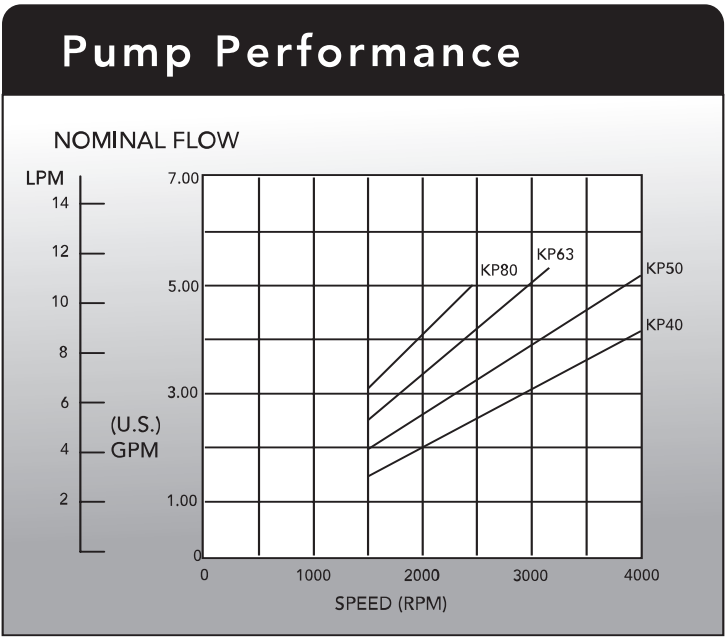
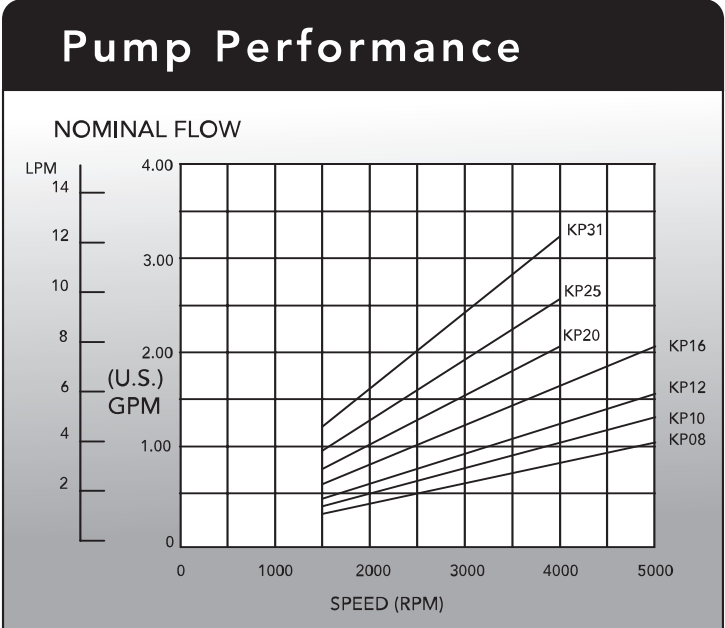
Current Endhead Design Uses 5/16-24 Mounting Thread. Older Endhead Design Used M8 Mounting Thread. Pump Kits Include Both Imperial And Metric Mounting Bolts.

| KIT NO. | DISPLACEMENT | | LENGTH | | MAXIMUM PRESS | | | INCLUDED IN KIT KP_ | |
|---------|--------------|-------|--------|------|---------------|-----------------|-------------------|-----------------------|-----------------------|
| | CC REV | CIPR | MM | INCH | MAX. RPM | CONT. PSI / BAR | INTERMIT. PSI/BAR | SERVICE BOLT PART NO. | SERVICE BOLT PART NO. |
| KP08 | 0.8 | 0.049 | 57 | 2.25 | 5000 | 5000/350 | 5000/350 | 2824-AA METRIC | F1-1052-75 IMPERIAL |
| KP10 | 1.0 | 0.061 | 58 | 2.28 | 5000 | 5000/350 | 5000/350 | 2824-AA METRIC | F1-1052-75 IMPERIAL |
| KP12 | 1.2 | 0.073 | 59 | 2.32 | 5000 | 5000/350 | 5000/350 | 2825-AA METRIC | F1-1052-75 IMPERIAL |
| KP16 | 1.6 | 0.098 | 60 | 2.38 | 5000 | 5000/350 | 5000/350 | 2825-AA METRIC | F1-1052-75 IMPERIAL |
| KP20 | 2.0 | 0.122 | 62 | 2.44 | 4000 | 5000/350 | 5000/350 | 2825-AA METRIC | F1-1053-00 IMPERIAL |
| KP25 | 2.5 | 0.153 | 64 | 2.52 | 4000 | 4600/320 | 5000/350 | 2826-AA METRIC | F1-1053-00 IMPERIAL |
| KP31 | 3.1 | 0.189 | 67 | 2.62 | 4000 | 3600/250 | 5000/350 | 2826-AA METRIC | F1-1053-00 IMPERIAL |
| KP40 | 4.0 | 0.244 | 70 | 2.75 | 4000 | 3000/200 | 4000/280 | 2826-AA METRIC | F1-1053-25 IMPERIAL |
| KP50 | 5.0 | 0.305 | 74 | 2.90 | 4000 | 2300/160 | 3200/220 | 2827-AA METRIC | F1-1053-50 IMPERIAL |
| KP63 | 6.3 | 0.384 | 79 | 3.11 | 3200 | 1800/125 | 2500/175 | 2827-AA METRIC | F1-1053-50 IMPERIAL |
| KP80 | 8.0 | 0.488 | 86 | 3.37 | 2400 | 1500/100 | 2000/140 | 2828-AA METRIC | F1-1053-75 IMPERIAL |

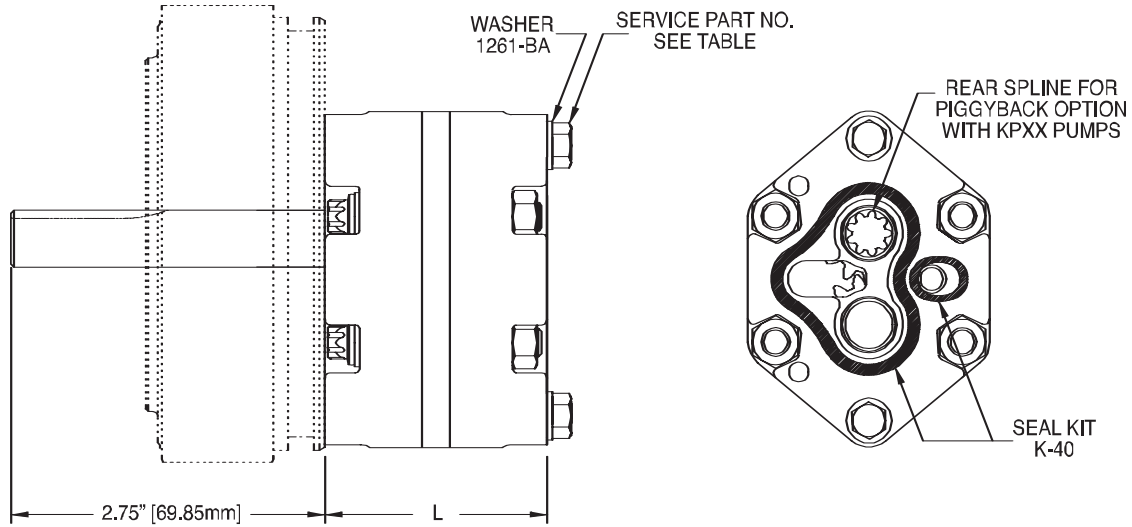
Kit includes washers and mounting bolts. Use all washers. Mounting bolts are grade 5. **Do not substitute.**

KP10 cannot be used in duplex pump applications.

PUMP KITS AFC SERIES



PUMP KITS AFC SERIES



Current Endhead Design Uses 5/16-24 Mounting Thread. Older Endhead Design Used M8 Mounting Thread. Pump Kits Include Both Imperial And Metric Mounting Bolts.

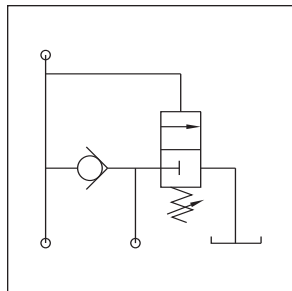
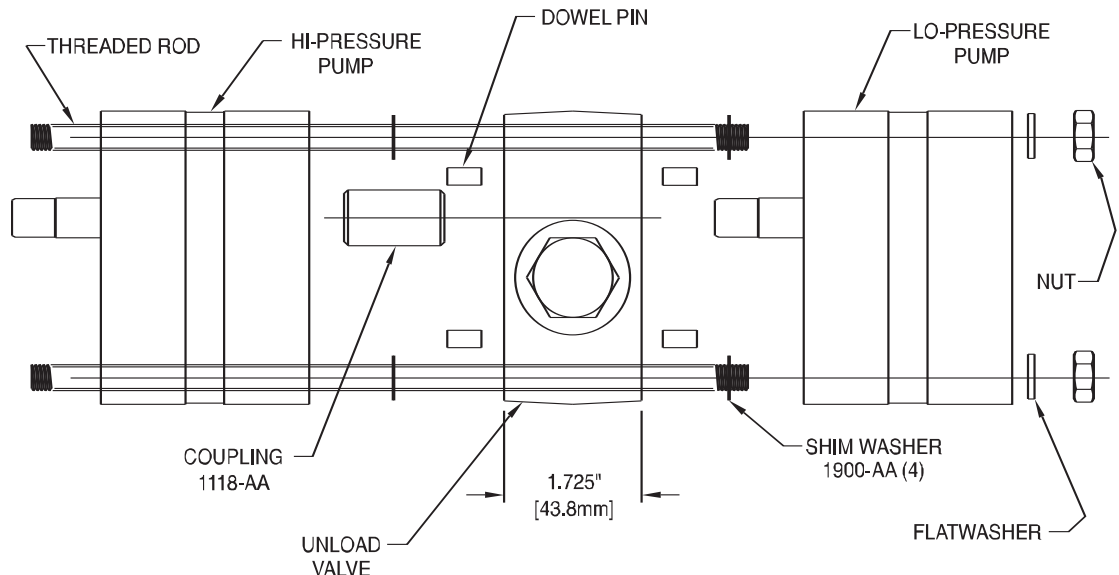
| KIT NO. | DISPLACEMENT | | LENGTH | | MAXIMUM PRESS | | | INCLUDED IN KIT KPJ__ | |
|---------|--------------|-------|--------|------|---------------|-----------------|-------------------|-----------------------|-----------------------|
| | CC REV | CIPR | MM | INCH | MAX. RPM | CONT. PSI / BAR | INTERMIT. PSI/BAR | SERVICE BOLT PART NO. | SERVICE BOLT PART NO. |
| KPJ08 | 0.8 | 0.049 | 57 | 2.25 | 5000 | 5000/350 | 5000/350 | 2824-AA METRIC | F1-1052-75 IMPERIAL |
| KPJ10 | 1.0 | 0.061 | 58 | 2.28 | 5000 | 5000/350 | 5000/350 | 2824-AA METRIC | F1-1052-75 IMPERIAL |
| KPJ12 | 1.2 | 0.073 | 59 | 2.32 | 5000 | 5000/350 | 5000/350 | 2825-AA METRIC | F1-1052-75 IMPERIAL |
| KPJ16 | 1.6 | 0.098 | 60 | 2.38 | 5000 | 5000/350 | 5000/350 | 2825-AA METRIC | F1-1052-75 IMPERIAL |
| KPJ20 | 2.0 | 0.122 | 62 | 2.44 | 4000 | 5000/350 | 5000/350 | 2825-AA METRIC | F1-1053-00 IMPERIAL |
| KPJ25 | 2.5 | 0.153 | 64 | 2.52 | 4000 | 4600/320 | 5000/350 | 2826-AA METRIC | F1-1053-00 IMPERIAL |
| KPJ31 | 3.1 | 0.189 | 67 | 2.62 | 4000 | 3600/250 | 5000/350 | 2826-AA METRIC | F1-1053-00 IMPERIAL |
| KPJ40 | 4.0 | 0.244 | 70 | 2.75 | 4000 | 3000/200 | 4000/280 | 2826-AA METRIC | F1-1053-25 IMPERIAL |
| KPJ50 | 5.0 | 0.305 | 74 | 2.90 | 4000 | 2300/160 | 3200/220 | 2827-AA METRIC | F1-1053-50 IMPERIAL |
| KPJ63 | 6.3 | 0.384 | 79 | 3.11 | 3200 | 1800/125 | 2500/175 | 2827-AA METRIC | F1-1053-50 IMPERIAL |
| KPJ80 | 8.0 | 0.488 | 86 | 3.37 | 2400 | 1500/100 | 2000/140 | 2828-AA METRIC | F1-1053-75 IMPERIAL |

Kit includes washers and metric mounting bolts. Use all washers. Mounting bolts are grade 5. **Do not substitute.**

KPJ pumps can not be used as rear pump in hi-lo or duplex pumps.

KU2-4

UNLOAD ASSEMBLY



Current Endhead Design Uses 5/16-24 Mounting Thread. Older Endhead Design Used M8 Mounting Thread. Pump Kits Include Both Imperial And Metric Mounting Bolts.

| Kit No. | Unload Setting | Adjustment Range |
|---------|----------------|--------------------------|
| KU2 | 300 PSI | 300-450 PSI (20-30 BAR) |
| KU4 | 600 PSI | 500-1000 PSI (35-70 BAR) |

Any 2 AFC pumps (except KP10) may be piggybacked with an unload valve between them to create a duplex (or hi-lo) pump.

Metric and imperial threaded rod, nuts and washers provided.

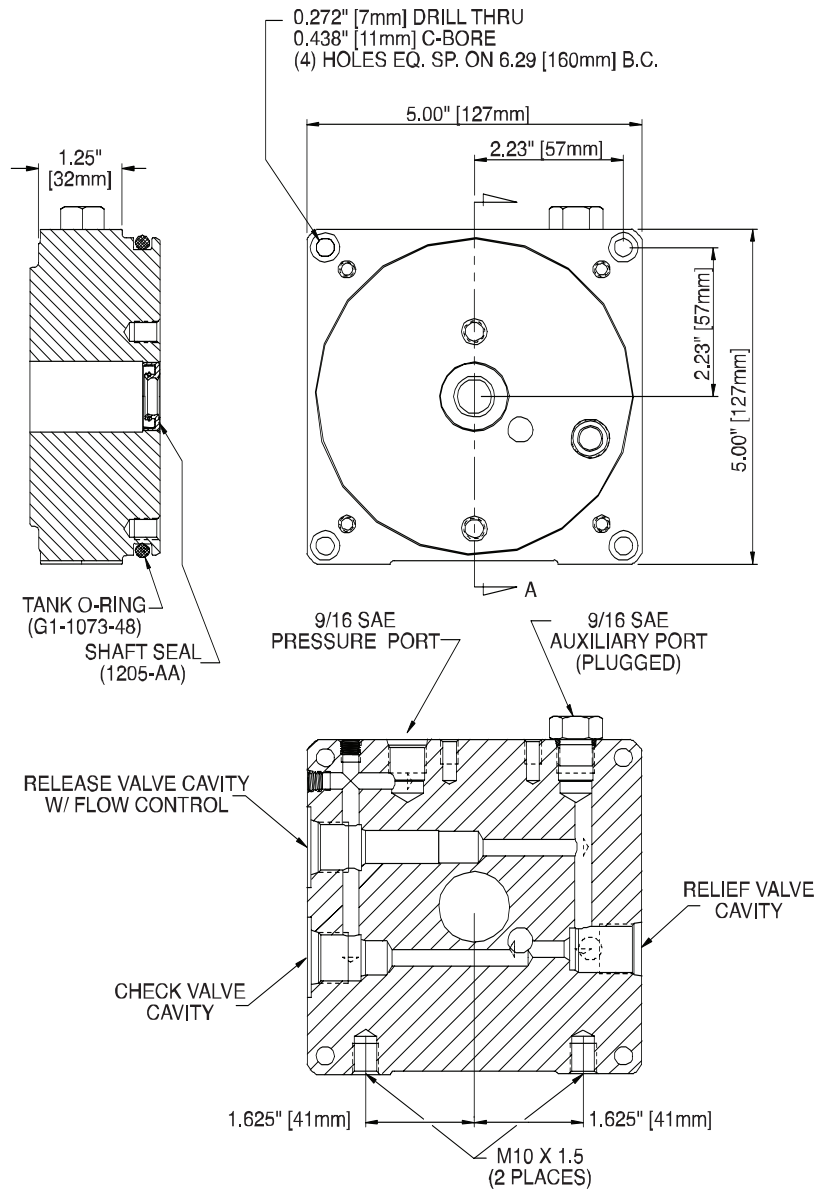
Unload setting can be adjusted in range shown.

Endheads

| Kit Number | Description | Page Number |
|-------------------|--------------------------------------|--------------------|
| KN09 | Endhead Metric Footmounts SAE Ports | Page 52 |
| KN10 | Endhead Metric Footmounts BSPP Ports | Page 53 |
| KN11 | Endhead UNC Footmounts NPT Ports | Page 54 |
| KN12 | Endhead UNC Footmounts SAE Ports | Page 55 |

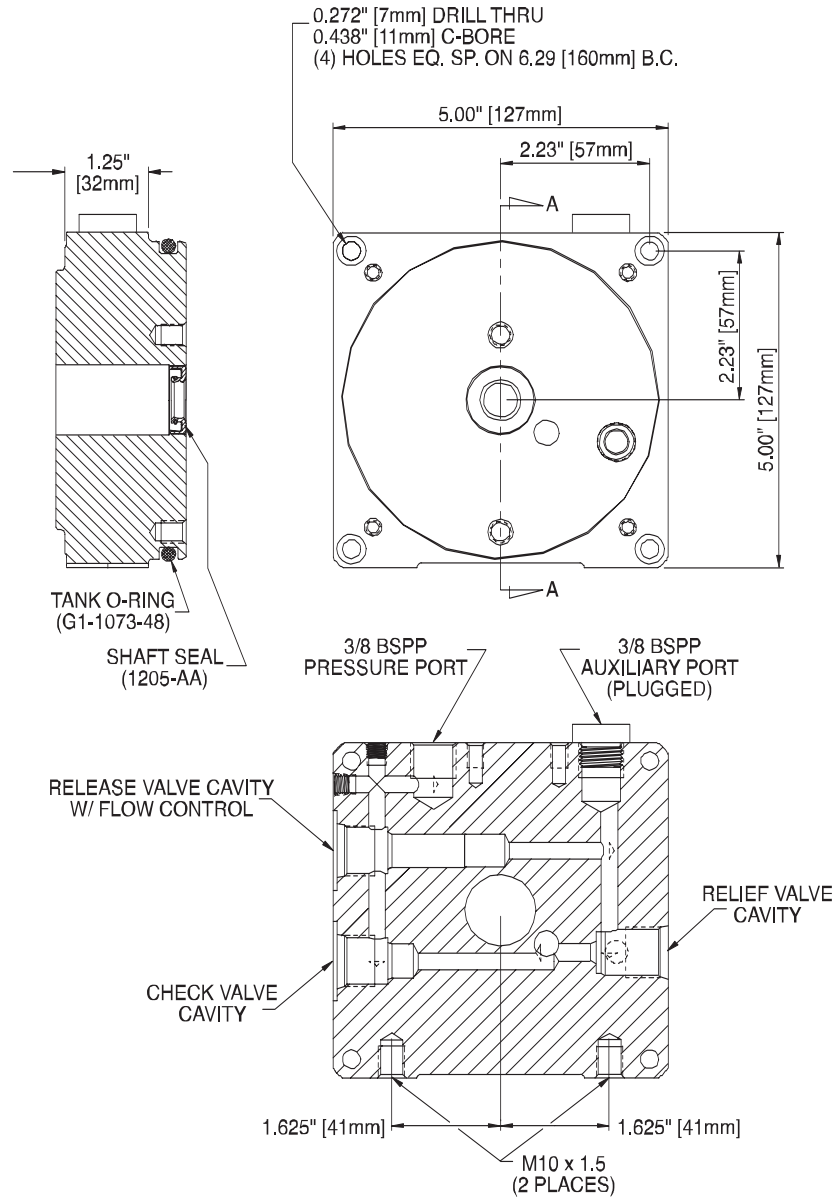
KN09

ENDHEAD METRIC FOOTMOUNTS SAE PORTS



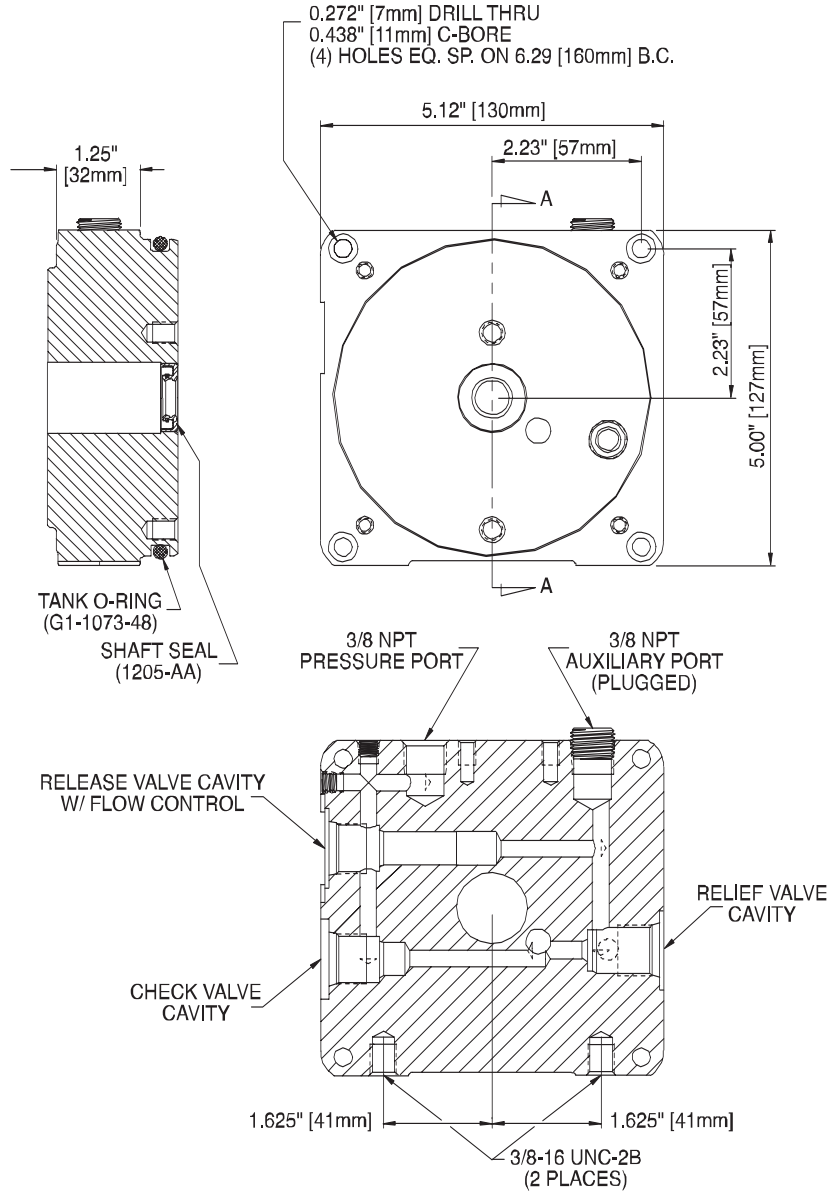
Endhead cannot be used with manifold valves.

ENDHEAD METRIC FOOTMOUNTS BSPP PORTS

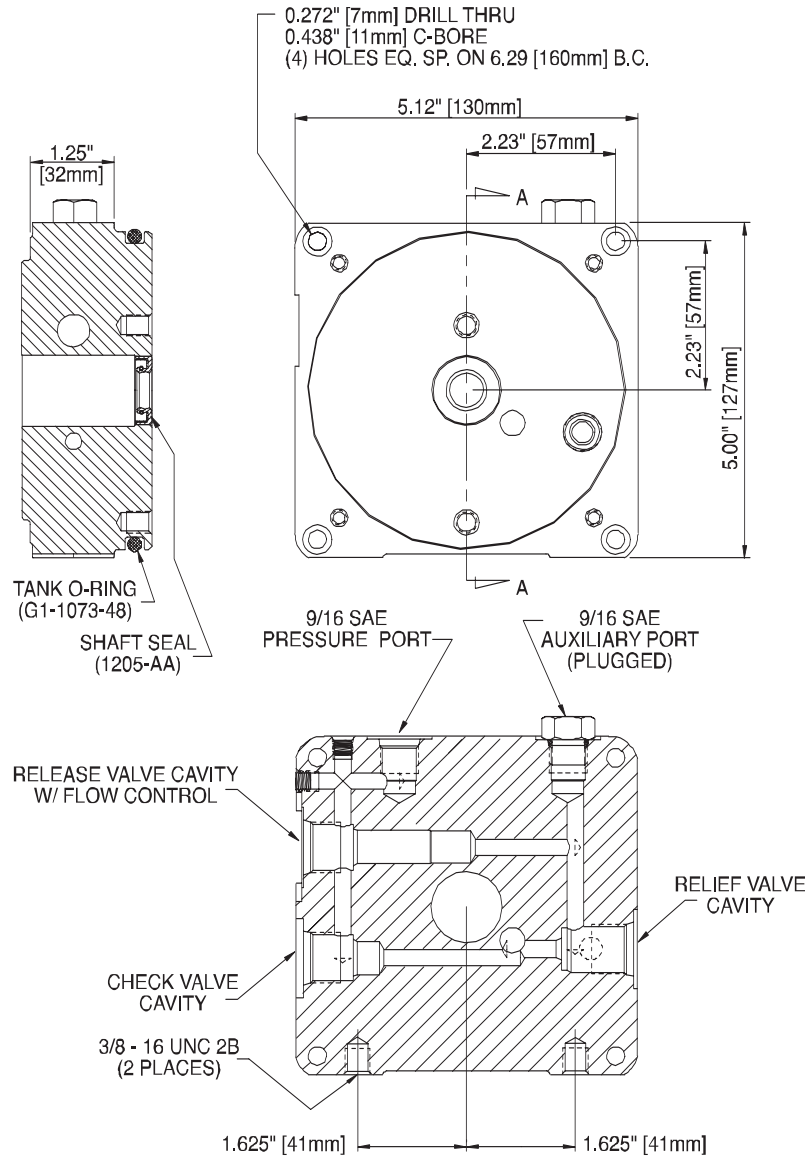


KN11

ENDHEAD UNC FOOTMOUNTS NPT PORTS



ENDHEAD UNC FOOTMOUNTS SAE PORTS

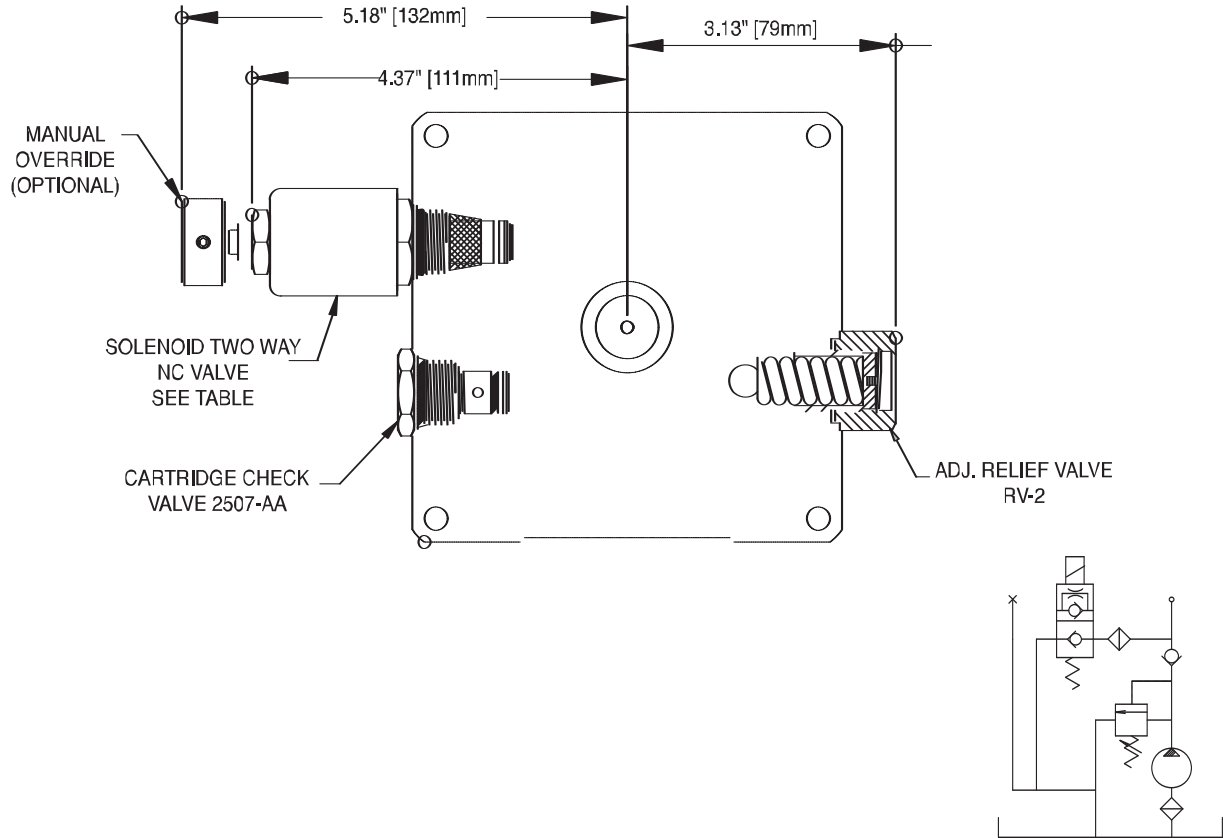


Endhead cannot be used with manifold valves.

Integral Valves

| Kit Number | Description | Page Number |
|-------------------|---|--------------------|
| KC01A-L | Relief, Check, Solenoid Release Valve Kit | Page 57 |
| KC03 | Relief, Check, Manual Release Valve Kit Direct Acting | Page 58 |
| KC05 | Relief, Check, Manual Release Valve Kit With Micro-Switch | Page 59 |
| KC07 | Relief & Check Valve Kit | Page 60 |
| KC08 | Relief Valve Kit | Page 61 |
| KC14 | Relief, Check Pneumatic Release Valve Kit | Page 62 |
| KC15 | Relief, Check Manual Release Valve Kit | Page 63 |
| KC18 | Relief, Check & Lever Release Valve Kit | Page 64 |
| KFC2-8 | Pressure Compensated Flow Control | Page 65 |

RELIEF, CHECK, SOLENOID RELEASE VALVE KIT



INTEGRAL VALVES

| KIT NO. | COIL VOLTAGE | CONNECTION STYLE | HANDSETS | KIT NO. | COIL VOLTAGE | CONNECTION STYLE | HANDSETS |
|---------|--------------|----------------------|----------|---------|--------------|------------------|----------|
| KC01A | 12V DC | DIN/Hirschmann | | KC01G | 24V AC | DIN/Hirschmann | |
| KC01B | 12V DC | Dual 1/4" Spade | | KC01H | 230V AC | DIN/Hirschmann | |
| KC01C | 12V DC | Single # 10 UNF Stud | * | KC01J | 115V AC | DIN/Hirschmann | |
| KC01D | 24V DC | DIN/Hirschmann | | KC01K | 12V DC | Smart Start | ** |
| KC01E | 24V DC | Dual 1/4" Spade | | KC01L | 24V DC | Smart Start | ** |
| KC01F | 24V DC | Single # 10 UNF Stud | * | | | | |

Kit includes 4 color-coded relief springs as follows: Blue (300-599 PSI) [20.7-41.3 Bar], Green (600-1299 PSI)[41.4-89.6 Bar], Red (1300-1999 PSI)[89.6-137.8 Bar], Black (2000-4199 PSI) [137.9-289.5 Bar].

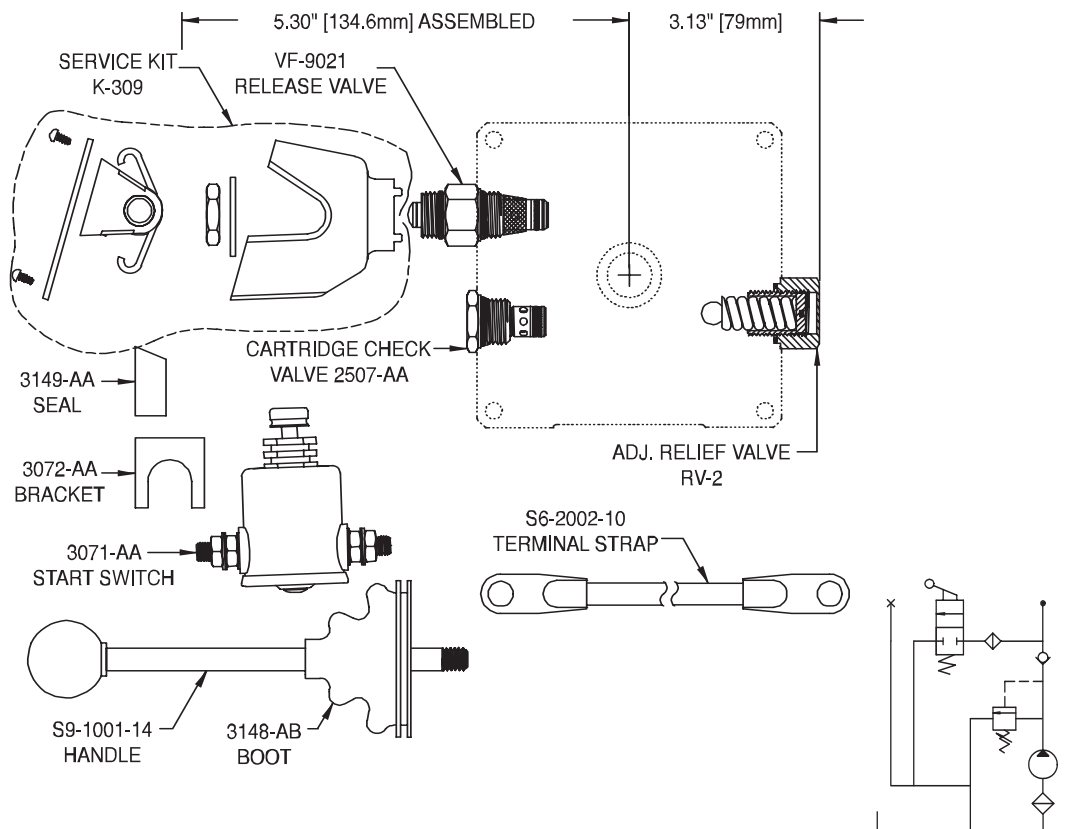
Optional: (4200-5000 PSI) [289.6-345 Bar] Relief valve kit available, order part no. K-175.

Optional: Order JF-0048 spring locator when using the blue (300-599 PSI) [20.7-41.3 Bar] spring.

Remote cord set available, for styles: * Order KG11 ** Order KG11A.

If using smart start with stud terminal coil, order 4088-AB.

RELIEF, CHECK, MANUAL RELEASE VALVE KIT DIRECT ACTING



Kit includes 4 color-coded relief springs as follows: Blue (300-599 PSI) [20.7-41.3 Bar], Green (600-1299 PSI)[41.4-89.6 Bar], Red (1300-1999 PSI)[89.6-137.8 Bar], Black (2000-4199 PSI) [137.9-289.5 Bar].

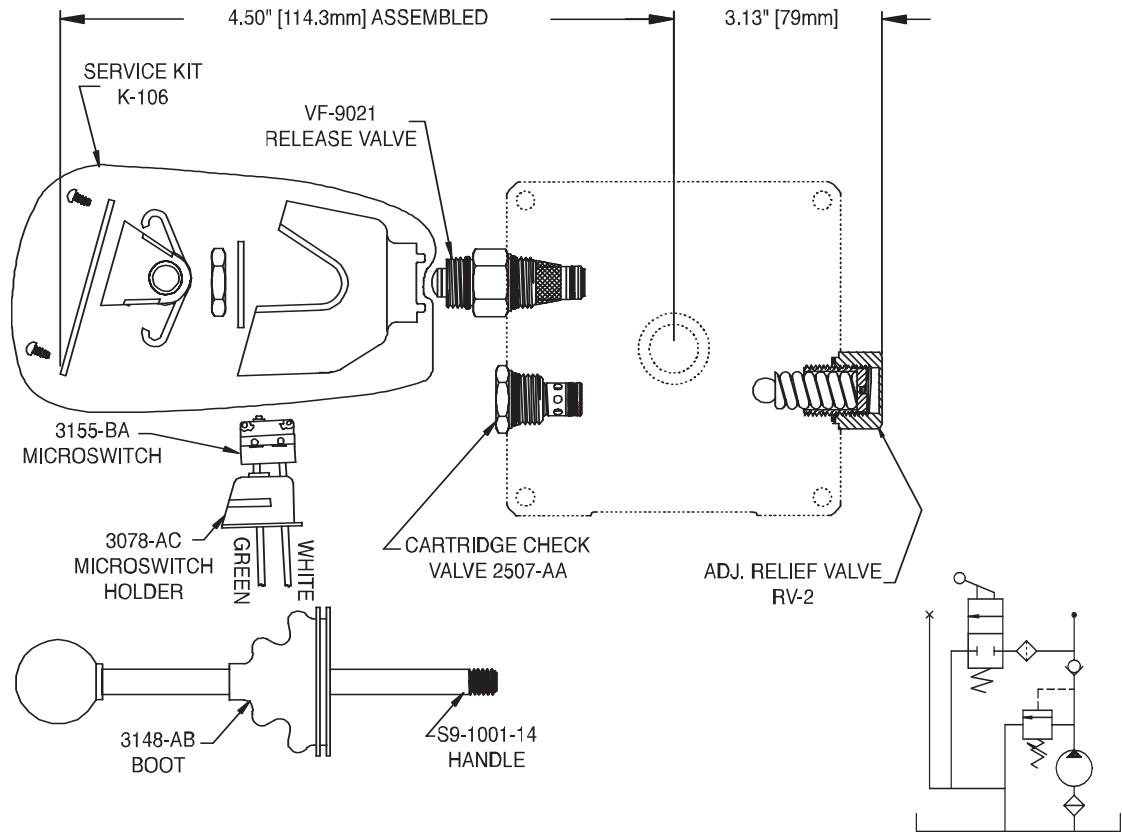
Optional: (4200-5000 PSI) [289.6-345 Bar] Relief valve kit available, order part no. K-175.

Optional: Order JF-0048 spring locator when using the blue (300-599 PSI) [20.7-41.3 Bar] spring.

Release bracket may be rotated in 90° Increments at assembly.

Can be used with 12V or 24V DC power units.

RELIEF, CHECK, MANUAL RELEASE VALVE KIT WITH MICRO-SWITCH



INTEGRAL VALVES

Kit includes 4 color-coded relief springs as follows: Blue (300-599 PSI) [20.7-41.3 Bar], Green (600-1299 PSI)[41.4-89.6 Bar], Red (1300-1999 PSI)[89.6-137.8 Bar], Black (2000-4199 PSI) [137.9-289.5 Bar].

Optional: (4200-5000 PSI) [289.6-345 Bar] Relief valve kit available, order part no. K-175.

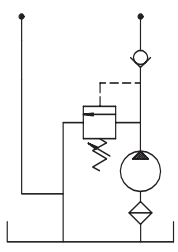
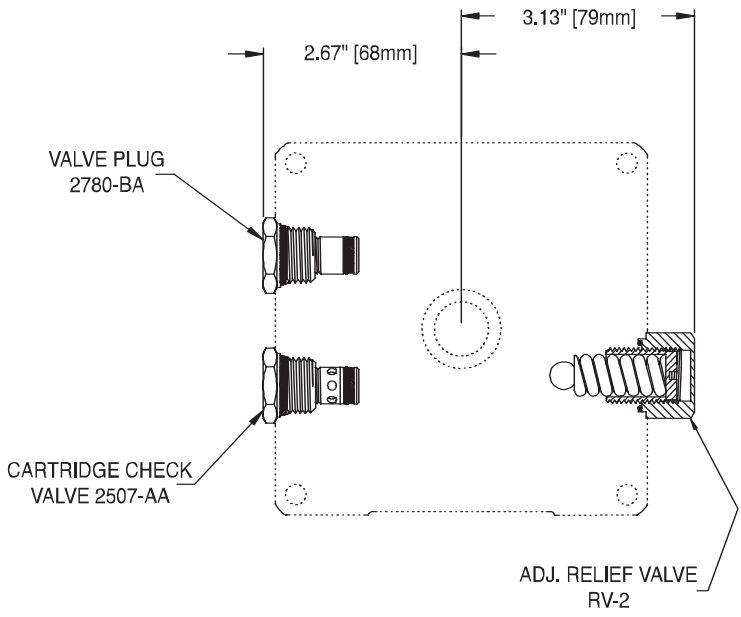
Optional: Order JF-0048 spring locator when using the blue (300-599 PSI) [20.7-41.3 Bar] spring.

Release bracket may be rotated in 90° increments at assembly.

For use with KS_ (DC application) or customer applied motor contactor (AC application).

KC07

RELIEF & CHECK VALVE KIT

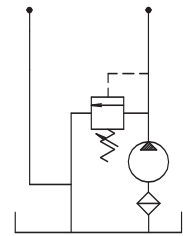
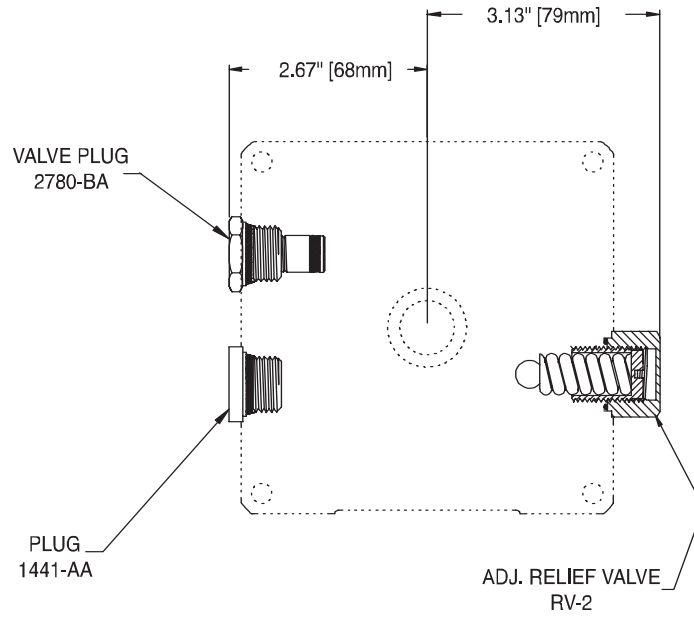


Kit includes 4 color-coded relief springs as follows: Blue (300-599 PSI) [20.7-41.3 Bar], Green (600-1299 PSI)[41.4-89.6 Bar], Red (1300-1999 PSI)[89.6-137.8 Bar], Black (2000-4199 PSI) [137.9-289.5 Bar].

Optional: (4200-5000 PSI) [289.6-345 Bar] Relief valve kit available, order part no. K-175.

Optional: Order JF-0048 spring locator when using the blue (300-599 PSI) [20.7-41.3 Bar] spring.

RELIEF VALVE KIT

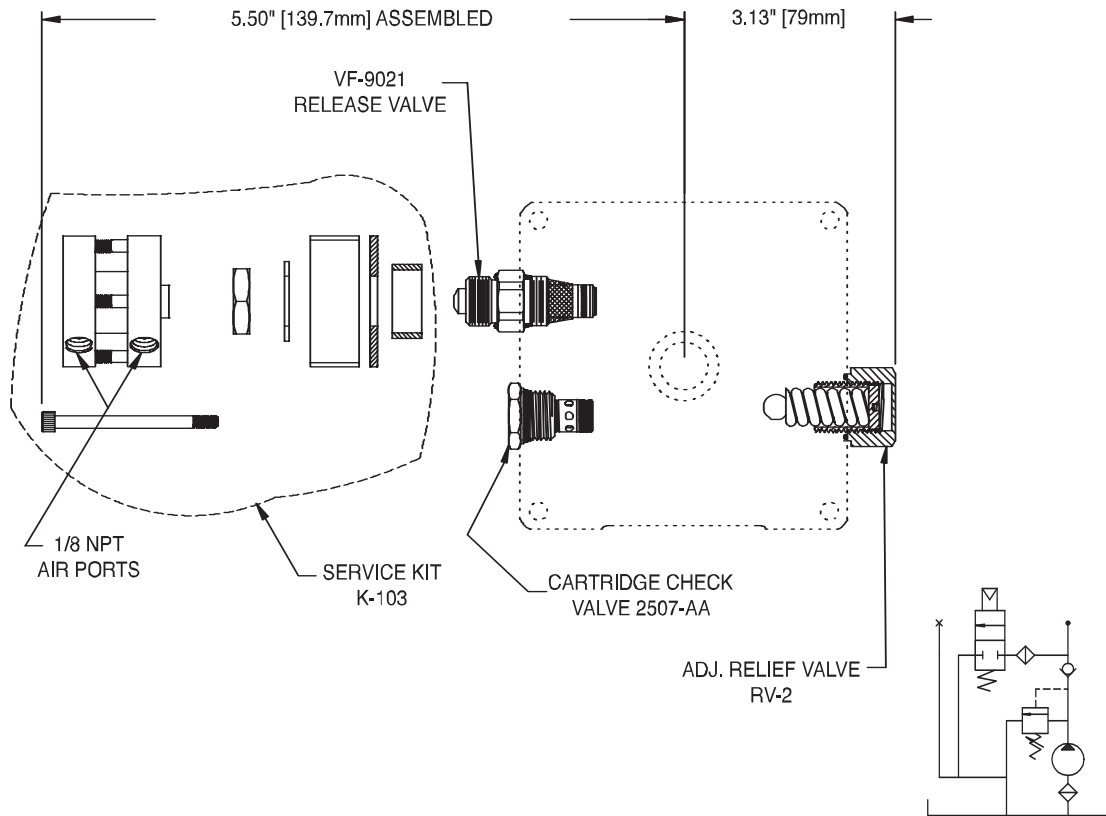


Kit includes 4 color-coded relief springs as follows: Blue (300-599 PSI) [20.7-41.3 Bar], Green (600-1299 PSI)[41.4-89.6 Bar], Red (1300-1999 PSI)[89.6-137.8 Bar], Black (2000-4199 PSI) [137.9-289.5 Bar].

Optional: (4200-5000 PSI) [289.6-345 Bar] Relief valve kit available, order part no. K-175.

Optional: Order JF-0048 spring locator when using the blue (300-599 PSI) [20.7-41.3 Bar] spring.

RELIEF, CHECK PNEUMATIC RELEASE VALVE KIT



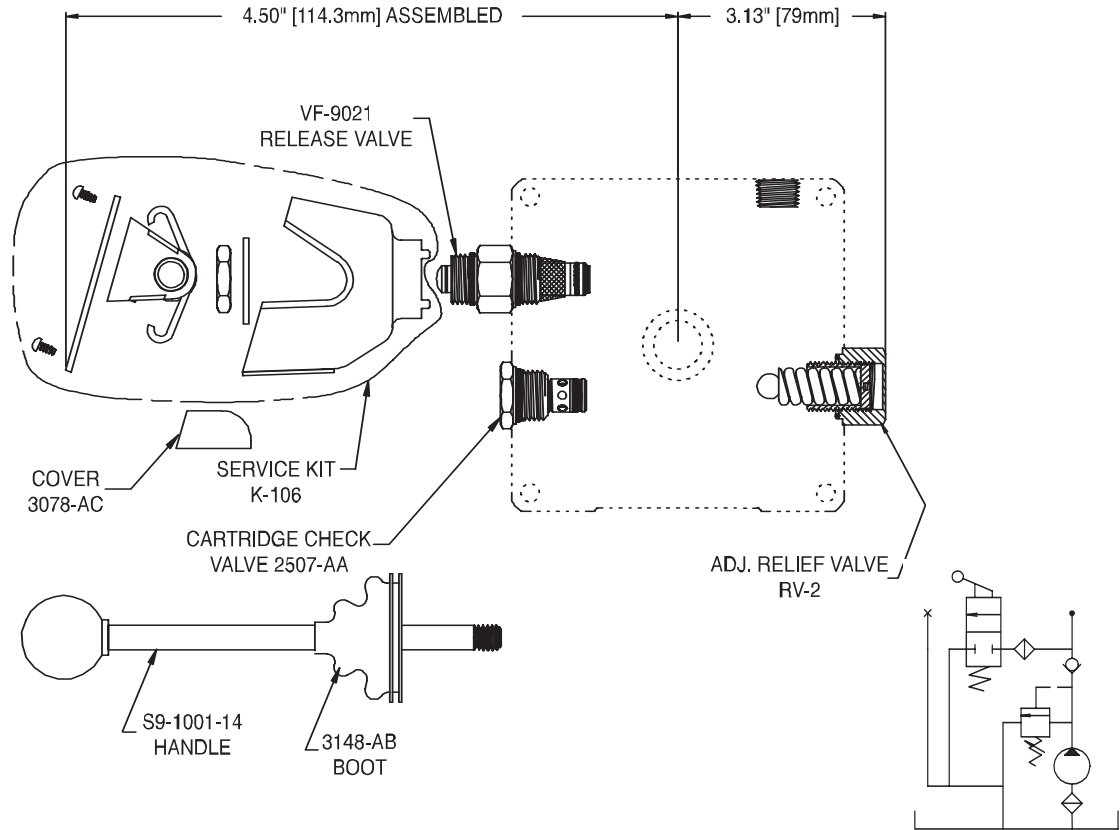
Kit includes 4 color-coded relief springs as follows: Blue (300-599 PSI) [20.7-41.3 Bar], Green (600-1299 PSI)[41.4-89.6 Bar], Red (1300-1999 PSI)[89.6-137.8 Bar], Black (2000-4199 PSI) [137.9-289.5 Bar].

Optional: (4200-5000 PSI) [289.6-345 Bar] Relief valve kit available, order part no. K-175.

Optional: Order JF-0048 spring locator when using the blue (300-599 PSI) [20.7-41.3 Bar] spring.

Valve is rated to release at 3000 PSI. Max. at 90 PSI air pressure.

RELIEF, CHECK MANUAL RELEASE VALVE KIT



Kit includes 4 color-coded relief springs as follows: Blue (300-599 PSI) [20.7-41.3 Bar], Green (600-1299 PSI)[41.4-89.6 Bar], Red (1300-1999 PSI)[89.6-137.8 Bar], Black (2000-4199 PSI) [137.9-289.5 Bar].

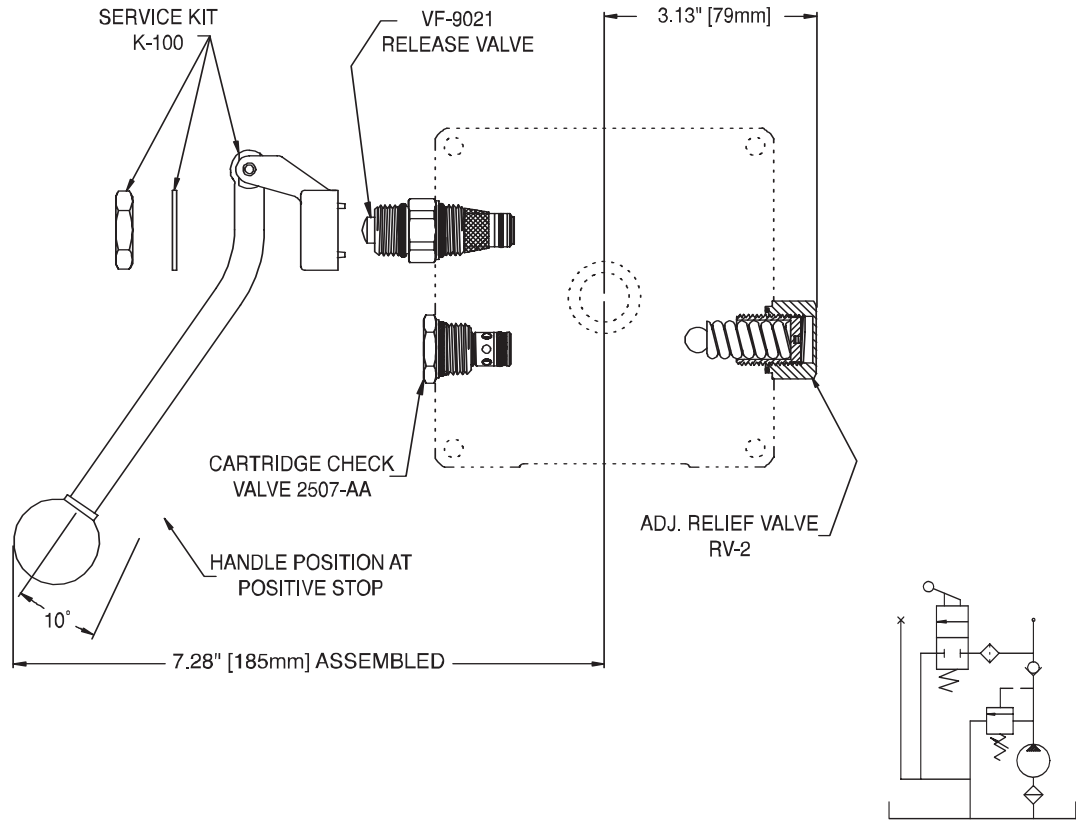
Optional: (4200-5000 PSI) [289.6-345 Bar] Relief valve kit available, order part no. K-175.

Optional: Order JF-0048 spring locator when using the blue (300-599 PSI) [20.7-41.3 Bar] spring.

Release bracket may be rotated in 90° increments at assembly.

KC18

RELIEF, CHECK & LEVER RELEASE VALVE KIT



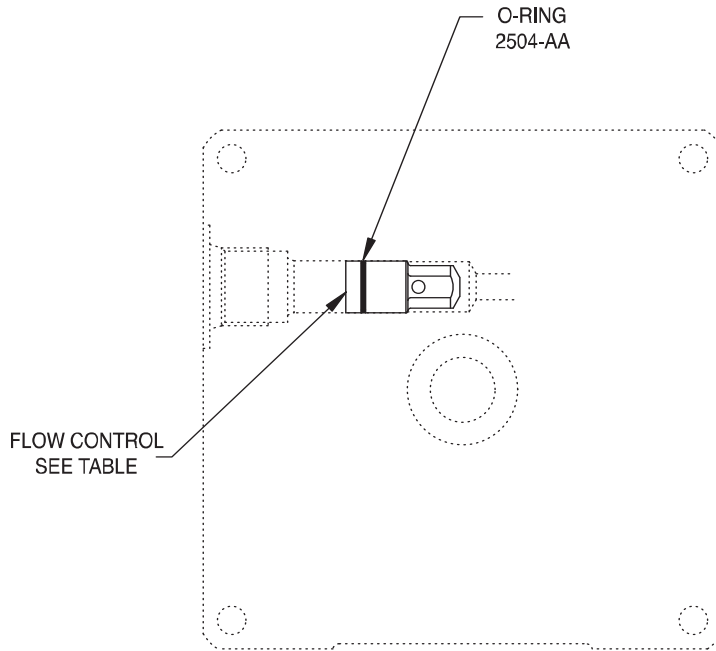
Kit includes 4 color-coded relief springs as follows: Blue (300-599 PSI) [20.7-41.3 Bar], Green (600-1299 PSI)[41.4-89.6 Bar], Red (1300-1999 PSI)[89.6-137.8 Bar], Black (2000-4199 PSI) [137.9-289.5 Bar].

Optional: (4200-5000 PSI) [289.6-345 Bar] Relief valve kit available, order part no. K-175.

Optional: Order JF-0048 spring locator when using the blue (300-599 PSI) [20.7-41.3 Bar] spring.

Release bracket may be rotated in 90° increments at assembly.

PRESSURE COMPENSATED FLOW CONTROL



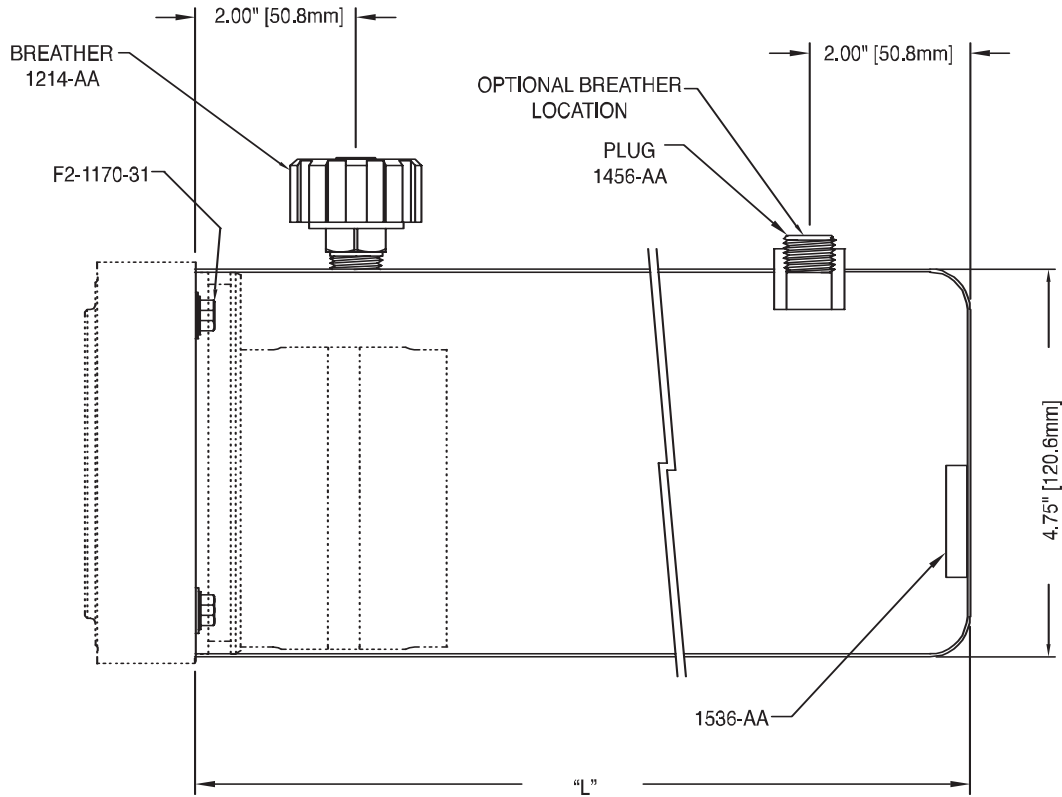
| Part No. | Nominal Flow | |
|----------|--------------|-----|
| | US GPM | LPM |
| KFC2 | .5 | 1.9 |
| KFC4 | 1.0 | 3.8 |
| KFC6 | 1.5 | 5.7 |
| KFC8 | 2.0 | 7.6 |

Metering accuracy typically $\pm 10\%$ of nominal flow.
 May be used with any KC control valve except KC07 and KC08.
 May be added to DC10 or DC20 Power Units.
 For additional GPM requirements, contact Stone technical service.

Reservoirs

| Kit Number | Description | Page Number |
|-------------------|--|--------------------|
| KR12-15 | 4.75"/120mm Diameter Round Steel | Page 67 |
| KR22-25 | 5.0"/127mm Square Plastic | Page 68 |
| KR40-46 | 6.7"/170mm Diameter Transition Style Steel | Page 69 |
| KR50-56 | 6.7"/170mm Offset Plastic | Page 70 |
| KR71 | 7 Gallon Floor Mount | Page 71 |
| KR72 | Tank Neck-Ring Kit | Page 72 |
| KR73 | 14 Gallon Vertical Floor Mount | Page 73 |
| K-140 | Industrial Reservoir Cover Kit | Page 74 |
| KH | Plumbing Kit Horizontally Mounted Units | Page 75 |
| KV | Plumbing Kit Vertically Mounted Units | Page 76 |

4.75"/120MM ROUND STEEL

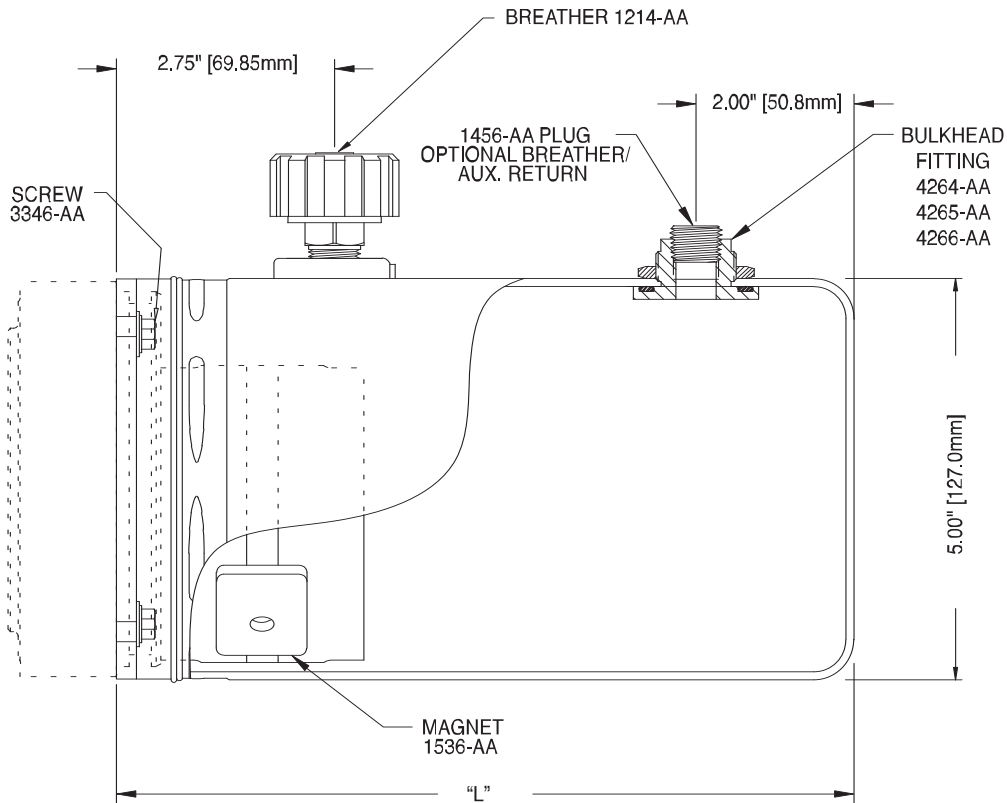


| KIT NO. | NOM. CAP. (QT.) | TANK LENGTH | | USEABLE OIL CAPACITY | | | |
|---------|-----------------|-------------|-------|----------------------|--------------------|-------|----------------------|
| | | MM | INCH | LITRE | VERTICAL CUBIC IN. | LITRE | HORIZONTAL CUBIC IN. |
| KR12 | 2 | 216 | 8.50 | 1.4 | 85 | 1.6 | 90 |
| KR14 | 3 | 305 | 12.00 | 2.4 | 138 | 2.2 | 135 |
| KR15 | 4 | 368 | 14.50 | 2.6 | 165 | 2.6 | 161 |

Do not use KR12 with Duplex pump units.

KR22-25

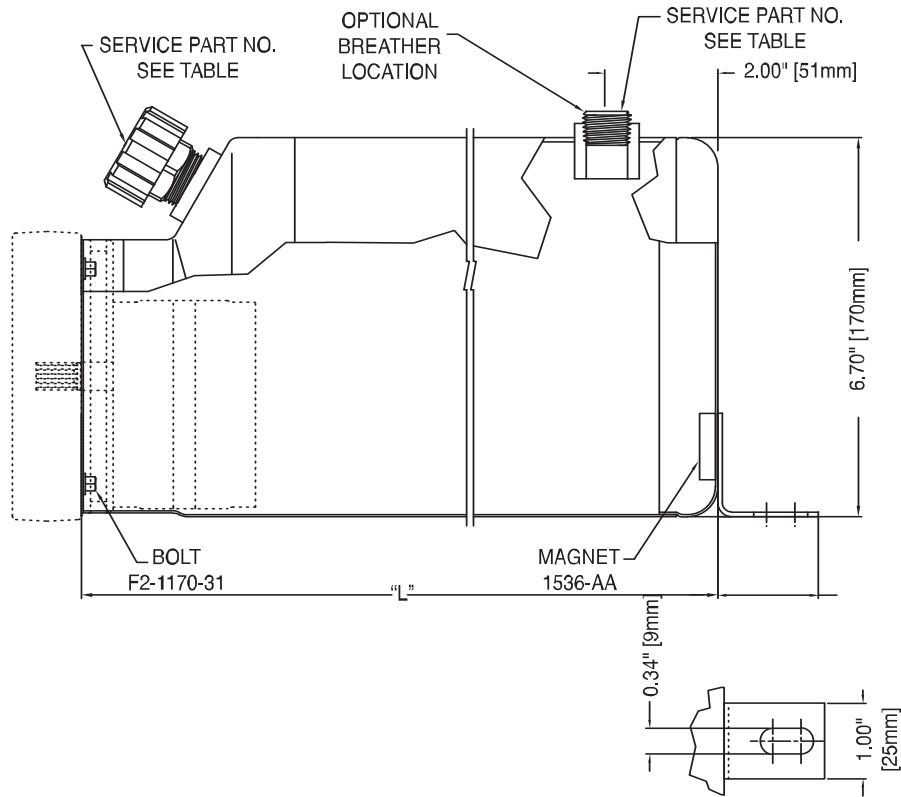
5.0"/127MM SQUARE PLASTIC



| KIT NO. | NOM. CAP. (QT.) | TANK LENGTH | | USEABLE OIL CAPACITY | | | |
|---------|-----------------|-------------|-------|----------------------|--------------------|-------|----------------------|
| | | MM | INCH | LITRE | VERTICAL CUBIC IN. | LITRE | HORIZONTAL CUBIC IN. |
| KR22 | 2 | 216 | 8.50 | 1.4 | 83 | 1.6 | 100 |
| KR24 | 3 | 280 | 11.00 | 2.3 | 138 | 2.2 | 130 |
| KR25 | 4 | 356 | 14.00 | 3.3 | 200 | 2.9 | 175 |

- Do not use KR22 with Duplex pump units.
- Use K-29 if mounting KDV_ valves.

6.7"/170MM TRANSITION STYLE STEEL

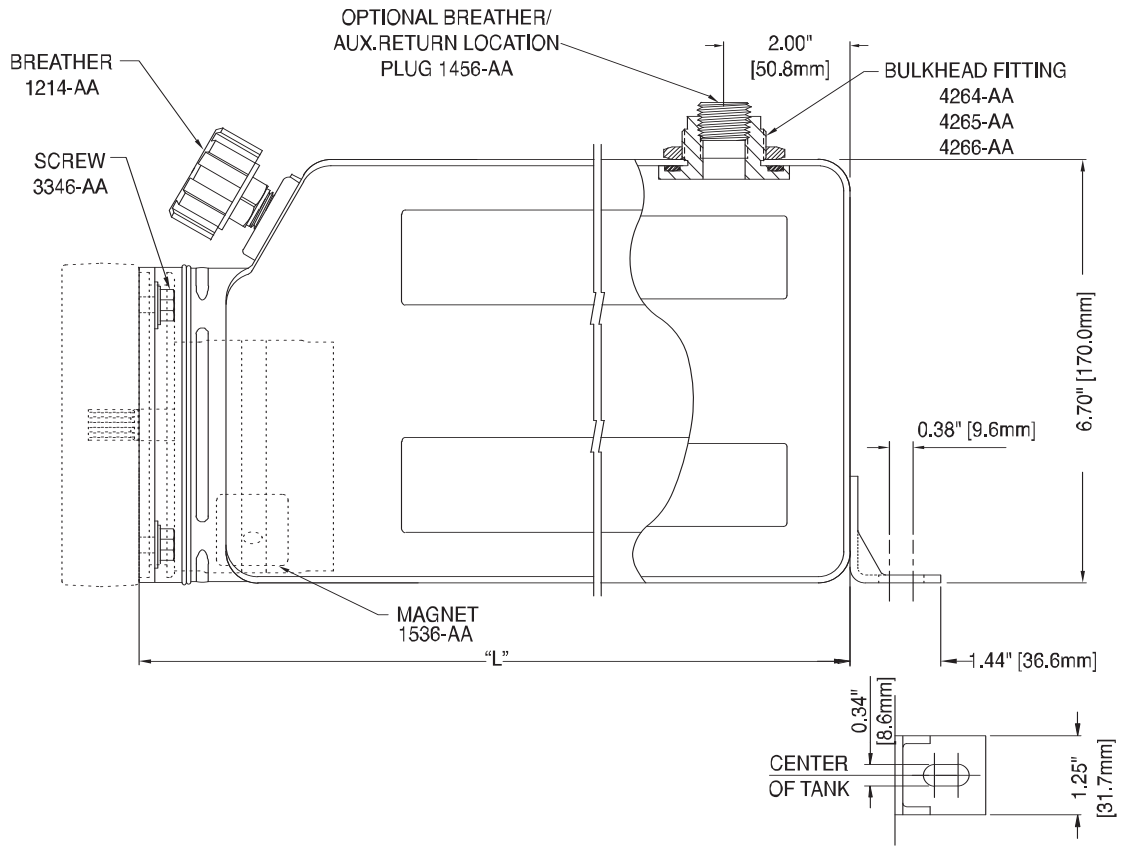


| KIT NO. | NOM. CAP. (GAL.) | TANK LENGTH | | USEABLE OIL CAPACITY | | | | BREATHER PART NO. | PLUG PART NO. |
|---------|------------------|-------------|-------|----------------------|-----------|------------------|-----------|-------------------|---------------|
| | | MM | INCH | VERTICAL LITRE | CUBIC IN. | HORIZONTAL LITRE | CUBIC IN. | | |
| KR40 | 1.0 | 200 | 7.88 | 1.6 | 100 | 2.8 | 170 | 1214-AA | 1465-AA |
| KR45 | 1.2 | 250 | 9.84 | 2.6 | 160 | 3.6 | 220 | 1214-AA | 1465-AA |
| KR41 | 1.5 | 300 | 11.81 | 3.6 | 220 | 4.4 | 270 | 1683-AB | 1896-AA |
| KR42 | 2.0 | 400 | 15.75 | 5.6 | 340 | 5.9 | 360 | 1683-AB | 1896-AA |
| KR46 | 2.5 | 432 | 17.00 | 6.2 | 380 | 6.4 | 390 | 1683-AB | 1896-AA |
| KR43 | 3.0 | 550 | 21.65 | 8.5 | 520 | 8.2 | 500 | 1683-AB | 1896-AA |
| KR44 | 4.0 | 660 | 26.00 | 10.6 | 650 | 9.8 | 600 | 1683-AB | 1896-AA |

Foot included on 1.5 gallon and larger.
 Shimming may be required at installation.
 Do not use KR40 with duplex pump units.

KR50-56

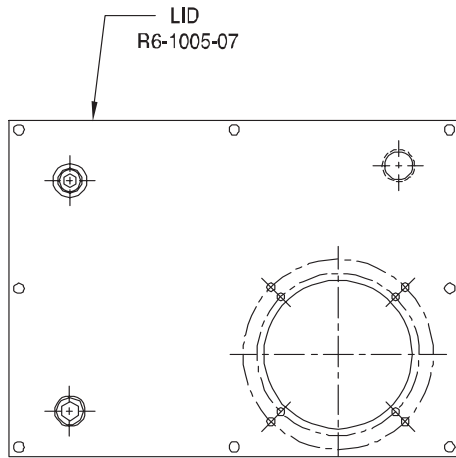
**6.7"/170MM
OFFSET PLASTIC**



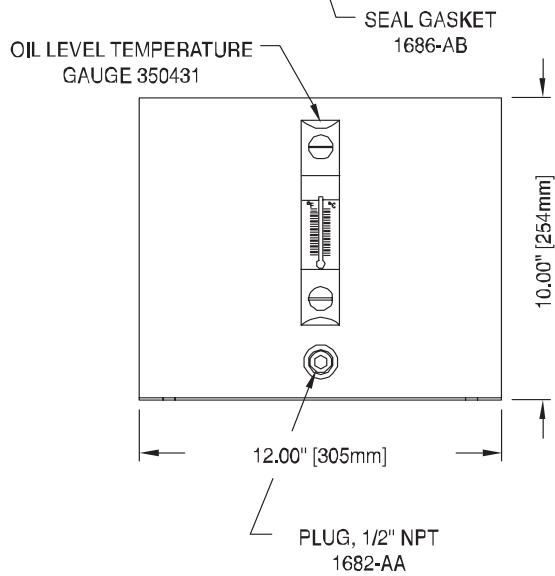
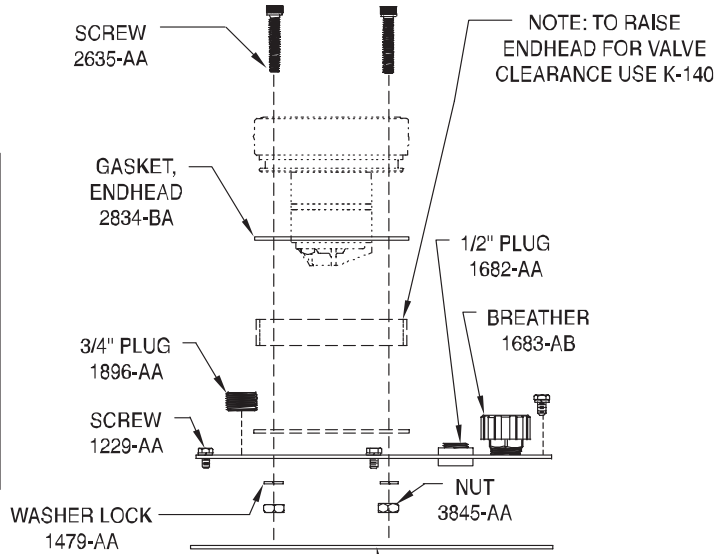
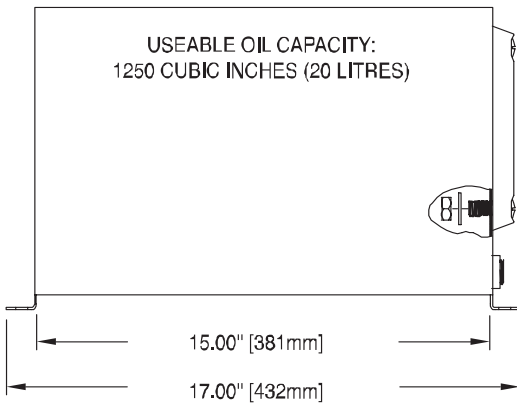
| KIT NO. | NOM. CAP. (GAL.) | TANK LENGTH | | USEABLE OIL CAPACITY | | | |
|---------|------------------|-------------|-------|----------------------|--------------------|------------------|-----------|
| | | MM | INCH | LITRE | VERTICAL CUBIC IN. | HORIZONTAL LITRE | CUBIC IN. |
| KR50 | 1.0 | 190 | 7.50 | 1.9 | 120 | 3.1 | 186 |
| KR55 | 1.2 | 288 | 9.00 | 2.9 | 180 | 3.8 | 230 |
| KR51 | 1.5 | 279 | 11.00 | 4.3 | 260 | 4.7 | 286 |
| KR52 | 2.0 | 330 | 13.00 | 5.6 | 340 | 5.6 | 345 |
| KR56 | 2.5 | 381 | 15.00 | 6.9 | 420 | 6.6 | 400 |
| KR53 | 3.0 | 508 | 20.00 | 10.2 | 620 | 8.8 | 540 |
| KR54 | 4.0 | 660 | 26.00 | 14.1 | 860 | 11.7 | 715 |

Foot included on 1.5 gallon and larger.
 Shimming may be required at installation.
 Do not use KR50 or KR55 with duplex pump units.

7 GALLON FLOOR MOUNT

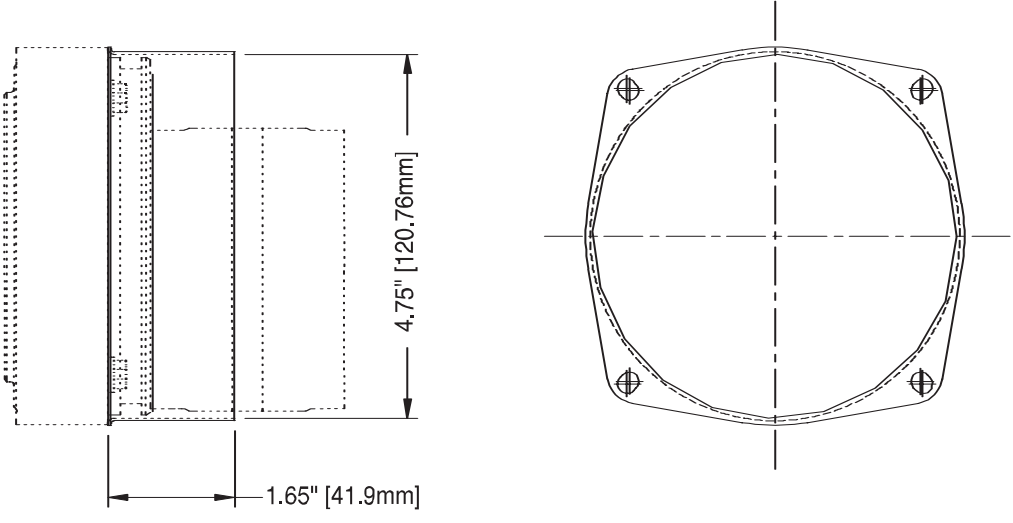


LID CAN BE ROTATED AND/OR REVERSED FOR FLEXIBILITY OF ENDHEAD/BREATHER POSITION



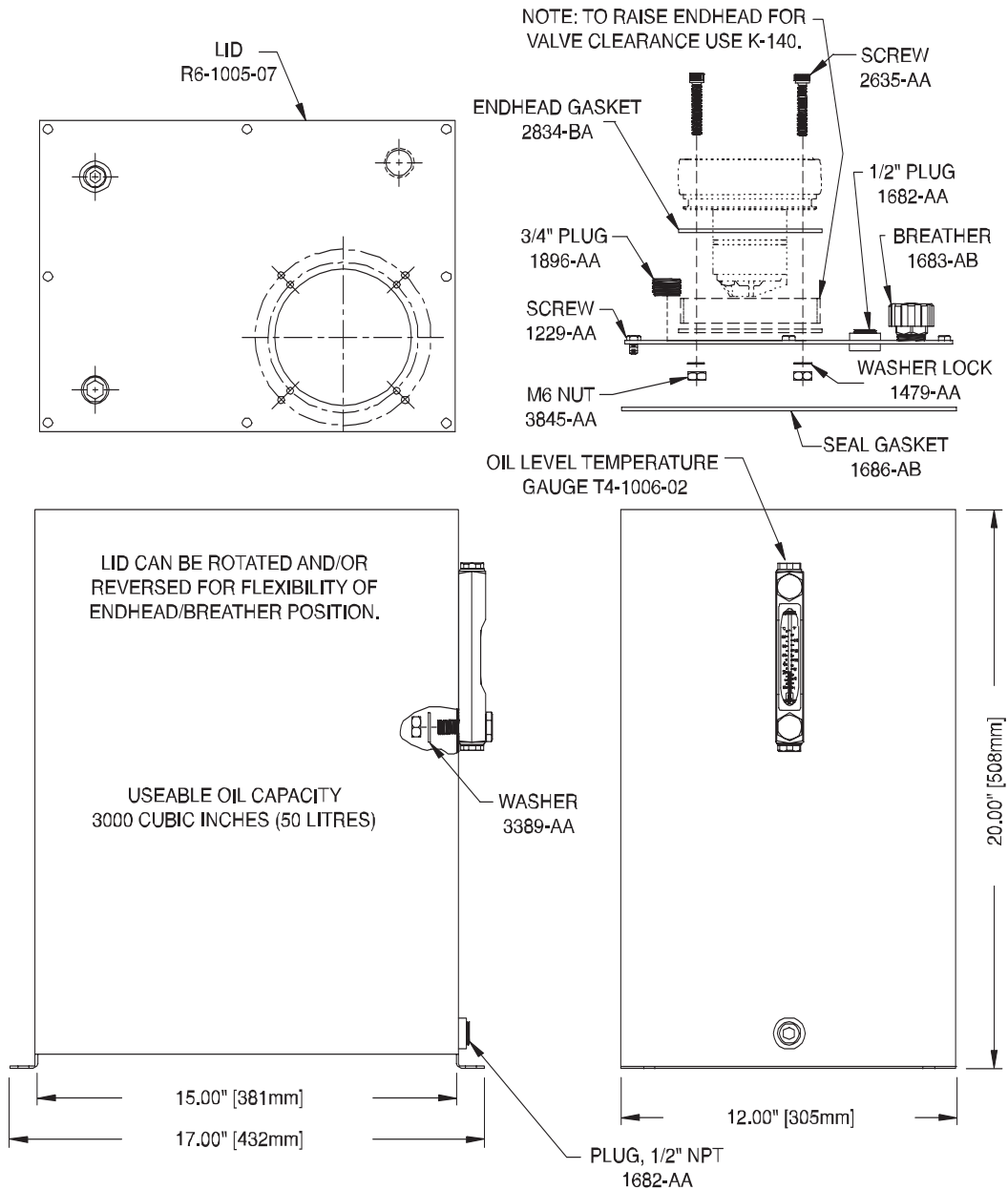
KR72

TANK NECK-RING KIT



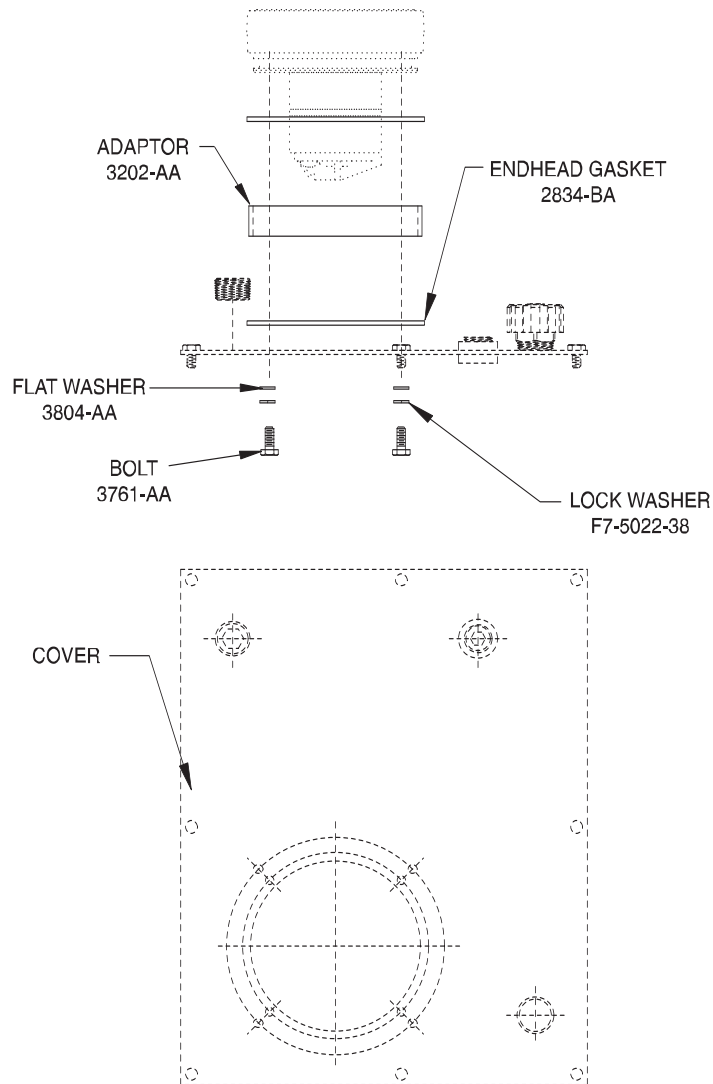
For use with self-manufactured steel reservoirs.

14 GALLON VERTICAL FLOOR MOUNT



K-140

INDUSTRIAL RESERVOIR COVER KIT

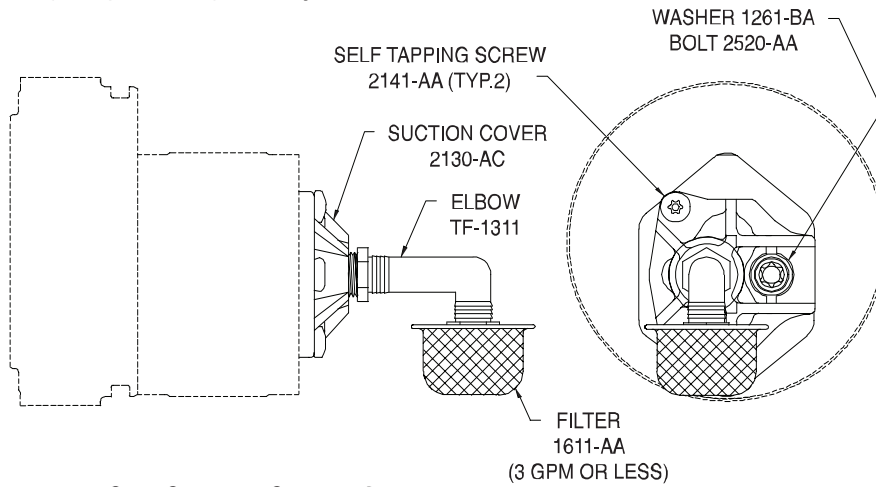


For use with KR71 and KR73 tanks to give additional clearance for valve coil.

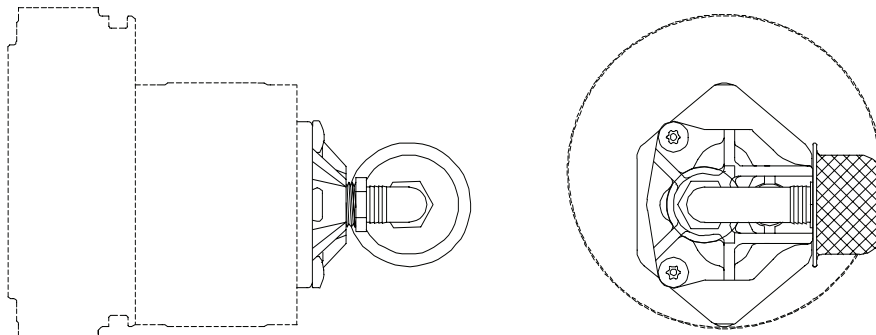
PLUMBING KIT

HORIZONTALLY MOUNTED UNITS

HORIZONTAL MOUNTING



SIDE HORIZONTAL MOUNTING

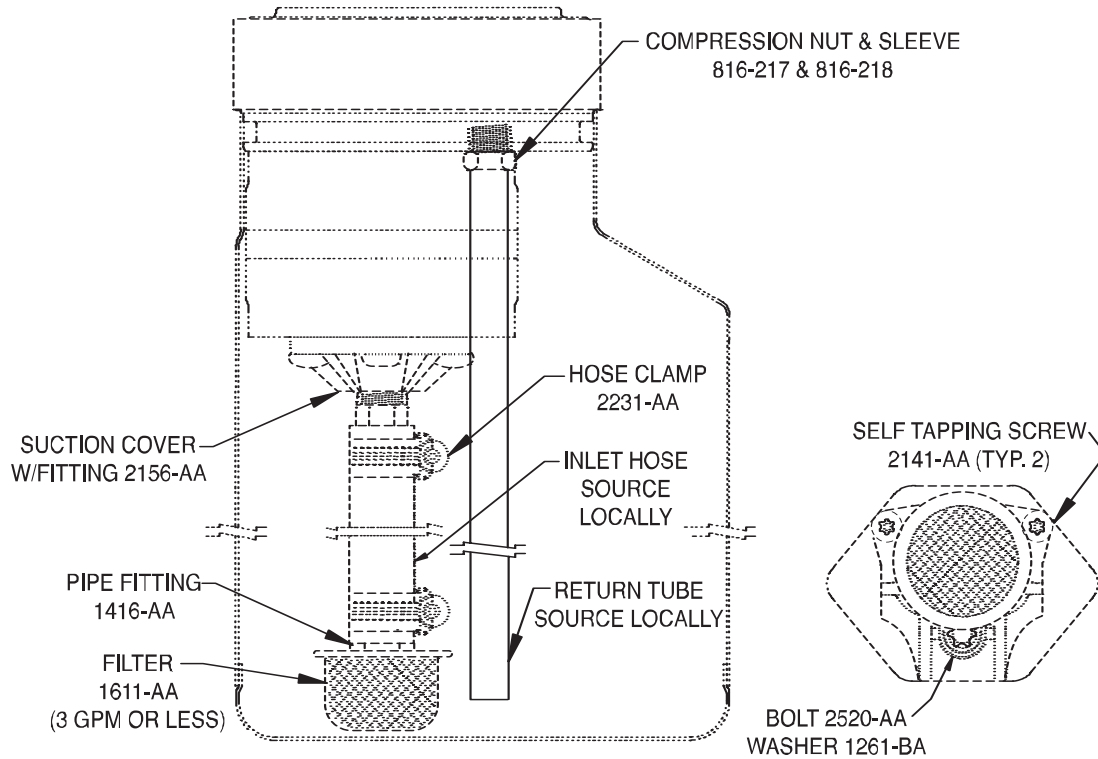


Parts may be assembled in either orientation depending on mounting of power unit.

For flows over 3 GPM use 1413-AA large filter.

KV

PLUMBING KIT VERTICALLY MOUNTED UNITS



Parts may be assembled in either orientation depending on mounting of power unit.

For flows over 3 GPM use 1413-AA large filter.

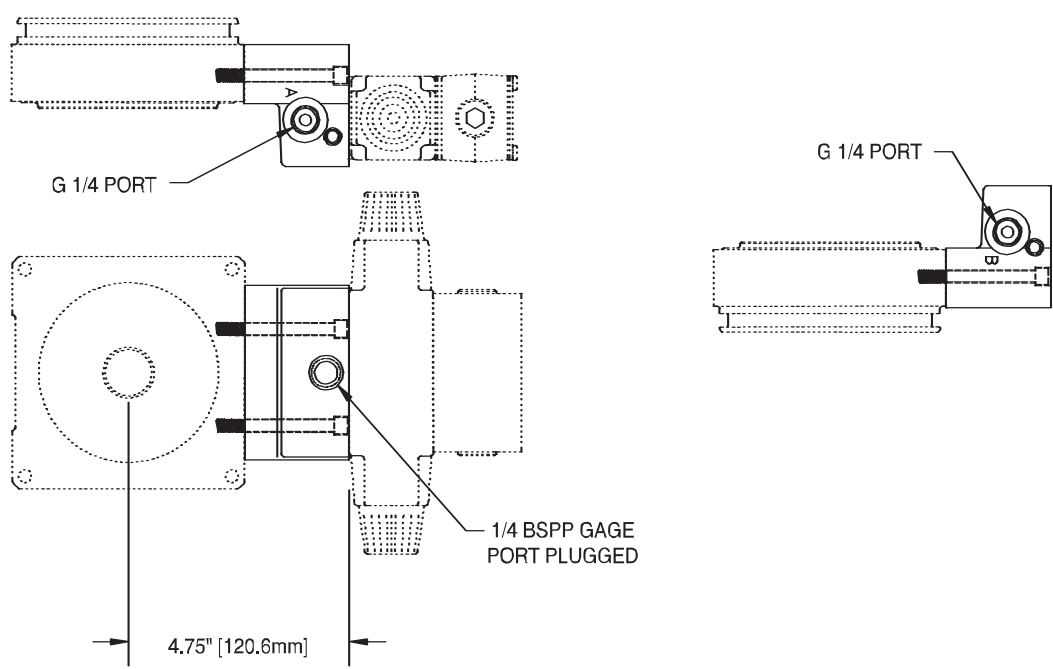
Manifolds

| Kit Number | Description | Page Number |
|-------------------|--|--------------------|
| KB10 | Single Manifold Block For D03 CETOP Valve/BSPP Ports | Page 78 |
| KB11 | Single Manifold Block For D03 CETOP Valve/SAE Ports | Page 79 |
| KCV1 | 12V DC Manifold Valve | Page 80 |
| KDV1 | 12V DC Solenoid Direct Control Bottom Valve | Page 81 |
| KDV2 | Manual Directional Control Bottom Valve With DC Switch | Page 82 |
| KDV3 | Manual Directional Control Valve With DC Switch | Page 83 |
| KDV4 | 12V DC Solenoid Directional Control Valve | Page 84 |

Note: Manifold valves cannot be used on KN12 endheads.

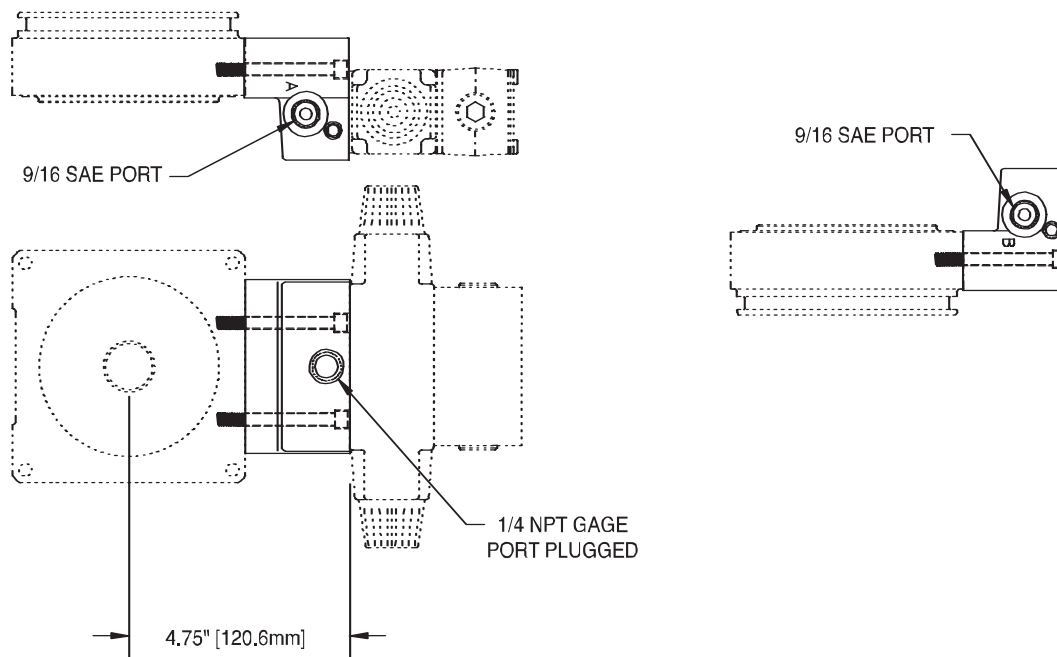
KB10

**SINGLE MANIFOLD BLOCK FOR
D03 CETOP VALVE/BSPP PORTS**



- Kit includes all seals and mounting hardware.
- CETOP valve not included.
- Use M5 thread mounting bolts for valve.
- Will allow only single D03 valve (not intended for multiple valve stacking) .
- Use K-29 adaptor if needed for motor or tank clearance.

SINGLE MANIFOLD BLOCK FOR D03 CETOP VALVE/SAE PORTS



Kit includes all seals and mounting hardware.

CETOP valve not included.

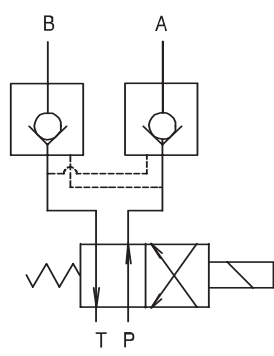
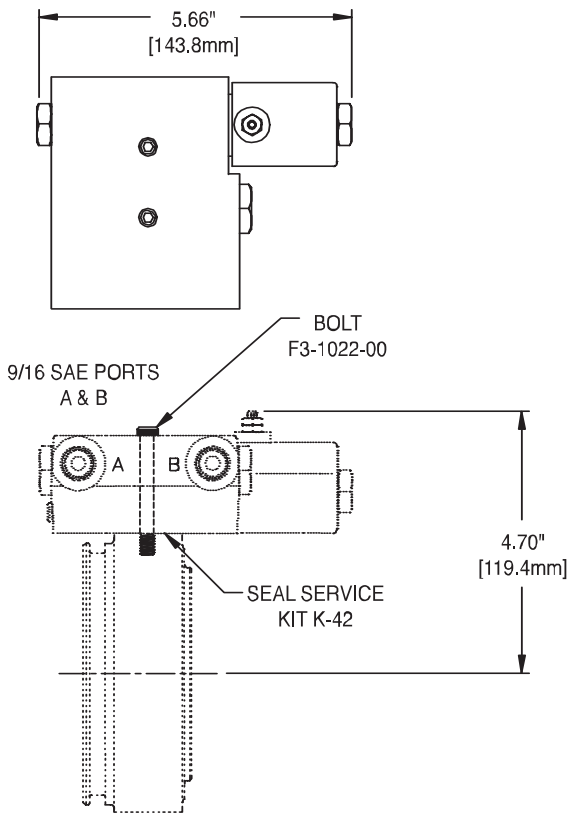
Use M5 thread mounting bolts for valve.

Will allow only single D03 valve (not intended for multiple valve stacking) .

Use K-29 adaptor if needed for motor or tank clearance.

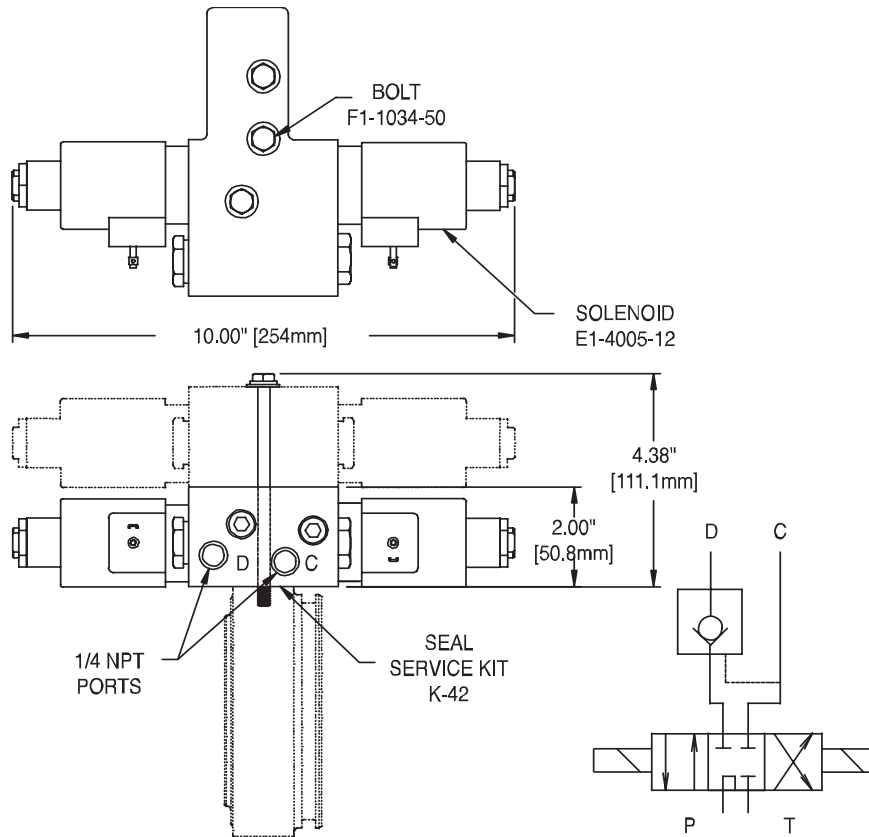
KCV1

12V DC MANIFOLD VALVE



Kit includes all seals and mounting hardware.
 If used with large motor, KR4_, KR5_ or KR7_ tanks, order valve spacer K-29.
 Remote cordset available, use KG12 with KS1.

12V DC SOLENOID DIRECT CONTROL BOTTOM VALVE



To convert to double P.O. check, order S8-9006-00.

Kit includes all seals and mounting hardware.

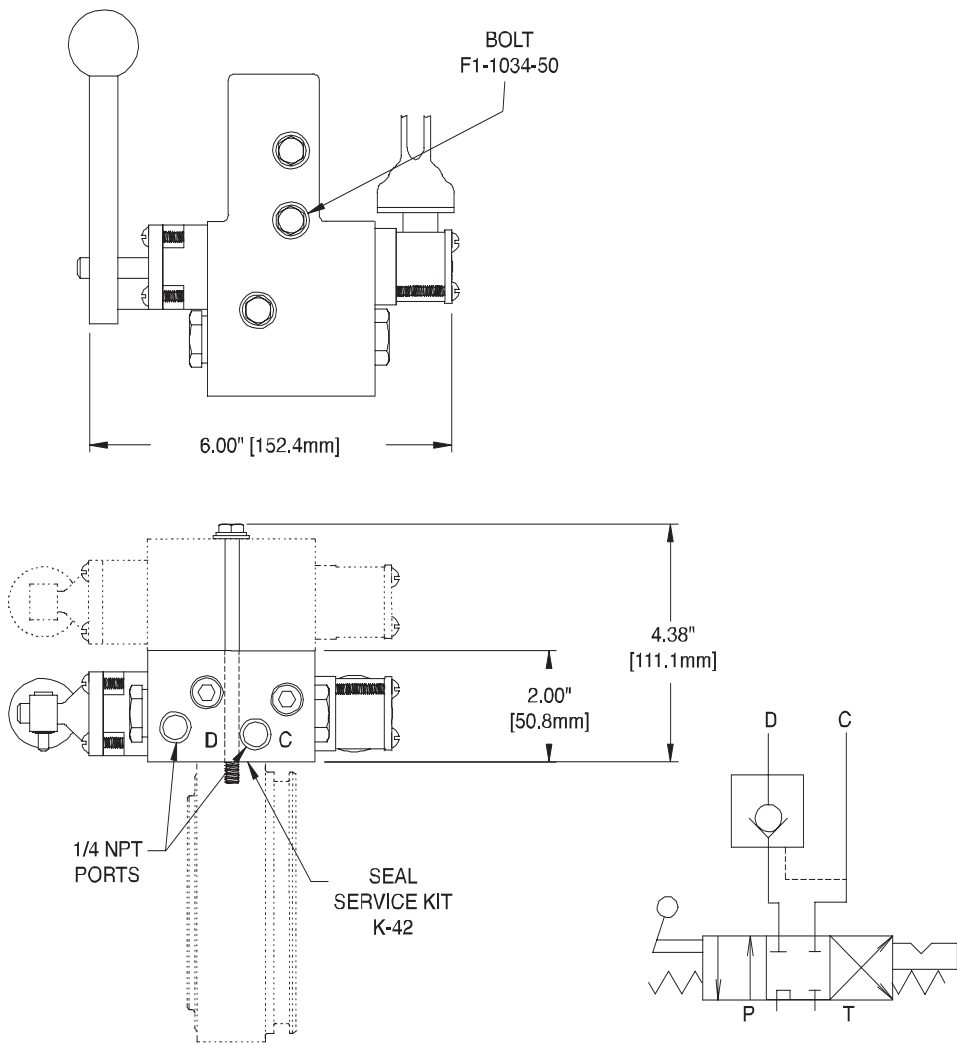
If used with large motor, KR4_, KR5_ or KR7_ tanks, order valve spacer K-29.

Remote cordset available, use KG13 with KS1, use KG13A with KS5.

To be used as a bottom valve with KDV4, or to modify DC-60 into DC-62.

KDV2

**MANUAL DIRECTIONAL CONTROL
BOTTOM VALVE WITH DC SWITCH**



To convert to double P.O. check, order S8-9006-00.

Kit includes all seals and mounting hardware.

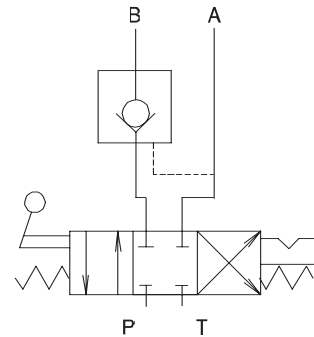
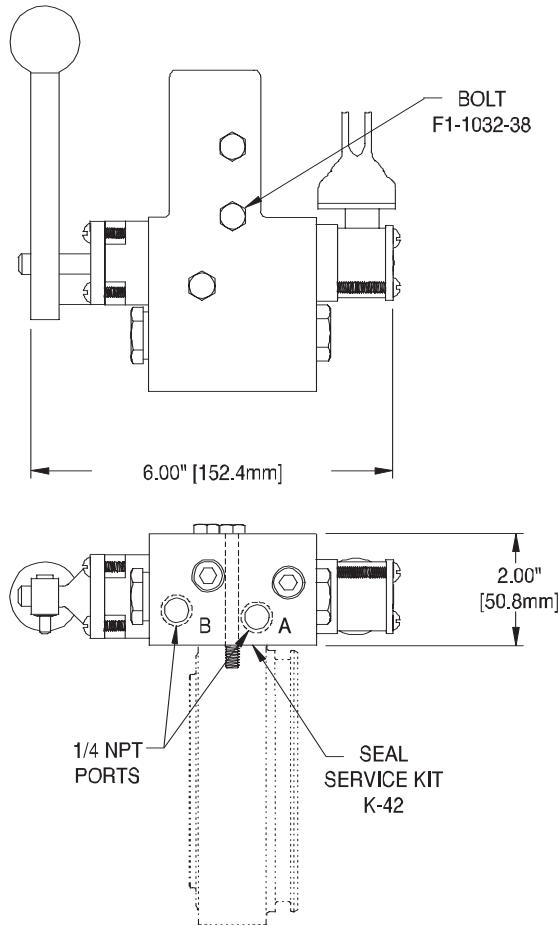
If used with large motor, KR4_, KR5_ or KR7_ tanks, order valve spacer K-29.

To be used as a bottom valve with KDV3, or to add a second 4-way function to DC-50.

Switch can be used at 12V or 24V DC.

Wire switch to KS_ start solenoid.

MANUAL DIRECTIONAL CONTROL VALVE WITH DC SWITCH



To convert to double P.O. check, order S8-9006-00.

Kit includes all seals and mounting hardware.

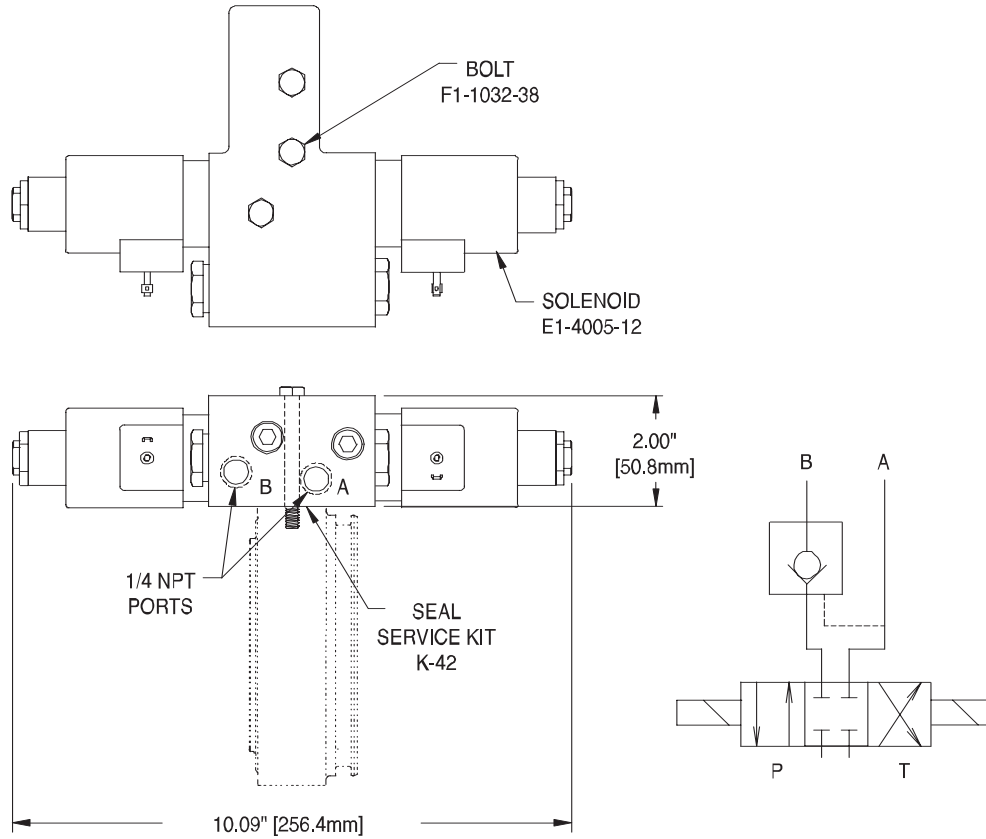
If used with large motor, KR4_, KR5_ or KR7_ tanks, order valve spacer K-29.

Switch will work at 12V or 24V DC.

Wire switch to KS_ start solenoid.

KDV4

12V DC SOLENOID DIRECTIONAL CONTROL VALVE



To convert to double P.O. check, order S8-9006-00.

Kit includes all seals and mounting hardware.

If used with large motor, KR4_, KR5_ or KR7_ tanks, order valve spacer K-29.

Remote cordset available, use KG13 with KS1, use KG13A with KS5.

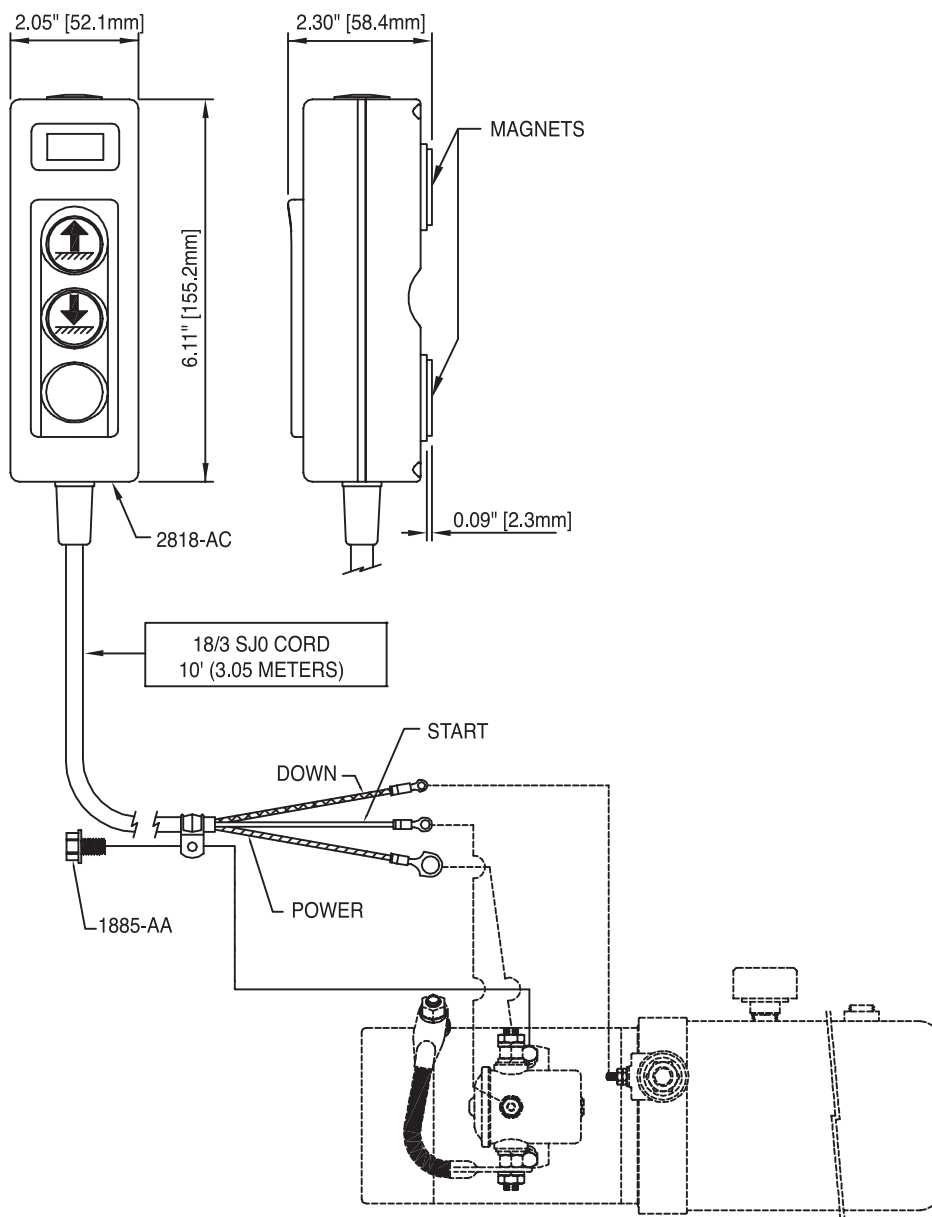
Manual override also available, order S8-4000-02.

Electrical Accessories

| Kit Number | Description | Page Number |
|-------------------|---|--------------------|
| KG11 | Control Handset For Single-Acting Units | Page 86 |
| KG11A | Control Handset For Single-Acting Units For Smart Start | Page 87 |
| KG12 | Control Handset For Double-Acting Units | Page 88 |
| KG12A | Control Handset For Double-Acting Units For Smart Start | Page 89 |
| KG13 | Control Handset For Double-Acting Units | Page 90 |
| KG13A | Control Handset For Double-Acting Units For Smart Start | Page 91 |
| KS1-4 | Intermittent Duty Start Solenoids | Page 92 |
| KS5 | Smart Start Solenoids Intermittent Duty | Page 93 |
| TA-01-B | Pressure Alarm | Page 94 |

KG11

CONTROL HANDSET FOR SINGLE-ACTING UNITS



DC voltage only.

To be used with DC-20SF power units and KS- and KC01C or KC01F valve kit.

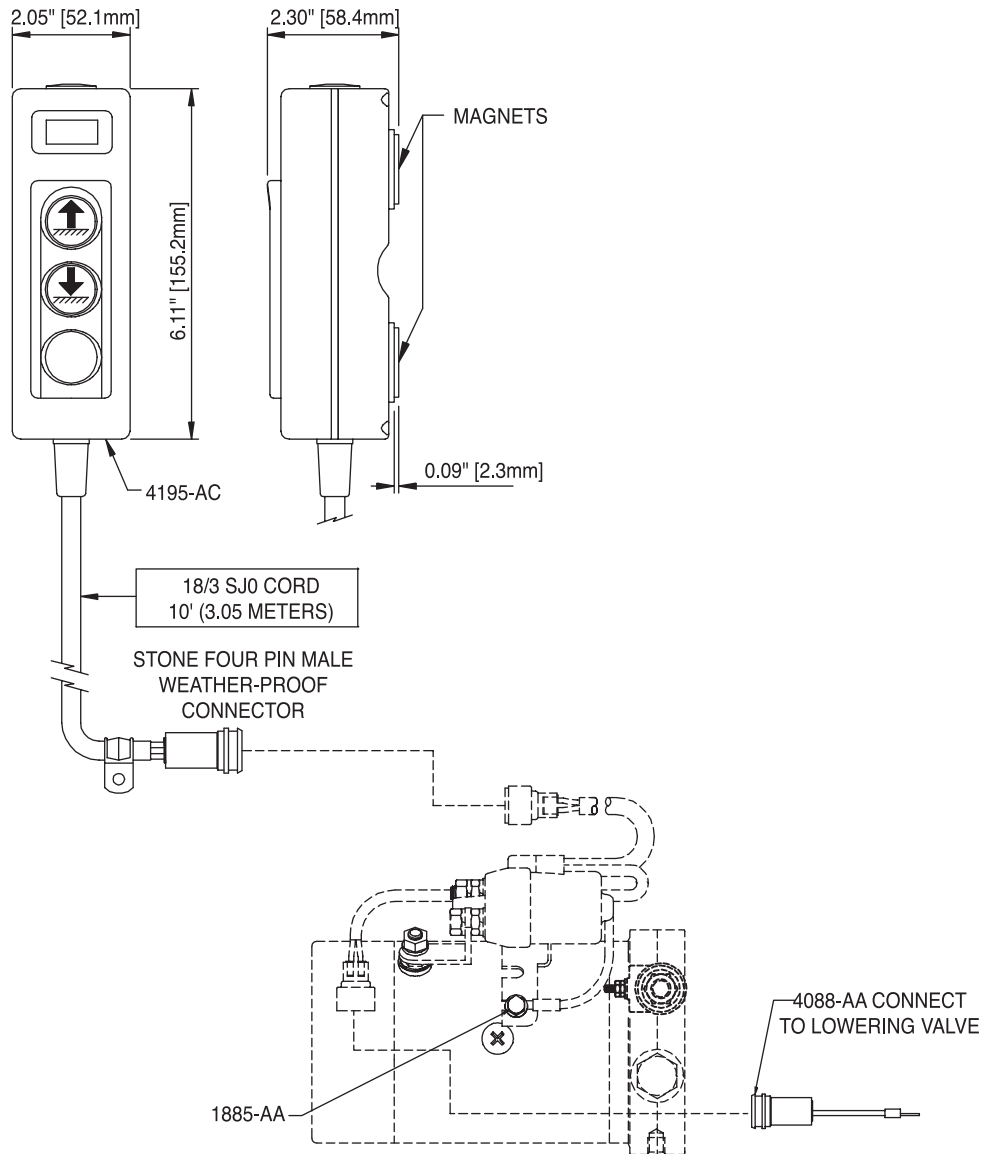
For bulkhead mounting, order holster 2817-AA.

For wall mounting, order bracket hook 2686-AA.

Magnets are intended for convenience during use. They are not intended to support the handset during motion.

| WIRE COLOR CODE | | |
|-----------------|---------------|----------|
| EUROPE | UNITED STATES | FUNCTION |
| BROWN | GREEN | POWER |
| BLUE | WHITE | START |
| GREEN/YELLOW | BLACK | DOWN |

CONTROL HANDSET FOR SINGLE-ACTING UNITS FOR SMART START



DC voltage only.

To be used with DC-20SF power units and KC01C or KC01F valve kit, using KS5 start solenoid.

For bulkhead mounting, order holster 2817-AA.

For wall mounting, order bracket hook 2686-AA.

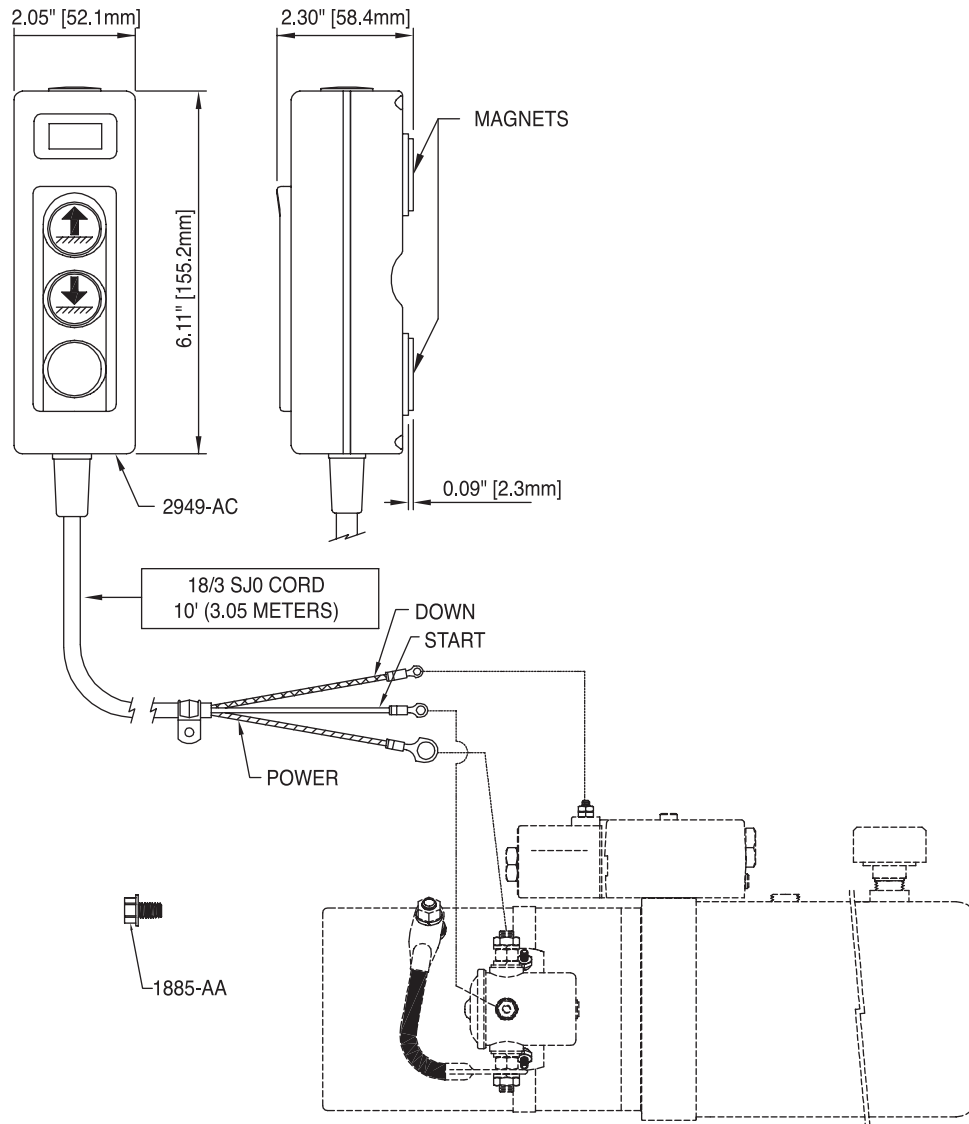
Magnets are intended for convenience during use. They are not intended to support the handset during motion.

Use 3467-AA jumper when using 24 volts.

Order 3553-AA when wiring smart start to other than Stone supplied cordset.

KG12

CONTROL HANDSET FOR DOUBLE-ACTING UNITS



DC voltage only.

To be used with DC-70SF, DC-70BS power units and SK_start solenoid.

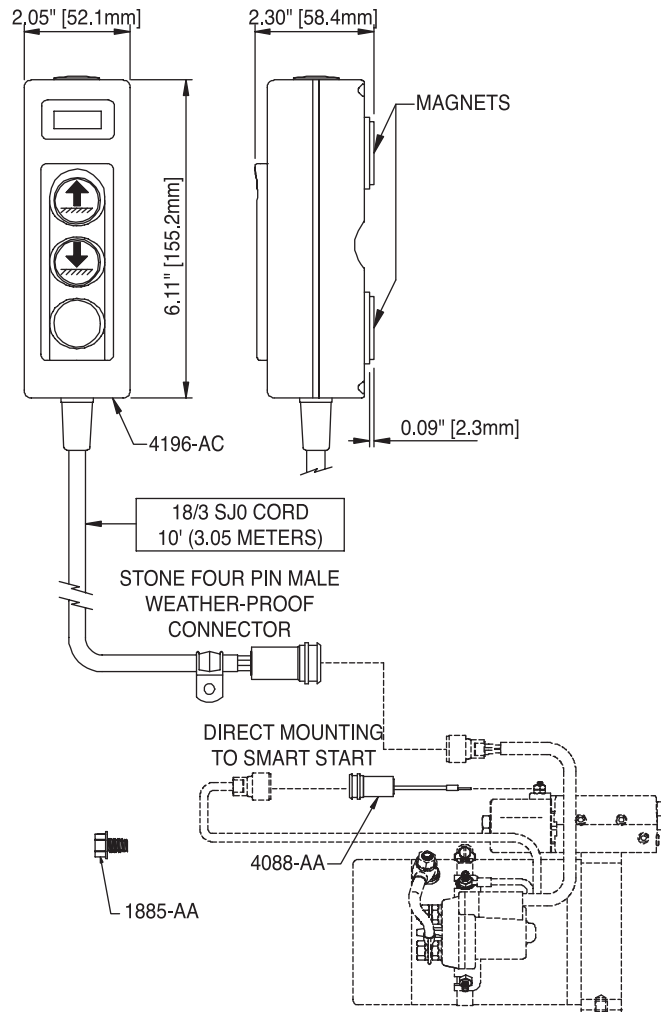
For bulkhead mounting, order holster 2817-AA.

For wall mounting, order bracket hook 2686-AA.

Magnets are intended for convenience during use. They are not intended to support the handset during motion.

| WIRE COLOR CODE | | |
|-----------------|---------------|----------|
| EUROPE | UNITED STATES | FUNCTION |
| BROWN | GREEN | POWER |
| BLUE | WHITE | START |
| GREEN/YELLOW | BLACK | DOWN |

CONTROL HANDSET FOR DOUBLE-ACTING UNITS FOR SMART START



DC voltage only.

To be used with DC-70SF and DC-70BS power units, using KS5 start solenoid.

For bulkhead mounting, order holster 2817-AA.

For wall mounting, order bracket hook 2686-AA.

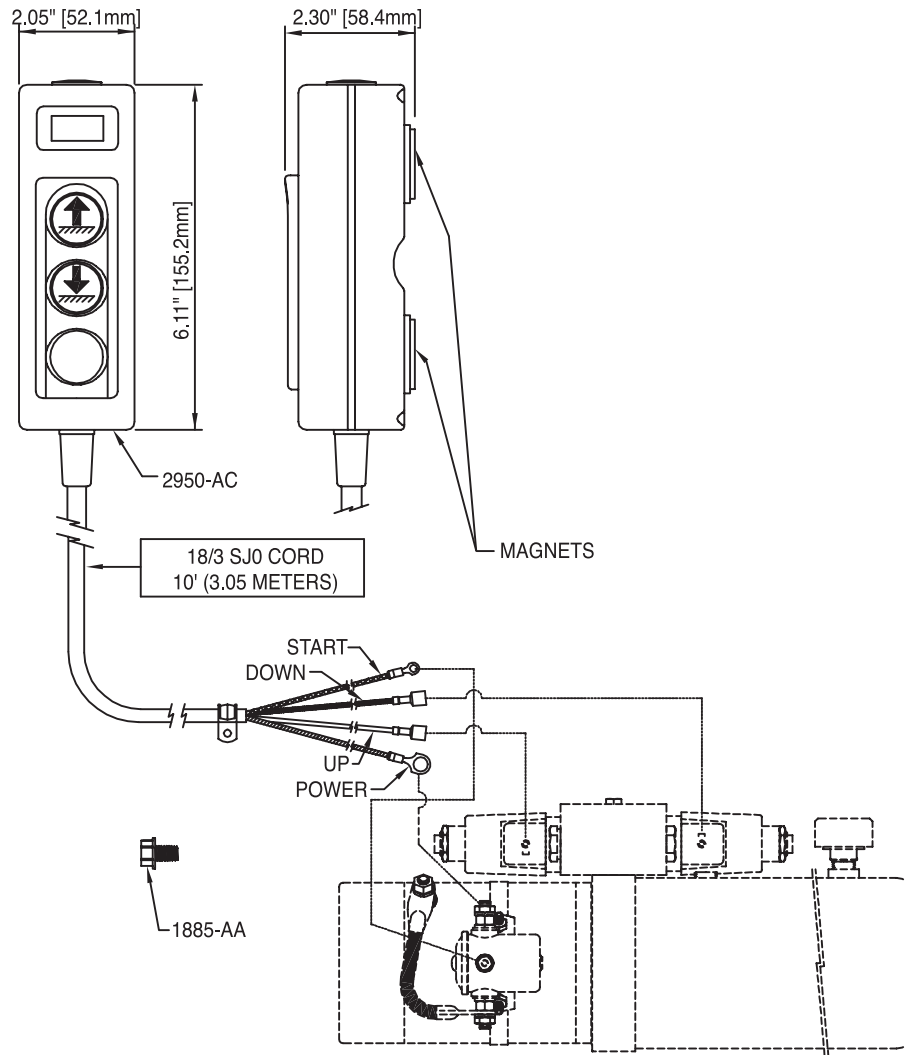
Magnets are intended for convenience during use. They are not intended to support the handset during motion.

Use 3467-AA jumper when using 24 volts.

Order 3553-AA when wiring smart start to other than Stone supplied cordset.

KG13

CONTROL HANDSET FOR DOUBLE-ACTING UNITS



DC voltage only.

To be used with DC-60SF power unit and KS_ start solenoid.

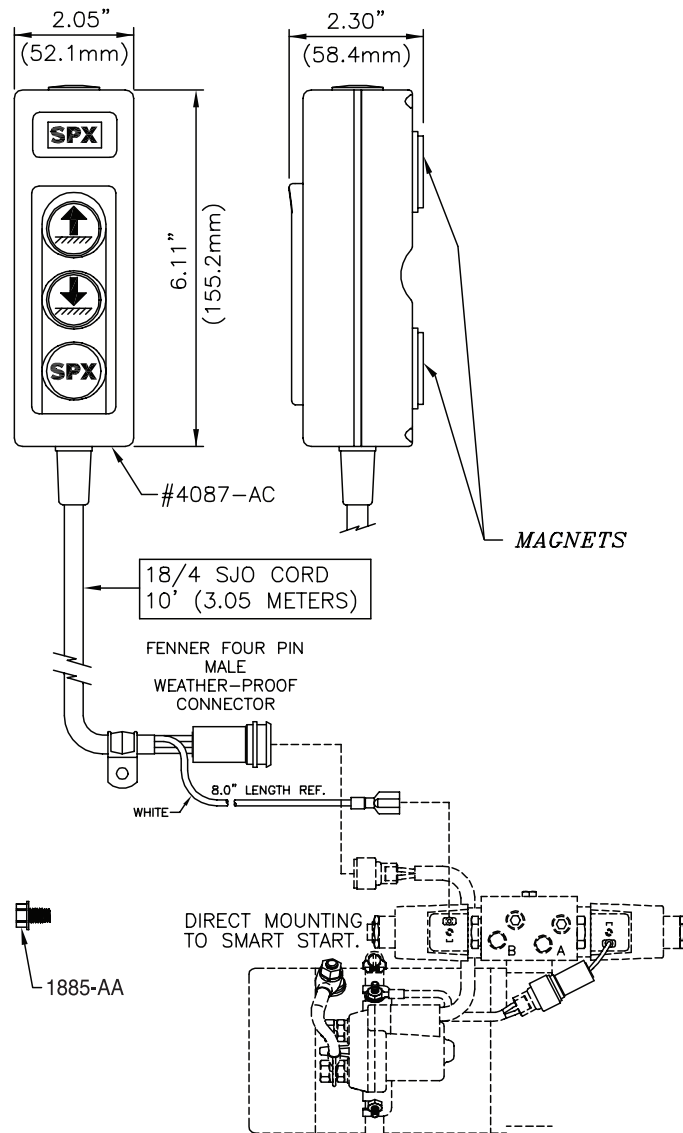
For bulkhead mounting, order holster 2817-AA.

For wall mounting, order bracket hook 2686-AA.

Magnets are intended for convenience during use. They are not intended to support the handset during motion.

| WIRE COLOR CODE | | |
|-----------------|---------------|----------|
| EUROPE | UNITED STATES | FUNCTION |
| BROWN | GREEN | POWER |
| BLUE | WHITE | UP |
| GREEN/YELLOW | BLACK | DOWN |
| BLACK | RED | START |

CONTROL HANDSET FOR DOUBLE-ACTING UNITS FOR SMART START



DC voltage only.

To be used with power units using KS5 start solenoid.

For bulkhead mounting, order holster 2817-AA.

For wall mounting, order bracket hook 2686-AA.

Magnets are intended for convenience during use. They are not intended to support the handset during motion.

Use 3467-AA jumper when using 24 volts.

Order 3553-AA when wiring smart start to other than Stone supplied cordset.

KS1-4

INTERMITTENT DUTY START SOLENOIDS

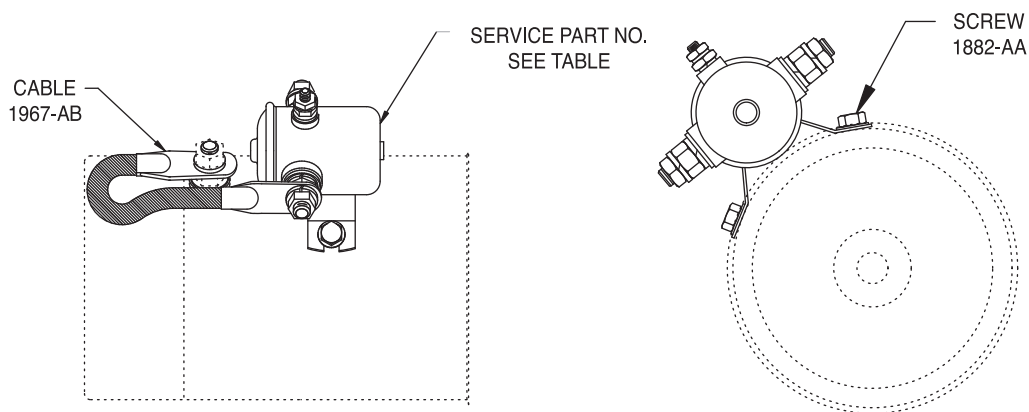


Figure 1 Internal Ground

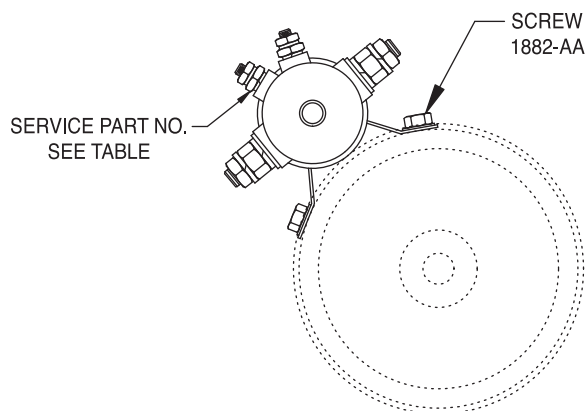


Figure 2 External Ground

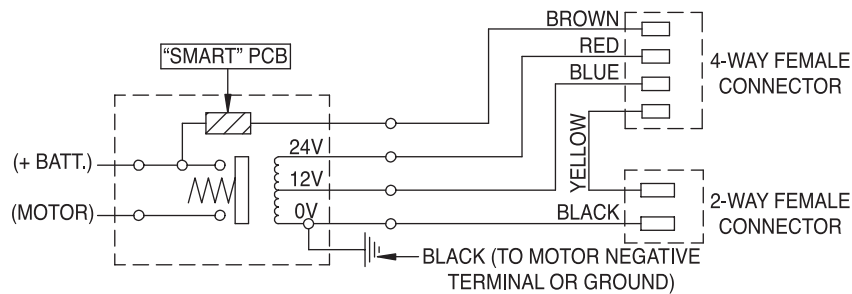
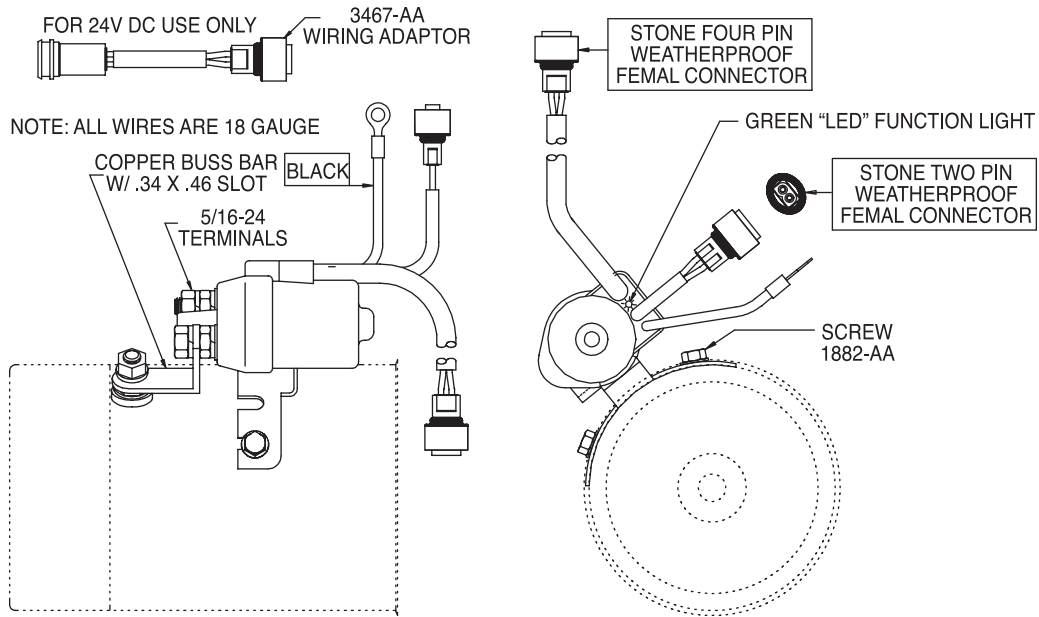
| KIT NO. | VOLTAGE | SERVICE P/N | CONFIGURATION | UL RECOGNIZED |
|---------|---------|-------------|---------------|---------------|
| KS1 | 12 VDC | 2145-AA | FIG. 1 | NO |
| KS2 | 24 VDC | 2151-AA | FIG. 1 | NO |
| KS3 | 12 VDC | 1866-CA | FIG. 2 | YES |
| KS4 | 24 VDC | 2150-AA | FIG. 2 | YES |

For mounting to 3.0" motors, order KS_ and K-104.

For flexibility of mounting position on 4.5" motors, order KS_ and K-105 (band clamp kit).

Note: Stone uses a network of qualified suppliers to ensure availability. There are minor dimensional and cosmetic differences between vendor's products.

SMART START SOLENOIDS INTERMITTENT DUTY



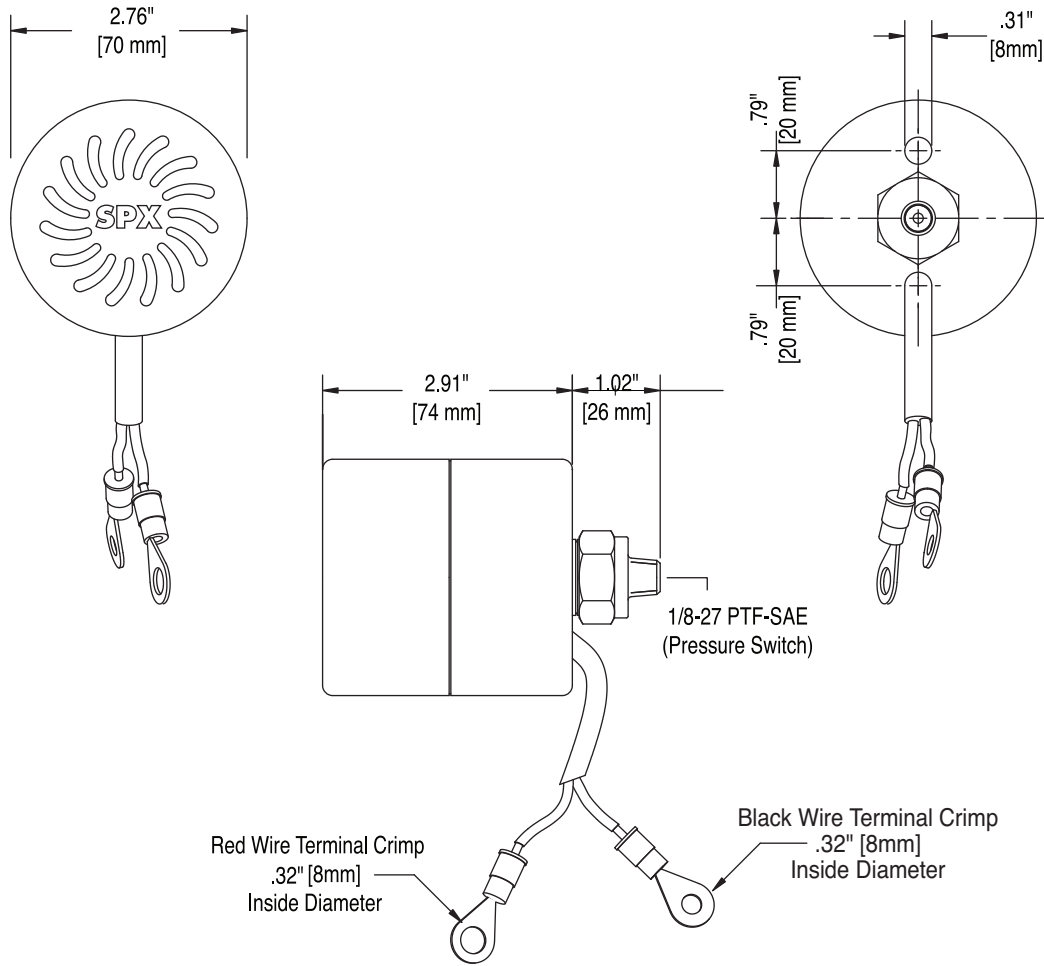
Rated for use up to 300 amps (intermittent), completely sealed construction eliminates need for circuit breakers, fuses or microswitches, dual voltage- 12 and 24 VDC, non-weldable contacts, interchangeable with current designs, neat one-plug wiring harness, terminals can not be over-tightened, covers single and double terminal applications, waterproofed to IP67, electronics suitable for use in ambient temperatures between -40° F(-40° C) and 185° F (86° C), world patents applied for.

Order with handset KG11A, KG12A, & KG13A.

For 24VDC, use 3467-AA wiring adaptor.

TA-01-B

PRESSURE ALARM



RED WIRE IS POSITIVE (+) BLACK WIRE IS NEGATIVE (-)

| MODEL NO. | DESCRIPTION | LEAD LENGTH | AUDIBLE ALARM |
|-----------|----------------|-------------|---------------|
| TA-01-B | END HEAD MOUNT | 304mm | BUZZER |

Sounds when pressure is present, indicates that the lift is activated, operates at 12 and 24V DC, 2.5 W, alarm noise level 100 DB, 980 Hz, normally open switch closes at 2 to 4 bar, max pressure 344 bar, pressure washable.

AC & DC Power Units

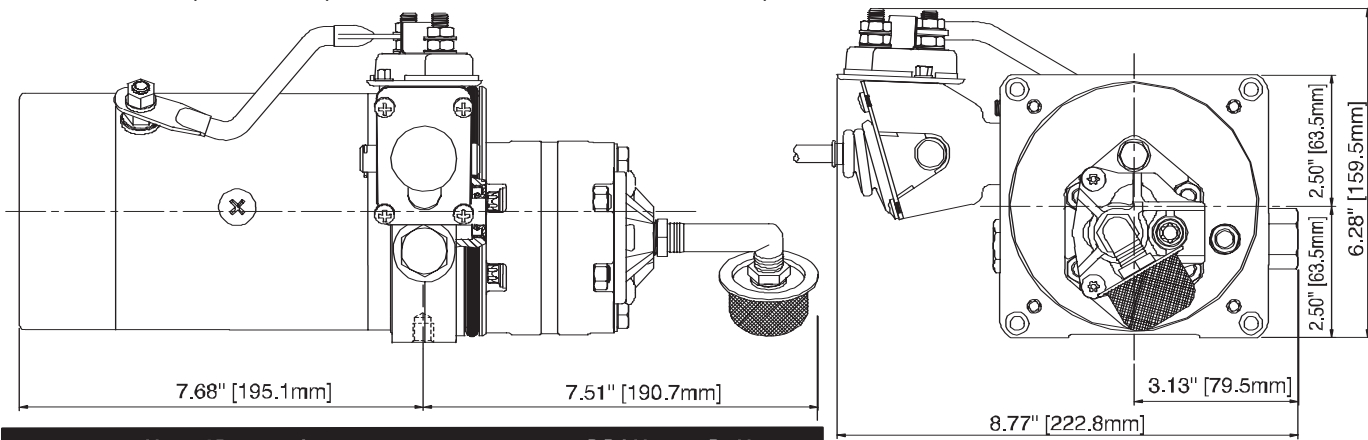
| Kit Number | Description | Page Number |
|------------|--|-------------|
| DC-10SF* | 12V DC Manual Operated Power Up/Gravity Down | Page 96 |
| DC-20SF* | 12V DC Solenoid Operated Power Up/Gravity Down | Page 97 |
| DC-30SF* | 12V DC Check & Relief Valve Power Unit | Page 98 |
| DC-41DT | 12V DC Solenoid Operated Power Up/Power Down | Page 99 |
| DC-50SF* | 12V DC Manual Operated Power Up/Power Down | Page 100 |
| DC-60SF* | 12V DC Solenoid Operated Power Up/Power Down | Page 101 |
| DC-62SF* | 12V DC Solenoid Operated Dual Power Up/Power Down | Page 102 |
| DC-70SF* | 12V DC Solenoid Operated Power Up/Power Down | Page 103 |
| DC-90SF* | 12V DC Relief Valve Only | Page 104 |
| AC-10AH | 230V AC 1PH Auto Hoist 2-Post Lift Power Up/Gravity Down | Page 105 |
| AC-10KS | 230V AC 1PH Auto Hoist 2-Post Lift With Kill Switch Power Up/Gravity Down | Page 106 |
| AC-10FP | 230V AC 1PH Auto Hoist 4-Post Lift Power Up/Gravity Down | Page 107 |
| AC-10TC | 115V AC 1PH Tire Changer Power Up/Gravity Down | Page 108 |
| AC-20ML | 115V AC 1PH Man Lift Power Up/Gravity Down | Page 109 |
| AC-40FC | 115V AC 1ph Filter Crusher Power Extend/Gravity Return | Page 110 |
| DC-20MH | 12V DC Material Handling Solenoid Operated Power Up/Gravity Down | Page 111 |
| DC-20ML | 12V DC Man Lift Solenoid Operated Power Up/Gravity Down | Page 112 |
| DC-24MH | 24V DC Material Handling Solenoid Operated Power Up/Gravity Down | Page 113 |
| DC-30APU | 12V DC Auxiliary Power Unit Relief & Check Valve Only | Page 114 |
| DC-70BS | 12V DC Bale Spike Solenoid Operated Power Up/Power Down | Page 115 |
| DC-80SP | 12V DC Snow Plow Solenoid Operated Power Angle & Lift/Gravity Down | Page 116 |

* Can be assembled using standard Pick-A-Pack parts. Can be made into metric by using KN10 endhead.

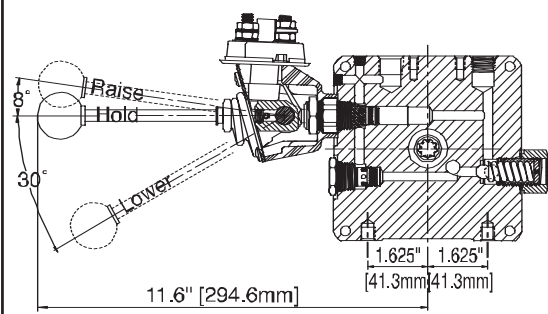
DC-10SF

12V DC MANUAL OPERATED POWER UP/GRAVITY DOWN

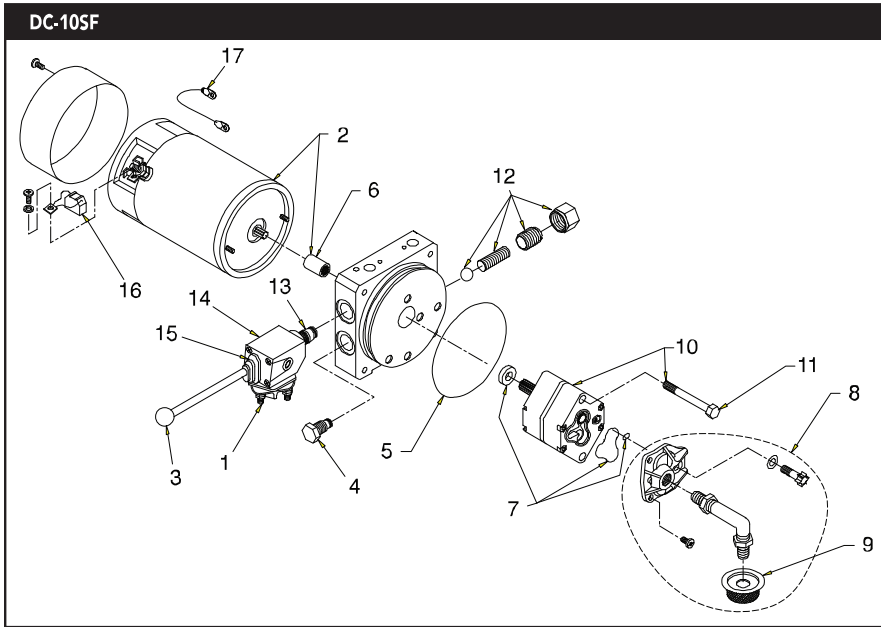
This unit is for power up-hold-gravity down applications. In one direction the manual handle starts unit to power up. In the other direction, the manual handle provides gravity down. In the neutral position, the unit holds steady. The unit features an adjustable relief valve, cartridge hold & lower valves, allowing for easy field service & interchangeability. A pressure compensated flow control for lower function is optional.



| UNIT SPECIFICATION | | HYDRAULIC CIRCUIT |
|--------------------|---|-------------------|
| Motor | 12V DC 1 Terminal Std. Duty Corrosion Resistant Plate Finish | |
| Pump | AFC 2.0 CC/Rev. (.122 Cu. In/Rev.) | |
| Relief | Adj. Set At 2500 PSI (172.4 Bar) | |
| Endhead (KN11*) | 3/8 NPTF Pressure-Return Port (2) 3/8-16 X .38 Deep Mtg. Hole | |
| Tank | None | |
| Valving | Check Valve - Manually Operated Release Valve | |
| Wiring | 12V To Solenoid Start Switch | |



ENDHEAD SECTION

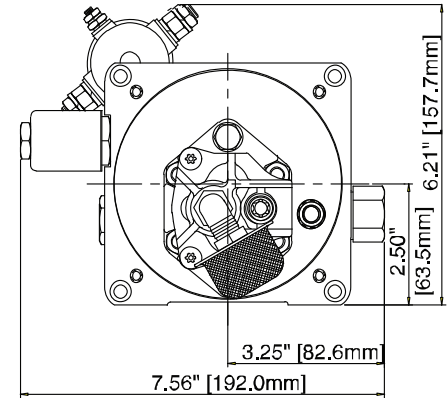
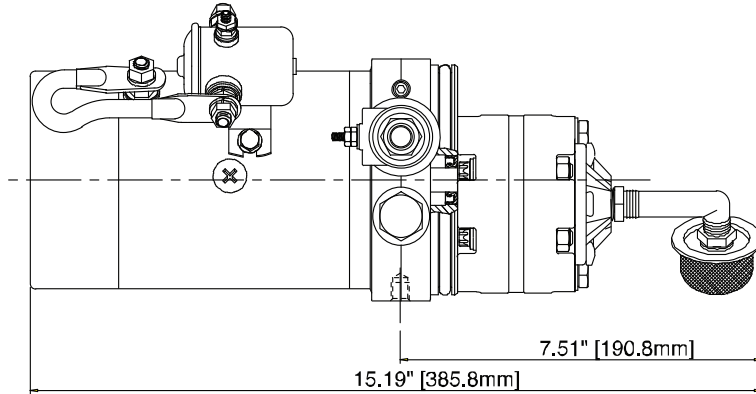


| ITEM | DESCRIPTION | P/N | QTY. |
|------|--------------------------|------------|------|
| 1 | Start Switch 12V DC | 3865-AB | 1 |
| 2 | DC Motor 12V 1T Std Duty | KMD1 | 1 |
| 3 | Handle Assembly | S9-1001-14 | 1 |
| 4 | Valve Cartridge Check | 2507-AA | 1 |
| 5 | Reservoir O-Ring | G1-1073-48 | 1 |
| 6 | Coupling | 1118-AA | 1 |
| 7 | Pump O-Ring Kit | K-40 | 1 |
| 8 | Inlet Plumbing Kit | KH | 1 |
| 9 | Filter | 1611-AA | 1 |
| 10 | Pump Assy. | KP20 | 1 |
| 11 | Pump Mounting Bolt | F1-1053-00 | 2 |
| 12 | Adj. Relief Valve Assy. | RV-2 | 1 |
| 13 | Manual Release Valve | VF-9021 | 1 |
| 14 | Bracket Assy. Finish | K-106 | 1 |
| 15 | Start Switch Boot | 3148-AB | 1 |
| 16 | Motor Brush Kit | K-90 | 1 |
| 17 | Terminal Strap Electric | 1967-AB | 1 |

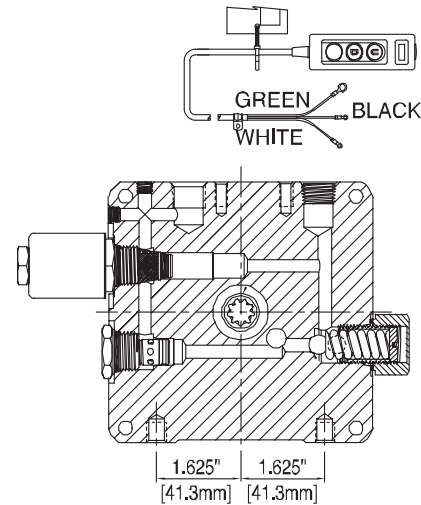
* Substitute KN10 for metric

12V DC SOLENOID OPERATED POWER UP/GRAVITY DOWN

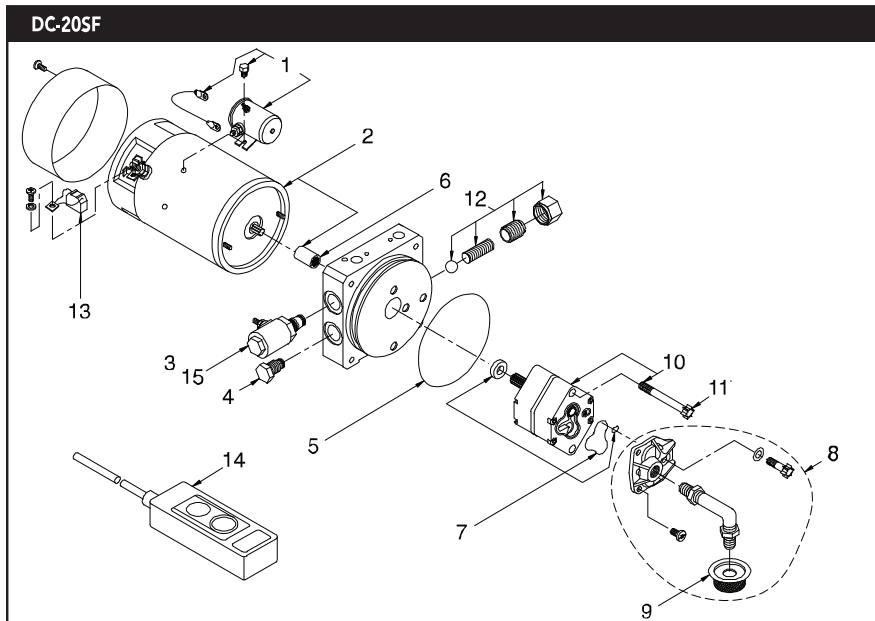
This unit is for power up-hold-gravity down applications. The remote controller allows an operator to power up & gravity down the unit. In the off position, the unit holds steady. The unit features an adjustable relief valve, cartridge hold & lower valves, allowing for easy field service & interchangeability. A pressure compensated flow control for lower function is optional.



| UNIT SPECIFICATION | | HYDRAULIC CIRCUIT |
|--------------------|---|-------------------|
| Motor | 12V DC 1 Terminal Std. Duty Corrosion Resistant Plate Finish | |
| Pump | AFC 2.0 CC/Rev. (.122 Cu. In/Rev.) | |
| Relief | Adj. Set At 2500 PSI (172.4 Bar) | |
| Endhead | 3/8 NPTF Pressure-ReturnPort (2) 3/8-16 X .38 Deep Mtg. Hole | |
| Tank | None | |
| Valving | Check Valve/12V DC Solenoid- Operated NC Valve | |
| Wiring | 12V DC To Start Switch & To N.C. Valve Solenoid | |



ENDHEAD SECTION

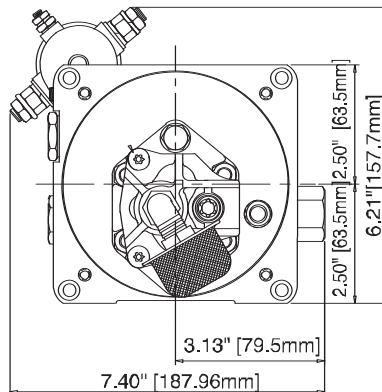
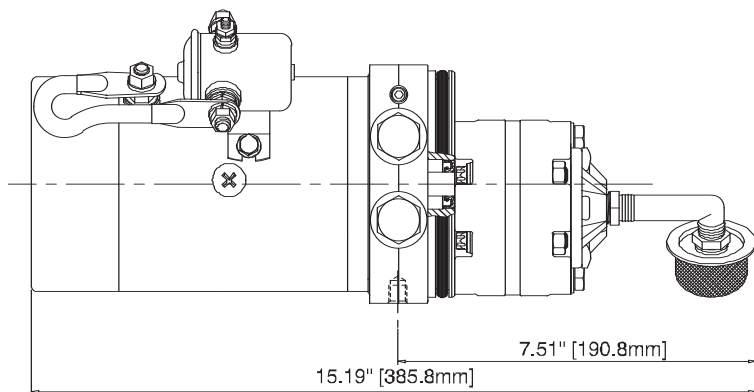


| ITEM | DESCRIPTION | P/N | QTY. |
|------|-------------------------|------------|------|
| 1 | Solenoid Starter 12V | KS1 | 1 |
| 2 | DC Motor 12V | KMD1 | 1 |
| 3 | Valve NC 12V DC | VF-4009 | 1 |
| 4 | Valve Cartridge Check | 2507-AA | 1 |
| 5 | Reservoir O-Ring | G1-1073-48 | 1 |
| 6 | Coupling | 1118-AA | 1 |
| 7 | Pump O-Ring Kit | K-40 | 1 |
| 8 | Inlet Plumbing Kit | KH | 1 |
| 9 | Filter | 1611-AA | 1 |
| 10 | Pump Assembly | KP20 | 1 |
| 11 | Pump Mounting Bolt | F1-1053-00 | 2 |
| 12 | Adj. Relief Valve Assy. | RV-2 | 1 |
| 13 | Motor Brush Kit | K-90 | 1 |
| 14 | Electric Switchbox | KG11 | 1 |
| 15 | Solenoid Coil 12V DC | EF-1082 | 1 |

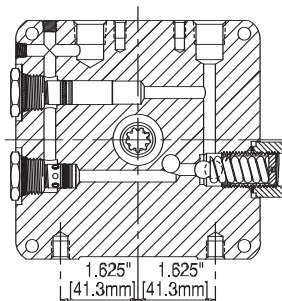
DC-30SF

12V DC CHECK & RELIEF VALVE POWER UNIT

This unit provides flow & pressure for customer specific applications. The unit can be used for power up-hold-gravity down, or power up-hold-power down applications, dependent on customer-supplied valving. Features include an adjustable relief valve & cartridge check valve.



| UNIT SPECIFICATION | | HYDRAULIC CIRCUIT |
|--------------------|---|-------------------|
| Motor | 12V DC 1 Terminal Std. Duty Corrosion Resistant Plate Finish | |
| Pump | AFC 2.0 CC/Rev. (.122 Cu. In/Rev.) | |
| Relief | Adj. Set At 2500 PSI (172.4 Bar) | |
| Endhead | 3/8 NPTF Pressure-Return Port (2) 3/8-16 X .38 Deep Mtg. Hole (KN11*) | |
| Tank | None | |
| Valving | Check Valve | |
| Wiring | 12V To Solenoid Start Switch | |



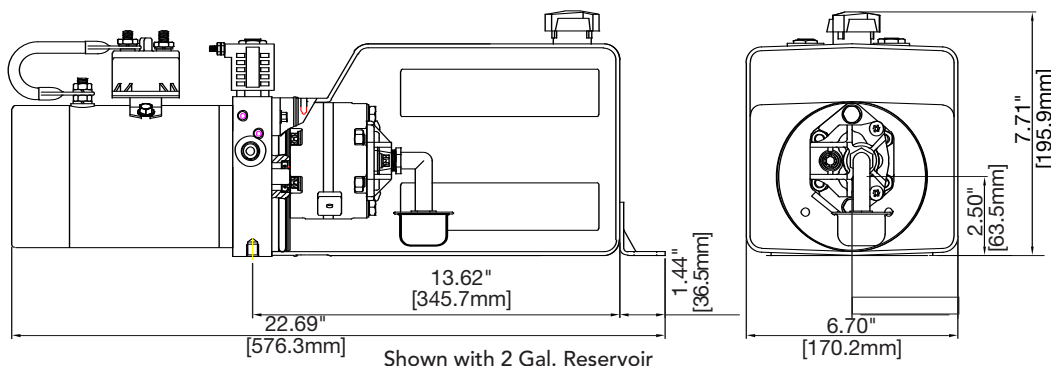
ENDHEAD SECTION

| DC-30SF | ITEM | DESCRIPTION | P/N | QTY. |
|---------|------|-------------------------|------------|------|
| | 1 | Solenoid Starter 12V | KS1 | 1 |
| | 2 | DC Motor 12V | KMD1 | 1 |
| | 3 | Valve Plug Two Way | 2780-BA | 1 |
| | 4 | Valve Cartridge Check | 2507-AA | 1 |
| | 5 | Reservoir O-Ring | G1-1073-48 | 1 |
| | 6 | Coupling | 1118-AA | 1 |
| | 7 | Pump O-Ring Kit | K-40 | 1 |
| | 8 | Inlet Plumbing Kit | KH | 1 |
| | 9 | Filter | 1611-AA | 1 |
| | 10 | Pump Assy. | KP20 | 1 |
| | 11 | Pump Mounting Bolt | F1-1053-00 | 2 |
| | 12 | Adj. Relief Valve Assy. | RV-2 | 1 |
| | 13 | Motor Brush Kit | K-90 | 1 |

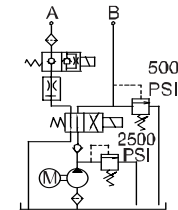
* Substitute KN10 for metric

12V DC SOLENOID OPERATED POWER UP/POWER DOWN

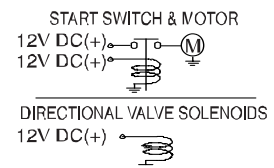
This unit is for power up-hold-power down applications. The controller (either customer-supplied or supplied with unit) will power the unit in both directions. The unit will hold load in the off position. Pressure compensated flow control allows smooth-running functions in both directions. Features include an adjustable relief valve & cartridge valves for easy field service & interchangeability.



HYDRAULIC CIRCUIT



ELECTRICAL CIRCUIT



| DC-41DT | | ORDERING GUIDE | | | |
|---|-----------------|--|------------|--|---|
| | | Pump | Reservoir | Fixed Low Relief | Fixed High Relief |
| C | - | 20 | 15P | 5 | 20 |
| Blank | No Controller | 16 | 10P | 1 = 100 PSI (6.9 Bar) | 20 = 2000 PSI (137.6 Bar) |
| C | With Controller | 20 | 10S | 3 = 300 PSI (20.6 Bar) | 25 = 2500 PSI (172 Bar) |
| Example listing: DC-41DTC-20-15P-5-20 | | 25 | 15P | 5 = 500 PSI (34.4 Bar) | 30 = 3000 PSI (206.4 Bar) |
| Standard Features on DC-41DT family: | | 31 | 15S | 8 = 800 PSI (55 Bar) | 35 = 3500 PSI (240.9 Bar) |
| 12V DC 1 Terminal Std Duty Motor | | 20P | | | |
| 12V DC Int Duty Start Solenoid | | 20S | | | |
| 10V DC 2P4W direction valving | | Example: 25 | 25S | Low Relief can be set from 100 - 800 PSI | High Relief can be set from 2000 - 3500 PSI |
| 10V DC 2P2W load hold valve | | (.153 Cu. In/Rev.) | 30P | in increments of 100 | in increments of 100 |
| 2.5 GPM Flow control | | 30S | | | |
| Horizontal mount plumbing SAE Ports | | Example: 10P = 1 Gal. Plastic 25S = 2.5 Gal. Steel | | | |

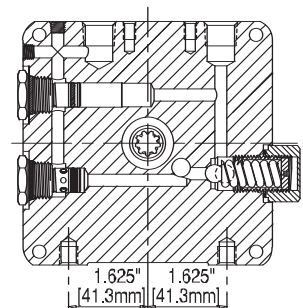
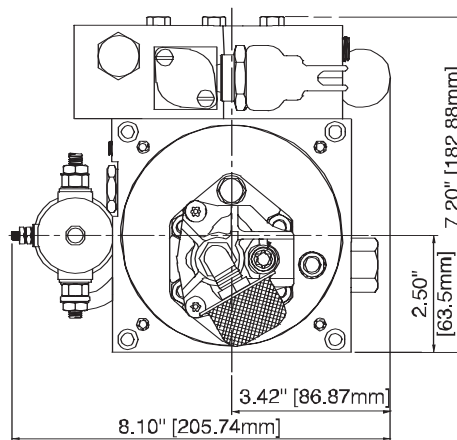
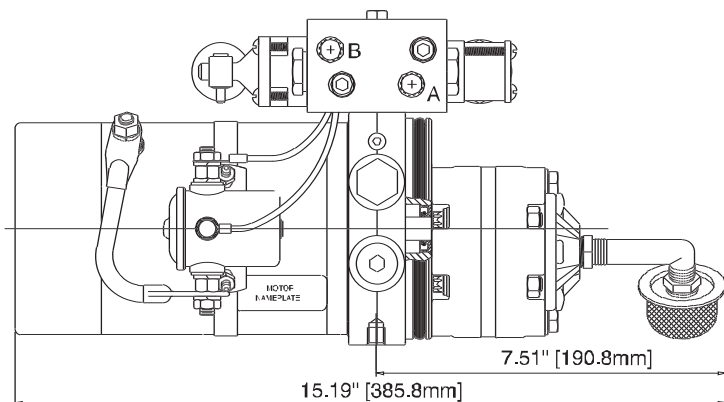
| DC-41DT | ITEM | DESCRIPTION | P/N | QTY. |
|---------|------|---------------------------|------------|------|
| | 1 | Start Switch 12VDC | 4795-AA | 1 |
| | 2 | DC Motor 12V | KMD1 | 1 |
| | 3 | 2P2W NC Valve | VF-4009 | 1 |
| | 4 | Plug | T1-1019-05 | 2 |
| | 5 | Battery Cable | 1967-AB | 1 |
| | 6 | Low PSI Relief Kit | K-424 | 1 |
| | 7 | Reservoir O-Ring | G1-1073-48 | 1 |
| | 8 | Coupling | 1118-AA | 1 |
| | 9 | Pump O-Ring Kit | K-40 | 1 |
| | 10 | Inlet Plumbing Kit | KH | 1 |
| | 11 | Filter | 1611-AA | 1 |
| | 12 * | Pump Assy. | KP25 | 1 |
| | 13 | Pump Mounting Bolt | F1-1053-00 | 2 |
| | 14 * | Reservoir | 5310-AC | 1 |
| | 15 | Reservoir Screw | 3346-AA | 1 |
| | 16 | Breather | 8060-CC | 1 |
| | 17 | High PSI Relief Valve Kit | K-425 | 1 |
| | 18 | Solenoid Coil 10VDC #8-32 | EF-1142 | 2 |
| | 19 | Motor Brush Kit | K-90 | 1 |
| | 20 | Check Valve Kit | K-420 | 1 |
| | 21 | Valve Body 2P4W | VF-6004 | 1 |
| | 22 | Flow Control | FC-2.5 | 1 |
| | 23 | Electric Switchbox † | 3832-AC | 1 |

* Will vary depending on model selection. † DC-41DTC only

DC-50SF

12V DC MANUAL OPERATED POWER UP/POWER DOWN

This unit is for power up-hold-power down applications. The manually operated directional valve powers the unit in both directions. In the neutral position the unit is off & holds steady. Features include an adjustable relief valve & load-holding P.O. check valve.



ENDHEAD SECTION

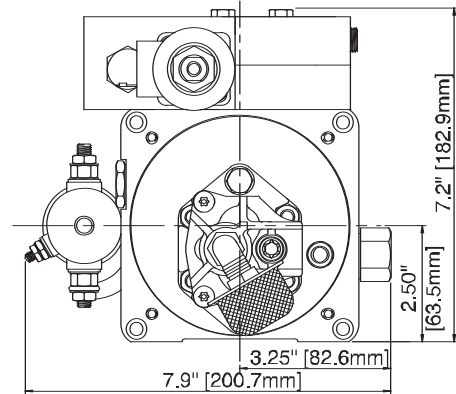
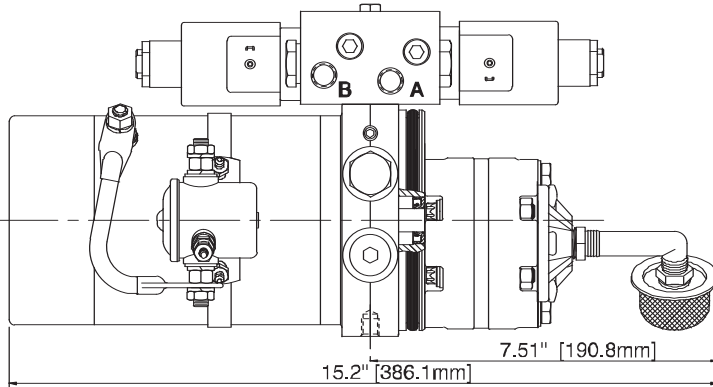
| UNIT SPECIFICATION | | HYDRAULIC CIRCUIT |
|--------------------|---|-------------------|
| Motor | 12V DC 1 Terminal Std. Duty Corrosion Resistant Plate Finish | |
| Pump | AFC 2.0 CC/Rev. (.122 Cu. In/Rev.) | |
| Relief | Adj. Set At 2500 PSI (172.4 Bar) | |
| Endhead (KN11*) | 1/4 NPTF PORTS "A" & "B" (2) 3/8-16 X .38 Deep Mtg. Hole | |
| Tank | None | |
| Valving | 3P4W Manually Operated Valve W/Single PO Check Valve On Port "B" | |
| Wiring | 12V To Solenoid Start Switch | |

| DC-50SF | ITEM | DESCRIPTION | P/N | QTY. |
|---------|------|---------------------------|------------|------|
| | 1 | Solenoid Starter 12V | KS1 | 1 |
| | 2 | DC Motor 12V | KMD1 | 1 |
| | 3 | Valve Plug, Two Way | 2780-AA | 1 |
| | 4 | Plug, 3/4-16 SAE | 1441-AA | 1 |
| | 5 | Reservoir O-Ring | G1-1073-48 | 1 |
| | 6 | Coupling | 1118-AA | 1 |
| | 7 | Pump O-Ring Kit | K-40 | 1 |
| | 8 | Inlet Plumbing Kit | KH | 1 |
| | 9 | Filter | 1611-AA | 1 |
| | 10 | Pump Assy. | KP20 | 1 |
| | 11 | Pump Mounting Bolt | F1-1053-00 | 2 |
| | 12 | Adj. Relief Valve Assy. | RV-2 | 1 |
| | 13 | U-Valve 4W3P CCCP Manual | KDV3 | 1 |
| | 14 | Bolt 1/4-20X2.375 Hexhead | F2-1032-38 | 3 |
| | 15 | Solenoid Band Kit | K-105 | 1 |
| | 16 | Motor Brush Kit | K-90 | 1 |

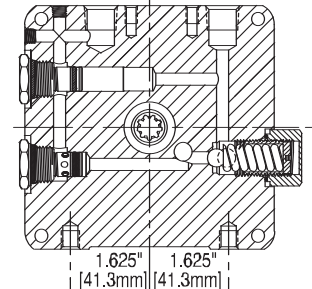
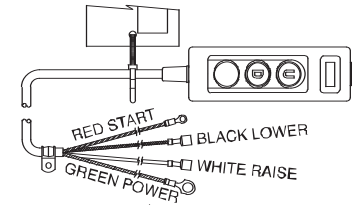
* Substitute KN10 for metric

12V DC SOLENOID OPERATED POWER UP/POWER DOWN

This unit is for power up-hold-power down applications. The controller allows an operator to power the unit in both directions. In the off position, the unit holds steady. Features include an adjustable relief valve & load-holding P.O. check valve.



| UNIT SPECIFICATION | | HYDRAULIC CIRCUIT |
|--------------------|---|-------------------|
| Motor | 12V DC 1 Terminal Std. Duty Corrosion Resistant Plate Finish | |
| Pump | AFC 2.0 CC/Rev. (.122 Cu. In/Rev.) | |
| Relief | Adj. Set At 2500 PSI (172.4 Bar) | |
| Endhead (KN11*) | 1/4 NPTF Ports "A" & "B" (2) 3/8-16 X .38 Deep Mtg. Hole | |
| Tank | None | |
| Valving | 3P4W Solenoid Operated Valve W/Single PO Check Valve On Port "B" | |
| Wiring | 12V DC To Start Switch & To U-Valve Solenoids | |



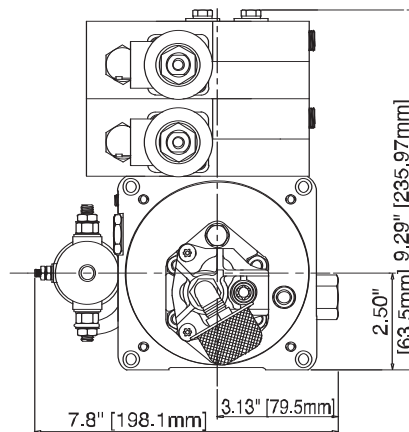
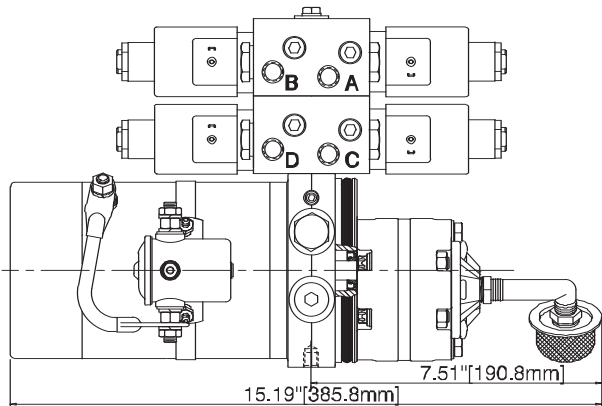
ENDHEAD SECTION

| DC-60SF | ITEM | DESCRIPTION | P/N | QTY. |
|---------|------|----------------------------|--------------|------|
| | 1 | Solenoid Starter Assy. 12V | KS1 | 1 |
| | 2 | DC Motor 12V | KMD1 | 1 |
| | 3 | Valve Plug, Two Way | 2780-AA | 1 |
| | 4 | Plug, 3/4-16 SAE | 1441-AA | 1 |
| | 5 | Reservoir O-Ring | G1-1073-48 | 1 |
| | 6 | Coupling | 1118-AA | 1 |
| | 7 | Pump O-Ring Kit | K-40 | 1 |
| | 8 | Inlet Plumbing Kit | KH | 1 |
| | 9 | Filter | 1611-AA | 1 |
| | 10 | Pump Assy. | KP20 | 1 |
| | 11 | Pump Mounting Bolt | F1-1053-00** | 2 |
| | 12 | Adj. Relief Valve Assy. | RV-2 | 1 |
| | 13 | U-Valve 4W3P CCCP | KDV4 | 1 |
| | 14 | Bolt 1/4-20X2.375 Hexhead | F1-1032-50 | 3 |
| | 15 | Solenoid Assy. DC | E1-4005-12 | 2 |
| | 16 | Solenoid Band Kit | K-105 | 1 |
| | 17 | Motor Brush Kit | K-90 | 1 |
| | 18 | Electric Switchbox | KG13 | 1 |
| | | U-Valve O-Ring Kit | K-42 | 1 |

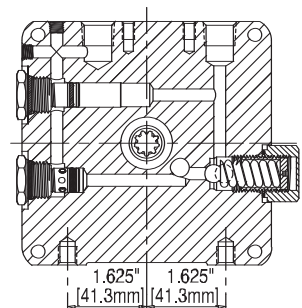
DC-62SF

12V DC SOLENOID OPERATED DUAL POWER UP/POWER DOWN

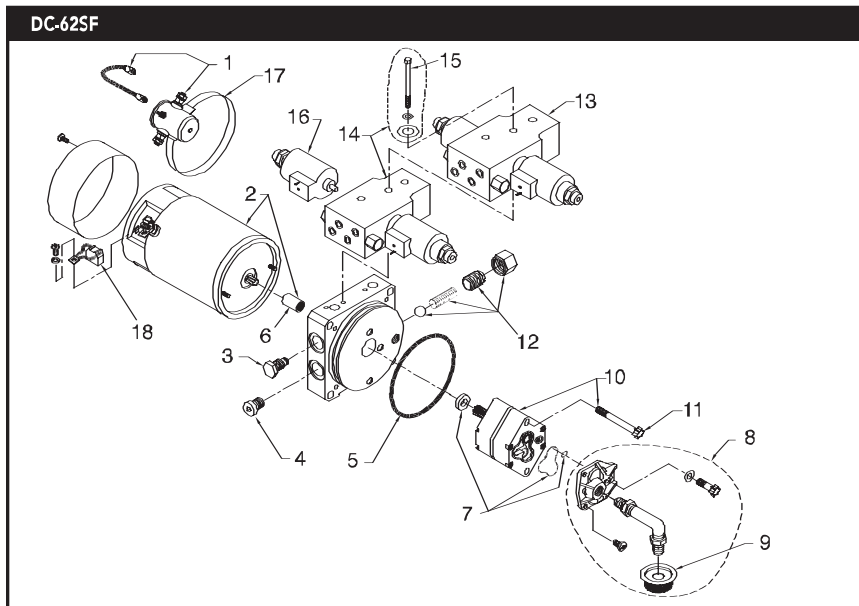
This unit is for dual power up-hold-power down applications. The customer-supplied controller will power the unit in both directions. In the off position, the unit holds steady. Directional valves run independently of each other, allowing for two separate system functions. Features include an adjustable relief valve & load-holding P.O. check valve.



| UNIT SPECIFICATION | | HYDRAULIC CIRCUIT |
|--------------------|--|-------------------|
| Motor | 12V DC 1 Terminal Std. Duty Corrosion Resistant Plate Finish | |
| Pump | AFC 2.0 CC/Rev. (.122 Cu. In/Rev.) | |
| Relief | Adj. Set At 2500 PSI (172.4 Bar) | |
| Endhead (KN11*) | 1/4 NPTF Ports "A", "B", "C" & "D", (2) 3/8-16 X .38 Deep Mtg. Hole | |
| Tank | None | |
| Valving | (2) 3P4W Solenoid Operated Valve W/P.O. Check Valves On Port "B" & "D" | |
| Wiring | 12V To Solenoid Start Switch & To U-Valve Solenoids | |



ENDHEAD SECTION

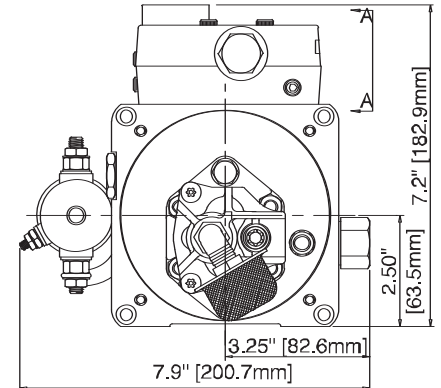
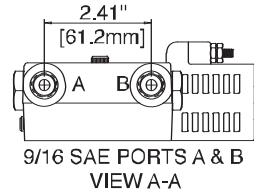
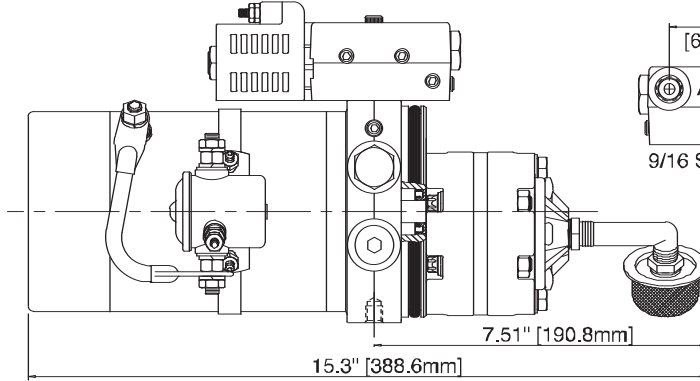


| ITEM | DESCRIPTION | P/N | QTY. |
|------|----------------------------|------------|------|
| 1 | Solenoid Starter 12V | KS1 | 1 |
| 2 | DC Motor 12V | KMD1 | 1 |
| 3 | Valve Plug, Two Way | 2780-AA | 1 |
| 4 | Plug, 3/4-16 SAE | 1441-AA | 1 |
| 5 | Reservoir O-Ring | G1-1073-48 | 1 |
| 6 | Coupling | 1118-AA | 1 |
| 7 | Pump O-Ring Kit | K-40 | 1 |
| 8 | Inlet Plumbing Kit | KH | 1 |
| 9 | Filter | 1611-AA | 1 |
| 10 | Pump Assy. | KP20 | 1 |
| 11 | Pump Mounting Bolt | F1-1053-00 | 2 |
| 12 | Adj. Relief Valve Assy. | RV-2 | 1 |
| 13 | U-Valve 4W3P CCCP | KDV4 | 1 |
| 14 | U-Valve 4W3P CCCP 12V Bot. | KDV1 | 1 |
| 15 | Bolt 1/4-20X2.375 Hexhead | F1-1034-50 | 3 |
| 16 | Solenoid Assy DC | E1-4005-12 | 4 |
| 17 | Solenoid Band Kit | K-105 | 1 |
| 18 | Motor Brush Kit | K-90 | 1 |
| | U-Valve O-Ring Kit | K-42 | 1 |

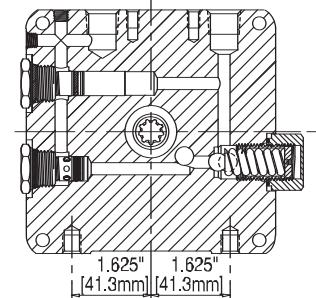
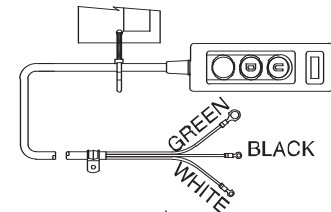
* Substitute KN10 for metric

12V DC SOLENOID OPERATED POWER UP/POWER DOWN

This unit is for power up-hold-power down applications. The controller allows an operator to power the unit in both directions. In the off position, the unit holds steady. Features include an adjustable relief valve & load-holding P.O. check valves. A cartridge directional valve is also included, for easy field service & interchangeability.



| UNIT SPECIFICATION | | HYDRAULIC CIRCUIT |
|--------------------|--|-------------------|
| Motor | 12V DC 1 Terminal Std. Duty Corrosion Resistant Plate Finish | |
| Pump | AFC 2.0 CC/Rev. (.122 Cu. In/Rev.) | |
| Relief | Adj. Set At 2500 PSI (172.4 Bar) | |
| Endhead (KN11*) | 9/16 SAE Ports "A" & "B" (On Valve), (2) 3/8-16 X .38 Deep Mtg. Hole | |
| Tank | None | |
| Valving | 2P4W Solenoid Operated Cartridge Valve W/Double PO Checks | |
| Wiring | 12V DC To Start Switch & To A-Valve Coil | |



ENDHEAD SECTION

| DC-70SF | ITEM | DESCRIPTION | P/N | QTY. |
|---------|------|-----------------------------|--------------|------|
| | 1 | Solenoid Starter 12V | KS1 | 1 |
| | 2 | DC Motor 12V | KMD1 | 1 |
| | 3 | Valve Plug, Two Way | 2780-AA | 1 |
| | 4 | Plug 3/4-16 SAE | 1441-AA | 1 |
| | 5 | Reservoir O-Ring | G1-1073-48 | 1 |
| | 6 | Coupling | 1118-AA | 1 |
| | 7 | Pump O-Ring Kit | K-40 | 1 |
| | 8 | Inlet Plumbing Kit | KH | 1 |
| | 9 | Filter | 1611-AA | 1 |
| | 10 | Pump Assy. | KP20 | 1 |
| | 11 | Pump Mounting Bolt | F1-1053-00** | 2 |
| | 12 | Adj. Relief Valve Assy. | RV-2 | 1 |
| | 13 | Valve Manifold Assy. | KCV1 | 1 |
| | 14 | Capscrew Skt Hd 1/4-20x 2.0 | 5037-AA | 2 |
| | 15 | 12V DC 2P4W Valve | E1-1021-00 | 1 |
| | 16 | Solenoid Band Kit | K-105 | 1 |
| | 17 | Motor Brush Kit | K-90 | 1 |
| | 18 | U-Valve O-Ring Kit | K-42 | 1 |
| | 19 | Switch Box Handset | KG12 | 1 |

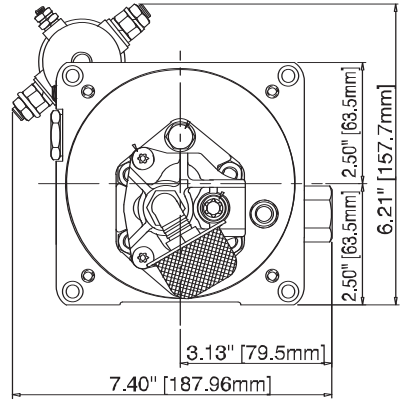
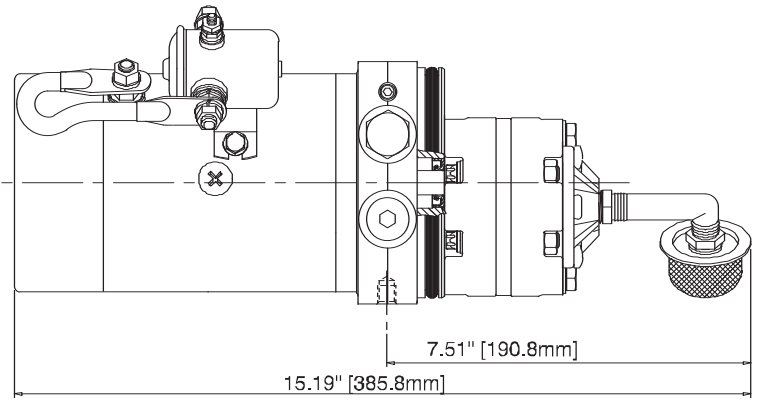
* Substitute KN10 for metric

** Older Endheads May Use M8 (Metric) Bolts Stone P/N 2825-AA

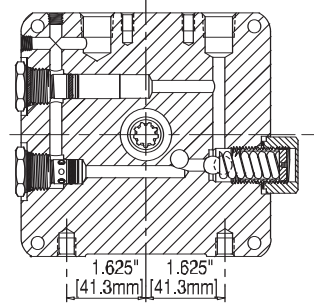
DC-90SF

12V DC RELIEF VALVE ONLY

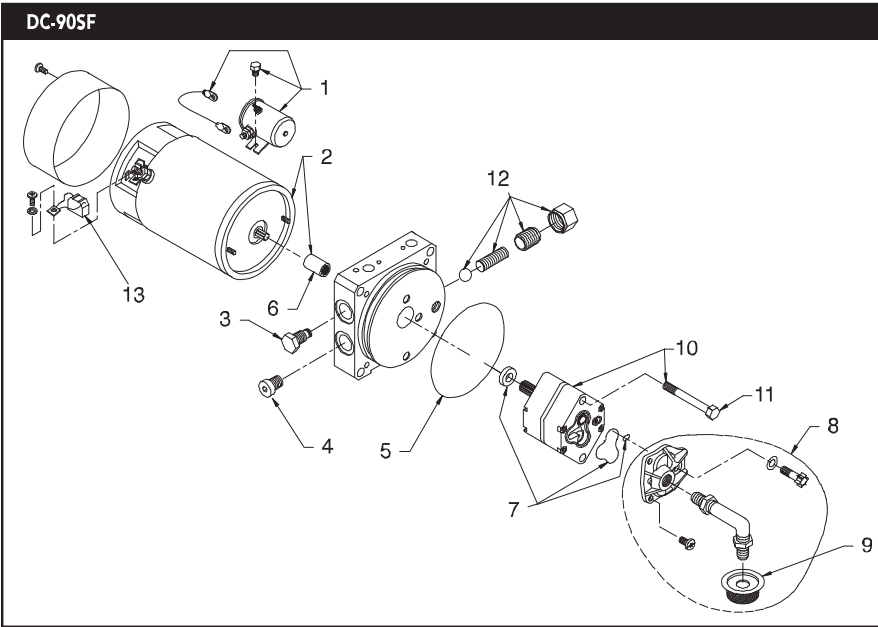
This unit provides flow & pressure for customer specific applications. The unit can be used on double acting applications. Features include an adjustable relief valve.



| UNIT SPECIFICATION | | HYDRAULIC CIRCUIT |
|--------------------|---|-------------------|
| Motor | 12V DC 1 Terminal Std. Duty Corrosion Resistant Plate Finish | |
| Pump | AFC 2.0 CC/Rev. (.122 Cu. In/Rev.) | |
| Relief | Adj. Set At 2500 PSI (172.4 Bar) | |
| Endhead (KN11*) | 3/8 NPTF Pressure & Return Ports (2) 3/8-16 X .38 Deep Mtg. Hole | |
| Tank | None | |
| Valving | Adj. Relief Valve | |
| Wiring | 12V To Solenoid Start Switch | |



ENDHEAD SECTION

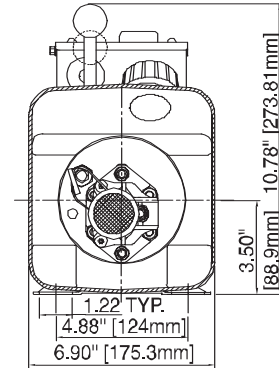
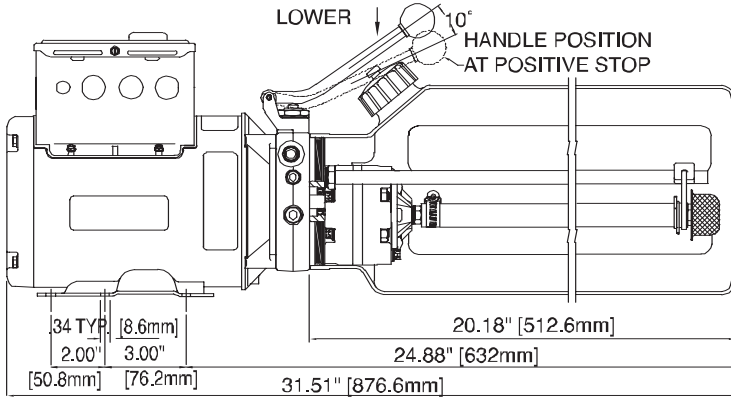


| ITEM | DESCRIPTION | P/N | QTY. |
|------|-------------------------|------------|------|
| 1 | Solenoid Starter 12V | KS1 | 1 |
| 2 | DC Motor 12V | KMD1 | 1 |
| 3 | Valve Plug, Two Way | 2780-AA | 1 |
| 4 | Plug, 3/4-16 SAE | 1441-AA | 1 |
| 5 | Reservoir O-Ring | G1-1073-48 | 1 |
| 6 | Coupling | 1118-AA | 1 |
| 7 | Pump O-Ring Kit | K-40 | 1 |
| 8 | Inlet Plumbing Kit | KH | 1 |
| 9 | Filter | 1611-AA | 1 |
| 10 | Pump Assy. | KP20 | 1 |
| 11 | Pump Mounting Bolt | F1-1053-00 | 2 |
| 12 | Adj. Relief Valve Assy. | RV-2 | 1 |
| 13 | Motor Brush Kit | K-90 | 1 |

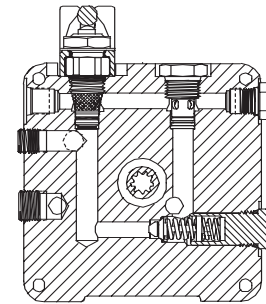
* Substitute KN10 for metric

230V AC 1PH AUTO HOIST 2-POST LIFT POWER UP/GRAVITY DOWN

This unit is for raise-hold-lower of the lift, with manual control of the lowering speed. A push-button starts the motor to raise the lift. The unit features a fixed relief valve. Cartridge valves are used, allowing easy field service & interchangeability.



| UNIT SPECIFICATION | | HYDRAULIC CIRCUIT |
|--------------------|---|--|
| Motor | 208-230V AC 3450 RPM 1PH 60 Hz. | |
| Pump | AFC 2.0 CC/Rev. (.122 Cu. In/Rev.) | |
| Relief | Fixed At 2750 PSI (191 Bar) Nominal | |
| Endhead | 9/16-18 SAE Pressure-Return Port 3/8 NPTF Aux. Return Port (Plugged) | ELECTRICAL CIRCUIT COMMON RAISE-N.O. |
| Tank | 4.0 U.S. Gallon Vertical Tank Down Mtg. 700 Cu. In. Useable | |
| Valving | Manual Release Valve (Cartridge-Style) Check Valve (Cartridge-Style) | |
| Wiring | 230V AC To Motor Momentary "On" Switch | |
| | | |



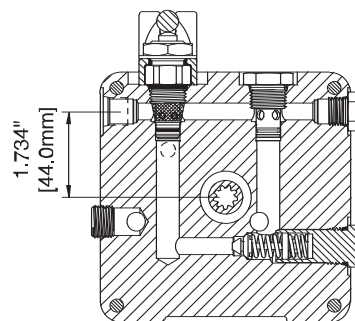
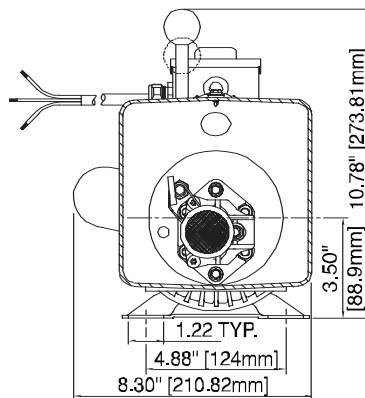
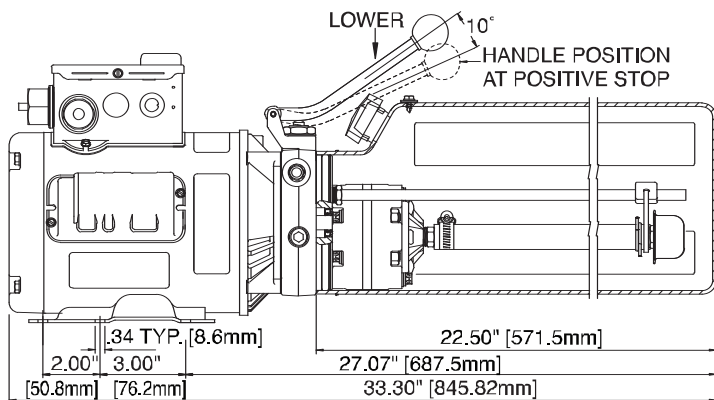
ENDHEAD SECTION

| AC-10AH | ITEM | DESCRIPTION | P/N | QTY. |
|---------|------|-----------------------|------------|------|
| | 1 | Wiring Assy. | W-400-230 | 1 |
| | 2 | AC Motor 208-230V 1PH | 4763-AC | 1 |
| | 3 | M6X1.0 - 35mm SHCS | 3009-AA | 4 |
| | 4 | Hi-Collar Lockwasher | 3020-AA | 4 |
| | 5 | Coupling | 1118-AA | 1 |
| | 6 | Manual Release Assy. | K-100 | 1 |
| | 7 | Manual Release Valve | VF-9021 | 1 |
| | 8 | Valve Cartridge Check | 2507-AA | 1 |
| | 9 | Fixed Relief Valve | RV-19 | 1 |
| | 10 | Relief Valve Cap | 3729-AA | 1 |
| | 11 | Reservoir O-Ring | G1-1073-48 | 1 |
| | 12 | Pump Assy. | KP20 | 1 |
| | 13 | Pump Mounting Bolt | 1112-AA | 2 |
| | 14 | Inlet Plumbing Kit | K-230 | 1 |
| | 15 | Filter | 1611-AA | 1 |
| | 16 | Pump O-Ring Kit | K-40 | 1 |
| | 17 | Return Tube | 5118-AA | 1 |
| | 18 | Breather | 260185 | 1 |
| | 19 | Reservoir | 5141-AC | 1 |
| | 20 | Reservoir Screw | 3346-AA | 4 |
| | 21 | Compression Tube Nut | 5115-AA | 1 |
| | 22 | Compression Sleeve | 5116-AA | 1 |
| | 23 | Plug Pipe 3/8 NPT | 1456-AA | 1 |
| | 24 | Plumbing Plug | 1170-AA | 1 |
| | 25 | Spring | 4475-AA | 1 |
| | 26 | Plug 1/4 NPT | 1215-AA | 1 |

AC-10KS

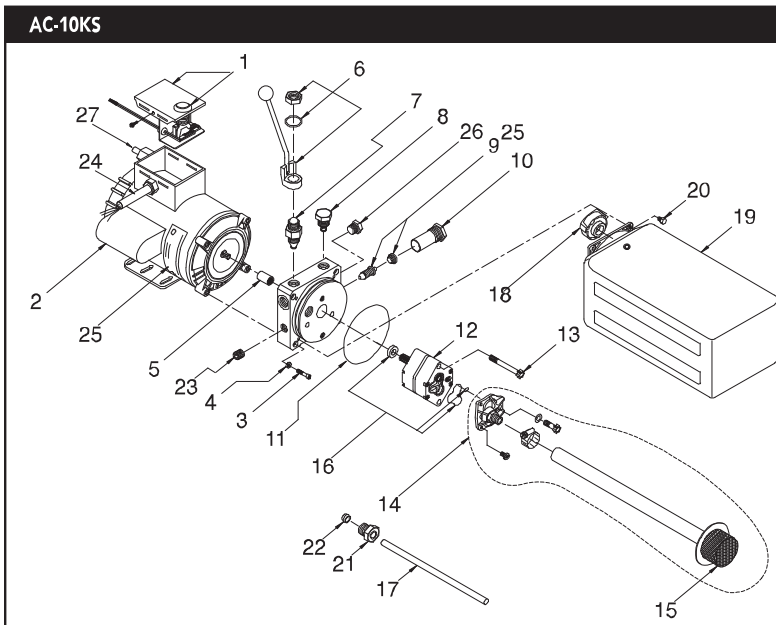
230V AC 1PH AUTO HOIST 2-POST LIFT WITH KILL SWITCH POWER UP/GRAVITY DOWN

This unit is for raise-hold-lower of the lift, with manual control of the lowering speed. A push-button starts the motor to raise the lift. The unit features a fixed relief valve. Cartridge valves are used, allowing easy field service & interchangeability.



ENDHEAD SECTION

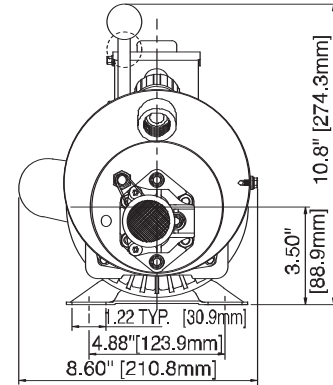
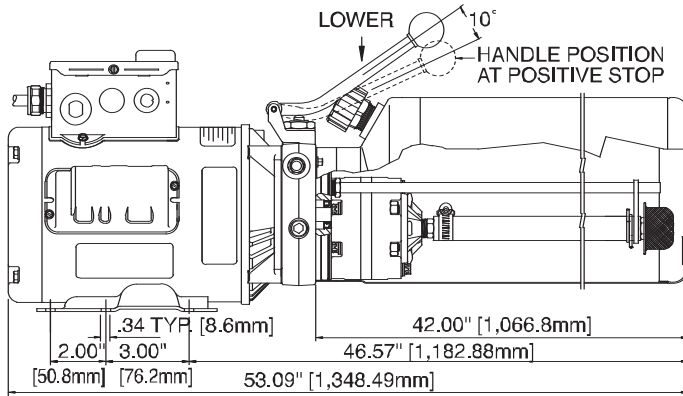
| UNIT SPECIFICATION | | HYDRAULIC CIRCUIT |
|--------------------|--|--------------------|
| Motor | 208-230V AC 3450 RPM 1PH 60 Hz. | |
| Test | Dielectric Std. 2.16.15 | |
| Pump | AFC 2.0 CC/Rev. (.122 Cu. In/Rev.) | |
| Relief | Fixed At 2750 PSI Nominal | |
| Endhead | 3/8 NPT Aux. Port (Plugged), 9/16 SAE Pressure-Return Port | |
| Tank | Plastic 4.0 Gallon Vert. Tank Down Mtg. 700 Cu. In. Useable + Reserve & Vent Screw | |
| | | ELECTRICAL CIRCUIT |
| Valving | Check Valve (Cartridge Style) Manual Release Valve (Cartridge Style) | |
| Wiring | 230V AC Directly To Motor Momentary On & Pull-Type Actuating Sealed Limit Switch | |



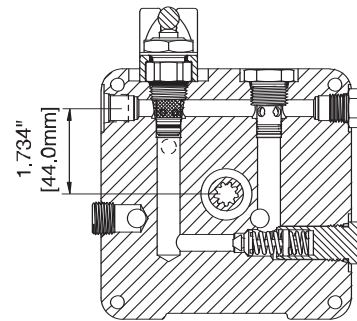
| ITEM | DESCRIPTION | P/N | QTY. |
|------|-------------------------|------------|------|
| 1 | Wiring Assy. | W-200 | 1 |
| 2 | AC Motor 208-230V 1PH | 4763-AC | 1 |
| 3 | M6X1.0 - 35mm SHCS | 3009-AA | 4 |
| 4 | Hi-Collar Lockwasher | 3020-AA | 4 |
| 5 | Coupling | 1118-AA | 1 |
| 6 | Manual Release Assy. | K-100 | 1 |
| 7 | Manual Release Valve | VF-9021 | 1 |
| 8 | Valve Cartridge Check | 2507-AA | 1 |
| 9 | Fixed Relief Valve | RV-19 | 1 |
| 10 | Relief Valve Cap | 3729-AA | 1 |
| 11 | Reservoir O-Ring | G1-1073-48 | 1 |
| 12 | Pump Assy. | KP20 | 1 |
| 13 | Pump Mounting Bolt | 1112-AA | 2 |
| 14 | Inlet Plumbing Kit | K-230 | 1 |
| 15 | Inlet Hose/Filter Assy. | 3382-AA | 1 |
| 16 | Pump O-Ring Kit | K-40 | 1 |
| 17 | Return Tube | 4536-AA | 1 |
| 18 | Breather | 3437-AA | 1 |
| 19 | Reservoir | 3899-AC | 1 |
| 20 | Reservoir Screw | 3346-AA | 4 |
| 21 | Compression Tube Nut | 816-217 | 1 |
| 22 | Compression Sleeve | 816-218 | 1 |
| 23 | Plug Pipe 3/8 NPT | 1456-AA | 1 |
| 24 | Cord Set SJO 14/3 | 3080-AB | 1 |
| 25 | Spring | 4475-AA | 1 |
| 26 | Plumbing Plug | 1170-AA | 1 |
| 27 | Limit Switch Assy. | 4043-AA | 1 |

230V AC 1PH AUTO HOIST 4-POST LIFT POWER UP/GRAVITY DOWN

This unit is for raise-hold-lower of the lift, with manual control of the lowering speed. A push-button starts the motor to raise the lift. The unit features a fixed relief valve. Cartridge valves are used, allowing easy field service & interchangeability.



| UNIT SPECIFICATION | | HYDRAULIC CIRCUIT |
|--------------------|---|--------------------|
| Motor | 208-230V AC 3450 RPM 1PH 60 Hz | |
| Test | Dielectric Std. 2.16.15 | |
| Pump | AFC 3.1 CC/Rev. (.189 Cu. In/Rev.) | |
| Relief | Fixed At 2450 PSI Nominal | |
| Endhead | 3/8 NPT Aux. Port (Plugged), 9/16 SAE Pressure-Return Port | |
| Tank | Steel 6.3 Gallon Vert. Tank Down Mtg. 1200 Cu. In. Useable + Reserve & Vent Screw | ELECTRICAL CIRCUIT |
| Valving | Check Valve (Cartridge Style) Manual Release Valve (Cartridge Style) | |
| Wiring | 230V AC Directly To Motor | |



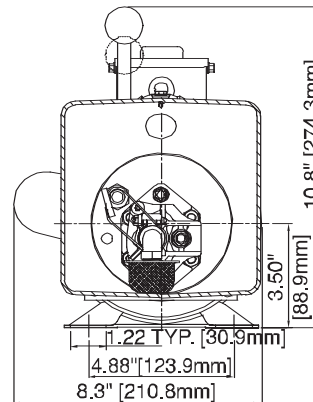
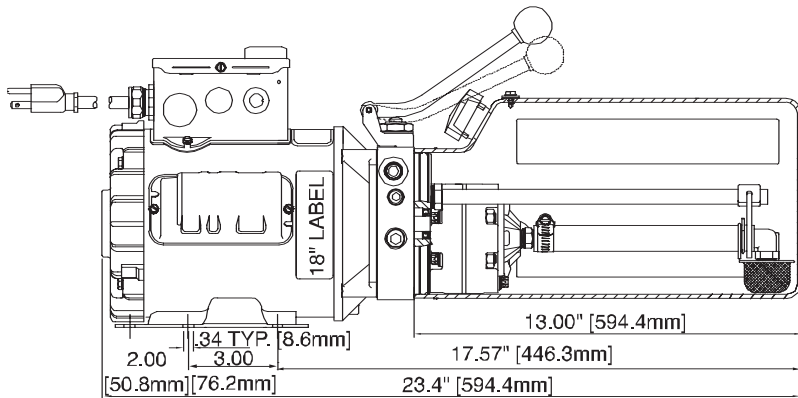
ENDHEAD SECTION

| AC-10FP | ITEM | DESCRIPTION | P/N | QTY. |
|---------|------|-----------------------|------------|------|
| | 1 | Wiring Assy. | W-200-230 | 1 |
| | 2 | AC Motor 208-230V 1PH | 4350-AC | 1 |
| | 3 | M6X1.0 - 35mm SHCS | 3009-AA | 4 |
| | 4 | Hi-Collar Lockwasher | 3020-AA | 4 |
| | 5 | Coupling | 1118-AA | 1 |
| | 6 | Manual Release Assy. | K-100 | 1 |
| | 7 | Manual Release Valve | VF-9021 | 1 |
| | 8 | Valve Cartridge Check | 2507-AA | 1 |
| | 9 | Fixed Relief Valve | RV-17 | 1 |
| | 10 | Relief Valve Cap | 3729-AA | 1 |
| | 11 | Reservoir O-Ring | G1-1073-48 | 1 |
| | 12 | Pump Assembly | KP31 | 1 |
| | 13 | Pump Mounting Bol: | F1-1053-00 | 2 |
| | 14 | Inlet: Plumbing Ki: | K-328 | 1 |
| | 15 | Filter | 1611-AA | 1 |
| | 16 | Pump O-Ring Ki: | K-40 | 1 |
| | 17 | Return Hose | 5214-AA | 1 |
| | 18 | Breather | 1683-AB | 1 |
| | 19 | Reservoir | R1-6000-11 | 1 |
| | 20 | Reservoir Screw | F2-1170-31 | 4 |
| | 21 | Plumbing Plug | 1456-AA | 1 |
| | 22 | Return Tube Fitting | 5115-AA | 1 |
| | 23 | Return Tube Sleeve | 5116-AA | 1 |
| | 24 | Plumbing Plug | 1170-AA | 1 |
| | 25 | Cordset SJO 14/3 | 3080-AB | 1 |
| | 26 | Spring | 4475-AA | 1 |
| | 27 | Plumbing Plug | 1215-AA | 1 |
| | 28 | Washer | 1261-BA | 2 |

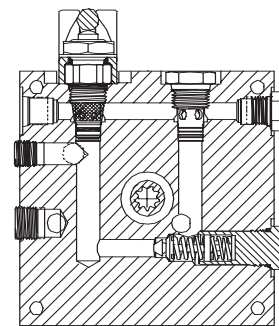
AC-10TC

115V AC 1PH TIRE CHANGER POWER UP/GRAVITY DOWN

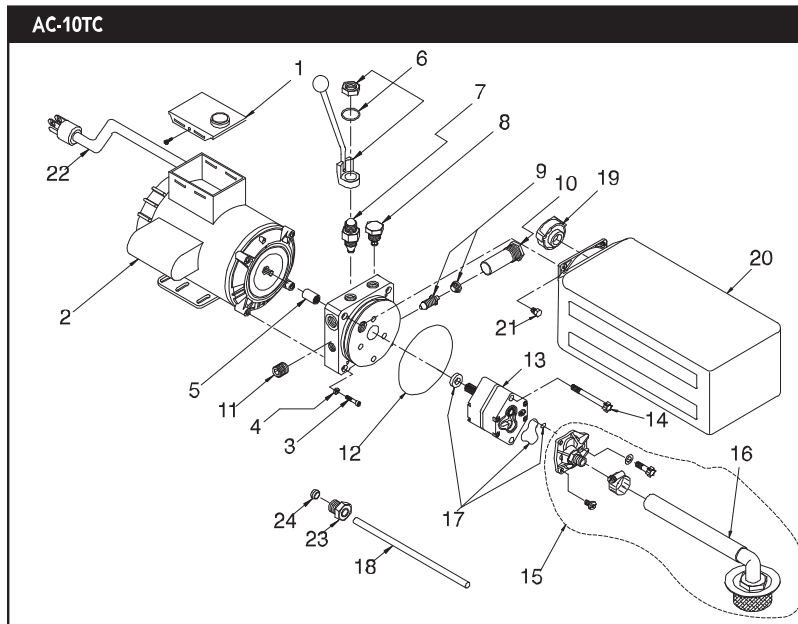
Designed for smaller, low-rise auto hoists & can be mounted either horizontally or vertically. A push button on the motor starts the unit to raise the vehicle on the lift. To lower, a manually operated cartridge-style release valve is used for finger-tip control of lowering speed.



| UNIT SPECIFICATION | | HYDRAULIC CIRCUIT |
|--------------------|---|---------------------------------------|
| Motor | 115V AC 3450 RPM 1PH 60 Hz. 3/4 HP Int. Duty | |
| Test | Motor/Switch Dielectric Tested | |
| Pump | AFC 0.8 C.C./Rev. (.049 Cu. In/Rev.) | ELECTRICAL CIRCUIT |
| Relief | Fixed At 2300 SI Nominal | |
| Endhead | 9/16-18 SAE Pressure-Return Port | COMMON RAISE N.O. |
| Tank | Black Plastic 6.5 Qt. Horz. Or Vert. (Tank Down) Mtg. (370 Cu. In. Useable) W/Breather-Fill Port | |
| Valving | Check Valve (Cartridge Style) Manual Release Valve (Cartridge Style) | 115 VOLT A.C./1 PHASE POWER SUPPLY |
| Wiring | 115V AC Directly To Motor Momentary On Switch/8 Ft. 16/3 SJO Cordset | |



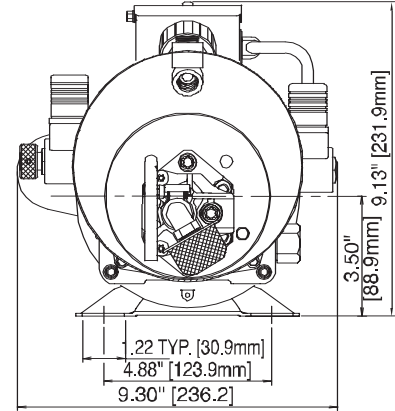
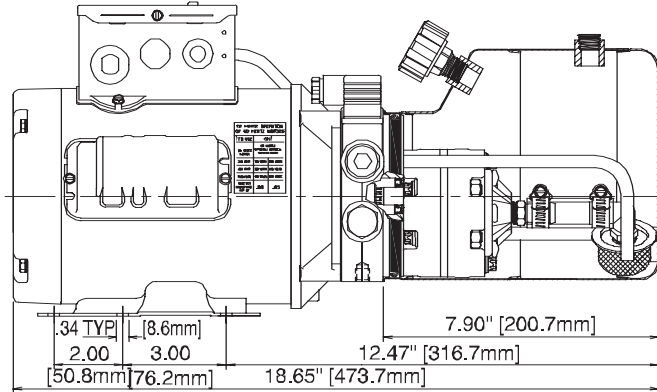
ENDHEAD SECTION



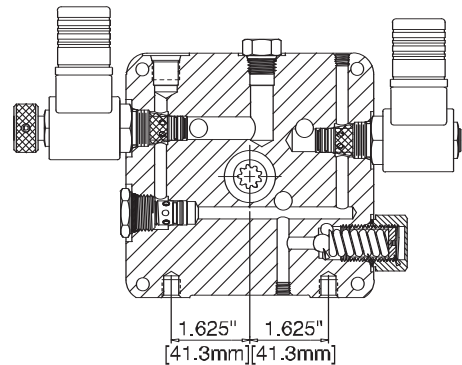
| ITEM | DESCRIPTION | P/N | QTY. |
|------|-------------------------|------------|------|
| 1 | Wiring Assy. | W-200-115 | 1 |
| 2 | AC Motor 115/230V 1PH | 2252-BC | 1 |
| 3 | M6X1.0 - 35mm Shcs | 3009-AA | 4 |
| 4 | Hi-Collar Lockwasher | 3020-AA | 4 |
| 5 | Coupling | 1118-AA | 1 |
| 6 | Manual Release Assy. | K-100 | 1 |
| 7 | Manual Release Valve | VF-9021 | 1 |
| 8 | Valve Cartridge Check | 2507-AA | 1 |
| 9 | Fixed Relief Valve | RV-17 | 1 |
| 10 | Relief Valve Cap | 3729-AA | 1 |
| 11 | Plug Pipe 3/8 NPT | 1456-AA | 1 |
| 12 | Reservoir O-Ring | G1-1073-48 | 1 |
| 13 | Pump Assy. | KP08 | 1 |
| 14 | Pump Mounting Bolt | 1111-AA | 2 |
| 15 | Inlet Plumbing Kit | K-108 | 1 |
| 16 | Inlet Hose/Filter Assy. | 2634-AA | 1 |
| 17 | Pump O-Ring Kit | K-40 | 1 |
| 18 | Return Tube | 5203-AA | 1 |
| 19 | Breather | 3437-AA | 1 |
| 20 | Reservoir | 3915-AC | 1 |
| 21 | Reservoir Screw | 3346-AA | 4 |
| 22 | Cordset SO 16/3 | 5148-AB | 1 |
| 23 | Compression Tube Nut | 5115-AA | 1 |
| 24 | Compression Sleeve | 5116-AA | 1 |

115V AC 1PH MAN LIFT POWER UP/GRAVITY DOWN

Designed for use on 115V AC operated, elevated work platforms using a raise-hold & gravity lower circuit.
Includes: • Normally open valve to protect operators from run-on • Manual override to allow the platform to be lowered in case of power failure • Electronic load delay for reliable operation in degraded voltage areas.



| UNIT SPECIFICATION | | HYDRAULIC CIRCUIT |
|--------------------|---|-----------------------------------|
| Motor | 115V AC 1 HP 3450 RPM 50/60 Hz. 1PH 56FR Int. Duty Tenv. Cwde. Rotation | |
| Pump | AFC 1.0 CC/Rev. (.061 Cu. In/rev.) | |
| Relief | Adj. Set At 2500 PSI (172.4 Bar) | |
| Endhead | 9/16-18 SAE Pressure-Return Port 9/16-18 SAE Aux. Return Port (Plugged) | |
| Tank | 1.0 U.S. Gallon Horiz.-Vert. Mtg. Steel Tank W/ 3/8 NPSC Breather-Fill Port | |
| Valving | Check Valve/115V AC N.O. 2-Way Valve/115V AC N.C. Valve W/Manual Override 115V AC To Motor/Electronic Time Delay | ELECTRICAL CIRCUIT |
| Wiring | Delay Wired To Motor & NO Valve Coil | <p>115 VOLT A.C. POWER SUPPLY</p> |



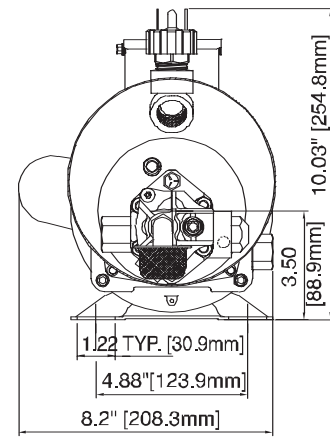
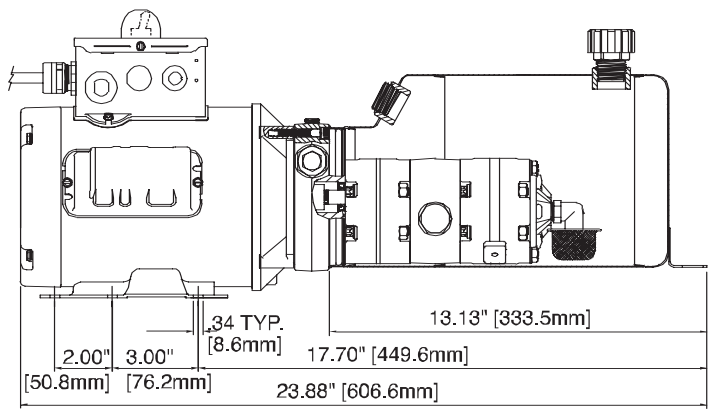
ENDHEAD SECTION

| AC-20ML | | ITEM | DESCRIPTION | P/N | QTY. |
|---------|--|------|---------------------------|------------|------|
| | | 1 | Timer Delay Assy. | S6-2000-51 | 1 |
| | | 2 | AC Motor 115/230V 50/60Hz | 2781-BC | 1 |
| | | 3 | M6X1.0 - 35mm Shcs | 3009-AA | 4 |
| | | 4 | Hi-Collar Lockwasher | 3020-AA | 4 |
| | | 5 | Coupling | 1118-AA | 1 |
| | | 6 | Valve Body, NC | VF-4010 | 1 |
| | | 7 | Valve Cartridge Check | 2507-AA | 1 |
| | | 8 | Reservoir O-Ring | G1-1073-48 | 1 |
| | | 9 | Pump O-Ring Kit | K-40 | 1 |
| | | 10 | Return Tube | T2-1006-70 | 1 |
| | | 11 | Return Tube | T2-1006-97 | 1 |
| | | 12 | Inlet Plumbing Kit | KV | 1 |
| | | 13 | Inlet Hose/Filter Assy. | 2979-AA | 1 |
| | | 14 | Pump Assy. | KP10 | 1 |
| | | 15 | Pump Mounting Bolt | 1111-AA | 2 |
| | | 16 | Reservoir | KR40 | 1 |
| | | 17 | Reservoir Screw | F2-1170-31 | 4 |
| | | 18 | Adj. Relief Valve Assy. | RV-2 | 1 |
| | | 19 | Breather | 1214-AA | 1 |
| | | 20 | Plug Pipe 3/8 NPT | 1456-AA | 1 |
| | | 21 | Hirschmann Connector | E0-1003-00 | 1 |
| | | 22 | Valve Body, NO | VF-4011 | 1 |
| | | 23 | Solenoid Coil, 115V AC | EF-1092 | 2 |
| | | 24 | Cordset W/Hirschman Conn. | S6-2400-00 | 1 |
| | | 25 | Plumbing Plug 9/16 SAE | 1170-AA | 1 |
| | | 26 | Filter | 1611-AA | 1 |

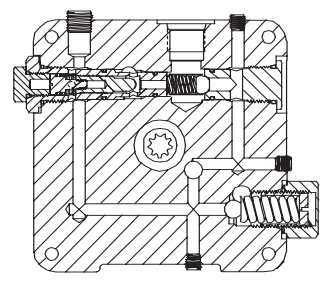
AC-40FC

115V AC 1PH FILTER CRUSHER POWER EXTEND/GRAVITY RETURN

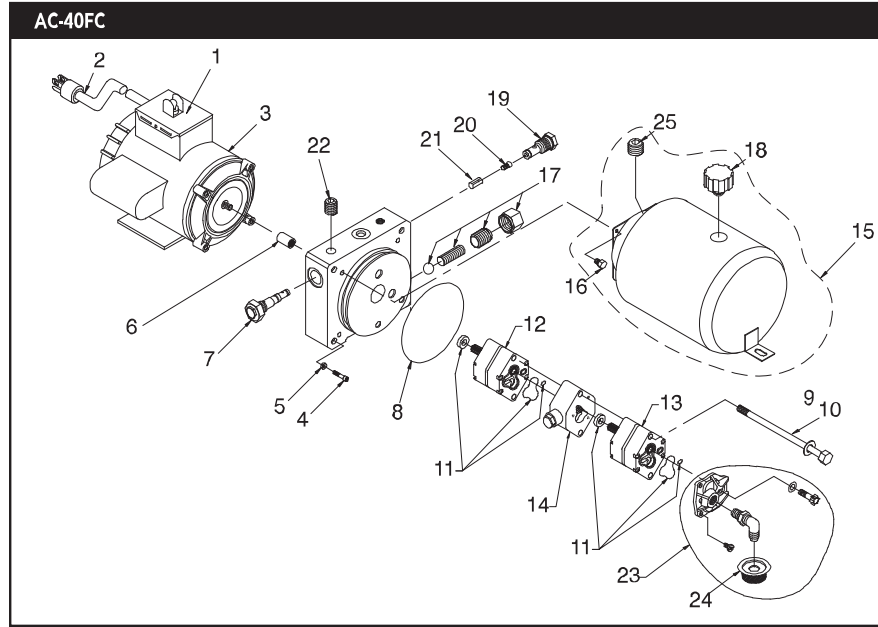
Incorporates a high-low pump for maximum output of oil for a fast extension of the cylinder, as well as high pressure/low volume flow for the work portion of the cycle. Use with single-acting spring return cylinder.



| UNIT SPECIFICATION | | HYDRAULIC CIRCUIT | |
|--------------------|--|-----------------------------|--------------------|
| Motor | 115V AC, 1 HP, 3450 RPM, 1 PH, 60Hz, Tenv | | |
| Pump | A.F.C. 0.8 & 2.0 CC/Rev. Duplex W/Unload Set At 60 Bar (900 PSI) | | |
| Relief | Adj. Set At 4000 PSI (275.9 Bar) | <th>ELECTRICAL CIRCUIT</th> | ELECTRICAL CIRCUIT |
| Endhead | 3/4-16 SAE Pressure-Return Port (2) 3/8-16 Tap X .50 Deep Mtg. Hole | | |
| Tank | 6 Qt. Horiz. Mounting Steel Tank W/ 3/8 NPT Breather-Filler Port | | |
| Valving | Relief, Check & Pilot Operated Normally Open Shuttle Valve | | |
| Wiring | Momentary On Switch 8 Ft. 115V Cord | | |
| | | | |



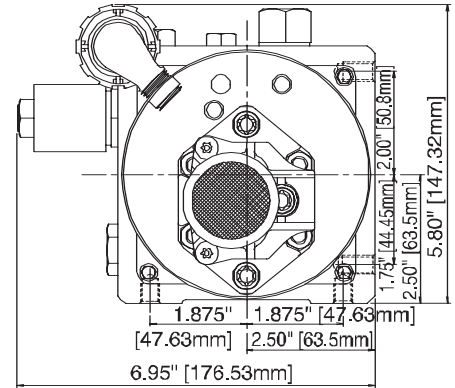
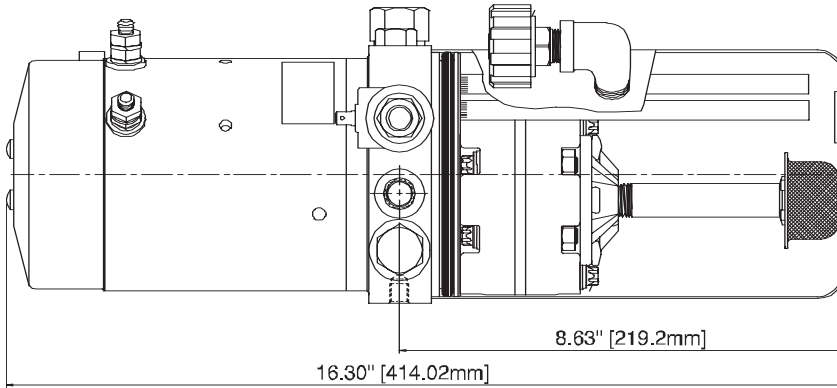
ENDHEAD SECTION



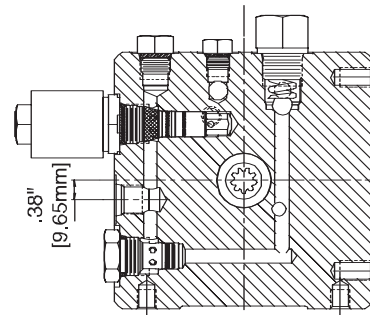
| ITEM | DESCRIPTION | P/N | QTY. |
|------|---------------------------|------------|------|
| 1 | Electric Switch Assy. | S6-2000-96 | 1 |
| 2 | Cord Assy. | E4-1005-54 | 1 |
| 3 | AC Motor 115/230V50/60Hz. | 2781-BC | 1 |
| 4 | M6 x 1.0 - 35MM SHCS | 3009-AA | 4 |
| 5 | Hi-Collar Lockwasher | 3020-AA | 4 |
| 6 | Coupling | 1118-AA | 1 |
| 7 | Shuttle Valve Assy. | S3-1025-08 | 1 |
| 8 | Reservoir O-Ring | G1-1073-48 | 1 |
| 9 | Washer | 1261-BA | 2 |
| 10 | Bolt 5/16-24 x 7.00" Hex | F1-1057-00 | 2 |
| 11 | Pump O-Ring Kit | K-40 | 2 |
| 12 | Pump Assy. | KP08 | 1 |
| 13 | Pump Assy. | KP20 | 1 |
| 14 | Unload Assy. | U-06 | 1 |
| 15 | Reservoir | KR41 | 1 |
| 16 | Reservoir Screw | F2-1170-31 | 4 |
| 17 | Adj. Relief Valve Assy. | RV-2 | 1 |
| 18 | Breather | 1683-AB | 1 |
| 19 | Valve Assy. Check N3 | 2289-AA | 1 |
| 20 | Spring & Ball | S1-1008-03 | 1 |
| 21 | Spring Retainer | W6-1001-02 | 1 |
| 22 | Plug 1/4 NPT | 1215-AA | 1 |
| 23 | Inlet Plumbing Kit | K-233 | 1 |
| 24 | Filter | 1611-AA | 1 |
| 25 | Plug 3/4 NPT | 1896-AA | 1 |

12V DC MATERIAL HANDLING SOLENOID OPERATED POWER UP/GRAVITY DOWN

Designed for low-lift pallet trucks. The units have a 3-way circuit for raise-hold-lower functions & are used with a single acting cylinder. This unit is plumbed for vertical mounting & is interchangeable with other manufacturer's power packs.



| UNIT SPECIFICATION | | HYDRAULIC CIRCUIT |
|--------------------|--|-------------------|
| Motor | 12V DC 2 Terminal Std. Duty Corrosion Resistant Plate Finish | |
| Pump | AFC 1.6 CC/Rev. (.098 Cu. In/Rev.) CCW Rotation, Mesh Inlet Filter | |
| Relief | Adj. Relief At 2500 PSI | |
| Endhead | 9/16-18 SAE Pressure-Return Port (4) 3/8-16 X .38 Deep Mtg. Hole | |
| Tank | 2 Qt. Vert. Mtg. Steel Tank W/3/8 NPT Breather-Fill Port | |
| Valving | Check Valve/12V DC Solenoid Oper. NC Valve/Pressure-Compensated Flow Control Valve | |
| Wiring | 12V DC To Motor Terminal 12V DC To NC Valve Solenoid | |



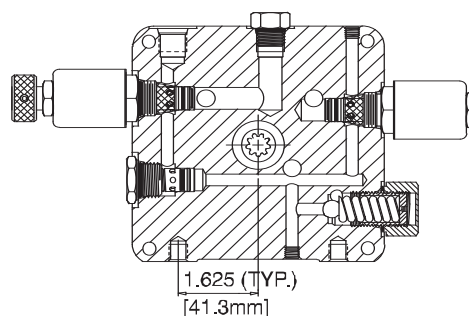
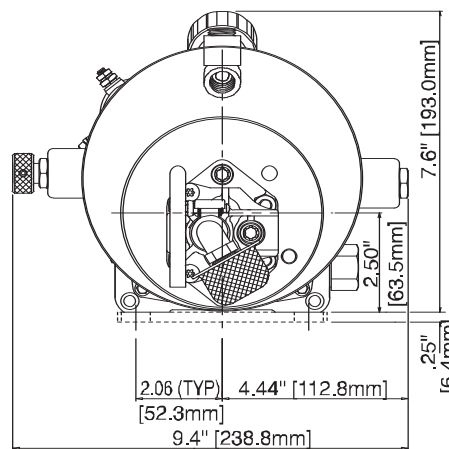
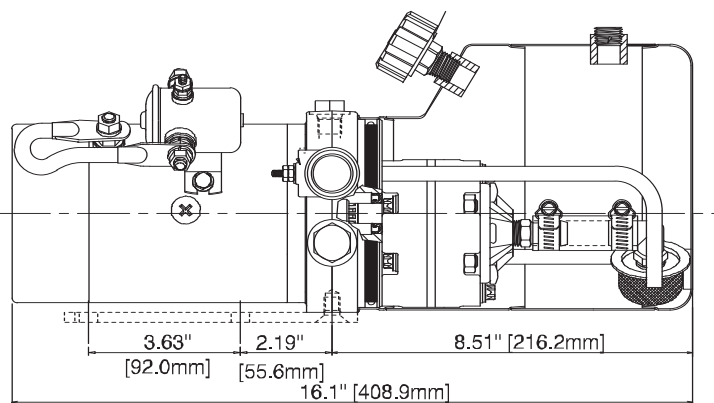
ENDHEAD SECTION

| DC-20MH | ITEM | DESCRIPTION | P/N | QTY. |
|---------|------|-------------------------|-----------------|------|
| | 1 | Plug | 1170-AA | 1 |
| | 2 | DC Motor 12V Std | KMD2 | 1 |
| | 3 | Valve, NC 12V DC | EF-1081&VF-4009 | 1 |
| | 4 | Valve Cartridge Check | 2507-AA | 1 |
| | 5 | Reservoir O-Ring | G1-1073-48 | 1 |
| | 6 | Coupling | 1118-AA | 1 |
| | 7 | Pump O-Ring Kit | K-40 | 1 |
| | 8 | Inlet Plumbing Kit | K-109 | 1 |
| | 9 | Filter | 1611-AA | 1 |
| | 10 | Pump Assy. | KP16 | 1 |
| | 11 | Pump Mounting Bolt | 1111-AA | 2 |
| | 12 | Reservoir | R1-1460-05 | 1 |
| | 13 | Reservoir Screw | F2-1170-31 | 4 |
| | 14 | Breather | 1214-AA | 1 |
| | 15 | Adj. Relief Valve Assy. | RV-2 | 1 |
| | 16 | Plug | W2-1004-00 | 1 |
| | 17 | Elbow 90 Degrees | 4495-AC | 1 |
| | 18 | Return Tube | T2-1006-70 | 2 |
| | 19 | Motor Brush Kit | K-97 | 1 |
| | 20 | Valve, Flow Control | FC-2.2 | 1 |

DC-20ML

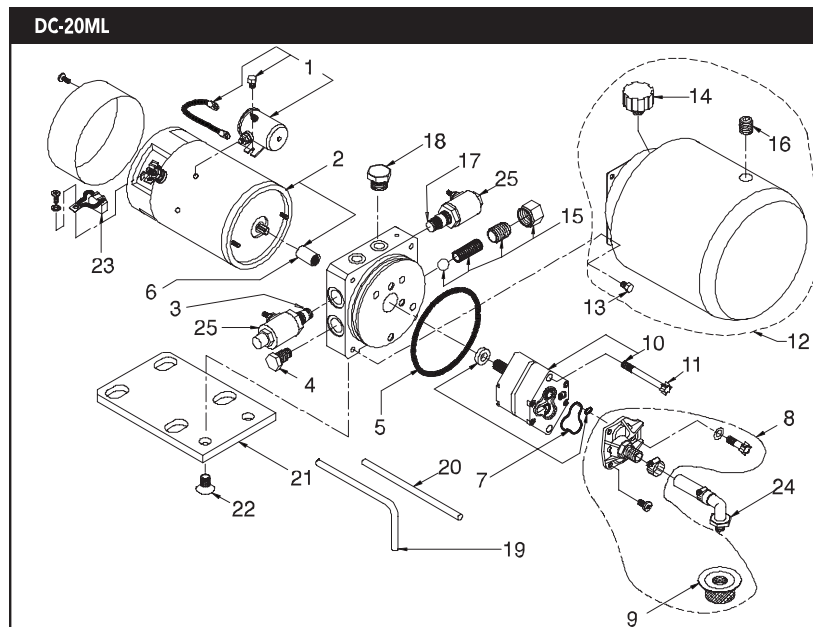
12V DC MAN LIFT SOLENOID OPERATED POWER UP/GRAVITY DOWN

Designed for use on battery operated, elevated work platforms using a raise-hold & gravity lower circuit. Includes: • Normally open valve to protect operators from run-on • Manual override to allow the platform to be lowered in case of power failure.



ENDHEAD SECTION

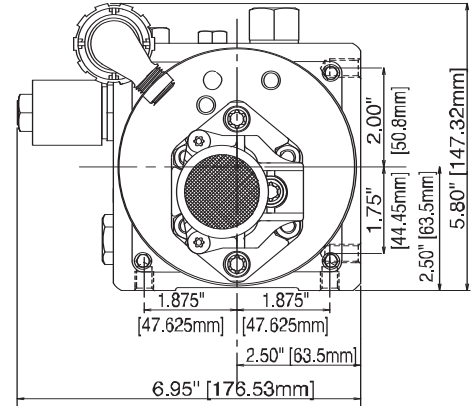
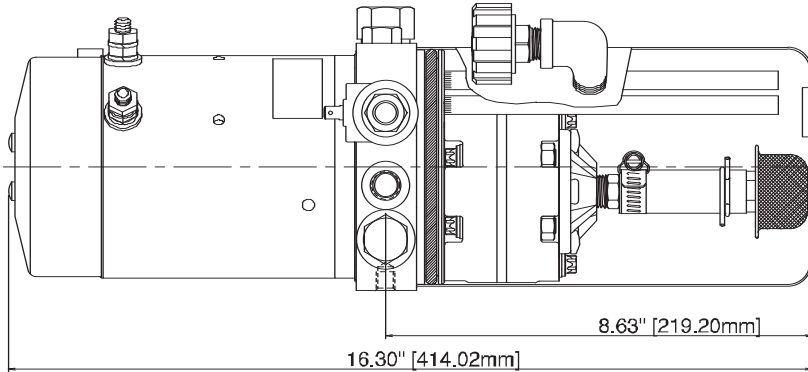
| UNIT SPECIFICATION | | HYDRAULIC CIRCUIT |
|--------------------|---|-------------------|
| Motor | 12 V DC 1 Terminal Std. Duty Corrosion Resistant Plate Finish | |
| Pump | AFC 1.0 CC/Rev. (.061 Cu. In/Rev.) | |
| Relief | Adjustable Relief At 2500 PSI | |
| Endhead | 9/16-18 SAE Pressure-Return Port (2) 3/8-16 X .37 Deep Mtg. Holes | |
| Tank | 1.0 Gallon Horiz.-Vert. Mtg. Steel Tank W/3/8 NPSC Breather-Filler Port | |
| Valving | Check Valve/12V DC N.O. 2-Way Valve/12V DC NC 2-Way Valve W/Manual Override | |
| Wiring | 12V DC To Start Switch | |



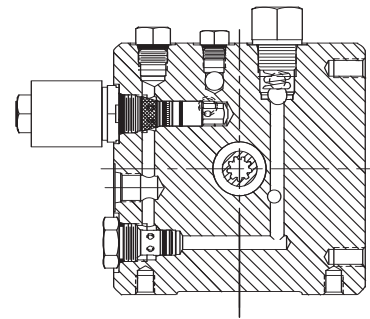
| ITEM | DESCRIPTION | P/N | QTY. |
|------|------------------------------|------------|------|
| 1 | Solenoid Starter Assy. 12v | KS1 | 1 |
| 2 | DC Motor 12V | KMD1 | 1 |
| 3 | Valve NC 12V DC | VF-4010 | 1 |
| 4 | Valve Cartridge Check | 2507-AA | 1 |
| 5 | Reservoir O-Ring | G1-1073-48 | 1 |
| 6 | Coupling | 1118-AA | 1 |
| 7 | Pump O-Ring Kit | K-40 | 1 |
| 8 | Inlet Plumbing Kit | KV | 1 |
| 9 | Filter | 1611-AA | 1 |
| 10 | Pump Assy. | KP 10 | 1 |
| 11 | Pump Mounting Bolt | F1-1052-75 | 2 |
| 12 | Reservoir | KR40 | 1 |
| 13 | Reservoir Screw | F2-1170-31 | 4 |
| 14 | Breather | 1214-AA | 1 |
| 15 | Adj. Relief Valve Assy. | RV-2 | 1 |
| 16 | Plug | 1456-AA | 1 |
| 17 | Valve NO 12V DC | VF-4011 | 1 |
| 18 | Plug | 1170-AA | 1 |
| 19 | Return Tube 90° Bend | T2-1006-97 | 1 |
| 20 | Return Tube | T2-1006-70 | 1 |
| 21 | Bracket Mounting Unit | 1910-AB | 1 |
| 22 | Bolt 3/8-16x .50 Phil Flt Hd | F2-1020-50 | 2 |
| 23 | Motor Brush Kit | K-90 | 1 |
| 24 | Plumbing Assy. Inlet | 2979-AA | 1 |
| 25 | Solenoid Coil 12V DC | EF-1082 | 2 |

24V DC MATERIAL HANDLING SOLENOID OPERATED POWER UP/GRAVITY DOWN

Designed for low-lift pallet trucks. The units have a 3-way circuit for raise-hold-lower functions & are used with a single acting cylinder. This unit is plumbed for vertical mounting & is interchangeable with other manufacturer's power packs.



| UNIT SPECIFICATION | | HYDRAULIC CIRCUIT |
|--------------------|--|-------------------|
| Motor | 24V DC Std. Duty 2-Terminal Corrosion Resistant Plate Finish | |
| Pump | AFC 1.6 CC/Rev. (.098 Cu. In/Rev.) CCW Rotation/Mesh Inlet Filter | |
| Relief | Adj. Relief At 2500 PSI | |
| Endhead | 9/16-18 SAE Pressure-Return Port (4) 3/8-16 X .38 Dp. Mtg. Holes | |
| Tank | 2 Qt. Vert. Motor Up Mtg. Steel Tank W/3/8 NPT Breather-Filler Port | |
| Valving | Check Valve/24V DC Solenoid Oper. NC Valve/Pressure-Compensated Flow Control Valve | |
| Wiring | 24V DC To Motor Terminal/24V DC To NC Valve Solenoid | |



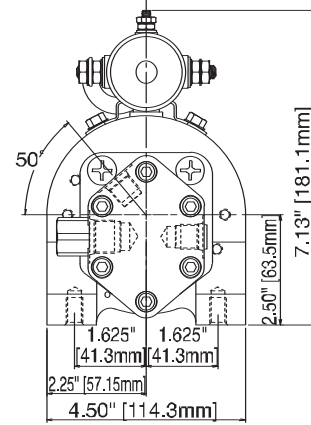
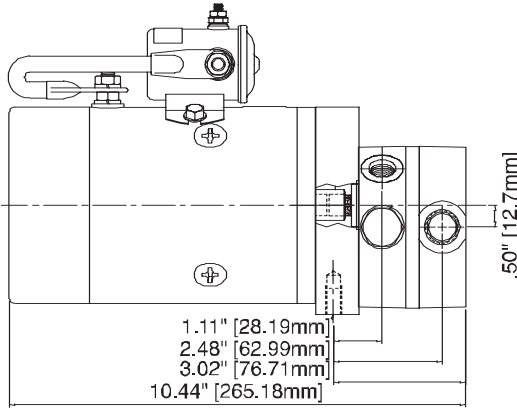
ENDHEAD SECTION

| DC-24MH | | ITEM | DESCRIPTION | P/N | QTY. |
|---------|--|------|-------------------------|-----------------|------|
| | | 1 | Plug | 1170-AA | 1 |
| | | 2 | DC Motor 24V Std | KMD5 | 1 |
| | | 3 | Valve, NC 24V DC | EF-1085/VF-4009 | 1 |
| | | 4 | Valve Cartridge Check | 2507-AA | 1 |
| | | 5 | Reservoir O-Ring | G1-1073-48 | 1 |
| | | 6 | Coupling | 1118-AA | 1 |
| | | 7 | Pump O-Ring Kit | K-40 | 1 |
| | | 8 | Inlet Plumbing Kit | 4223-AA | 1 |
| | | 9 | Filter | 1611-AA | 1 |
| | | 10 | Pump Assy. | KP16 | 1 |
| | | 11 | Pump Mounting Bolt | 1111-AA | 2 |
| | | 12 | Reservoir | R1-1460-05 | 1 |
| | | 13 | Reservoir Screw | F2-1170-31 | 4 |
| | | 14 | Breather | 1214-AA | 1 |
| | | 15 | Adj. Relief Valve Assy. | RV-2 | 1 |
| | | 16 | Plug | W2-1004-00 | 1 |
| | | 17 | Elbow 90 Degrees | 4495-AC | 1 |
| | | 18 | Return Tube | T2-1006-70 | 2 |
| | | 19 | Motor Brush Kit | K-92 | 1 |
| | | 20 | Valve, Flow Control | FC-2.2 | 1 |
| | | 21 | Suction Cover | 2156-AA | 1 |
| | | 22 | Plumbing Clamp | 2231-AA | 1 |

DC-30APU

12V DC AUXILIARY POWER UNIT RELIEF & CHECK VALVE ONLY

Intended to be used with remote directional control valving & reservoir. This unit has an adjustable relief valve & outlet check valve. For applications such as back-up hydraulic power for truck mounted/mobile equipment. It can also be used to power material handling functions & other intermittent duty applications.

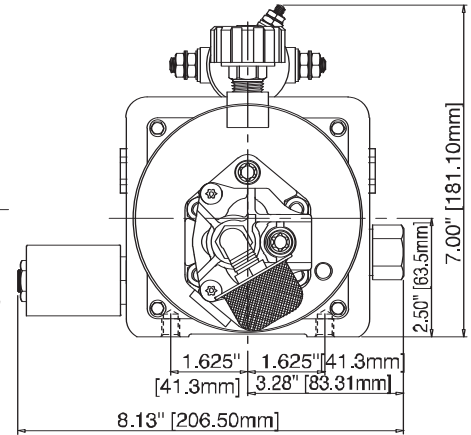
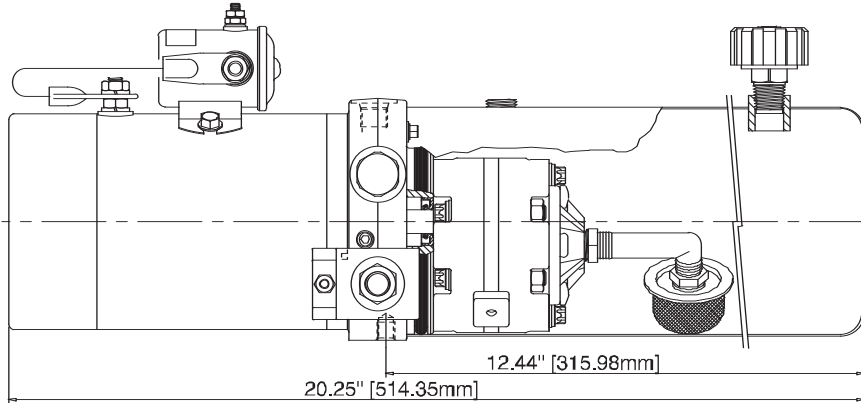


| UNIT SPECIFICATION | | HYDRAULIC CIRCUIT |
|--------------------|---|-------------------|
| Motor | 12V DC 1T Std. Duty Corrosion Resistant Plate Finish | |
| Pump | 2.0 CC/Rev. | |
| Relief | 2500 PSI | |
| Valving | Check & Adj. Relief Valve | |
| Wiring | 12V DC | |
| Ports | 3/4 SAE Side Inlet 9/16 SAE Side Outlet & Relief Drain | |

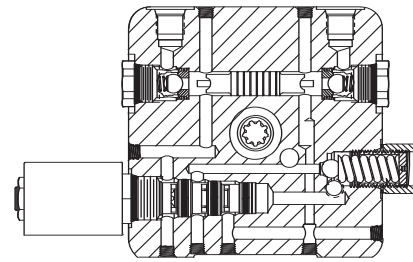
| DC-30APU | ITEM | DESCRIPTION | P/N | QTY. |
|----------|------|-------------------------|------------|------|
| | 1 | Solenoid Starter 12V | KS1 | 1 |
| | 2 | DC Motor 12V | KMD1 | 1 |
| | 3 | Motor Adaptor | 2000384 | 1 |
| | 4 | Adj. Relief Valve Assy. | S8-6000-00 | 1 |
| | 5 | Coupling | 2441-BA | 1 |
| | 6 | Bolt | 2458-AA | 2 |
| | 7 | Pump Assy. | PE-1063 | 1 |
| | 8 | Seal | G2-1002-00 | 1 |
| | 9 | Check Valve Kit | S8-6000-01 | 1 |
| | 10 | Motor Brush Kit | K-90 | 1 |

12V DC BALE SPIKE SOLENOID OPERATED POWER UP/POWER DOWN

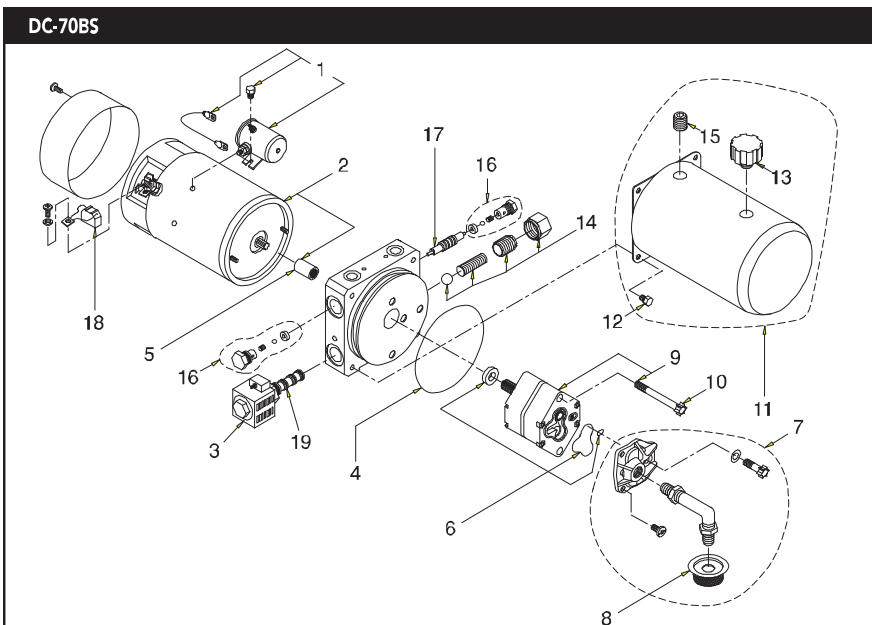
Designed primarily to operate tines which pick up round bales. Incorporates a 2 position, 4-way cartridge valve & double pilot-operated checks to control a double acting cylinder, to lift-hold-lower the bale.



| UNIT SPECIFICATION | | HYDRAULIC CIRCUIT |
|--------------------|---|-------------------|
| Motor | 12V DC 1 Terminal Std. Duty Corrosion Resistant Plate Finish | |
| Pump | AFC 2.0 CC/Rev. (.122 Cu. In/Rev.) | |
| Relief | Adj. Set At 2500 PSI (172.4 Bar) | |
| Endhead | 9/16 SAE Ports "A" & "B" (2) 3/8-16 X .38 Deep Mtg. Hole | |
| Tank | 3 Qt. Capacity Horiz. Mount Steel Tank W/3/8 NPT Breather-Fill Port | |
| Valving | 2P4W Cartridge Valve W/12V DC Coil/Double PO Checks & 9/16 SAE Ports | |
| Wiring | 12V DC To Start Switch 12V DC To 2P4W Valve Coil | |



ENDHEAD SECTION

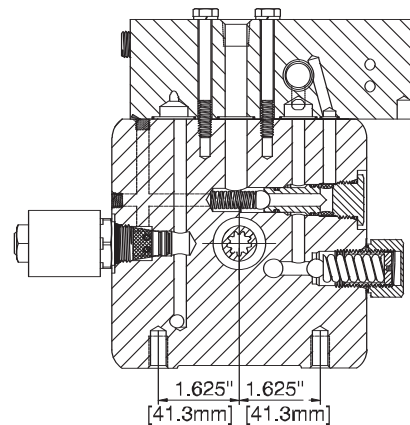
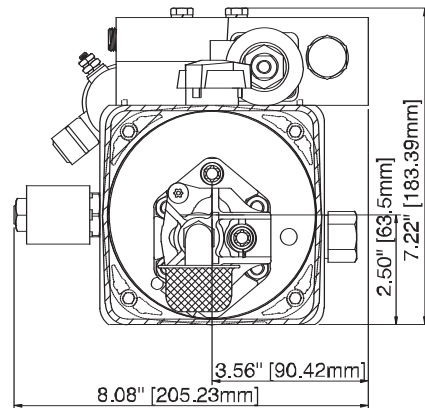
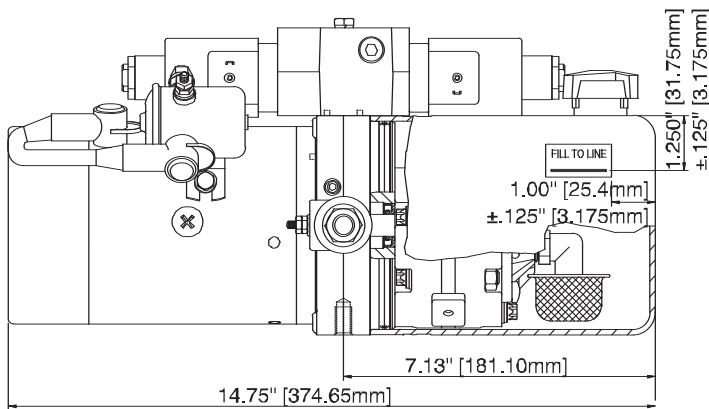


| ITEM | DESCRIPTION | P/N | QTY. |
|------|-------------------------|------------|------|
| 1 | Solenoid Starter 12V | KS1 | 1 |
| 2 | DC Motor 12V | KMD1 | 1 |
| 3 | Solenoid Coil 12V DC | EF-1126 | 1 |
| 4 | Reservoir O-Ring | G1-1073-48 | 1 |
| 5 | Coupling | 1118-AA | 1 |
| 6 | Pump O-Ring Kit | K-40 | 1 |
| 7 | Inlet Plumbing Kit | KH | 1 |
| 8 | Filter | 1611-AA | 1 |
| 9 | Pump Assy. | KP20 | 1 |
| 10 | Pump Mounting Bolt | 1112-AA | 2 |
| 11 | Reservoir | KR14 | 1 |
| 12 | Reservoir Screw | F2-1170-31 | 4 |
| 13 | Breather | 1214-AA | 1 |
| 14 | Adj. Relief Valve Assy. | RV-2 | 1 |
| 15 | Plug 3/8 NPT | 1456-AA | 1 |
| 16 | PO Check Kit | S8-9000-00 | 2 |
| 17 | PO Spool | X2-1048-04 | 1 |
| 18 | Motor Brush Kit | K-90 | 1 |
| 19 | 2P4W Solenoid Valve | VF-1060 | 1 |

DC-80SP

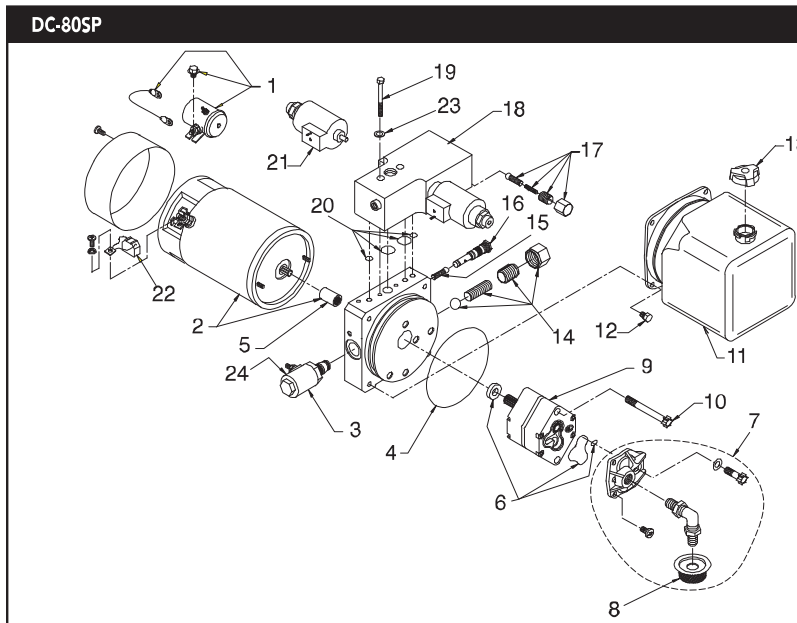
12V DC SNOW PLOW SOLENOID OPERATED POWER ANGLE & LIFT/GRAVITY DOWN

Designed to operate all functions of a power operated angling snow plow. The unit includes a lift-hold-gravity lower function for the blade, with a continuous "float" capability. A directional valve controls power angling of the blade, 2 cross-over reliefs protect the system from damage should the blade be obstructed while plowing.



ENDHEAD SECTION

| UNIT SPECIFICATION | | HYDRAULIC CIRCUIT |
|--------------------|---|-------------------|
| Motor | 12V DC 1 Term Std. Extended Duty | |
| Pump | AFC 1.6 CC/Rev. (.098 Cu. In./Rev.) | |
| Relief | Adj. Relief Valve Set At 2000 PSI | |
| Endhead | 1/4 NPTF Ports "A", "B" & "C" (On U-Valve) (2) 3/8-16 Tap X .62 Deep Mtg. Holes | |
| Tank | 1.5 Qt. Capacity Horiz. Mount Plastic Tank W/Breather-Filler Port | |
| Valving | 3P4W Solenoid Operated Directional Control Valve W/(2) 12V DC Solenoids/Crossover Relief Valves Set At 1500 PSI | |
| Wiring | 12V DC To U-Valve Solenoids, Motor Solenoid & Release Solenoid | |



| ITEM | DESCRIPTION | P/N | QTY. |
|------|----------------------------|------------|------|
| 1 | Start Switch Assy. | KS1 | 1 |
| 2 | DC Motor 12V | KMD1 | 1 |
| 3 | Valve NC 12V DC | VF-4009 | 1 |
| 4 | Reservoir O-Ring | G1-1073-48 | 1 |
| 5 | Coupling | 1118-AA | 1 |
| 6 | Pump O-Ring Kit | K-40 | 1 |
| 7 | Inlet Plumbing Kit | KH | 1 |
| 8 | Filter | 1611-AA | 1 |
| 9 | Pump Assy. | KP16 | 1 |
| 10 | Pump Mounting Bolt | F1-1052-75 | 2 |
| 11 | Reservoir | 3540-AC | 1 |
| 12 | Reservoir Screw | 3346-AA | 4 |
| 13 | Breather | 8060-CC | 1 |
| 14 | Adj. Relief Valve Assy. | RV-2 | 1 |
| 15 | Spring And Ball Assy. | S1-1004-12 | 1 |
| 16 | Valve Check Assy. | 2290-BA | 1 |
| 17 | Crossover Relief Valve Kit | S8-6000-38 | 2 |
| 18 | U-Valve 4W3P CCCP 12V N2 | U1-6710-81 | 1 |
| 19 | Bolt 1/4-20 X 2 1/2 Hex | F1-1032-50 | 2 |
| 20 | U-Valve O-Ring Kit | K-42 | 1 |
| 21 | Solenoid Assy. DC | E1-4005-12 | 2 |
| 22 | Motor Brush Kit | K-90 | 1 |
| 23 | Lock Washer | 1479-AA | 2 |
| 24 | Coil Only | EF-1082 | 1 |

LIMITED WARRANTY

FOR A PERIOD OF TIME STATED BELOW, SPX FLUID POWER will repair or replace, free of charge, any products SPX Fluid Power has determined, upon inspection by SPX Fluid Power, to be faulty due to defective material and/or workmanship. SPX Fluid Power may, at its discretion, issue credit in lieu of repair or replacement.

This warranty shall not apply to any loss or damage resulting from: (i) normal wear and tear; (ii) alteration, misuse, abuse or improper installation, operation or maintenance by Buyer or a third party; (iii) accident, fire, flood or acts of God; or (iv) inaccurate or incomplete information or data supplied or approved by the Buyer. Buyer shall defend and indemnify SPX Fluid Power for any loss or damage of SPX Fluid Power arising out of (i) through (iv) above and any breach by Buyer of its covenants and obligations under the SPX Fluid Power Terms and Conditions of Purchase.

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WARRANTY PERIOD

STONE® PRODUCTS, STANDARD AND OEM, a period of twelve (12) months from the date of manufacture.

STONE® PRODUCTS, AUTO HOIST POWER UNITS, a period of twenty-four (24) months from date of manufacture.

PRODUCTS NOT COVERED UNDER WARRANTY.

An inspection fee may be applied to all returns determined by SPX Fluid Power to be not under warranty. Charges for labor and applicable repair parts will be in addition to the aforementioned inspection fee. Repair estimates will be

communicated to the Buyer. SPX Fluid Power will allow a maximum of two weeks (10 working days) from the date of notification for the Buyer to advise SPX Fluid Power whether to: 1) Return, 2) Repair or 3) Scrap the product. If SPX Fluid Power does not receive written notification within this two-week period, SPX Fluid Power will, at its discretion, scrap the product in question.

RETURNS

Returns of product will be accepted only for the purpose set forth above and will not be accepted without a Return Authorization (RA) Number. An RA number can be obtained by calling Customer Service at 800-541-1418.

WARNINGS

- People who work on and around hydraulic systems of any kind without formal training expose themselves, and others, to serious safety hazards. An accident with a hydraulic system can result in severe injury, death, or substantial property damage.
- Always wear eye protection and protective clothing when working on and around hydraulic systems.
- Some hydraulic power units contain pumps that can generate pressures in excess of 5000 PSI (345 Bar). A pressure relief valve is used to set the pressure at the desired level. Tampering with, adjusting, modifying or removing the relief valve is extremely dangerous and is not recommended.
- Hydraulic fluid poses a fire hazard, and can cause skin irritation or burning if not properly handled.
- Never exhaust hydraulic fluid under pressure to atmosphere.
- Hydraulic fluid can reach high temperatures under normal operating conditions and can burn exposed skin.
- Fluid pressure (even as low as 100 PSI) can penetrate skin and cause death or serious injury.
- Hydraulic devices should be properly "Locked-Out" or "Tagged-Out" before being worked on, including the release of any stored energy and mechanically locking the device in place when appropriate.
- Remove any jewelry and/or objects that are electrical conductors before working on power units.
- Properly contain and dispose of fluids according to local codes and regulations.
- SPX Fluid Power is not responsible for misuse or misapplication of product.

SPX FLUID POWER QUALITY POLICY

At SPX FLUID POWER we are committed to meeting or exceeding Customer defined expectations by continuously improving the Quality of our Products, Processes, and Services.

SPX Fluid Power is an ISO 9001:2000 certified facility.





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