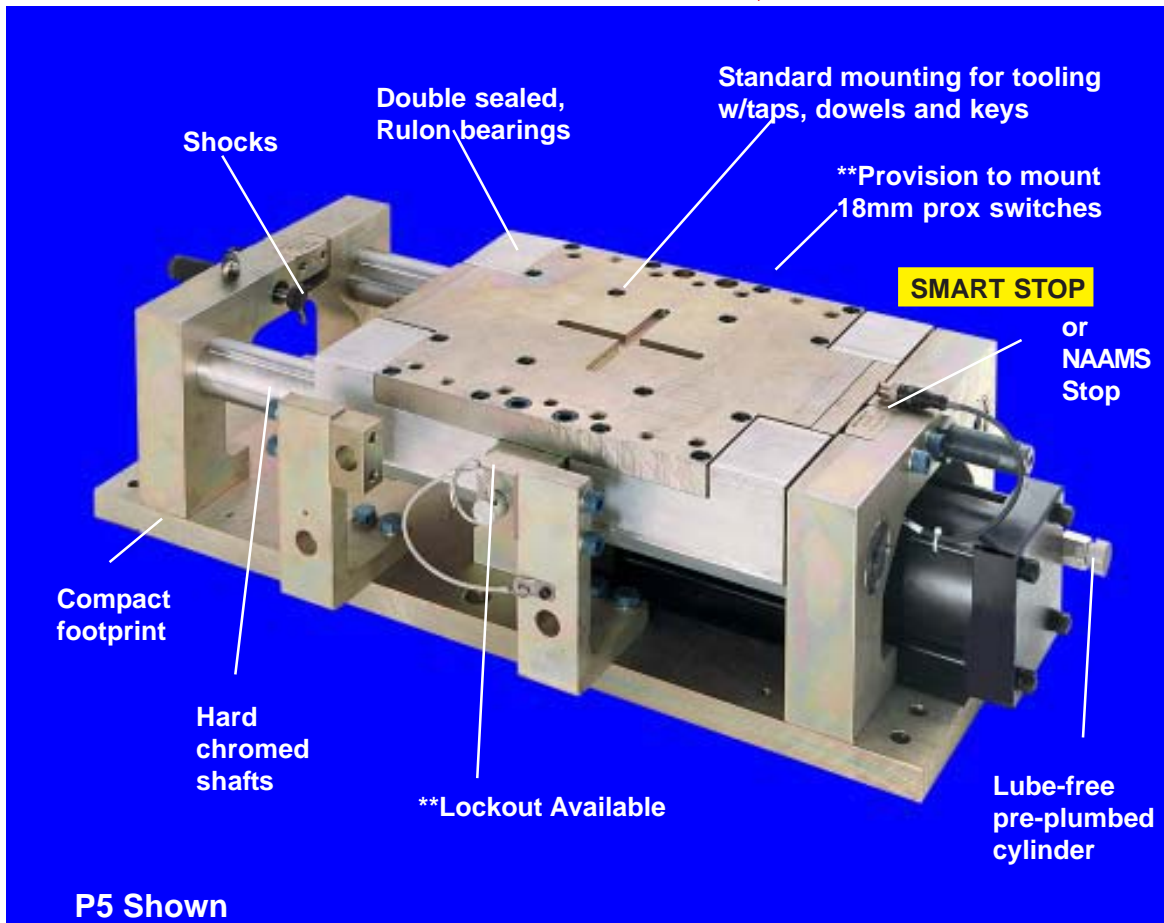


POWERED SLIDES P5, P7 & H7



WELKER POWERED SLIDES are commercially available slides that provide all the desired features that engineers and designers need. The compact, yet robust powered slides have been designed to provide symmetry and flexibility of installation. P Series Slides are available in three sizes and capabilities. They can be mounted in any orientation and are designed to operate successfully in harsh environments.

Available pneumatic cylinders types are non-locking, locking and duplex. Hydraulic and electric servo-powered slides are also available.

**The manual lockout brackets and proximity switch mounts are reversible and can be relocated in the field or called out in the part number. Up to 30mm of spacers are available for the NAAMS stops or Smart stops on both ends of the slide. Spacers will also be added to manual lockout when this option is specified.

Note: Adding spacers reduces the stroke of the slide by the total spacer thickness on both ends.

WELKER SMART STOP does all stopping and sensing functions in one part. SMART STOP minimizes engineering, field set up and operator adjustment time.

WELKER SMART STOP eliminates:

- Need for separate mounts, brackets and flags
- Need for switch adjustment when shimming
- Improper adjustment of outboard switches
- Outboard switch vibrating loose in bracket
- Protecting outboard proxies from being stepped on or bent in tools



Ordering Information

P5 0 0 0 0 5 0 0 1 E 0 0 0 0 X

Series (Sheet 2)

- P5 100mm Bore, 50mm Shaft
- P7 150mm Bore, 75mm Shaft
- H7 200mm Bore, 75mm Shaft

***1st Stroke of Duplex**

000-495 ("000" for Non-Duplex)

***2nd (or Total) Stroke**

050-500 Total Stroke
(005-495 2nd Stroke of Duplex)

Cylinder Opts (Pneumatic) Sheet 3

- 01 Double Acting (NPT Ports)
- 02 Double Acting (SAE Ports)
- 03 Double Acting ("G" Ports)
- 04 Double Acting with Rod Lock (P5 & P7 only, NPT Ports)
- 05 Double Acting with Rod Lock (P5 & P7 only, SAE Ports)
- 06 Double Acting with Rod Lock (P5 & P7 only, "G" Ports)
- 07 Duplex (NPT Ports)
- 08 Duplex (SAE Ports)
- 09 Duplex ("G" Ports)
- 10 Duplex with Rod Lock (P5 & P7 only, NPT Ports)
- 11 Duplex with Rod Lock (P5 & P7 only, SAE Ports)
- 12 Duplex with Rod Lock (P5 & P7 only, "G" Ports)

Lockout & Switch Mounting Options (Sheets 5,6,7)

- X NONE
- A Lockout only - LH Side
- B Lockout only - RH Side
- C Switch only - LH Side
- D Switch & Lockout - LH Side (not P5)
- E Switch LH Side & Lockout RH Side
- F Switch only - RH Side
- G Switch RH Side & Lockout LH Side
- H Switch & Lockout - RH Side (not P5)

****Additional Retract Shim**

Whole (mm)

- 0 0 G 16
- 1 1 H 17
- 2 2 J 18
- 3 3 K 19
- 4 4 L 20
- 5 5 M 21
- 6 6 N 22
- 7 7 P 23
- 8 8 R 24
- 9 9 S 25
- A 10 T 26
- B 11 U 27
- C 12 V 28
- D 13 W 29
- E 14 X 30
- F 15

****Additional Retract Shim**

Quarter (mm)

- 0 0.00
- A 0.25
- B 0.50
- C 0.75

****Additional Extend Shim**

Whole (mm)

- 0 0 G 16
- 1 1 H 17
- 2 2 J 18
- 3 3 K 19
- 4 4 L 20
- 5 5 M 21
- 6 6 N 22
- 7 7 P 23
- 8 8 R 24
- 9 9 S 25
- A 10 T 26
- B 11 U 27
- C 12 V 28
- D 13 W 29
- E 14 X 30
- F 15

****Additional Extend Shim**

Quarter (mm)

- 0 0.00
- A 0.25
- B 0.50
- C 0.75

Options (Sheets 5,6,7)

- 0 No Switch Mount
- X 18mm Barrel Prox Mount
- B 18mm Barrel Switch Mount & Smart Stop (Duplex)
- C Cube Switch Mount
- D Cube Switch Mount & Smart Stop (Duplex)
- P Welker Smart Stop (Sheet 8)

***Stroke Note:** Units are built to standard total strokes from 50mm to 500mm in 25mm increments. Total strokes for Duplex are 1st stroke + 2nd stroke. If necessary, stops can be shimmed back to achieve the required travel.

Non standard strokes are available by special order and will increase lead time and spare part availability.

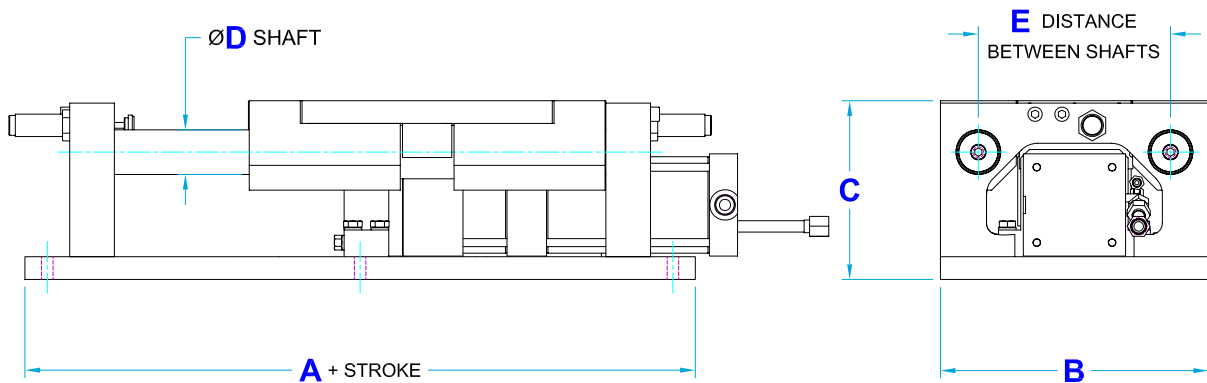
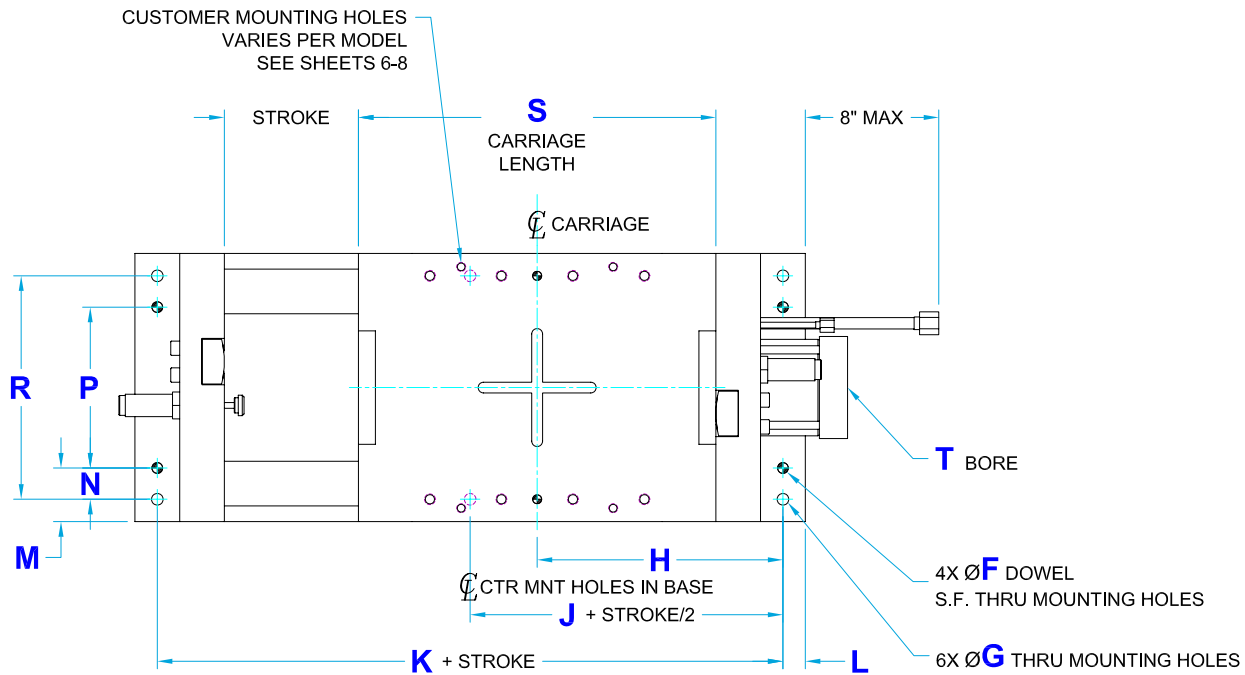
****Shim Note:** When ordering the shim option, units will have shim packs/grind spacers added to the NAAMS stops on both ends and it will shorten the total working stroke.

Manual lockouts both ends, prox switch mounts, and duplex cylinders are available on all models.

Ordering examples: For a "P5" slide with 150mm stroke (150mm total stroke), double acting air cylinder, lockouts RH & barrel prox switches on LH side, no additional shims, order as: **P500015001E0000X**

For A "P7" slide with 50mm 1st stroke and 100mm 2nd stroke, duplex air cylinder, lockouts & barrel prox switches on the LH side, 5.25

GENERAL DIMENSIONS



Series	A	B	C	\varnothing D	E	\varnothing F	\varnothing G	H	J	K
P5	600	300	200	50	215	12	13	275	275	550
P7	775	500	260	75	365	16	17	368	368	736
H7	775	550	300	75	415	16	17	368	368	736

	L	M	N	P	R	S	T	WEIGHT
P5	25	60	35	180	250	400	100mm	285 LBS (1268 N) + 10 lbs (44 N) / 25mm
P7	19.5	65	50	370	470	550	150mm	865 LBS (3848 N) + 11.3 lbs (50 N) / 25mm
H7	19.5	90	50	370	470	550	200mm	1000 LBS (4448 N) + 15 lbs (67 N) / 25mm

CYLINDER OPTIONS

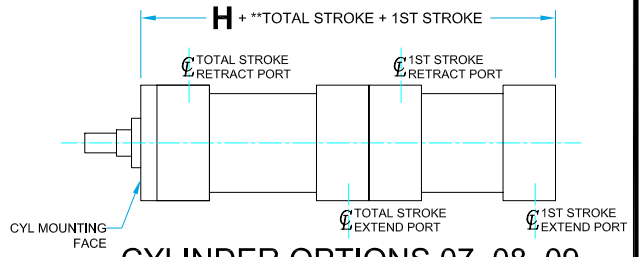
SERIES P5, P7, H7
P5 0 0 0 0 5 0 0 1 E 0 0 0 0 X

Cylinder Options (Pneumatic)

CYLINDER OPTION	MIN CYL LENGTH	*CYLINDER LENGTH	CYL PORTS	BRAKE PORTS	CYL TYPE
01 Double Acting (NPT Ports)	A	B + STK	C NPT	N/A	NON-LOCK
02 Double Acting (SAE Ports)	A	B + STK	D SAE	N/A	NON-LOCK
03 Double Acting ("G" Ports)	A	B + STK	E G	N/A	NON-LOCK
04 Double Acting with Rod Lock (P5 & P7 only, NPT)	F	G + STK	C NPT	R NPT	LOCK
05 Double Acting with Rod Lock (P5 & P7 only, SAE)	F	G + STK	D SAE	S SAE	LOCK
06 Double Acting with Rod Lock (P5 & P7 only, "G")	F	G + STK	E G	T G	LOCK
07 Duplex (NPT Ports)	N/A	H + **TOTAL STROKE + 1ST STROKE	C NPT	N/A	DUPLEX
08 Duplex (SAE Ports)	N/A	H + **TOTAL STROKE + 1ST STROKE	D SAE	N/A	DUPLEX
09 Duplex ("G" Ports)	N/A	H + **TOTAL STROKE + 1ST STROKE	E G	N/A	DUPLEX
10 Duplex with Rod Lock (P5 & P7 only, NPT Ports)	N/A	J + **TOTAL STROKE + 1ST STROKE	C NPT	R NPT	LOCKING DUPLEX
11 Duplex with Rod Lock (P5 & P7 only, SAE Ports)	N/A	J + **TOTAL STROKE + 1ST STROKE	D SAE	S SAE	LOCKING DUPLEX
12 Duplex with Rod Lock (P5 & P7 only, "G" Ports)	N/A	J + **TOTAL STROKE + 1ST STROKE	E G	T G	LOCKING DUPLEX

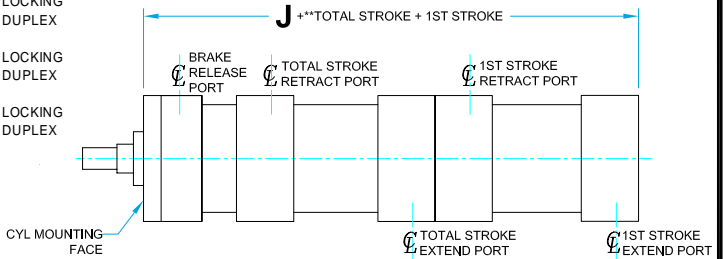
*CYLINDER LENGTH MAY INCLUDE OVERSTROKE, SPACERS OR OTHER VARIABLES. FOR MOUNTINGS & LENGTHS OF NON-STANDARD CYLINDERS, CONSULT WELKER.

**TOTAL STROKE = 1ST STROKE + 2ND STROKE. 1ST STROKE STARTS FROM CARRIAGE IN RETRACTED POSITION AS SHN.

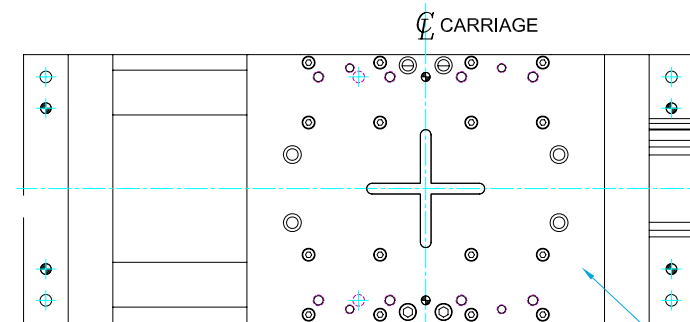


CYLINDER OPTIONS 07, 08, 09
(SEE NOTE)

NOTE: ALL INACCESSIBLE PORTS WILL BE PRE-PLUMBED BY WELKER WITH FITTINGS THAT WILL BE ACCESSIBLE OUTSIDE THE END PLATE AND WITHIN 8" FROM THE BASE PLATE. WHEN "G" PORT OPTION IS ORDERED, METRIC TUBING & FITTINGS WILL BE SUPPLIED WHEN NECESSARY.



CYLINDER OPTIONS 10, 11, 12
(SEE NOTE)



L FEMALE THREAD 37° FLARE FITTING FOR **M** O.D. TUBING FROM CYL ROD END. LOCATION WILL VARY PER CYLINDER. WHEN "G" PORT OPTION IS ORDERED, **M** O.D. METRIC TUBING WILL BE SUPPLIED LESS FITTINGS & WILL BE ACCESSIBLE.

N FEMALE THREAD 37° FLARE FITTING FROM BRAKE PORT FOR **P** O.D. TUBING FOR LOCKING CYLINDER OPTION ONLY. LOCATION WILL VARY PER CYLINDER. WHEN "G" PORT OPTION IS ORDERED, **P** O.D. METRIC TUBING WILL BE SUPPLIED LESS FITTINGS & WILL BE ACCESSIBLE.

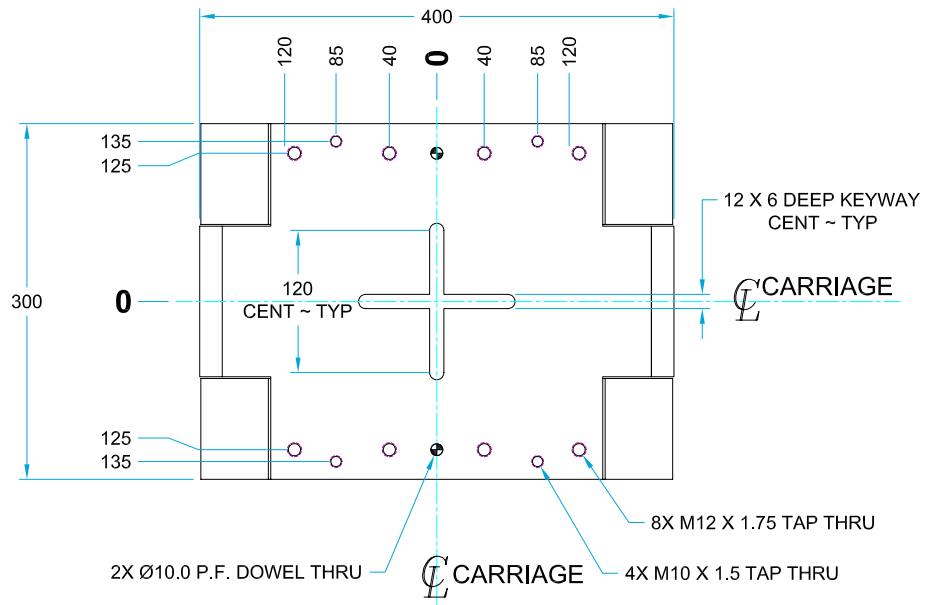
FOR CARRIAGE DIMENSIONS, SEE CARRIAGE SHEET 6

CYL OPTIONS 01-06

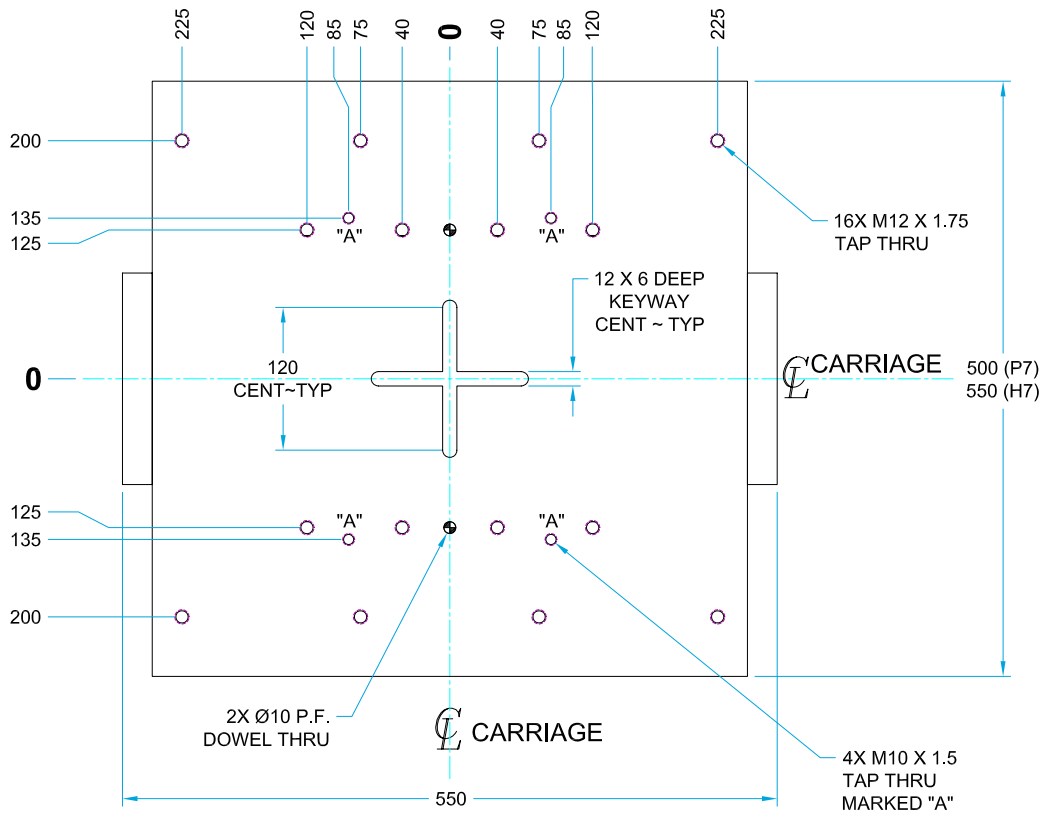
K TO CYL MNT FACE
 GREATER OF MIN CYL LENGTH OR CYL LENGTH ~ (SEE CHART)

	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	S	T
P5	350	150	1/2"	#10	1/2	365	265	265	385	343	3/4-16"	1/2" or 12mm	7/16"-20	1/4" or 6mm	1/4"	#4	1/4
P7	520	200	3/4"	#12	3/4	520	320	350	475	514	1 1/16"-12	3/4" or 22mm	7/16"-20	1/4" or 6mm	1/4"	#4	1/4
H7	525	200	3/4"	#12	3/4	N/A	N/A	360	N/A	528	1 1/16"-12	3/4" or 22mm	N/A	N/A	N/A	N/A	N/A

CARRIAGE SHEET



P5 CARRIAGE



P7 & H7 CARRIAGE

LOCKOUTS & SWITCHES

P5 SERIES

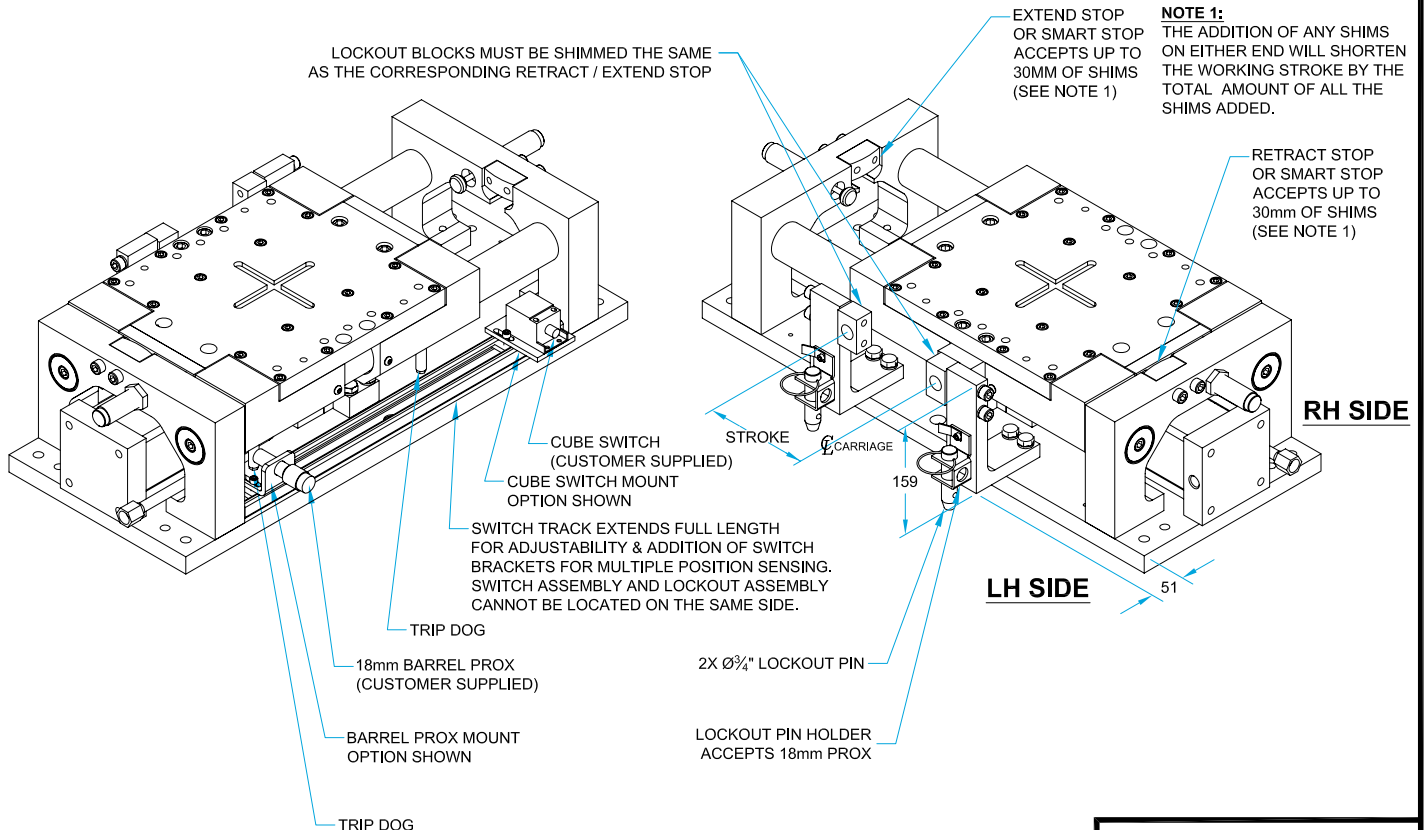
P5 0 0 0 0 5 0 0 1 E 0 0 0 0 X

Lockout & Switch Mounting Options

- X** NONE
- A** Lockout only - LH Side
- B** Lockout only - RH Side
- C** Switch only - LH Side
- D** N/A
- E** Switch LH Side & Lockout RH Side
- F** Switch only - RH Side
- G** Switch RH Side & Lockout LH Side
- H** N/A

Options

- 0** No Switch Mount
- X** 18mm Barrel Prox Mount
- B** 18mm Barrel Switch Mnt & Smart Stop (Duplex)
- C** Cube Switch Mount
- D** Cube Switch Mnt & Smart Stop (Duplex)
- P** Welker Smart Stop



LOCKOUTS & SWITCHES

P7 SERIES

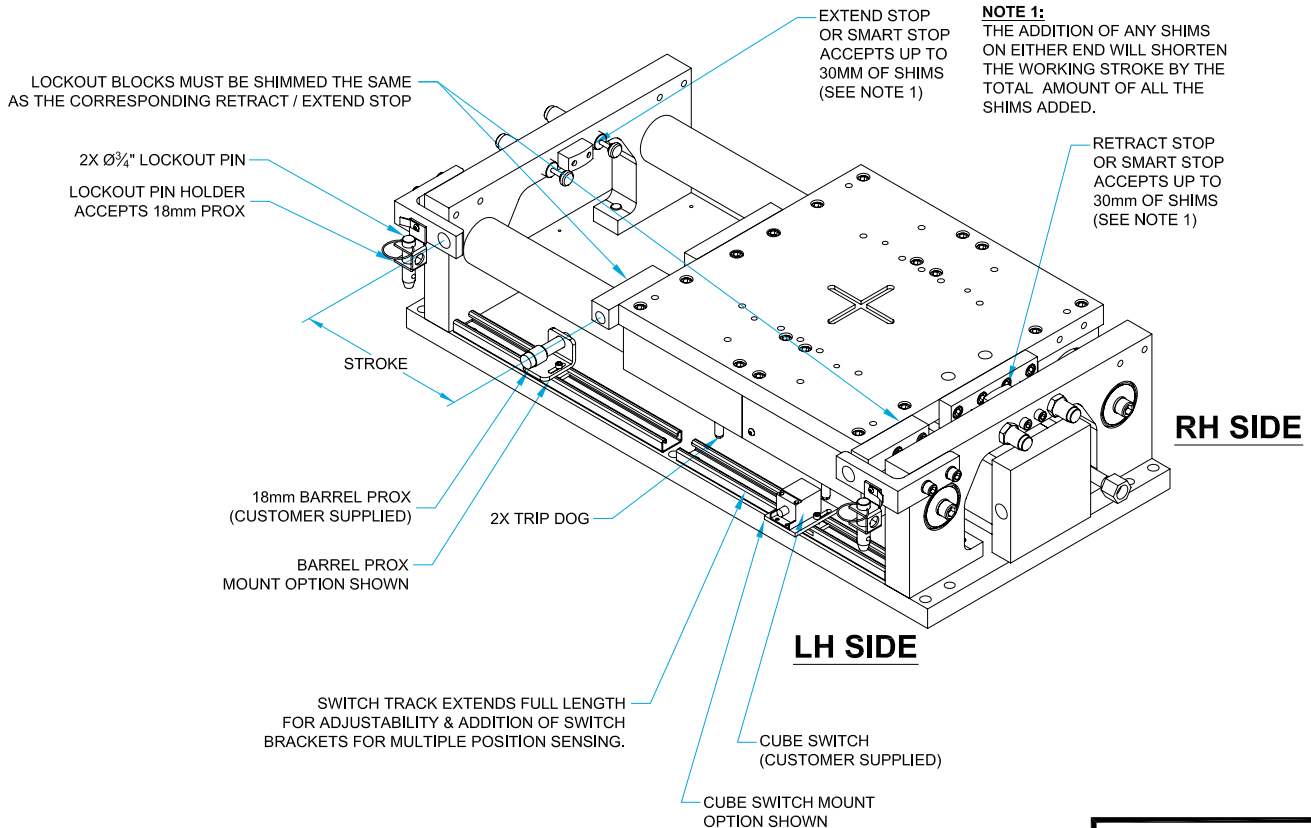
P7 0 0 0 0 5 0 0 1 E 0 0 0 0 X

Lockout & Switch Mounting Options

- X** NONE
- A** Lockout only - LH Side
- B** Lockout only - RH Side
- C** Switch only - LH Side
- D** Switch & Lockout - LH Side
- E** Switch LH Side & Lockout RH Side
- F** Switch only - RH Side
- G** Switch RH Side & Lockout LH Side
- H** Switch & Lockout - RH Side

Options

- 0** No Switch Mount
- X** 18mm Barrel Prox Mount
- B** 18mm Barrel Switch Mnt & Smart Stop (Duplex)
- C** Cube Switch Mount
- D** Cube Switch Mnt & Smart Stop (Duplex)
- P** Welker Smart Stop



LOCKOUTS & SWITCHES

H7 SERIES

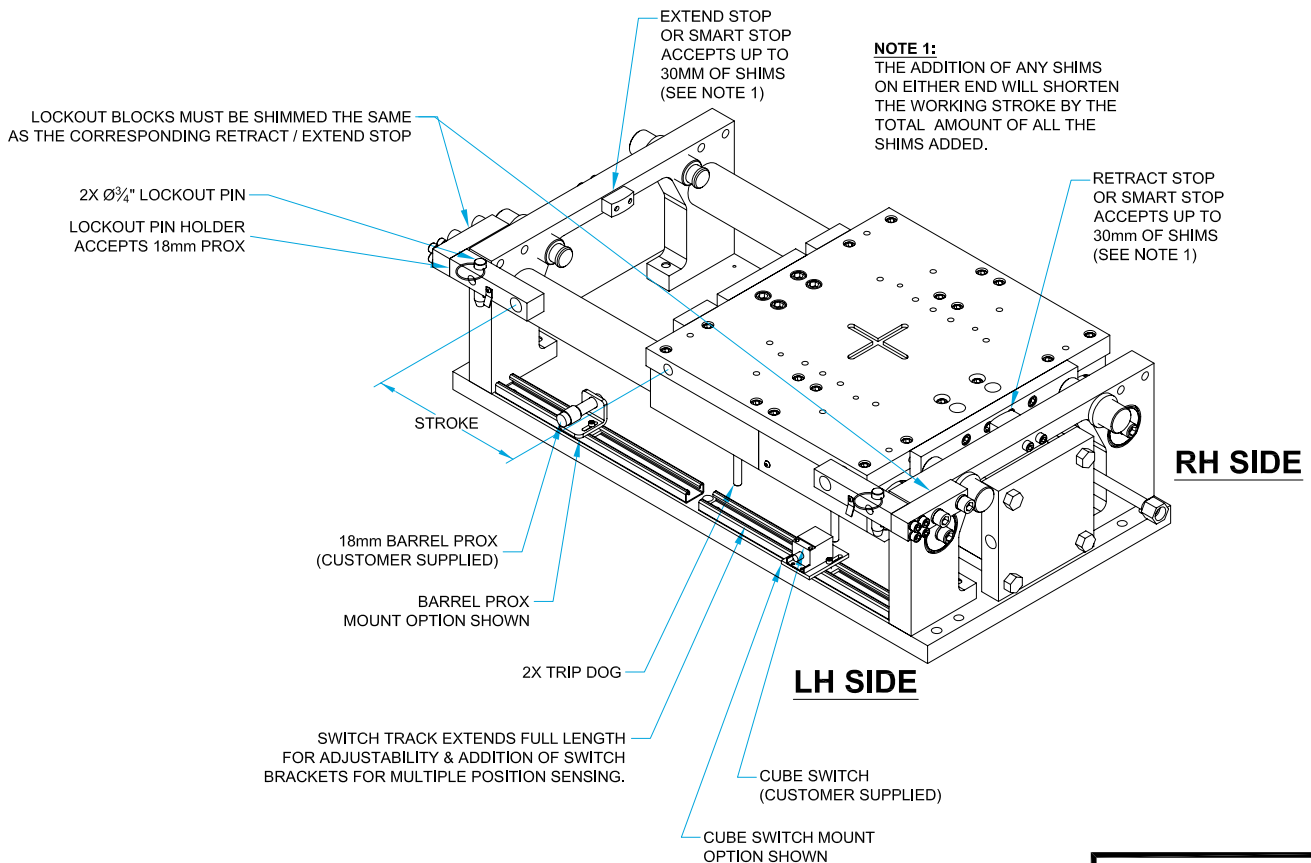
H7 0 0 0 0 5 0 0 1 E 0 0 0 0 X

Lockout & Switch Mounting Options

- X** NONE
- A** Lockout only - LH Side
- B** Lockout only - RH Side
- C** Switch only - LH Side
- D** Switch & Lockout - LH Side
- E** Switch LH Side & Lockout RH Side
- F** Switch only - RH Side
- G** Switch RH Side & Lockout LH Side
- H** Switch & Lockout - RH Side

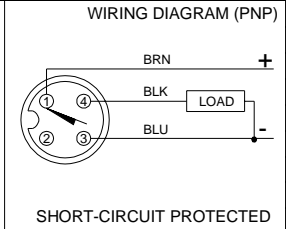
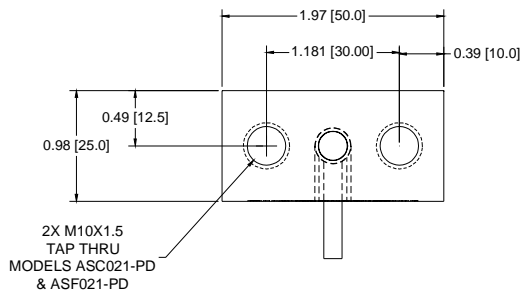
Options

- 0** No Switch Mount
- X** 18mm Barrel Prox Mount
- B** 18mm Barrel Switch Mnt & Smart Stop (Duplex)
- C** Cube Switch Mount
- D** Cube Switch Mnt & Smart Stop (Duplex)
- P** Welker Smart Stop

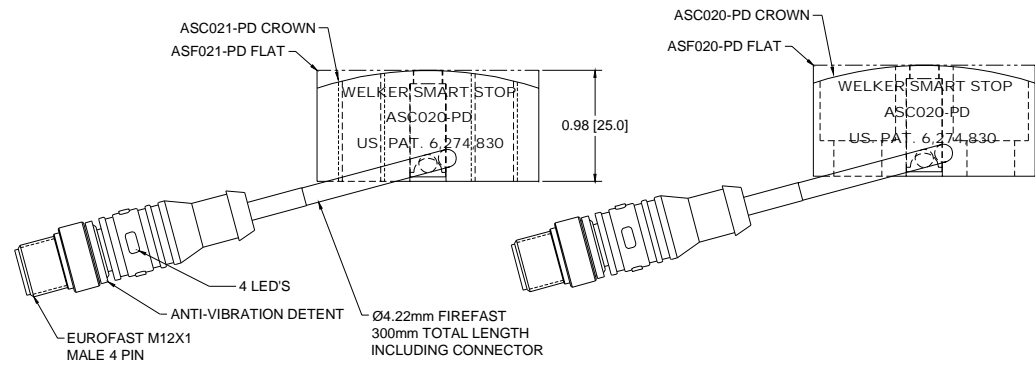


WELKER SMART STOP

MODEL NO:
 ASC020-PD FOR CROWNED, DRILL & C'BORE FOR M10 SHCS + DC SWITCH
 ASC021-PD FOR CROWNED, M10X1.5 TAP + DC SWITCH
 ASF020-PD FOR FLAT, DRILL & C'BORE FOR M10 SHCS + DC SWITCH
 ASF021-PD FOR FLAT, M10X1.5 TAP + DC SWITCH

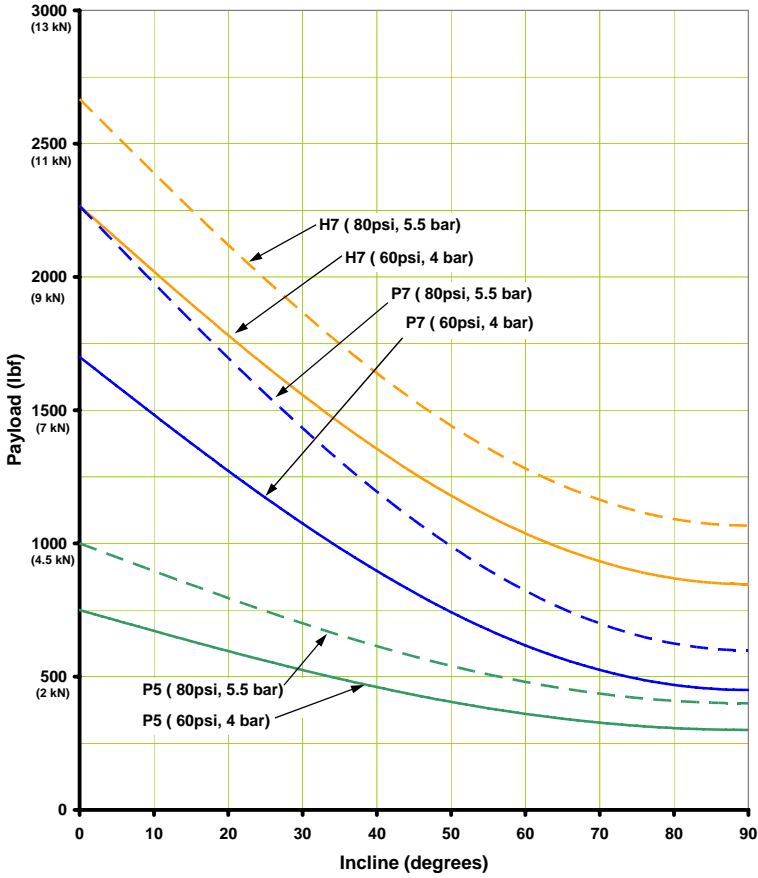


SPECIFICATIONS	
CONTACT CARRIER MATERIAL (RSE)	PUR
MOLDED HEAD MATERIAL/COLOR (RSE)	THERMOPLASTIC PUR/BLACK
CONTACT MATERIAL/PLATING (RSE)	GOLD-PLATED BRASS
COUPLING NUT MATERIAL/PLATING (RSE)	NICKEL-PLATED BRASS
RATED OPERATING DISTANCE	2mm = .079" (NOMINAL)
MOUNTING MODE	FLUSH
HYSTERESIS (DIFFERENTIAL TRAVEL)	3-15%
MAX. RELATIVE TEMPERATURE DRIFT	Ω#±10%
MIN. REPEAT ACCURACY	Ω#±2%
OPERATING TEMPERATURE	-25 to 70°C (-13 to 158°F)
RATED OPERATIONAL VOLTAGE (DC)	10-30 VDC
MAX. RIPPLE	Ω#10%
RATED OPERATIONAL CURRENT	Ω#150 mA
NO-LOAD CURRENT	Ω#15 mA
MAX. OFF-STATE CURRENT	Ω#0.1 mA
MAX. SWITCHING FREQUENCY	Ω#8 kHz
RATED INSULATION VOLTAGE	0.5 kV
OUTPUT FUNCTION	3-WIRE, NORMALLY OPEN, PNP
SHORT-CIRCUIT PROTECTION	YES
MAX. VOLTAGE DROP	Ω#1.8 V
WIRE BREAKAGE/REVERSE POLARITY PROTECT	YES
DEGREE OF PROTECTION	IP 67
HOUSING MATERIAL	SST, V2A 1.4301
ACTIVE FACE	PLASTIC, PA12-GF30
OUTER CABLE JACKET (SENSOR)	3mm PUR
VIBRATION RESISTANCE	55 Hz (1mm)
SHOCK RESISTANCE	30 x g (11 ms)
PIG-TAIL LED COLOR	GREEN=POWER, YELLOW=OUTPUT

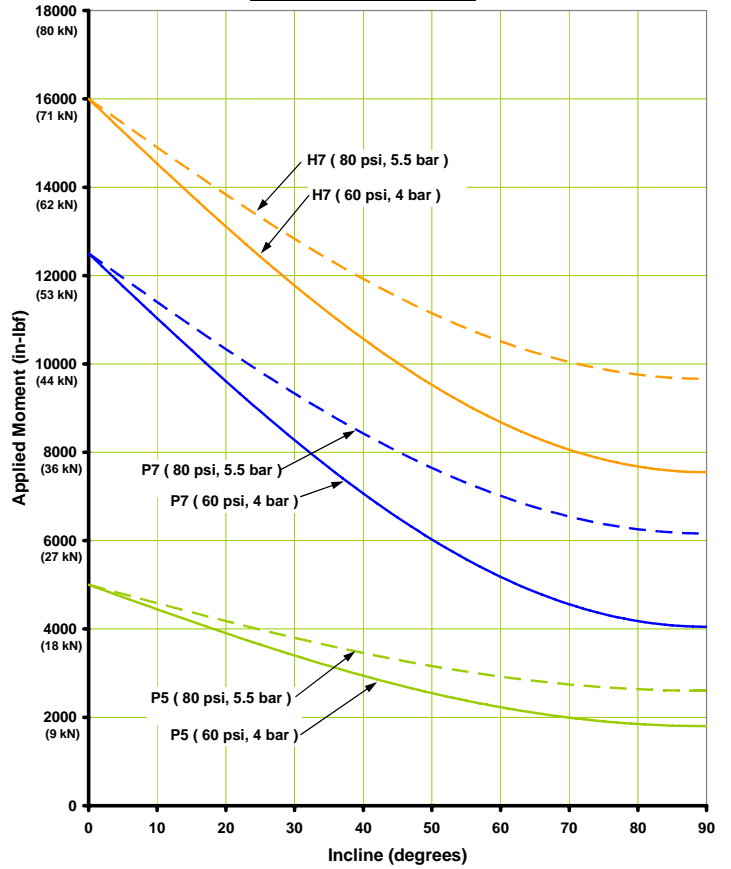


Download CAD drawings @welkerbearing.com

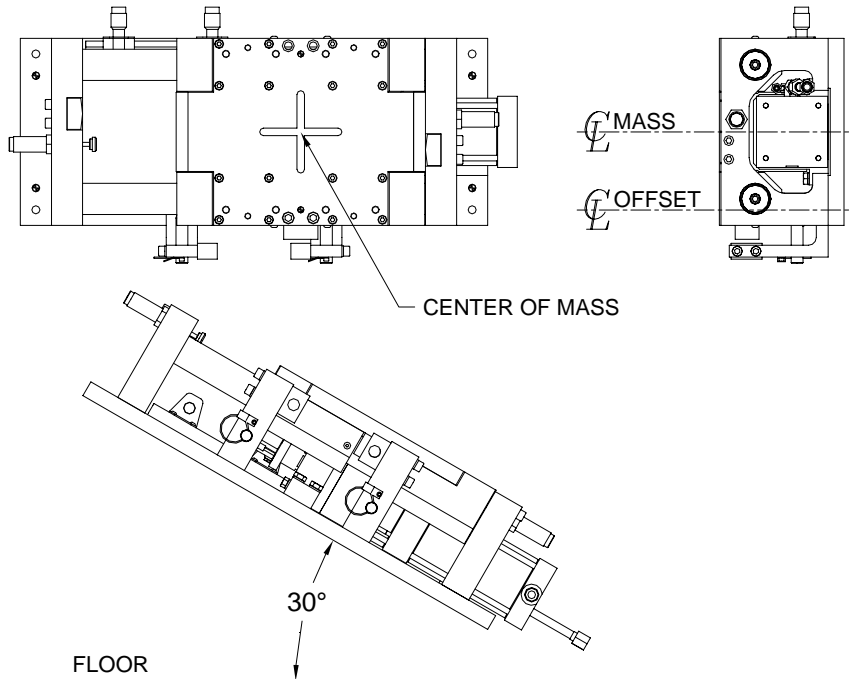
PAYLOAD CAPACITY



MOMENT LOAD CAPACITY



Applications are evaluated in two separate calculations: payload and moment load. An approvable application meets both criteria. For applications outside the graph safety zone, contact Welker. Go to www.ewelker.com for a sizing program to verify your application.



Loading Example for P5 Slide:

An application with a 400 lbf (1779 N) payload, offset 6 inches and operating at a 30 degree incline has an applied moment load of 2400 in-lbf. (271 N-m) with an allowable payload of 500 lbf (2224 N). The allowable moment load is 3800 in/lbf (429N-m). Note that the offset, in inches, is the same regardless of the slide orientation to the floor. Round shafting makes calculations the same for all slide orientations.