

## L SERIES PNEUMATIC CYLINDERS

### Low Breakaway and Running Friction / Long Life

Designed for low start up and running friction, the L series contains low friction Nitrile seals and is lubricated at the factory with PTFE impregnated grease. Precision machined components and self-lubricating bearings ensure long life and continued low friction operation.

### Compact Size / Clean Design

Nason L series cylinders were designed with today's automation equipment in mind. They offer more power in a smaller package than comparable pancake or compact type cylinders. The smooth exterior of the cylinder body (no bolt together or retaining wire hole access) means no dirt or grease traps.

### Rugged Construction

The L series incorporates thick walled, anodized aluminum housings and caps. Rods are chrome plated 303 stainless steel riding in self-lubricating bronze bearings and hardened 302 stainless steel retaining wires are used for assembly.

### Rebuildable

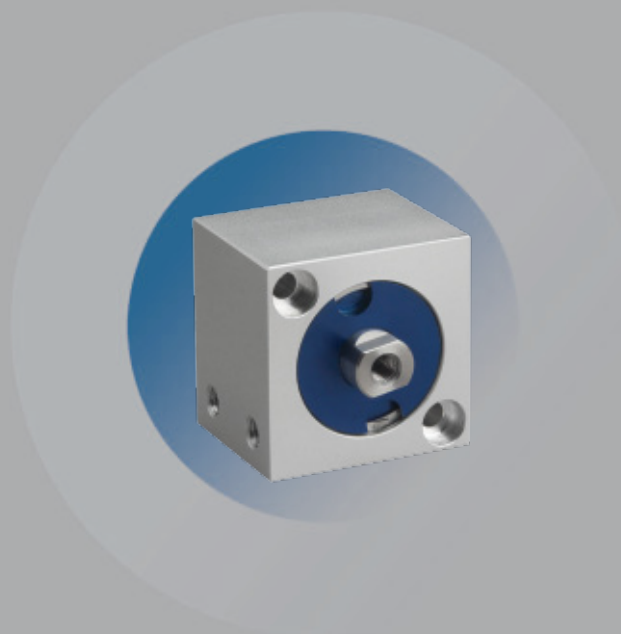
All L series cylinders are field rebuildable.

### Versatile Design

The L series cylinders are metric in design (bore and rod sizes). They are offered in inch or metric mounting and porting. Due to their 100% machined design they are easily customized by Nason.

**L SERIES  
PNEUMATIC CYLINDERS**

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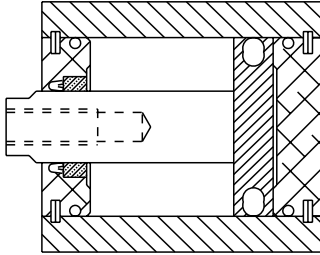


Individual Features

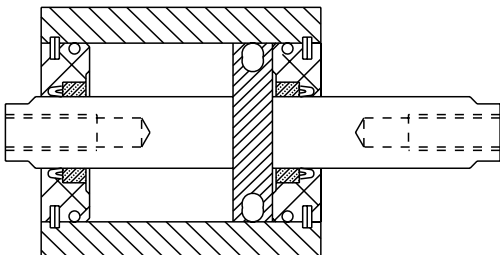
**Model LS**

- Most compact of 3 models

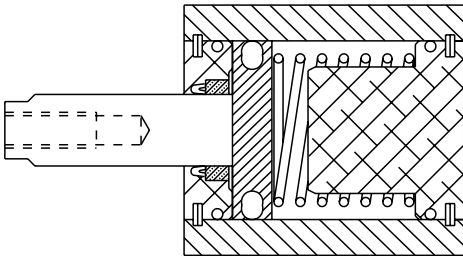
Double Acting, Single Rod



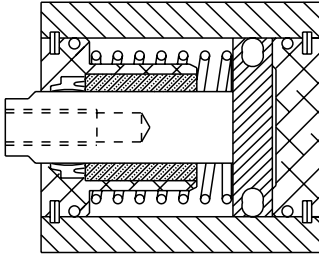
Type "D" - Double Acting, Double Rod



Type "R" - Single Acting, Spring Extend



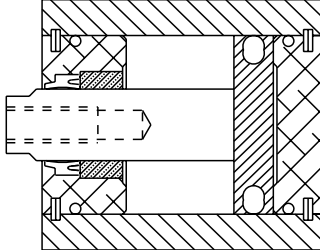
Type "S" - Single Acting, Spring Retract



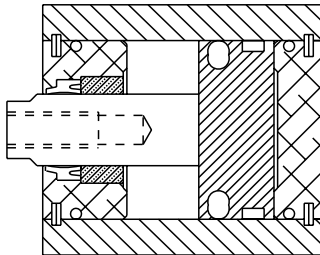
**Model LE**

- Extended internal rod bearing for additional load support
- Integral seal and rod wiper

Double Acting, Single Rod



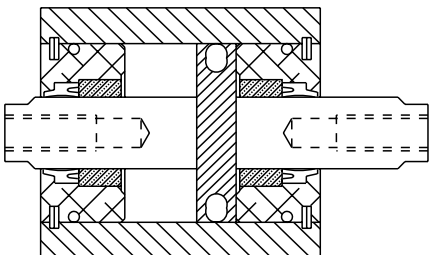
Double Acting, Single Rod



**Model LH**

- Extended internal rod bearing for additional load support
- Integral seal and rod wiper
- Wear band added to piston for additional load support

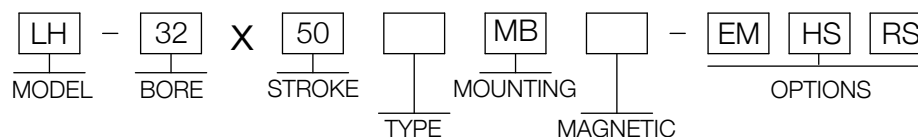
Type "D" - Double Acting, Double Rod



## How to Order

Example:

Part Number: LH-32X50MB-EM-HSRS



MODEL
LS - Low Friction Standard Duty Cylinder
LE - Low Friction Medium Duty Cylinder
LH - Low Friction Heavy Duty Cylinder

BORE
12 - 12mm (.47")
20 - 20mm (.79")
25 - 25mm (.98")
28.5 - 28.5mm (1.13")
32 - 32mm (1.26")
40 - 40mm (1.58")
50 - 50mm (1.97")
63 - 63mm (2.48")
76 - 76mm (3.00")
101 - 101mm (4.00")
127 - 127mm (5.00")
152 - 152mm (6.00")

STROKE
See Stroke Table

TYPE
BLANK (No Code) - Double Acting, Single Rod
D - Double Acting, Double Rod
S - Single Acting, Spring Retract
R - Single Acting, Spring Extend

MOUNTING
MF - Threads on Front Face (Rod End)
MR - Threads on Rear Face (Opposite Rod)
MB - Threads on Both Faces
MT - Drilled Through and Counterbored for Bolt Clearance (See product pages for stroke availability)
MS - Threads on Side of Cylinder Body
FF - Flange on Front Face (Rod End)
FR - Flange on Rear Face (Opposite Rod)
FS - Flange on Side of Cylinder Body
PR - Pivot on Rear Face
PL - Long Pivot

MAGNETIC
BLANK (No Code) - Standard "NO MAGNET" Piston
M - Magnetic Piston and Sensor Mounting

OPTIONS
EM - InchThreads (Mounting and Ports) (See product pages for sizes)
HS - High Temperature Seals -10 C to 150 C (0 F to 302 F) (Available on LE and LH Models Only)
RE - Rod Eye
RS - Male Stud for Rod End (Length - 2 x Thread Diameter)
RF - 5mm (.197") Rod Extension
RT - 10mm (.394") Rod Extension
RV - 25mm (.984") Rod Extension
SH - Hydraulic Option (35 Bar 500 PSI) Hydraulic Service (Not available on 12, 101, 127 and 152mm Bores)
PE - Enlarged Ports (Available on 50, 63, 76, 101, 127 and 152mm Bores)
UB - Urethane Shock Pads Both Ends (20 thru 76mm Bores)
UF - Urethane Shock Pad Front (Rod End) (20 thru 76mm Bores)
UR - Urethane Shock Pad Rear (Opposite Rod) (20 thru 76mm Bores)

### Piston Area Chart

Bore	Push (Rod Extend)	Pull (Rod Retract)
12	1,13 cm <sup>2</sup> (.18 in <sup>2</sup> )	0,85 cm <sup>2</sup> (.14 in <sup>2</sup> )
20	3,14 cm <sup>2</sup> (.48 in <sup>2</sup> )	2,64 cm <sup>2</sup> (.40 in <sup>2</sup> )
25	4,91 cm <sup>2</sup> (.76 in <sup>2</sup> )	4,12 cm <sup>2</sup> (.64 in <sup>2</sup> )
28.5	6,41 cm <sup>2</sup> (1.0 in <sup>2</sup> )	5.28 cm <sup>2</sup> (.82 in <sup>2</sup> )
32	8,04 cm <sup>2</sup> (1.25 in <sup>2</sup> )	6,91 cm <sup>2</sup> (1.07 in <sup>2</sup> )
40	12,56 cm <sup>2</sup> (1.95 in <sup>2</sup> )	10,55 cm <sup>2</sup> (1.64 in <sup>2</sup> )
50	19,63 cm <sup>2</sup> (3.04 in <sup>2</sup> )	17,62 cm <sup>2</sup> (2.73 in <sup>2</sup> )
63	31,17 cm <sup>2</sup> (4.83 in <sup>2</sup> )	28,03 cm <sup>2</sup> (4.34 in <sup>2</sup> )
76	45,6 cm <sup>2</sup> (7.07 in <sup>2</sup> )	42,46 cm <sup>2</sup> (6.59 in <sup>2</sup> )
101	81,07 cm <sup>2</sup> (12.57 in <sup>2</sup> )	77,93 cm <sup>2</sup> (12.09 in <sup>2</sup> )
127	126,7 cm <sup>2</sup> (19.6 in <sup>2</sup> )	123,5 cm <sup>2</sup> (19.1 in <sup>2</sup> )
152	181,46 cm <sup>2</sup> (28.2 in <sup>2</sup> )	176,55 cm <sup>2</sup> (27.45 in <sup>2</sup> )

Operating Media: Air (Clean, Dry or Lubricated)  
 Maximum Operating Pressure: 17 Bar (250 PSI)  
 Operating Temperature: -10°C to 95°C (0°F to 200°F)  
 Packing: Buna N  
 Lubrication: PTFE impregnated grease  
 Stroke Tolerance: +0.75mm/-0mm (+0.03"/-0")

### Cylinder Output Force Formula

Piston Area x Pressure = Output Force
Piston Area (in <sup>2</sup> ) x Pressure (PSI) = lbf (Pounds Force)
Piston Area (cm <sup>2</sup> ) x Pressure (kg/cm <sup>2</sup> ) = kgf (Kilograms Force)
Piston Area (cm <sup>2</sup> ) x Pressure (kg/cm <sup>2</sup> ) x 9.8 = Newtons
Piston Area (cm <sup>2</sup> ) x Pressure (Bar) x 10 = Newtons
Piston Area (cm <sup>2</sup> ) x Pressure (Bar) x 1.02 = kgf (Kilograms Force)

### Spring Forces (Type S,R)

Bore	Type	Compressed Spring Force	Spring Rate
12	S,R	26.7 N (6 lbs)	0,6 N/mm (3.6 lbs/in)
20	S,R	40 N (9 lbs)	0,9 N/mm (5.5 lbs/in)
25	S,R	29.8 N (6.7 lbs)	0,6 N/mm (3.51 lbs/in)
28.5	S,R	57.8 N (13.0 lbs)	1,31 N/mm (7.53 lbs/in)
32	S,R	55.6 N (12.5 lbs)	1,31 N/mm (7.53 lbs/in)

### Stock Stroke Table

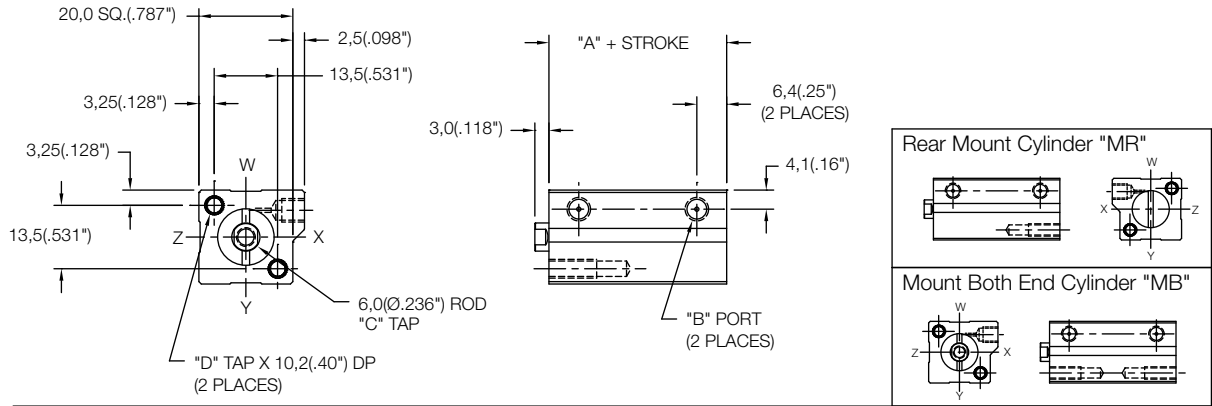
Bore	Model LS		Model LE	Model LH
	Single Rod, Double Rod	Spring Extend, Spring Retract	Single Rod	Single Rod, Double Rod
	Standard Stroke Lengths			
12	10, 15, 20, 25, 30, 35, 40, 45, 50	5, 10, 15, 20, 25	5, 10, 15, 20, 25, 30, 35, 40, 45, 50	
20			5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 65, 75, 90, 100	
25			5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 65, 75, 90, 100	
28.5	6.35, 12.7, 19.05, 25.4, 31.75, 38.1, 44.45, 50.8, 63.5, 76.2, 88.9, 101.6	6.35, 12.7, 19.05, 25.4	6.35, 12.7, 19.05, 25.4, 31.75, 38.1, 44.45, 50.8, 63.5, 76.2, 88.9, 101.6	
32	10, 15, 20, 25, 30, 35, 40, 45, 50, 65, 75, 90, 100	5, 10, 15, 20, 25	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 65, 75, 90, 100	
40		N/A – 40mm Bore and Higher		
50				
63				
76				
101				
127				
152				

Note: Stroke lengths are in millimeters. Enter stroke code above in appropriate place in part number. 5mm stroke not available as standard in LS model due to fitting interference. Contact the factory if a 5mm stroke is required in the LS model as this can be accomplished by special port locations. Other strokes available upon special order.

### Non Magnetic Front Mount Cylinder "MF"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	-	10mm - 50mm	16,0(0.63")	PUSH 1,13 cm <sup>2</sup> (0.18 in <sup>2</sup> )
LE	-	5mm - 50mm	21,0(0.83")	
LH	-	5mm - 50mm	26,0(1.03")	PULL 0,85 cm <sup>2</sup> (0.14 in <sup>2</sup> )
LS	S,R	5mm - 25mm	31,0(1.22")	

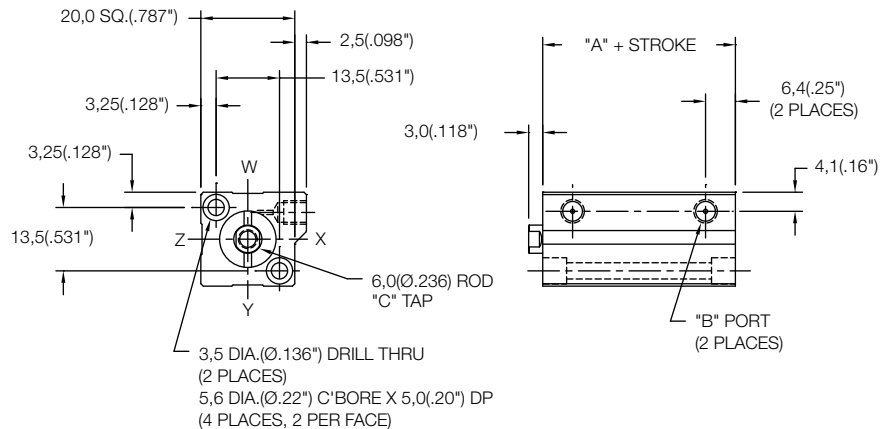
	Standard Threads	"EM" Option
"B"	M5X0,8	#10-32
"C"	M4X0,7	#8-32
"D"	M4X0,7	#8-32



### Non Magnetic Thru Mount Cylinder "MT"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	-	10mm - 20mm	16,0(0.63")	PUSH 1,13 cm <sup>2</sup> (0.18 in <sup>2</sup> )
LE	-	5mm - 15mm	21,0(0.83")	
LH	-	5mm - 10mm	26,0(1.03")	PULL 0,85 cm <sup>2</sup> (0.14 in <sup>2</sup> )
LS	S,R	5mm	31,0(1.22")	

	Standard Threads	"EM" Option
"B"	M5X0,8	#10-32
"C"	M4X0,7	#8-32



  - 12 X             -      

MODEL    BORE    STROKE    TYPE    MOUNTING    OPTIONS

LS  
LE  
LH

5mm - 50mm STROKE  
(SEE STROKE RANGE)

BLANK - NO CODE, DOUBLE ACTING, SINGLE ROD

S - SINGLE ACTING, SPRING RETRACT  
R - SINGLE ACTING, SPRING EXTEND

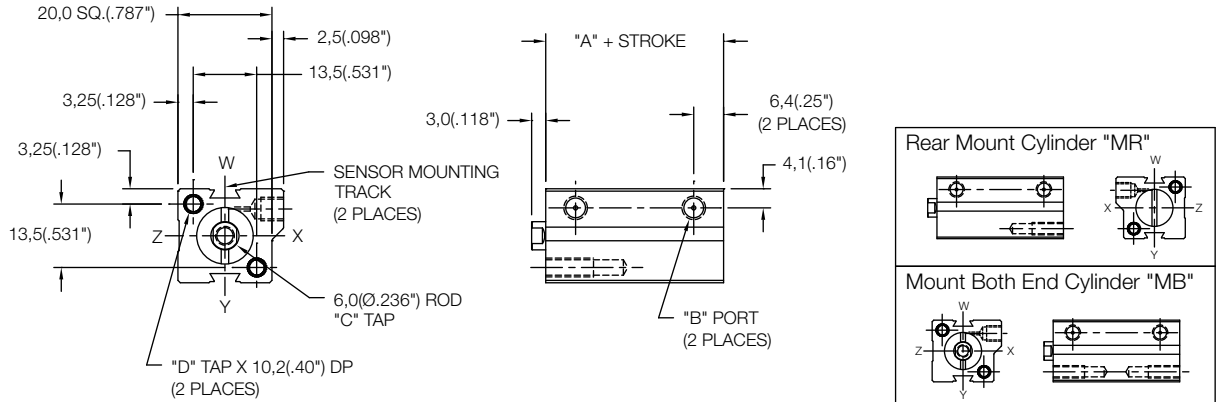
MT - THRU MOUNT  
MF - FRONT MOUNT  
MR - REAR MOUNT  
MB - BOTH END MOUNTS  
FF - FRONT FLANGE  
FR - REAR FLANGE  
(FOR FLANGES SEE PAGE 58)  
PR - REAR PIVOT  
(FOR PIVOT SEE PAGE 60)

EM - INCH THREADS & PORT OPTIONS  
 HS - HIGH TEMPERATURE SEALS OPTION:  
AVAILABLE ON LE AND LH MODELS ONLY  
(SEE PAGE 62)  
 RE - ROD EYE  
(SEE PAGE 61)  
 RS - MALE STUD FOR ROD END  
(SEE PAGE 61)  
 RF, RH, RN, RT, RV, RY - ROD EXTENSIONS  
(SEE PAGE 61)

### Magnetic Front Mount Cylinder "MF"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	-	10mm - 50mm	26,0(1.03")	PUSH 1,13 cm <sup>2</sup> (0.18 in <sup>2</sup> )
LE	-	5mm - 50mm	31,0(1.23")	
LH	-	5mm - 50mm	36,0(1.42")	PULL 0,85 cm <sup>2</sup> (0.14 in <sup>2</sup> )
LS	S,R	5mm - 25mm	41,0(1.62")	

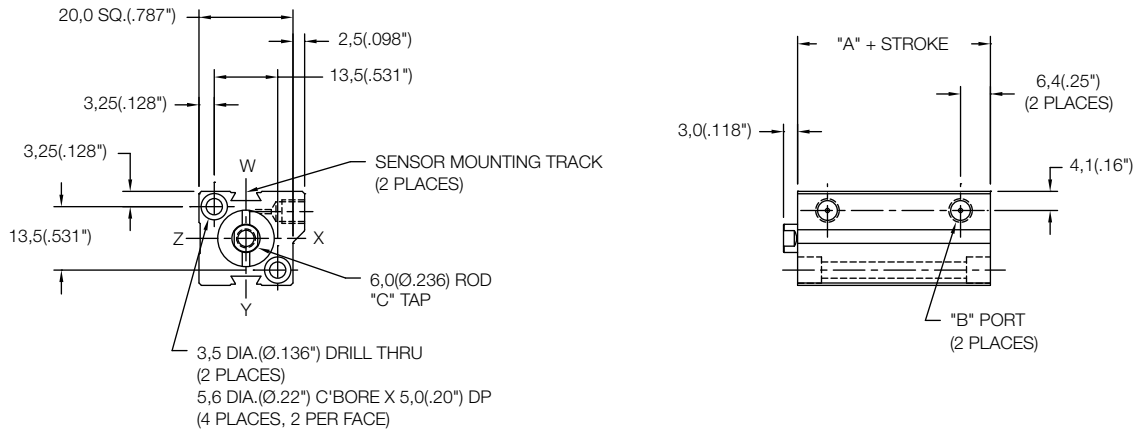
	Standard Threads	"EM" Option
"B"	M5X0,8	#10-32
"C"	M4X0,7	#8-32
"D"	M4X0,7	#8-32



### Magnetic Thru Mount Cylinder "MT"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	-	10mm	26,0(1.03")	PUSH 1,13 cm <sup>2</sup> (0.18 in <sup>2</sup> )
LE	-	5mm	31,0(1.23")	

	Standard Threads	"EM" Option
"B"	M5X0,8	#10-32
"C"	M4X0,7	#8-32



- MODEL: LS, LE, LH
- 5mm - 50mm STROKE (SEE STROKE RANGE)
- BLANK - NO CODE, DOUBLE ACTING, SINGLE ROD
- S - SINGLE ACTING, SPRING RETRACT
- R - SINGLE ACTING, SPRING EXTEND
- MT - THRU MOUNT
- MF - FRONT MOUNT
- MR - REAR MOUNT
- MB - BOTH END MOUNTS
- FF - FRONT FLANGE
- FR - REAR FLANGE (FOR FLANGES SEE PAGE 58)
- PR - REAR PIVOT (FOR PIVOT SEE PAGE 60)

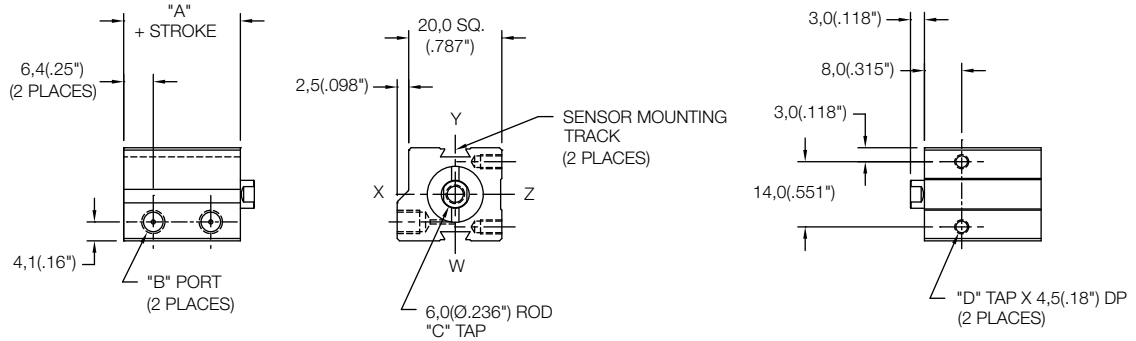
SENSORS SOLD SEPARATELY  
SKS, SKP, SCS, SCP - SOLID STATE  
LIMIT SENSORS (SEE PAGE 54)

- EM - INCH THREADS & PORT OPTIONS
- HS - HIGH TEMPERATURE SEALS OPTION: AVAILABLE ON LE AND LH MODELS ONLY (SEE PAGE 62)
- RE - ROD EYE (SEE PAGE 61)
- RS - MALE STUD FOR ROD END (SEE PAGE 61)
- RF, RH, RN, RT, RV, RY - ROD EXTENSIONS (SEE PAGE 61)

### Magnetic Side Mount Cylinder "MS"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	-	10mm	26,0(1.03")	PUSH 1,13 cm <sup>2</sup> (0.18 in <sup>2</sup> )
LE	-	5mm	31,0(1.23")	PULL 0,85 cm <sup>2</sup> (0.14 in <sup>2</sup> )

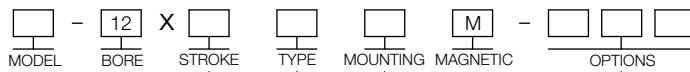
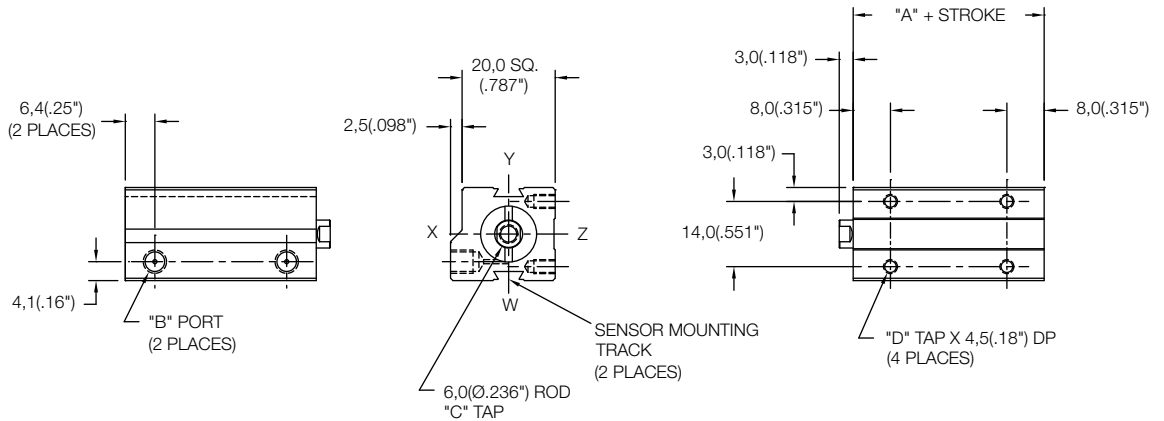
	Standard Threads	"EM" Option
"B"	M5X0,8	#10-32
"C"	M4X0,7	#8-32
"D"	M3X0,5	#4-40



### Magnetic Side Mount Cylinder "MS"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	-	15mm - 50mm	26,0(1.03")	PUSH 1,13 cm <sup>2</sup> (0.18 in <sup>2</sup> )
LE	-	10mm - 50mm	31,0(1.23")	
LH	-	5mm - 50mm	36,0(1.42")	PULL 0,85 cm <sup>2</sup> (0.14 in <sup>2</sup> )
LS	S,R	5mm - 25mm	41,0(1.62")	

	Standard Threads	"EM" Option
"B"	M5X0,8	#10-32
"C"	M4X0,7	#8-32
"D"	M3X0,5	#4-40



SENSORS SOLD SEPERATELY  
SKS, SKP, SCS, SCP - SOLID STATE  
LIMIT SENSORS (SEE PAGE 54)

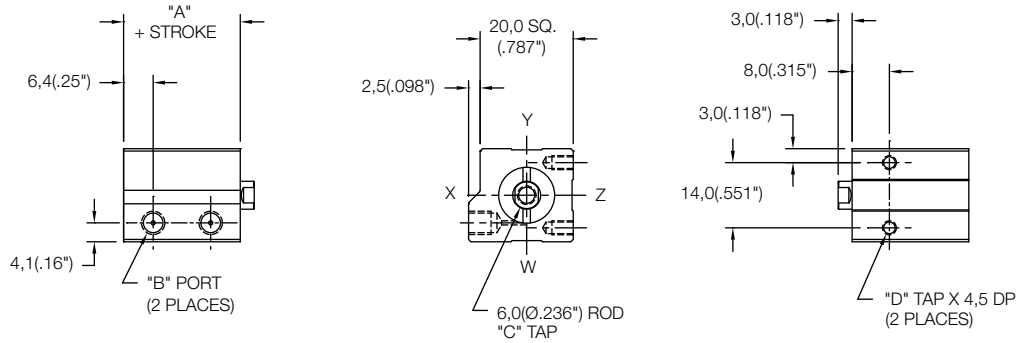
- MODEL: LS, LE, LH
- BORE: 12
- STROKE: 5mm - 50mm STROKE (SEE STROKE RANGE)
- TYPE: BLANK - NO CODE, DOUBLE ACTING, SINGLE ROD; S - SINGLE ACTING, SPRING RETRACT; R - SINGLE ACTING, SPRING EXTEND
- MOUNTING: MS - SIDE MOUNT; FE - FLANGE ON END; FS - FLANGE ON SIDE (SEE PAGE 59)
- MAGNETIC: M
- OPTIONS: EM - INCH THREADS & PORT OPTIONS; HS - HIGH TEMPERATURE SEALS OPTION: AVAILABLE ON LE AND LH MODELS ONLY (SEE PAGE 62); RE - ROD EYE (SEE PAGE 61); RS - MALE STUD FOR ROD END (SEE PAGE 61); RF, RH, RN, RT, RV, RY - ROD EXTENSIONS (SEE PAGE 61)



### Non Magnetic Side Mount Cylinder "MS"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	-	10mm - 20mm	16,0(0.63")	PUSH 1,13 cm <sup>2</sup> (0.18 in <sup>2</sup> )
LE	-	5mm - 15mm	21,0(0.83")	
LH	-	5mm - 10mm	26,0(1.03")	PULL 0,85 cm <sup>2</sup> (0.14 in <sup>2</sup> )
LS	S,R	5mm	31,0(1.22")	

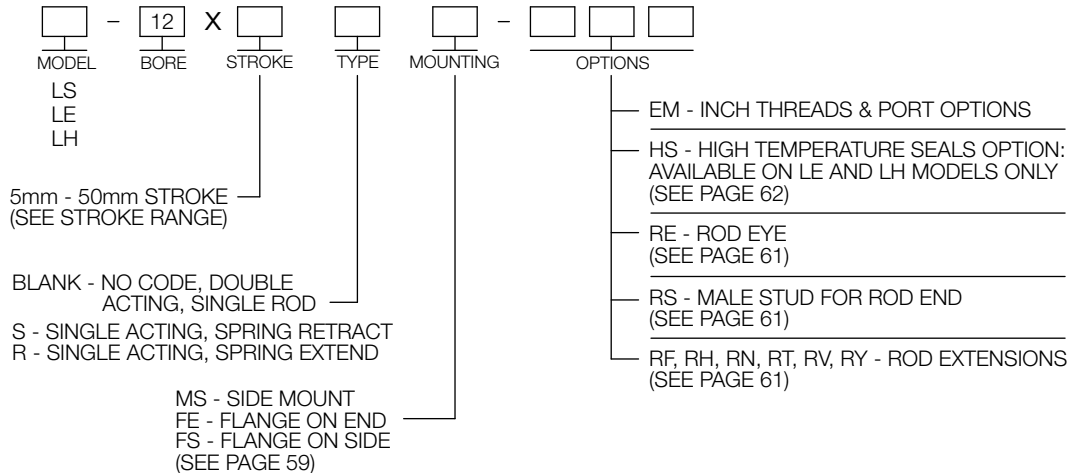
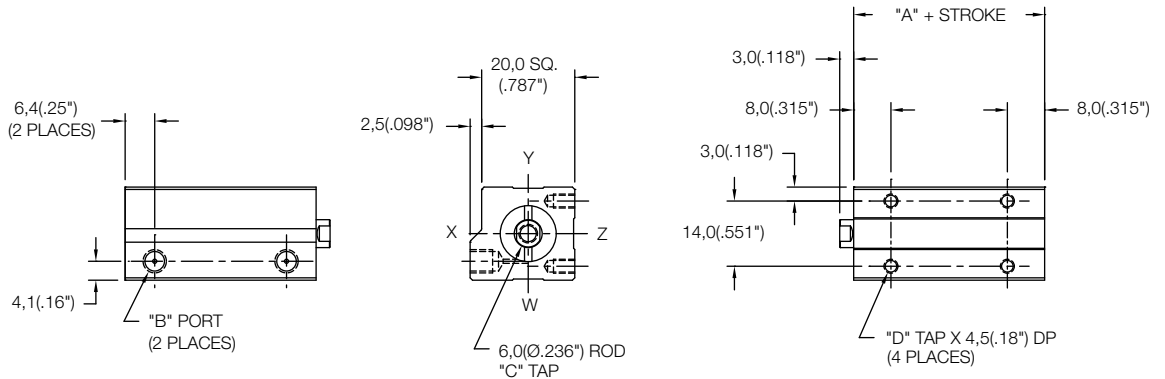
	Standard Threads	"EM" Option
"B"	M5X0,8	#10-32
"C"	M4X0,7	#8-32
"D"	M3X0,5	#4-40



### Non Magnetic Side Mount Cylinder "MS"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	-	25mm - 50mm	16,0(0.63")	PUSH 1,13 cm <sup>2</sup> (0.18 in <sup>2</sup> )
LE	-	20mm - 50mm	21,0(0.83")	
LH	-	15mm - 50mm	26,0(1.03")	PULL 0,85 cm <sup>2</sup> (0.14 in <sup>2</sup> )
LS	S,R	10mm - 25mm	31,0(1.22")	

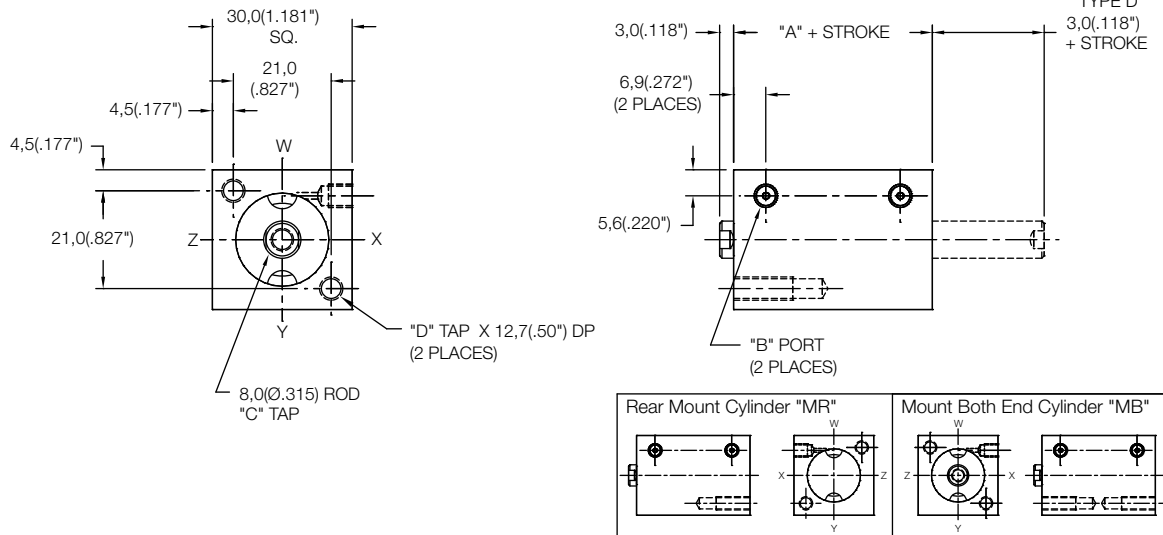
	Standard Threads	"EM" Option
"B"	M5X0,8	#10-32
"C"	M4X0,7	#8-32
"D"	M3X0,5	#4-40



### Non Magnetic Front Mount Cylinder "MF"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	...D	10mm - 50mm	18,5(0.73")	PUSH 3,14 cm <sup>2</sup> (0.48 in <sup>2</sup> )
LE	-	5mm - 100mm	23,5(0.93")	
LH	...D	5mm - 100mm	28,5(1.12")	PULL 2,64 cm <sup>2</sup> (0.40 in <sup>2</sup> )
LS	S,R	5mm - 25mm	33,5(1.32")	

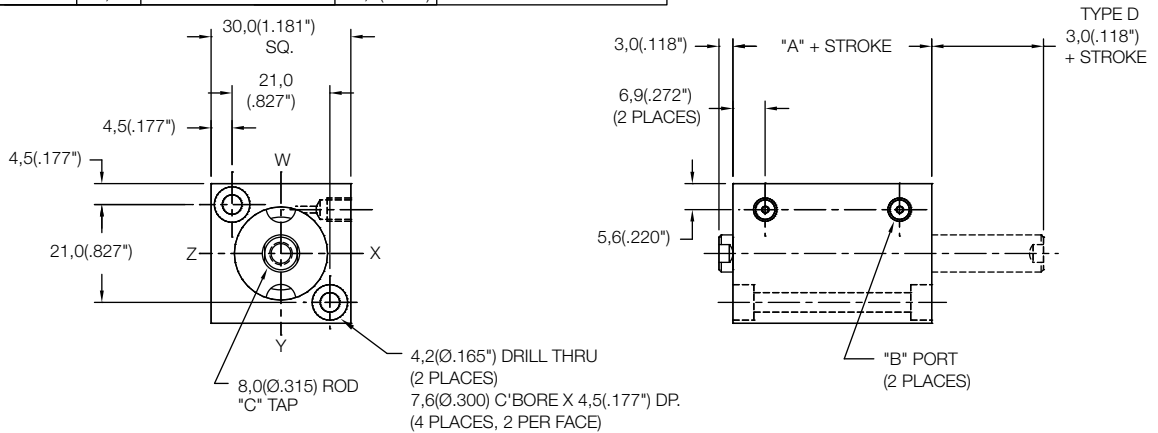
	Standard Threads	"EM" Option
"B"	M5X0,8	#10-32
"C"	M5X0,8	#10-32
"D"	M5X0,8	#10-32



### Non Magnetic Thru Mount Cylinder "MT"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	...D	10mm - 25mm	18,5(0.73")	PUSH 3,14 cm <sup>2</sup> (0.48 in <sup>2</sup> )
LE	-	5mm - 20mm	23,5(0.93")	
LH	...D	5mm - 15mm	28,5(1.12")	PULL 2,64 cm <sup>2</sup> (0.40 in <sup>2</sup> )
LS	S,R	5mm - 10mm	33,5(1.32")	

	Standard Threads	"EM" Option
"B"	M5X0,8	#10-32
"C"	M5X0,8	#10-32



  - 20 X     -      

MODEL    BORE    STROKE    TYPE    MOUNTING    OPTIONS

LS  
LE  
LH

5mm - 100mm STROKE  
(SEE STROKE RANGE)

BLANK - NO CODE, DOUBLE ACTING, SINGLE ROD  
 D - DOUBLE ACTING, DOUBLE ROD  
 S - SINGLE ACTING, SPRING RETRACT  
 R - SINGLE ACTING, SPRING EXTEND

MT - THRU MOUNT  
 MF - FRONT MOUNT  
 MR - REAR MOUNT  
 MB - BOTH END MOUNTS  
 FF - FRONT FLANGE  
 FR - REAR FLANGE  
 (FOR FLANGES SEE PAGE 58)

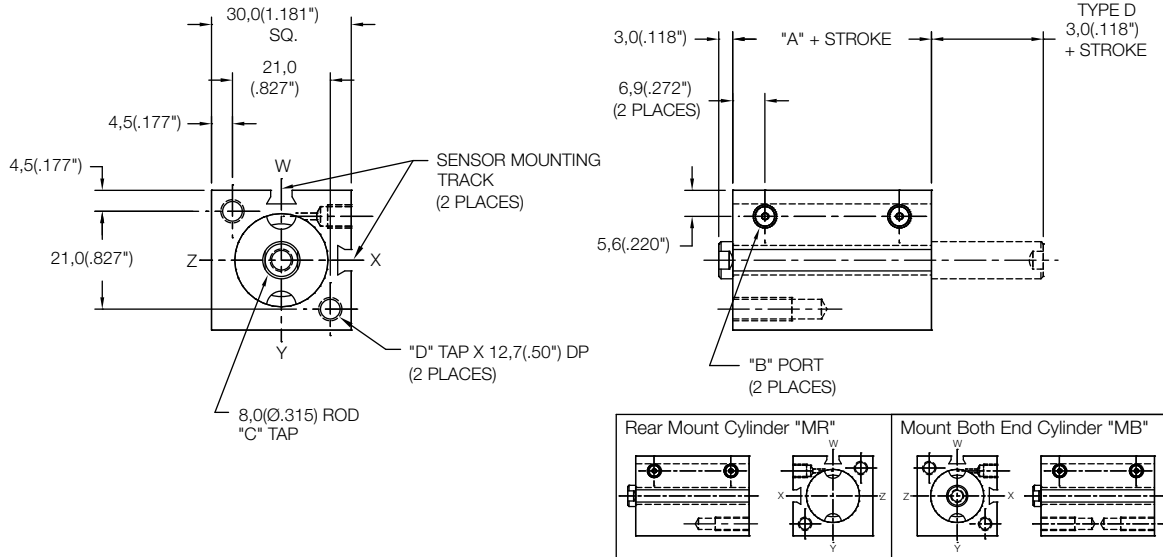
PR - REAR PIVOT  
 PL - LONG PIVOT  
 (FOR PIVOTS SEE PAGE 61)

EM - INCH THREADS & PORT OPTIONS  
 HS - HIGH TEMPERATURE SEALS OPTION:  
 AVAILABLE ON LE AND LH MODELS ONLY  
 (SEE PAGE 62)  
 RE - ROD EYE  
 (SEE PAGE 61)  
 RS - MALE STUD FOR ROD END  
 (SEE PAGE 61)  
 RF, RH, RN, RT, RV, RY - ROD EXTENSIONS  
 (SEE PAGE 61)  
 SH - HYDRAULIC OPTION (35 BAR 500 PSI)  
 (SEE PAGE 62)  
 UB, UF, UR - URETHANE SHOCK PAD OPTION  
 (SEE PAGE 62)

### Magnetic Front Mount Cylinder "MF"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	_,D	10mm - 50mm	23,5(0.93")	PUSH 3,14 cm <sup>2</sup> (0.48 in <sup>2</sup> )
LE	_	5mm - 100mm	28,5(1.12")	
LH	_,D	5mm - 100mm	33,5(1.32")	PULL 2,64 cm <sup>2</sup> (0.40 in <sup>2</sup> )
LS	S,R	5mm - 25mm	38,5(1.52")	

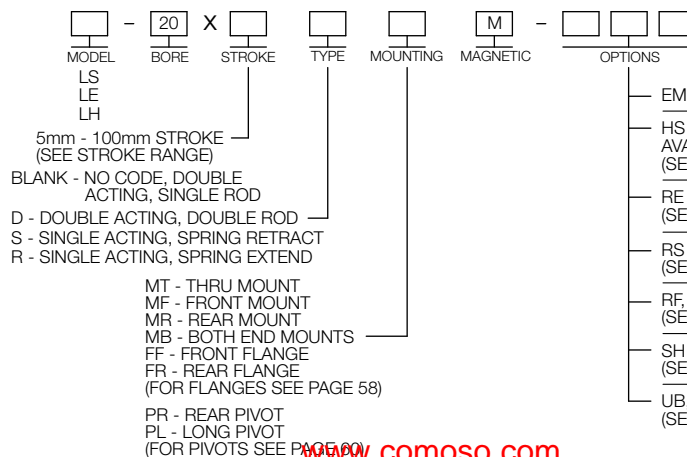
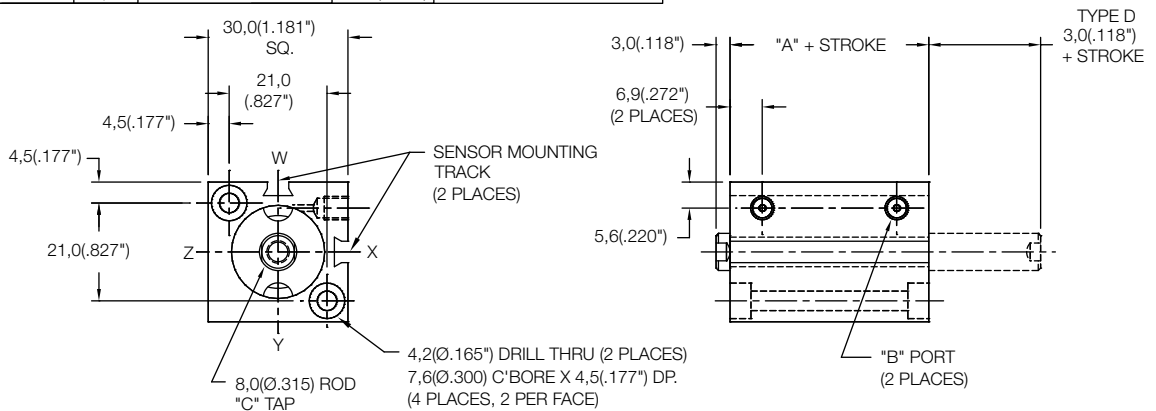
	Standard Threads	"EM" Option
"B"	M5X0,8	#10-32
"C"	M5X0,8	#10-32
"D"	M5X0,8	#10-32



### Magnetic Thru Mount Cylinder "MT"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	_,D	10mm - 20mm	23,5(0.93")	PUSH 3,14 cm <sup>2</sup> (0.48 in <sup>2</sup> )
LE	_	5mm - 15mm	28,5(1.12")	
LH	_,D	5mm - 10mm	33,5(1.32")	PULL 2,64 cm <sup>2</sup> (0.40 in <sup>2</sup> )
LS	S,R	5mm	38,5(1.52")	

	Standard Threads	"EM" Option
"B"	M5X0,8	#10-32
"C"	M5X0,8	#10-32

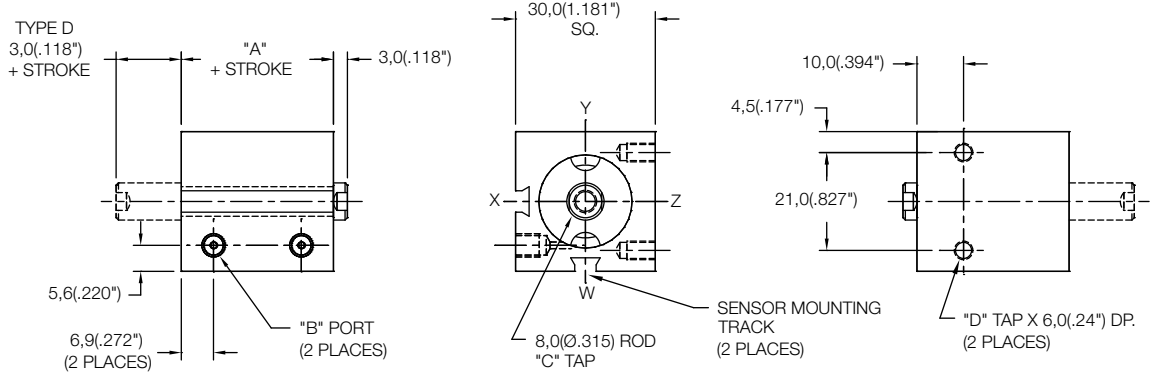


SENSORS SOLD SEPARATELY  
SKS, SKP, SCS, SCP - SOLID STATE  
LIMIT SENSORS (SEE PAGE 54)

### Magnetic Side Mount Cylinder "MS"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	_,D	10mm - 15mm	23,5(0.93")	PUSH 3,14 cm <sup>2</sup> (0.48 in <sup>2</sup> )
LE	-	5mm - 10mm	28,5(1.12")	PULL 2,64 cm <sup>2</sup> (0.40 in <sup>2</sup> )
LH	_,D	5mm	33,5(1.32")	

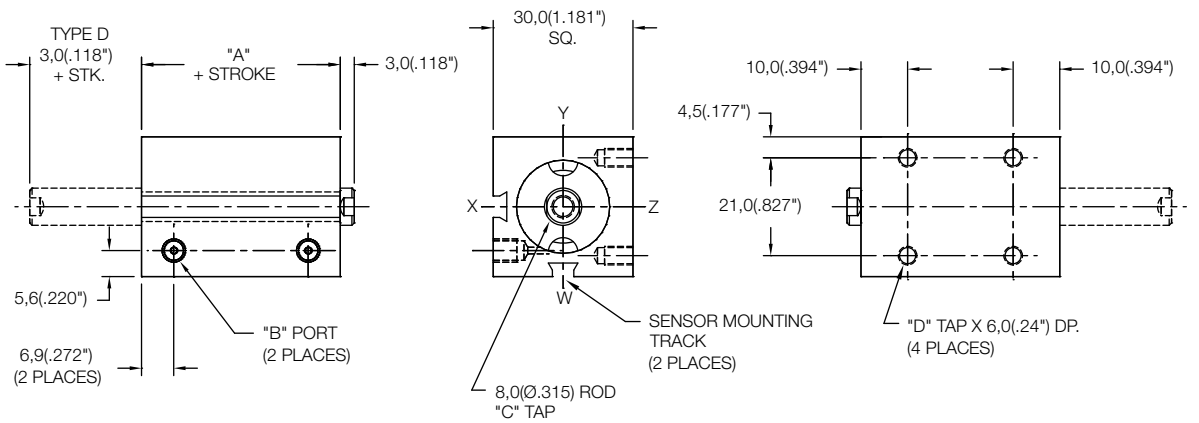
	Standard Threads	"EM" Option
"B"	M5X0,8	#10-32
"C"	M5X0,8	#10-32
"D"	M4X0,7	#8-32



### Magnetic Side Mount Cylinder "MS"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	_,D	20mm - 50mm	23,5(0.93")	PUSH 3,14 cm <sup>2</sup> (0.48 in <sup>2</sup> )
LE	-	15mm - 100mm	28,5(1.12")	PULL 2,64 cm <sup>2</sup> (0.40 in <sup>2</sup> )
LH	_,D	10mm - 100mm	33,5(1.32")	
LS	S,R	5mm - 25mm	38,5(1.52")	

	Standard Threads	"EM" Option
"B"	M5X0,8	#10-32
"C"	M5X0,8	#10-32
"D"	M4X0,7	#8-32

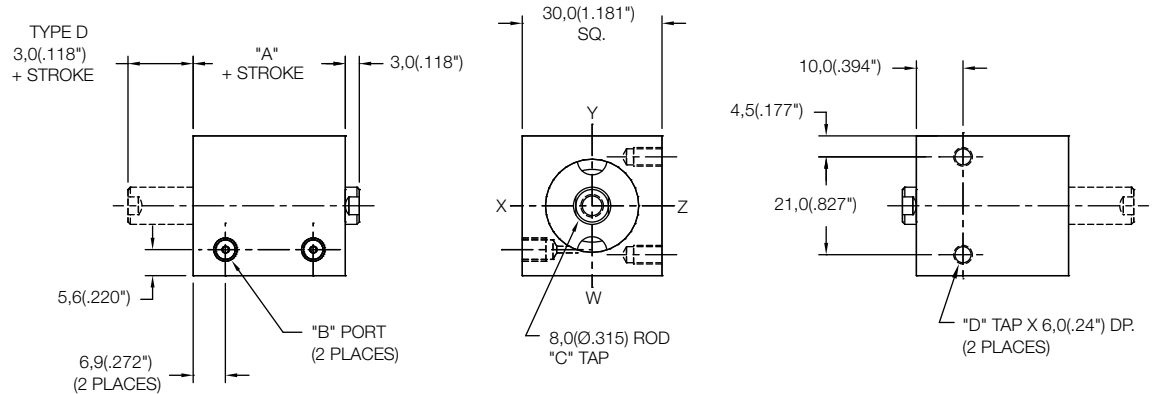


<p>MODEL - BORE X STROKE TYPE MOUNTING MAGNETIC OPTIONS</p> <p>LS LE LH</p> <p>5mm - 100mm STROKE (SEE STROKE RANGE)</p> <p>BLANK - NO CODE, DOUBLE ACTING, SINGLE ROD</p> <p>D - DOUBLE ACTING, DOUBLE ROD</p> <p>S - SINGLE ACTING, SPRING RETRACT</p> <p>R - SINGLE ACTING, SPRING EXTEND</p> <p>MS - SIDE MOUNT</p> <p>FE - FLANGE ON END</p> <p>FS - FLANGE ON SIDE (SEE PAGE 59)</p>	<p>SENSORS SOLD SEPARATELY</p> <p>SKS, SKP, SCS, SCP - SOLID STATE LIMIT SENSORS (SEE PAGE 54)</p> <p>EM - INCH THREADS &amp; PORT OPTIONS</p> <p>HS - HIGH TEMPERATURE SEALS OPTION: AVAILABLE ON LE AND LH MODELS ONLY (SEE PAGE 62)</p> <p>RE - ROD EYE (SEE PAGE 61)</p> <p>RS - MALE STUD FOR ROD END (SEE PAGE 61)</p> <p>RF, RH, RN, RT, RV, RY - ROD EXTENSIONS (SEE PAGE 61)</p> <p>SH - HYDRAULIC OPTION (35 BAR 500 PSI) (SEE PAGE 62)</p> <p>UB, UF, UR - URETHANE SHOCK PAD OPTION (SEE PAGE 62)</p>
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### Non Magnetic Side Mount Cylinder "MS"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	_,D	10mm - 20mm	18,5(0.73")	PUSH 3,14 cm <sup>2</sup> (0.48 in <sup>2</sup> )
LE	_	5mm - 15mm	23,5(0.93")	
LH	_,D	5mm - 10mm	28,5(1.12")	
LS	S,R	5mm	33,5(1.32")	PULL 2,64 cm <sup>2</sup> (0.40 in <sup>2</sup> )

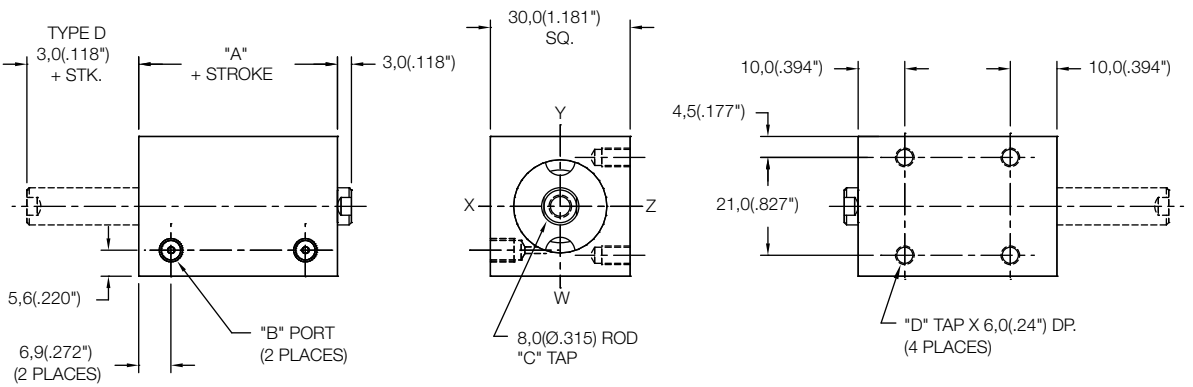
	Standard Threads	"EM" Option
"B"	M5X0,8	#10-32
"C"	M5X0,8	#10-32
"D"	M4X0,7	#8-32



### Non Magnetic Side Mount Cylinder "MS"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	_,D	25mm - 50mm	18,5(0.73")	PUSH 3,14 cm <sup>2</sup> (0.48 in <sup>2</sup> )
LE	_	20mm - 100mm	23,5(0.93")	
LH	_,D	15mm - 100mm	28,5(1.12")	
LS	S,R	10mm - 25mm	33,5(1.32")	PULL 2,64 cm <sup>2</sup> (0.40 in <sup>2</sup> )

	Standard Threads	"EM" Option
"B"	M5X0,8	#10-32
"C"	M5X0,8	#10-32
"D"	M4X0,7	#8-32



-  20 X

MODEL    BORE    STROKE    TYPE    MOUNTING    OPTIONS

LS  
 LE  
 LH

5mm - 100mm STROKE  
 (SEE STROKE RANGE)

BLANK - NO CODE, DOUBLE ACTING, SINGLE ROD  
 D - DOUBLE ACTING, DOUBLE ROD  
 S - SINGLE ACTING, SPRING RETRACT  
 R - SINGLE ACTING, SPRING EXTEND

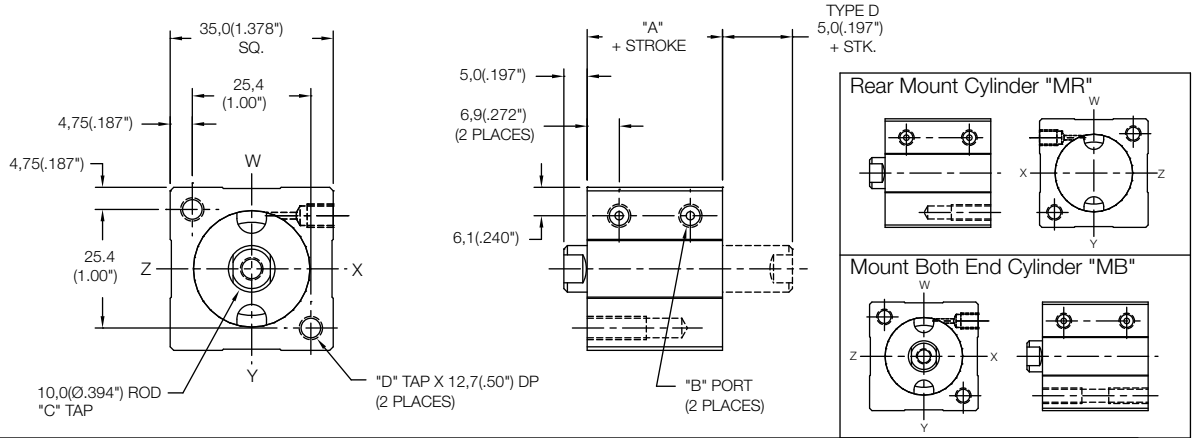
MS - SIDE MOUNT  
 FE - FLANGE ON END  
 FS - FLANGE ON SIDE  
 (SEE PAGE 59)

EM - INCH THREADS & PORT OPTIONS  
 HS - HIGH TEMPERATURE SEALS OPTION:  
 AVAILABLE ON LE AND LH MODELS ONLY  
 (SEE PAGE 62)  
 RE - ROD EYE  
 (SEE PAGE 61)  
 RS - MALE STUD FOR ROD END  
 (SEE PAGE 61)  
 RF, RH, RN, RT, RV, RY - ROD EXTENSIONS  
 (SEE PAGE 61)  
 SH - HYDRAULIC OPTION (35 BAR 500 PSI)  
 (SEE PAGE 62)  
 UB, UF, UR - URETHANE SHOCK PAD OPTION  
 (SEE PAGE 62)

### Non Magnetic Front Mount Cylinder "MF"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	_,D	10mm - 50mm	19,0(0.75")	PUSH 4,91 cm <sup>2</sup> (0.76 in <sup>2</sup> )
LE	_	5mm - 100mm	24,0(0.95")	
LH	_,D	5mm - 100mm	29,0(1.14")	PULL 4,12 cm <sup>2</sup> (0.64 in <sup>2</sup> )
LS	S,R	5mm - 25mm	34,0(1.34")	

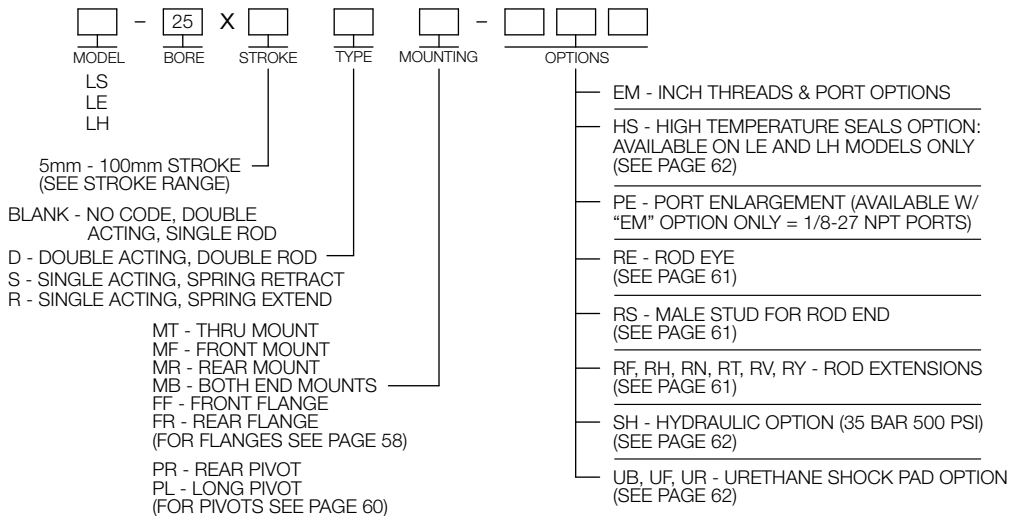
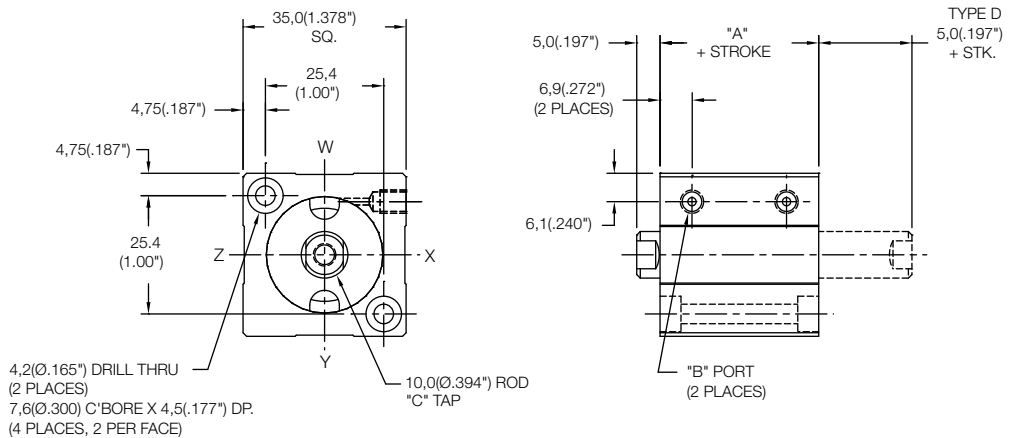
	Standard Threads	"EM" Option
"B"	M5X0,8	#10-32
"C"	M5X0,8	#10-32
"D"	M5X0,8	#10-32



### Non Magnetic Thru Mount Cylinder "MT"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	_,D	10mm - 25mm	19,0(0.75")	PUSH 4,91 cm <sup>2</sup> (0.76 in <sup>2</sup> )
LE	_	5mm - 20mm	24,0(0.95")	
LH	_,D	5mm - 15mm	29,0(1.14")	PULL 4,12 cm <sup>2</sup> (0.64 in <sup>2</sup> )
LS	S,R	5mm - 10mm	34,0(1.34")	

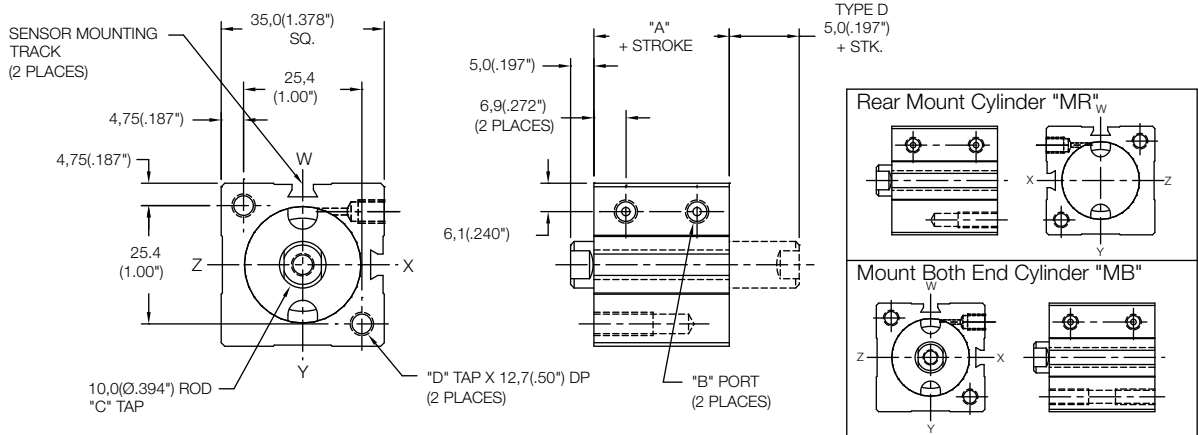
	Standard Threads	"EM" Option
"B"	M5X0,8	#10-32
"C"	M5X0,8	#10-32



### Magnetic Front Mount Cylinder "MF"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	_,D	10mm - 50mm	24,0(0.95")	PUSH 4,91 cm <sup>2</sup> (0.76 in <sup>2</sup> )
LE	_	5mm - 100mm	29,0(1.14")	
LH	_,D	5mm - 100mm	34,0(1.34")	PULL 4,12 cm <sup>2</sup> (0.64 in <sup>2</sup> )
LS	S,R	5mm - 25mm	39,0(1.54")	

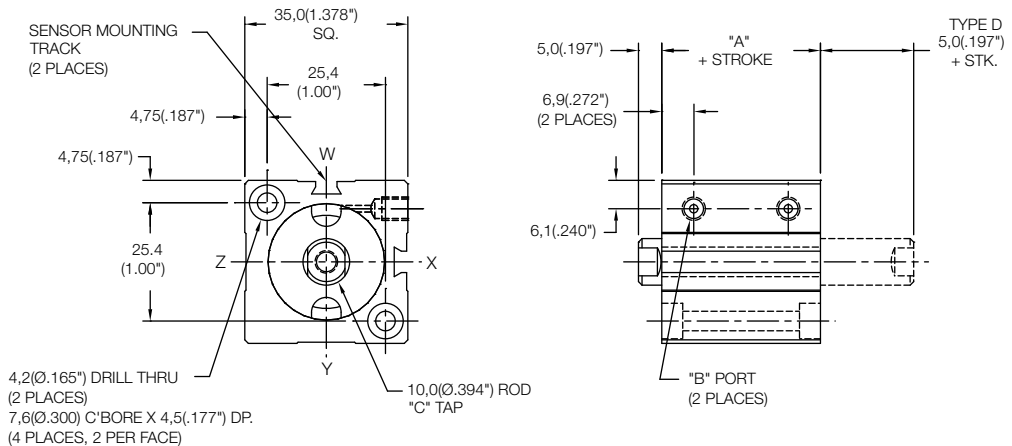
	Standard Threads	"EM" Option
"B"	M5X0,8	#10-32
"C"	M5X0,8	#10-32
"D"	M5X0,8	#10-32



### Magnetic Thru Mount Cylinder "MT"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	_,D	10mm - 20mm	24,0(0.95")	PUSH 4,91 cm <sup>2</sup> (0.76 in <sup>2</sup> )
LE	_	5mm - 15mm	29,0(1.14")	
LH	_,D	5mm - 10mm	34,0(1.34")	PULL 4,12 cm <sup>2</sup> (0.64 in <sup>2</sup> )
LS	S,R	5mm	39,0(1.54")	

	Standard Threads	"EM" Option
"B"	M5X0,8	#10-32
"C"	M5X0,8	#10-32

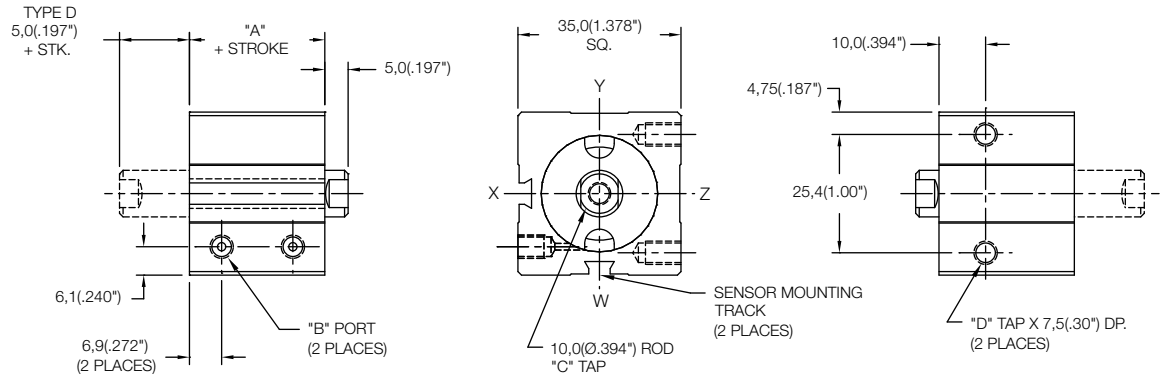


<p>MODEL: LS, LE, LH</p> <p>BORE: 25</p> <p>STROKE: 5mm - 100mm (SEE STROKE RANGE)</p> <p>TYPE: BLANK - NO CODE, DOUBLE ACTING, SINGLE ROD; D - DOUBLE ACTING, DOUBLE ROD; S - SINGLE ACTING, SPRING RETRACT; R - SINGLE ACTING, SPRING EXTEND</p> <p>MOUNTING: MT - THRU MOUNT; MF - FRONT MOUNT; MR - REAR MOUNT; MB - BOTH END MOUNTS; FF - FRONT FLANGE; FR - REAR FLANGE (FOR FLANGES SEE PAGE 58); PR - REAR PIVOT; PL - LONG PIVOT (FOR PIVOTS SEE PAGE 60)</p>	<p>MAGNETIC: M</p> <p>OPTIONS: EM - INCH THREADS &amp; PORT OPTIONS; HS - HIGH TEMPERATURE SEALS OPTION: AVAILABLE ON LE AND LH MODELS ONLY (SEE PAGE 62); PE - PORT ENLARGEMENT (AVAILABLE W/ "EM" OPTION ONLY = 1/8-27 NPT PORTS); RE - ROD EYE (SEE PAGE 61); RS - MALE STUD FOR ROD END (SEE PAGE 61); RF, RH, RN, RT, RV, RY - ROD EXTENSIONS (SEE PAGE 61); SH - HYDRAULIC OPTION (35 BAR 500 PSI) (SEE PAGE 62); UB, UF, UR - URETHANE SHOCK PAD OPTION (SEE PAGE 62)</p>	<p>SENSORS SOLD SEPARATELY SKS, SKP, SCS, SCP - SOLID STATE LIMIT SENSORS (SEE PAGE 54)</p>
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### Magnetic Side Mount Cylinder "MS"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	...D	10mm - 15mm	24,0(0.95")	PUSH 4,91 cm <sup>2</sup> (0.76 in <sup>2</sup> )
LE	-	5mm - 10mm	29,0(1.14")	PULL 4,12 cm <sup>2</sup> (0.64 in <sup>2</sup> )
LH	...D	5mm	34,0(1.34")	

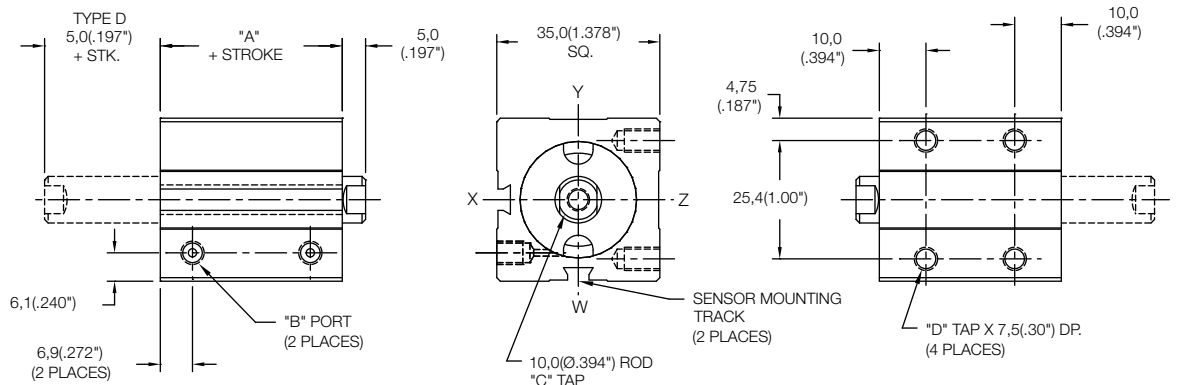
	Standard Threads	"EM" Option
"B"	M5X0,8	#10-32
"C"	M5X0,8	#10-32
"D"	M5X0,8	#10-32



### Magnetic Side Mount Cylinder "MS"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	...D	20mm - 50mm	24,0(0.95")	PUSH 4,91 cm <sup>2</sup> (0.76 in <sup>2</sup> )
LE	-	15mm - 100mm	29,0(1.14")	PULL 4,12 cm <sup>2</sup> (0.64 in <sup>2</sup> )
LH	...D	10mm - 100mm	34,0(1.34")	
LS	S,R	5mm - 25mm	39,0(1.54")	

	Standard Threads	"EM" Option
"B"	M5X0,8	#10-32
"C"	M5X0,8	#10-32
"D"	M5X0,8	#10-32



<p>MODEL - BORE X STROKE TYPE MOUNTING MAGNETIC - OPTIONS</p> <p>LS LE LH</p> <p>5mm - 100mm STROKE (SEE STROKE RANGE)</p> <p>BLANK - NO CODE, DOUBLE ACTING, SINGLE ROD</p> <p>D - DOUBLE ACTING, DOUBLE ROD S - SINGLE ACTING, SPRING RETRACT R - SINGLE ACTING, SPRING EXTEND</p> <p>MS - SIDE MOUNT FE - FLANGE ON END FS - FLANGE ON SIDE (SEE PAGE 59)</p>	<p>EM - INCH THREADS &amp; PORT OPTIONS</p> <p>HS - HIGH TEMPERATURE SEALS OPTION: AVAILABLE ON LE AND LH MODELS ONLY (SEE PAGE 62)</p> <p>PE - PORT ENLARGEMENT (AVAILABLE W/ "EM" OPTION ONLY = 1/8-27 NPT PORTS)</p> <p>RE - ROD EYE (SEE PAGE 61)</p> <p>RS - MALE STUD FOR ROD END (SEE PAGE 61)</p> <p>RF, RH, RN, RT, RV, RY - ROD EXTENSIONS (SEE PAGE 61)</p> <p>SH - HYDRAULIC OPTION (35 BAR 500 PSI) (SEE PAGE 62)</p> <p>UB, UF, UR - URETHANE SHOCK PAD OPTION (SEE PAGE 62)</p>
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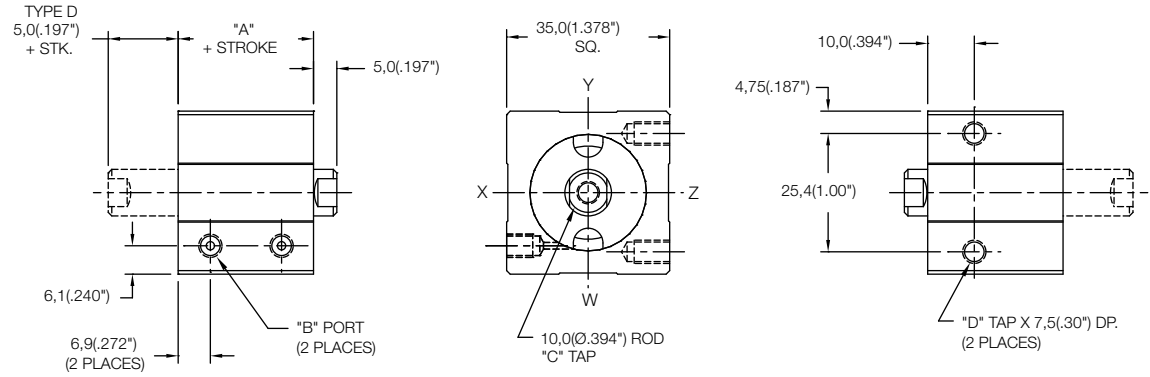
SENSORS SOLD SEPARATELY  
SKS, SKP, SCS, SCP - SOLID STATE  
LIMIT SENSORS (SEE PAGE 54)



### Non Magnetic Side Mount Cylinder "MS"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	..D	10mm - 20mm	19,0(0.75")	PUSH 4,91 cm <sup>2</sup> (0.76 in <sup>2</sup> )
LE	-	5mm - 15mm	24,0(0.95")	
LH	..D	5mm - 10mm	29,0(1.14")	PULL 4,12 cm <sup>2</sup> (0.64 in <sup>2</sup> )
LS	S,R	5mm	34,0(1.34")	

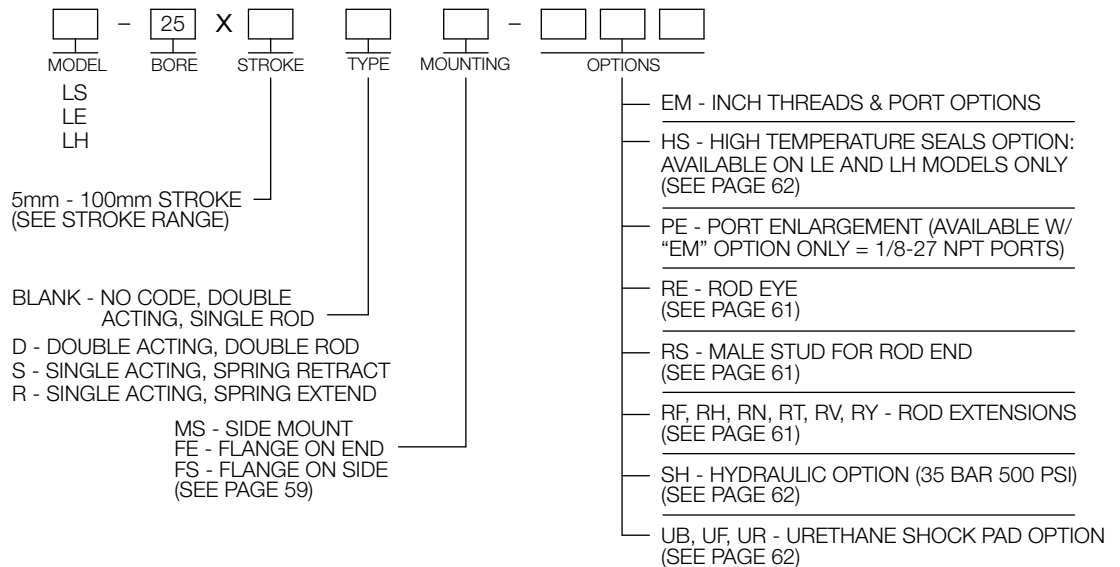
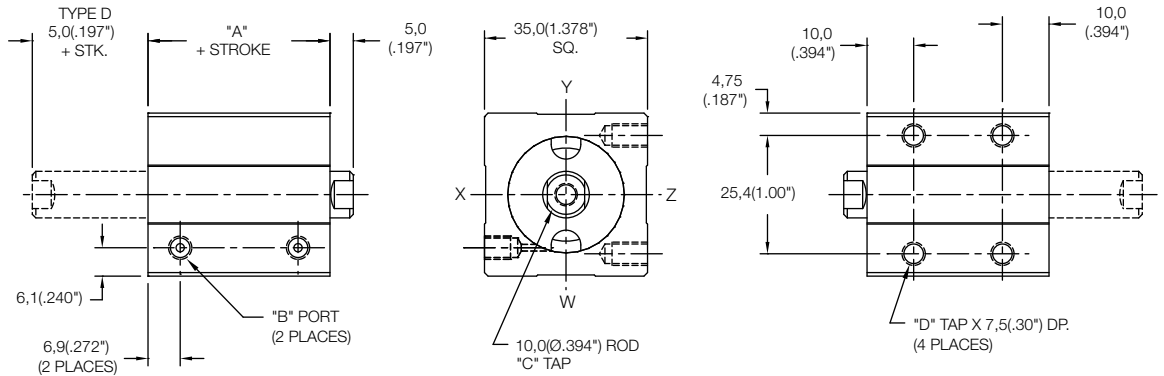
	Standard Threads	"EM" Option
"B"	M5X0,8	#10-32
"C"	M5X0,8	#10-32
"D"	M5X0,8	#10-32



### Non Magnetic Side Mount Cylinder "MS"

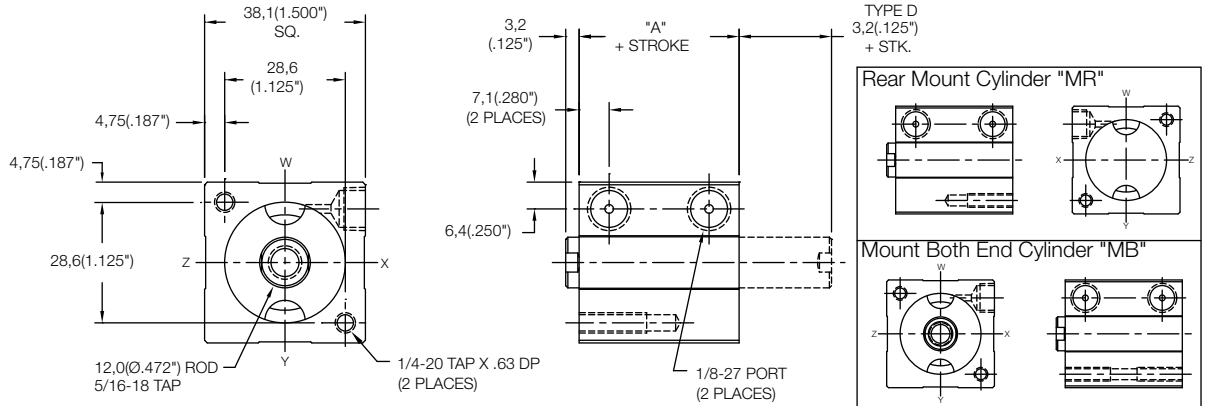
MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	..D	25mm - 50mm	19,0(0.75")	PUSH 4,91 cm <sup>2</sup> (0.76 in <sup>2</sup> )
LE	-	20mm - 100mm	24,0(0.95")	
LH	..D	15mm - 100mm	29,0(1.14")	PULL 4,12 cm <sup>2</sup> (0.64 in <sup>2</sup> )
LS	S,R	10mm - 25mm	34,0(1.34")	

	Standard Threads	"EM" Option
"B"	M5X0,8	#10-32
"C"	M5X0,8	#10-32
"D"	M5X0,8	#10-32



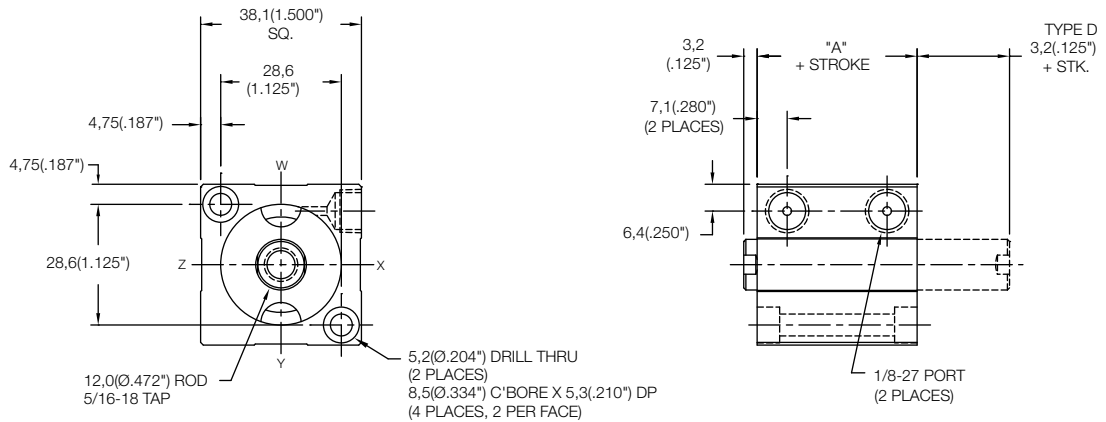
### Non Magnetic Front Mount Cylinder "MF"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	_D	6,35mm - 101,6mm	19,05(.75")	PUSH 6,41 cm <sup>2</sup> (1.0 in <sup>2</sup> )
LE	-	6,35mm - 101,6mm	25,4(1.00")	
LH	_D	6,35mm - 101,6mm	31,75(1.25")	
LS	S,R	6,35mm - 25,4mm	31,75(1.25")	PULL 5,28 cm <sup>2</sup> (0.82 in <sup>2</sup> )



### Non Magnetic Thru Mount Cylinder "MT"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	_D	6,35mm - 25,4mm	19,05(.75")	PUSH 6,41 cm <sup>2</sup> (1.0 in <sup>2</sup> )
LE	-	6,35mm - 19,05mm	25,4(1.00")	
LH	_D	6,35mm - 12,7mm	31,75(1.25")	
LS	S,R	6,35mm - 12,7mm	31,75(1.25")	PULL 5,28 cm <sup>2</sup> (0.82 in <sup>2</sup> )



MODEL -  28,5 BORE X  STROKE  TYPE  MOUNTING -    OPTIONS

LS  
LE  
LH

6,35mm - 101,6mm STROKE (SEE STROKE RANGE)

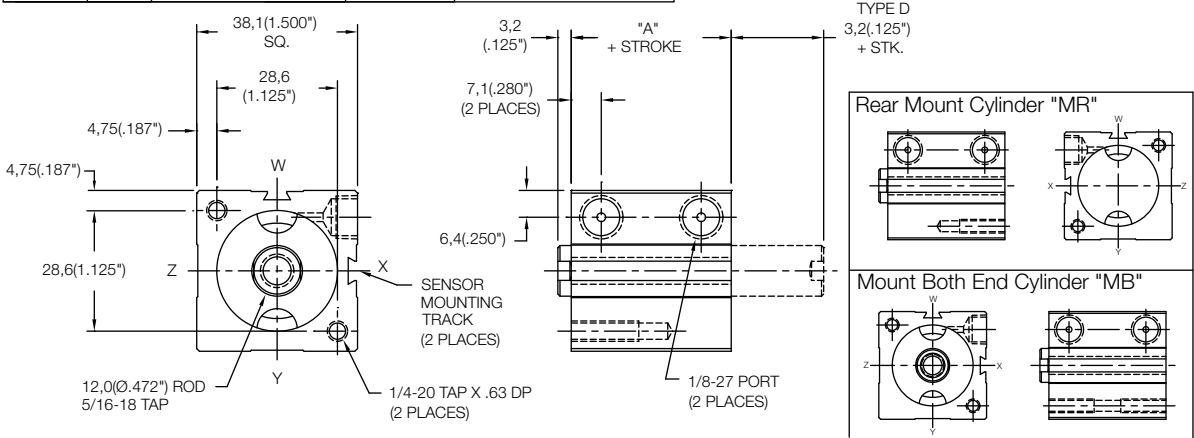
BLANK - NO CODE, DOUBLE ACTING, SINGLE ROD  
 D - DOUBLE ACTING, DOUBLE ROD  
 S - SINGLE ACTING, SPRING RETRACT  
 R - SINGLE ACTING, SPRING EXTEND

MT - THRU MOUNT  
 MF - FRONT MOUNT  
 MR - REAR MOUNT  
 MB - BOTH END MOUNTS  
 FF - FRONT FLANGE (FOR FLANGES SEE PAGE 58)  
 PR - REAR PIVOT  
 PL - LONG PIVOT (FOR PIVOTS SEE PAGE 60)

HS - HIGH TEMPERATURE SEALS OPTION: AVAILABLE ON LE AND LH MODELS ONLY (SEE PAGE 62)  
 RE - ROD EYE (SEE PAGE 61)  
 RS - MALE STUD FOR ROD END (SEE PAGE 61)  
 RF, RH, RN, RT, RV, RY - ROD EXTENSIONS (SEE PAGE 61)  
 SH - HYDRAULIC OPTION (35 BAR 500 PSI) (SEE PAGE 62)  
 UB, UF, UR - URETHANE SHOCK PAD OPTION (SEE PAGE 62)

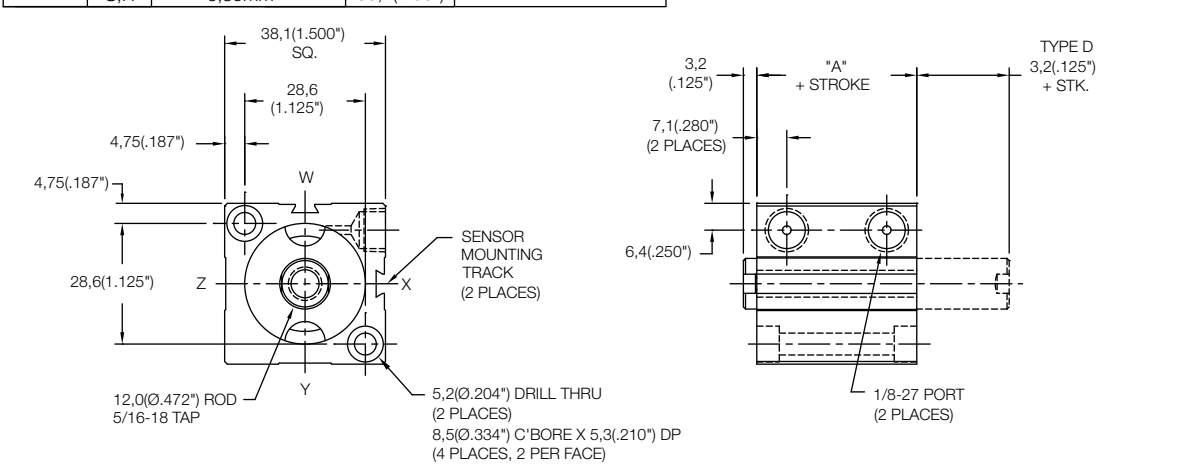
**Magnetic Front Mount Cylinder "MF"**

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	__D	6,35mm - 101,6mm	25,4(1.00")	PUSH 6,41 cm <sup>2</sup> (1.0 in <sup>2</sup> )
LE	__	6,35mm - 101,6mm	31,75(1.25")	
LH	__D	6,35mm - 101,6mm	38,1(1.50")	PULL 5,28 cm <sup>2</sup> (0.82 in <sup>2</sup> )
LS	S,R	6,35mm - 25,4mm	38,1(1.50")	



**Magnetic Thru Mount Cylinder "MT"**

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	__D	6,35mm - 19,05mm	25,4(1.00")	PUSH 6,41 cm <sup>2</sup> (1.0 in <sup>2</sup> )
LE	__	6,35mm - 12,7mm	31,75(1.25")	
LH	__D	6,35mm	38,1(1.50")	PULL 5,28 cm <sup>2</sup> (0.82 in <sup>2</sup> )
LS	S,R	6,35mm	38,1(1.50")	

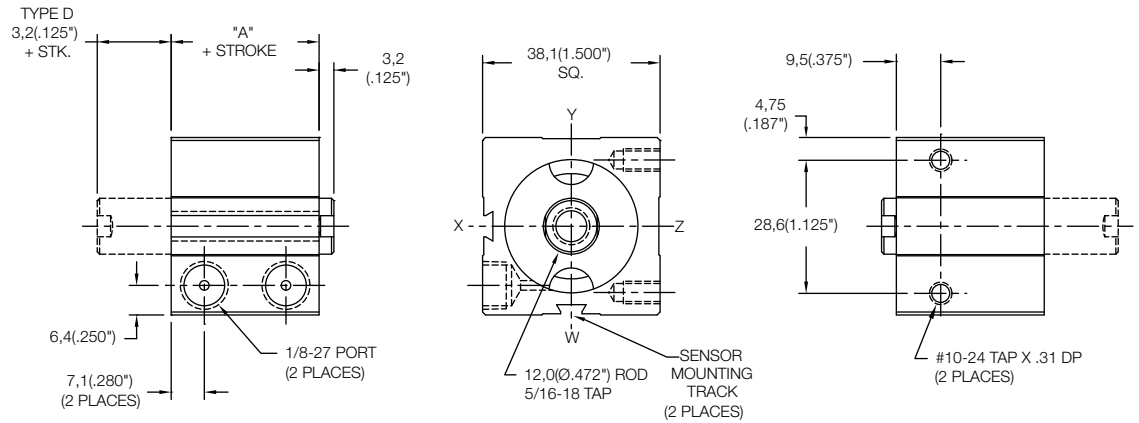


<p>MODEL: LS, LE, LH</p> <p>BORE: 28,5</p> <p>STROKE: 6,35mm - 101,6mm (SEE STROKE RANGE)</p> <p>TYPE: BLANK - NO CODE, DOUBLE ACTING, SINGLE ROD; D - DOUBLE ACTING, DOUBLE ROD; S - SINGLE ACTING, SPRING RETRACT; R - SINGLE ACTING, SPRING EXTEND</p> <p>MOUNTING: MT - THRU MOUNT; MF - FRONT MOUNT; MR - REAR MOUNT; MB - BOTH END MOUNTS; FF - FRONT FLANGE; FR - REAR FLANGE (FOR FLANGES SEE PAGE 58); PR - REAR PIVOT; PL - LONG PIVOT (FOR PIVOTS SEE PAGE 60)</p>	<p>MAGNETIC: M</p>	<p>OPTIONS: HS - HIGH TEMPERATURE SEALS OPTION: AVAILABLE ON LE AND LH MODELS ONLY (SEE PAGE 62); RE - ROD EYE (SEE PAGE 61); RS - MALE STUD FOR ROD END (SEE PAGE 61); RF, RH, RN, RT, RV, RY - ROD EXTENSIONS (SEE PAGE 61); SH - HYDRAULIC OPTION (35 BAR 500 PSI) (SEE PAGE 62); UB, UF, UR - URETHANE SHOCK PAD OPTION (SEE PAGE 62)</p>
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SENSORS SOLD SEPERATELY  
SKS, SKP, SCS, SCP - SOLID STATE  
LIMIT SENSORS (SEE PAGE 54)

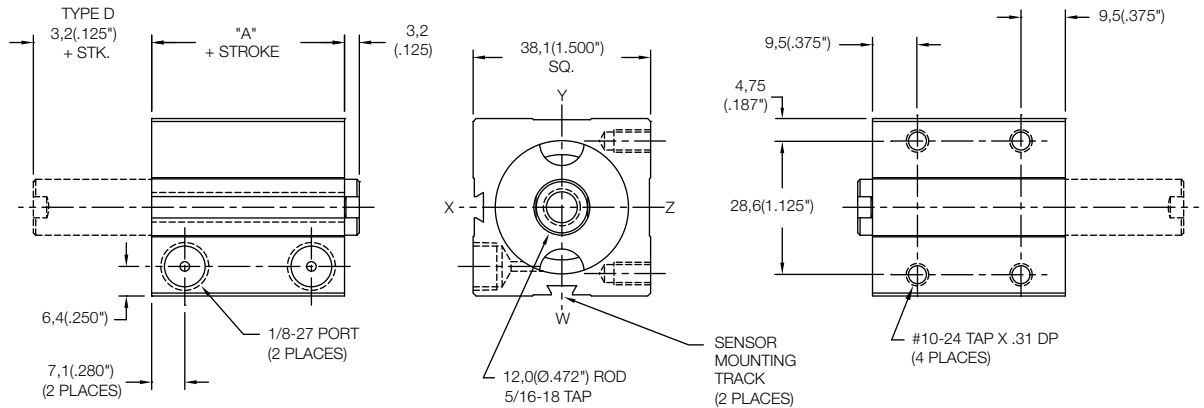
### Magnetic Side Mount Cylinder "MS"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	-,D	6,35mm - 12,7mm	25,4(1.00")	PUSH 6,41 cm <sup>2</sup> (1.0 in <sup>2</sup> )
LE	-	6,35mm	31,75(1.25")	PULL 5,28 cm <sup>2</sup> (0.82 in <sup>2</sup> )



### Magnetic Side Mount Cylinder "MS"

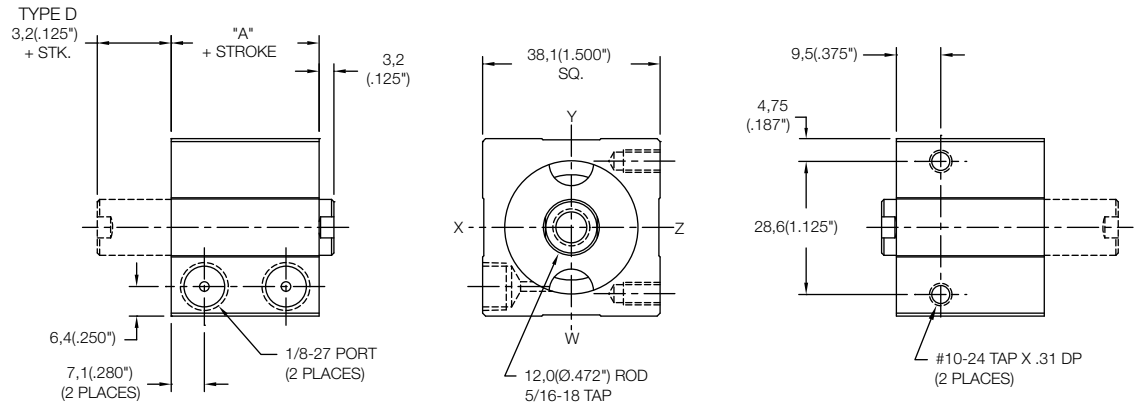
MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	-,D	19,05mm - 101,6mm	25,4(1.00")	PUSH 6,41 cm <sup>2</sup> (1.0 in <sup>2</sup> )
LE	-	12,7mm - 101,6mm	31,75(1.25")	PUSH 6,41 cm <sup>2</sup> (1.0 in <sup>2</sup> )
LH	-,D	6,35mm - 101,6mm	38,1(1.50")	PULL 5,28 cm <sup>2</sup> (0.82 in <sup>2</sup> )
LS	S,R	6,35mm - 25,4mm	38,1(1.50")	PULL 5,28 cm <sup>2</sup> (0.82 in <sup>2</sup> )



<p>MODEL - BORE X STROKE TYPE MOUNTING MAGNETIC - OPTIONS</p> <p>LS LE LH</p> <p>6.35mm - 101.6mm STROKE (SEE STROKE RANGE)</p> <p>BLANK - NO CODE, DOUBLE ACTING, SINGLE ROD</p> <p>D - DOUBLE ACTING, DOUBLE ROD</p> <p>S - SINGLE ACTING, SPRING RETRACT</p> <p>R - SINGLE ACTING, SPRING EXTEND</p> <p>MS - SIDE MOUNT</p> <p>FE - FLANGE ON END</p> <p>FS - FLANGE ON SIDE (SEE PAGE 59)</p>	<p>SENSORS SOLD SEPARATELY</p> <p>SKS, SKP, SCS, SCP - SOLID STATE LIMIT SENSORS (SEE PAGE 54)</p> <p>HS - HIGH TEMPERATURE SEALS OPTION: AVAILABLE ON LE AND LH MODELS ONLY (SEE PAGE 62)</p> <p>RE - ROD EYE (SEE PAGE 61)</p> <p>RS - MALE STUD FOR ROD END (SEE PAGE 61)</p> <p>RF, RH, RN, RT, RV, RY - ROD EXTENSIONS (SEE PAGE 61)</p> <p>SH - HYDRAULIC OPTION (35 BAR 500 PSI) (SEE PAGE 62)</p> <p>UB, UF, UR - URETHANE SHOCK PAD OPTION (SEE PAGE 62)</p>
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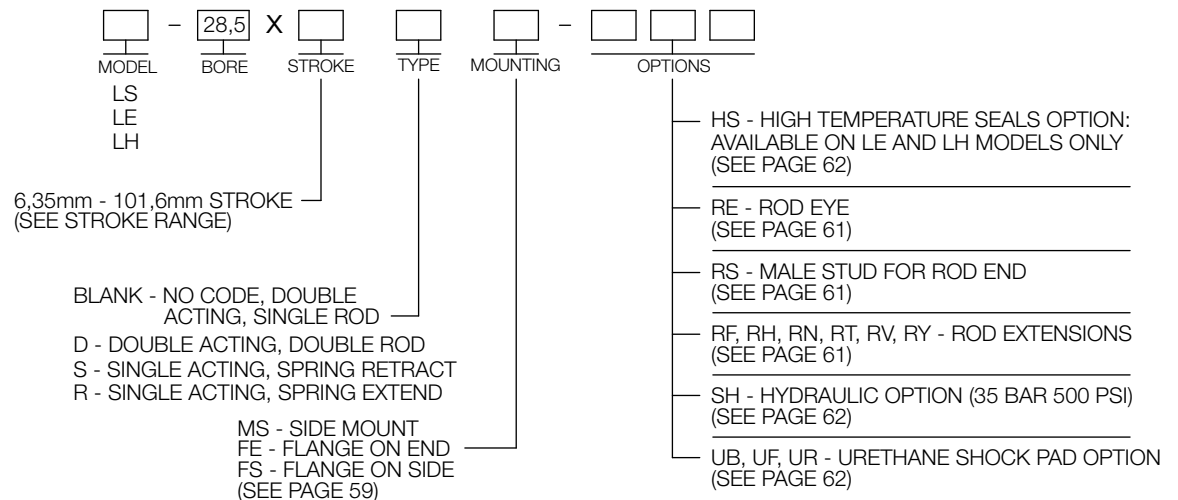
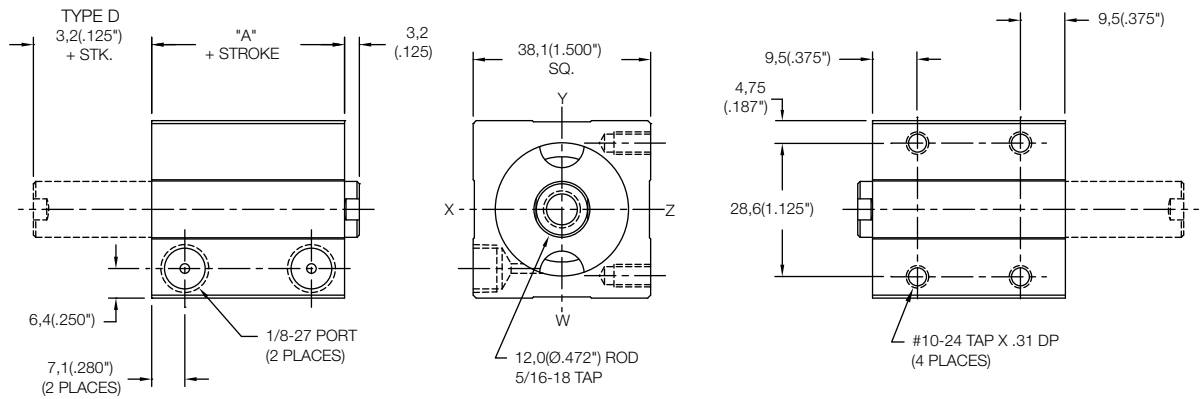
### Non Magnetic Side Mount Cylinder "MS"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	_D	6,35mm - 19,05mm	19,05(0.75")	PUSH 6,41 cm <sup>2</sup> (1.0 in <sup>2</sup> )
LE	-	6,35mm - 12,7mm	25,4(1.00")	PULL 5,28 cm <sup>2</sup> (0.82 in <sup>2</sup> )
LH	_D	6,35mm	31,75(1.25")	PULL 5,28 cm <sup>2</sup> (0.82 in <sup>2</sup> )



### Non Magnetic Side Mount Cylinder "MS"

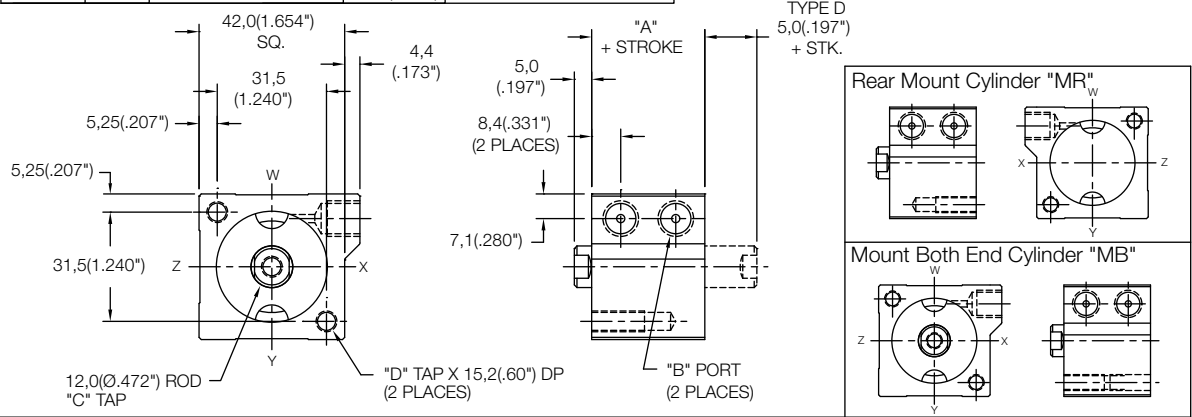
MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	_D	25,4mm - 101,6mm	19,05(0.75")	PUSH 6,41 cm <sup>2</sup> (1.0 in <sup>2</sup> )
LE	-	19,05mm - 101,6mm	25,4(1.00")	PULL 5,28 cm <sup>2</sup> (0.82 in <sup>2</sup> )
LH	_D	12,7mm - 101,6mm	31,75(1.25")	PULL 5,28 cm <sup>2</sup> (0.82 in <sup>2</sup> )
LS	S,R	6,35mm - 25,4mm	31,75(1.25")	PULL 5,28 cm <sup>2</sup> (0.82 in <sup>2</sup> )



### Non Magnetic Front Mount Cylinder "MF"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	_,D	10mm - 100mm	22,5(0.89")	PUSH 8,04 cm <sup>2</sup> (1.25 in <sup>2</sup> )
LE	_	5mm - 100mm	27,5(1.08")	
LH	_,D	5mm - 100mm	32,5(1.28")	PULL 6,91 cm <sup>2</sup> (1.07 in <sup>2</sup> )
LS	S,R	5mm - 25mm	37,5(1.48")	

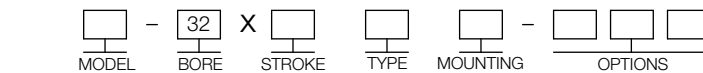
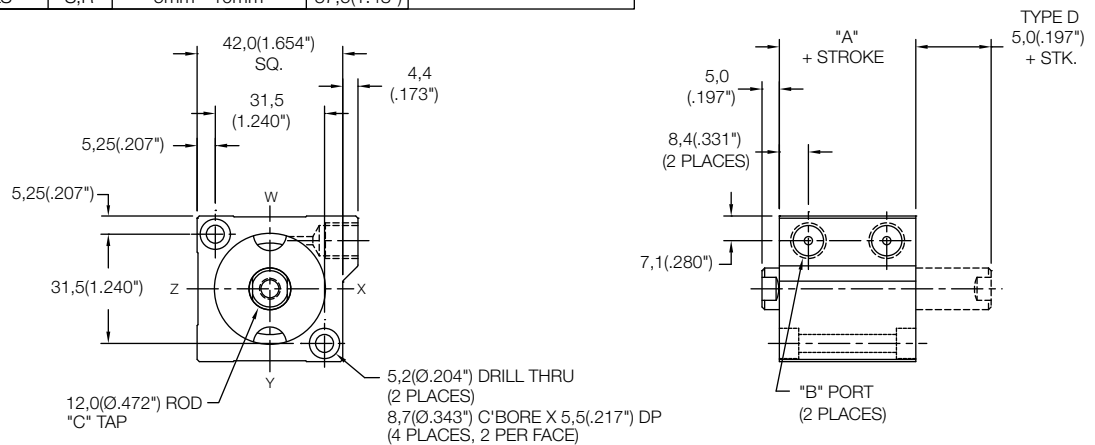
	Standard Threads	"EM" Option
"B"	G1/8 PORT	1/8-27
"C"	M6X1,0	1/4-20
"D"	M6X1,0	1/4-20



### Non Magnetic Thru Mount Cylinder "MT"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	_,D	10mm - 25mm	22,5(0.89")	PUSH 8,04 cm <sup>2</sup> (1.25 in <sup>2</sup> )
LE	_	5mm - 20mm	27,5(1.08")	
LH	_,D	5mm - 15mm	32,5(1.28")	PULL 6,91 cm <sup>2</sup> (1.07 in <sup>2</sup> )
LS	S,R	5mm - 10mm	37,5(1.48")	

	Standard Threads	"EM" Option
"B"	G1/8 PORT	1/8-27
"C"	M6X1,0	1/4-20

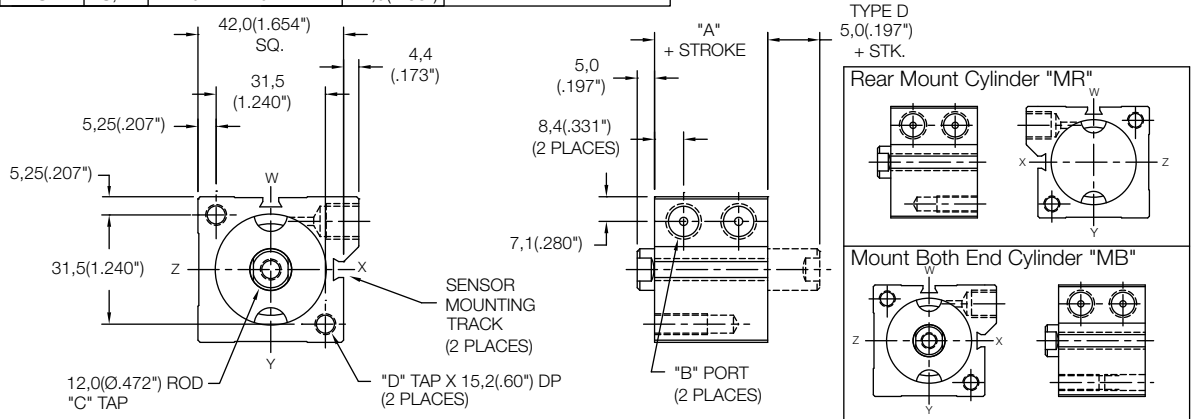


- MODEL: LS, LE, LH
- BORE: 32
- STROKE: 5mm - 100mm STROKE (SEE STROKE RANGE)
- TYPE: BLANK - NO CODE, DOUBLE ACTING, SINGLE ROD; D - DOUBLE ACTING, DOUBLE ROD; S - SINGLE ACTING, SPRING RETRACT; R - SINGLE ACTING, SPRING EXTEND
- MOUNTING: MT - THRU MOUNT; MF - FRONT MOUNT; MR - REAR MOUNT; MB - BOTH END MOUNTS; FF - FRONT FLANGE; FR - REAR FLANGE (FOR FLANGES SEE PAGE 58); PR - REAR PIVOT; PL - LONG PIVOT (FOR PIVOTS SEE PAGE 60)
- OPTIONS:
  - EM - INCH THREADS & PORT OPTIONS
  - HS - HIGH TEMPERATURE SEALS OPTION: AVAILABLE ON LE AND LH MODELS ONLY (SEE PAGE 62)
  - RE - ROD EYE (SEE PAGE 61)
  - RS - MALE STUD FOR ROD END (SEE PAGE 61)
  - RF, RH, RN, RT, RV, RY - ROD EXTENSIONS (SEE PAGE 61)
  - SH - HYDRAULIC OPTION (35 BAR 500 PSI) (SEE PAGE 62)
  - UB, UF, UR - URETHANE SHOCK PAD OPTION (SEE PAGE 62)

### Magnetic Front Mount Cylinder "MF"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	...D	10mm - 100mm	27,5(1.08")	PUSH 8,04 cm <sup>2</sup> (1.25 in <sup>2</sup> )
LE	-	5mm - 100mm	32,5(1.28")	
LH	...D	5mm - 100mm	37,5(1.48")	PULL 6,91 cm <sup>2</sup> (1.07 in <sup>2</sup> )
LS	S,R	5mm - 25mm	42,5(1.68")	

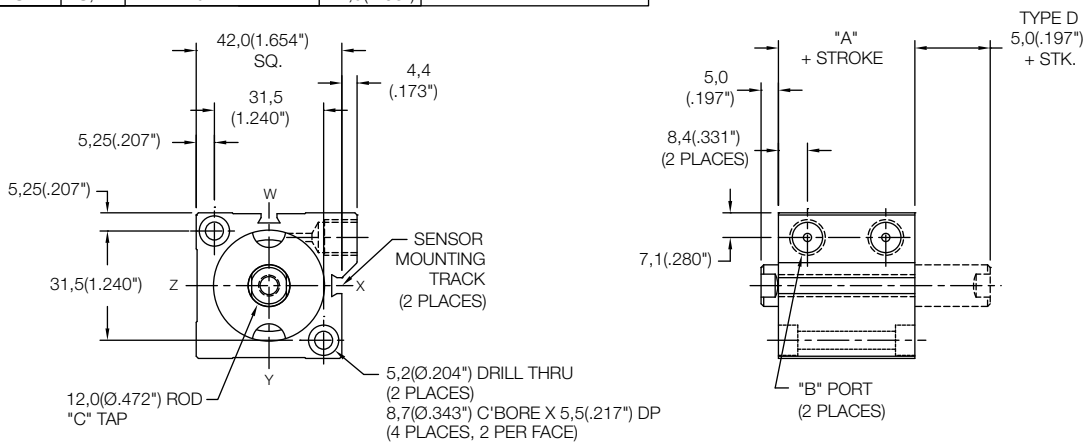
	Standard Threads	"EM" Option
"B"	G1/8 PORT	1/8-27
"C"	M6X1,0	1/4-20
"D"	M6X1,0	1/4-20



### Magnetic Thru Mount Cylinder "MT"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	...D	10mm - 20mm	27,5(1.08")	PUSH 8,04 cm <sup>2</sup> (1.25 in <sup>2</sup> )
LE	-	5mm - 15mm	32,5(1.28")	
LH	...D	5mm - 10mm	37,5(1.48")	PULL 6,91 cm <sup>2</sup> (1.07 in <sup>2</sup> )
LS	S,R	5mm	42,5(1.68")	

	Standard Threads	"EM" Option
"B"	G1/8 PORT	1/8-27
"C"	M6X1,0	1/4-20

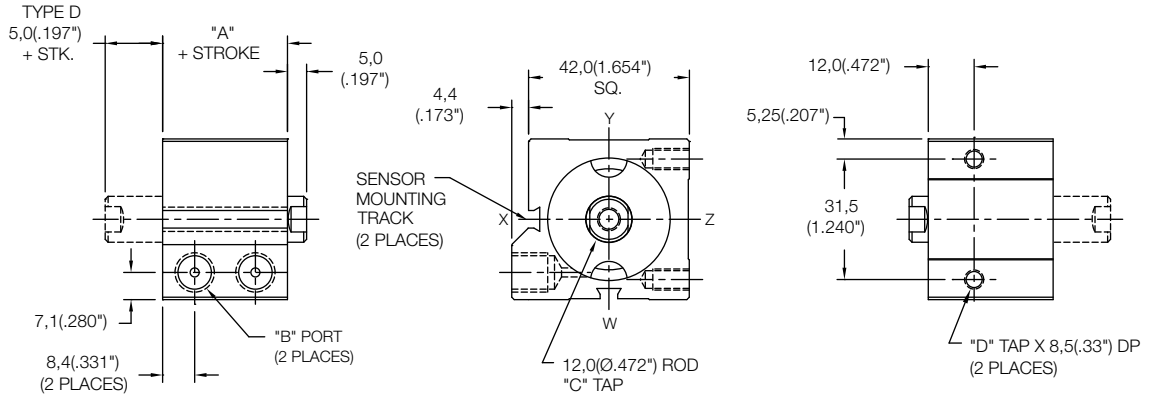


<table border="1"> <tr> <td>MODEL</td> <td>-</td> <td>32</td> <td>X</td> <td>STROKE</td> <td>TYPE</td> <td>MOUNTING</td> <td>MAGNETIC</td> <td>-</td> <td>OPTIONS</td> </tr> </table>	MODEL	-	32	X	STROKE	TYPE	MOUNTING	MAGNETIC	-	OPTIONS	SENSORS SOLD SEPARATELY SKS, SKP, SCS, SCP - SOLID STATE LIMIT SENSORS (SEE PAGE 54)
MODEL	-	32	X	STROKE	TYPE	MOUNTING	MAGNETIC	-	OPTIONS		
LS LE LH  5mm - 100mm STROKE (SEE STROKE RANGE)  BLANK - NO CODE, DOUBLE ACTING, SINGLE ROD D - DOUBLE ACTING, DOUBLE ROD S - SINGLE ACTING, SPRING RETRACT R - SINGLE ACTING, SPRING EXTEND  MT - THRU MOUNT MF - FRONT MOUNT MR - REAR MOUNT MB - BOTH END MOUNTS FF - FRONT FLANGE FR - REAR FLANGE (FOR FLANGES SEE PAGE 58)  PR - REAR PIVOT PL - LONG PIVOT (FOR PIVOTS SEE PAGE 60)	EM - INCH THREADS & PORT OPTIONS  HS - HIGH TEMPERATURE SEALS OPTION: AVAILABLE ON LE AND LH MODELS ONLY (SEE PAGE 62)  RE - ROD EYE (SEE PAGE 61)  RS - MALE STUD FOR ROD END (SEE PAGE 61)  RF, RH, RN, RT, RV, RY - ROD EXTENSIONS (SEE PAGE 61)  SH - HYDRAULIC OPTION (35 BAR 500 PSI) (SEE PAGE 62)  UB, UF, UR - URETHANE SHOCK PAD OPTION (SEE PAGE 62)										

### Magnetic Side Mount Cylinder "MS"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	_,D	10mm - 15mm	27,5(1.08")	PUSH 8,04 cm <sup>2</sup> (1.25 in <sup>2</sup> )
LE	-	5mm - 10mm	32,5(1.28")	
LH	_,D	5mm	37,5(1.48")	PULL 6,91 cm <sup>2</sup> (1.07 in <sup>2</sup> )

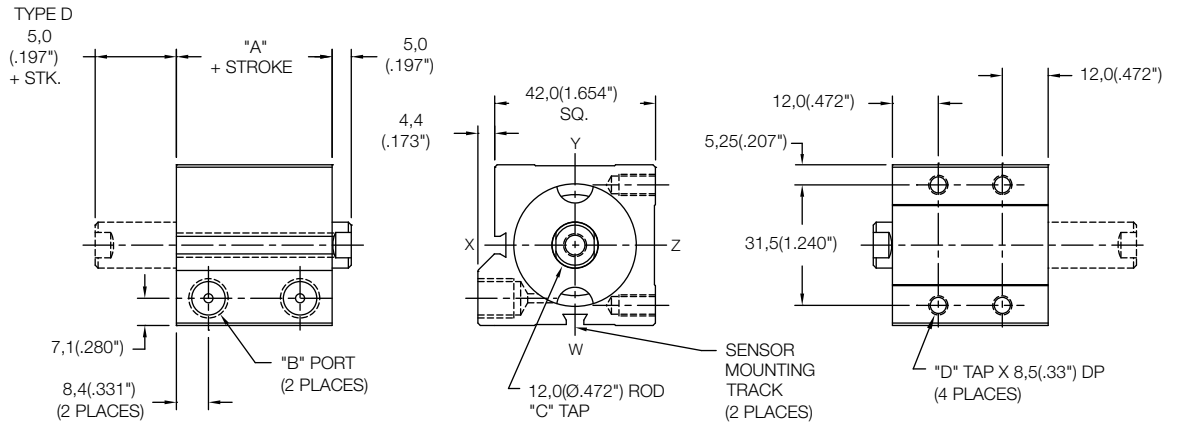
	Standard Threads	"EM" Option
"B"	G1/8 PORT	1/8-27
"C"	M6X1,0	1/4-20
"D"	M5X0,8	#10-32



### Magnetic Side Mount Cylinder "MS"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	_,D	20mm - 100mm	27,5(1.08")	PUSH 8,04 cm <sup>2</sup> (1.25 in <sup>2</sup> )
LE	-	15mm - 100mm	32,5(1.28")	
LH	_,D	10mm - 100mm	37,5(1.48")	PULL 6,91 cm <sup>2</sup> (1.07 in <sup>2</sup> )
LS	S,R	5mm - 25mm	42,5(1.68")	

	Standard Threads	"EM" Option
"B"	G1/8 PORT	1/8-27
"C"	M6X1,0	1/4-20
"D"	M5X0,8	#10-32



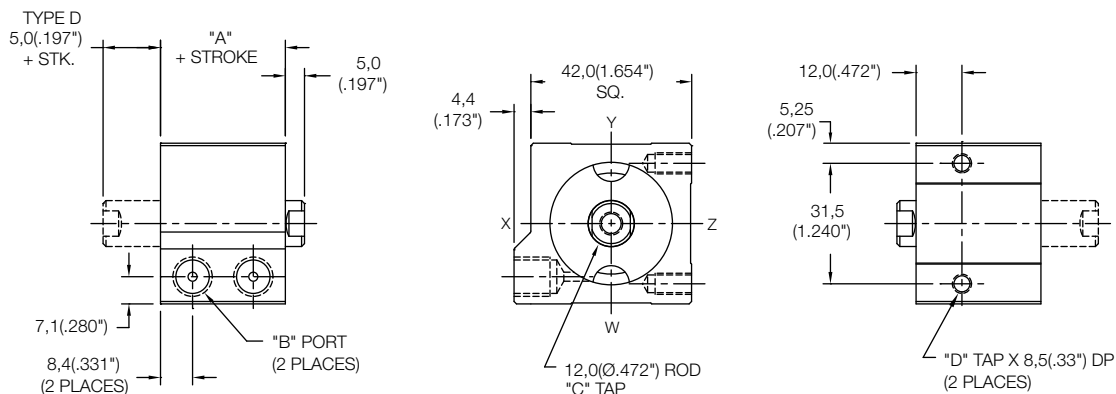
<table border="1"> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> <tr> <td>MODEL</td> <td>BORE</td> <td>STROKE</td> <td>TYPE</td> <td>MOUNTING</td> <td>MAGNETIC</td> <td colspan="5">OPTIONS</td> <td rowspan="4" style="border: 1px solid black; padding: 5px;">                 SENSORS SOLD SEPARATELY                  SKS, SKP, SCS, SCP - SOLID STATE                  LIMIT SENSORS (SEE PAGE 54)             </td> </tr> <tr> <td>LS</td> <td>32</td> <td>X</td> <td></td> <td></td> <td>M</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>LE</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>LH</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>													MODEL	BORE	STROKE	TYPE	MOUNTING	MAGNETIC	OPTIONS					SENSORS SOLD SEPARATELY SKS, SKP, SCS, SCP - SOLID STATE LIMIT SENSORS (SEE PAGE 54)	LS	32	X			M						LE											LH											<p>5mm - 100mm STROKE (SEE STROKE RANGE)</p> <p>BLANK - NO CODE, DOUBLE ACTING, SINGLE ROD</p> <p>D - DOUBLE ACTING, DOUBLE ROD S - SINGLE ACTING, SPRING RETRACT R - SINGLE ACTING, SPRING EXTEND</p> <p>MS - SIDE MOUNT FE - FLANGE ON END FS - FLANGE ON SIDE (SEE PAGE 59)</p>	<p>EM - INCH THREADS &amp; PORT OPTIONS</p> <p>HS - HIGH TEMPERATURE SEALS OPTION: AVAILABLE ON LE AND LH MODELS ONLY (SEE PAGE 62)</p> <p>RE - ROD EYE (SEE PAGE 61)</p> <p>RS - MALE STUD FOR ROD END (SEE PAGE 61)</p> <p>RF, RH, RN, RT, RV, RY - ROD EXTENSIONS (SEE PAGE 61)</p> <p>SH - HYDRAULIC OPTION (35 BAR 500 PSI) (SEE PAGE 62)</p> <p>UB, UF, UR - URETHANE SHOCK PAD OPTION (SEE PAGE 62)</p>
MODEL	BORE	STROKE	TYPE	MOUNTING	MAGNETIC	OPTIONS					SENSORS SOLD SEPARATELY SKS, SKP, SCS, SCP - SOLID STATE LIMIT SENSORS (SEE PAGE 54)																																																
LS	32	X			M																																																						
LE																																																											
LH																																																											



### Non Magnetic Side Mount Cylinder "MS"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	..D	10mm - 20mm	22,5(0.89")	PUSH 8,04 cm <sup>2</sup> (1.25 in <sup>2</sup> )
LE	-	5mm - 15mm	27,5(1.08")	
LH	..D	5mm - 10mm	32,5(1.28")	PULL 6,91 cm <sup>2</sup> (1.07 in <sup>2</sup> )
LS	S,R	5mm	37,5(1.48")	

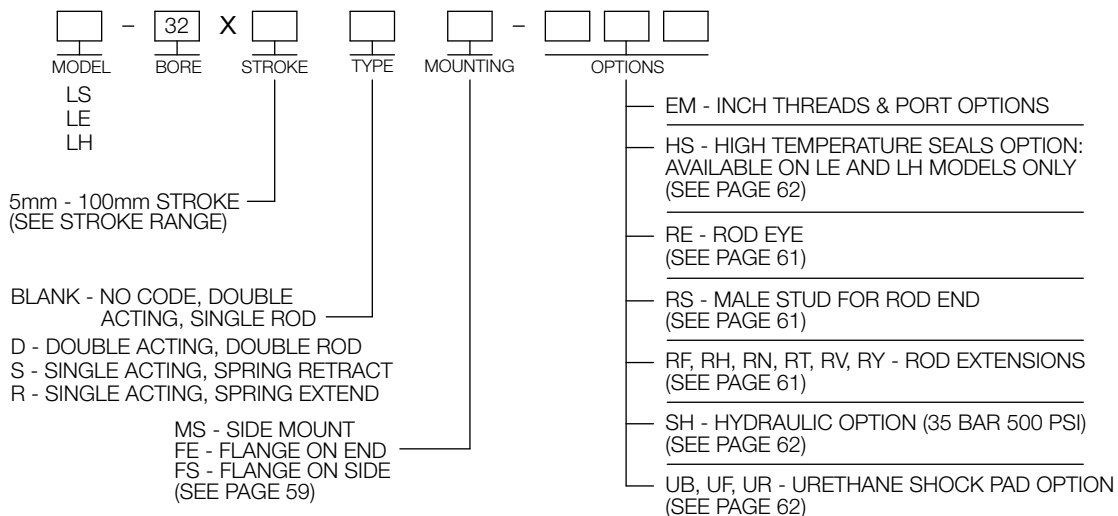
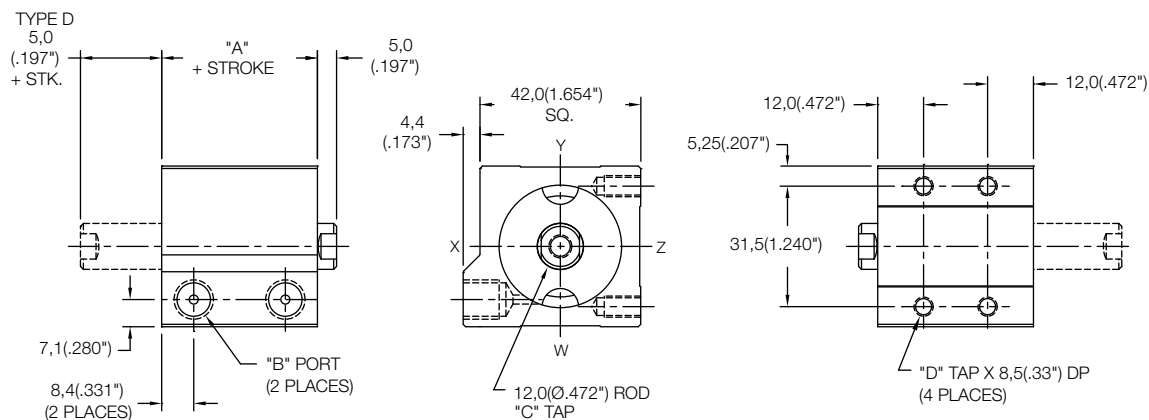
	Standard Threads	"EM" Option
"B"	G1/8 PORT	1/8-27
"C"	M6X1,0	1/4-20
"D"	M5X0,8	#10-32



### Non Magnetic Side Mount Cylinder "MS"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	..D	25mm - 100mm	22,5(0.89")	PUSH 8,04 cm <sup>2</sup> (1.25 in <sup>2</sup> )
LE	-	20mm - 100mm	27,5(1.08")	
LH	..D	15mm - 100mm	32,5(1.28")	PULL 6,91 cm <sup>2</sup> (1.07 in <sup>2</sup> )
LS	S,R	10mm - 25mm	37,5(1.48")	

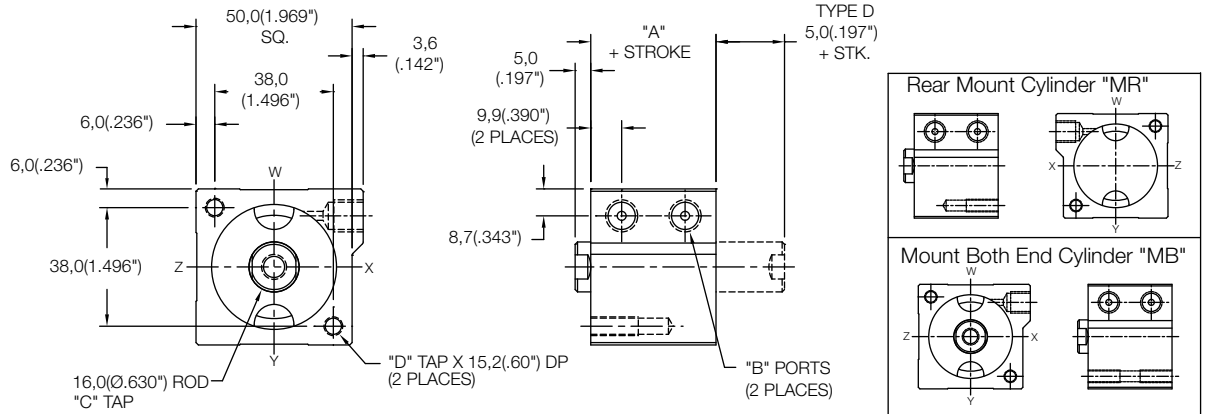
	Standard Threads	"EM" Option
"B"	G1/8 PORT	1/8-27
"C"	M6X1,0	1/4-20
"D"	M5X0,8	#10-32



### Non Magnetic Front Mount Cylinder "MF"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	..D	10mm - 100mm	25,0(0.98")	PUSH 12,56 cm <sup>2</sup> (1.95 in <sup>2</sup> )
LE	-	5mm - 100mm	35,0(1.38")	
LH	-	5mm - 100mm	40,0(1.58")	PULL 10,55 cm <sup>2</sup> (1.64 in <sup>2</sup> )
LH	D	5mm - 100mm	45,0(1.78")	

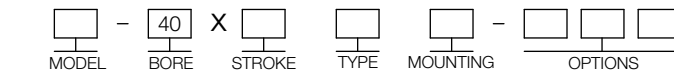
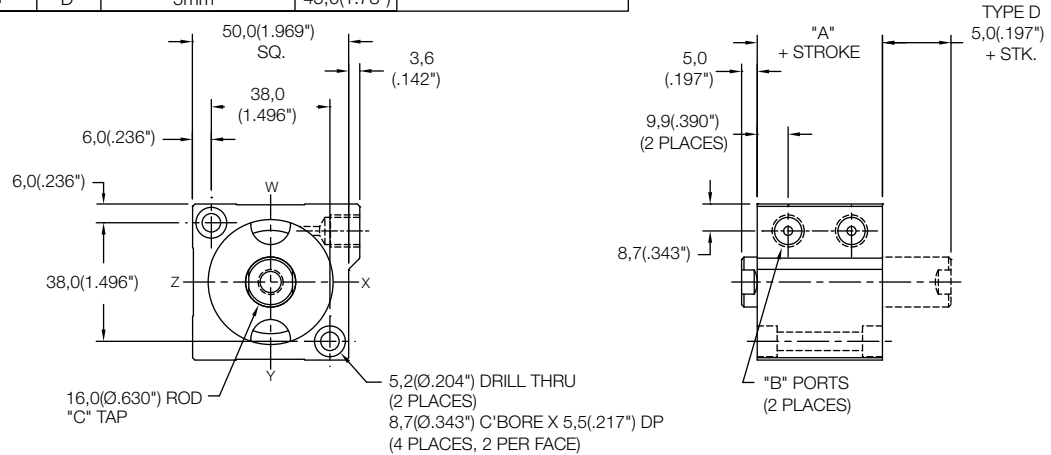
	Standard Threads	"EM" Option
"B"	G1/8 PORT	1/8-27
"C"	M8X1,25	5/16-18
"D"	M6X1,0	1/4-20



### Non Magnetic Thru Mount Cylinder "MT"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	..D	10mm - 25mm	25,0(0.98")	PUSH 12,56 cm <sup>2</sup> (1.95 in <sup>2</sup> )
LE	-	5mm - 15mm	35,0(1.38")	
LH	-	5mm - 10mm	40,0(1.58")	PULL 10,55 cm <sup>2</sup> (1.64 in <sup>2</sup> )
LH	D	5mm	45,0(1.78")	

	Standard Threads	"EM" Option
"B"	G1/8 PORT	1/8-27
"C"	M8X1,25	5/16-18



MODEL  
LS  
LE  
LH

5mm - 100mm STROKE  
(SEE STROKE RANGE)

BLANK - NO CODE, DOUBLE ACTING, SINGLE ROD

D - DOUBLE ACTING, DOUBLE ROD

MT - THRU MOUNT  
MF - FRONT MOUNT  
MR - REAR MOUNT  
MB - BOTH END MOUNTS  
FF - FRONT FLANGE  
FR - REAR FLANGE  
(FOR FLANGES SEE PAGE 58)

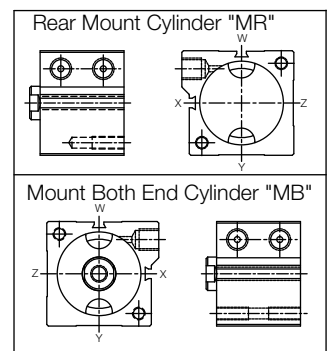
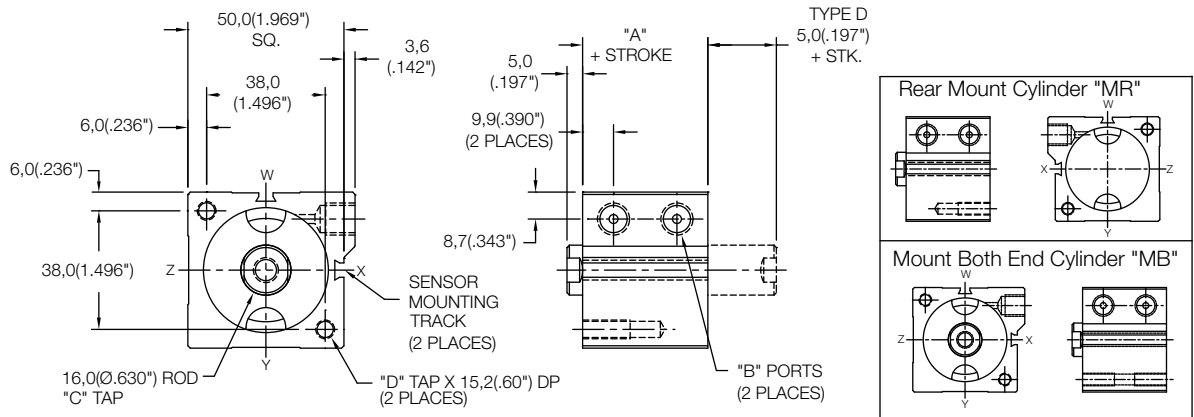
PR - REAR PIVOT  
PL - LONG PIVOT  
(FOR PIVOTS SEE PAGE 60)

- EM - INCH THREADS & PORT OPTIONS
- HS - HIGH TEMPERATURE SEALS OPTION: AVAILABLE ON LE AND LH MODELS ONLY (SEE PAGE 62)
- PE - PORT ENLARGEMENT (AVAILABLE W/ "EM" OPTION ONLY = 1/4-18 NPT PORTS)
- RE - ROD EYE (SEE PAGE 61)
- RS - MALE STUD FOR ROD END (SEE PAGE 61)
- RF, RH, RN, RT, RV, RY - ROD EXTENSIONS (SEE PAGE 61)
- SH - HYDRAULIC OPTION (35 BAR 500 PSI) (SEE PAGE 62)
- UB, UF, UR - URETHANE SHOCK PAD OPTION (SEE PAGE 62)

### Magnetic Front Mount Cylinder "MF"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	...D	10mm - 100mm	30,0(1.18")	PUSH 12,56 cm <sup>2</sup> (1.95 in <sup>2</sup> )
LE	-	5mm - 100mm	40,0(1.58")	
LH	-	5mm - 100mm	45,0(1.78")	PULL 10,55 cm <sup>2</sup> (1.64 in <sup>2</sup> )
LH	D	5mm - 100mm	50,0(1.98")	

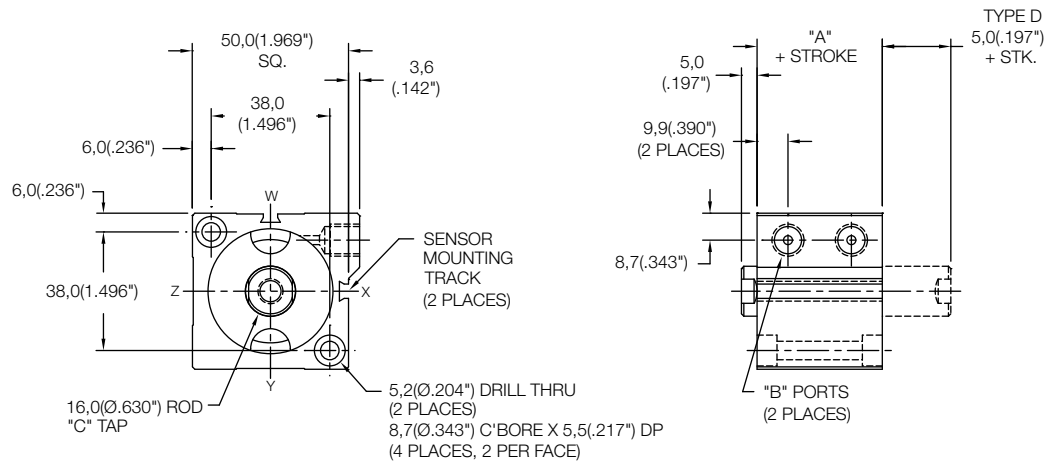
	Standard Threads	"EM" Option
"B"	G1/8 PORT	1/8-27
"C"	M8X1,25	5/16-18
"D"	M6X1,0	1/4-20



### Magnetic Thru Mount Cylinder "MT"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	...D	10mm - 20mm	30,0(1.18")	PUSH 12,56 cm <sup>2</sup> (1.95 in <sup>2</sup> )
LE	-	5mm - 10mm	40,0(1.58")	
LH	-	5mm	45,0(1.78")	PULL 10,55 cm <sup>2</sup> (1.64 in <sup>2</sup> )

	Standard Threads	"EM" Option
"B"	G1/8 PORT	1/8-27
"C"	M8X1,25	5/16-18



MODEL - BORE X STROKE TYPE MOUNTING MAGNETIC OPTIONS

LS  
LE  
LH

5mm - 100mm STROKE (SEE STROKE RANGE)

BLANK - NO CODE, DOUBLE ACTING, SINGLE ROD  
D - DOUBLE ACTING, DOUBLE ROD

MT - THRU MOUNT  
MF - FRONT MOUNT  
MR - REAR MOUNT  
MB - BOTH END MOUNTS  
FF - FRONT FLANGE  
FR - REAR FLANGE (FOR FLANGES SEE PAGE 58)  
PR - REAR PIVOT  
PL - LONG PIVOT (FOR PIVOTS SEE PAGE 60)

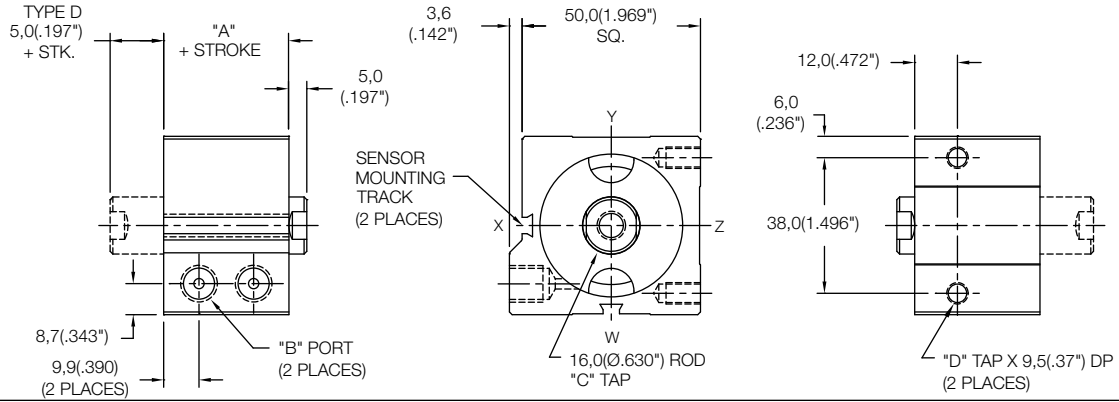
EM - INCH THREADS & PORT OPTIONS  
HS - HIGH TEMPERATURE SEALS OPTION: AVAILABLE ON LE AND LH MODELS ONLY (SEE PAGE 62)  
PE - PORT ENLARGEMENT (AVAILABLE W/ "EM" OPTION ONLY = 1/4-18 NPT PORTS)  
RE - ROD EYE (SEE PAGE 61)  
RS - MALE STUD FOR ROD END (SEE PAGE 61)  
RF, RH, RN, RT, RV, RY - ROD EXTENSIONS (SEE PAGE 61)  
SH - HYDRAULIC OPTION (35 BAR 500 PSI) (SEE PAGE 62)  
UB, UF, UR - URETHANE SHOCK PAD OPTION (SEE PAGE 62)

SENSORS SOLD SEPARATELY  
SKS, SKP, SCS, SCP - SOLID STATE LIMIT SENSORS (SEE PAGE 54)

**Magnetic Side Mount Cylinder "MS"**

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	...D	10mm - 15mm	30,0(1.18")	PUSH 12,56 cm <sup>2</sup> (1.95 in <sup>2</sup> )
LE	-	5mm	40,0(1.58")	PULL 10,55 cm <sup>2</sup> (1.64 in <sup>2</sup> )

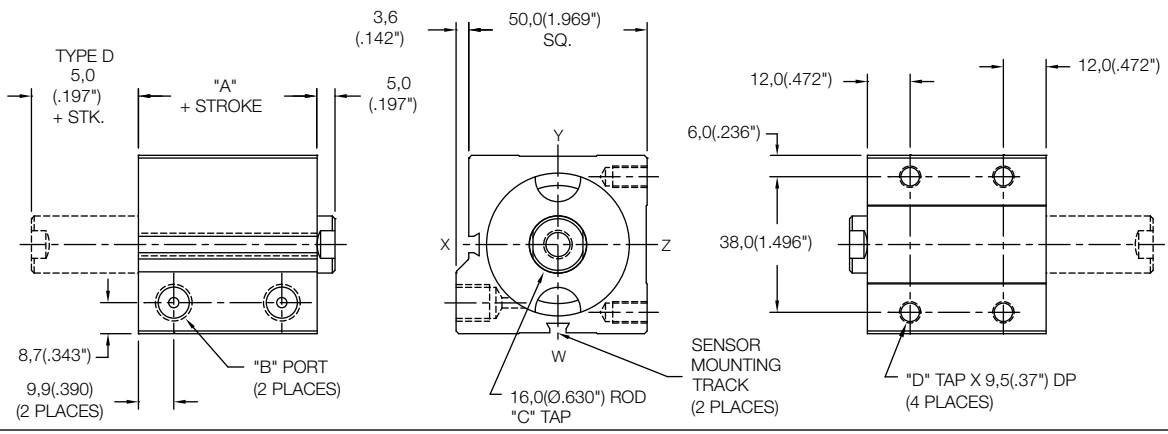
	Standard Threads	"EM" Option
"B"	G1/8 PORT	1/8-27
"C"	M8X1,25	5/16-18
"D"	M6X1,0	1/4-20



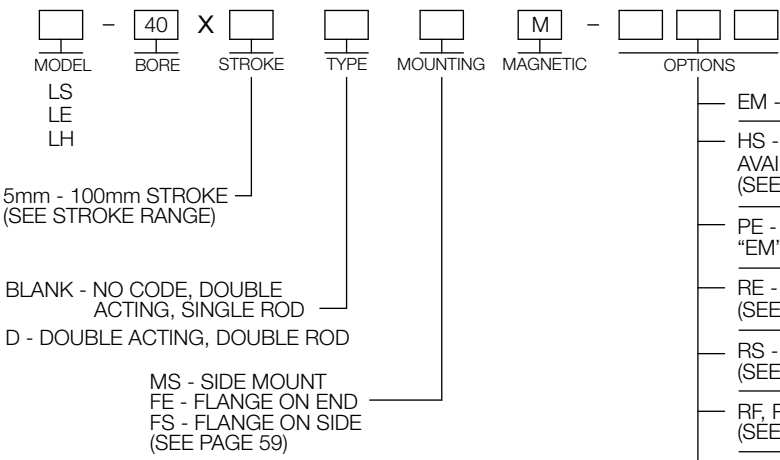
**Magnetic Side Mount Cylinder "MS"**

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	...D	20mm - 100mm	30,0(1.18")	PUSH 12,56 cm <sup>2</sup> (1.95 in <sup>2</sup> )
LE	-	5mm - 100mm	40,0(1.58")	PULL 10,55 cm <sup>2</sup> (1.64 in <sup>2</sup> )
LH	-	5mm - 100mm	45,0(1.78")	PULL 10,55 cm <sup>2</sup> (1.64 in <sup>2</sup> )
LH	D	5mm - 100mm	50,0(1.98")	PULL 10,55 cm <sup>2</sup> (1.64 in <sup>2</sup> )

	Standard Threads	"EM" Option
"B"	G1/8 PORT	1/8-27
"C"	M8X1,25	5/16-18
"D"	M6X1,0	1/4-20



SENSORS SOLD SEPARATELY  
SKS, SKP, SCS, SCP - SOLID STATE  
LIMIT SENSORS (SEE PAGE 54)

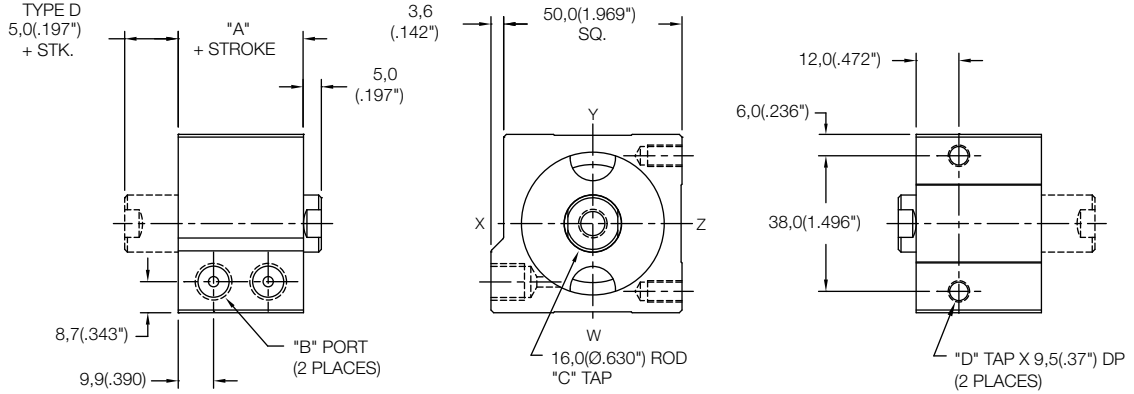


- EM - INCH THREADS & PORT OPTIONS
- HS - HIGH TEMPERATURE SEALS OPTION: AVAILABLE ON LE AND LH MODELS ONLY (SEE PAGE 62)
- PE - PORT ENLARGEMENT (AVAILABLE W/ "EM" OPTION ONLY = 1/4-18 NPT PORTS)
- RE - ROD EYE (SEE PAGE 61)
- RS - MALE STUD FOR ROD END (SEE PAGE 61)
- RF, RH, RN, RT, RV, RY - ROD EXTENSIONS (SEE PAGE 61)
- SH - HYDRAULIC OPTION (35 BAR 500 PSI) (SEE PAGE 62)
- UB, UF, UR - URETHANE SHOCK PAD OPTION (SEE PAGE 62)

### Non Magnetic Side Mount Cylinder "MS"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	_,D	10mm - 20mm	25,0(0.98")	PUSH 12,56 cm <sup>2</sup> (1.95 in <sup>2</sup> )
LE	-	5mm - 10mm	35,0(1.38")	PULL 10,55 cm <sup>2</sup> (1.64 in <sup>2</sup> )
LH	-	5mm	40,0(1.58")	PULL 10,55 cm <sup>2</sup> (1.64 in <sup>2</sup> )

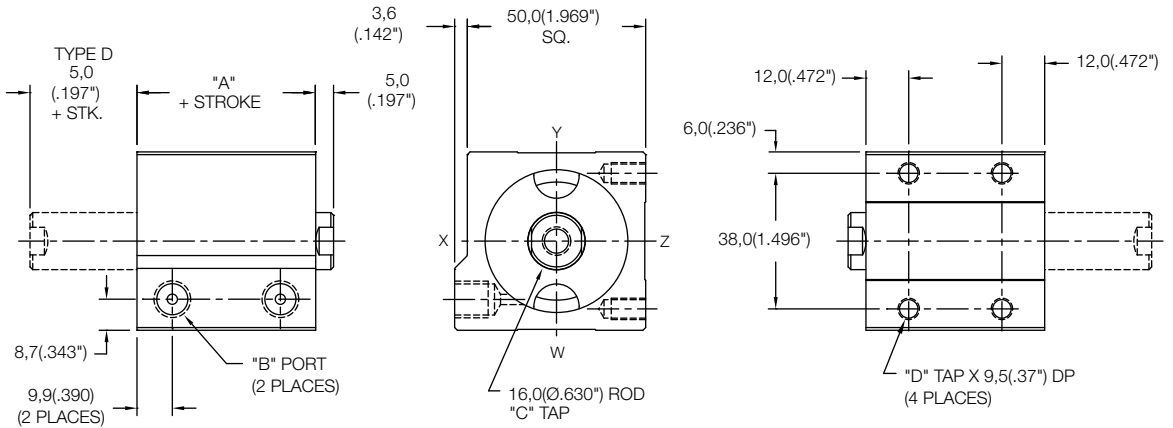
	Standard Threads	"EM" Option
"B"	G1/8 PORT	1/8-27
"C"	M8X1,25	5/16-18
"D"	M6X1,0	1/4-20



### Non Magnetic Side Mount Cylinder "MS"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	_,D	25mm - 100mm	25,0(0.98")	PUSH 12,56 cm <sup>2</sup> (1.95 in <sup>2</sup> )
LE	-	15mm - 100mm	35,0(1.38")	PUSH 12,56 cm <sup>2</sup> (1.95 in <sup>2</sup> )
LH	-	10mm - 100mm	40,0(1.58")	PULL 10,55 cm <sup>2</sup> (1.64 in <sup>2</sup> )
LH	D	5mm - 100mm	45,0(1.78")	PULL 10,55 cm <sup>2</sup> (1.64 in <sup>2</sup> )

	Standard Threads	"EM" Option
"B"	G1/8 PORT	1/8-27
"C"	M8X1,25	5/16-18
"D"	M6X1,0	1/4-20



-  40 X    -

MODEL    BORE    STROKE    TYPE    MOUNTING    OPTIONS

LS  
LE  
LH

5mm - 100mm STROKE  
(SEE STROKE RANGE)

BLANK - NO CODE, DOUBLE  
ACTING, SINGLE ROD

D - DOUBLE ACTING, DOUBLE ROD

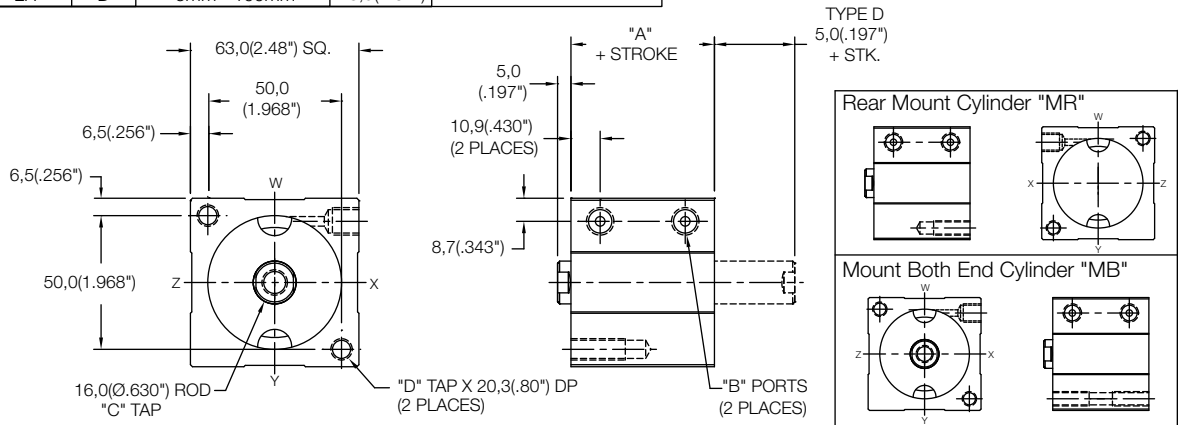
MS - SIDE MOUNT  
FE - FLANGE ON END  
FS - FLANGE ON SIDE  
(SEE PAGE 59)

EM - INCH THREADS & PORT OPTIONS  
 HS - HIGH TEMPERATURE SEALS OPTION:  
AVAILABLE ON LE AND LH MODELS ONLY  
(SEE PAGE 62)  
 PE - PORT ENLARGEMENT (AVAILABLE W/  
"EM" OPTION ONLY = 1/4-18 NPT PORTS)  
 RE - ROD EYE  
(SEE PAGE 61)  
 RS - MALE STUD FOR ROD END  
(SEE PAGE 61)  
 RF, RH, RN, RT, RV, RY - ROD EXTENSIONS  
(SEE PAGE 61)  
 SH - HYDRAULIC OPTION (35 BAR 500 PSI)  
(SEE PAGE 62)  
 UB, UF, UR - URETHANE SHOCK PAD OPTION  
(SEE PAGE 62)

### Non Magnetic Front Mount Cylinder "MF"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	_,D	10mm - 100mm	28,5(1.12")	PUSH 19,63 cm <sup>2</sup> (3.04 in <sup>2</sup> )
LE	-	5mm - 100mm	38,5(1.52")	
LH	-	5mm - 100mm	43,5(1.72")	PULL 17,62 cm <sup>2</sup> (2.73 in <sup>2</sup> )
LH	D	5mm - 100mm	48,5(1.91")	

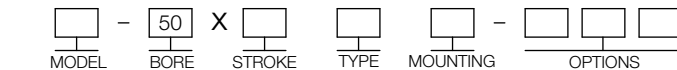
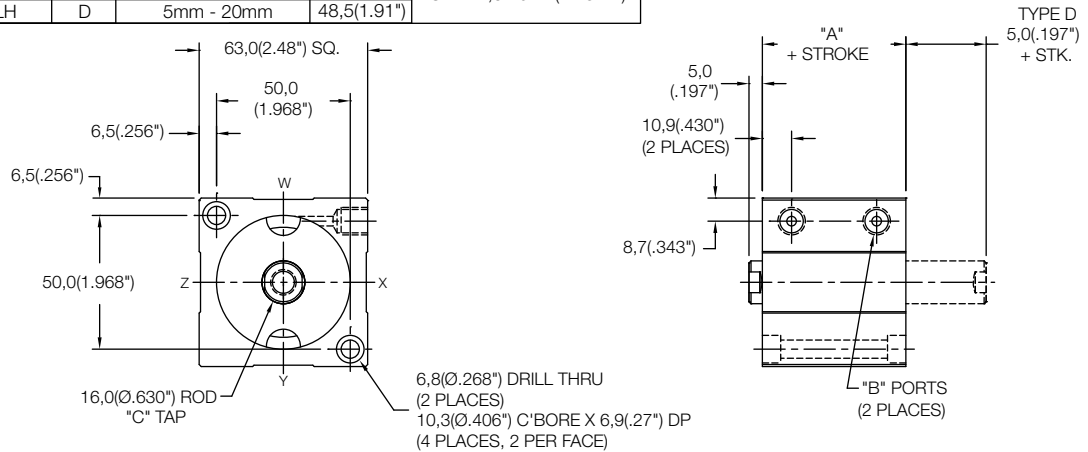
	Standard Threads	"EM" Option
"B"	G1/8 PORT	1/8-27
"C"	M10X1,5	3/8-24
"D"	M8X1,25	5/16-18



### Non Magnetic Thru Mount Cylinder "MT"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	_,D	10mm - 40mm	28,5(1.12")	PUSH 19,63 cm <sup>2</sup> (3.04 in <sup>2</sup> )
LE	-	5mm - 30mm	38,5(1.52")	
LH	-	5mm - 25mm	43,5(1.72")	PULL 17,62 cm <sup>2</sup> (2.73 in <sup>2</sup> )
LH	D	5mm - 20mm	48,5(1.91")	

	Standard Threads	"EM" Option
"B"	G1/8 PORT	1/8-27
"C"	M10X1,5	3/8-24



LS  
LE  
LH

5mm - 100mm STROKE  
(SEE STROKE RANGE)

BLANK - NO CODE, DOUBLE ACTING, SINGLE ROD  
D - DOUBLE ACTING, DOUBLE ROD

MT - THRU MOUNT  
MF - FRONT MOUNT  
MR - REAR MOUNT  
MB - BOTH END MOUNTS  
FF - FRONT FLANGE  
FR - REAR FLANGE  
(FOR FLANGES SEE PAGE 58)

PR - REAR PIVOT  
PL - LONG PIVOT  
(FOR PIVOTS SEE PAGE 60)

EM - INCH THREADS & PORT OPTIONS

HS - HIGH TEMPERATURE SEALS OPTION:  
AVAILABLE ON LE AND LH MODELS ONLY  
(SEE PAGE 62)

PE - PORT ENLARGEMENT (AVAILABLE W/  
"EM" OPTION ONLY = 1/4-18 NPT PORTS)

RE - ROD EYE  
(SEE PAGE 61)

RS - MALE STUD FOR ROD END  
(SEE PAGE 61)

RF, RH, RN, RT, RV, RY - ROD EXTENSIONS  
(SEE PAGE 61)

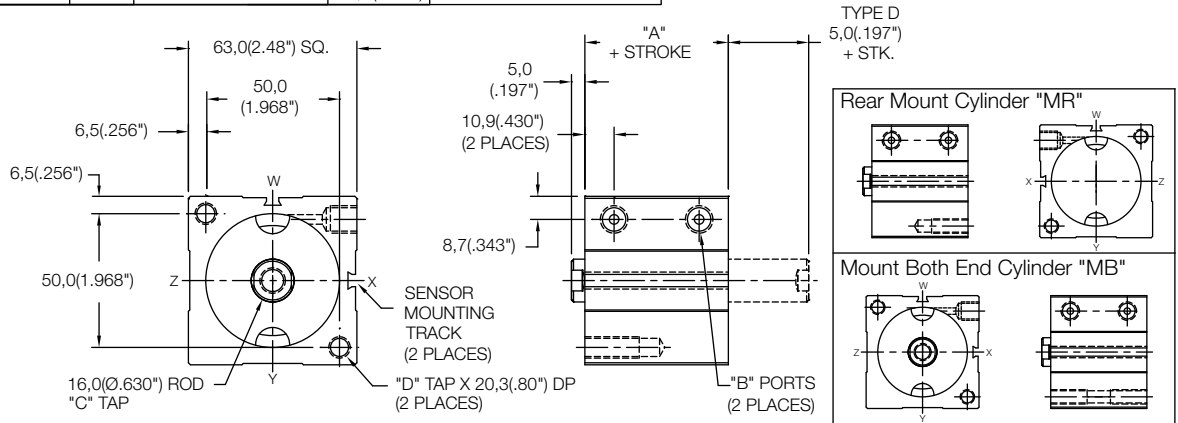
SH - HYDRAULIC OPTION (35 BAR 500 PSI)  
(SEE PAGE 62)

UB, UF, UR - URETHANE SHOCK PAD OPTION  
(SEE PAGE 62)

### Magnetic Front Mount Cylinder "MF"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	_,D	10mm - 100mm	33,5(1.32")	PUSH 19,63 cm <sup>2</sup> (3.04 in <sup>2</sup> )
LE	-	5mm - 100mm	43,5(1.72")	
LH	-	5mm - 100mm	48,5(1.91")	PULL 17,62 cm <sup>2</sup> (2.73 in <sup>2</sup> )
LH	D	5mm - 100mm	53,5(2.11")	

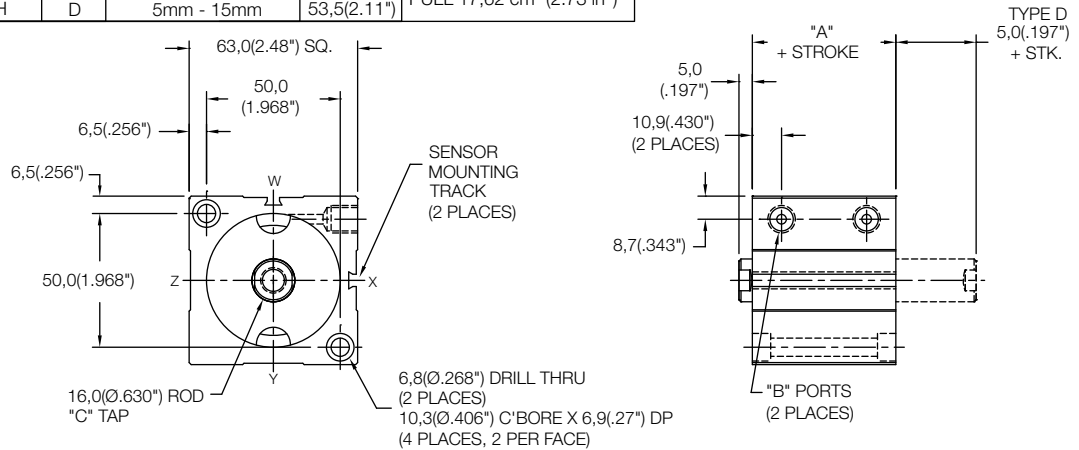
	Standard Threads	"EM" Option
"B"	G1/8 PORT	1/8-27
"C"	M10X1,5	3/8-24
"D"	M8X1,25	5/16-18



### Magnetic Thru Mount Cylinder "MT"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	_,D	10mm - 35mm	33,5(1.32")	PUSH 19,63 cm <sup>2</sup> (3.04 in <sup>2</sup> )
LE	-	5mm - 25mm	43,5(1.72")	
LH	-	5mm - 20mm	48,5(1.91")	PULL 17,62 cm <sup>2</sup> (2.73 in <sup>2</sup> )
LH	D	5mm - 15mm	53,5(2.11")	

	Standard Threads	"EM" Option
"B"	G1/8 PORT	1/8-27
"C"	M10X1,5	3/8-24

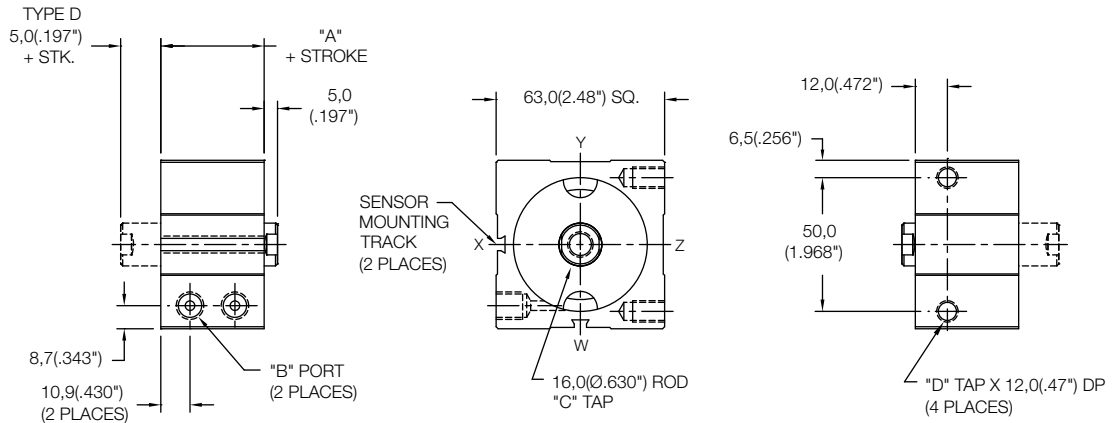


<p>MODEL - <b>50</b> X BORE STROKE TYPE MOUNTING MAGNETIC OPTIONS</p> <p>LS LE LH</p> <p>5mm - 100mm STROKE (SEE STROKE RANGE)</p> <p>BLANK - NO CODE, DOUBLE ACTING, SINGLE ROD D - DOUBLE ACTING, DOUBLE ROD</p> <p>MT - THRU MOUNT MF - FRONT MOUNT MR - REAR MOUNT MB - BOTH END MOUNTS FF - FRONT FLANGE FR - REAR FLANGE (FOR FLANGES SEE PAGE 58)</p> <p>PR - REAR PIVOT PL - LONG PIVOT (FOR PIVOTS SEE PAGE 60)</p>	<p>SENSORS SOLD SEPARATELY SKS, SKP, SCS, SCP - SOLID STATE LIMIT SENSORS (SEE PAGE 54)</p> <p>EM - INCH THREADS &amp; PORT OPTIONS</p> <p>HS - HIGH TEMPERATURE SEALS OPTION: AVAILABLE ON LE AND LH MODELS ONLY (SEE PAGE 62)</p> <p>PE - PORT ENLARGEMENT (AVAILABLE W/ "EM" OPTION ONLY = 1/4-18 NPT PORTS)</p> <p>RE - ROD EYE (SEE PAGE 61)</p> <p>RS - MALE STUD FOR ROD END (SEE PAGE 61)</p> <p>RF, RH, RN, RT, RV, RY - ROD EXTENSIONS (SEE PAGE 61)</p> <p>SH - HYDRAULIC OPTION (35 BAR 500 PSI) (SEE PAGE 62)</p> <p>UB, UF, UR - URETHANE SHOCK PAD OPTION (SEE PAGE 62)</p>
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### Magnetic Side Mount Cylinder "MS"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	_,D	10mm - 15mm	33,5(1.32")	PUSH 19,63 cm <sup>2</sup> (3.04 in <sup>2</sup> )
LE	-	5mm	43,5(1.72")	PULL 17,62 cm <sup>2</sup> (2.73 in <sup>2</sup> )

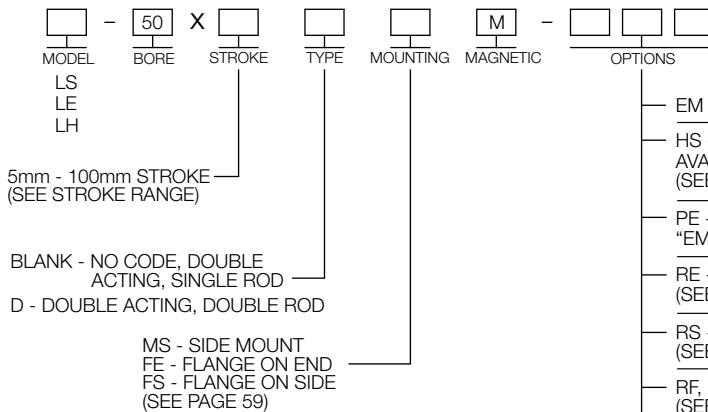
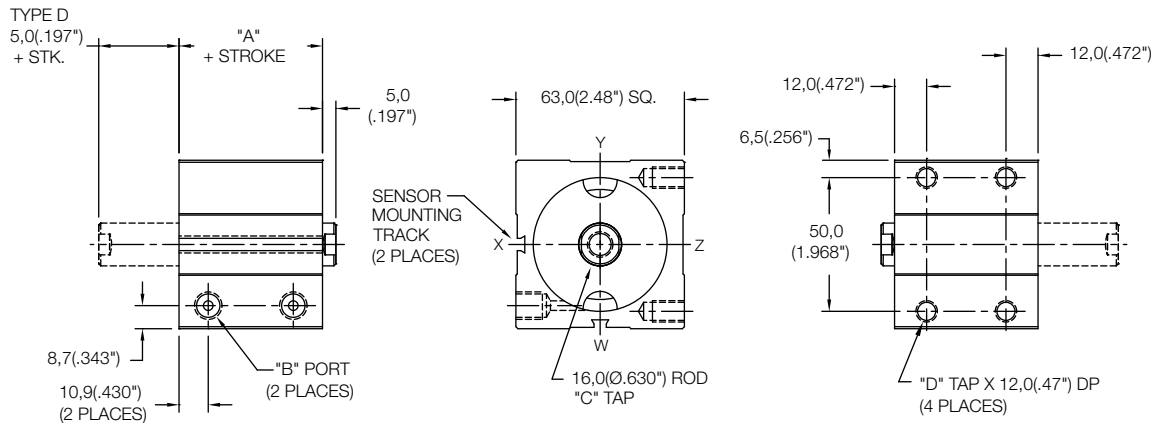
	Standard Threads	"EM" Option
"B"	G1/8 PORT	1/8-27
"C"	M10X1,5	3/8-24
"D"	M8X1,25	5/16-18



### Magnetic Side Mount Cylinder "MS"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	_,D	20mm - 100mm	33,5(1.32")	PUSH 19,63 cm <sup>2</sup> (3.04 in <sup>2</sup> )
LE	-	10mm - 100mm	43,5(1.72")	PUSH 19,63 cm <sup>2</sup> (3.04 in <sup>2</sup> )
LH	-	5mm - 100mm	48,5(1.91")	PULL 17,62 cm <sup>2</sup> (2.73 in <sup>2</sup> )
LH	D	5mm - 100mm	53,5(2.11")	PULL 17,62 cm <sup>2</sup> (2.73 in <sup>2</sup> )

	Standard Threads	"EM" Option
"B"	G1/8 PORT	1/8-27
"C"	M10X1,5	3/8-24
"D"	M8X1,25	5/16-18



SENSORS SOLD SEPERATELY  
SKS, SKP, SCS, SCP - SOLID STATE  
LIMIT SENSORS (SEE PAGE 54)

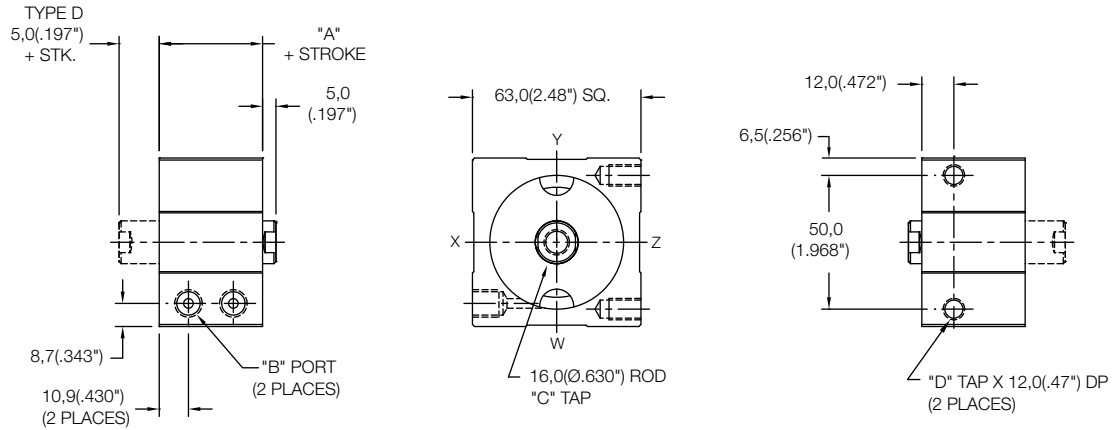
- EM - INCH THREADS & PORT OPTIONS
- HS - HIGH TEMPERATURE SEALS OPTION: AVAILABLE ON LE AND LH MODELS ONLY (SEE PAGE 62)
- PE - PORT ENLARGEMENT (AVAILABLE W/ "EM" OPTION ONLY = 1/4-18 NPT PORTS)
- RE - ROD EYE (SEE PAGE 61)
- RS - MALE STUD FOR ROD END (SEE PAGE 61)
- RF, RH, RN, RT, RV, RY - ROD EXTENSIONS (SEE PAGE 61)
- SH - HYDRAULIC OPTION (35 BAR 500 PSI) (SEE PAGE 62)
- UB, UF, UR - URETHANE SHOCK PAD OPTION (SEE PAGE 62)



### Non Magnetic Side Mount Cylinder "MS"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	_,D	10mm - 20mm	28,5(1.12")	PUSH 19,63 cm <sup>2</sup> (3.04 in <sup>2</sup> )
LE	-	5mm - 10mm	38,5(1.52")	
LH	-	5mm	43,5(1.72")	PULL 17,62 cm <sup>2</sup> (2.73 in <sup>2</sup> )

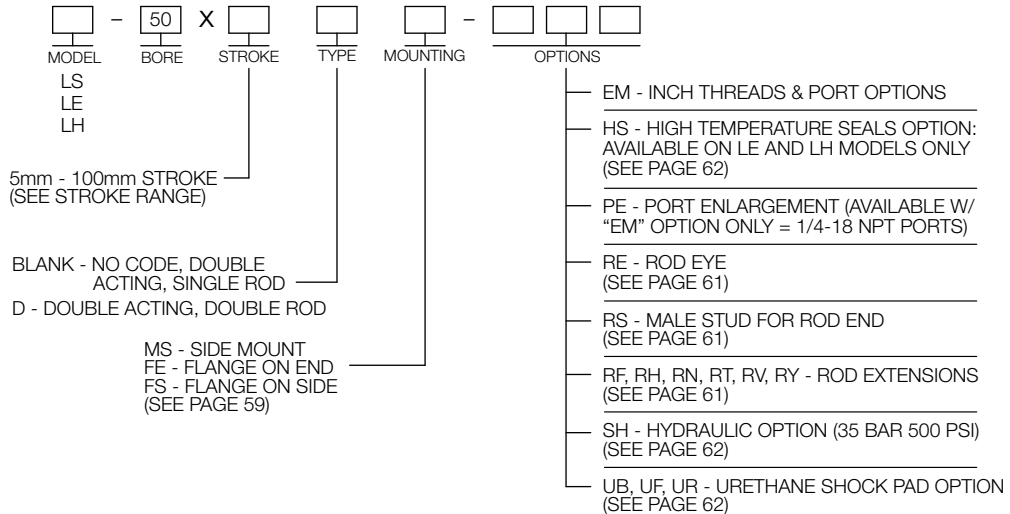
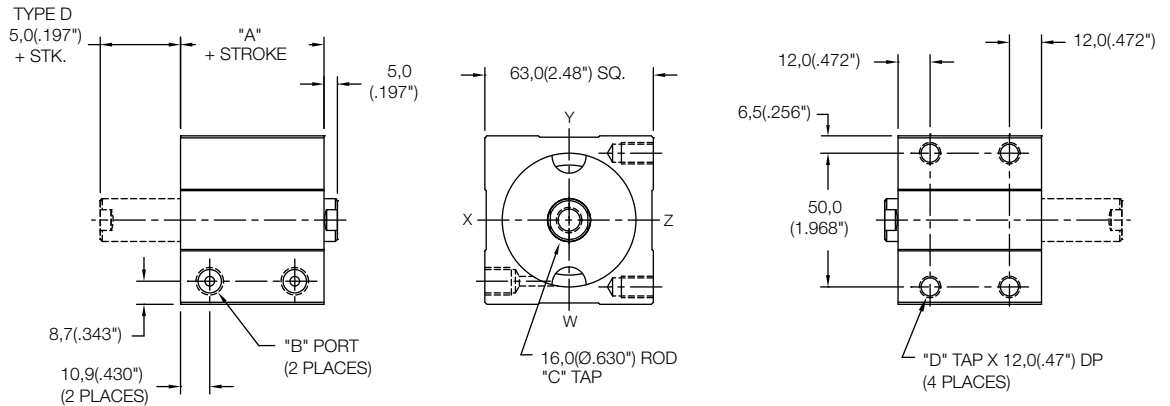
	Standard Threads	"EM" Option
"B"	G1/8 PORT	1/8-27
"C"	M10X1,5	3/8-24
"D"	M8X1,25	5/16-18



### Non Magnetic Side Mount Cylinder "MS"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	_,D	25mm - 100mm	28,5(1.12")	PUSH 19,63 cm <sup>2</sup> (3.04 in <sup>2</sup> )
LE	-	15mm - 100mm	38,5(1.52")	
LH	-	10mm - 100mm	43,5(1.72")	PULL 17,62 cm <sup>2</sup> (2.73 in <sup>2</sup> )
LH	D	5mm - 100mm	48,5(1.91")	

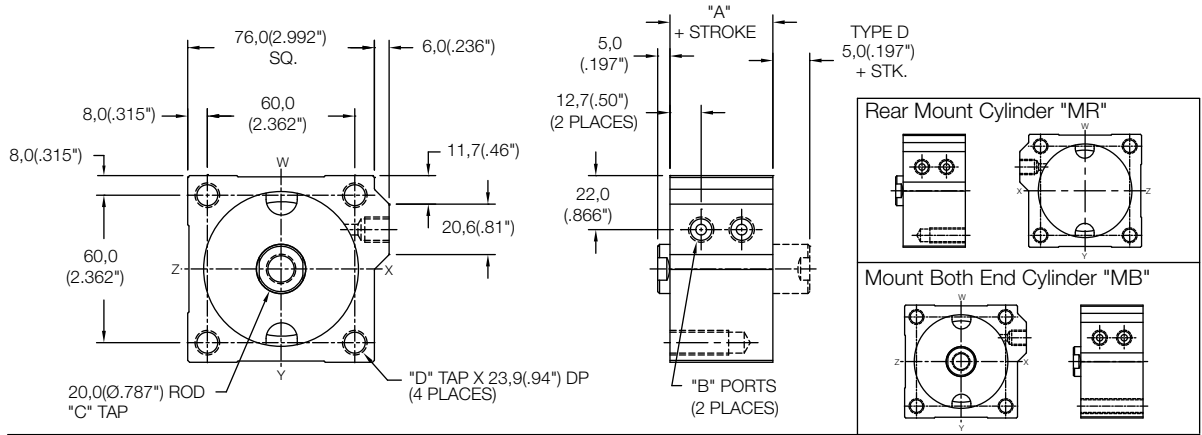
	Standard Threads	"EM" Option
"B"	G1/8 PORT	1/8-27
"C"	M10X1,5	3/8-24
"D"	M8X1,25	5/16-18



### Non Magnetic Front Mount Cylinder "MF"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	_D	10mm - 100mm	32,0(1.26")	PUSH 31,17 cm <sup>2</sup> (4.83 in <sup>2</sup> )
LE	-	5mm - 100mm	42,0(1.66")	
LH	_D	5mm - 100mm	52,0(2.05")	PULL 28,03 cm <sup>2</sup> (4.34 in <sup>2</sup> )

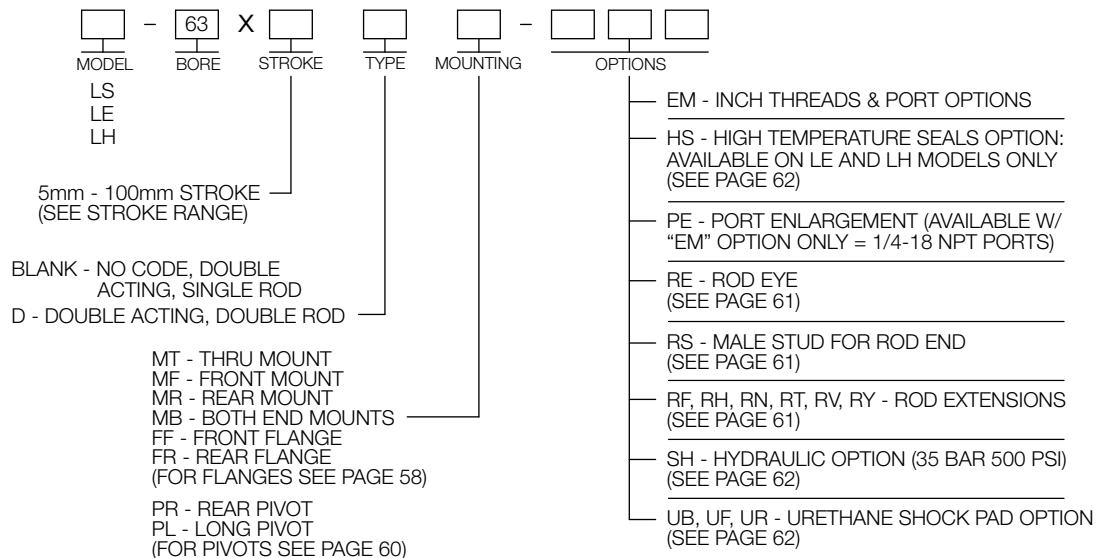
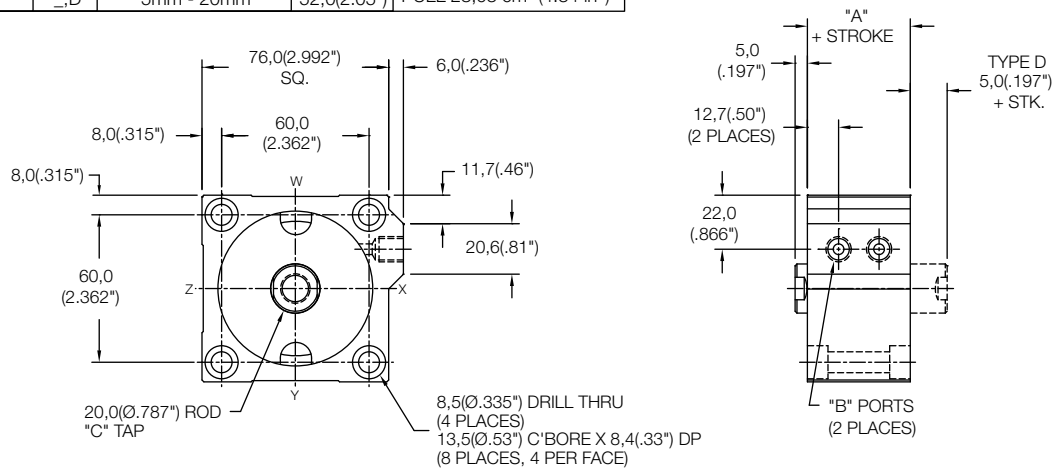
	Standard Threads	"EM" Option
"B"	G1/8 PORT	1/8-27
"C"	M12X1,75	1/2-13
"D"	M10X1,5	3/8-24



### Non Magnetic Thru Mount Cylinder "MT"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	_D	10mm - 40mm	32,0(1.26")	PUSH 31,17 cm <sup>2</sup> (4.83 in <sup>2</sup> )
LE	-	5mm - 30mm	42,0(1.66")	
LH	_D	5mm - 20mm	52,0(2.05")	PULL 28,03 cm <sup>2</sup> (4.34 in <sup>2</sup> )

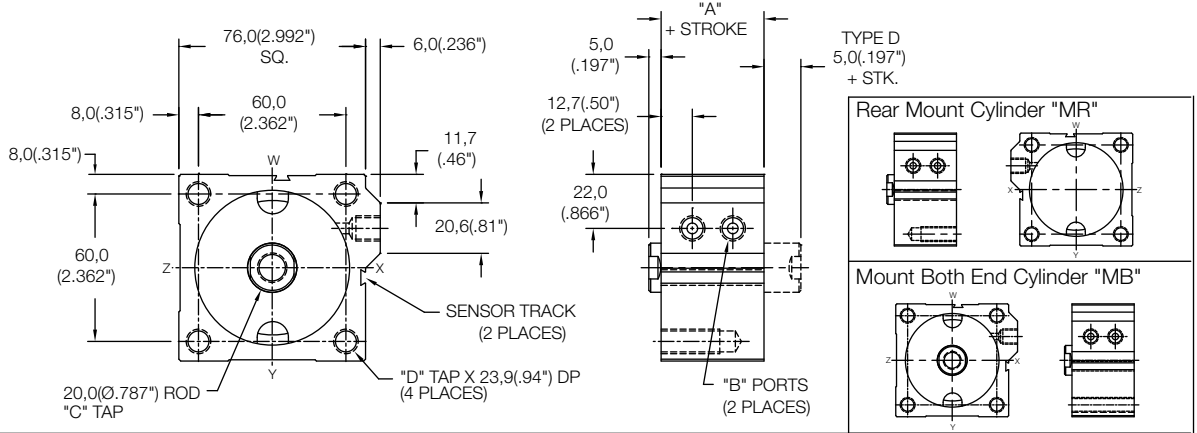
	Standard Threads	"EM" Option
"B"	G1/8 PORT	1/8-27
"C"	M12X1,75	1/2-13



### Magnetic Front Mount Cylinder "MF"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	...D	10mm - 100mm	37,0(1.46")	PUSH 31,17 cm <sup>2</sup> (4.83 in <sup>2</sup> )
LE	-	5mm - 100mm	47,0(1.85")	
LH	...D	5mm - 100mm	57,0(2.25")	PULL 28,03 cm <sup>2</sup> (4.34 in <sup>2</sup> )

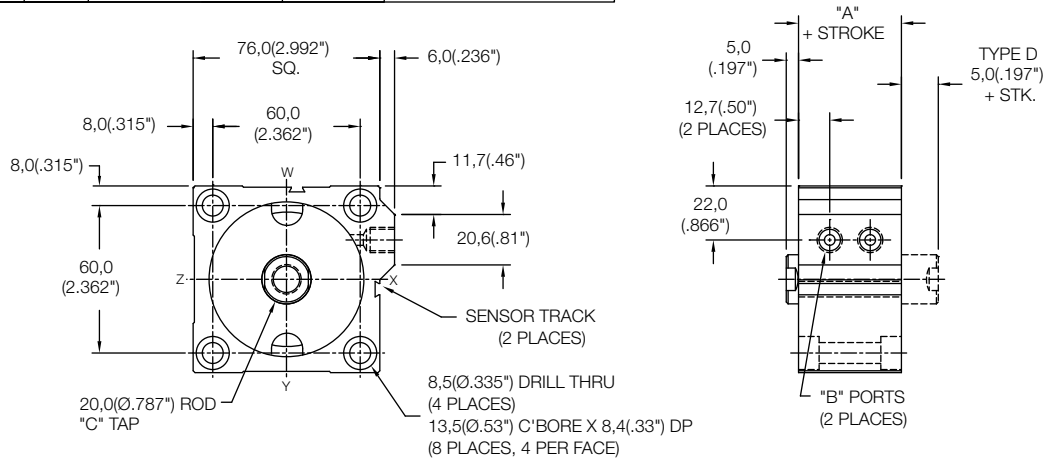
	Standard Threads	"EM" Option
"B"	G1/8 PORT	1/8-27
"C"	M12X1,75	1/2-13
"D"	M10X1,5	3/8-24



### Magnetic Thru Mount Cylinder "MT"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	...D	10mm - 35mm	37,0(1.46")	PUSH 31,17 cm <sup>2</sup> (4.83 in <sup>2</sup> )
LE	-	5mm - 25mm	47,0(1.85")	
LH	...D	5mm - 15mm	57,0(2.25")	PULL 28,03 cm <sup>2</sup> (4.34 in <sup>2</sup> )

	Standard Threads	"EM" Option
"B"	G1/8 PORT	1/8-27
"C"	M12X1,75	1/2-13



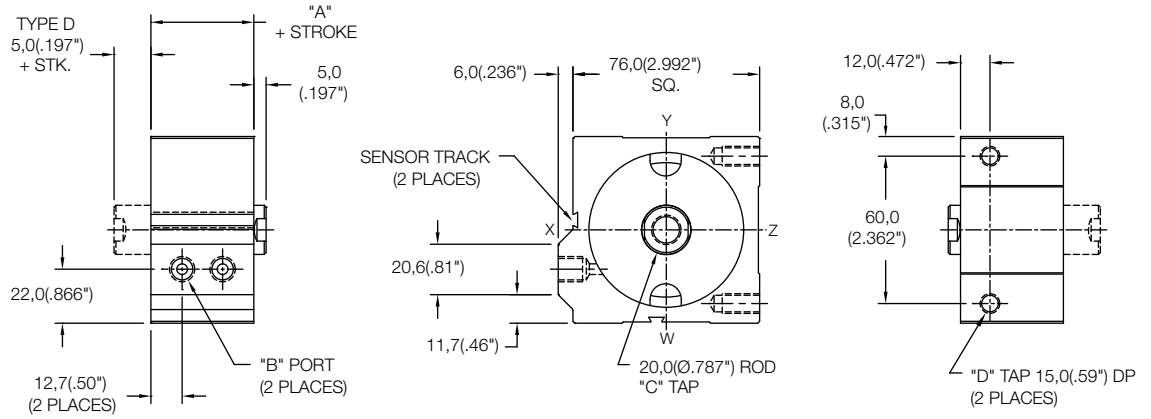
MODEL - **63** X  BORE X  STROKE  
 LS  
LE  
LH  
 5mm - 100mm STROKE (SEE STROKE RANGE)  
 BLANK - NO CODE, DOUBLE ACTING, SINGLE ROD  
 D - DOUBLE ACTING, DOUBLE ROD  
 TYPE  
 MT - THRU MOUNT  
 MF - FRONT MOUNT  
 MR - REAR MOUNT  
 MB - BOTH END MOUNTS  
 FF - FRONT FLANGE  
 FR - REAR FLANGE (FOR FLANGES SEE PAGE 58)  
 PR - REAR PIVOT  
 PL - LONG PIVOT (FOR PIVOTS SEE PAGE 60)  
 MOUNTING  
 MAGNETIC  
 M  
 OPTIONS  
 EM - INCH THREADS & PORT OPTIONS  
 HS - HIGH TEMPERATURE SEALS OPTION: AVAILABLE ON LE AND LH MODELS ONLY (SEE PAGE 62)  
 PE - PORT ENLARGEMENT (AVAILABLE W/ "EM" OPTION ONLY = 1/4-18 NPT PORTS)  
 RE - ROD EYE (SEE PAGE 61)  
 RS - MALE STUD FOR ROD END (SEE PAGE 61)  
 RF, RH, RN, RT, RV, RY - ROD EXTENSIONS (SEE PAGE 61)  
 SH - HYDRAULIC OPTION (35 BAR 500 PSI) (SEE PAGE 62)  
 UB, UF, UR - URETHANE SHOCK PAD OPTION (SEE PAGE 62)

SENSORS SOLD SEPARATELY  
 SKS, SKP, SCS, SCP - SOLID STATE LIMIT SENSORS (SEE PAGE 54)

### Magnetic Side Mount Cylinder "MS"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	_D	10mm - 15mm	37,0(1.46")	PUSH 31,17 cm <sup>2</sup> (4.83 in <sup>2</sup> )
LE	-	5mm	47,0(1.85")	PULL 28,03 cm <sup>2</sup> (4.34 in <sup>2</sup> )

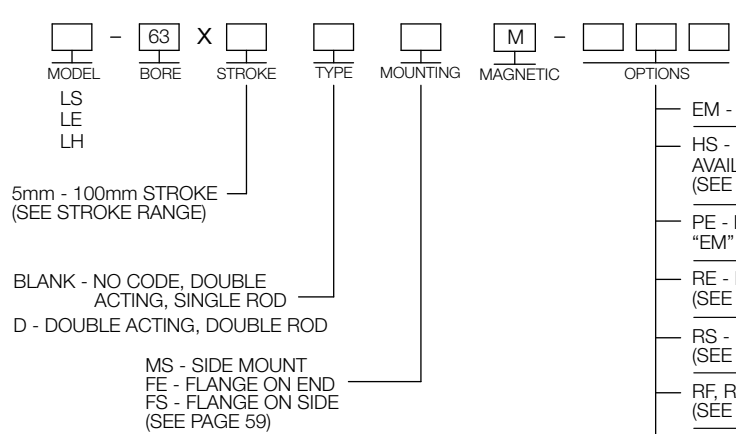
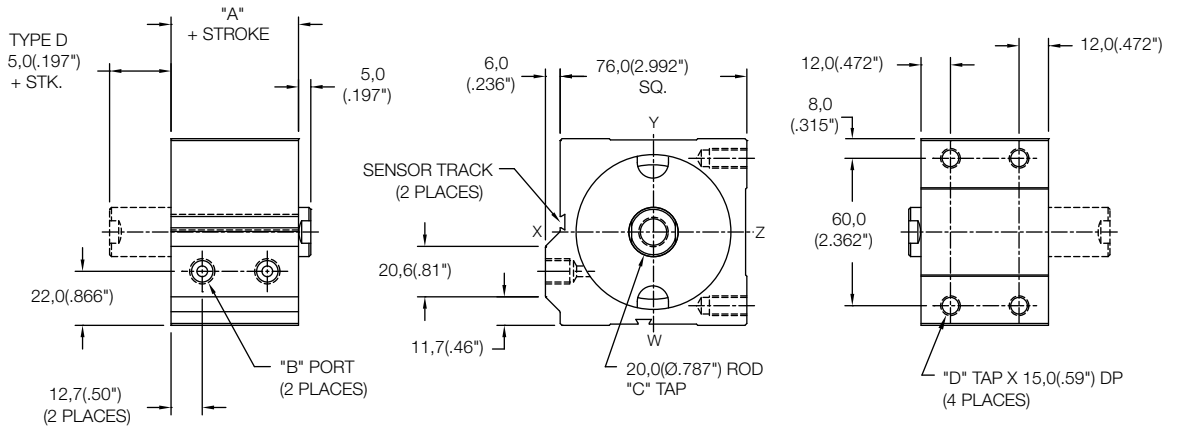
	Standard Threads	"EM" Option
"B"	G1/8 PORT	1/8-27
"C"	M12X1,75	1/2-13
"D"	M8X1,25	5/16-18



### Magnetic Side Mount Cylinder "MS"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	_D	20mm - 100mm	37,0(1.46")	PUSH 31,17 cm <sup>2</sup> (4.83 in <sup>2</sup> )
LE	-	10mm - 100mm	47,0(1.85")	PULL 28,03 cm <sup>2</sup> (4.34 in <sup>2</sup> )
LH	_D	5mm - 100mm	57,0(2.25")	PULL 28,03 cm <sup>2</sup> (4.34 in <sup>2</sup> )

	Standard Threads	"EM" Option
"B"	G1/8 PORT	1/8-27
"C"	M12X1,75	1/2-13
"D"	M8X1,25	5/16-18

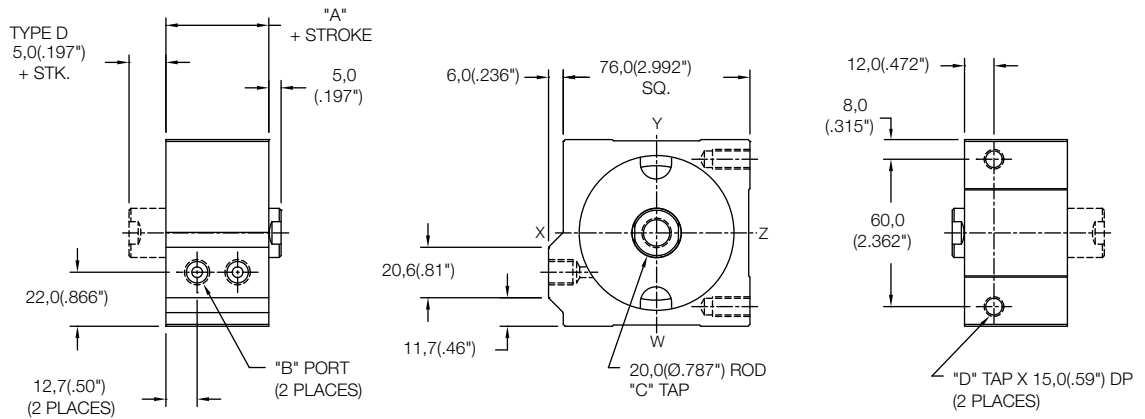


SENSORS SOLD SEPARATELY  
SKS, SKP, SCS, SCP - SOLID STATE  
LIMIT SENSORS (SEE PAGE 54)

### Non Magnetic Side Mount Cylinder "MS"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	_,D	10mm - 20mm	32,0(1.26")	PUSH 31,17 cm <sup>2</sup> (4.83 in <sup>2</sup> )
LE	-	5mm - 10mm	42,0(1.66")	PULL 28,03 cm <sup>2</sup> (4.34 in <sup>2</sup> )

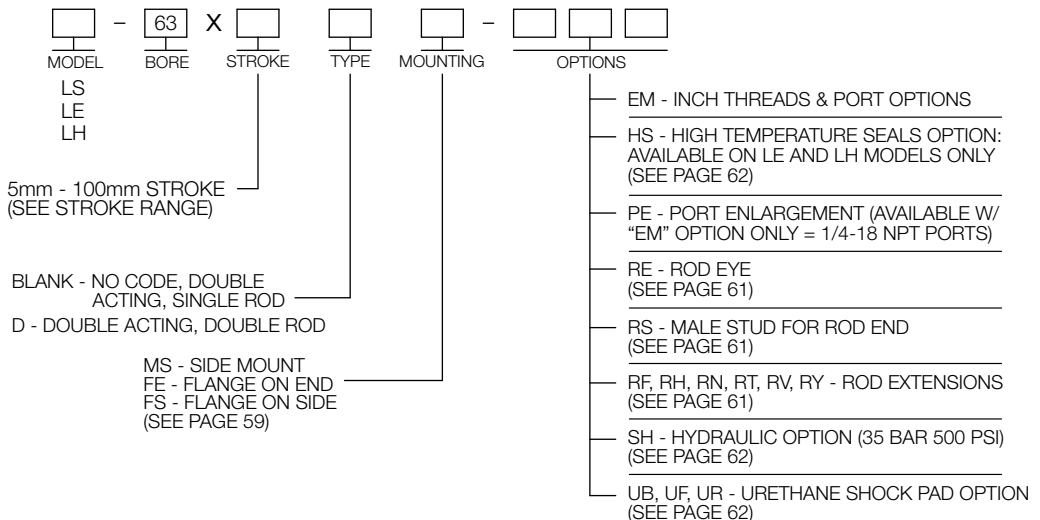
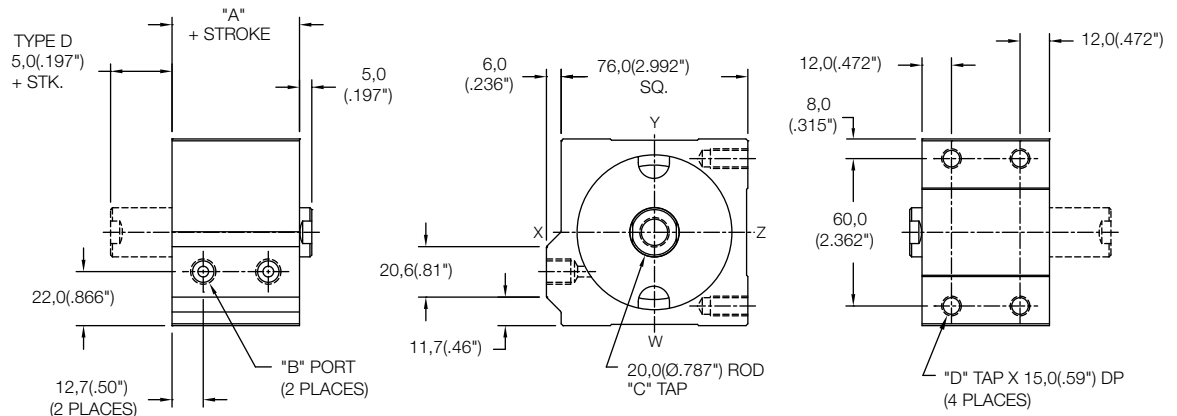
	Standard Threads	"EM" Option
"B"	G1/8 PORT	1/8-27
"C"	M12X1,75	1/2-13
"D"	M8X1,25	5/16-18



### Non Magnetic Side Mount Cylinder "MS"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	_,D	25mm - 100mm	32,0(1.26")	PUSH 31,17 cm <sup>2</sup> (4.83 in <sup>2</sup> )
LE	-	15mm - 100mm	42,0(1.66")	PUSH 31,17 cm <sup>2</sup> (4.83 in <sup>2</sup> )
LH	_,D	5mm - 100mm	52,0(2.05")	PULL 28,03 cm <sup>2</sup> (4.34 in <sup>2</sup> )

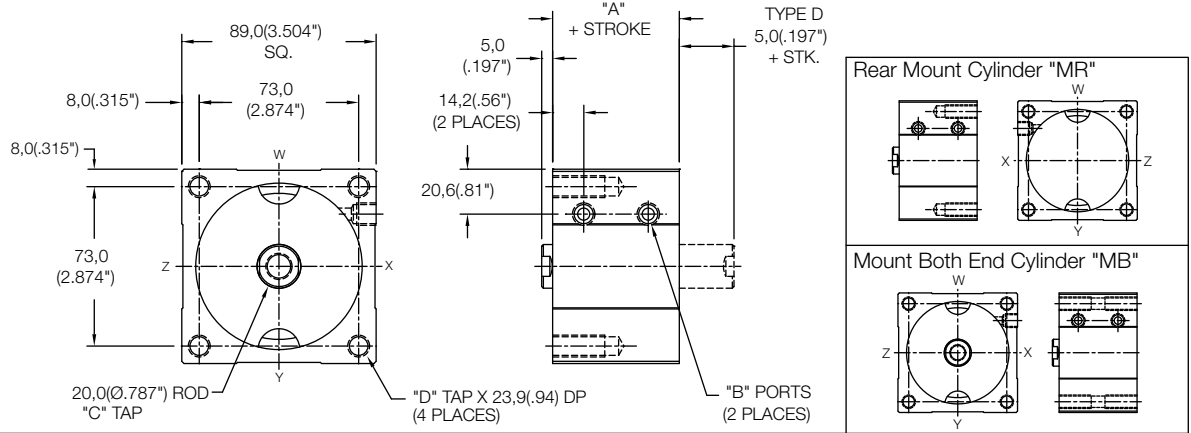
	Standard Threads	"EM" Option
"B"	G1/8 PORT	1/8-27
"C"	M12X1,75	1/2-13
"D"	M8X1,25	5/16-18



### Non Magnetic Front Mount Cylinder "MF"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	..D	10mm - 100mm	38,0(1.50")	PUSH 45,6 cm <sup>2</sup> (7.07 in <sup>2</sup> )
LE	-	5mm - 100mm	48,0(1.89")	
LH	..D	5mm - 100mm	58,0(2.28")	PULL 42,46 cm <sup>2</sup> (6.59 in <sup>2</sup> )

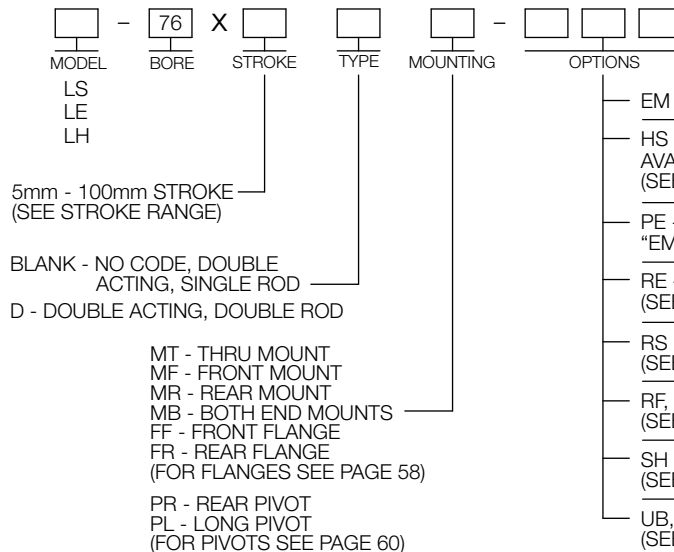
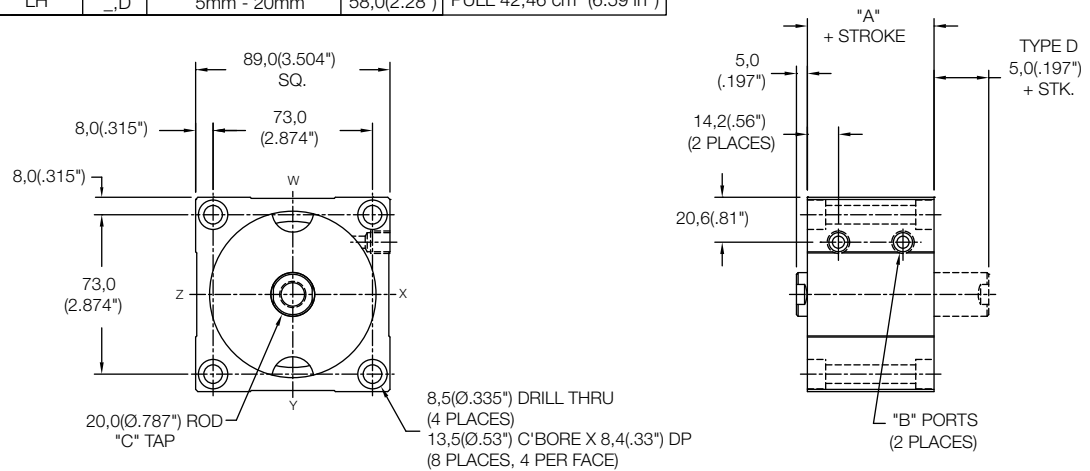
	Standard Threads	"EM" Option
"B"	G1/8 PORT	1/8-27
"C"	M12X1,75	1/2-13
"D"	M10X1,5	3/8-24



### Non Magnetic Thru Mount Cylinder "MT"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	..D	10mm - 40mm	38,0(1.50")	PUSH 45,6 cm <sup>2</sup> (7.07 in <sup>2</sup> )
LE	-	5mm - 30mm	48,0(1.89")	
LH	..D	5mm - 20mm	58,0(2.28")	PULL 42,46 cm <sup>2</sup> (6.59 in <sup>2</sup> )

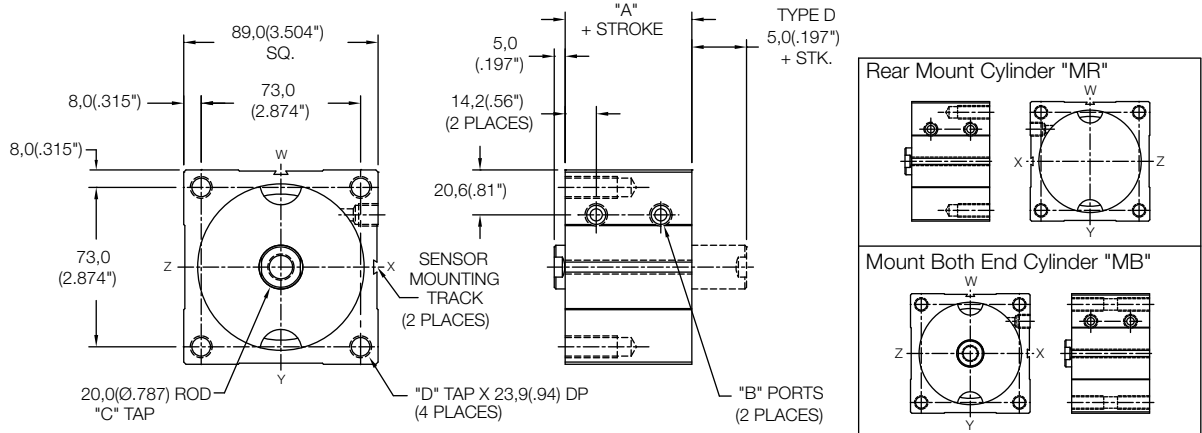
	Standard Threads	"EM" Option
"B"	G1/8 PORT	1/8-27
"C"	M12X1,75	1/2-13



### Magnetic Front Mount Cylinder "MF"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	..D	10mm - 100mm	43,0(1.69")	PUSH 45,6 cm <sup>2</sup> (7.07 in <sup>2</sup> )
LE	-	5mm - 100mm	53,0(2.09")	PULL 42,46 cm <sup>2</sup> (6.59 in <sup>2</sup> )
LH	..D	5mm - 100mm	63,0(2.48")	PULL 42,46 cm <sup>2</sup> (6.59 in <sup>2</sup> )

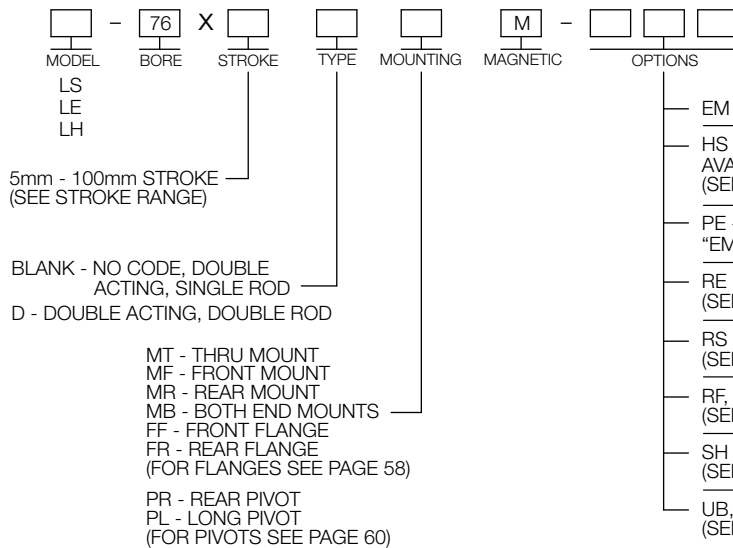
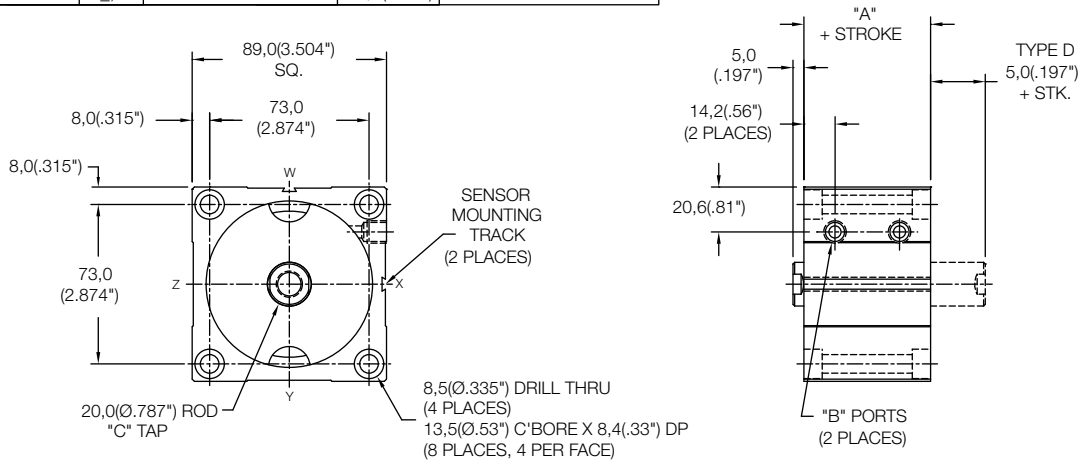
	Standard Threads	"EM" Option
"B"	G1/8 PORT	1/8-27
"C"	M12X1,75	1/2-13
"D"	M10X1,5	3/8-24



### Magnetic Thru Mount Cylinder "MT"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	..D	10mm - 35mm	43,0(1.69")	PUSH 45,6 cm <sup>2</sup> (7.07 in <sup>2</sup> )
LE	-	5mm - 25mm	53,0(2.09")	PULL 42,46 cm <sup>2</sup> (6.59 in <sup>2</sup> )
LH	..D	5mm - 15mm	63,0(2.48")	PULL 42,46 cm <sup>2</sup> (6.59 in <sup>2</sup> )

	Standard Threads	"EM" Option
"B"	G1/8 PORT	1/8-27
"C"	M12X1,75	1/2-13

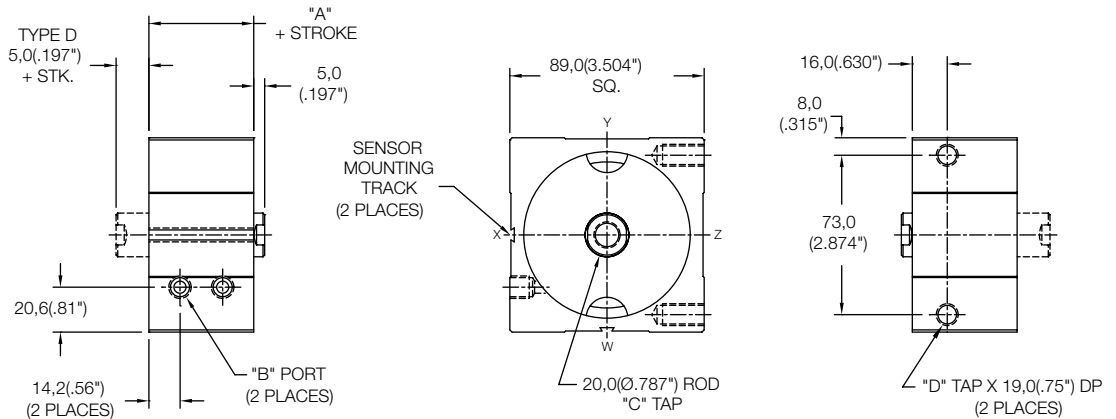


SENSORS SOLD SEPARATELY  
SKS, SKP, SCS, SCP - SOLID STATE  
LIMIT SENSORS (SEE PAGE 54)

### Magnetic Side Mount Cylinder "MS"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	..D	10mm - 15mm	43,0(1.69")	PUSH 45,6 cm <sup>2</sup> (7.07 in <sup>2</sup> )
LE	-	5mm	53,0(2.09")	PULL 42,46 cm <sup>2</sup> (6.59 in <sup>2</sup> )

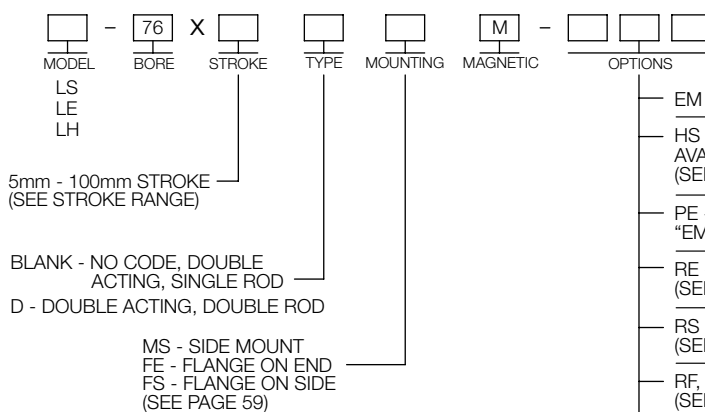
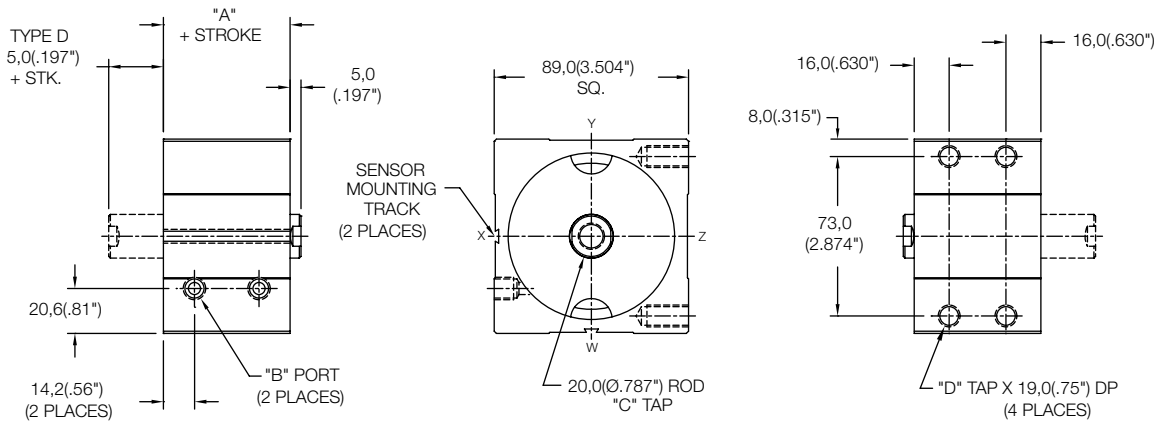
	Standard Threads	"EM" Option
"B"	G1/8 PORT	1/8-27
"C"	M12X1,75	1/2-13
"D"	M10X1,5	3/8-24



### Magnetic Side Mount Cylinder "MS"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	..D	20mm - 100mm	43,0(1.69")	PUSH 45,6 cm <sup>2</sup> (7.07 in <sup>2</sup> )
LE	-	10mm - 100mm	53,0(2.09")	PULL 42,46 cm <sup>2</sup> (6.59 in <sup>2</sup> )
LH	..D	5mm - 100mm	63,0(2.48")	PULL 42,46 cm <sup>2</sup> (6.59 in <sup>2</sup> )

	Standard Threads	"EM" Option
"B"	G1/8 PORT	1/8-27
"C"	M12X1,75	1/2-13
"D"	M10X1,5	3/8-24



SENSORS SOLD SEPERATELY  
SKS, SKP, SCS, SCP - SOLID STATE  
LIMIT SENSORS (SEE PAGE 54)

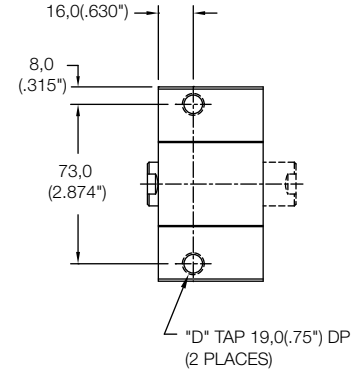
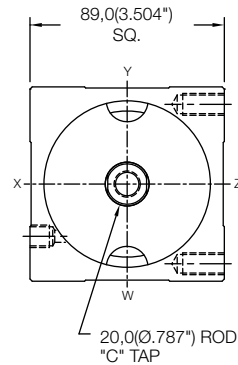
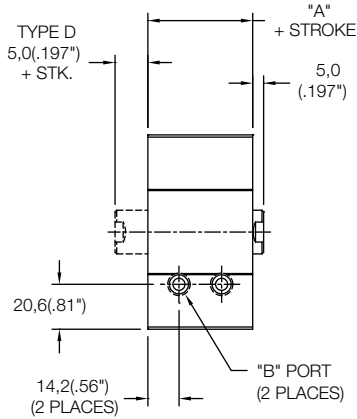
- EM - INCH THREADS & PORT OPTIONS
- HS - HIGH TEMPERATURE SEALS OPTION: AVAILABLE ON LE AND LH MODELS ONLY (SEE PAGE 62)
- PE - PORT ENLARGEMENT (AVAILABLE W/ "EM" OPTION ONLY = 1/4-18 NPT PORTS)
- RE - ROD EYE (SEE PAGE 61)
- RS - MALE STUD FOR ROD END (SEE PAGE 61)
- RF, RH, RN, RT, RV, RY - ROD EXTENSIONS (SEE PAGE 61)
- SH - HYDRAULIC OPTION (35 BAR 500 PSI) (SEE PAGE 62)
- UB, UF, UR - URETHANE SHOCK PAD OPTION (SEE PAGE 62)



### Non Magnetic Side Mount Cylinder "MS"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	_,D	10mm - 20mm	38,0(1.50")	PUSH 45,6 cm <sup>2</sup> (7.07 in <sup>2</sup> )
LE	-	5mm - 10mm	48,0(1.89")	PULL 42,46 cm <sup>2</sup> (6.59 in <sup>2</sup> )

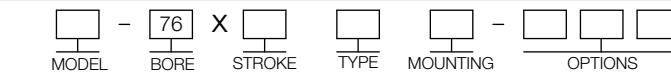
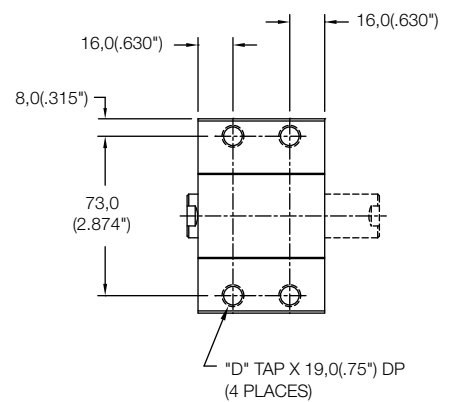
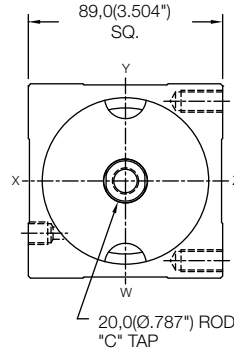
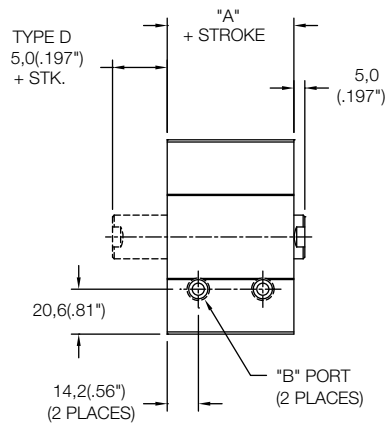
	Standard Threads	"EM" Option
"B"	G1/8 PORT	1/8-27
"C"	M12X1,75	1/2-13
"D"	M10X1,5	3/8-24



### Non Magnetic Side Mount Cylinder "MS"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	_,D	25mm - 100mm	38,0(1.50")	PUSH 45,6 cm <sup>2</sup> (7.07 in <sup>2</sup> )
LE	-	15mm - 100mm	48,0(1.89")	PULL 42,46 cm <sup>2</sup> (6.59 in <sup>2</sup> )
LH	_,D	5mm - 100mm	58,0(2.28")	PULL 42,46 cm <sup>2</sup> (6.59 in <sup>2</sup> )

	Standard Threads	"EM" Option
"B"	G1/8 PORT	1/8-27
"C"	M12X1,75	1/2-13
"D"	M10X1,5	3/8-24



MODEL  
LS  
LE  
LH

5mm - 100mm STROKE  
(SEE STROKE RANGE)

BLANK - NO CODE, DOUBLE ACTING, SINGLE ROD  
D - DOUBLE ACTING, DOUBLE ROD

MS - SIDE MOUNT  
FE - FLANGE ON END  
FS - FLANGE ON SIDE  
(SEE PAGE 59)

MOUNTING

OPTIONS

EM - INCH THREADS & PORT OPTIONS

HS - HIGH TEMPERATURE SEALS OPTION:  
AVAILABLE ON LE AND LH MODELS ONLY  
(SEE PAGE 62)

PE - PORT ENLARGEMENT (AVAILABLE W/  
"EM" OPTION ONLY = 1/4-18 NPT PORTS)

RE - ROD EYE  
(SEE PAGE 61)

RS - MALE STUD FOR ROD END  
(SEE PAGE 61)

RF, RH, RN, RT, RV, RY - ROD EXTENSIONS  
(SEE PAGE 61)

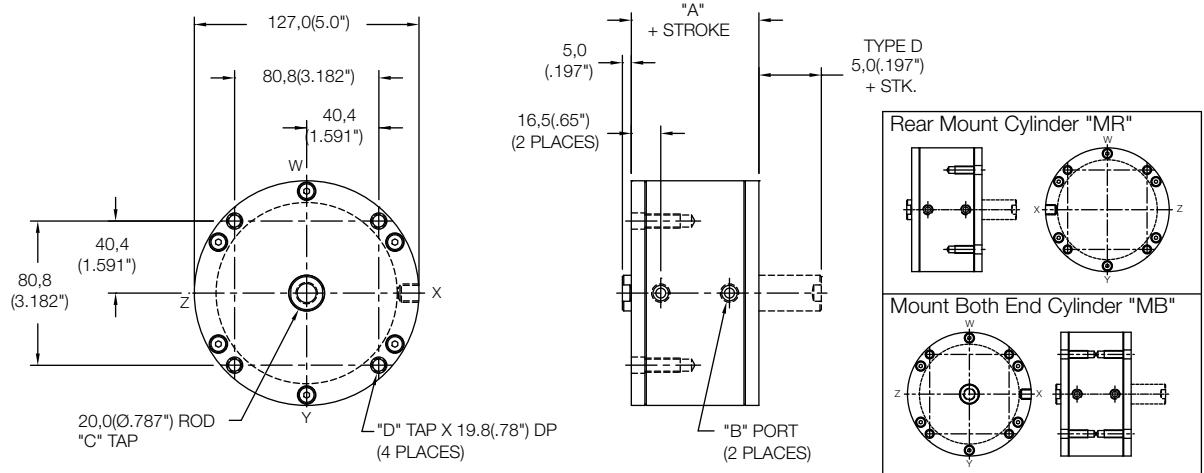
SH - HYDRAULIC OPTION (35 BAR 500 PSI)  
(SEE PAGE 62)

UB, UF, UR - URETHANE SHOCK PAD OPTION  
(SEE PAGE 62)

### Non Magnetic Front Mount Cylinder "MF"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	...D	10mm - 100mm	41,5(1.63")	PUSH 81,07 cm <sup>2</sup> (12.57 in <sup>2</sup> )
LE	-	5mm - 100mm	51,5(2.03")	
LH	...D	5mm - 100mm	61,5(2.42")	PULL 77,93 cm <sup>2</sup> (12.09 in <sup>2</sup> )

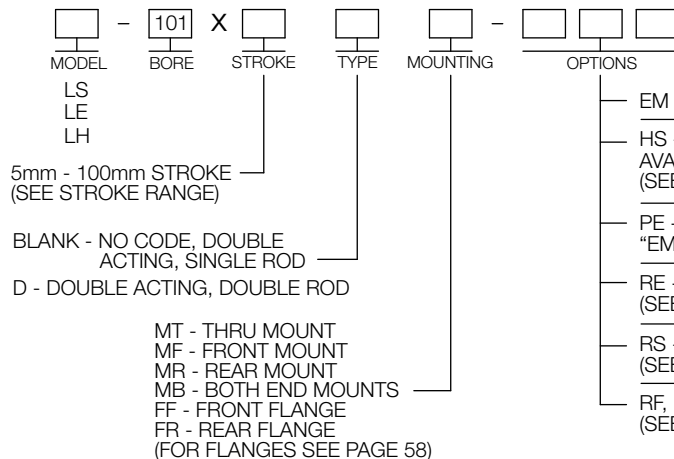
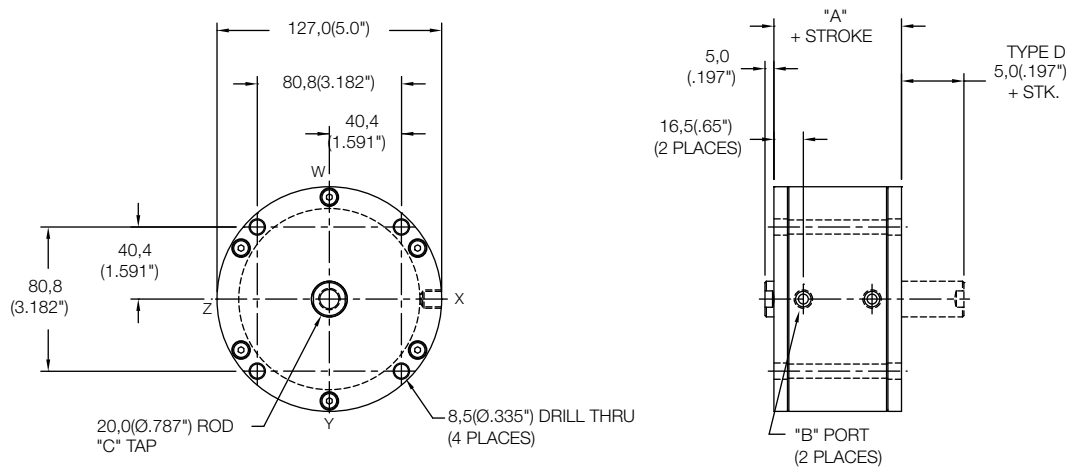
	Standard Threads	"EM" Option
"B"	G1/8 PORT	1/8-27
"C"	M12X1,75	1/2-13
"D"	M8X1,25	5/16-18



### Non Magnetic Thru Mount Cylinder "MT"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	...D	10mm - 50mm	41,5(1.63")	PUSH 81,07 cm <sup>2</sup> (12.57 in <sup>2</sup> )
LE	-	5mm - 40mm	51,5(2.03")	
LH	...D	5mm - 30mm	61,5(2.42")	PULL 77,93 cm <sup>2</sup> (12.09 in <sup>2</sup> )

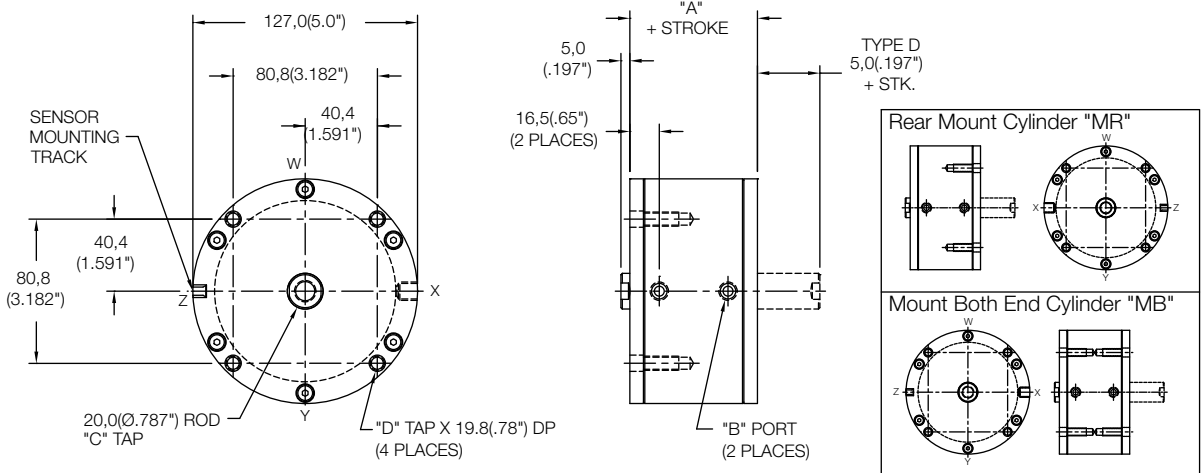
	Standard Threads	"EM" Option
"B"	G1/8 PORT	1/8-27
"C"	M12X1,75	1/2-13



### Magnetic Front Mount Cylinder "MF"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	...D	10mm - 100mm	51,5(2.03")	PUSH 81,07 cm <sup>2</sup> (12.57 in <sup>2</sup> )
LE	-	5mm - 100mm	61,5(2.42")	
LH	...D	5mm - 100mm	71,5(2.82")	PULL 77,93 cm <sup>2</sup> (12.09 in <sup>2</sup> )

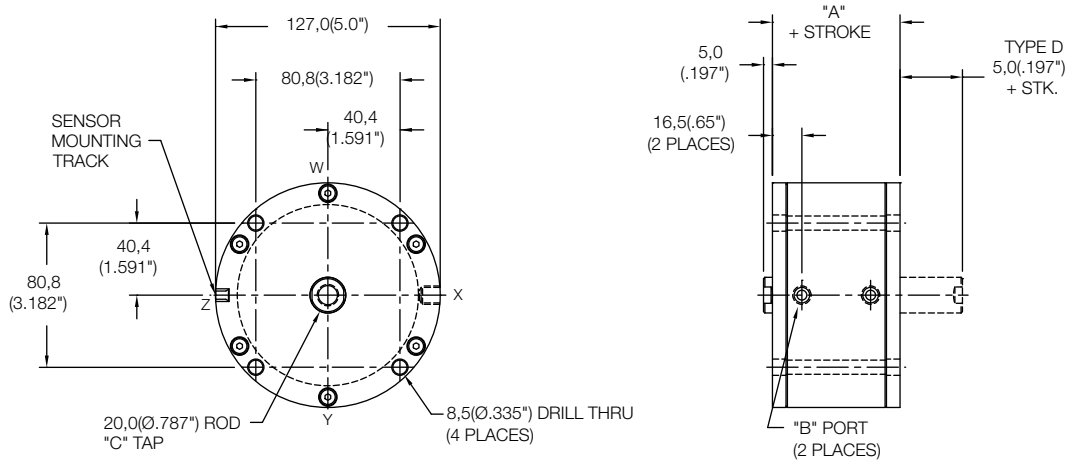
	Standard Threads	"EM" Option
"B"	G1/8 PORT	1/8-27
"C"	M12X1,75	1/2-13
"D"	M8X1,25	5/16-18



### Magnetic Thru Mount Cylinder "MT"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	...D	10mm - 40mm	51,5(2.03")	PUSH 81,07 cm <sup>2</sup> (12.57 in <sup>2</sup> )
LE	-	5mm - 30mm	61,5(2.42")	
LH	...D	5mm - 20mm	71,5(2.82")	PULL 77,93 cm <sup>2</sup> (12.09 in <sup>2</sup> )

	Standard Threads	"EM" Option
"B"	G1/8 PORT	1/8-27
"C"	M12X1,75	1/2-13

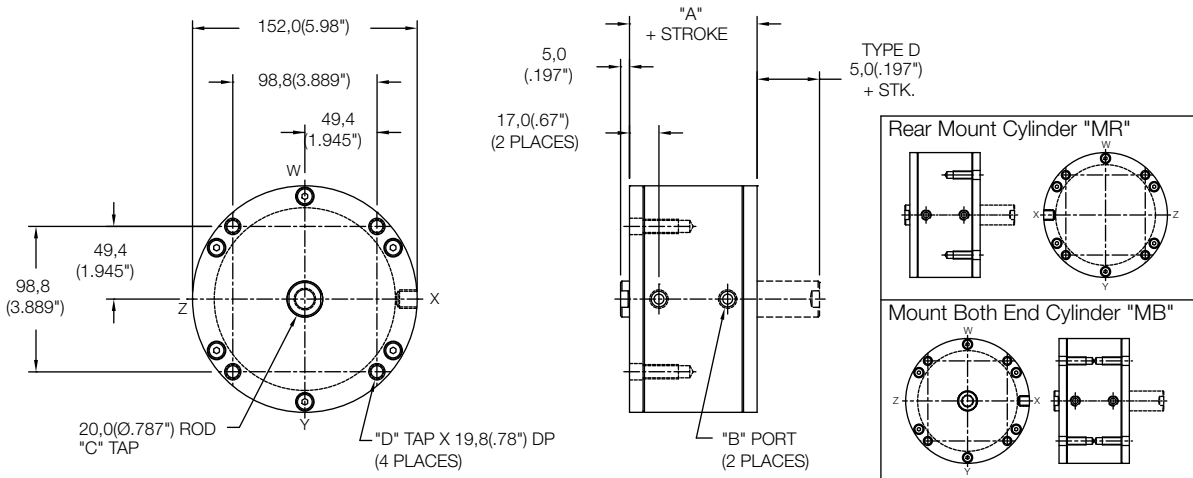


<table border="0"> <tr> <td><input type="checkbox"/></td> <td>-</td> <td><input type="checkbox"/></td> <td>X</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td>-</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>MODEL</td> <td></td> <td>BORE</td> <td></td> <td>STROKE</td> <td></td> <td>TYPE</td> <td></td> <td>MOUNTING</td> <td></td> <td>MAGNETIC</td> <td></td> <td>OPTIONS</td> </tr> </table> <p>LS LE LH</p> <p>5mm - 100mm STROKE (SEE STROKE RANGE)</p> <p>BLANK - NO CODE, DOUBLE ACTING, SINGLE ROD</p> <p>D - DOUBLE ACTING, DOUBLE ROD</p> <p>MT - THRU MOUNT MF - FRONT MOUNT MR - REAR MOUNT MB - BOTH END MOUNTS FF - FRONT FLANGE FR - REAR FLANGE (FOR FLANGES SEE PAGE 58)</p>	<input type="checkbox"/>	-	<input type="checkbox"/>	X	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	MODEL		BORE		STROKE		TYPE		MOUNTING		MAGNETIC		OPTIONS	<p>SENSORS SOLD SEPARATELY SKS, SKP, SCS, SCP - SOLID STATE LIMIT SENSORS (SEE PAGE 54)</p> <p>EM - INCH THREADS &amp; PORT OPTIONS</p> <p>HS - HIGH TEMPERATURE SEALS OPTION: AVAILABLE ON LE AND LH MODELS ONLY (SEE PAGE 62)</p> <p>PE - PORT ENLARGEMENT (AVAILABLE W/ "EM" OPTION ONLY = 1/4-18 NPT PORTS)</p> <p>RE - ROD EYE (SEE PAGE 61)</p> <p>RS - MALE STUD FOR ROD END (SEE PAGE 61)</p> <p>RF, RH, RN, RT, RV, RY - ROD EXTENSIONS (SEE PAGE 61)</p>
<input type="checkbox"/>	-	<input type="checkbox"/>	X	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>															
MODEL		BORE		STROKE		TYPE		MOUNTING		MAGNETIC		OPTIONS													

### Non Magnetic Front Mount Cylinder "MF"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	...D	10mm - 100mm	44,5(1.75")	PUSH 126,7 cm <sup>2</sup> (19.6 in <sup>2</sup> )
LE	-	5mm - 100mm	54,5(2.15")	
LH	...D	5mm - 100mm	64,5(2.54")	PULL 123,5 cm <sup>2</sup> (19.1 in <sup>2</sup> )

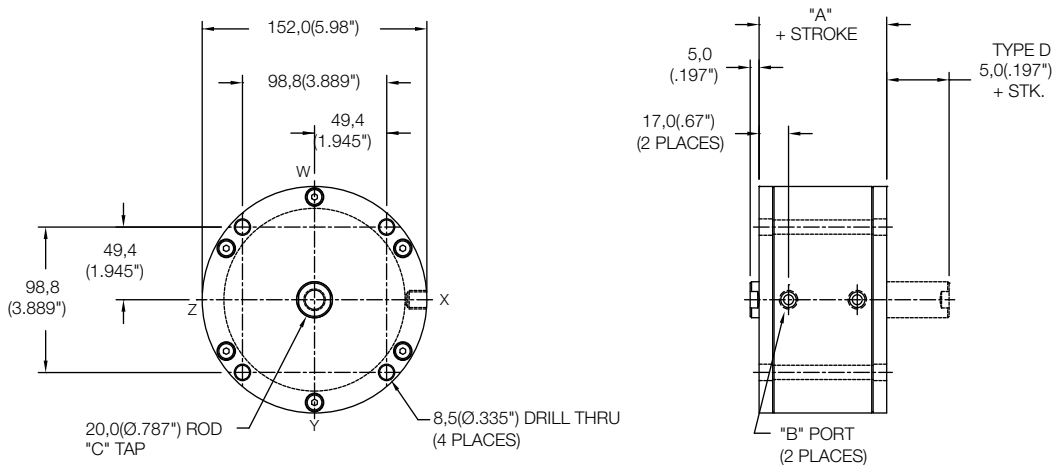
	Standard Threads	"EM" Option
"B"	G1/8 PORT	1/8-27
"C"	M12X1,75	1/2-13
"D"	M8X1,25	5/16-18



### Non Magnetic Thru Mount Cylinder "MT"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	...D	10mm - 45mm	44,5(1.75")	PUSH 126,7 cm <sup>2</sup> (19.6 in <sup>2</sup> )
LE	-	5mm - 35mm	54,5(2.15")	
LH	...D	5mm - 25mm	64,5(2.54")	PULL 123,5 cm <sup>2</sup> (19.1 in <sup>2</sup> )

	Standard Threads	"EM" Option
"B"	G1/8 PORT	1/8-27
"C"	M12X1,75	1/2-13

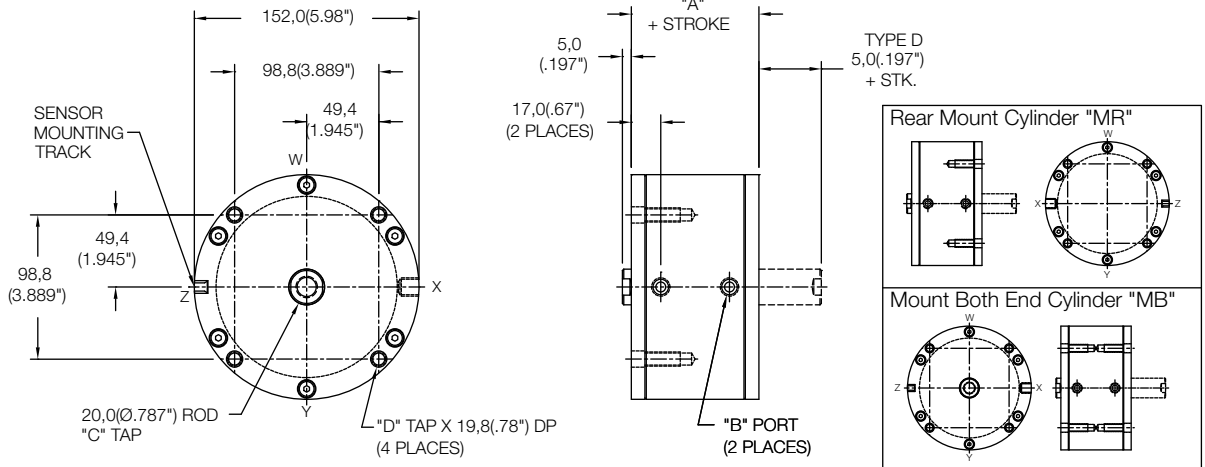


MODEL	-	127	X	STROKE	TYPE	MOUNTING	-	OPTIONS
LS LE LH				5mm - 100mm STROKE (SEE STROKE RANGE)	BLANK - NO CODE, DOUBLE ACTING, SINGLE ROD D - DOUBLE ACTING, DOUBLE ROD	MT - THRU MOUNT MF - FRONT MOUNT MR - REAR MOUNT MB - BOTH END MOUNTS FF - FRONT FLANGE FR - REAR FLANGE (FOR FLANGES SEE PAGE 58)		EM - INCH THREADS & PORT OPTIONS HS - HIGH TEMPERATURE SEALS OPTION: AVAILABLE ON LE AND LH MODELS ONLY (SEE PAGE 62) PE - PORT ENLARGEMENT (AVAILABLE W/ "EM" OPTION ONLY = 1/4-18 NPT PORTS) RE - ROD EYE (SEE PAGE 61) RS - MALE STUD FOR ROD END (SEE PAGE 61) RF, RH, RN, RT, RV, RY - ROD EXTENSIONS (SEE PAGE 61)

### Magnetic Front Mount Cylinder "MF"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	_,D	10mm - 100mm	54,5(2.15")	PUSH 126,7 cm <sup>2</sup> (19.6 in <sup>2</sup> )
LE	-	5mm - 100mm	64,5(2.54")	
LH	_,D	5mm - 100mm	74,5(2.93")	PULL 123,5 cm <sup>2</sup> (19.1 in <sup>2</sup> )

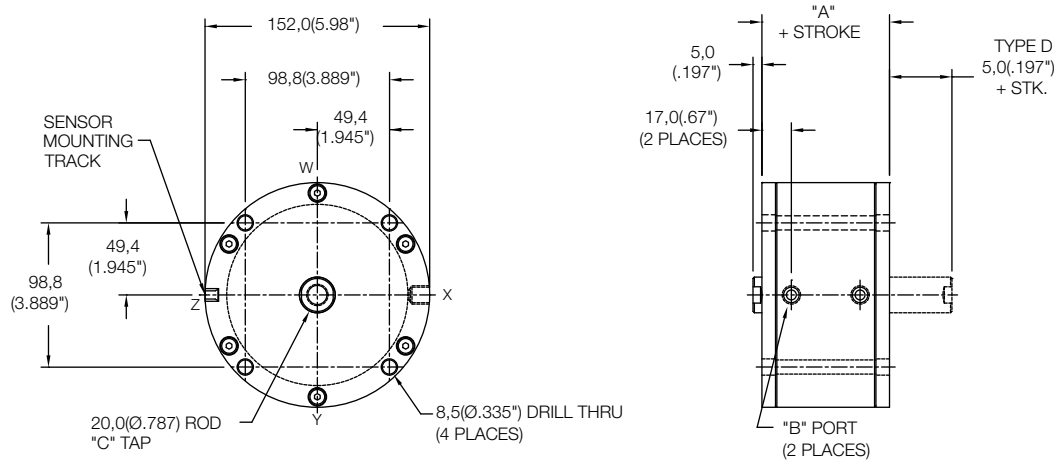
	Standard Threads	"EM" Option
"B"	G1/8 PORT	1/8-27
"C"	M12X1,75	1/2-13
"D"	M8X1,25	5/16-18



### Magnetic Thru Mount Cylinder "MT"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	_,D	10mm - 35mm	54,5(2.15")	PUSH 126,7 cm <sup>2</sup> (19.6 in <sup>2</sup> )
LE	-	5mm - 25mm	64,5(2.54")	
LH	_,D	5mm - 15mm	74,5(2.93")	PULL 123,5 cm <sup>2</sup> (19.1 in <sup>2</sup> )

	Standard Threads	"EM" Option
"B"	G1/8 PORT	1/8-27
"C"	M12X1,75	1/2-13



  - 127 X         M -      

MODEL    BORE    STROKE    TYPE    MOUNTING    MAGNETIC    OPTIONS

LS  
LE  
LH

5mm - 100mm STROKE  
(SEE STROKE RANGE)

BLANK - NO CODE, DOUBLE  
ACTING, SINGLE ROD

D - DOUBLE ACTING, DOUBLE ROD

MT - THRU MOUNT  
MF - FRONT MOUNT  
MR - REAR MOUNT  
MB - BOTH END MOUNTS  
FF - FRONT FLANGE  
FR - REAR FLANGE  
(FOR FLANGES SEE PAGE 58)

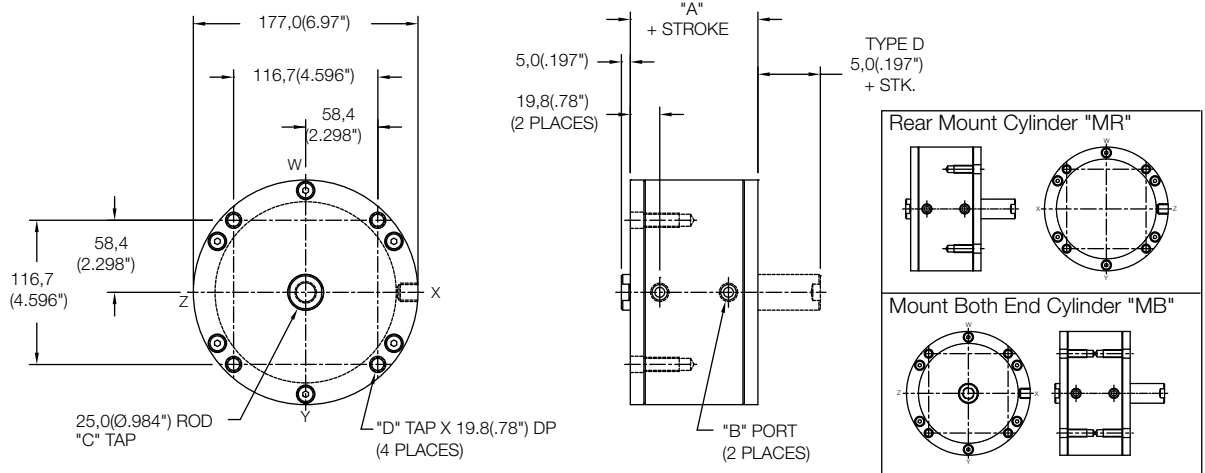
SENSORS SOLD SEPERATELY  
SKS, SKP, SCS, SCP - SOLID STATE  
LIMIT SENSORS (SEE PAGE 54)

- EM - INCH THREADS & PORT OPTIONS
- HS - HIGH TEMPERATURE SEALS OPTION:  
AVAILABLE ON LE AND LH MODELS ONLY  
(SEE PAGE 62)
- PE - PORT ENLARGEMENT (AVAILABLE W/  
"EM" OPTION ONLY = 1/4-18 NPT PORTS)
- RE - ROD EYE  
(SEE PAGE 61)
- RS - MALE STUD FOR ROD END  
(SEE PAGE 61)
- RF, RH, RN, RT, RV, RY - ROD EXTENSIONS  
(SEE PAGE 61)

### Non Magnetic Front Mount Cylinder "MF"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	_D	10mm - 100mm	51,0(2.00")	PUSH 181,46 cm <sup>2</sup> (28.2 in <sup>2</sup> ) PULL 176,55 cm <sup>2</sup> (27.45 in <sup>2</sup> )

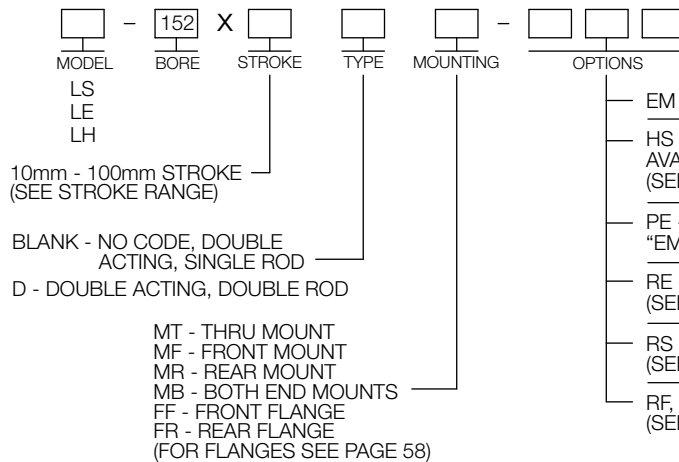
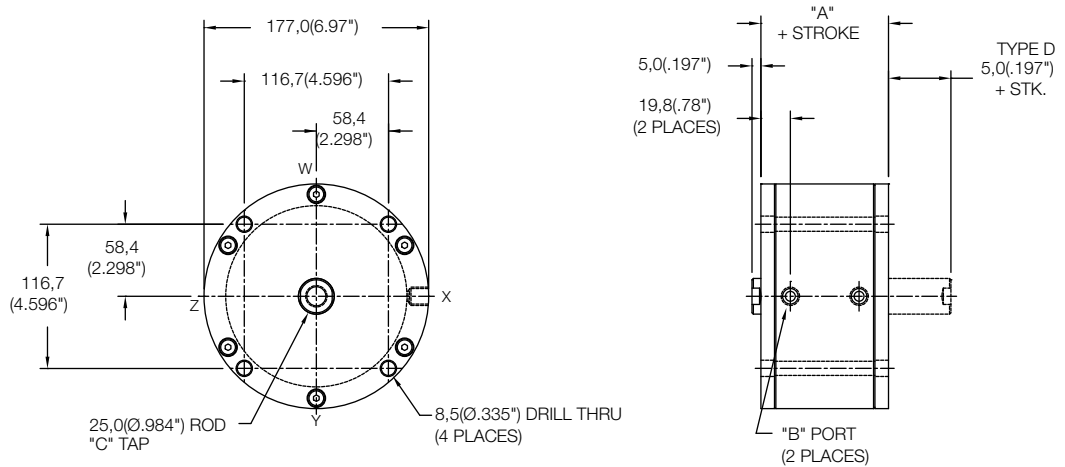
	Standard Threads	"EM" Option
"B"	G1/8 PORT	1/8-27
"C"	M16X2,0	5/8-18
"D"	M8X1,25	5/16-18



### Non Magnetic Thru Mount Cylinder "MT"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	_D	10mm - 40mm	51,0(2.00")	PUSH 181,46 cm <sup>2</sup> (28.2 in <sup>2</sup> ) PULL 176,55 cm <sup>2</sup> (27.45 in <sup>2</sup> )

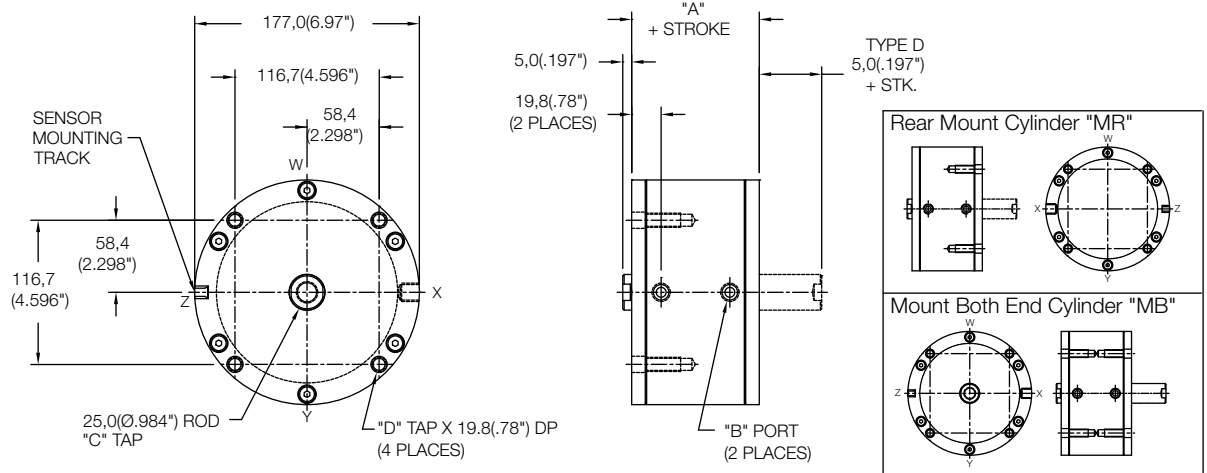
	Standard Threads	"EM" Option
"B"	G1/8 PORT	1/8-27
"C"	M16X2,0	5/8-18



### Magnetic Front Mount Cylinder "MF"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	_,D	10mm - 100mm	61,0(2.40")	PUSH 181,46 cm <sup>2</sup> (28.2 in <sup>2</sup> ) PULL 176,55 cm <sup>2</sup> (27.45 in <sup>2</sup> )

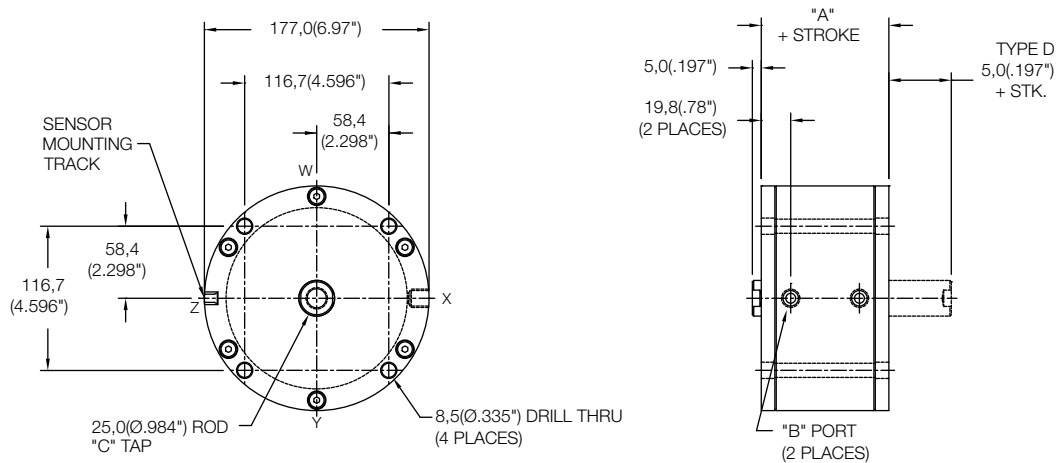
	Standard Threads	"EM" Option
"B"	G1/8 PORT	1/8-27
"C"	M16X2,0	5/8-18
"D"	M8X1,25	5/16-18



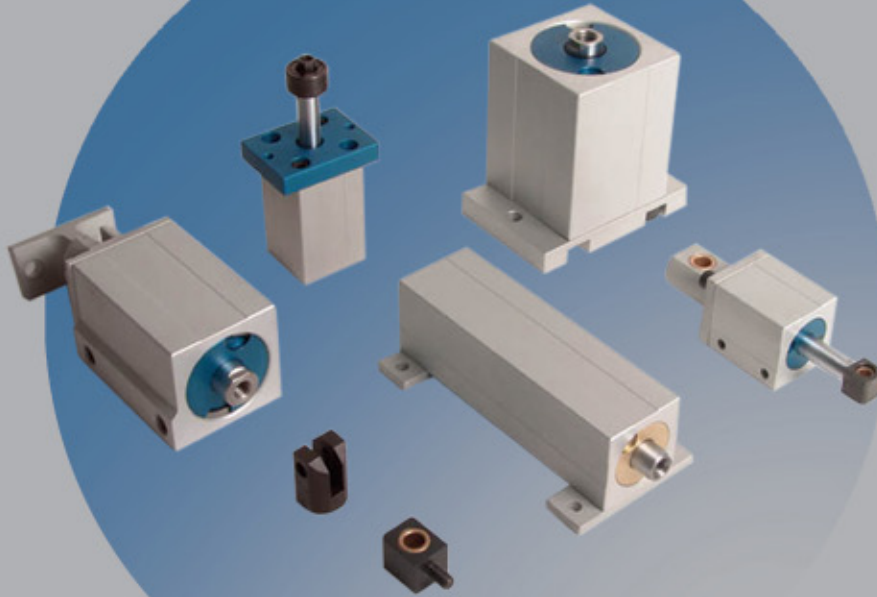
### Magnetic Thru Mount Cylinder "MT"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
LS	_,D	10mm - 30mm	61,0(2.40")	PUSH 181,46 cm <sup>2</sup> (28.2 in <sup>2</sup> ) PULL 176,55 cm <sup>2</sup> (27.45 in <sup>2</sup> )

	Standard Threads	"EM" Option
"B"	G1/8 PORT	1/8-27
"C"	M16X2,0	5/8-18



<table border="0"> <tr> <td>MODEL</td> <td>-</td> <td>152</td> <td>X</td> <td>STROKE</td> <td></td> <td>TYPE</td> <td></td> <td>MOUNTING</td> <td></td> <td>MAGNETIC</td> <td>-</td> <td>OPTIONS</td> </tr> <tr> <td>LS LE LH</td> <td></td> <td></td> <td></td> <td>10mm - 100mm STROKE (SEE STROKE RANGE)</td> <td></td> <td>BLANK - NO CODE, DOUBLE ACTING, SINGLE ROD D - DOUBLE ACTING, DOUBLE ROD</td> <td></td> <td>MT - THRU MOUNT MF - FRONT MOUNT MR - REAR MOUNT MB - BOTH END MOUNTS FF - FRONT FLANGE FR - REAR FLANGE (FOR FLANGES SEE PAGE 58)</td> <td></td> <td>M</td> <td></td> <td> <div style="border: 1px solid black; padding: 2px; width: fit-content;">                     SENSORS SOLD SEPERATELY                      SKS, SKP, SCS, SCP - SOLID STATE                      LIMIT SENSORS (SEE PAGE 54)                 </div> <ul style="list-style-type: none"> <li>EM - INCH THREADS &amp; PORT OPTIONS</li> <li>HS - HIGH TEMPERATURE SEALS OPTION: AVAILABLE ON LE AND LH MODELS ONLY (SEE PAGE 62)</li> <li>PE - PORT ENLARGEMENT (AVAILABLE W/ "EM" OPTION ONLY = 1/4-18 NPT PORTS)</li> <li>RE - ROD EYE (SEE PAGE 61)</li> <li>RS - MALE STUD FOR ROD END (SEE PAGE 61)</li> <li>RF, RH, RN, RT, RV, RY - ROD EXTENSIONS (SEE PAGE 61)</li> </ul> </td> </tr> </table>	MODEL	-	152	X	STROKE		TYPE		MOUNTING		MAGNETIC	-	OPTIONS	LS LE LH				10mm - 100mm STROKE (SEE STROKE RANGE)		BLANK - NO CODE, DOUBLE ACTING, SINGLE ROD D - DOUBLE ACTING, DOUBLE ROD		MT - THRU MOUNT MF - FRONT MOUNT MR - REAR MOUNT MB - BOTH END MOUNTS FF - FRONT FLANGE FR - REAR FLANGE (FOR FLANGES SEE PAGE 58)		M		<div style="border: 1px solid black; padding: 2px; width: fit-content;">                     SENSORS SOLD SEPERATELY                      SKS, SKP, SCS, SCP - SOLID STATE                      LIMIT SENSORS (SEE PAGE 54)                 </div> <ul style="list-style-type: none"> <li>EM - INCH THREADS &amp; PORT OPTIONS</li> <li>HS - HIGH TEMPERATURE SEALS OPTION: AVAILABLE ON LE AND LH MODELS ONLY (SEE PAGE 62)</li> <li>PE - PORT ENLARGEMENT (AVAILABLE W/ "EM" OPTION ONLY = 1/4-18 NPT PORTS)</li> <li>RE - ROD EYE (SEE PAGE 61)</li> <li>RS - MALE STUD FOR ROD END (SEE PAGE 61)</li> <li>RF, RH, RN, RT, RV, RY - ROD EXTENSIONS (SEE PAGE 61)</li> </ul>
MODEL	-	152	X	STROKE		TYPE		MOUNTING		MAGNETIC	-	OPTIONS														
LS LE LH				10mm - 100mm STROKE (SEE STROKE RANGE)		BLANK - NO CODE, DOUBLE ACTING, SINGLE ROD D - DOUBLE ACTING, DOUBLE ROD		MT - THRU MOUNT MF - FRONT MOUNT MR - REAR MOUNT MB - BOTH END MOUNTS FF - FRONT FLANGE FR - REAR FLANGE (FOR FLANGES SEE PAGE 58)		M		<div style="border: 1px solid black; padding: 2px; width: fit-content;">                     SENSORS SOLD SEPERATELY                      SKS, SKP, SCS, SCP - SOLID STATE                      LIMIT SENSORS (SEE PAGE 54)                 </div> <ul style="list-style-type: none"> <li>EM - INCH THREADS &amp; PORT OPTIONS</li> <li>HS - HIGH TEMPERATURE SEALS OPTION: AVAILABLE ON LE AND LH MODELS ONLY (SEE PAGE 62)</li> <li>PE - PORT ENLARGEMENT (AVAILABLE W/ "EM" OPTION ONLY = 1/4-18 NPT PORTS)</li> <li>RE - ROD EYE (SEE PAGE 61)</li> <li>RS - MALE STUD FOR ROD END (SEE PAGE 61)</li> <li>RF, RH, RN, RT, RV, RY - ROD EXTENSIONS (SEE PAGE 61)</li> </ul>														



## CYLINDER ACCESSORIES

12mm - 152mm Bore

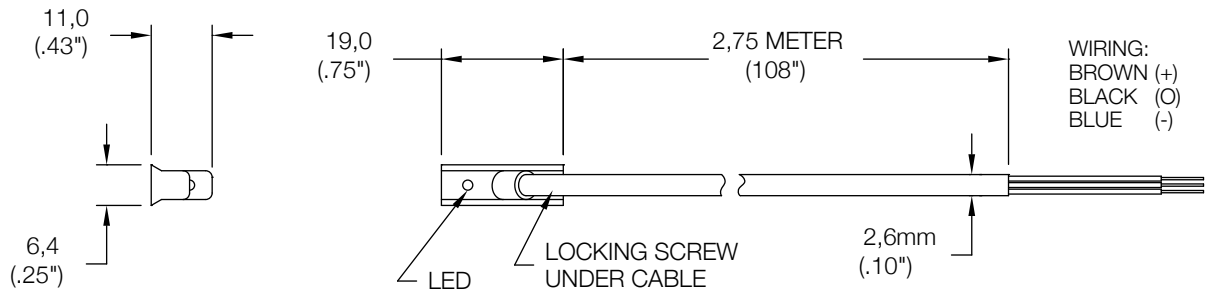


## Solid State Limit Sensors

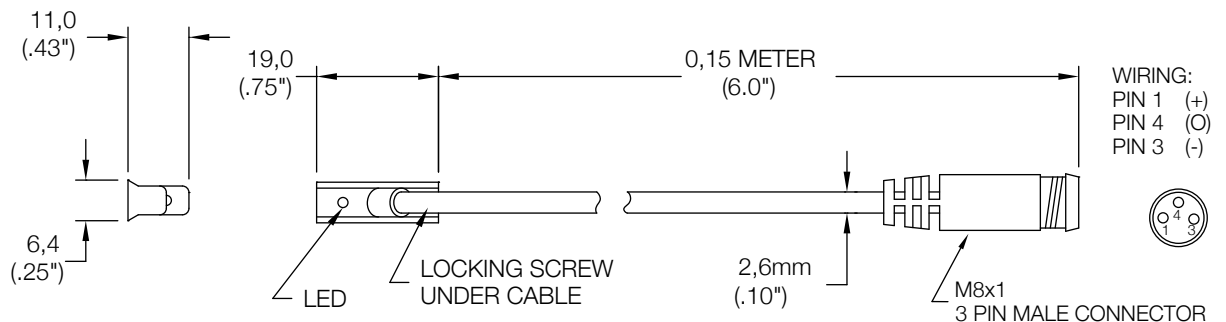
Nason limit sensors are magnetically activated digital output devices. They are on/off devices used to sense piston location on Nason "L" series cylinders. A magnet is added to the piston of the cylinder and a 60° dovetail is machined into the cylinder body to allow the sensors to be added. Magneto-resistive technology (similar to Hall Effect) is used to produce the sensors. This results in greater sensitivity and reduced dead-band compared to Hall devices.

Specifications		
Part Number	SKS, SKP	SCS, SCP
Switch Logic	Solid State Output, Normally Open	Solid State Output, Normally Open
Sensor Type	NPN, Current Sinking	PNP, Current Sourcing
Operating Voltage	5-28 VDC	
Switching Current	200mA max.	
Voltage Drop	1.0 V max	
Switching Power	4.8 Watts max.	
LED Indicator: Switch Active	Red	
Operating Temperature	-20 C to 80 C (-4 F to 176 F)	
Switching Speed	4 uS operate, 4 uS release	
Enclosure Classification	IP67, NEMA 6	
Cable	2.6 dia, 3C, 26 AWG, Black PVC	
Housing	Glass-filled Polypropylene	
Shock	50 G max	
Vibration	9 G max	

## Flying Lead Sensors - Part #: SKS, SCS



## Quick Disconnect Sensors - Part #: SKP, SCP



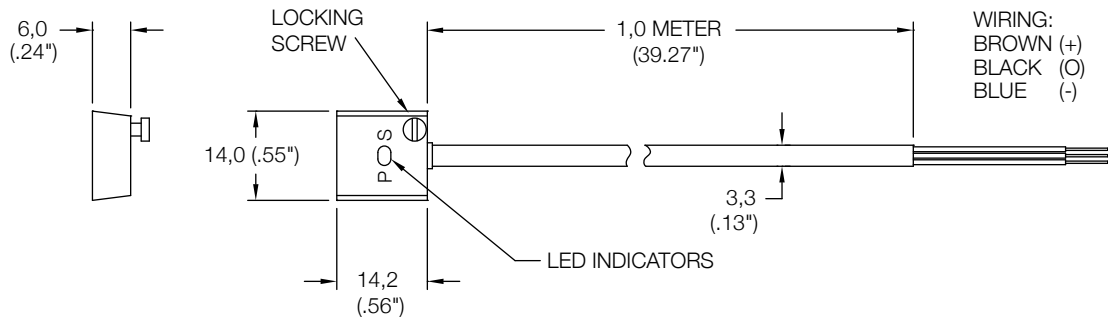
Mates with Part Number "SR" sensor receptacle. See page 9.

## Low Profile Solid State Limit Sensors

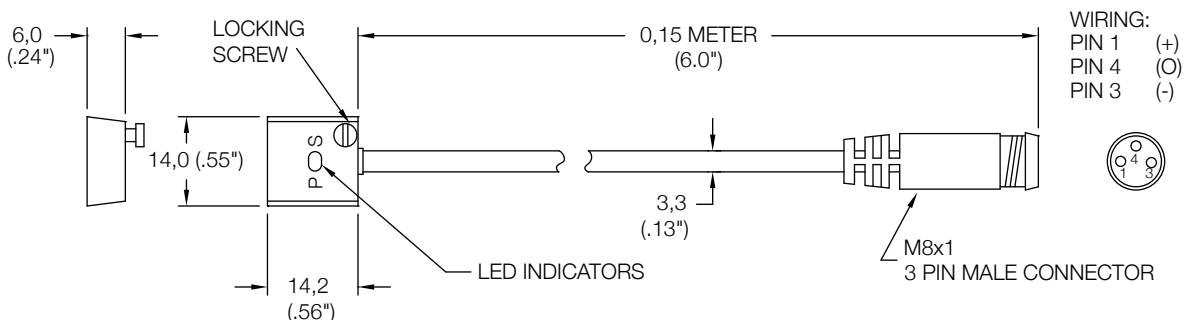
Nason limit sensors are magnetically activated digital output devices. They are on/off devices used to sense piston location on Nason "C" series cylinders. A magnet is added to the piston of the cylinder and a dovetail is machined into the cylinder body to allow the sensors to be added. Magneto-resistive technology (similar to Hall Effect) is used to produce the sensors. This results in greater sensitivity and reduced dead-band compared to Hall devices.

Specifications		
Part Number	NPL, NPP	PNL, PNP
Switch Logic	Solid State Output, Normally Open	Solid State Output, Normally Open
Sensor Type	NPN, Current Sinking	PNP, Current Sourcing
Operating Voltage	5-28 VDC	
Current Consumption:	On	16mA @ 24 VDC
	Off	7mA @ 24 VDC
Switching Current	100mA @ 24 VDC, 30mA @ 5 VDC	
Voltage Drop	1.5 V max @ 100mA	
Response Frequency	1 KHz max	
LED Indicators:	Power On	Green
	Switch Active	Red
Operating Temperature	-10 C to 70 C (14 F to 158 F)	
Circuit Protection	Reverse Polarity, Surge Suppression	
Enclosure Classification	IEC 529 IP67, NEMA 6P	
Cable	3.3 dia, 3C, 24 AWG, Black PVC	
Housing	Zinc Diecast - Black	Zinc Diecast - Silver
Shock	50 G max	
Vibration	9 G max	

### Flying Lead Sensors - Part #: NPL, PNL



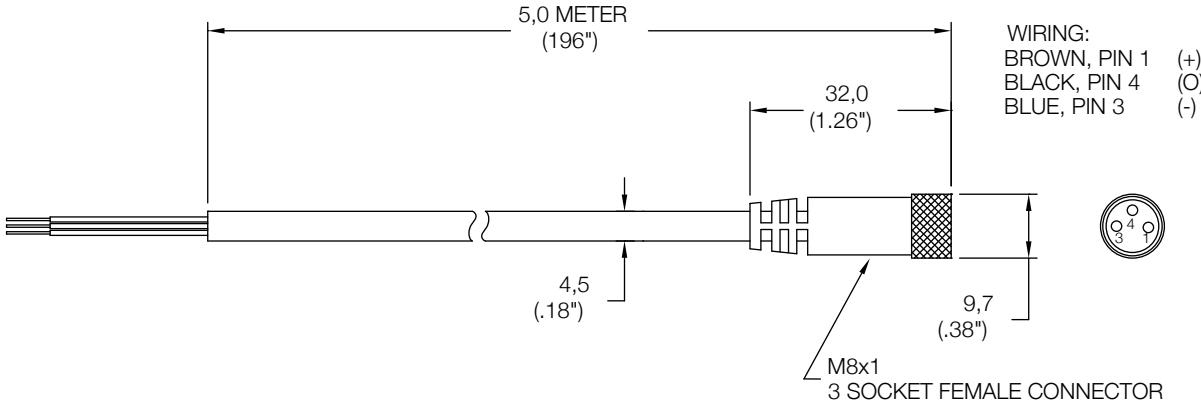
### Quick Disconnect Sensors - Part #: NPP, PNP



# Sensor Receptacle

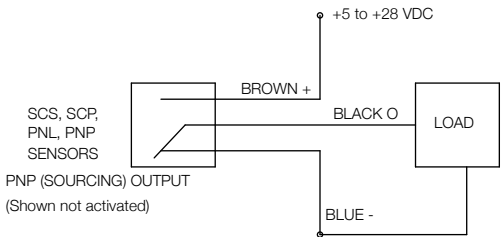
8mm female molded locking connector  
 Mates with SCP, SKP, NPP, PNP Sensors

Part #: SR

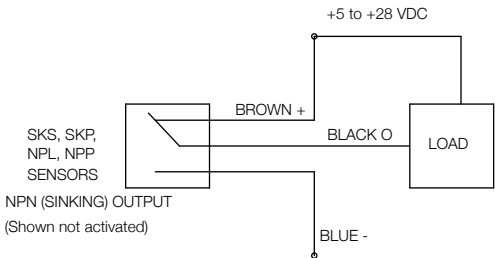


## Sensor Schematics

PNP (Sourcing) output sensors complete a circuit by connecting the load to the supply current. These sensors are typically used on controllers with a single power supply. All sensors will utilize the same supply voltage.



NPN (Sinking) output sensors complete a circuit by connecting the load to ground. These sensors are typically used on controllers with multiple power supplies. All sensors can utilize different supply voltages. The ground is their common factor.

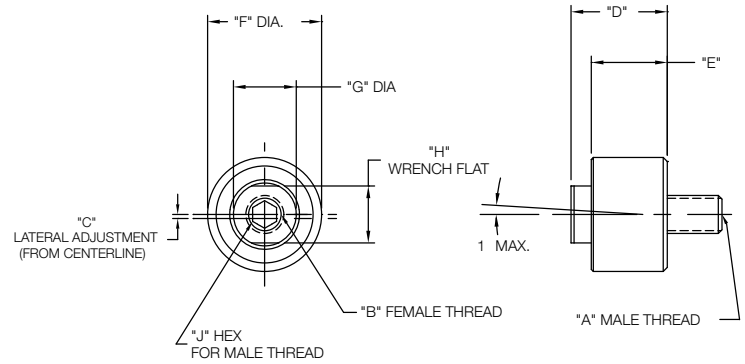


## Important Notes

- All Nason sensors are magnetically activated devices. Cylinders should be ordered with option "M" for a magnetic piston.
- Presence of electromagnetic fields, external magnets, welding fields, etc. may effect operation of Nason sensors.
- Temperature ratings for sensors should be observed and will override seal option temperature ratings of the cylinder.

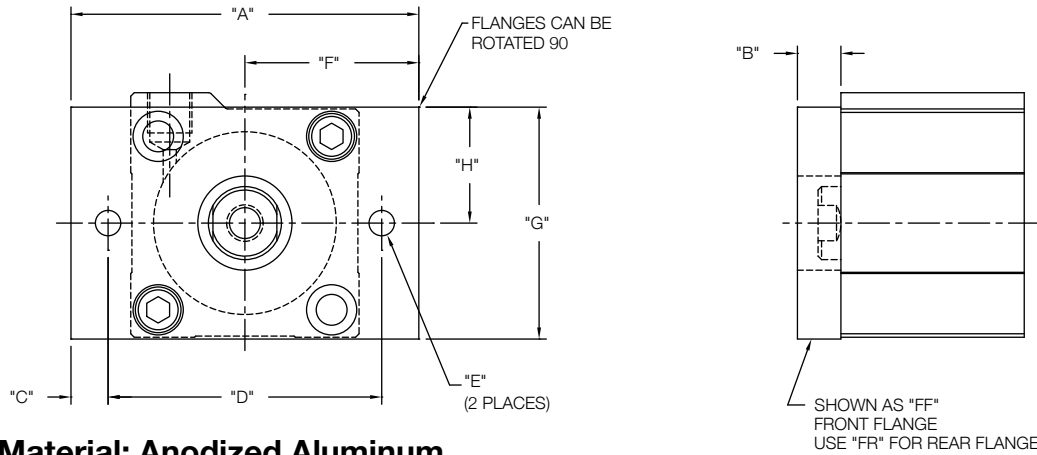
## Features

- Hardened Steel Components with Black Oxide Finish
- 0,15mm (.006") Max. Axial Play
- Temperature rating -10 C to 204 C (0 F to 400 F)



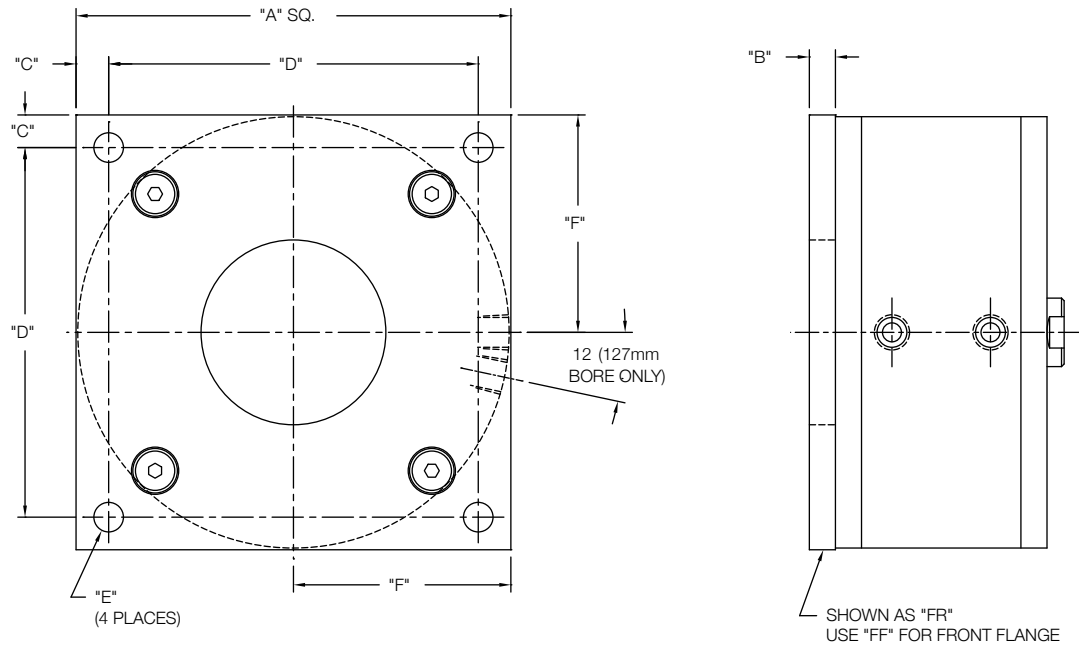
Bore Part Number	A Male Thread	B Female Thread	C	D	E	F	G	H	J	Load Rating
										Max Pull 5 X S.F.
AC-M4	M4x0,7 X 6,3mm	M4x0,7 X 5,5mm	0,5 (.02")	10,3 (.40")	8,7 (.34")	14,0 (.55")	6,0 (.24")	5,0 (.20")	2,5	.67 kN (150 lbs.)
AC-M4-C8	M4x0,7 X 6,3mm	#8-32 X .22"								
AC-C8	#8-32 X .31"	#8-32 X .22"								
AC-C8-M4	#8-32 X .31"	M4x0,7 X 5,5mm	0,8 (.03")	14,3 (.56")	10,3 (.41")	19,0 (.75")	8,0 (.31")	7,0 (.28")	5/64	
AC-M5	M5x0,8 X 8,4mm	M5x0,8 X 8,0mm								
AC-M5-F10	M5x0,8 X 8,4mm	#10-32 X .31"								
AC-M5-C10	M5x0,8 X 8,4mm	#10-24 X .31"								
AC-F10	#10-32 X .31"	#10-32 X .31"								
AC-F10-M5	#10-32 X .31"	M5x0,8 X 8,0mm								
AC-F10-C10	#10-32 X .31"	#10-24 X .31"	0,8 (.03")	19,3 (.76")	14,3 (.56")	28,5 (1.13")	12,7 (.50")	11,0 (.43")	3	1.11 kN (250 lbs.)
AC-C10	#10-24 X .31"	#10-24 X .31"								
AC-C10-M5	#10-24 X .31"	M5x0,8 X 8,0mm								
AC-C10-F10	#10-24 X .31"	#10-32 X .31"								
AC-M6	M6x1,0 X 9,5mm	M6x1,0 X 11,0mm								
AC-M6-C14	M6x1,0 X 9,5mm	1/4-20 X .44"								
AC-M6-F14	M6x1,0 X 9,5mm	1/4-28 X .44"	0,8 (.03")	19,3 (.76")	14,3 (.56")	28,5 (1.13")	12,7 (.50")	11,0 (.43")	4	3.55 kN (800 lbs.)
AC-C14	1/4-20 X .41"	1/4-20 X .44"								
AC-C14-M6	1/4-20 X .41"	M6x1,0 X 11,0mm								
AC-C14-F14	1/4-20 X .41"	1/4-28 X .44"								
AC-F14	1/4-28 X .41"	1/4-28 X .44"								
AC-F14-M6	1/4-28 X .41"	M6x1,0 X 11,0mm								
AC-F14-C14	1/4-28 X .41"	1/4-20 X .44"	0,8 (.03")	21,0 (.83")	16,0 (.63")	28,5 (1.13")	12,7 (.50")	11,0 (.43")	1/8	4.66 kN (1050 lbs.)
AC-M8	M8x1,25 X 13,7mm	M8x1,25 X 12,0mm								
AC-M8-C516	M8x1,25 X 13,7mm	5/16-18 X .50"								
AC-M8-F516	M8x1,25 X 13,7mm	5/16-24 X .50"								
AC-C516	5/16-18 X .54"	5/16-18 X .50"								
AC-C516-M8	5/16-18 X .54"	M8x1,25 X 12,0mm								
AC-C516-F516	5/16-18 X .54"	5/16-24 X .50"	0,8 (.03")	24,0 (.95")	19,0 (.75")	28,5 (1.13")	16,0 (.63")	14,0 (.55")	5	7.11 kN (1600 lbs.)
AC-F516	5/16-24 X .54"	5/16-24 X .50"								
AC-F516-M8	5/16-24 X .54"	M8x1,25 X 12,0mm								
AC-F516-C516	5/16-24 X .54"	5/16-18 X .50"								
AC-M10	M10x1,5 X 13,7mm	M10x1,5 X 14,0mm								
AC-M10-F38	M10x1,5 X 13,7mm	3/8-24 X .56"								
AC-M10-C38	M10x1,5 X 13,7mm	3/8-16 X .56"	0,8 (.03")	24,0 (.95")	19,0 (.75")	28,5 (1.13")	16,0 (.63")	14,0 (.55")	6	15.55 kN (3500 lbs.)
AC-F38	3/8-24 X .54"	3/8-24 X .56"								
AC-F38-M10	3/8-24 X .54"	M10x1,5 X 14,0mm								
AC-F38-C38	3/8-24 X .54"	3/8-16 X .56"								
AC-C38	3/8-16 X .54"	3/8-16 X .56"								
AC-C38-M10	3/8-16 X .54"	M10x1,5 X 14,0mm								
AC-C38-F38	3/8-16 X .54"	3/8-24 X .56"	1,5 (.06")	33,5 (1.33")	28,5 (1.13")	38,0 (1.50)	19,0 (.75")	17,0 (.67")	3/16	
AC-M12	M12x1,75 X 21,8mm	M12x1,75 X 22,0mm								
AC-M12-C12	M12x1,75 X 21,8mm	1/2-13 X .88"								
AC-M12-F12	M12x1,75 X 21,8mm	1/2-20 X .88"								
AC-C12	1/2-13 X .88"	1/2-13 X .88"								
AC-C12-M12	1/2-13 X .88"	M12x1,75 X 22,0mm								
AC-C12-F12	1/2-13 X .88"	1/2-20 X .88"	1,5 (.06")	33,5 (1.33")	28,5 (1.13")	38,0 (1.50)	19,0 (.75")	17,0 (.67")	8	15.55 kN (3500 lbs.)
AC-F12	1/2-20 X .88"	1/2-20 X .88"								
AC-F12-M12	1/2-20 X .88"	M12x1,75 X 22,0mm								
AC-F12-C12	1/2-20 X .88"	1/2-13 X .88"								

**Face Flange Mounting - "FF" & "FR"**  
**12mm Thru 76mm Bores**



**Material: Anodized Aluminum**

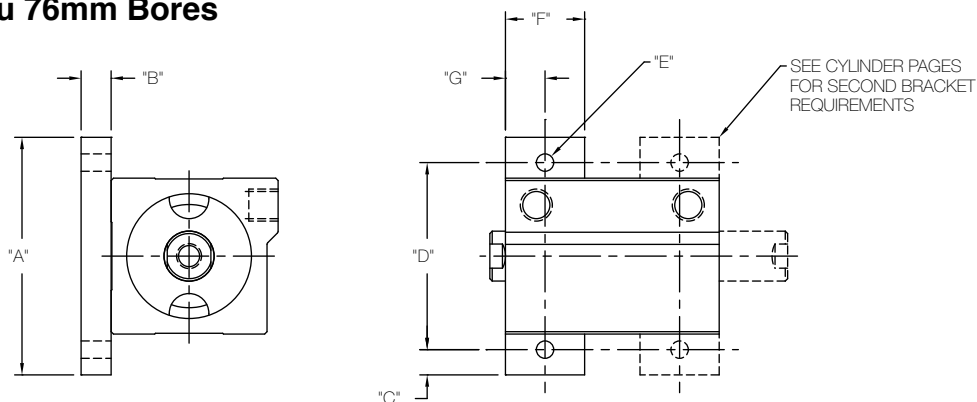
**Face Flange Mounting - "FF" & "FR"**  
**101mm Thru 152mm Bores**



**Material:**  
**101mm Bore - Anodized Aluminum**  
**127mm & 152mm Bore - Zinc Plated Steel**

BORE	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"
12	50,8 (2.0")	6,4 (.25")	5,4 (.21")	40,0 (1.58")	4,5 (.18")	25,4 (1.0")	22,2 (0.88")	11,1 (.44")
20		9,5 (.38")	3,9 (.15")	43,0 (1.69")			31,8 (1.25")	15,9 (.63")
25		6,4 (.25")	6,4 (.25")	50,8 (2.00")			38,1 (1.50")	19,05 (.75")
28,5	63,5 (2.5")	9,5 (.38")	5,75 (.23")	52,0 (2.05")	5,5 (.22")	31,8 (1.25")	44,5 (1.75")	22,25 (.88")
32			8,1 (.32")	60,0 (2.36")			38,1 (1.50")	50,8 (2.00")
40	76,2 (3.0")	12,7 (.50")	7,5 (.30")	78,0 (3.07")	8,5 (.33")	46,5 (1.83")	63,5 (2.50")	31,8 (1.25")
50	93,0 (3.66")		9,0 (.35")	102,0 (4.02")	10,5 (.41")	59,9 (2.36")	76,2 (3.00")	38,1 (1.50")
63	120,0 (4.72")		115,1 (4.53")	66,5 (2.62")	88,9 (3.50")	44,45 (1.75")		
76	133,1 (5.24")	19,05 (.75")	9,5 (.38")	108,0 (4.25")	8,64 (.34")	63,5 (2.50")	N/A	N/A
101	127,0 (5.0")		12,7 (.50")	152,4 (6.00")	10,5 (.41")	88,9 (3.50")		
127	177,8 (7.0")	9,5 (.38")	12,7 (.50")	152,4 (6.00")	10,5 (.41")	88,9 (3.50")	N/A	N/A
152								

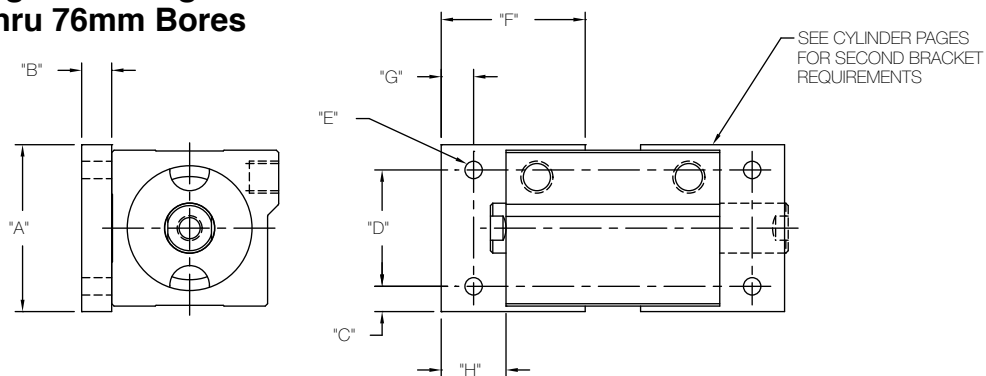
## Side Flange Mounting - "FS" 12mm Thru 76mm Bores



### Material: Anodized Aluminum

Bore	"A"	"B"	"C"	"D"	"E"	"F"	"G"
12	44,5 (1.75")	6,35 (.25")	4,8 (.19")	35 (1.38")	4,5 (.18")	16 (.63")	7,9 (.31")
20	50,8 (2.0")	9,5 (.38")	5,4 (.21")	40 (1.58")		19 (.75")	9,5 (.38")
25			3,9 (.15")	43 (1.69")			
28,5	63,5 (2.5")	4,8 (.19")	6,35 (.25")	50,8 (2.0")	5,5 (.22")	25,4 (1.00")	12,7 (.50")
32			5,75 (.23")	52 (2.05")			
40	76,2 (3")	9,5 (.38")	8,1 (.32")	60 (2.36")	5,5 (.22")	25,4 (1.00")	12,7 (.50")
50	93 (3.66")		12,7 (.50")	7,5 (.30")			
63	120 (4.72")	19 (.75")	9,0 (.35")	102 (4.02")	10,5 (.41")	25,4 (1.00")	12,7 (.50")
76	133 (5.24")			115 (4.53")			

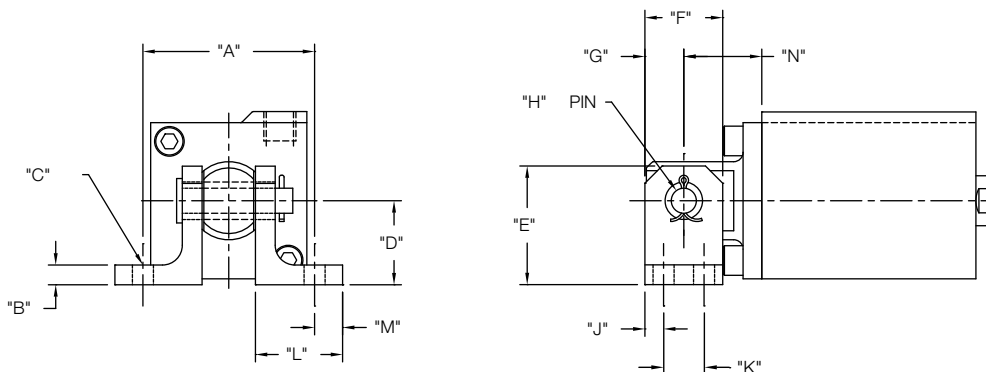
## End Flange Mounting - "FE" 12mm Thru 76mm Bores



### Material: Anodized Aluminum

Bore	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"
12	25,4 (1.00")	6,35 (.25")	4,2 (.17")	17,0 (.67")	4,5 (.18")	24,0 (.95")	4,0 (.16")	8,0 (.32")
20	31,8 (1.25")	9,5 (.38")	4,4 (.17")	23,0 (.91")		27,0 (1.06")		
25	38,1 (1.50")		4,05 (.16")	30,0 (1.18")				
28,5	38,1 (1.50")	4,8 (.19")	4,8 (.19")	28,6 (1.13")	5,6 (.22")	28,6 (1.13")	4,8 (.19")	9,7 (.38")
32	44,5 (1.75")	9,5 (.38")	5,0 (.20")	34,5 (1.36")	5,5 (.22")	35,4 (1.39")	5,0 (.20")	10,0 (.39")
40	50,8 (2.00")		4,9 (.19")	41,0 (1.61")				
50	63,5 (2.50")	12,7 (.50")	8,0 (.32")	47,5 (1.87")	8,5 (.33")	41,4 (1.63")	8,0 (.32")	16,0 (.63")
63	76,2 (3.00")	19 (.75")	10,1 (.40")	56,0 (2.20")	10,5 (.41")	45,4 (1.79")	10,0 (.39")	20,0 (.79")
76	88,9 (3.50")		9,95 (.39")	69,0 (2.72")				

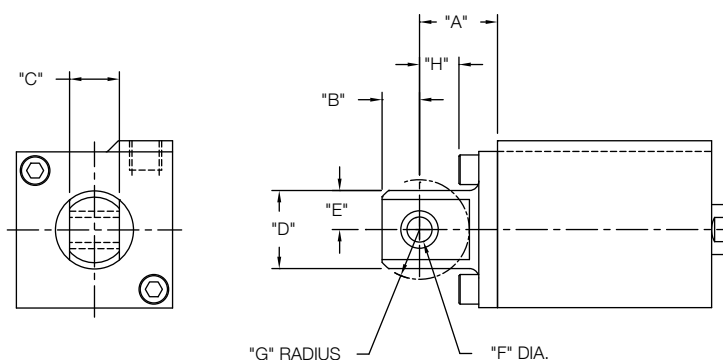
### Long Pivot Mounting Style - "PL"



Bore	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"	"J"	"K"	"L"	"M"	"N"
20	48,8 (1.92")	6,35 (.25")	5,4 (.21")	20 (.79")	31,8 (1.25")	25 (.98")	12,5 (.49")	8,0 (.32")	6,0 (.24")	13 (.51")	25,0 (.98")	7,0 (.28")	23,0 (.91")
25	52,8 (2.08")		5,5 (.22")	27 (1.06")	38,1 (1.50")	25,4 (1.0")	12,7 (.50")	7,9 (.31")	6,35 (.25")	12,7 (.50")	25,4 (1.0")	9,7 (.38")	25,0 (.98")
28.5	48,3 (1.90")		6,8 (.27")	22 (.87")	31,8 (1.25")	25 (.98")	12,5 (.49")	8,0 (.32")	6,0 (.24")	13 (.51")	28,0 (1.10")	9,0 (.35")	
32	54,9 (2.16")	9,53 (.38")	6,8 (.27")	27 (1.06")	38,1 (1.50")	25 (.98")	12,5 (.49")	8,0 (.32")	6,0 (.24")	13 (.51")	30,0 (1.18")	13,0 (.51")	40,0 (1.58")
40	58,7 (2.31")			34 (1.34")	50,8 (2.00")	35 (1.38")	17,5 (.69")	8,0 (.32")	19 (.75")	36,0 (1.42")			
50	65,8 (2.59")		8,7 (.34")	46 (1.81")	63,5 (2.50")	40 (1.58")	20,0 (.79")	10,0 (.39")	10,0 (.39")	20 (.79")	40,0 (1.58")	16,0 (.63")	
63	67,8 (2.67")												
76	73,7 (2.90")												

- LONG PIVOTS ALLOW FOR A MINIMUM 180° OF MOVEMENT
- LONG PIVOTS ARE ANODIZED ALUMINUM WITH SINTERED BRONZE BEARINGS
- PIVOT PINS ARE STEEL WITH STEEL COTTER PIN, INCLUDED

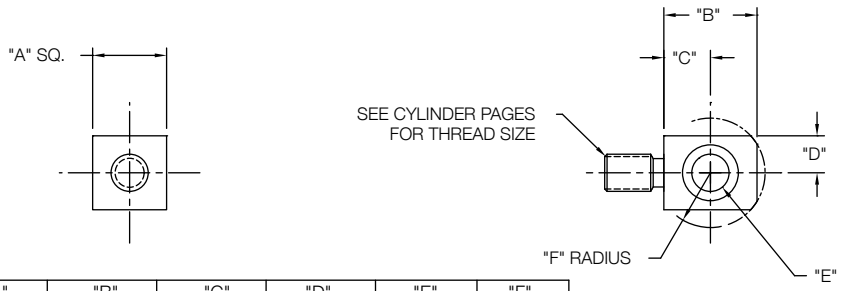
### Pivot on Rear Face Mounting Style - "PR"



Bore	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"
12	20 (.79")	5,9 (.23")	6 (.24")	12 (.47")	6 (.24")	5 (.20")	13,9 (.55")	10,9 (.43")
20	23 (.91")	12 (.47")	12 (.47")	22 (.87")	11 (.43")	8 (.32")	14 (.55")	12,5 (.49")
25			16 (.63")	25 (.98")	12,5 (.49")	7,9 (.31")	15,5 (.61")	
28.5	25 (.98")		16 (.63")	25 (.98")	12,5 (.49")	7,9 (.31")	16 (.63")	12 (.47")
32		19 (.75")	35 (1.38")	17,5 (.69")	8 (.32")			
40	40 (1.58")	14 (.55")	19 (.75")	35 (1.38")	17,5 (.69")	10 (.39")	25 (.98")	23 (.91")
50			25 (.98")	40 (1.58")	20 (.79")			21 (.83")
63			25 (.98")	40 (1.58")	20 (.79")			
76								

- REAR PIVOT CAN BE ROTATED 90°
- REAR PIVOT OPTION IS ONLY AVAILABLE ON SINGLE END MODELS ONLY
- REAR PIVOTS ARE ANODIZED ALUMINUM WITH A SINTERED BRONZE BEARING

**Rod Eye  
Option - "RE"**

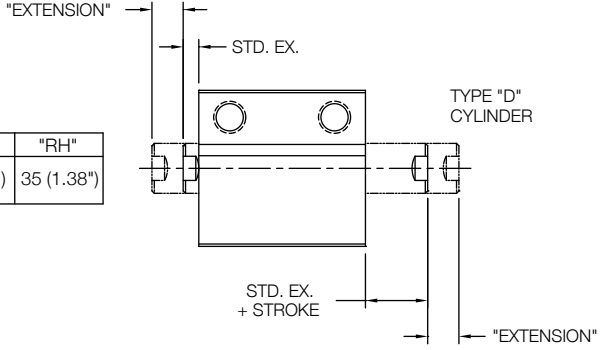


Bore	"A"	"B"	"C"	"D"	"E"	"F"
12	7,9(.31")	8,0(.32")	4,0(.16")	3,96(.156")	3,0(.119")	5,0(.20")
20	12,7 (.50")	12 (.47")	6 (.24")	6,35 (.25")	5 (.20")	8 (.32")
25		12,7(.50")	6,35(.25")		6,35(.25")	7,6(.30")
28,5	16 (.63")	20 (.79")	10 (.39")	8 (.32")	8 (.32")	12 (.47")
32		20 (.79")	10 (.39")	8 (.32")	8 (.32")	12 (.47")
40	19 (.75")	25 (.98")	12,5 (.49")	9,5 (.38")	10 (.39")	14 (.55")
50				12,7 (.50")		
63	25,4 (1.00")			12,7 (.50")		
76						

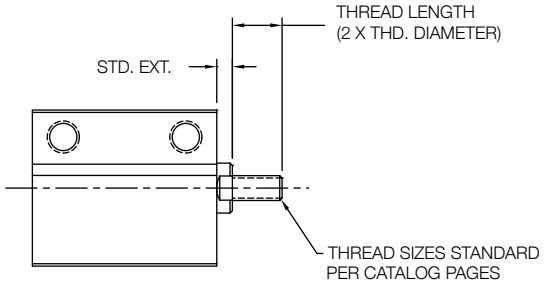
**Rod Extensions  
Option - See Chart Below**

Extension	"RF"	"RT"	"RN"	"RY"	"RV"	"RH"
Length	5 (.20")	10 (.39")	15 (.59")	20 (.79")	25 (.98")	35 (1.38")

For standard extension, see catalog pages.  
If cylinder is double ended, extension will be on both ends.  
Consult factory for single ended extension on a double ended cylinder.



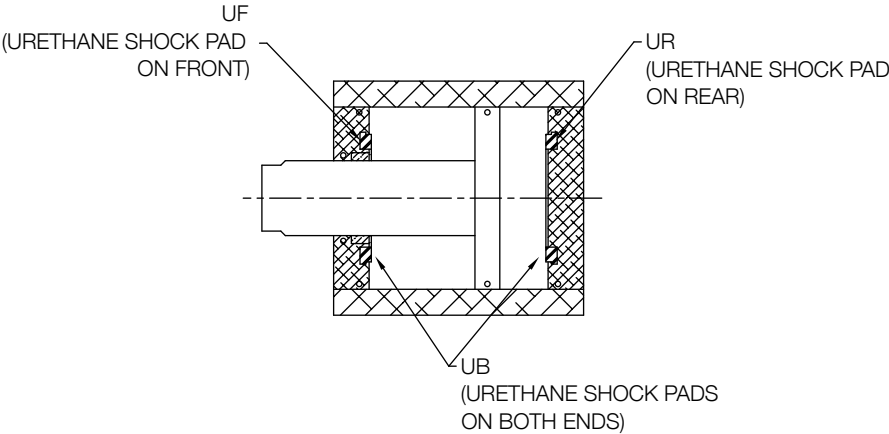
**Rod Stud  
Option - "RS"**



Bore	Std. Ext.	Thread Length
12	3 (.12")	8 (.32")
20	3 (.12")	10 (.39")
25	5 (.20")	10 (.39")
28,5	3,2(.13")	16(.63")
32	5 (.20")	12 (.47")
40	5 (.20")	16 (.63")
50	5 (.20")	20 (.79")
63	5 (.20")	24 (.95")
76	5 (.20")	24 (.95")



**Urethane Shock Pads  
Option - "UF", "UR", "UB"**



- Urethane shock pads available on 20mm thru 76mm Bores in models LS, LE, LH, and LC.
- Pneumatic service only.
- Temperature rating: -18 C to 82 C (0 F -180 F).
- Use for increased noise reduction, minor piston impact, or high cycle rates.
- Does not increase cylinder length.
- Shock pads mechanically retained in cap and head.
- Shock pads are replaceable.
- Shock pads are NOT suitable replacements in applications requiring shock absorbers.

**Seal Options**

OPTION	MATERIAL	MODEL	BORE SIZE	PRESSURE RATING	TEMPERATURE RATING	MEDIA
BLANK (NO CODE)	NITRILE	LS, LE, LH	12mm 20mm thru 76mm 101mm thru 152mm	10 BAR (150 PSI) 17 BAR (250 PSI) 14 BAR (200 PSI)	-18 C to 95 C (0 F to 200 F)	Air (Clean, Dry or Lubricated)
HS	FLUOROCARBON	LE, LH	12mm 20mm thru 76mm 101mm thru 152mm	10 BAR (150 PSI) 17 BAR (250 PSI) 14 BAR (200 PSI)	-18 C to 150 C (0 F to 302 F)	Air (Clean, Dry or Lubricated)
SH	NITRILE	LS, LE, LH	20mm thru 76mm	35 BAR (500 PSI)	-10 C to 70 C (14 F to 158 F)	Hydraulic Fluid (Mineral Oil, Water Polyglycol Solutions Water-in-Oil Emulsions)

- Temperature and pressure ratings are based on a combination of seal materials, lubrication, and cylinder design.
- For higher or lower temperature and/or pressure ratings, consult Nason for a custom solution. Nason has successfully designed cylinders to operate at temperature extremes of -40 F and +500 F respectively, as well pressures as low as 5PSI and as high as 3000 PSI.

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