TECHNOLOGIES

will repair or replace, free of charge, any defective material and/or workmanship. SPX Hydraulic Technologies 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, floor or acts of God; or (iv) inaccurate or incomplete information or data supplied or received by Buyer.

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 Hydraulic Technologies will allow a maximum of two weeks (10 working days) from the date of notification for the Buyer to advise SPX Hydraulic Technologies whether to: 1) Return, 2) Repair or 3) Scrap the product. If SPX Hydraulic Technologies does not receive such an advise within two weeks (10 working days), SPX Hydraulic Technologies will, at its discretion, scrap the product in question.

HYDRAULIC TECHNOLOGIES QUALITY POLICY

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

SPX Hydraulic Technologies is an ISO 9001:2000 certified facility.

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.

No claim by a Buyer, other than a demand for replacement or repair, shall be honored by SPX Hydraulic Technologies arising out of (i) through (iv) above and any breach by Buyer of its covenants and obligations under the SPX Hydraulic Technologies Terms and Conditions of Sale and Use. This warranty is limited to replacement or repair and is in lieu of and exclusive of all other remedies.

SPX HYDRAULIC TECHNOLOGIES DOES NOT WARRANT ITS PRODUCTS TO BE OF THE KIND AND QUALITY DESCRIBED IN OUR SPECIFICATIONS.

WARNINGs

- 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 mechanically locking the device in place when appropriate.
- Release of pump energy can cause skin injury where applicable law requires such liability.
- 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 device can result in 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 allowable.
- Hydraulic fluid poses a fire hazard, and can cause skin irritation or burning if not properly handled.
- Always wear protective clothing where applicable.
- Always wear eye protection.
- Always wear protective seals.
- Never exhaust hydraulic fluid under pressure or in the presence of an open flame or lighter.
- For external use only.
- Never use hydraulic fluid in the presence of an open flame or lighter.
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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.

This power unit is designed specifically for use on 2 and 4 post auto hoists. This is for raise-hold-lower of the lift. A push-button 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 3175 to 4082 kg capacity lifts. Cartridge valves are used, allowing easy field service and interchangeability. Air motor driven models also available.

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

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

This power unit is designed for use on a tipping trailer applications. The unit provides for power lift, hold and gravity down operation. Two models are available with or without a hand pump. A two button corded hand controller is optional.

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

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
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.

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.
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.

An option to add a "tipper up" indication or warning pressure switch is available.
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.

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.
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.

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.
The Stone Pick-A-Pack product range is based on a system of modular construction which was pioneered by Stone Hydraulics when the company was founded in 1968. This concept and the components utilized have been continuously refined and improved through the years. Today, Stone applies the most advanced manufacturing technologies and the highest quality materials and components available to provide this unique and extremely flexible product range.

International Distributor Pick-A-Pack Product Range
This section is designed to aid the user in selecting a combination of pump, motor, reservoir, and valves which will precisely suit their needs. All of the components in the Pick-A-Pack product range are designed to be interchangeable with mating components. All components are modular in design and the “International” endhead is the key component of this interchangeable system. Any desired combination of drive motor, pump, reservoir, and control valving can be either assembled into or manifolded onto this endhead. This is available in three configurations, with either NPTF, SAE or G3/8 porting.

How to Select Pump and DC Motor Combinations:
The following section contains pump/motor curves for various combinations of pumps and motors used on Stone hydraulic power units. It is important to select the correct motor and pump for a given application so proper pressure, flow and electrical amp draws can be accounted for appropriately in the design circuit. Proper selection also ensures the motor does not overheat and become inoperable.

There are motor curves for both S2 and S3 duty cycle categories.
• S2- Absolute Continuous On-time. Indicates how long a motor can be run continuously before it must be allowed to cool back to ambient temperature.
• S3- Percentage On-time. Based on a 5 minute duty cycle, it indicates the duty cycle (percent on vs percent off) the motor can be run continuously without overheating the motor.

The following is an example of how to select a motor and pump based on specific application criteria:
Assume the given application parameters require a flow rate of 5.5 LPM at 140 Bar, intermittent operation and 12 VDC supplied power. (If continuous operation is needed, a Hi-Power 12V motor needs to be selected). Referring to the 12 VDC pump/motor graphs show that a KP-2.5 pump (2.5 cc/rev) is required and will draw 260 amps with this combination.

• Since the application dictates that the motor needs to be run intermittently, the S3 graph indicates how long the motor can operate as a percentage of 5 minute (300 second) intervals without needing to cool back to ambient temperature. Referring to the S3 graph shows that the standard duty motor (KMD1 and KMD2) can operate with a 8% on-time, or for 24 seconds on, 276 seconds off continuously. If an extended duty motor is selected (KMD3), it can operate with a 13% on-time, or for 39 seconds on, 261 seconds off continuously.

Relief valves are extremely important in that they limit the amount of pressure the power unit can generate. Stone AFC pumps can potentially generate in excess of 340 Bar. If the pressure is not limited by the use of relief valves, the excess pressure could damage the mechanical components used in the hydraulic circuit, resulting in potential injury or death. Always ensure that the mechanical components selected in the application design can handle the working pressure needed. Once the working pressure is determined, select the relief valve that will allow full flow at the working pressure. Relief valves “crack” at about 80% of their pressure rating, opening to full “dump” to tank once the rated pressure is obtained (typically referred to as “full bypass pressure and flow”).

The working pressure in the application should be 80% or less than the rated relief valve pressure. For example, if the working pressure needed is 160 Bar, a relief valve rated at 200 Bar should be selected. (160 divided by 0.8).
Distributor Power Unit Program

- 3" DC MOTOR
  - K-19 adaptor kit needed to mount to endhead

- 4.5" DC MOTOR

- HIGH POWER DC MOTOR
  - K-19 adaptor kit needed to mount to endhead

- NEMA C-FACE
  - AC MOTOR (US)
    - KM96 or KM97 adaptor kit needed to mount to endhead

- AC MOTOR
  - K-187 adaptor kit needed to mount to endhead

- ISO AC MOTOR
  - KM98-XX adaptor kit needed to mount to endhead

- DIRECTIONAL CONTROL U VALVE
- MANIFOLD CARTRIDGE VALVE
- D03 CETOP VALVE ADAPTOR

- STEEL RESERVOIR
  - 4.75" (120mm) Diameter

- STEEL RESERVOIR
  - 6.7" (170mm) Offset

- PLASTIC RESERVOIR
  - 5.0" (127mm) Square

- PLASTIC RESERVOIR
  - 6.7" (170mm) Offset

- INDUSTRIAL RESERVOIR

- OIL PICK-UP

- SINGLE-STAGE PUMP

- 2-STAGE PUMP

- ENDHEAD

Stone

www.stonehydraulics.com
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.

Please contact factory for KM05 and KM06
KM05+08 3.0" 12V DC MOTOR PERFORMANCE

KM06+09 3.0" 12-24V DC MOTOR PERFORMANCE

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

Please contact factory for KM05 and KM06

Please contact factory for KM05 and KM06
Suitable for use with IEC 80 Frame motors with an 80C (B14) interface and a 19mm diameter shaft, measuring 40mm long from mounting 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.
Suitable for use with IEC 100 frame motors with an 110C (B14) interface and a 28mm diameter shaft, measuring 60mm long from mounting face.

Performance at 45 CST (200 SSU) and 90% mechanical efficiency. 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 11 LPM, use a 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.

KM 78 duty cycle S3-30%, Class F insulation, B3 form, Cap Start only.
KM53-58  

CONTINUOUS DUTY  
3 PH 2 POLE AC MOTORS

<table>
<thead>
<tr>
<th>Motor</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
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<td>90 mm</td>
<td>235 mm</td>
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<tr>
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<td>181 mm</td>
<td>140 mm</td>
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Stone uses a network of qualified suppliers to ensure availability. There are minor dimensional and cosmetic differences between vendor’s products.

KM78 duty cycle 53-30%, Class F insulation, 83 form, Cap Start only.

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

KM54, 0.75kW, 1450 RPM, 3PH 230/400V 50Hz

<table>
<thead>
<tr>
<th>Motor/Pump</th>
<th>KP08</th>
<th>KP10</th>
<th>KP12</th>
<th>KP14</th>
<th>KP20</th>
<th>KP35</th>
<th>KP40</th>
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<td>2.0 LPM 175 BAR</td>
<td>2.5 LPM 175 BAR</td>
<td>3.0 LPM 175 BAR</td>
<td>4.0 LPM 175 BAR</td>
<td>5.0 LPM 175 BAR</td>
<td>7.0 LPM 175 BAR</td>
<td>8.0 LPM 175 BAR</td>
<td>11.0 LPM 175 BAR</td>
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<td>KM55, 0.75kW</td>
<td>2.0 LPM 175 BAR</td>
<td>2.5 LPM 175 BAR</td>
<td>3.0 LPM 175 BAR</td>
<td>4.0 LPM 175 BAR</td>
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<td>7.0 LPM 175 BAR</td>
<td>8.0 LPM 175 BAR</td>
<td>11.0 LPM 175 BAR</td>
<td>13.0 LPM 175 BAR</td>
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<tr>
<td>KM56, 1.1kW</td>
<td>2.0 LPM 175 BAR</td>
<td>2.5 LPM 175 BAR</td>
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<td>4.0 LPM 175 BAR</td>
<td>5.0 LPM 175 BAR</td>
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KM54, 0.75kW, 1450 RPM, 3PH 230/400V 50Hz

Performance at 45 CST (200 SSU) and 90% mechanical efficiency. 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 11 LPM, use a 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.

KM78 duty cycle 53-30%, Class F insulation, 83 form, Cap Start only.

3 PH 4 POLE AC MOTORS

<table>
<thead>
<tr>
<th>Motor</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
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<td>140 mm</td>
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Stone uses a network of qualified suppliers to ensure availability. There are minor dimensional and cosmetic differences between vendor’s products.

KM78 duty cycle 53-30%, Class F insulation, 83 form, Cap Start only.

Performance at 45 CST (200 SSU) and 90% mechanical efficiency. 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 11 LPM, use a 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.

KM78 duty cycle 53-30%, Class F insulation, 83 form, Cap Start only.

www.stonehydraulics.com
CONTINUOUS DUTY
1PH 4 POLE AC MOTORS

Motor | A | B | C | D | E | F | G | H
--- | --- | --- | --- | --- | --- | --- | --- | ---
KM74 | 66 mm | 90 mm | 235 mm | 136 mm | 71 mm | 109 mm | 163 mm | 112 mm
KM75 | 65 mm | 100 mm | 266 mm | 176 mm | 90 mm | 128 mm | 195 mm | 140 mm
KM76 | 65 mm | 100 mm | 266 mm | 176 mm | 90 mm | 128 mm | 195 mm | 140 mm
KM77 | 65 mm | 125 mm | 296 mm | 176 mm | 90 mm | 128 mm | 202 mm | 140 mm
KM78 | 65 mm | 125 mm | 296 mm | 176 mm | 90 mm | 128 mm | 202 mm | 140 mm

**Motor/Pump**

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<th>KG08</th>
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</tr>
<tr>
<td>1450 RPM</td>
<td>340 BAR</td>
<td>205 BAR</td>
<td>140 BAR</td>
<td>70 BAR</td>
<td>50 BAR</td>
<td>40 BAR</td>
<td>30 BAR</td>
<td>25 BAR</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KM77 1.5kW</td>
<td>2.1 LPM</td>
<td>2.6 LPM</td>
<td>3.3 LPM</td>
<td>3.6 LPM</td>
<td>4.0 LPM</td>
<td>5.2 LPM</td>
<td>6.5 LPM</td>
<td>8.2 LPM</td>
<td>10.4 LPM</td>
<td>12.5 LPM</td>
<td>14.8 LPM</td>
</tr>
<tr>
<td>1450 RPM</td>
<td>350 BAR</td>
<td>280 BAR</td>
<td>225 BAR</td>
<td>155 BAR</td>
<td>100 BAR</td>
<td>70 BAR</td>
<td>50 BAR</td>
<td>40 BAR</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KM78 2.2kW</td>
<td>2.6 LPM</td>
<td>3.3 LPM</td>
<td>3.6 LPM</td>
<td>4.0 LPM</td>
<td>5.2 LPM</td>
<td>6.5 LPM</td>
<td>8.2 LPM</td>
<td>10.4 LPM</td>
<td>12.5 LPM</td>
<td>14.8 LPM</td>
<td>17.0 LPM</td>
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<tr>
<td>1450 RPM</td>
<td>350 BAR</td>
<td>325 BAR</td>
<td>265 BAR</td>
<td>205 BAR</td>
<td>165 BAR</td>
<td>130 BAR</td>
<td>100 BAR</td>
<td>80 BAR</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Performance at 45 CST (200 SSU) and 95% mechanical efficiency. 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 11 LPM, use a 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.

KM 78 duty cycle S3-30%, Class F insulation, B3 form, Cap Start only.

Note: Stone uses a network of qualified suppliers to ensure availability. There are minor dimensional and cosmetic differences between vendor's products.
4.5" 12V DC MOTOR (STD. & EXT. DUTY) PERFORMANCE & DUTY CYCLE

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

KMD2 Flow/AMP vs. Pressure Curve

KMD2 Flow/AMP vs. Pressure Curve

KMD5 Flow/AMP vs. Pressure Curve

KMD5 Flow/AMP vs. Pressure Curve

KMD2 Motor Duty Cycle

KMD2 Motor Duty Cycle

KMD5 Motor Duty Cycle

KMD5 Motor Duty Cycle

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

S3 Duty Rating on time. (% of 5 minutes)
HI-POWER 12V DC 50 IN-LB
PERMANENT MAGNET MOTOR

KMP2

11.67" [295mm]
7.88" [200mm]
3.05" [77mm]

Flow/Amp vs. Pressure Curve

Motor Duty Cycle

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

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

KMP5

13.75" [350mm]
6.20" [160mm]
3.05" [77mm]

Flow/Amp vs. Pressure Curve

Motor Duty Cycle

For flows over 3 U.S. GPM (11 LPM) use 1413-AA filter
E-Series Externally Mounted Version PG Pumps are available. For more information, contact Stone Technical Service.


<table>
<thead>
<tr>
<th>KIT NO.</th>
<th>CC REV</th>
<th>CIPR</th>
<th>MM</th>
<th>INCH</th>
<th>MAX. RPM</th>
<th>CONT. PSI/BAR</th>
<th>INTERMIT. PSI/BAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>KP08</td>
<td>0.8</td>
<td>0.049</td>
<td>57</td>
<td>2.25</td>
<td>5000</td>
<td>5000/350</td>
<td>5000/350</td>
</tr>
<tr>
<td>KP10</td>
<td>1.0</td>
<td>0.061</td>
<td>58</td>
<td>2.28</td>
<td>5000</td>
<td>5000/350</td>
<td>5000/350</td>
</tr>
<tr>
<td>KP12</td>
<td>1.2</td>
<td>0.073</td>
<td>59</td>
<td>2.32</td>
<td>5000</td>
<td>5000/350</td>
<td>5000/350</td>
</tr>
<tr>
<td>KP16</td>
<td>1.6</td>
<td>0.098</td>
<td>60</td>
<td>2.38</td>
<td>5000</td>
<td>5000/350</td>
<td>5000/350</td>
</tr>
<tr>
<td>KP20</td>
<td>2.0</td>
<td>0.122</td>
<td>62</td>
<td>2.44</td>
<td>4000</td>
<td>5000/350</td>
<td>5000/350</td>
</tr>
<tr>
<td>KP25</td>
<td>2.5</td>
<td>0.153</td>
<td>64</td>
<td>2.52</td>
<td>4000</td>
<td>4600/320</td>
<td>5000/350</td>
</tr>
<tr>
<td>KP31</td>
<td>3.1</td>
<td>0.189</td>
<td>67</td>
<td>2.62</td>
<td>4000</td>
<td>3600/250</td>
<td>5000/350</td>
</tr>
<tr>
<td>KP40</td>
<td>4.0</td>
<td>0.244</td>
<td>70</td>
<td>2.75</td>
<td>4000</td>
<td>3000/200</td>
<td>4000/240</td>
</tr>
<tr>
<td>KP50</td>
<td>5.0</td>
<td>0.305</td>
<td>74</td>
<td>2.90</td>
<td>4000</td>
<td>2300/160</td>
<td>3200/220</td>
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<tr>
<td>KP63</td>
<td>6.3</td>
<td>0.384</td>
<td>79</td>
<td>3.11</td>
<td>3200</td>
<td>1800/125</td>
<td>2500/175</td>
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<tr>
<td>KP80</td>
<td>8.0</td>
<td>0.488</td>
<td>86</td>
<td>3.37</td>
<td>2400</td>
<td>1500/100</td>
<td>2000/140</td>
</tr>
</tbody>
</table>

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.
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.


### Unload Setting

<table>
<thead>
<tr>
<th>Kit No.</th>
<th>Unload Setting</th>
<th>Adjustment Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>KU2</td>
<td>300 PSI</td>
<td>300-650 PSI (20-40 BAR)</td>
</tr>
<tr>
<td>KU4</td>
<td>620 PSI</td>
<td>500-1000 PSI (35-70 BAR)</td>
</tr>
</tbody>
</table>

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.
<table>
<thead>
<tr>
<th>Kit Number</th>
<th>Description</th>
<th>Page Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>KC01A-L</td>
<td>Relief, Check, Solenoid Release Valve Kit</td>
<td>Page 45</td>
</tr>
<tr>
<td>KC03</td>
<td>Relief, Check, Manual Release Valve Kit Direct Acting</td>
<td>Page 46</td>
</tr>
<tr>
<td>KC05</td>
<td>Relief, Check, Manual Release Valve Kit With Micro-Switch</td>
<td>Page 47</td>
</tr>
<tr>
<td>KC07</td>
<td>Relief &amp; Check Valve Kit</td>
<td>Page 48</td>
</tr>
<tr>
<td>KC08</td>
<td>Relief Valve Kit</td>
<td>Page 49</td>
</tr>
<tr>
<td>KC14</td>
<td>Relief, Check Pneumatic Release Valve Kit</td>
<td>Page 50</td>
</tr>
<tr>
<td>KC15</td>
<td>Relief, Check Manual Release Valve Kit</td>
<td>Page 51</td>
</tr>
<tr>
<td>KC18</td>
<td>Relief, Check &amp; Lever Release Valve Kit</td>
<td>Page 52</td>
</tr>
<tr>
<td>KFC2-8</td>
<td>Pressure Compensated Flow Control</td>
<td>Page 53</td>
</tr>
</tbody>
</table>

Kit includes 4 color-coded relief springs as follows: Blue (500-1000 PSI [34.5-69 Bar]), Green (1000-2000 PSI [69-138 Bar]), Red (2000-3000 PSI [138-207 Bar]), Black (3000-4000 PSI [207-276 Bar]).

Optional: (4000-5000 PSI [276-345 Bar]) Relief valve kit available, order part no. K-175.

Optional: Order JF-0048 spring locator when using the blue (500-1000 PSI [34.5-69 Bar]) spring.

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

If using smart start with stud terminal coil, order 4088-AB.
Kit includes 4 color-coded relief springs as follows: Blue (500-1000 PSI) [34.5-69 Bar], Green (1000-2000 PSI) [69-138 Bar], Red (2000-3000 PSI) [138-207 Bar], Black (3000-4000 PSI) [207-276 Bar].

Optional: (4000-5000 PSI) [276-345 Bar] Relief valve kit available, order part no. K-175.

Optional: Order JF-0048 spring locator when using the blue (500-1000 PSI) [34.5-69 Bar] spring.

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

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

Kit includes 4 color-coded relief springs as follows: Blue (500-1000 PSI) [34.5-69 Bar], Green (1000-2000 PSI) [69-138 Bar], Red (2000-3000 PSI) [138-207 Bar], Black (3000-4000 PSI) [207-276 Bar].

Optional: (4000-5000 PSI) [276-345 Bar] Relief valve kit available, order part no. K-175.

Optional: Order JF-0048 spring locator when using the blue (500-1000 PSI) [34.5-69 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).
Kit includes 4 color-coded relief springs as follows: Blue (500-1000 PSI) [34.5-69 Bar], Green (1000-2000 PSI) [69-138 Bar], Red (2000-3000 PSI) [138-207 Bar], Black (3000-4000 PSI) [207-276 Bar].

Optional: (4000-5000 PSI) [276-345 Bar] Relief valve kit available, order part no. K-175.

Optional: order JF-0048 spring locator when using the blue (500-1000 PSI) [34.5-69 Bar] spring.
**RELIEF, CHECK PNEUMATIC RELEASE VALVE KIT**

Kit includes 4 color-coded relief springs as follows: Blue (500-1000 PSI) [34.5-69 Bar], Green (1000-2000 PSI) [69-138 Bar], Red (2000-3000 PSI) [138-207 Bar], Black (3000-4000 PSI) [207-276 Bar].

Optional: (4000-5000 PSI) [276-345 Bar] Relief valve kit available, order part no. K-175.

Optional: order JF-0048 spring locator when using the blue (500-1000 PSI) [34.5-69 Bar] spring.

Valve is rated to release at 3000 PSI [207 Bar]. Max. at 90 PSI [6 Bar] air pressure.

---

**RELIEF, CHECK MANUAL RELEASE VALVE KIT**

Kit includes 4 color-coded relief springs as follows: Blue (500-1000 PSI) [34.5-69 Bar], Green (1000-2000 PSI) [69-138 Bar], Red (2000-3000 PSI) [138-207 Bar], Black (3000-4000 PSI) [207-276 Bar].

Optional: (4000-5000 PSI) [276-345 Bar] Relief valve kit available, order part no. K-175.

Optional: order JF-0048 spring locator when using the blue (500-1000 PSI) [34.5-69 Bar] spring.

Release bracket may be rotated in 90° increments at assembly.
RELIEF, CHECK & LEVER RELEASE VALVE KIT

Kit includes 4 color-coded relief springs as follows: Blue (500-1000 PSI) [34.5-69 Bar], Green (1000-2000 PSI) [69-138 Bar], Red (2000-3000 PSI) [138-207 Bar], Black (3000-4000 PSI) [207-276 Bar].

Optional: (4000-5000 PSI) [276-345 Bar] Relief valve kit available, order part no. K-175.

Optional: order JF-0048 spring locator when using the blue (500-1000 PSI) [34.5-69 Bar] spring.

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

PRESSURE COMPENSATED FLOW CONTROL

Metering accuracy typically ±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

<table>
<thead>
<tr>
<th>Kit Number</th>
<th>Description</th>
<th>Page Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>KR12-15</td>
<td>4.75”/120mm Diameter Round Steel</td>
<td>Page 55</td>
</tr>
<tr>
<td>KR22-25</td>
<td>5.0”/127mm Square Plastic</td>
<td>Page 56</td>
</tr>
<tr>
<td>KR40-46</td>
<td>6.7”/170mm Diameter Transition Style Steel</td>
<td>Page 57</td>
</tr>
<tr>
<td>KR50-56</td>
<td>6.7”/170mm Offset Plastic</td>
<td>Page 58</td>
</tr>
<tr>
<td>KR71</td>
<td>20 Litres Floor Mount</td>
<td>Page 59</td>
</tr>
<tr>
<td>KR72</td>
<td>Tank Neck-Ring Kit</td>
<td>Page 60</td>
</tr>
<tr>
<td>KR73</td>
<td>50 Litres Vertical Floor Mount</td>
<td>Page 61</td>
</tr>
<tr>
<td>K-140</td>
<td>Industrial Reservoir Cover Kit</td>
<td>Page 62</td>
</tr>
<tr>
<td>KH</td>
<td>Plumbing Kit Horizontally Mounted Units</td>
<td>Page 63</td>
</tr>
<tr>
<td>KV</td>
<td>Plumbing Kit Vertically Mounted Units</td>
<td>Page 64</td>
</tr>
</tbody>
</table>

**4.75”/120MM DIAMETER ROUND STEEL**

<table>
<thead>
<tr>
<th>Kit No.</th>
<th>Nom.-Cap. (qt.)</th>
<th>Tank Length</th>
<th>Vertical Useable Oil Capacity (cu in)</th>
<th>Horizontal Useable Oil Capacity (cu in)</th>
</tr>
</thead>
<tbody>
<tr>
<td>KR12</td>
<td>2</td>
<td>214</td>
<td>8.50</td>
<td>1.4</td>
</tr>
<tr>
<td>KR14</td>
<td>3</td>
<td>305</td>
<td>12.00</td>
<td>2.4</td>
</tr>
<tr>
<td>KR15</td>
<td>4</td>
<td>368</td>
<td>14.50</td>
<td>2.6</td>
</tr>
</tbody>
</table>
5.0”/127MM SQUARE PLASTIC

6.7”/170MM DIAMETER TRANSITION STYLE STEEL

<table>
<thead>
<tr>
<th>Kit No.</th>
<th>Nom. Cap. (Qt.</th>
<th>Tank Length</th>
<th>Useable Oil Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>MM</td>
<td>Inch</td>
</tr>
<tr>
<td>KR22-25</td>
<td></td>
<td>2</td>
<td>216</td>
</tr>
<tr>
<td>KR24-35</td>
<td></td>
<td>3</td>
<td>280</td>
</tr>
<tr>
<td>KR25-45</td>
<td></td>
<td>4</td>
<td>356</td>
</tr>
</tbody>
</table>

Foot included on 3.6 L and larger.
Shimming may be required at installation.
Do not use KR40 with duplex pump unit.

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

Shimming may be required at installation.

Do not use KR50 or KR55 with duplex pump units.

<table>
<thead>
<tr>
<th>TANK LENGTH</th>
<th>USEABLE OIL CAPACITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>KIT NO.</td>
<td>NOM. CAP. (QT)</td>
</tr>
<tr>
<td>KR50</td>
<td>1.0</td>
</tr>
<tr>
<td>KR55</td>
<td>1.2</td>
</tr>
<tr>
<td>KR51</td>
<td>1.5</td>
</tr>
<tr>
<td>KR52</td>
<td>2.0</td>
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<tr>
<td>KR54</td>
<td>2.5</td>
</tr>
<tr>
<td>KR53</td>
<td>3.0</td>
</tr>
<tr>
<td>KR54</td>
<td>4.0</td>
</tr>
</tbody>
</table>
For use with self-manufactured steel reservoirs.
INDUSTRIAL RESERVOIR COVER KIT

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

PLUMBING KIT
HORizontally MOUNTED UNITS

Parts may be assembled in either orientation depending on mounting of power unit.
For flows over 11 LPM use 1413-AA large filter.
Parts may be assembled in either orientation depending on mounting of power unit.

For flows over 11 LPM use 1413-AA filter.
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.

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.
### Electrical Accessories

<table>
<thead>
<tr>
<th>Kit Number</th>
<th>Description</th>
<th>Page Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>KG11</td>
<td>Control Handset For Single-Acting Units</td>
<td>Page 69</td>
</tr>
<tr>
<td>KG11A</td>
<td>Control Handset For Single-Acting Units For Smart Start</td>
<td>Page 70</td>
</tr>
<tr>
<td>KG12</td>
<td>Control Handset For Double-Acting Units</td>
<td>Page 71</td>
</tr>
<tr>
<td>KG12A</td>
<td>Control Handset For Double-Acting Units For Smart Start</td>
<td>Page 72</td>
</tr>
<tr>
<td>KG13</td>
<td>Control Handset For Double-Acting Units</td>
<td>Page 73</td>
</tr>
<tr>
<td>KG13A</td>
<td>Control Handset For Double-Acting Units For Smart Start</td>
<td>Page 74</td>
</tr>
<tr>
<td>KS1-4</td>
<td>Intermittent Duty Start Solenoids</td>
<td>Page 75</td>
</tr>
<tr>
<td>KS5</td>
<td>Smart Start Solenoids Intermittent Duty</td>
<td>Page 76</td>
</tr>
<tr>
<td>TA-01-B</td>
<td>Pressure Alarm</td>
<td>Page 77</td>
</tr>
</tbody>
</table>

**CONTROL HANDSET FOR SINGLE-ACTING UNITS**

DC voltage only.

To be used with DC-20SF power units and KS_, and KC07C or KC07F 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

<table>
<thead>
<tr>
<th>Europe</th>
<th>Wire Color Code</th>
<th>United States</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BROWN</td>
<td>GREEN</td>
<td>POWER</td>
</tr>
<tr>
<td></td>
<td>BLUE</td>
<td>WHITE</td>
<td>START</td>
</tr>
<tr>
<td></td>
<td>GREEN/YELLOW</td>
<td>BLACK</td>
<td>DOWN</td>
</tr>
</tbody>
</table>
CONTROL HANDSET FOR SINGLE-ACTING UNITS FOR SMART START

- DC voltage only.
- To be used with DC–20SF power units and KG01C or KG01F valve kit, using KSS 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.

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.

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**电线颜色**

<table>
<thead>
<tr>
<th>欧洲</th>
<th>美国</th>
<th>功能</th>
</tr>
</thead>
<tbody>
<tr>
<td>棕色</td>
<td>绿色</td>
<td>动力</td>
</tr>
<tr>
<td>蓝色</td>
<td>白色</td>
<td>启动</td>
</tr>
<tr>
<td>绿色/黄色</td>
<td>黑色</td>
<td>下降</td>
</tr>
</tbody>
</table>
CONTROL HANDSET FOR DOUBLE-ACTING UNITS FOR SMART START

**KG12A**

- 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**

- 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**

<table>
<thead>
<tr>
<th>EUROPE</th>
<th>UNITED STATES</th>
<th>FUNCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>BROWN</td>
<td>GREEN</td>
<td>POWER</td>
</tr>
<tr>
<td>BLUE</td>
<td>WHITE</td>
<td>UP</td>
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<tr>
<td>GREEN/YELLOW</td>
<td>BLACK</td>
<td>DOWN</td>
</tr>
<tr>
<td>BLACK</td>
<td>RED</td>
<td>START</td>
</tr>
</tbody>
</table>
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.

INTERMITTENT DUTY START SOLENOIDS

<table>
<thead>
<tr>
<th>KIT NO.</th>
<th>VOLTAGE</th>
<th>SERVICE P/N</th>
<th>UL RECOGNIZED</th>
</tr>
</thead>
<tbody>
<tr>
<td>KS3</td>
<td>12 VDC</td>
<td>1964-AA</td>
<td>YES</td>
</tr>
<tr>
<td>KS4</td>
<td>24 VDC</td>
<td>2150-AA</td>
<td>YES</td>
</tr>
</tbody>
</table>

Note: Stone uses a network of qualified suppliers to ensure availability. There are minor dimensional and cosmetic differences between vendor’s products.
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) K-217 for KMP2, 5 and KMD8.
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-AAA wiring adaptor.

PRESSURE ALARM

TA-01-B

Sounds when pressure is present, indicates that the lift is activated, operates at 12 and 24 VDC, 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.
DECIMAL & MILLIMETER EQUIVALENTS

<table>
<thead>
<tr>
<th>DECIMALS</th>
<th>MILLIMETERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/64</td>
<td>.015625</td>
</tr>
<tr>
<td>1/32</td>
<td>.03125</td>
</tr>
<tr>
<td>3/64</td>
<td>.046875</td>
</tr>
<tr>
<td>1/16</td>
<td>.0625</td>
</tr>
<tr>
<td>5/32</td>
<td>.15625</td>
</tr>
<tr>
<td>11/32</td>
<td>.34375</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DECIMALS</th>
<th>MILLIMETERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>23/64</td>
<td>.359375</td>
</tr>
<tr>
<td>25/64</td>
<td>.390625</td>
</tr>
<tr>
<td>31/64</td>
<td>.484375</td>
</tr>
<tr>
<td>1/2</td>
<td>.5000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>APPROXIMATE CONVERSION FORMULAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>LENGTH</td>
</tr>
<tr>
<td>millimeter (mm) X 0.03937 = inch</td>
</tr>
<tr>
<td>centimeter (cm) 10 mm X 0.3937 =</td>
</tr>
<tr>
<td>meter (m) 1000 mm X 3.28 = foot</td>
</tr>
<tr>
<td>kilometer (km) 1000 m X 0.62 =</td>
</tr>
<tr>
<td>AREA</td>
</tr>
<tr>
<td>millimeter2 (mm2) X 0.00155 = inch</td>
</tr>
<tr>
<td>centimeter2 (cm2) X 0.155 = inch</td>
</tr>
<tr>
<td>meter2 (m2) 1000 m2 X 1.09 = yard</td>
</tr>
<tr>
<td>hectare (ha) 10,000 m2 X 0.01 =</td>
</tr>
<tr>
<td>VOLUME</td>
</tr>
<tr>
<td>centimeter3 (cm3) X 0.000155 = inch</td>
</tr>
<tr>
<td>liter (l) 1000 cm3 X 0.001 = liter</td>
</tr>
<tr>
<td>milliliter (ml) X 0.035 = ounce</td>
</tr>
<tr>
<td>MASS</td>
</tr>
<tr>
<td>gram (g) 1000 g X 1 = kilogram</td>
</tr>
<tr>
<td>kilogram (kg) 1000 g X 2.2 = pound</td>
</tr>
<tr>
<td>metric ton (t) 1000 kg X 1.1 = ton</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SI* CONVERSION FORMULAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>FORCE (N = kg o m/s²)</td>
</tr>
<tr>
<td>Newton (N) X 0.225 = pound</td>
</tr>
<tr>
<td>kilonewton (kN) X 225 = pound</td>
</tr>
<tr>
<td>TORQUE</td>
</tr>
<tr>
<td>Newton meter (Nm) X 0.74 = ft l</td>
</tr>
<tr>
<td>PRESSION (Pa = N/m²)</td>
</tr>
<tr>
<td>kilopascal (kPa) X 9.02 = in H2O</td>
</tr>
<tr>
<td>megapascal (MPa) X 145 = p.s.i.</td>
</tr>
<tr>
<td>POWER (w = W)</td>
</tr>
<tr>
<td>watts (w) X 0.74 = ft lb/s</td>
</tr>
<tr>
<td>TEMPERATURE</td>
</tr>
<tr>
<td>°C = °F - 32 / 1.8</td>
</tr>
</tbody>
</table>

NOTES:

1 mm = 0.03937" * System International (Modern Metric System)
LIMITED WARRANTY

FOR A PERIOD OF TIME STATED BELOW, SPX HYDRAULIC TECHNOLOGIES will repair or replace, free of charge, any products SPX Hydraulic Technologies has determined, upon inspection by SPX Hydraulic Technologies, to be faulty due to defective material and/or workmanship. SPX Hydraulic Technologies 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 Hydraulic Technologies for any loss or damage of SPX Hydraulic Technologies arising out of (i) through (iv) above and any breach by Buyer of its covenants and obligations under the SPX Hydraulic Technologies 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 Hydraulic Technologies; and, SPX Hydraulic Technologies shall not be liable for contingent liabilities arising out of the improper function of any product, nor shall SPX Hydraulic Technologies be liable for any claim for labor or consequential damage or incidental damages resulting from, arising out of or in connection with the testing, use, operation, replacement or repair of any SPX Hydraulic Technologies product or part. SPX HYDRAULIC TECHNOLOGIES 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 Hydraulic Technologies has not authorized anyone to make representation of warranty other than the warranty contained herein. Under no circumstances shall SPX Hydraulic Technologies 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 Hydraulic Technologies 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 Hydraulic Technologies will allow a maximum of two weeks (10 working days) from the date of notification for the Buyer to advise SPX Hydraulic Technologies whether to: 1) Return, 2) Repair or 3) Scrap the product. If SPX Hydraulic Technologies does not receive written notification within this two-week period, SPX Hydraulic Technologies 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 Hydraulic Technologies is not responsible for misuse or misapplication of product.

SPX HYDRAULIC TECHNOLOGIES QUALITY POLICY

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

SPX Hydraulic Technologies is an ISO 9001:2000 certified facility.