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## L 30 SERIES Hydraulic Cylinders

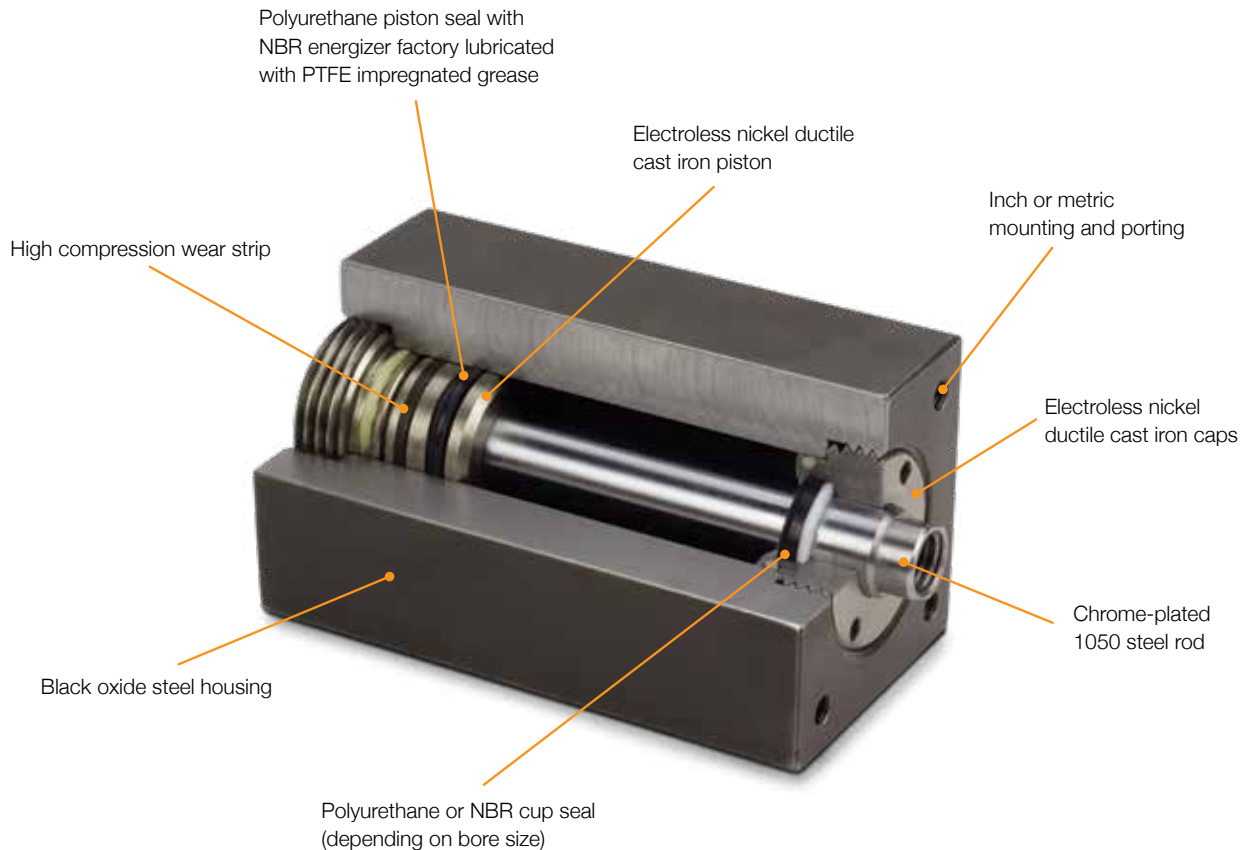


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# L30 SERIES

## HYDRAULIC CYLINDERS

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### Common Features

Nason's L30 series hydraulic actuators were designed to be compact, long-lasting devices for today's demanding design requirements. They are offered in single and double rod configurations with inch or metric mounting and ports.

### Compact Size

Nason L30 series cylinders were designed with today's automation equipment in mind. They offer more power in a smaller package than comparable NFPA style hydraulic cylinders without sacrificing performance.

### Rugged Construction

The L30 series incorporates thick-walled steel housing. The rods are chrome-plated 1050 steel riding in electroless nickel-plated ductile cast iron rod bearings. The piston is ductile cast iron with wear rings standard. Rod wipers are standard on all models.

### Versatile Design

The L30 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.

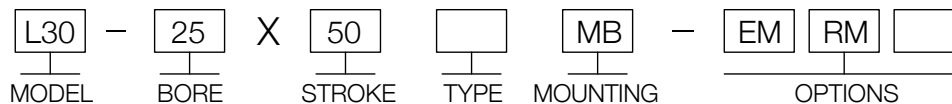
### Rebuildable

All L30 series cylinders are field-rebuildable.

## How to Order

Example:

Part Number: L30-25X50MB-EMRM



<b>MODEL</b>
L30 - High Pressure Cylinder

<b>BORE</b>
25 - 25mm (.98")
32 - 32mm (1.26")
40 - 40mm (1.58")
50 - 50mm (1.97")
63 - 63mm (2.48")
76 - 76mm (3.00")

<b>STROKE</b>
See Stroke Table

<b>TYPE</b>
Blank (NO CODE) - Double Acting, Single Rod
D - Double Acting, Double Rod

<b>MOUNTING</b>
MF - Threads on Front Face (Rod End)
MR - Threads on Rear Face (Opposite Rod)
MB - Threads on Both Faces
MT - Drilled Through and Counter bored for Bolt Clearance

<b>OPTIONS</b>
EM - Inch Threads (Mounting, Ports and Rods)
RM - Rod Male Threads
RF - 5mm (.197") Rod Extension
RT - 10mm (.394") Rod Extension
RN - 15mm (.591") Rod Extension
RY - 20mm (.787") Rod Extension
RV - 25mm (.984") Rod Extension
RH - 35mm (1.38") Rod Extension

Packing: Urethane and Buna N  
 Lubrication: PTFE impregnated grease  
 Stroke Tolerance: +0,75mm/-0mm (+0.03"/-0")

### Piston Area Chart

Bore	PUSH (ROD EXTEND)	PULL (ROD RETRACT)
25	4,91cm <sup>2</sup> (.76in <sup>2</sup> )	3,37cm <sup>2</sup> (.52in <sup>2</sup> )
32	8,04cm <sup>2</sup> (1.25in <sup>2</sup> )	5,50cm <sup>2</sup> (.85in <sup>2</sup> )
40	12,57cm <sup>2</sup> (1.95in <sup>2</sup> )	8,77cm <sup>2</sup> (1.36in <sup>2</sup> )
50	19,63cm <sup>2</sup> (3.04in <sup>2</sup> )	13,48cm <sup>2</sup> (2.09in <sup>2</sup> )
63	31,17cm <sup>2</sup> (4.83in <sup>2</sup> )	20,99cm <sup>2</sup> (3.25in <sup>2</sup> )
76	45,60cm <sup>2</sup> (7.07in <sup>2</sup> )	29,70cm <sup>2</sup> (4.60in <sup>2</sup> )

### Stock Strokes

Bore	Stroke
25	25mm, 50mm, 75mm, 100mm (.98", 1.96", 2.95", 3.93")
32	
40	
50	
63	
76	

5mm increments available with additional lead time

### 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)

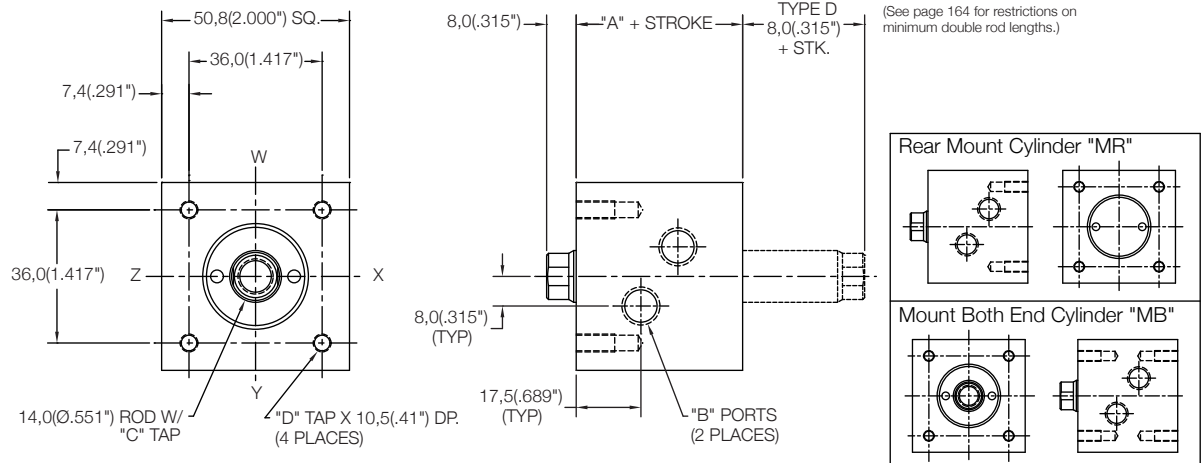
### Cylinder Ratings

Bore	Pressure	Temperature
25	206 BAR (3000 PSI)	-10° C to 80° C (14° F to 176° F)
32	206 BAR (3000 PSI)	-10° C to 80° C (14° F to 176° F)
40	206 BAR (3000 PSI)	-23° C to 100° C (-10° F to 212° F)
50	206 BAR (3000 PSI)	-23° C to 100° C (-10° F to 212° F)
63	206 BAR (3000 PSI)	-23° C to 100° C (-10° F to 212° F)
76	206 BAR (3000 PSI)	-23° C to 100° C (-10° F to 212° F)

## Front Mount Cylinder "MF"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
L30	_,D	25mm, 50mm, 75mm, 100mm	45,0(1.77")	PUSH 4,91 cm <sup>2</sup> (0.76 in <sup>2</sup> ) PULL 3,37 cm <sup>2</sup> (0.52 in <sup>2</sup> )

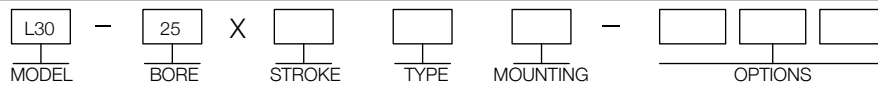
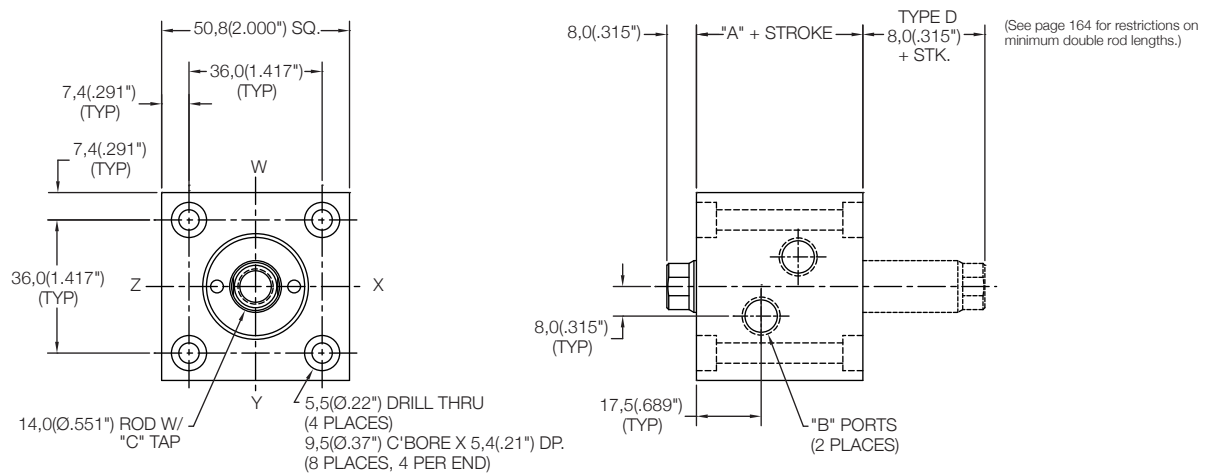
	Standard Threads	"EM" Option
"B"	G1/8	#2 SAE
"C"	M10X1,5	3/8-24
"D"	M5X0,8	#10-32



## Thru Mount Cylinder "MT"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
L30	_,D	25mm, 50mm, 75mm, 100mm	45,0(1.77")	PUSH 4,91 cm <sup>2</sup> (0.76 in <sup>2</sup> ) PULL 3,37 cm <sup>2</sup> (0.52 in <sup>2</sup> )

	Standard Threads	"EM" Option
"B"	G1/8	#2 SAE
"C"	M10X1,5	3/8-24



25mm, 50mm, 75mm, 100mm

BLANK - NO CODE, DOUBLE ACTING, SINGLE ROD  
D - DOUBLE ACTING, DOUBLE ROD  
(See page 164 for restrictions on minimum double rod lengths.)

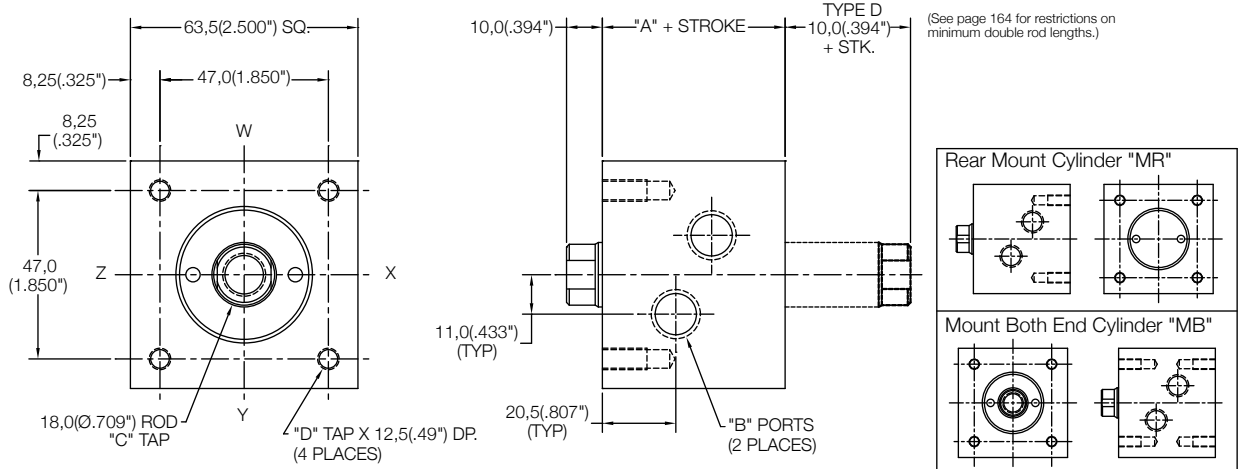
MT - THRU MOUNT  
MF - FRONT MOUNT  
MR - REAR MOUNT  
MB - BOTH MOUNT

EM - INCH THREADS & PORT OPTIONS  
RM - ROD MALE THREADS  
RF, RT, RN, RY, RV, RH - ROD EXTENSIONS (SEE PAGE 164)

## Front Mount Cylinder "MF"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
L30	_,D	25mm, 50mm, 75mm, 100mm	51,0(2.01")	PUSH 8,04 cm <sup>2</sup> (1.25 in <sup>2</sup> ) PULL 5,50 cm <sup>2</sup> (0.85 in <sup>2</sup> )

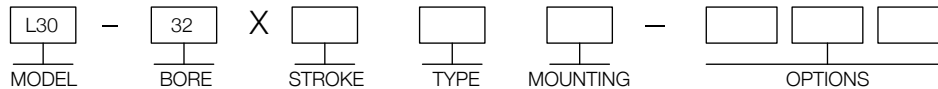
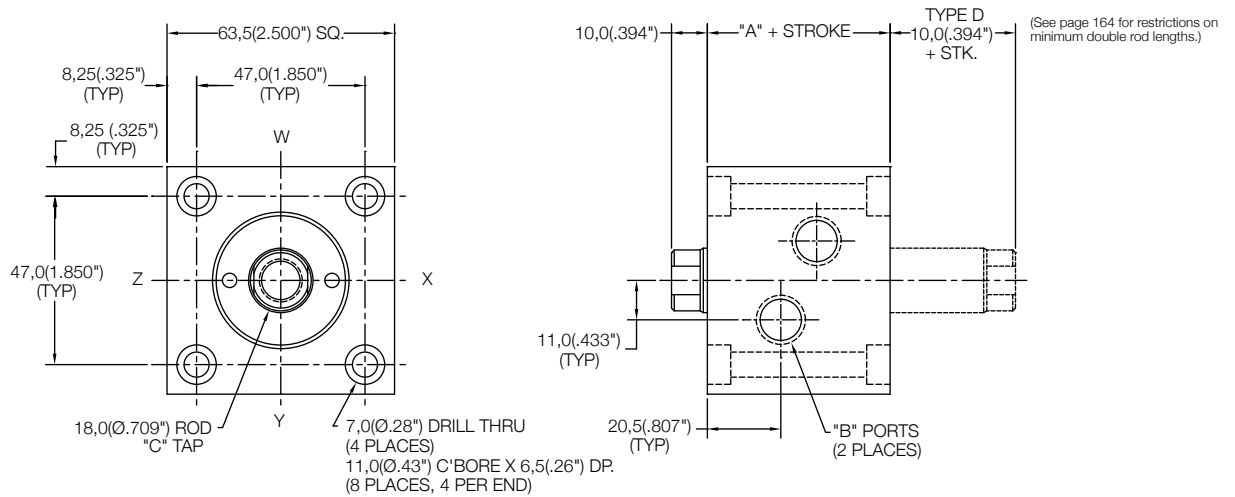
	Standard Threads	"EM" Option
"B"	G1/4	#4 SAE
"C"	M12X1,75	7/16-20
"D"	M6X1	1/4-28



## Thru Mount Cylinder "MT"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
L30	_,D	25mm, 50mm, 75mm, 100mm	51,0(2.01")	PUSH 8,04 cm <sup>2</sup> (1.25 in <sup>2</sup> ) PULL 5,50 cm <sup>2</sup> (0.85 in <sup>2</sup> )

	Standard Threads	"EM" Option
"B"	G1/4	#4 SAE
"C"	M12X1,75	7/16-20



25mm, 50mm, 75mm, 100mm

BLANK - NO CODE, DOUBLE ACTING, SINGLE ROD  
D - DOUBLE ACTING, DOUBLE ROD  
(See page 164 for restrictions on minimum double rod lengths.)

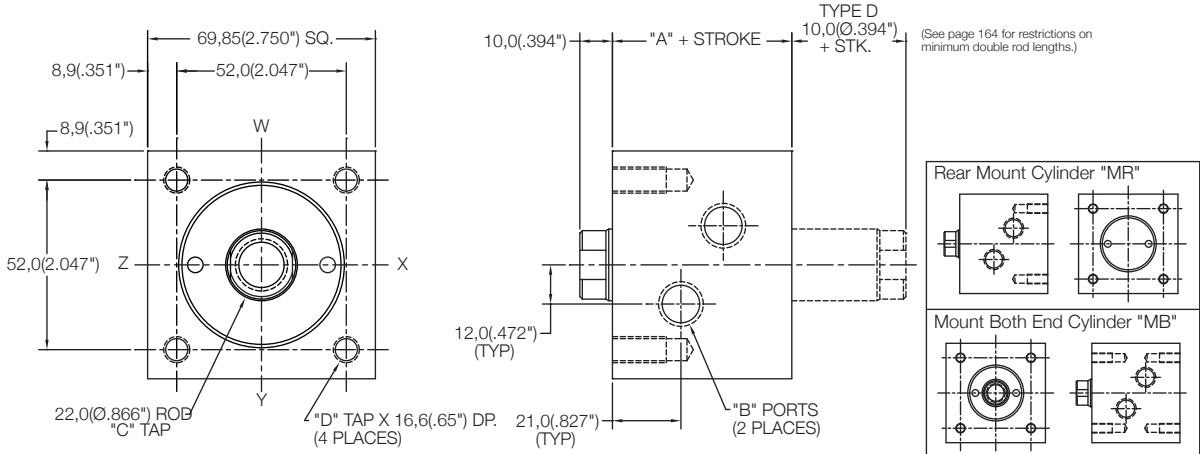
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MF - FRONT MOUNT  
MR - REAR MOUNT  
MB - BOTH MOUNT

EM - INCH THREADS & PORT OPTIONS  
RM - ROD MALE THREADS  
RF, RT, RN, RY, RV, RH - ROD EXTENSIONS (SEE PAGE 164)

Front Mount Cylinder "MF"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
L30	_,D	25mm, 50mm, 75mm, 100mm	55,0(2.17")	PUSH 12,57 cm <sup>2</sup> (1.95 in <sup>2</sup> ) PULL 8,77 cm <sup>2</sup> (1.36 in <sup>2</sup> )

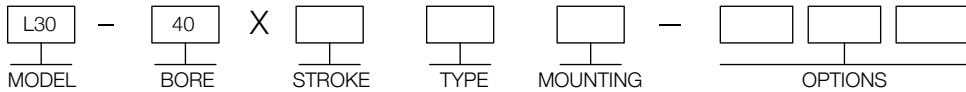
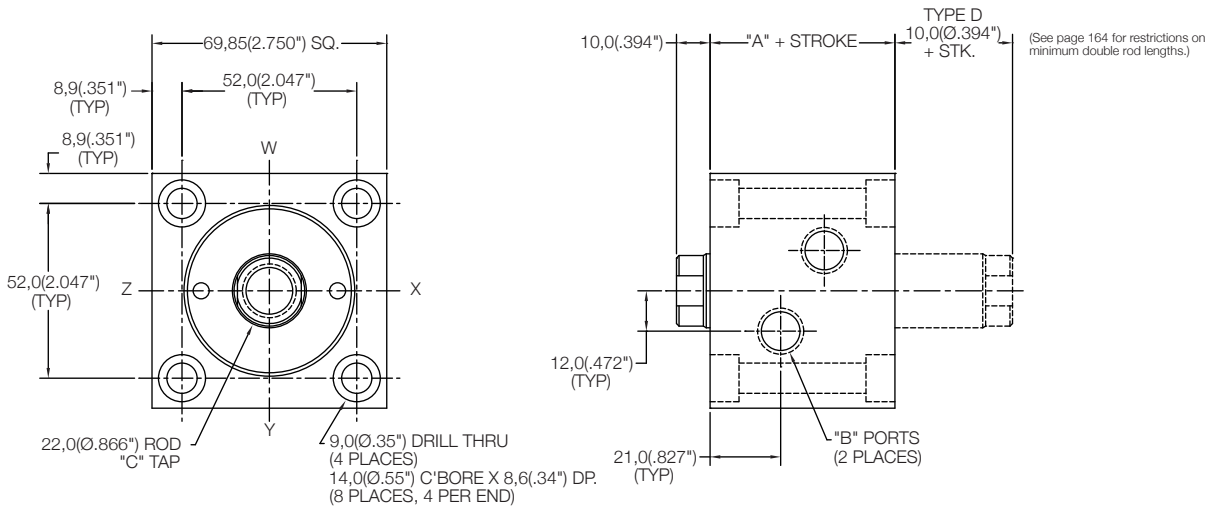
	Standard Threads	"EM" Option
"B"	G1/4	#4 SAE
"C"	M16X2	5/8-18
"D"	M8X1.25	5/16-24



Thru Mount Cylinder "MT"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
L30	_,D	25mm, 50mm, 75mm, 100mm	55,0(2.17")	PUSH 12,57 cm <sup>2</sup> (1.95 in <sup>2</sup> ) PULL 8,77 cm <sup>2</sup> (1.36 in <sup>2</sup> )

	Standard Threads	"EM" Option
"B"	G1/4	#4 SAE
"C"	M16X2	5/8-18



25mm, 50mm, 75mm, 100mm

BLANK - NO CODE, DOUBLE ACTING, SINGLE ROD  
D - DOUBLE ACTING, DOUBLE ROD  
(See page 164 for restrictions on minimum double rod lengths.)

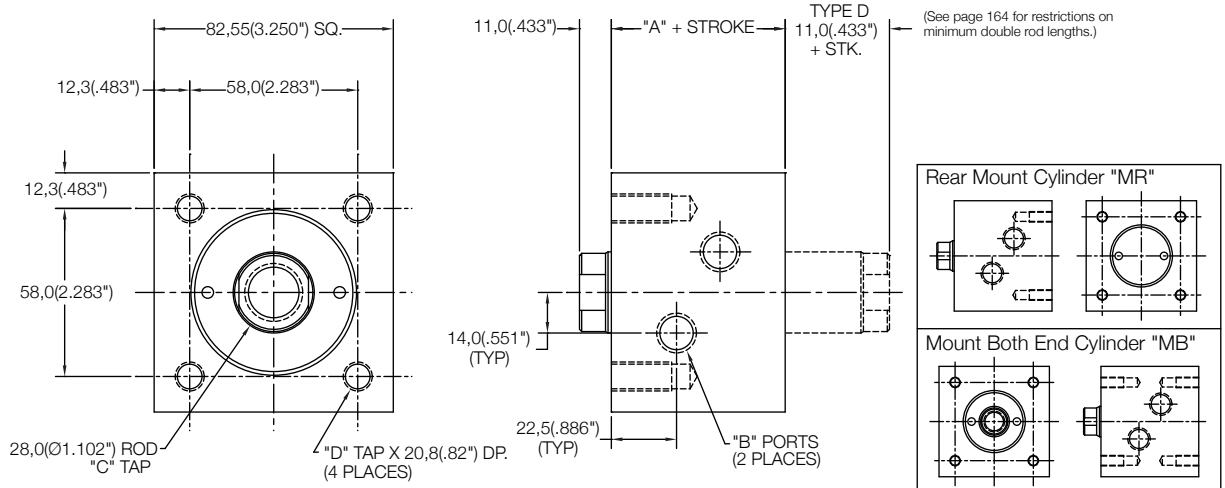
MT - THRU MOUNT  
MF - FRONT MOUNT  
MR - REAR MOUNT  
MB - BOTH MOUNT

EM - INCH THREADS & PORT OPTIONS  
RM - ROD MALE THREADS  
RF, RT, RN, RY, RV, RH - ROD EXTENSIONS (SEE PAGE 164)

## Front Mount Cylinder "MF"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
L30	_,D	25mm, 50mm, 75mm, 100mm	60,0(2.36")	PUSH 19,63 cm <sup>2</sup> (3.04 in <sup>2</sup> ) PULL 13,48 cm <sup>2</sup> (2.09 in <sup>2</sup> )

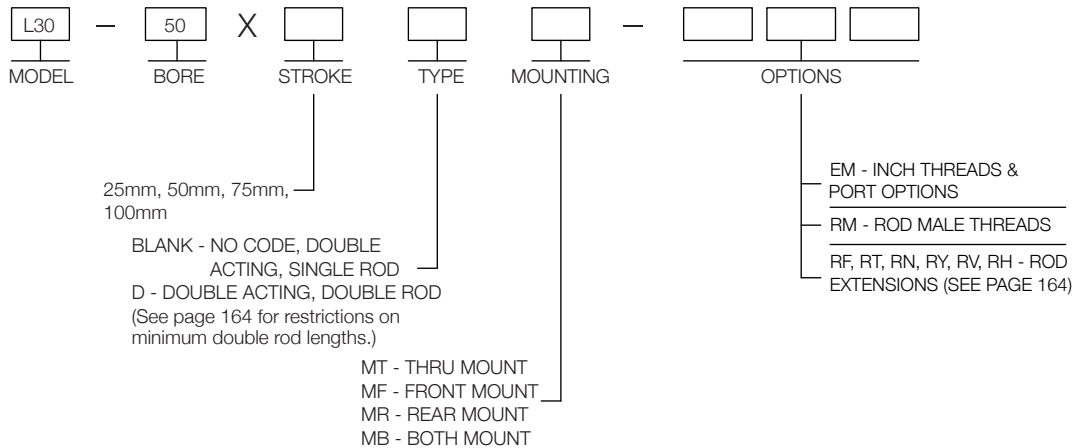
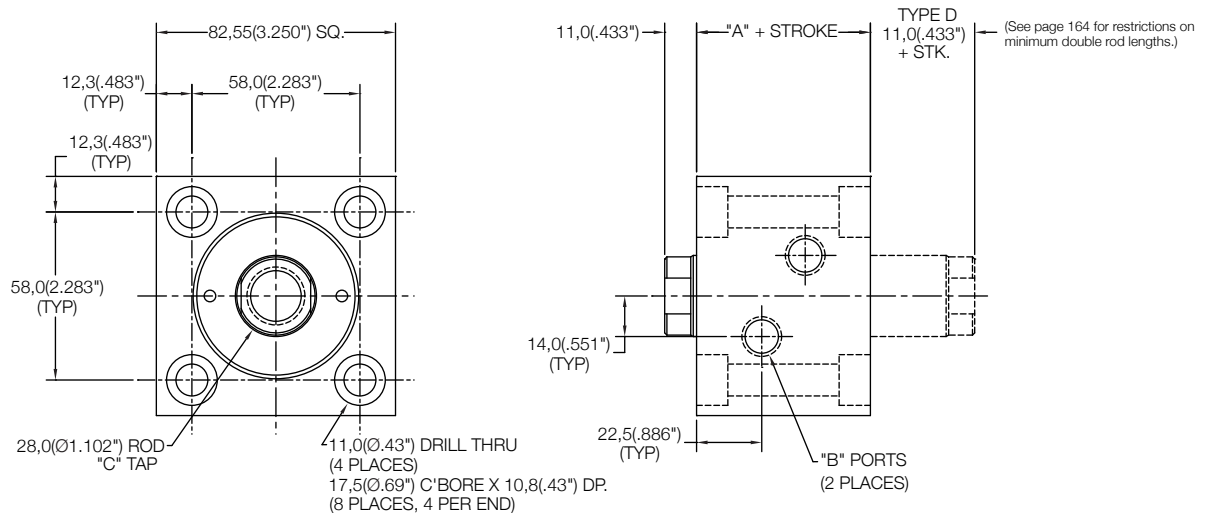
	Standard Threads	"EM" Option
"B"	G1/4	#4 SAE
"C"	M20X2.5	3/4-16
"D"	M10X1.5	3/8-24



## Thru Mount Cylinder "MT"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
L30	_,D	25mm, 50mm, 75mm, 100mm	60,0(2.36")	PUSH 19,63 cm <sup>2</sup> (3.04 in <sup>2</sup> ) PULL 13,48 cm <sup>2</sup> (2.09 in <sup>2</sup> )

	Standard Threads	"EM" Option
"B"	G1/4	#4 SAE
"C"	M20X2.5	3/4-16

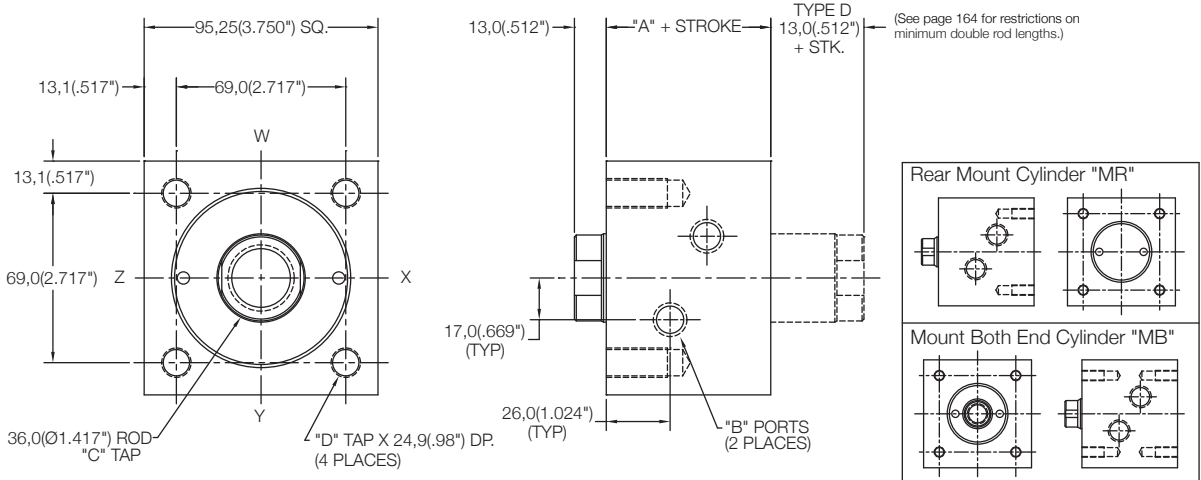




**Front Mount Cylinder "MF"**

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
L30	_,D	25mm, 50mm, 75mm, 100mm	67,0(2.64")	PUSH 31,17 cm <sup>2</sup> (4.83 in <sup>2</sup> ) PULL 20,99 cm <sup>2</sup> (3.25 in <sup>2</sup> )

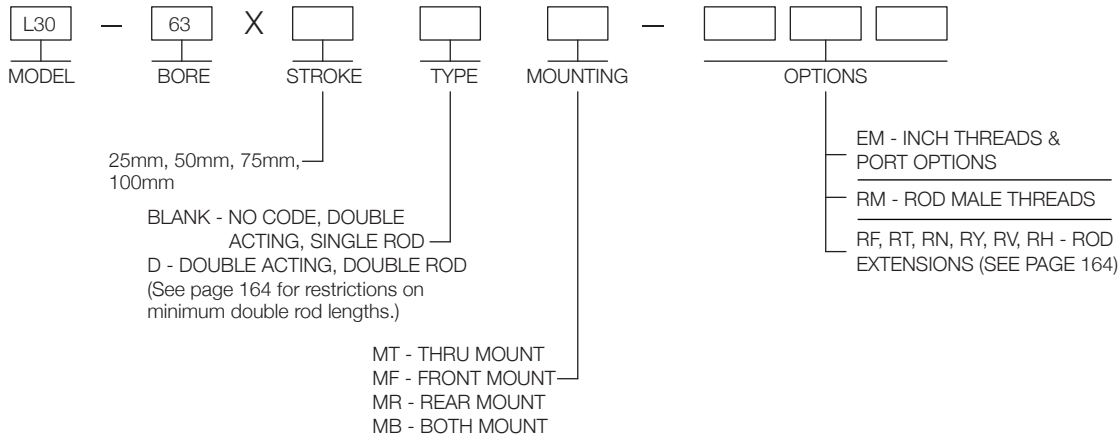
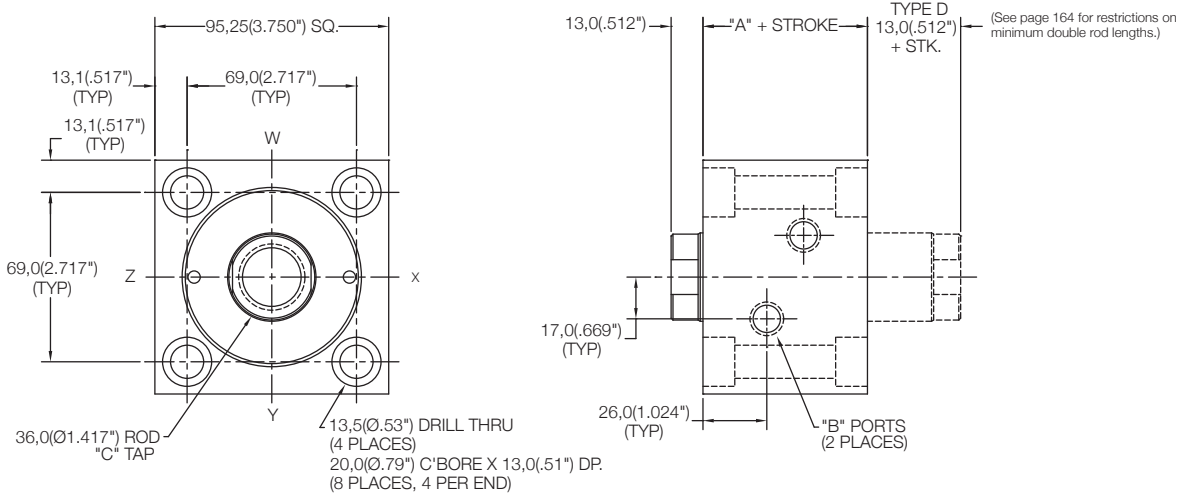
	Standard Threads	"EM" Option
"B"	G1/4	#4 SAE
"C"	M27X3	1-14
"D"	M12X1.75	1/2-20



**Thru Mount Cylinder "MT"**

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
L30	_,D	25mm, 50mm, 75mm, 100mm	67,0(2.64")	PUSH 31,17 cm <sup>2</sup> (4.83 in <sup>2</sup> ) PULL 20,99 cm <sup>2</sup> (3.25 in <sup>2</sup> )

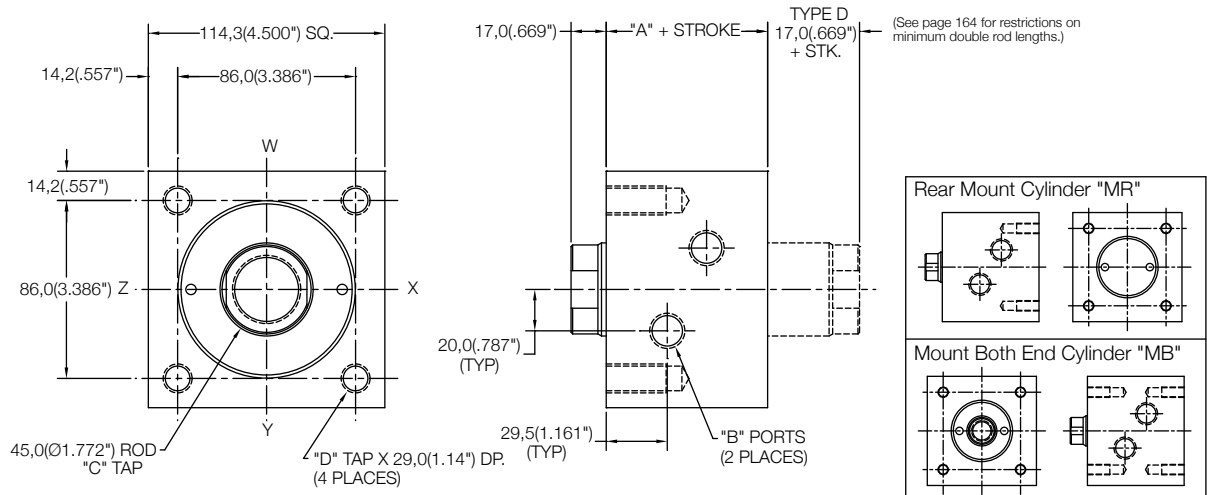
	Standard Threads	"EM" Option
"B"	G1/4	#4 SAE
"C"	M27X3	1-14



## Front Mount Cylinder "MF"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
L30	_D	25mm, 50mm, 75mm, 100mm	78,0(3.07")	PUSH 45,60 cm <sup>2</sup> (7.07 in <sup>2</sup> ) PULL 29,70 cm <sup>2</sup> (4.60 in <sup>2</sup> )

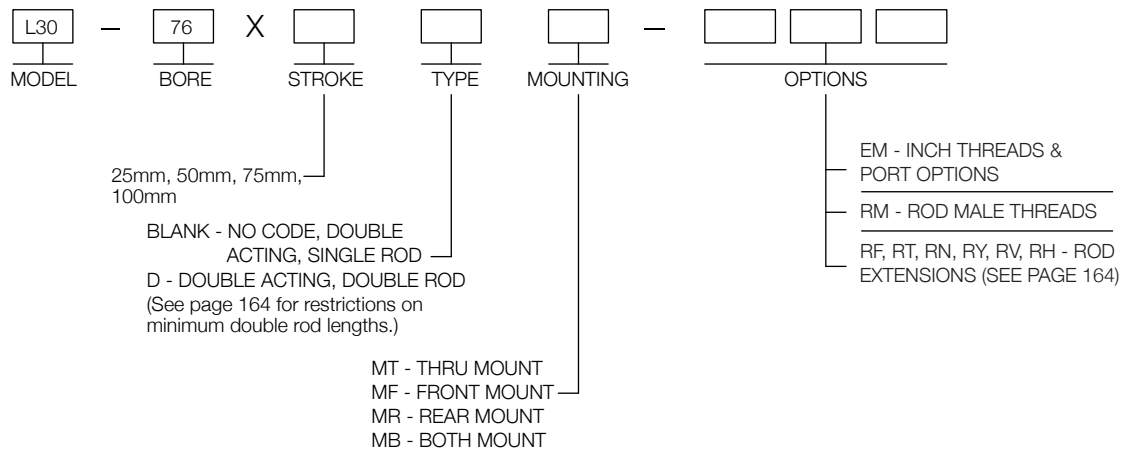
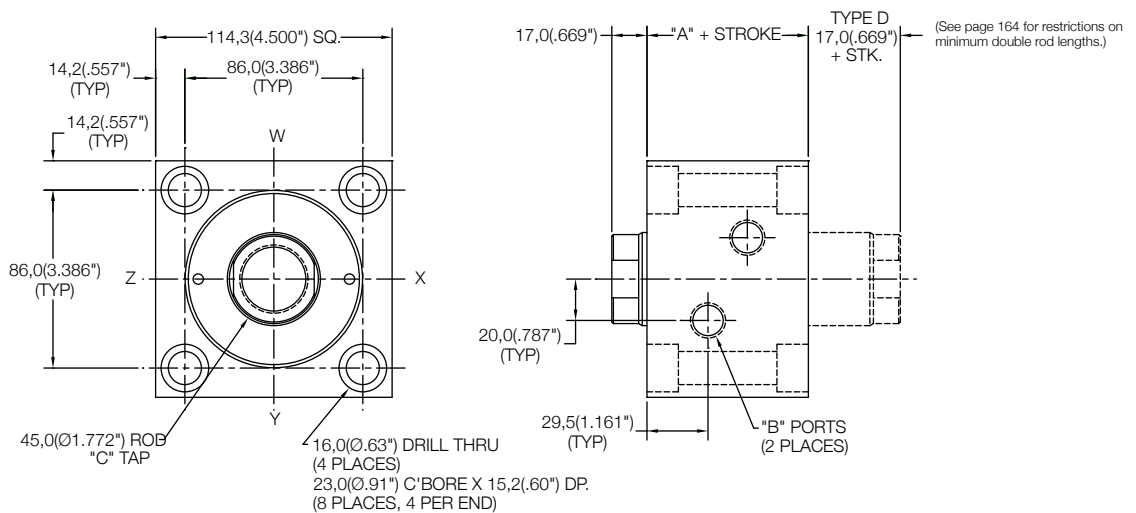
	Standard Threads	"EM" Option
"B"	G3/8	#6 SAE
"C"	M33X3.5	1 1/4-12
"D"	M14X2	5/8-18



## Thru Mount Cylinder "MT"

MODEL	TYPE	STANDARD STROKES	"A"	PISTON AREA
L30	_D	25mm, 50mm, 75mm, 100mm	78,0(3.07")	PUSH 45,60 cm <sup>2</sup> (7.07 in <sup>2</sup> ) PULL 29,70 cm <sup>2</sup> (4.60 in <sup>2</sup> )

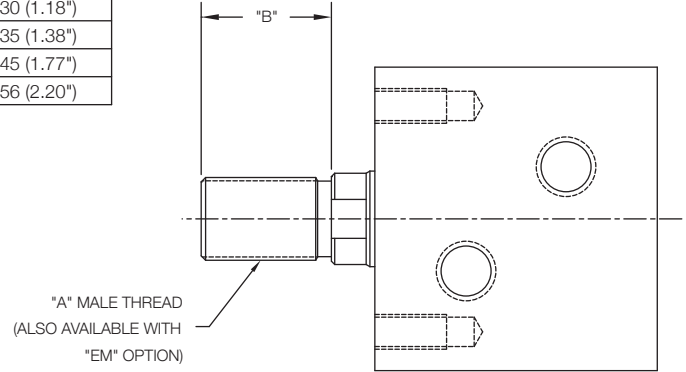
	Standard Threads	"EM" Option
"B"	G3/8	#6 SAE
"C"	M33X3.5	1 1/4-12



### Male Thread Option - "RM"

Bore	"A"	"B"	"EM" Option	"B"
25	M10X1.25	16 (.63")	1/2-20	18 (.71")
32	M12X1.25	18 (.71")	9/16-18	25 (.98")
40	M16X1.5	22 (.87")	3/4-16	30 (1.18")
50	M20X1.5	28 (1.10")	7/8-14	35 (1.38")
63	M27X2	36 (1.42")	1 1/4-12	45 (1.77")
76	M33X2	45 (1.77")	1 1/2-12	56 (2.20")

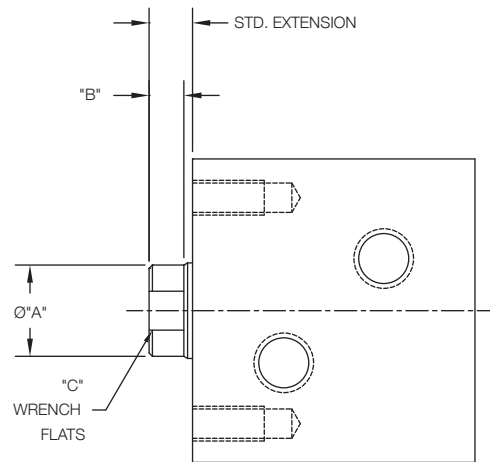
Dimensions above are the same for double rod cylinders.



### Rod End Detail See Chart Below

Bore	Ø"A"	"B"	"C"
25	13 (.51")	6 (.24")	12 (.47")
32	17 (.67")	8 (.31")	15 (.59")
40	21 (.83")	8 (.31")	19 (.75")
50	27 (1.06")	9 (.35")	24 (.94")
63	35 (1.38")	11 (.43")	32 (1.26")
76	43 (1.69")	13 (.51")	39 (1.54")

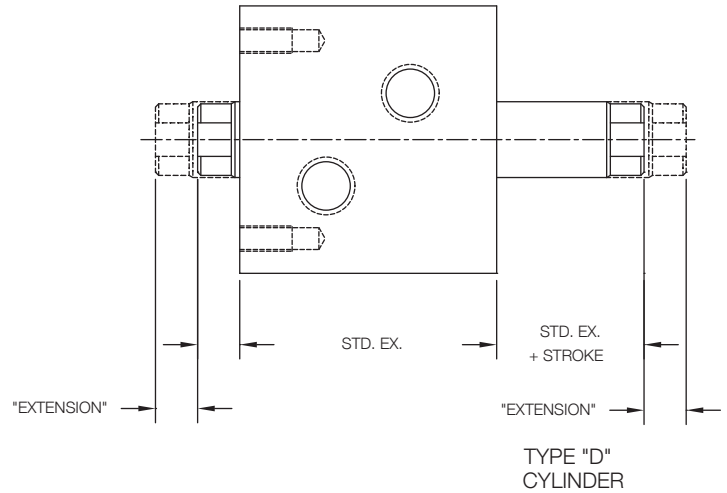
Dimensions above are the same for double rod cylinders.



**Rod Extensions  
Option - See Chart Below**

Extensions	"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.



**Minimum Rod Extension for Double Rod  
Option (Type "D") - See Chart Below**

Standard double rod cylinders must have "X" dimensions greater than or equal to those listed in the table below. Corresponding rod extensions will be added to cylinders which do not meet this minimum length, so that standard extension plus stroke adds up to "X" MIN. This applies only to rear rod.

Bore	STD. Ex.	"X" MIN	For Strokes Less Than
25	8 (.31")	23 (.91")	15 (.59")
32	10 (.39")	25 (.98")	15 (.59")
40	10 (.39")	30 (1.18")	20 (.79")
50	11 (.43")	31 (1.22")	20 (.79")
63	13 (.51")	38 (1.50")	25 (.98")
76	17 (.67")	42 (1.65")	25 (.98")

\*Single rod cylinders and cylinders with "RM" rod male thread option do not have this restriction.

