Movotec® Lift Systems
SUSPA® - The Company

SUSPA® is a world leading supplier of lift, dampering and adjustment mechanisms. Thousands of SUSPA® employees across the globe work every day to ensure their customers receive products of the highest quality and the best value. SUSPA® is known for innovating solutions that meet specific customer needs, and SUSPA® is also highly recognized for providing outstanding customer service.

Why Choose Movotec®?

Why do so many manufacturers of height adjustable work benches, work stations and work surfaces choose Movotec®?

Technology

Years of experience, engineering and research have resulted in a product that goes well beyond the competition. Whether it be a proprietary process or patented product, Movotec® remains the technology leader.

Sealing Technology - Providing superior sealing technology means a product that performs at peak levels, requires no maintenance, and provides years and years of flawless performance. Only Movotec® uses its unique combination of engineered fluids, sealing surfaces and sealing materials.

Proprietary Manufacturing Operations - Much of Movotec’s superior performance is the result of highly refined manufacturing operations. Years of experience and engineering have resulted in consistently producing a highly reliable product. Our customers can feel the difference when they grasp the crank handle or press the see the results.

Fluid Properties - Movotec® NT15 is a specially formulated oil that is clear, odorless, reduces friction, has superior sealing qualities, and is safe for all applications, including food processing.

Motor Technology - Do the comparison: Put any motorized lift system next to a Movotec® System and compare noise level, speed, ease of use and features. Movotec® provides the motor control technology designed for years of service, with programmable features and built-in intelligence.

Patented Products/Features - Many times it is the unique products and features offered that keep SUSPA® Movotec® customers among those with the highest level of customer satisfaction. The Movotec® ATU and numerous cylinders are patented and are used in SUSPA® Movotec® exclusively.

Value

No other height adjustment system provider compares to Movotec® in terms of providing overall value. The Movotec® team understands the importance of providing a high quality product, delivered in a timely fashion.

Service - Taking pride in every aspect of the order fulfillment process and providing exceptional customer service is part of the SUSPA Movotec® culture.

Support - Movotec® Lift Systems are backed with a knowledgeable staff ready to meet the needs of each individual customer. Comprehensive design implementation (CAD drawings and 3-D models), installation and operating instructions are available online 24/7 to ensure all customer expectations are met.

Warranty - As part of SUSPA’s quality sales and exceptional service, all Movotec® products come with a factory warranty. It’s SUSPA’s way of making sure the products delivered to our valued customers perform as promised. For details about the SUSPA Movotec® warranty, please see “Terms of Sale” on our website at http://www.suspa.com/us/footer/terms-of-trade/

Quality - For the last few decades and continuing today, SUSPA® products are recognized in the industry for top quality. Movotec® products are engineered to the highest quality utilizing ISO9001 standards. In addition, Movotec® products are manufactured at a production facility that meets the ISO/TS 16949 quality standards. The highest quality products are the result of employee pride, empowerment, customer loyalty and a commitment to be the best.

Contents

1 “Bolt-On” Lift System 3
2 Dual Drive Lift System 5
3 Corner Leg System 7
4 ATU Lift System 9
5 Pumps 11
6 Guided Cylinders 13
7 Un-Guided Cylinders 15
8 Crank Handle Options 17
9 Glides, Casters and Brackets 18
10 Switches and Accessories 20
11 Custom System Specification Guide 21
12 Design Guidelines 23
13 Standards and Compliance 25
“Bolt-On” Systems are the most popular configurations of Movotec® components - ideal for transforming static work surfaces into dynamic ones. These Lift Systems have four “Bolt-On” lift cylinders and are available in both hand-crank and motorized models.

System Includes
- A Crank or Motor Driven System
- Four “Bolt-On” lift cylinders
- Two 2.5m (8 ft.) and two 3m (10 ft.) sections of flexible tubing
- Four glides
- Drilling templates, tubing clips and cable ties
- Installation and operating instructions

Movotec® “Bolt-On” lift systems are readily available, shipped completely assembled and ready for installation.

Lift System Dimensions

<table>
<thead>
<tr>
<th>System Lift Capacity</th>
<th>Adjustment Range*</th>
<th>Crank-Driven System (120V) Part Number</th>
<th>Motor-Driven System (230V)** Part Number</th>
<th>Includes</th>
<th>Includes Cylinders (x4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>340 / 750</td>
<td>150 / 5.9</td>
<td>MLS-00001</td>
<td>MLS-00009E</td>
<td>Q4809</td>
<td>CB415</td>
</tr>
<tr>
<td>340 / 750</td>
<td>200 / 7.9</td>
<td>MLS-00002</td>
<td>MLS-00010E</td>
<td>Q4812</td>
<td>CB420</td>
</tr>
<tr>
<td>340 / 750</td>
<td>300 / 11.8</td>
<td>MLS-00003</td>
<td>MLS-00011E</td>
<td>Q4818</td>
<td>CB431</td>
</tr>
<tr>
<td>340 / 750</td>
<td>400 / 15.7</td>
<td>MLS-00004</td>
<td>MLS-00012E</td>
<td>Q4824</td>
<td>CB440</td>
</tr>
<tr>
<td>454 / 1000</td>
<td>150 / 5.9</td>
<td>MLS-00005</td>
<td>MLS-00013E</td>
<td>Q4612</td>
<td>CB415</td>
</tr>
<tr>
<td>454 / 1000</td>
<td>200 / 7.9</td>
<td>MLS-00006</td>
<td>MLS-00014E</td>
<td>Q4615</td>
<td>CB420</td>
</tr>
<tr>
<td>454 / 1000</td>
<td>300 / 11.8</td>
<td>MLS-00007</td>
<td>MLS-00015E</td>
<td>Q4623</td>
<td>CB431</td>
</tr>
<tr>
<td>454 / 1000</td>
<td>400 / 15.7</td>
<td>MLS-00008</td>
<td>MLS-00016E</td>
<td>Q4631</td>
<td>CB440</td>
</tr>
<tr>
<td>590 / 1300</td>
<td>150 / 5.9</td>
<td>MLS-00009</td>
<td>MLS-00018E</td>
<td>Q4615</td>
<td>CB615</td>
</tr>
<tr>
<td>590 / 1300</td>
<td>230 / 9.1</td>
<td>MLS-00010</td>
<td>MLS-00019E</td>
<td>Q4623</td>
<td>CB631</td>
</tr>
<tr>
<td>590 / 1300</td>
<td>300 / 11.8</td>
<td>MLS-00011</td>
<td>MLS-00020E</td>
<td>Q4631</td>
<td>CB631</td>
</tr>
<tr>
<td>590 / 1300</td>
<td>385 / 15.5</td>
<td>MLS-00012</td>
<td>MLS-00021E</td>
<td>Q4639</td>
<td>CB640</td>
</tr>
</tbody>
</table>

* The adjustment range is reduced for motorized systems by 6-8mm

** 230V System supplied with Schuko plugs

* See section 8, pg.17 for more crank handle options
The Movotec® Dual Drive “Bolt-On” Lift Systems can be supplied with 6 or 8 cylinders and can lift up to 1134 kg. / 2500 lbs.

**System Includes**
- Two synchronized Motor Driven Systems with controller and switch
- 6 cylinder “Bolt-On” lift systems use one 2.5m (8ft.) and two 3m (10ft.) sections of flexible tubing per pump
- 8 cylinder “Bolt-On” lift systems use two 2.5m (8ft.) and two 3m (10ft.) sections of flexible tubing per pump
- Glides for each lift cylinder
- Drilling templates, tubing clips and cable ties
- Installation and operating instructions

Movotec® Dual Drive Lift Systems are shipped assembled and ready for installation.

**Lift System Dimensions**

<table>
<thead>
<tr>
<th># of Cylinders</th>
<th>System Lift Capacity (kg / lbs.)</th>
<th>Adjustment Range (mm / in.)</th>
<th>Motor-Driven System (120V) Part Number</th>
<th>Motor-Driven System (230V) Part Number</th>
<th>Includes Pump (x2)</th>
<th>Includes Cylinders (x6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>680 / 1500</td>
<td>150 / 5.9</td>
<td>MLS-00020</td>
<td>MLS-00028</td>
<td>Q3612</td>
<td>CB415</td>
</tr>
<tr>
<td></td>
<td>680 / 1500</td>
<td>200 / 7.9</td>
<td>MLS-00021</td>
<td>MLS-00029</td>
<td>Q3615</td>
<td>CB420</td>
</tr>
<tr>
<td></td>
<td>680 / 1500</td>
<td>300 / 11.8</td>
<td>MLS-00022</td>
<td>MLS-00030</td>
<td>Q3623</td>
<td>CB431</td>
</tr>
<tr>
<td></td>
<td>680 / 1500</td>
<td>400 / 15.7</td>
<td>MLS-00023</td>
<td>MLS-00031</td>
<td>Q3631</td>
<td>CB440</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th># of Cylinders</th>
<th>System Lift Capacity (kg / lbs.)</th>
<th>Adjustment Range (mm / in.)</th>
<th>Motor-Driven System (120V) Part Number</th>
<th>Motor-Driven System (230V) Part Number</th>
<th>Includes Pump (x2)</th>
<th>Includes Cylinders (x8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>907 / 2000</td>
<td>150 / 5.9</td>
<td>MLS-00024</td>
<td>MLS-00032</td>
<td>Q4612</td>
<td>CB415</td>
</tr>
<tr>
<td></td>
<td>907 / 2000</td>
<td>200 / 7.9</td>
<td>MLS-00025</td>
<td>MLS-00033</td>
<td>Q4615</td>
<td>CB420</td>
</tr>
<tr>
<td></td>
<td>907 / 2000</td>
<td>300 / 11.8</td>
<td>MLS-00026</td>
<td>MLS-00034</td>
<td>Q4623</td>
<td>CB431</td>
</tr>
<tr>
<td></td>
<td>907 / 2000</td>
<td>400 / 15.7</td>
<td>MLS-00027</td>
<td>MLS-00035</td>
<td>Q4631</td>
<td>CB440</td>
</tr>
<tr>
<td>8</td>
<td>1134 / 2500</td>
<td>150 / 5.9</td>
<td>MLS-00090</td>
<td>MLS-00094</td>
<td>Q4615</td>
<td>CB815</td>
</tr>
<tr>
<td></td>
<td>1134 / 2500</td>
<td>230 / 9.1</td>
<td>MLS-00091</td>
<td>MLS-00095</td>
<td>Q4623</td>
<td>CB831</td>
</tr>
<tr>
<td></td>
<td>1134 / 2500</td>
<td>300 / 11.8</td>
<td>MLS-00092</td>
<td>MLS-00096</td>
<td>Q4631</td>
<td>CB831</td>
</tr>
<tr>
<td></td>
<td>1134 / 2500</td>
<td>400 / 15.7</td>
<td>MLS-00093</td>
<td>MLS-00097</td>
<td>Q4639</td>
<td>CB840</td>
</tr>
</tbody>
</table>

* The adjustment range is reduced for motorized systems by 6-8mm
** 230V System supplied with Schuko plugs

Note: 5 and 7 cylinder systems provided on request. Larger load capacity available upon request

For drawings, CAD models and more information visit www.suspmovotec.com
Corner Leg Lift Systems are used with 40-45mm (1.6 in. - 1.8 in.) aluminum extrusion material to quickly and easily assemble a height adjustable table or work surface. Corner Leg systems come with four Corner Leg cylinders and hand-crank or motor drive unit.

**System Includes**
- A Crank or Motor Driven System with controller and switch
- Four Corner Leg Lift Cylinders
- Two 2.5m (8 ft.) and two 3m (10 ft.) sections of flexible tubing
- Four glides
- Tubing clips and cable ties
- Installation and operating instructions

Corner Leg Lift Systems are readily available and require minor assembly.

**Lift System Dimensions**

<table>
<thead>
<tr>
<th>System Lift Capacity</th>
<th>Adjustment Range* (mm / in.)</th>
<th>Crank-Driven System Part Number</th>
<th>Motor-Driven System (120V) Part Number</th>
<th>Motor-Driven System (230V) Part Number</th>
<th>Includes Pump</th>
<th>Includes Cylinders (x4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>340 / 750</td>
<td>150 / 5.9</td>
<td>MLS-00040</td>
<td>MLS-00044</td>
<td>MLS-00048</td>
<td>Q4809</td>
<td>CL450 (150)</td>
</tr>
<tr>
<td>340 / 750</td>
<td>200 / 7.9</td>
<td>MLS-00041</td>
<td>MLS-00045</td>
<td>MLS-00049</td>
<td>Q4812</td>
<td>CL450 (200)</td>
</tr>
<tr>
<td>340 / 750</td>
<td>300 / 11.8</td>
<td>MLS-00042</td>
<td>MLS-00046</td>
<td>MLS-00050</td>
<td>Q4818</td>
<td>CL450 (300)</td>
</tr>
<tr>
<td>340 / 750</td>
<td>400 / 15.7</td>
<td>MLS-00043</td>
<td>MLS-00047</td>
<td>MLS-00051</td>
<td>Q4824</td>
<td>CL450 (400)</td>
</tr>
</tbody>
</table>

* The adjustment range is reduced for motorized systems by 6-8mm.
** 230V System supplied with Schuko plug.

For drawings, CAD models and more information visit www.suspmovotec.com
4 ATU Lift System

The Aluminum Telescoping Upright (ATU) Lift System can be used with a variety of brackets, hardware, or other structural components to create a height adjustable workstation. With smooth telescoping movement and rigid structural integrity, the patented two-piece anodized aluminum extrusion was designed to support the application of our CE cylinders and crank or motor driven units. ATU lift systems have a 227 kg (500 lbs) lift capacity.

System Includes:
- A crank or motor drive system
- Two lift cylinders with ATU bracket
- Two ATU’s
- Two flexible tubing sections 0.9m (3 ft.) and 1.8m (6 ft.)

Adjustment Range *

<table>
<thead>
<tr>
<th>Adjustment Range</th>
<th>ATU Length</th>
<th>Crank Driven System</th>
<th>Motor Driven Unit (120V)</th>
<th>Motor Driven Unit (230V)inosulfate</th>
<th>Includes Pump</th>
<th>Includes Cylinder (x2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(mm / in.)</td>
<td>(mm / in.)</td>
<td>MLS-00060</td>
<td>MLS-00062</td>
<td>MLS-00064</td>
<td>Q2812</td>
<td>CE420</td>
</tr>
<tr>
<td>200 / 7.9</td>
<td>560 / 22.0</td>
<td>MLS-00063</td>
<td>MLS-00065</td>
<td>Q2818</td>
<td></td>
<td>CE430</td>
</tr>
<tr>
<td>300 / 11.8</td>
<td>600 / 23.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* The adjustment range is reduced for motorized systems by 6-8mm
** 230V System supplied with Schuko plug

Workstation Components and Kits
The Movotec® ATU workstation components and kits are intended to be used with a Movotec® ATU Lift System to offer a complete height adjustable workstation solution. Workstation components can be purchased separately or as a complete Workstation Kit. The typical installation of the Movotec® ATU Workstation Kit is shown here.

Workstation Kit
Includes:
- Two foot brackets
- Two top brackets
- Cross beam
- All fasteners and plugs required to assemble frame
- Installation instructions

Workstation Configurations
The Movotec® Workstation Kits allows the workstation to be assembled in either a centered or cantilever configuration. (Tabletop not included)

For drawings, CAD models and more information visit www.suspanmovotec.com

Note: ATU Cross Beam, ATU Top Bracket & ATU Foot Bracket are available separately.
The Movotec® Q pump can accommodate up to four independent pressure elements to drive one to four cylinders. This unique design allows Movotec® Lift System cylinders to maintain equal displacements regardless of the load on the work surface. The Q pump uses the latest technology to ensure quiet and reliable service along with easy integration of Movotec® hand-cranks and motors.

**Technical Data**
- Anodized aluminum housing
- Aluminum die-cast front and endplates
- Splined output shaft

**Pump Dimensions**

<table>
<thead>
<tr>
<th>Pump Model Number</th>
<th>For Use With x Cylinders</th>
<th>Part Number</th>
<th>Length (A) (mm / in.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q2809</td>
<td>2</td>
<td>D43-02015</td>
<td>292 (11.5)</td>
</tr>
<tr>
<td>Q2812</td>
<td>2</td>
<td>D43-02016</td>
<td>352 (13.9)</td>
</tr>
<tr>
<td>Q2818</td>
<td>2</td>
<td>D43-02017</td>
<td>472 (18.6)</td>
</tr>
<tr>
<td>Q2824</td>
<td>2</td>
<td>D43-02018</td>
<td>594 (23.4)</td>
</tr>
<tr>
<td>Q4809</td>
<td>4</td>
<td>D43-02006</td>
<td>292 (11.5)</td>
</tr>
<tr>
<td>Q4812</td>
<td>4</td>
<td>D43-02007</td>
<td>352 (13.9)</td>
</tr>
<tr>
<td>Q4818</td>
<td>4</td>
<td>D43-02008</td>
<td>472 (18.6)</td>
</tr>
<tr>
<td>Q4824</td>
<td>4</td>
<td>D43-02009</td>
<td>594 (23.4)</td>
</tr>
<tr>
<td>Q4612</td>
<td>4</td>
<td>D43-02001</td>
<td>352 (13.9)</td>
</tr>
<tr>
<td>Q4615</td>
<td>4</td>
<td>D43-02002</td>
<td>412 (16.2)</td>
</tr>
<tr>
<td>Q4623</td>
<td>4</td>
<td>D43-02003</td>
<td>594 (23.4)</td>
</tr>
<tr>
<td>Q4631</td>
<td>4</td>
<td>D43-02004</td>
<td>722 (28.4)</td>
</tr>
<tr>
<td>Q4639</td>
<td>4</td>
<td>D43-02005</td>
<td>898 (35.4)</td>
</tr>
</tbody>
</table>

Pumps to drive 1 or 3 cylinders available upon request.
Guided Cylinders - CB and CN “Bolt-On” Cylinders

For O.E.M. or retrofit applications, the patented CB and CN cylinders were designed to bolt on to virtually any structure for height adjustability. CB “Bolt-On” cylinders have an in-line tubing port and can be used for most applications. CN “Bolt-On” cylinders have a 90˚ tubing port and are designed for applications where tubing bend radius clearance is limited. (See design guidelines on page 23 for details.) Both cylinders have 4 - M5 x 0.8 x 7mm tapped holes that make mounting easy, or choose mounting brackets shown on page 19.

Technical Data
- Anodized aluminum housing
- Corrosion resistant extension tube

The CN Cylinder port rotates to any desired angle.

Note:
Corrosion resistant CB cylinders are available for applications in environments subject to periodic wash-down.

For drawings, CAD models and more information visit www.suspamovotec.com
Unguided Cylinders

Designed for O.E.M. applications, each cylinder utilizes a unique set of end-fitting configurations to assist in your design and manufacturing process. CE & CS cylinders are secured with retaining rings (not included). CH cylinders are secured with pins (not included). These cylinders must be used in conjunction with an external guide mechanism to prevent non-axial loading of the cylinder. Custom combination or unique rod & tube ends available.

Technical Data
- Brass cylinder tubes
- Stainless steel rods

<table>
<thead>
<tr>
<th>Tube End</th>
<th>Rod End</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE Cylinder</td>
<td>Accepts 13mm retaining ring</td>
</tr>
<tr>
<td>Accepts 8mm pin</td>
<td>Accepts 5mm pin</td>
</tr>
<tr>
<td>CS Cylinder</td>
<td>Accepts 13mm retaining ring</td>
</tr>
<tr>
<td>Accepts 8mm pin</td>
<td>Accepts 5mm pin</td>
</tr>
<tr>
<td>CH Cylinder</td>
<td>Accepts 8mm pin</td>
</tr>
<tr>
<td>Accepts 5mm pin</td>
<td></td>
</tr>
</tbody>
</table>

Cylinder Dimensions

<table>
<thead>
<tr>
<th>CE Cylinder Model Number</th>
<th>CS Cylinder Model Number</th>
<th>CH Cylinder Model Number</th>
<th>Length (A) (mm / in)</th>
<th>Stroke (L) (mm / in)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE415</td>
<td>CS415</td>
<td>CH415</td>
<td>188 / 7.4</td>
<td>150 / 5.9</td>
</tr>
<tr>
<td>CE420</td>
<td>CS420</td>
<td>CH420</td>
<td>238 / 9.4</td>
<td>200 / 7.9</td>
</tr>
<tr>
<td>CE430</td>
<td>CS430</td>
<td>CH430</td>
<td>338 / 13.3</td>
<td>300 / 11.8</td>
</tr>
<tr>
<td>CE440</td>
<td>CS440</td>
<td>CH440</td>
<td>438 / 17.2</td>
<td>400 / 15.7</td>
</tr>
</tbody>
</table>

For drawings, CAD models and more information visit www.suspmovotec.com
**8 Crank Handle Options**

**Plastic Cranks**
- Offered in small and large versions for low and high load applications
- Crank body is made from durable black glass-filled nylon with rotating grip
- Crank body and grip fold away completely under worksurface when not in use
- Cranks are easily secured to pump shaft using a 3mm hex key (Allen) wrench

**Aluminum Cranks**
- Offered in standard and extended versions
- Crank body is made from durable aluminum diecast with black powder coat finish
- Grip conveniently folds away into crank body when not in use
- Cranks are easily secured to pump shaft using a 3mm hex key (Allen) wrench

**9 Glides, Casters and Brackets**

**Standard Glide**
The "foot pad" provided with standard Movotec® systems is the Standard Glide. The Standard Glide includes a nylon base with a non-skid TPE pad and steel M10 x 1.5 threaded bolt with lock nut for adjustability.

**Mounting Glide**
The Mounting Glide is used in applications when fastening the lift actuator to a floor or work surface is necessary. Mounting Glides are also used in applications where the Movotec® lift cylinder is mounted inverted with the glide upward. The Mounting Glide base is aluminum with a steel thread and lock nut for adjustability.

**Disc Glide**
The Disc Glide is similar to the Standard Glide but does not have the non-skid feature. The Disc Glide has a nylon base, steel thread and lock nut for adjustability.

**Casters**
Casters are available in locking or non-locking models. Both casters include M10 x 1.5 threaded steel bolts sized for easy assembly to Movotec® CB, CN and CL cylinders. Caster wheel is 76mm (3 in) in diameter and is made from polyurethane with a polypropylene hub. Caster load capacity = 136kg (300 lb)

*Note: The standard glide and mounting glide are also available in a corrosion-resistant version for applications in environments subject to periodic wash-down.

For drawings, CAD models and more information visit www.suspamovotec.com

For drawings, CAD models and more information visit www.suspamovotec.com
Switch Options and Accessories

Low-Profile Switch
645-02553
- Standard, industrial-grade activation switch
- Ergonomically designed with durable, plastic body
- Switch provided with mounting plate and screws
- 22mm high x 55mm wide x 59mm deep
- 1.8m cable length

Office Switch
645-03103
- Office-oriented motor activation switch
- Ergonomically compact design with large, easy to use buttons
- Mounting screws are not included
- 18mm high x 67mm wide x 48mm deep
- 1.8m cable length

Foot Switch
D45-02375
- Designed for hands-free motor operation
- Foot pedal made from durable zinc diecast with a medium grey finish and non-skid pad
- Available with or without custom decal
- 37mm high x 106mm wide x 122mm long
- 3m cable length

Dual Switch Splitter Cable
645-03311
- Allows use of two switch options on a single lift system
- 200mm cable length

Switch Interface Cable
D99-00078
- Includes instructions with pinout for easy integration with other switches or PLC devices
- 3m cable length

IR Remote Control Switch
645-03105
- Provides wireless control of lift system
- Features 4 memory presets
- IR receiver mounts using adhesive pad
- 2m cable length

10 Switch Options and Accessories

Brackets
Mounting Brackets may be used when the threaded holes in Movotec® CB and CN cylinders are not conveniently located for the application. Order one bracket set per lift cylinder in the application.

Small Mounting Bracket Set
D44-00002A
Large Mounting Bracket Set
D44-00001
L Mounting Bracket Set
D44-00018
Creform™ Bracket Adaptor Set
D44-00027
(For easy mounting of Creform™ brackets, shown in black but not included.)

For drawings, CAD models and more information visit www.suspamovotec.com
Movotec’s Lift Systems come in both custom and standard configurations. Specifications and part numbers for all standard configurations are on the previous pages. Please use part number listed on those pages for standard “Bolt-On”, Dual Drive, Corner Leg and ATU Systems. To specify a unique combination of Movotec’s Pumps and Cylinders, please use the guidelines below and on the following to specify a System Model Number.

<table>
<thead>
<tr>
<th># of Cylinders</th>
<th>Lifting Capacity</th>
<th>Adjustment Range</th>
<th>Pump Model #</th>
<th>Cylinder Model #</th>
<th>System Model #</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>113 kg / 250 lb</td>
<td>150 mm / 5.9 in</td>
<td>Q1809</td>
<td>415</td>
<td>1Q8-4150-E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>200 mm / 7.9 in</td>
<td>Q1812</td>
<td>420</td>
<td>1Q8-4200-E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>300 mm / 11.8 in</td>
<td>Q1818</td>
<td>430</td>
<td>1Q8-4300-E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>400 mm / 15.8 in</td>
<td>Q1824</td>
<td>440</td>
<td>1Q8-4400-E</td>
</tr>
<tr>
<td>2</td>
<td>227 kg / 500 lb</td>
<td>150 mm / 5.9 in</td>
<td>Q2809</td>
<td>415</td>
<td>2Q8-4150-E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>200 mm / 7.9 in</td>
<td>Q2812</td>
<td>420</td>
<td>2Q8-4200-E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>300 mm / 11.8 in</td>
<td>Q2818</td>
<td>430</td>
<td>2Q8-4300-E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>400 mm / 15.8 in</td>
<td>Q2824</td>
<td>440</td>
<td>2Q8-4400-E</td>
</tr>
<tr>
<td>3</td>
<td>340 kg / 750 lb</td>
<td>150 mm / 5.9 in</td>
<td>Q3809</td>
<td>415</td>
<td>3Q6-4150-E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>200 mm / 7.9 in</td>
<td>Q3812</td>
<td>420</td>
<td>3Q6-4200-E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>300 mm / 11.8 in</td>
<td>Q3823</td>
<td>430</td>
<td>3Q6-4300-E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>400 mm / 15.8 in</td>
<td>Q3831</td>
<td>440</td>
<td>3Q6-4400-E</td>
</tr>
<tr>
<td>4</td>
<td>454 kg / 1000 lb</td>
<td>150 mm / 5.9 in</td>
<td>Q4809</td>
<td>415</td>
<td>4Q6-4150-E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>200 mm / 7.9 in</td>
<td>Q4812</td>
<td>420</td>
<td>4Q6-4200-E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>300 mm / 11.8 in</td>
<td>Q4823</td>
<td>430</td>
<td>4Q6-4300-E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>400 mm / 15.8 in</td>
<td>Q4831</td>
<td>440</td>
<td>4Q6-4400-E</td>
</tr>
<tr>
<td>5</td>
<td>590 kg / 1300 lb</td>
<td>150 mm / 5.9 in</td>
<td>Q5812</td>
<td>415</td>
<td>5Q8-4150-E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>200 mm / 7.9 in</td>
<td>Q5815</td>
<td>420</td>
<td>5Q8-4200-E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>300 mm / 11.8 in</td>
<td>Q5823</td>
<td>430</td>
<td>5Q8-4300-E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>400 mm / 15.8 in</td>
<td>Q5831</td>
<td>440</td>
<td>5Q8-4400-E</td>
</tr>
<tr>
<td>6</td>
<td>680 kg / 1500 lb</td>
<td>150 mm / 5.9 in</td>
<td>Q6812</td>
<td>415</td>
<td>6Q6-4150-E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>200 mm / 7.9 in</td>
<td>Q6815</td>
<td>420</td>
<td>6Q6-4200-E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>300 mm / 11.8 in</td>
<td>Q6823</td>
<td>430</td>
<td>6Q6-4300-E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>400 mm / 15.8 in</td>
<td>Q6831</td>
<td>440</td>
<td>6Q6-4400-E</td>
</tr>
<tr>
<td>7</td>
<td>907 kg / 2000 lb</td>
<td>150 mm / 5.9 in</td>
<td>Q7812</td>
<td>415</td>
<td>7Q8-4150-E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>200 mm / 7.9 in</td>
<td>Q7815</td>
<td>420</td>
<td>7Q8-4200-E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>300 mm / 11.8 in</td>
<td>Q7823</td>
<td>430</td>
<td>7Q8-4300-E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>400 mm / 15.8 in</td>
<td>Q7831</td>
<td>440</td>
<td>7Q8-4400-E</td>
</tr>
<tr>
<td>8</td>
<td>1134 kg / 2500 lb</td>
<td>150 mm / 5.9 in</td>
<td>Q8812</td>
<td>415</td>
<td>8Q8-4150-E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>200 mm / 7.9 in</td>
<td>Q8815</td>
<td>420</td>
<td>8Q8-4200-E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>300 mm / 11.8 in</td>
<td>Q8823</td>
<td>430</td>
<td>8Q8-4300-E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>400 mm / 15.8 in</td>
<td>Q8831</td>
<td>440</td>
<td>8Q8-4400-E</td>
</tr>
</tbody>
</table>

Movotec’s Lift Systems come in both custom and standard configurations. Specifications and part numbers for all standard configurations are on the previous pages. Please use part number listed on those pages for standard “Bolt-On”, Dual Drive, Corner Leg and ATU Systems. To specify a unique combination of Movotec’s Pumps and Cylinders, please use the guidelines below and on the following to specify a System Model Number.

1. Number of Cylinders
   Determine how many cylinders will be required for the application.
   Note: 6 and 8 cylinder systems work using 2 pumps simultaneously. As such, they are only available as a motor-driven system.

2. Maximum Lifting Capacity
   Check / Determine the appropriate lift capacity for the application.

3. Adjustment Range
   Determine the adjustment range required for the application.

4. Style of Cylinder
   Choose the style of cylinder; reference pages 13-16 for details on all types of cylinders (guided and unguided). Then, insert the cylinder letter into the shaded gray box on the following page, omitting the initial “C” from the cylinder description:
   Example:
   CB cylinder  415
   CE cylinder  415

5. System Model Number
   Next, put the cylinder letter in column 4 into column 5. Finally, determine whether a hand-crank or motor is required for the application.
   Motorized systems are available in a variety of voltages. Select from the list below to complete the model number.
   - C01 - Folding Hand Crank
   - E1L - 120V Motor Drive (North America)
   - E2L - 230V Motor Drive (with Schuko plug)

   Example:
   Crank Driven or Motor Driven
   2Q8-E4300-C01 or 4Q8-E4300-E2L

   When Ordering
   In addition to specifying the model number please indicate the flexible tubing lengths. Also list any accessories such as glides, casters, mounting brackets or non-standard switches.

For drawings, CAD models and more information visit www.suspamovotec.com
Single Acting
Movotec® Lift Systems are single acting. That means lifting a load is done with the action of a hand crank or motor, and lowering is accomplished with the help of gravity. Each cylinder requires 11-16kg (25-35 lbs.) for the retraction stroke. Keep this in mind when lifting light loads or when the load on the work surface may be unevenly distributed. Lower load applications may be achieved with optional tubing or shorter tubing lengths.

Tubing Radius
The hydraulic lines that connect the pump to the lift cylinders should be positioned so that the radius of the tubing is not less than 50mm (2 in.).

Duty Cycle
Movotec® Lift Systems are designed with a 10% duty cycle. This means that for every minute of operation, a system should remain idle for nine minutes. Movotec® Lift Systems are not designed for continuous operation.

Uneven Loading/Load Distribution
Movotec® Lift Systems are designed to handle uneven load distributions on work surfaces. The maximum load on the work surface should not exceed the rated lift capacity of the system. The maximum load per cylinder must not exceed 136kg (300 lb) for CX4XX cylinders or 181kg (400 lb) for CX6XX cylinders.

Durability Testing
Movotec® Lift Systems are regularly tested to ensure the system performs flawlessly for at least 10,000 full up/down cycles under full load.

10,000 CYCLES

Tubing Length
Predetermined hydraulic tubing lengths are listed with each standard Movotec® Lift System. Excess tubing can easily be coiled. If you have unique tubing length requirements, please let us know. A ratio of tubing length of 1:3 should be maintained. (Minimum tubing length 0.5m (1.6 ft.) - maximum tubing length 5m (197 in.).)

Operating Temperature
Movotec® Lift Systems perform best with operating temperatures between 0˚C (32˚F) and 46˚C (115˚F).

Installation and Operating Manuals Available
Detailed information about installing and operating Movotec® Lift Systems is available online.

Many Options for Easy Installation and Operation
A variety of mounting brackets and switches are available to ensure ease of installation and operation (please see pages 18-20 for details).

SUSPA™ reserves the right to make changes without advance notice.
Hydraulic Fluid
Movotec® NT15 Oil is a specially formulated food-grade lubricant used in all Movotec® systems and applications. Movotec® NT15 is clear, odorless and safe for incidental food contact. Movotec® NT15 Oil is registered with the National Sanitation Foundation under number 132507. See our website for Material Safety Data Sheets.

Underwriter’s Laboratory
In combination, the SUSPA Movotec® gear motor, controller and cable are UL recognized under UL file: E258745. See the SUSPA® website for more information.

CE
Movotec® Components and Systems are defined as partly completed machines under the scope of the Machine Safety Directive 2006/42/EC. Components and Movotec® Lift Systems assemblies have been designed with essential health and safety requirements in mind. See our website for technical documentation, assembly instructions and our Declaration of Incorporation.

RoHS
Reduction of Hazardous Substances
SUSPA® understands its responsibility as a steward of the environment. As a result, SUSPA Movotec® components meet the requirements of the European Union RoHS Directive.

ISO14001
Environmental Standards
At SUSPA® we respect our community and the environment in which we operate. We believe that strong environmental standards and practices are consistent with high quality in manufacturing and efficient business operations. SUSPA Movotec® Component and Lift System manufacturing and assembly in the United States are carried out in our ISO14001 certified facility.

ISO9001
Quality Standards
SUSPA® products are designed and manufactured under the highest quality standards. Movotec® components and assemblies are produced in the United States and meet the strict quality standards of ISO/TS 16949.

For drawings, CAD models and more information visit www.suspmovotec.com