

# WELKER

QS-9000 TE CERTIFIED

## COMPACT METRIC LIFTERS



including

# Synchrolift™

U.S. Patent Numbers 5,690,315 - 6,408,736 - 6,408,740



## **SAFETY FEATURES**

- Welker Locking cylinder stops load in mid-stroke in both directions upon air loss.
- Spiral retaining ring construction won't come apart if fasteners loosen.
- Manual lockouts standard
- 18mm Prox bosses and targets standard.
- Welker MRP Spring Extend Lock-out Pin can be added.

## **DESIGN FEATURES**

- Compact closed height (no protruding shafts).
- Strokes up to 40" / 1000mm.
- Slim footprint
- Mounting from base or side.
- 4",6",8" bore cylinders available with appropriate shaft sizes (English and Metric)
- Extremely rigid in extended position = High repeatability.
- Symmetrically reversible.
- Can lift overhung loads.
- Synchrolift synchronizes remotely mounted units.

U.S. Patent Numbers 5,690,315 - 6,408,736 - 6,408,740

## **MAINTENANCE**

- Lube free cylinder.
- Lube free bearings and seals.
- Easy bearing replacement.
- Shafts can be individually removed.
- One side open for easy cylinder replacement.

## **DURABILITY**

- Bearing spread in two directions.
- Hard chromed shafts standard.
- Lubrication free linear bearings with integrated seals.
- Floating cylinder rod coupling.
- Dual shocks in both directions.
- Dual hard stops in both directions.

**DOWNLOAD PRINTS @**  
**WWW.WELKERBEARING.COM**

**PHONE:(248) 528-2020**  
**FAX: (248) 528-0920**

# WELKER

Lifters may be covered under one or more of the following or other patents: U.S. Patent No. 5,690,315  
U.S. Patent No. 6,408,736 or U.S. Patent No.6,408,740

## SYNCHROLIFT™

Part Number:  
SLM-40 -STROKE-CYLINDER OPTION

Examples:  
SLM-40-300-WEL1  
(300mm Stroke, NON-LOCK)

SLM-40-500-WEL4  
(500mm Stroke, LOCK)

SLM-40-275-800-WEL8  
(275mm Midpoint - 800mm Total  
Stroke, NON-LOCK, 3 POS.)



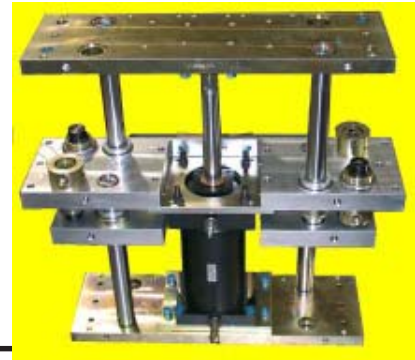
Lifts in tandem within 5mm tolerance  
Patented "Synchro Cylinder"  
Presently synchronized up to 4 lifters  
Connection leaves center of tool open



**SSL 40  
SHORT STROKE  
METRIC LIFTER**

See Page 6 for print  
& specifications

## METRIC LIFTER



Part Number:  
CLM-40 -STROKE-CYLINDER OPTION

Examples:  
CLM-40-300-WEL1  
(300mm Stroke, NON-LOCK)

CLM-40-500-WEL4  
(500mm Stroke, LOCK)

CLM-40-275-800-WEL8  
(275mm Midpoint - 800mm Total  
Stroke, NON-LOCK, 3 POS.)



## METRIC LIFTER PART SPECIFICATIONS

PART NUMBER	CLM 40	CLM 40	CLM 50	CLM 50	CLM 50
	Nonlock *	Lock *	Nonlock*	Lock *	Lrg. Bore-NL*
Stroke Increment	5mm	5mm	5mm	5mm	5mm
Maximum Stroke	1000mm	1000mm	1000mm	1000mm	1000mm
Extend Capacity	375	375	850	850	1510
Retract Capacity	330	330	805	805	1465
Recommended Max. Overhung Load	150 lbf-ft.	150 lbf-ft.	300 lbf-ft.	300 lbf-ft.	300 lbf-ft.
Recommended Max. CG Offset	36"	36"	36"	36"	36"
Cylinder Options	See Cylinder Chart				
Weight	215 lbs.      230 lbs. +2.71 lbf./ 25mm stroke		450 lbs.      475 lbs.      475 lbf. +3.88 lbf./ 25mm stroke		

\* Welker Cylinder



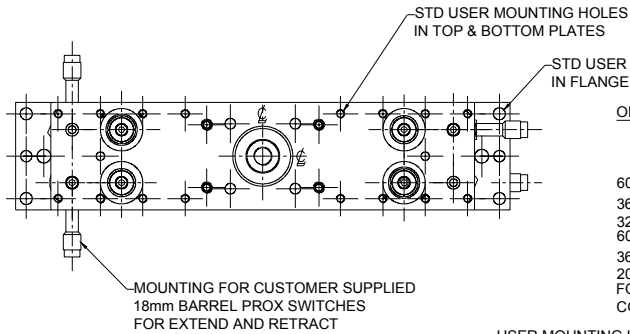
# METRIC LIFTERS & SYNCHROLIFT

## CYLINDER OPTIONS FOR ALL METRIC LIFTERS

CYLINDER OPTION	CYLINDER TYPE	CYLINDER BORE	CYLINDER BRAKE PORTS	MAIN CYLINDER PORTS
<b>CLM 40 LIFTER</b>	<b>SLM 40 LIFTER</b>			
-WEL 1	NON-LOCK	4"	N/A	1/2 NPT
-WEL 2	NON-LOCK	4"	N/A	#10 SAE
-WEL 3	NON-LOCK	4"	N/A	1/2 ISO-G
-WEL 4	LOCK	4"	1/4 NPT	1/2 NPT
-WEL 5	LOCK	4"	#4 SAE	#10 SAE
-WEL 6	LOCK	4"	1/4 ISO-G	1/2 ISO-G
-WEL 7	NL 3 POS.	4"	N/A	1/2 NPT
-WEL 8	NL 3 POS.	4"	N/A	#10 SAE
-WEL 9	NL 3 POS.	4"	N/A	1/2 ISO-G
-WEL 10	LOCK 3 POS.	4"	1/4 NPT	1/2 NPT
-WEL 11	LOCK 3 POS.	4"	#4 SAE	#10 SAE
-WEL 12	LOCK 3 POS.	4"	1/4 ISO-G	1/2 ISO-G
<b>CLM 50 LIFTER</b>	<b>SLM 50 LIFTER</b>			
-WEL 1	NON-LOCK	6"	N/A	3/4 NPT
-WEL 2	NON-LOCK	6"	N/A	#12 SAE
-WEL 3	NON-LOCK	6"	N/A	3/4 G
-WEL 4	LOCK	6"	1/4 NPT	3/4 NPT
-WEL 5	LOCK	6"	#4 SAE	#12 SAE
-WEL 6	LOCK	6"	1/4 G	3/4 G
-WEL 7	NON-LOCK	8"	N/A	3/4 NPT
-WEL 8	NON-LOCK	8"	N/A	#12 SAE
-WEL 9	NON-LOCK	8"	N/A	3/4 G

**3 Position cylinder provides a hard & repeatable midpoint (Patent Pending)**

**WELKER**  
CLM 40 METRIC LIFTER



ORDERING INFORMATION: CLM40-STROKE-CYL OPTION

100-1000mm STROKE  
SEE CHART

60psi LOAD CAP. FOR STD LOCKING & NON-LOCKING AIR CYL:

365lbf (EXTEND)

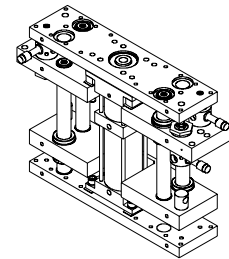
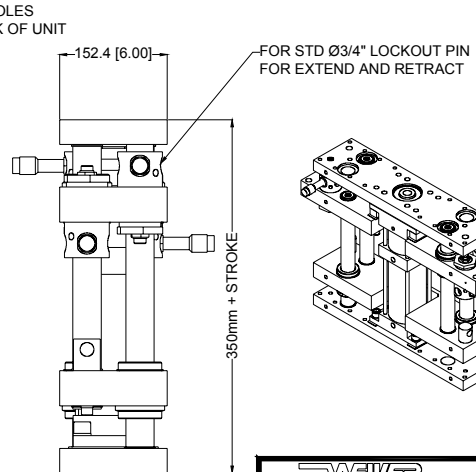
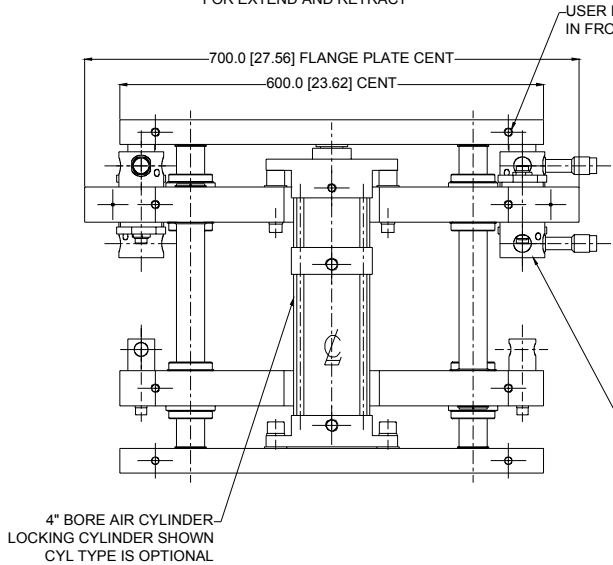
325lbf (RETRACT)

60psi LOAD CAP. FOR 3-POSITION AIR CYL(LOCK OR NL):

365lbf (EXTEND)

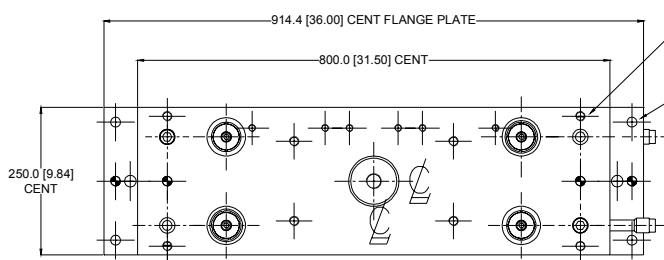
200lbf (RETRACT)

FOR COMPLETE DIMENSIONAL INFORMATION, CONTACT WELKER BEARING COMPANY.



4X DETAIL HOUSES THE SHOCKS, PROX SWITCHES, AND LOCKOUTS. THIS DETAIL IS FIELD ROTATABLE. 2X EXTEND-2X RETRACT

**WELKER**  
BEARING COMPANY  
1401 PIEDMONT  
TROY, MICHIGAN 48083  
PH 248.528.2020  
FAX 248.528.0920  
www.welkerbearing.com  
CLM40 SERIES LIFTER ASSEMBLY

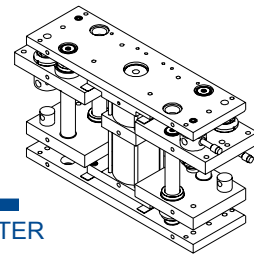
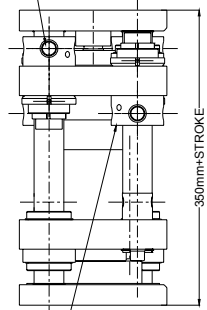
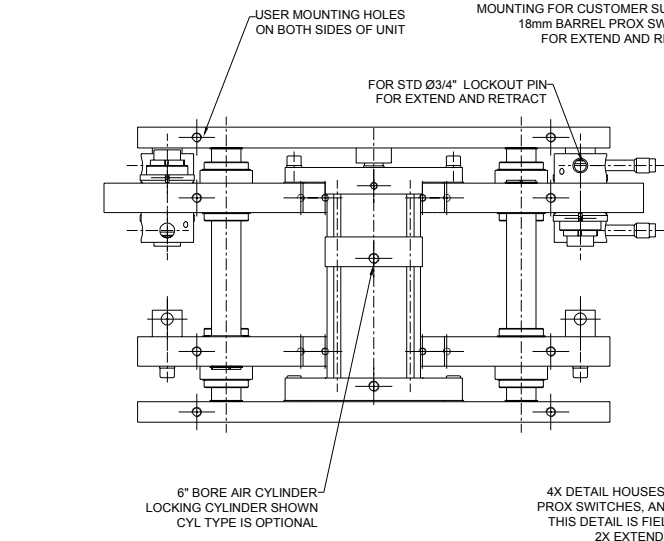


**WELKER**  
CLM 50 METRIC LIFTER

ORDERING INFORMATION: CLM50-STROKE-CYLINDER OPTION

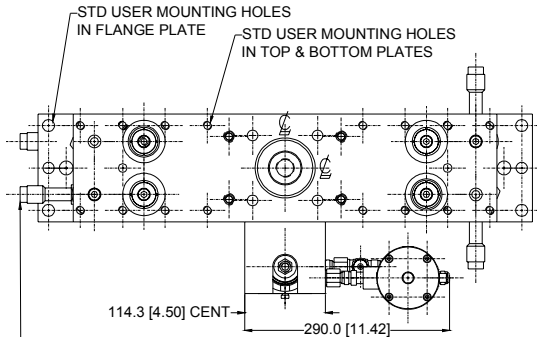
100mm-1,000mm  
SEE CHART

FOR LOAD CAPACITIES OF LOCKING & NON-LOCKING AIR CYLINDER OPTIONS & COMPLETE DIMENSIONAL INFORMATION, CONTACT WELKER BEARING COMPANY.



4X DETAIL HOUSES THE SHOCKS, PROX SWITCHES, AND LOCKOUTS. THIS DETAIL IS FIELD ROTATABLE. 2X EXTEND-2X RETRACT

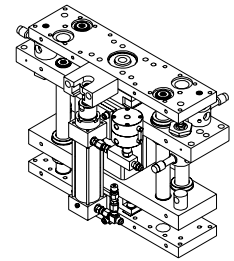
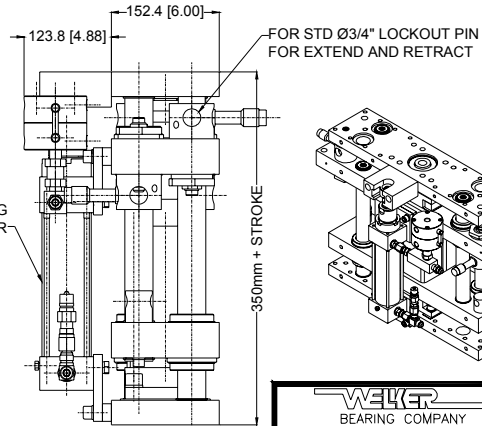
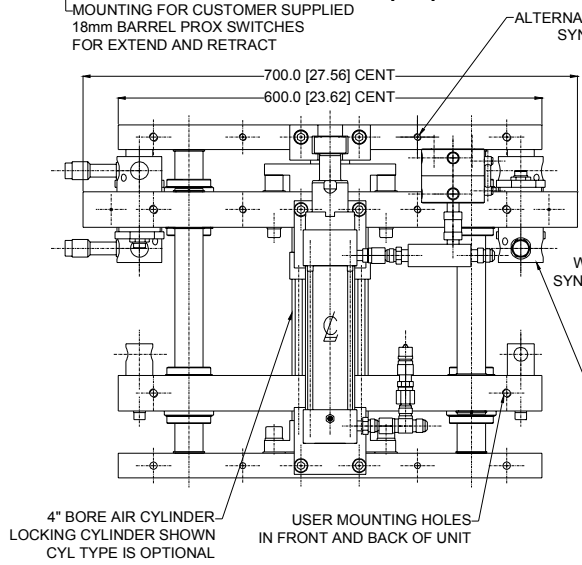
**WELKER**  
BEARING COMPANY  
1401 PIEDMONT  
TROY, MICHIGAN 48083  
PH 248.528.2020  
FAX 248.528.0920  
www.welkerbearing.com  
50 SERIES METRIC LIFTER



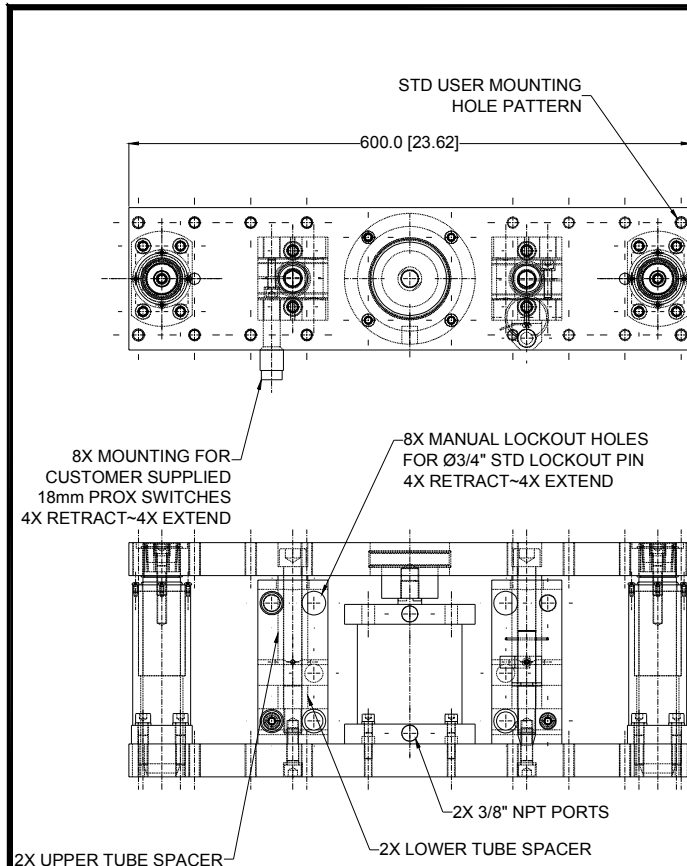
ORDERING INFORMATION: SLM40-STROKE-CYL OPTION

100-1000mm STROKE  
SEE CHART  
FOR LOAD CAPACITY OF SYNCHRO LIFT & COMPLETE DIMENSIONAL, PLUMBING, & INSTALLATION INFORMATION, CONTACT WELKER BEARING COMPANY.

## SYNCHROLIFT SLM 40 Synchronized Metric Lifter



**WELKER**  
BEARING COMPANY  
1401 PIEDMONT  
TROY, MICHIGAN 48083  
PH 248.528.2020  
FAX 248.528.0920  
www.welkerbearing.com  
SLM40 SERIES SYNCHRONIZED LIFTER

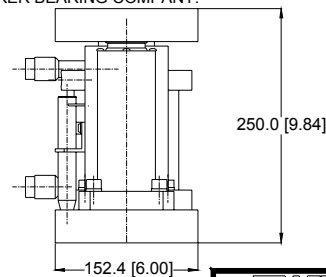


## WELKER SSL 40 SHORT STROKE METRIC LIFTER

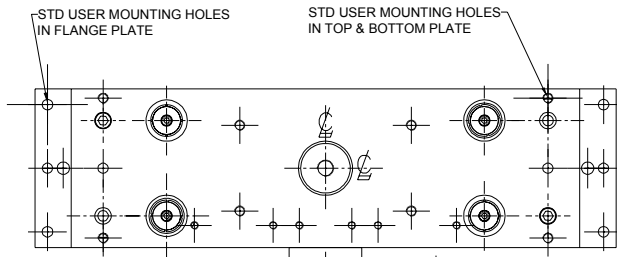
ORDERING INFORMATION: #SSL40-STROKE  
UNIT COMES WITH Ø40mm SHAFTING AND A 4" BORE PANCAKE AIR CYLINDER. THE 250.0mm HEIGHT DIM IS REGARDLESS OF STROKE.

UNIT HAS A MAXIMUM STROKE OF 100mm AND CAN BE FIELD ADJUSTED TO ANY STROKE UNDER THE 100mm MAX BY MACHINING TUBE SPACERS TO DESIRED LENGTHS. TUBES SHOULD BE MACHINED IN PAIRS.  
FOR FIELD ADJUSTING, ACCESS MUST BE LEFT IN ASSEMBLY FOR SPACER RETAINER BOLTS, AS MARKED.  
LOAD CAPACITY @ 60PSI IS 365lbf EXTEND / 325lbf RETRACT

FOR COMPLETE DIMENSIONAL INFORMATION, CONTACT WELKER BEARING COMPANY.



**WELKER**  
BEARING COMPANY  
1401 PIEDMONT  
TROY, MICHIGAN 48083  
PH 248.528.2020  
FAX 248.528.0920  
www.welkerbearing.com  
2-POST SHORT STROKE LIFTER



STD USER MOUNTING HOLES  
IN FLANGE PLATE

STD USER MOUNTING HOLES  
IN TOP & BOTTOM PLATE

ORDERING INFORMATION: #SLM50-STROKE-CYL OPTION

100mm-1,000mm  
SEE CHART

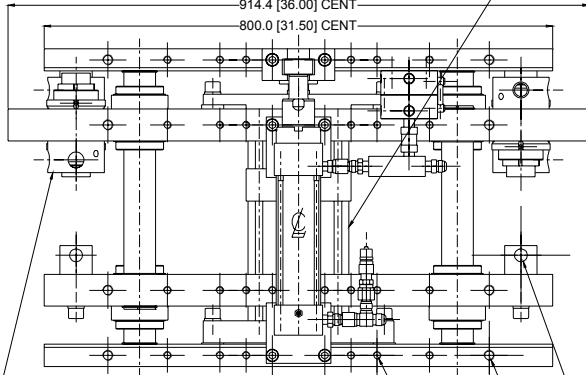
THIS DRAWING IS ONLY REPRESENTATIVE OF LIFTER ASSEMBLY WITH  
CYLINDER OPTIONS -WEL1 THRU -WEL6 (6" BORE PNEUMATIC CYL).  
FOR CYLINDER OPTIONS -WEL7 THRU -WEL9 (8" BORE PNEUMATIC CYL), SEE  
DWG #SLM50L02. (SLM50 LARGE BORE)  
FOR LOAD CAPACITIES & COMPLETE DIMENSIONAL, PLUMBING, & INSTALLATION  
INFORMATION, CONTACT WELKER BEARING COMPANY.

## SYNCHROLIFT SLM 50 SMALL BORE

114.3 [4.50] CENT

290.0 [11.42]

6" BORE LOCKING AIR CYLINDER SHOWN  
CYLINDER TYPE IS OPTIONAL

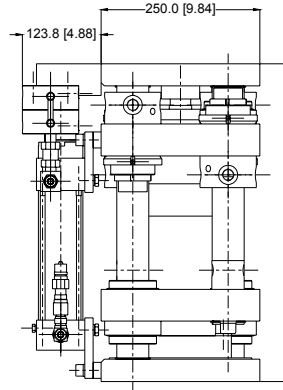


4X DETAIL HOUSES THE SHOCKS,  
18mm PROX SWITCHES, & LOCKOUTS.  
THESE DETAILS ARE FIELD ROTATABLE.  
2X EXTEND-2X RETRACT

FOR STD 3/8" LOCKOUT PIN

STD USER MOUNTING HOLES  
IN FRONT & BACK OF UNIT

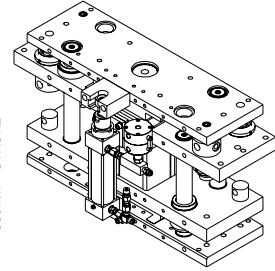
ALTERNATE MOUNTING HOLES  
FOR OFFSET SYNCHRO CYL MTG



123.8 [4.88]

250.0 [9.84]

350mm + STROKE

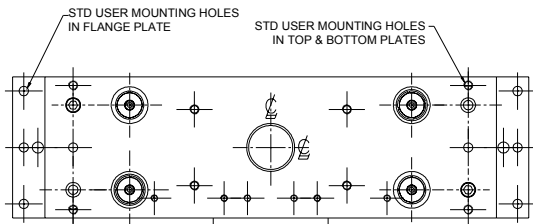


6/25/2002

**WELKER**  
BEARING COMPANY

1401 PIEDMONT  
TROY, MICHIGAN 48083  
PH 248.528.2020  
FAX 248.528.0920  
www.welkerbearing.com

SLM50 SYNCHRO LIFT SMALL BORE



STD USER MOUNTING HOLES  
IN FLANGE PLATE

STD USER MOUNTING HOLES  
IN TOP & BOTTOM PLATES

ORDERING INFORMATION: #SLM50-STROKE-CYL OPTION

100mm-1,000mm STROKE  
SEE CHART

THIS DRAWING IS ONLY REPRESENTATIVE OF LIFTER ASSEMBLY WITH CYLINDER  
OPTIONS -WEL7 THRU -WEL9 (8" BORE PNEUMATIC CYL).  
FOR CYLINDER OPTIONS -WEL1 THRU -WEL6 (6" BORE PNEUMATIC CYL), SEE DWG  
#SLM50L01. (SLM50 SMALL BORE)  
FOR LOAD CAPACITY OF SYNCHRO LIFT & COMPLETE DIMENSIONAL, PLUMBING, &  
INSTALLATION INFORMATION, CONTACT WELKER BEARING COMPANY.

## SYNCHROLIFT SLM 50 LARGE BORE

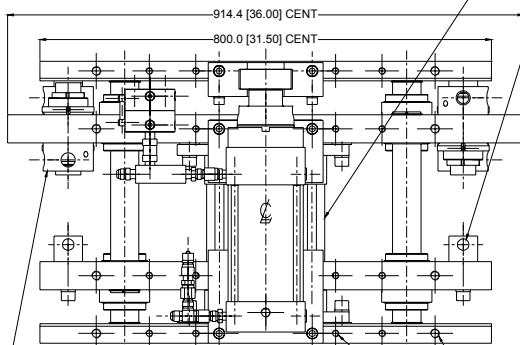
203.2 [8.00] CENT

365.4 [14.39]

8" BORE AIR CYLINDER SHOWN  
CYLINDER TYPE IS OPTIONAL

FOR STD 3/8" LOCKOUT PIN

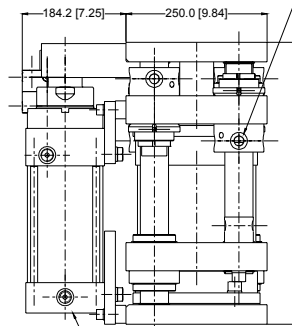
MTG FOR 18mm PROXIMITY SWITCH



4X DETAIL HOUSES THE SHOCKS,  
18mm PROX SWITCHES, & LOCKOUTS.  
THESE DETAILS ARE FIELD ROTATABLE.  
2X EXTEND-2X RETRACT

USER MOUNTING HOLES  
IN FRONT & BACK OF UNIT

ALTERNATE MOUNTING HOLES  
FOR OFFSET SYNCHRO CYL MTG

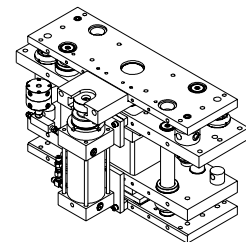


184.2 [7.25]

250.0 [9.84]

350mm + STROKE

WELKER BEARING  
SYNCHRO CYLINDER



6/25/2002

**WELKER**  
BEARING COMPANY

1401 PIEDMONT  
TROY, MICHIGAN 48083  
PH 248.528.2020  
FAX 248.528.0920  
www.welkerbearing.com

SLM50 SYNCHRO LIFT LARGE BORE



## WELKER PRODUCTS

- Lubrication Free Linear Slides & Gibs
- Lubrication Free Powered Slides
- Lubrication Free Shot Pin Packages
- Lubrication Free Lock-out Pin Packages
- Lubrication Free Gapless Locating Pin Clamp Packages
- Rulon® Filled PTFE Bearings
- Laminate Composite Bearings
- Welker Friction Rollers
- Cast Bronze Bearings
- Simplicity™ Bearing Systems
- High Performance Plastic Bearings

Call your Welker representative for specific application information.  
(800) 229-0890

### WELKER BEARING COMPANY

1401 Piedmont  
Troy, MI 48083  
USA

[www.welkerbearing.com](http://www.welkerbearing.com)