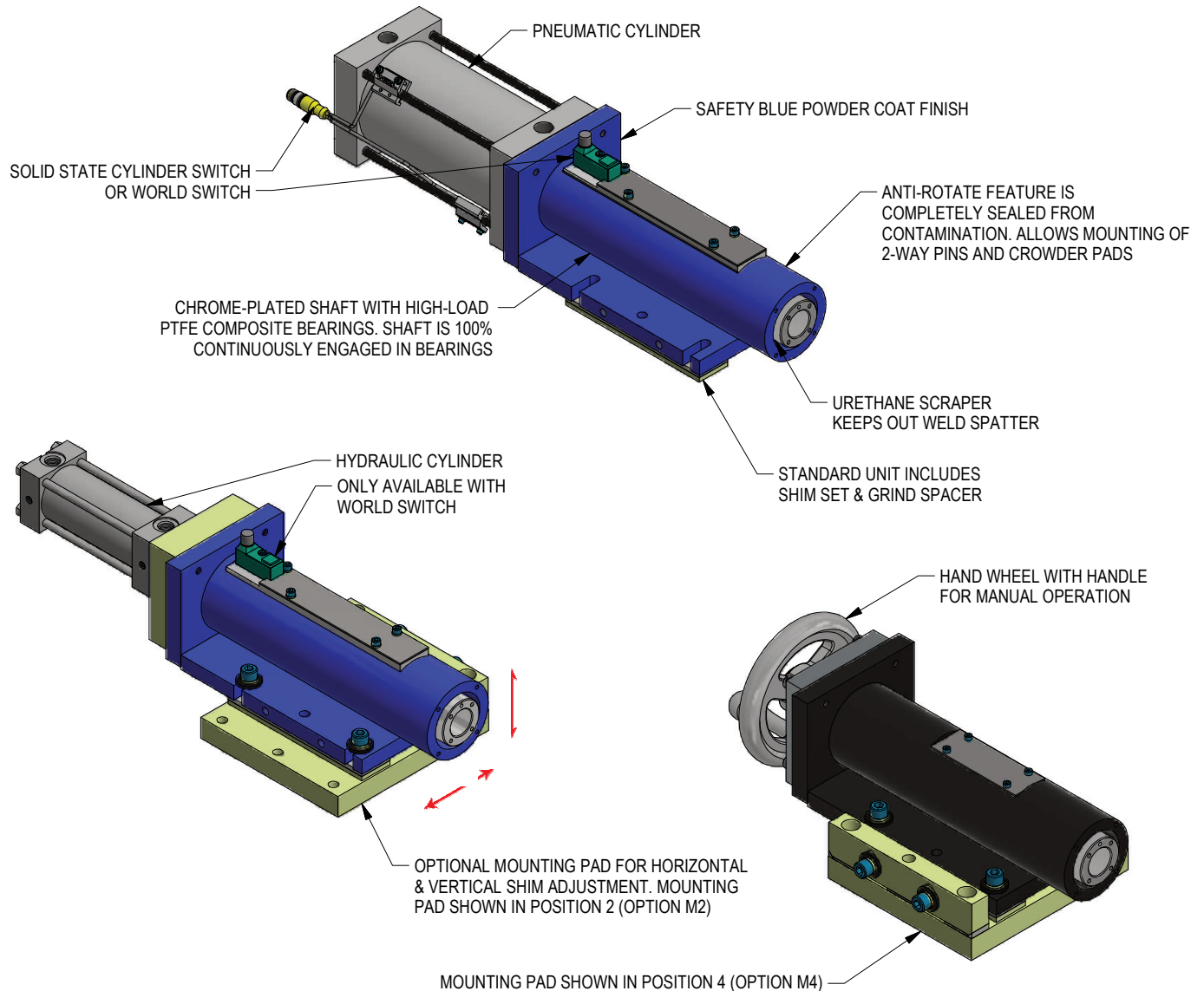


HP5 BULL PIN

FOR FRAME LINE APPLICATIONS

754 LBF RETRACT FORCE @ 60 PSI

RETRACTING LOCATING PIN WITH A 2KG SLIDE HAMMER PISTON. RAP ACTION* PROVIDES CONCENTRATED PULLING POWER. A GREATER THAN FOUR TIMES SHAFT DIAMETER TO BEARING LENGTH RATIO IS ALWAYS FULLY ENGAGED, OFFERING LONG PRECISION LIFE. NO MAINTENANCE OR GREASING REQUIRED.
(*RAP ACTION ON PNEUMATIC UNIT ONLY)



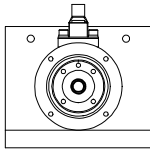
RELEASED 1/20/21

APPLICATION GUIDE

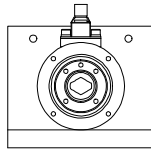
HP5 Bull Pins are made for inline balanced loads. There is an anti-rotate feature but it is for orientation only - not for offset loads.

GOOD APPLICATIONS

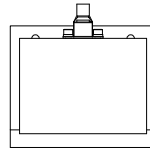
(VIEWS ARE FROM PIN END, HP5 SHOWN)



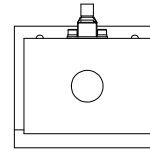
INLINE
ROUND PIN



INLINE
DIAMOND PIN



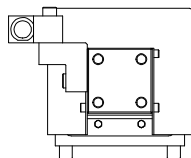
INLINE
PUSHER BLOCK



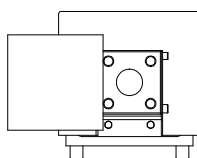
INLINE
PIN/PUSHER BLOCK COMBO

BAD APPLICATIONS FOR HP5, GOOD APPLICATIONS FOR WP6 SHOT PINS

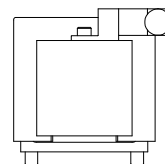
(VIEWS ARE FROM PIN END, WP6 SHOWN)



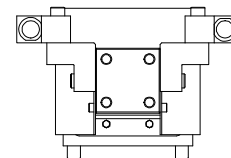
OFFSET PIN



INLINE PIN WITH
OFFSET
PUSHER BLOCK



INLINE PUSHER BLOCK
WITH OFFSET PIN



DOUBLE PIN

(DO NOT SCALE DRAWING)

WELKER

ENGINEERED PRODUCTS

(800) 229-0890 www.welkerproducts.com

ORDERING INFORMATION

NOTE: ALL BOXES MUST BE FILLED IN FOR A COMPLETE PART NUMBER

H P 5 -

0
0

- Cylinder**
- P** Pneumatic, NPT ports
 - G** Pneumatic, G ports
 - H** Hydraulic
 - M** Manual

- Port Position**
- 0** None (Manual operation)
 - 1** Port @ Position 1
 - 2** Port @ Position 2
 - 3** Port @ Position 3
 - 4** Port @ Position 4

- Mounting Assembly**
- 00** None
 - M2** Mounting Position 2
 - M4** Mounting Position 4

- Switch Option**
- 00** None
 - ZE** See World Switch chart (Pneum & Hyd Options only)
 - L3** Cylinder Switch (Pneumatic Option only)

- Short Stroke (Pneumatic Option Only)**
- 0** None
 - A** 60mm Stroke

World Switches	Order Number SO1 EXTEND (E) or SO1 RETRACT (R)				
	Part Number	Manufacturer	Description		
	00	NO SWITCH			
	VE or VR	NBN2-F581-160S6-E8-V1	Pepperl & Fuchs	4-Wire, 4-Pin, DC M12 X 1 (PNP) Quick Disconnect	
ZE or ZR	WWS001A	Welker	4-Wire, 4-Pin, DC M12 X 1 (PNP) Quick Disconnect		

Cylinder Switch	Switch	Part Number	Manufacturer	Description
	L3	SWITCH L3*	L3 sw itch is w eld field immune, comparable to World Sw itches. Dual sensor sw itch, 1 per cylinder	Welker

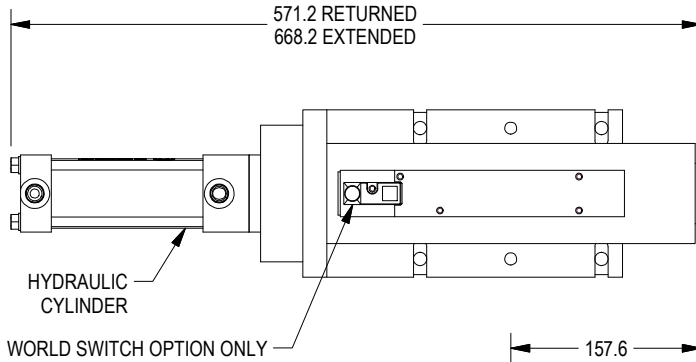
*Note that some mid and low frequency DC resistance applications (i.e. aluminum resistance w elding applications) may cause a fault. In these applications, it is recommended that the sensor be ignored/bypassed during the w elding cycle.

Standard Switch Option - All other options may affect price and delivery

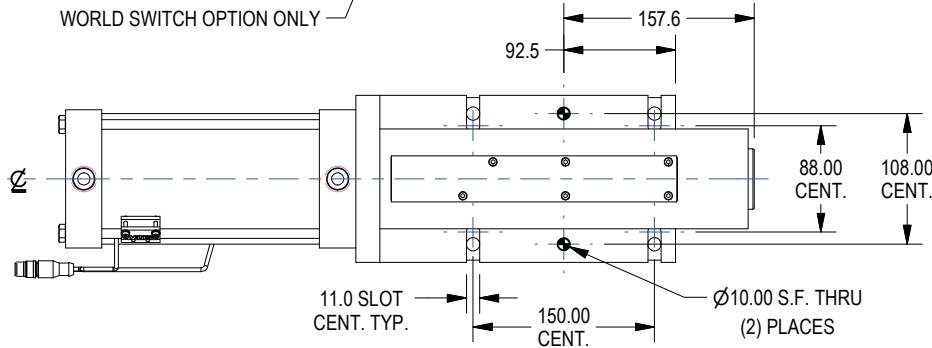
(DO NOT SCALE DRAWING)



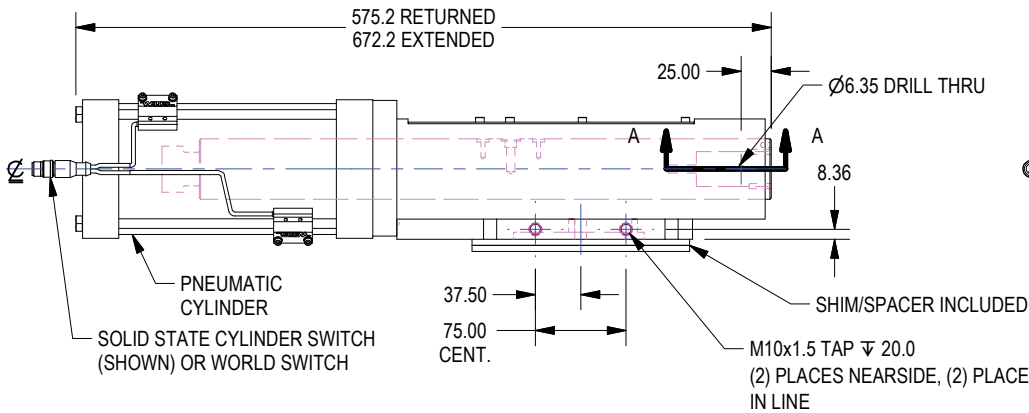
GENERAL DIMENSIONS



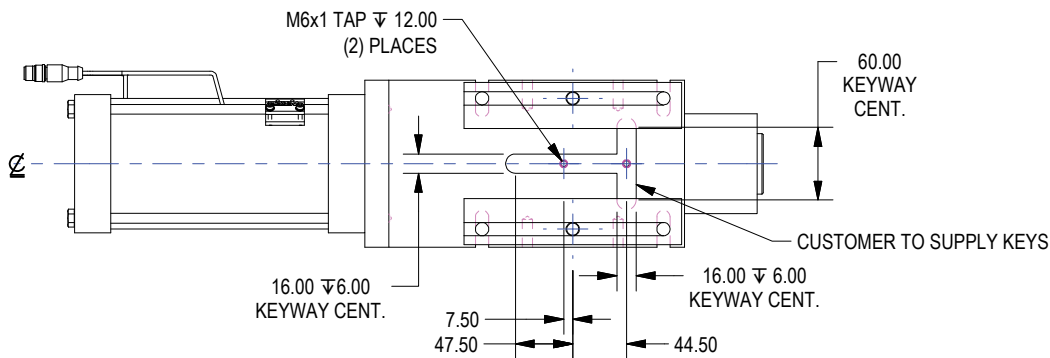
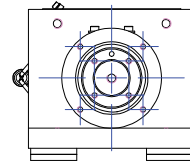
HYDRAULIC CYLINDER:
 2" BORE X 97mm [3.818] STROKE, 1400 PSI MAX
 CUSHIONS BOTH ENDS
 #6 SAE PORTS
 FLUOROCARBON SEALS FOR PISTON AND ROD
 HIGH LOAD PISTON



PNEUMATIC CYLINDER:
 4" BORE X 100mm STROKE
 LESS 3.0mm FOR RAP
 97.0mm ACTUAL STROKE
 1/2" NPT OR G1/2 PORTS



FOR THIS VIEW'S DIMENSIONS SEE SHEET 5



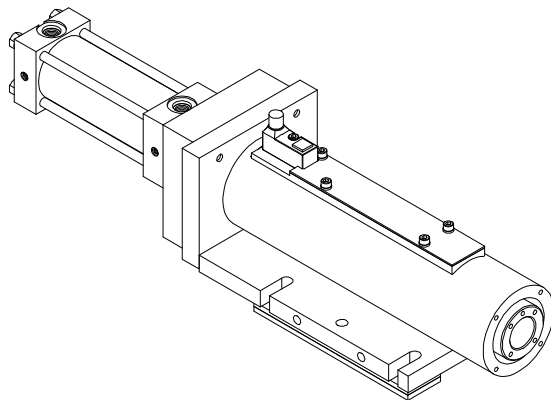
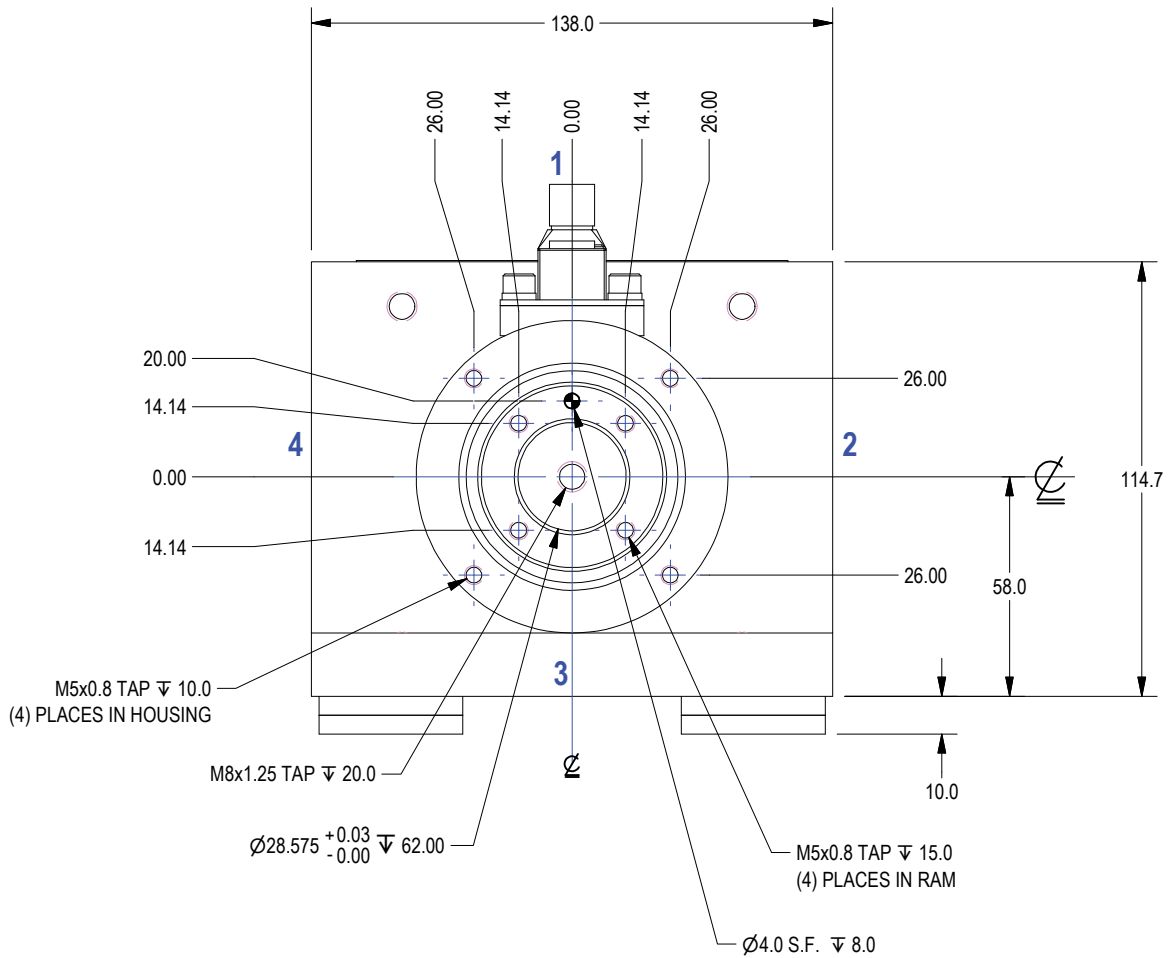
(DO NOT SCALE DRAWING)

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GENERAL DIMENSIONS: HP5 NOSE END VIEW



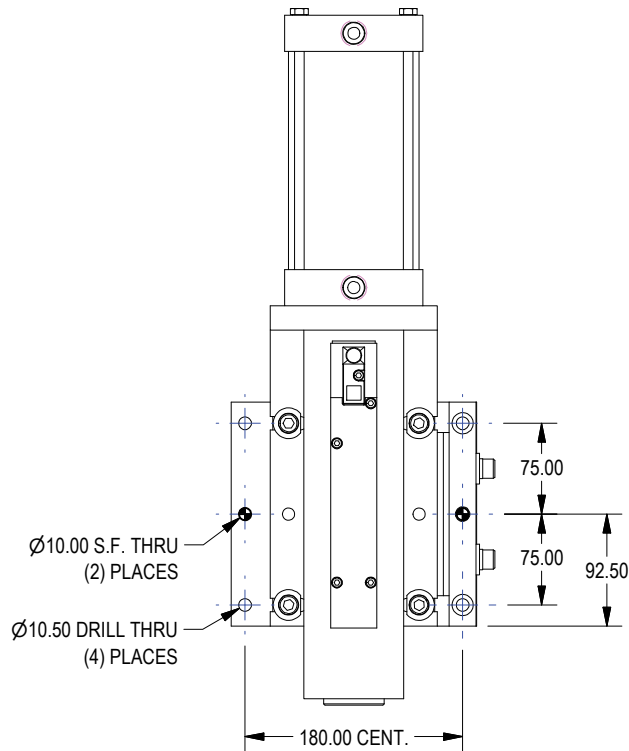
(DO NOT SCALE DRAWING)

WELKER

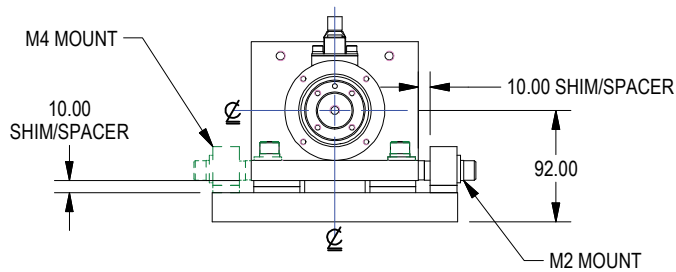
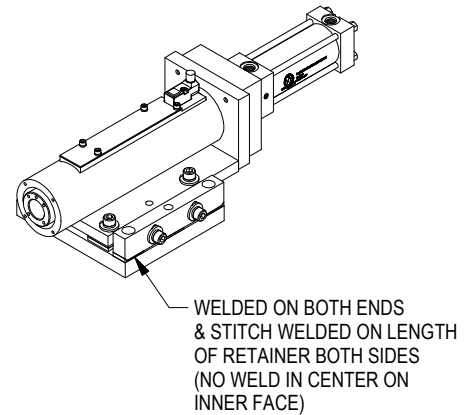
ENGINEERED PRODUCTS

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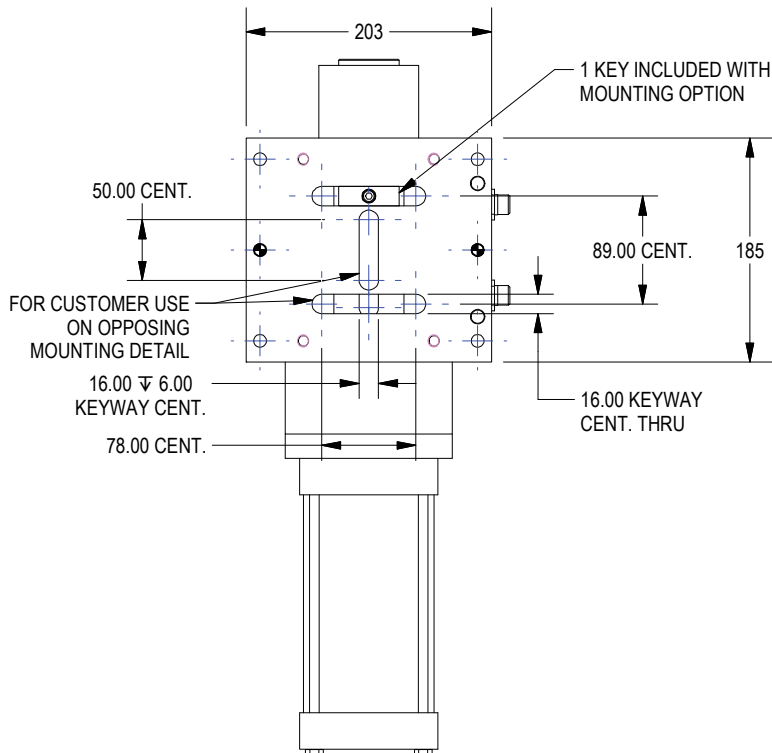
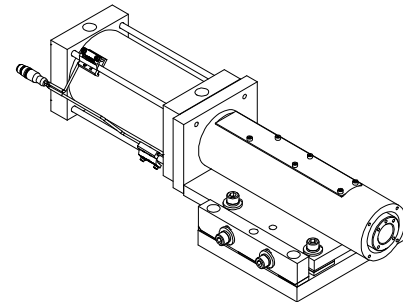
MOUNTING OPTION DIMENSIONS



**HP5 WITH MOUNTING
ASSEMBLY OPTION M2:**
SHOWN WITH HYDRAULIC CYLINDER



**HP5 WITH MOUNTING
ASSEMBLY OPTION M4:**
SHOWN WITH PNEUMATIC CYLINDER



(DO NOT SCALE DRAWING)

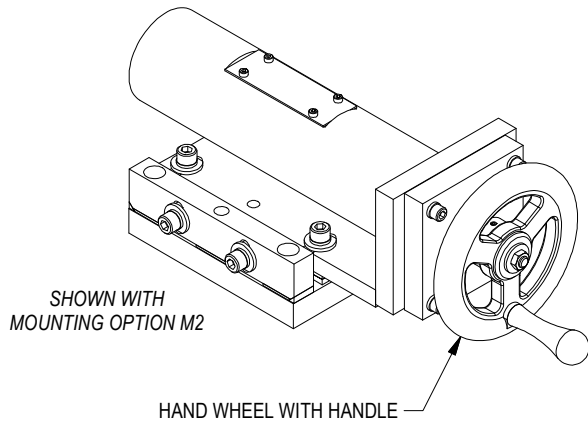
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MANUAL OPTION

SEE SHEETS 4 & 5 FOR GENERAL DIMENSIONS
SEE SHEET 6 FOR MOUNTING OPTION DIMENSIONS

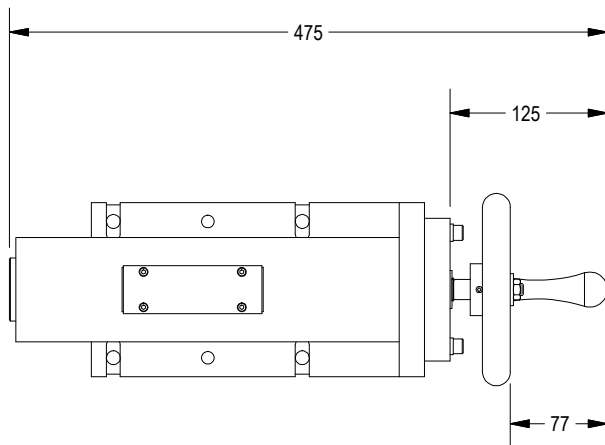


TYPICAL APPLICATIONS:

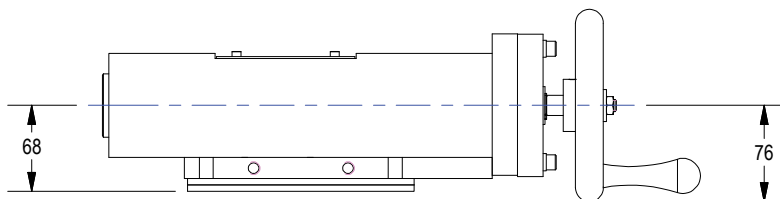
- MANUAL BUILD/PONY LINES
- PROTOTYPE BUILDS
- CMM ROOMS

1-4 ACME LEAD SCREW

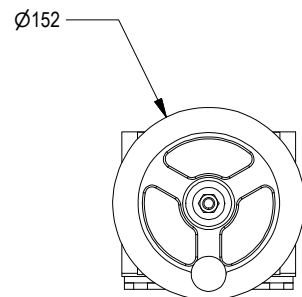
75mm STROKE



SWITCH NOT AVAILABLE WITH MANUAL OPTION



SHOWN WITHOUT MOUNTING OPTION



(DO NOT SCALE DRAWING)

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