

Rod Tap Depth

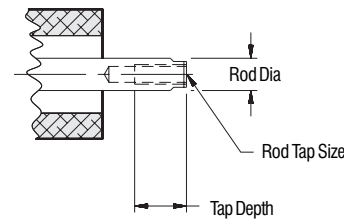
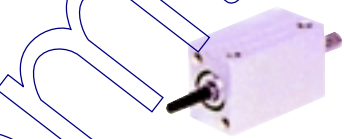
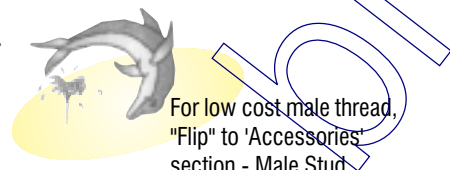
8mm - 40mm
Bore

Usable Female Rod Thread

On magnetic piston style cylinders, refer to longer **stroke** when determining tap depth.

- 12mm - 20mm use 10mm longer stroke
- 25mm - 40mm use 5mm longer stroke

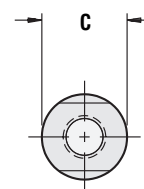
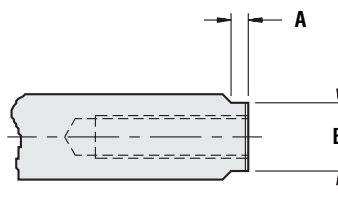
Bore	Rod Diameter	Standard Rod Tap	Duty	Tap Depths				
				Stroke (in millimeters)				
				5	10	15	20	25 & longer
8	4	NA	Standard	All duty types and strokes have M3 turned male threads as a standard rod end option.				
			Intermediate					
			Heavy					
12	6	M3x0,5	Standard	6	8	8	8	8
			Intermediate	8	8	8	8	8
			Heavy	8	8	8	8	8
20	8	M5x0,8	Standard	8	10	12,5	12,5	12,5
			Intermediate	10	12,5	12,5	12,5	12,5
			Heavy	12,5	12,5	12,5	12,5	12,5
25	10	M5x0,8	Standard	8	10	12,5	12,5	12,5
			Intermediate	10	12,5	12,5	12,5	12,5
			Heavy	12,5	12,5	12,5	12,5	12,5
40	16	M6x1	Standard	9	12	14	15	15
			Intermediate	12	14	15	15	15
			Heavy	14	15	15	15	15



Usable Wrench Flats

Bore	A	B Flat	C Dia
8*	3	3,5	4
12	3	5	6
20	3	7	8
25	3	8	10
40	5	13	16

* Turned male threads not shown



Unit Weights

Cylinder Unit Weights (approximate weight in grams)

Bore	Duty	Non-Magnetic Piston					Magnetic Piston				
		Standard		Intermediate	Heavy		Standard		Intermediate	Heavy	
		Rod End	Single	Double	Single	Single	Double	Single	Double	Single	Single
8	Zero stroke	10,1	NA	13	16,5	NA	23,3	NA	28,2	34	NA
	per 5mm stroke	4	NA	4	4	NA	5	NA	6	5	NA
12	Zero stroke	22,6	24,5	28,1	33	44,4	44,6	39,2	52,7	62,4	68
	per 5mm stroke	5	6	5	5	7	6	7	6	6	7
20	Zero stroke	55,5	62,3	63,1	78,6	80	68,3	79,7	83,1	108,9	136,5
	per 5mm stroke	12	11	12	12	12	13	12	13	13	12
25	Zero stroke	83,2	88,9	95	122,5	132,6	115,8	106,3	135,3	143,6	156,5
	per 5mm stroke	17	16	17	17	19	18	19	18	18	19
40	Zero stroke	242,1	253	276,5	294,3	344,7	262,2	253	308	353,6	316,8
	per 5mm stroke	32	35	32	32	35	33	35	33	33	35



Example: AS12x15

AS12 - Magnetic 12mm bore = 44.60 g
 15 - 15mm stroke = 6.00 x 3 = 18.00 g
 44.60 + 18.00 = **62.60 grams**

Grams to Ounces (Grams x .03527 = Ounces)
 62.60 x .03527 = 2.208 ounces

Threaded Body Unit Weights (approximate weight in grams)

Threaded Body weights do not include jam nuts.

Bore	Stroke	Weight
8	5 mm	14,2
	20 mm	28,4
12	10 mm	28,4
	25 mm	42,6
16	15 mm	42,6
	25 mm	49,7

Grams to Ounces Conversion Formula

• Grams x .03527 = Ounces
 Example: 14,2 x .03527 = .5 ounces

Accessory Unit Weights (approximate weight in grams)

Suffix	Description	Bore				
		8	12	20	25	40
FF	Front Flange	—	10,80	28,35	49,70	83,25
MS	Male Stud	—	,45	1,65	1,65	3,80
RE	Rod Eye	—	3,30	6,05	6,05	25,25
RF	Rear Flange	—	10,80	28,35	47,30	83,25
RC/RCH	Rear Clevis	—	9,85	67,40	76,50	177,00
RCE/RCHE	Rear Clevis with Eye Mount	—	—	48,25	64,55	130,80

Grams to Ounces Conversion Formula

• Grams x .03527 = Ounces
 Example: 10,80 x .03527 = .38 ounces

Repair Kits



Repair Kits apply to Non
Magnetic and Magnetic
piston cylinders — any duty.

Repair Kits, 8mm thru 40mm Bore

Bore	Rod End	Repair Kits				Tools			Lubrication
		Pneumatic Seals		Hydraulic Seals		Urethane Cushions	Assembly Wrench	Flat Wrench	
		Standard	Viton®	Hydraulic	Viton® Hyd.				
8	Single	RKW8	—	—	—	—	—	WFW0S	Lube-1 (Description: 5.3 oz. tube) Lubricates approximately 30 medium size cylinders
12	Single	RKW12	RKWV12	—	—	—	—	WFW1S	
	Double	RKWD12	RKWDV12						
20	Single	RKW20	RKWV20	RKWH20	RKWVH20	RKWD20UC	MW-1	WFW2S	
	Double	RKWD20	RKWDV20	RKWDH20	RKWDVH20				
25	Single	RKW25	RKWV25	RKWH25	RKWVH25	RKWD25UC	W-2	WFW2S	
	Double	RKWD25	RKWDV25	RKWDH25	RKWDVH25				
40	Single	RKW40	RKWV40	RKWH40	RKWVH40	RKWD40UC	W-2	WFW2S	
	Double	RKWD40	RKWDV40	RKWDH40	RKWDVH40				

Part No. WFS
Includes one each:
WFW0S, WFW1S, WFW2S



NEW!

All universal repair kits now include magnets.

All Repair Kits Include:

- Endcap Seals
- Shaft Seals
- Piston Seals
- Retaining Wire *
- Nyliner Bearing
- Magnet
- Lubrication (1 to 4 milliliters)
- Snap Rings - *RDK kits only*

* 20mm - 40mm only

Repair Kits, Threaded Body

Bore	Repair Kits	
	Stroke	Part Number
8	2,5 5	RKTB8S
	7,5 10 12,5 15 17,5 20	RKTB8L
12	2,5 5 7,5 10	RKTB12S
	12,5 15 17,5 20 22,5 25	RKTB12L
16	2,5 5 7,5 10	RKTB16S
	12,5 15 17,5 20 22,5 25	RKTB16L

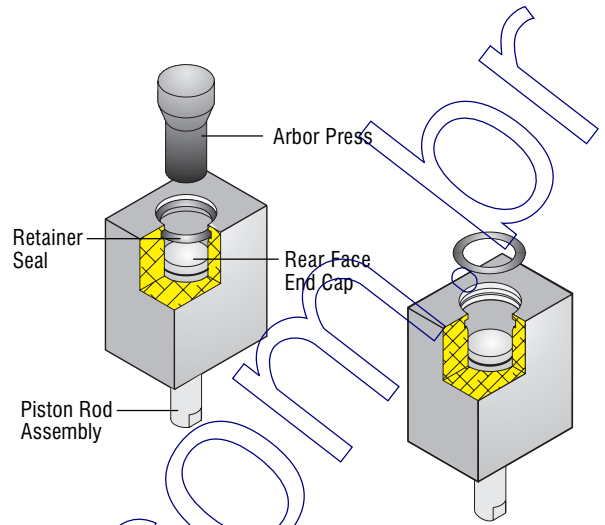


Repair Kit for 12mm Bore
Threaded Body Cylinders
(Part Number: RKTB12S)

Disassembly

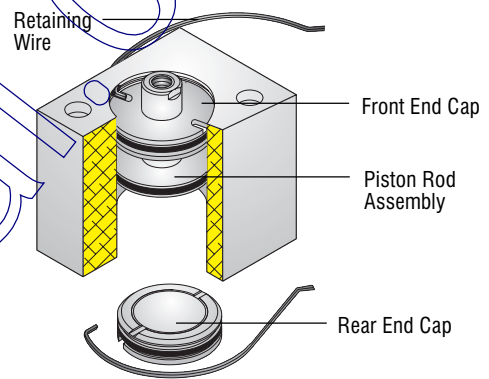
8mm - 12mm Bore

1. Place cylinder under small arbor press, rear end cap up, apply 15 pounds of force.
2. Push the end cap down into the cylinder frame, retainer seal will remain in groove.
3. With an o-ring tool, remove the retainer seal.
4. Push the piston rod assembly up to remove the rear face end cap.
5. Do not remove the piston rod assembly.
6. Turn cylinder over.
7. Repeat steps 1-3, push rod end cap out with piston rod assembly and remove both.



20mm - 40mm Bore

1. Place cylinder in vise, rear end cap up.
2. Place spanner wrench pins in notches of the end cap.
3. Turn clockwise — the retaining wire will back out of the cylinder.
4. Stop turning when wire becomes loose.
5. Push the end cap down into the frame.
6. Remove the wire by pulling the hooked end from the cylinder bore.
7. Push the piston rod assembly up to remove the end cap.
8. Do not remove piston rod assembly.
9. Turn cylinder over.
10. Repeat steps 1-6, push front end cap out with piston rod assembly and remove both.

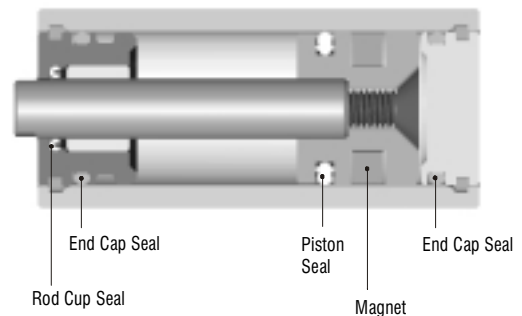


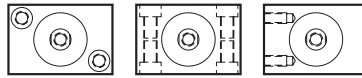
General Repair Instructions

1. Remove any seal that becomes visible during repair with an o-ring tool.
2. Remove magnet only if magnet appears damaged or broken.
3. Replace magnet in mag groove, taking care to position painted side of magnet toward piston.
4. Clean all grooves with a soft cloth.
5. Lightly lubricate seal grooves, reset seals and lubricate again.
6. Repeat above steps in reverse to reassemble.
7. Bubble test cylinder to assure air tight seal.

Double Rod Instructions - 20mm through 40mm

1. Using snap ring pliers, remove first snap ring.
2. Remove piston from rod and remove snap ring from opposite side.
3. Remove inner piston seal with an o-ring tool and reset seals as detailed above.
4. Reset snap ring with flat side facing out from center.
5. Place piston over seal.
6. Reset opposite snap ring with flat side facing out from center.
7. Reassemble and bubble test.





Mounting Options

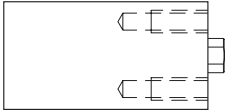
Mounting Options



“S” Style - end mount - cylinders have one or more of the following patterns as standard.
Each dimensional page lists standard and optional mounting suffix codes.

Threads Front

Standard on all cylinders.

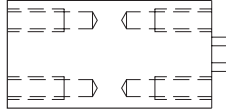


Tapped mounting holes on the rod end

Threads Both Ends

Ordering Suffix

TBE

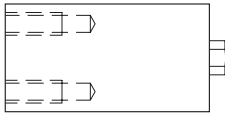


Tapped mounting holes on both ends

Threads Rear

Ordering Suffix

TR

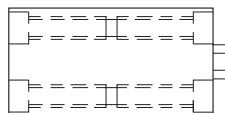


Tapped mounting holes opposite the rod end

Thru Mount*

Ordering Suffix

TM



Counterbored mounting holes, both ends, for drop through bolt

*Available on strokes in table at right

⚠ Non magnetic piston cylinders: When 'TR' is specified or when using 'Bolt On Hardware' options, the cylinder may be reverse assembled, see 'Technical Data' section for detailed explanation. To avoid changing port orientation, specify suffix: "TBE or TM".

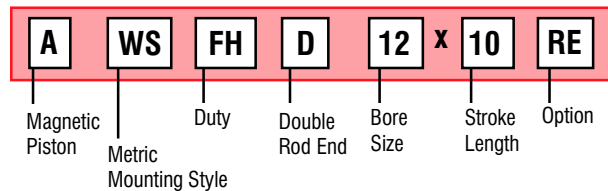
Maximum Stroke Lengths for Thru Mount Option					
Style	Bore				
	8	12	20	25	40
WS	25	25	50	50	50
WSHH	20	20	45	45	45
WSFH	15	15	40	40	40
AWS	15	15	40	45	45
AWSHH	10	10	35	40	40
AWSFH	5	5	30	35	35

How To Order

Metric Cylinders

Creating a Part Number

Example: AWSFHD12x10RE



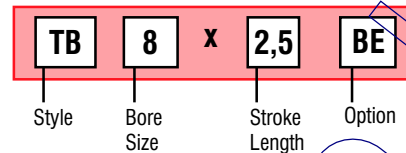
- A** Optional Magnetic Piston
- WS** Metric Mounting Style
- FH** Optional Duty Type
- D** Optional Double Rod End
- 12** Bore Size
- 10** Stroke Length
- RE** Option

Threaded Body Cylinders

SINGLE ACTING
TB Series
THREADED BODY

Creating a Part Number

Example: TB8x2,5BE



- TB** Style
- 8** Bore Size
- 2,5** Stroke Length
- BE** Option - Blind Rod End

Modifications Welcome

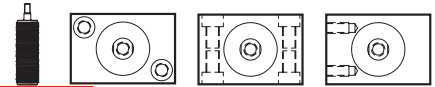
Special stroke lengths, port orientation, mounting configuration, rod ends.

Compact Air Products, Inc. • P.O. Box 499 • Westminster, SC 29693 • Phone: 864-647-9521 • Fax: 864-647-9574 Website: www.compactair.com • E-Mail: techsales@compactair.com

www.magnumair.com

Styles

Icon shown on top of
each dimensional page



Rectangle - End Mount

Non Magnetic Piston

Ordering Prefix **WS**

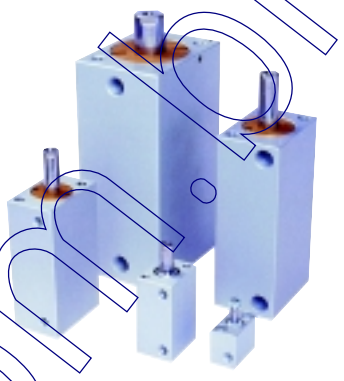


Magnetic Piston

Ordering Prefix **AWS**



Sensors Sold Separately
Flip to our Comtronic®
Limit Sensor catalog.



Base - Side Mount

Non Magnetic Piston

Ordering Prefix **WB**

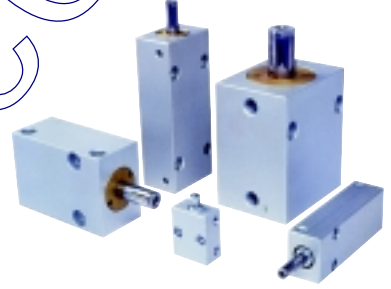


Magnetic Piston

Ordering Prefix **AWB**



Sensors Sold Separately
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Thin - Side Mount

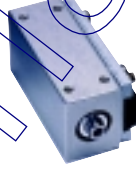
Non Magnetic Piston

Ordering Prefix **WT**

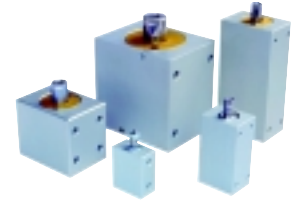


Magnetic Piston

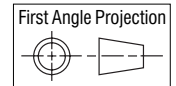
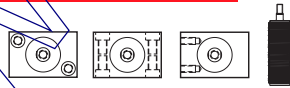
Ordering Prefix **AWT**



Sensors Sold Separately
Flip to our Comtronic®
Limit Sensor catalog.

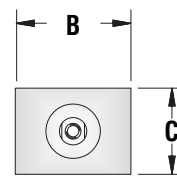
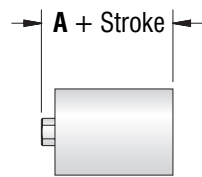


Envelope Dimensions

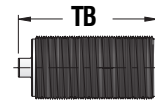


SINGLE ACTING
TB Series
THREADED BODY

Compact® Metric Cylinders					
	A			B	C
Bore	Standard	Intermediate	Heavy		
8	18	21	26	23	13
12	19	24	29	25,5	19
20	23	28	33	39	26
25	23	28	33	47	33
40	31	36	41	65	49

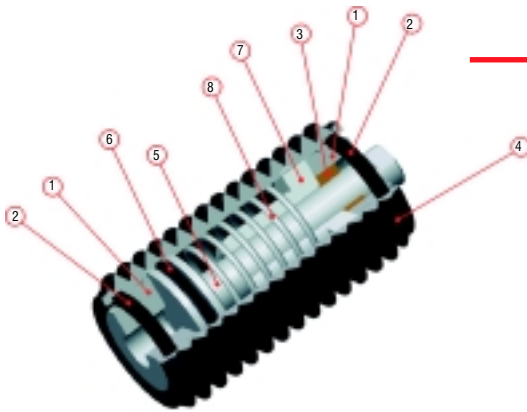


Threaded Body		
Bore	Stroke	TB
8	2,5 - 5	36
8	7,5 - 20	46
12	2,5 - 10	39
12	12,5 - 25	64
16	2,5 - 15	50
16	17,5 - 25	65



Threaded Body

Components, Material, and Descriptions Snap-Cap® Design



No.	Description	Material
1	End Cap	Aluminum (Plastic on 8mm bore)
2	End Cap Retainer Seal	O-ring
3	Rod Bearing	Sintered Bronze
4	Cylinder Body	Anodized Aluminum
5	Solid Piston Rod	Stainless Steel
6	Piston Seal	Low Friction Nitrile
7	Spring Spacer	Plastic
8	Spring	Stainless Steel

A) End Caps ①

are machined of high grade aluminum alloy and anodized for protection against corrosion. They feature our patented Snap-Cap® design with elastomer retainer seal that aids in absorbing impact and extends cylinder life. 8mm bore utilizes a PET plastic rod end cap.

B) Rod Bearing ③

is sintered bronze for wear resistance and longevity. On the 8mm bore, our polyethylene rod end cap doubles as the rod bearing, allowing smooth, accurate, low friction linear movement.

C) Cylinder Body ④

is a diamond honed metric threaded frame with black anodized exterior. Tight tolerances and concentricity guarantee longer life.

D) Seals ② ⑥

are constructed of high grade, low friction Nitrile materials.

E) Solid Piston Rod ⑤

is a solid construction of high grade stainless steel.

F) Spring ⑧

is made of stainless steel to provide corrosion resistance and maximum load capacity.

G) Spring Spacer ⑦

is made of ertalyte and serves a dual function of rod bearing and stroke limiter. Ertalyte material provides low friction and smooth cycling.

These specifications may change with various options. If exact data is required, call the factory with a complete part number for additional information. COMPACT® reserves the right to enhance or change any product, with or without notification to ensure our customer's quality expectations.

8mm - 40mm Components and Material

A) The AccuGrain® Bore is diamond honed and work hardened for roundness and precision tolerances. The AccuGrain® finish retains lubrication which enhances piston seal life. This trademark finish ensures low breakaway friction and seal longevity.

B) Port Orifices enter directly into the bore; no turns, tapers or cross drilling. Crisp, powerful response to pneumatic pressure provides speed, control, and faster cycle time.

C) Lubrication on Snap-Cap® design (8mm and 12mm) is silicone grease. Larger bores (20mm - 40mm) receive a Teflon® base grease. No additional lubrication is required, although it may be added. Other compounds are available.

D) End Caps (1) (10) are machined of high grade aluminum alloy and anodized for protection against corrosion.

- 8mm & 12mm bore end caps feature our patented Snap-Cap® design with elastomeric retainer seal that aids in absorbing piston impact and extends cylinder life. 8mm bore utilizes a PET plastic rod end cap.
- 20mm - 40mm bore and larger feature our patented wire retainer design.

Optional urethane cushions may be added when additional impact resistance is required, available on 20mm - 40mm bore.

E) Retaining Wire (2) is a patented stainless wire-form end cap retainer. This design provides more security than common fasteners and tie rods. It is easily removed for maintenance, altering seal types, or seal replacement.

F) Rod Bearing (4) (9) varies according to duty and bore size.

- 8mm Bore Snap-Cap®
All duties - Our polyethylene rod end cap doubles as the rod bearing, allowing smooth, accurate, low friction linear movement.
- 12mm - 40mm Bore
Standard Duty - Sintered bronze
Husky Duty - Long, oil impregnated bronze

G) Cylinder Body (5) is a thick-walled, diamond honed extrusion with a flat, clear anodized, clean exterior. Tight tolerances and concentricity guarantee longer life. Total Compact® envelope is up to 60% smaller than typical cylinders.

H) Tuf-Coat II® Piston Rod (12) is stainless steel with extremely hard chromium plating and a secondary bonded PTFE treatment. Our unique plating process provides corrosion resistance, typical surface hardness of Rc70-72, reduced friction, and superior wear resistance.

I) Seals (3) (7) (8) (13) are constructed of high grade, low friction, Nitrile materials. Optional seal materials include: HTV, HYD, and VHYD — See Seal Descriptions in 'Accessories' section.

J) Piston Construction (6) (14) (16)

- 8mm & 12mm Bore
 - Single rod end cylinder is a solid one piece construction
 - 12mm double rod end cylinder has a set screw construction.

- 20mm - 40mm Bore
 - Single rod end cylinder - the lightweight aluminum piston is attached to the rod with a flat head socket screw. A thread adhesive is used to assure sealing and secure the assembly from shock and vibration damage.
 - Double rod end cylinders - the piston and rod feature a snap-ring construction.

For strength and higher pressure ratings, alternate constructions are offered.

K) Tuf-Coat® Piston (15) is specially designed for aggressive applications where side load and misalignment are present. The PTFE fluoropolymer is bonded to a high grade aluminum alloy piston which acts as a full length bearing. This feature provides the high yield of the alloy base material with a low coefficient of friction and high abrasion resistance.

Additional Features:

- 100% rebuildable
- 100% bubble tested at 0,7 and 10 BAR before leaving the factory
- Pneumatic service - standard
Optional low pressure hydraulic service* up to 30 BAR (435 PSI) on 20mm - 40mm bore.
(*Hydraulic service available upon request only.)



Threaded Body Cylinders

Snap-Cap® Design

TB Series

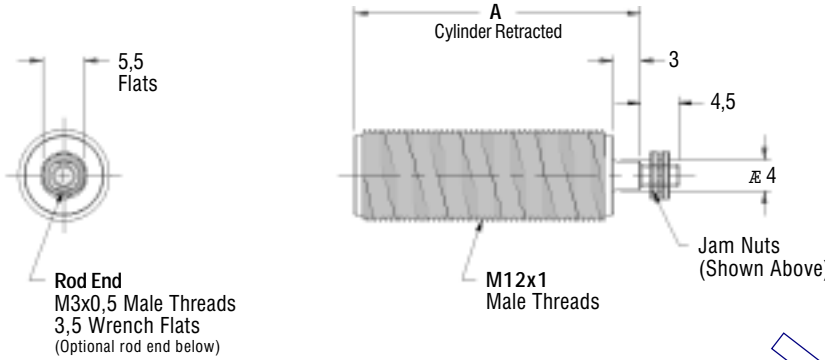
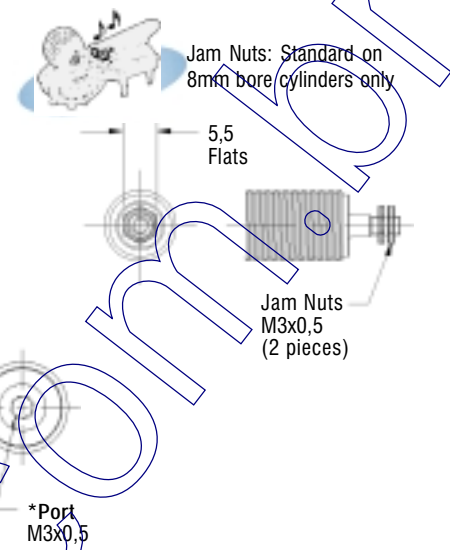
8mm, 12mm, & 16mm Bore

First Angle Projection	Single Acting and Spring Return
Fitting: 10-32 inch thread will fit and function in M5 port.	

8mm Bore

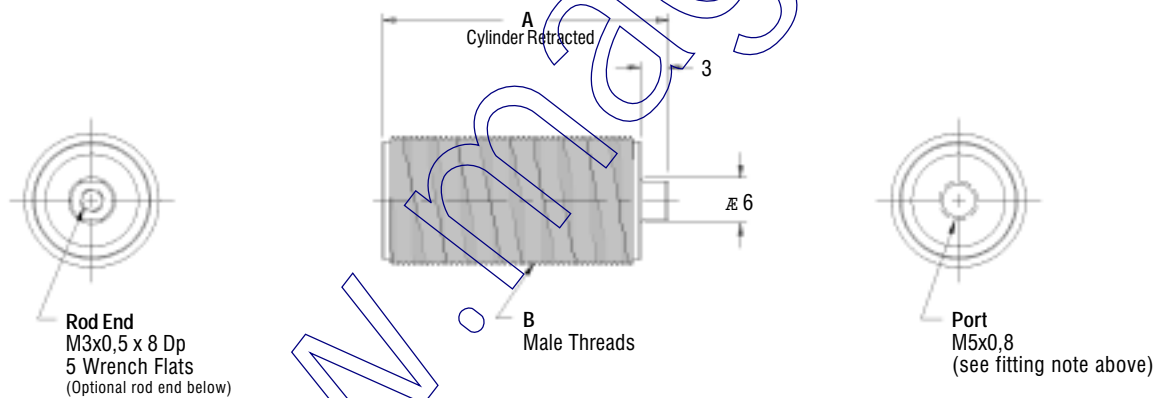
Part Number	Stock Stroke Length	A
TB8x__	2,5 5	36
TB8x__	7,5 10 12,5 15 17,5 20	46

*Optional Porting:
M5x0,8 x 5Dp
Specify suffix M5
(see fitting note above)



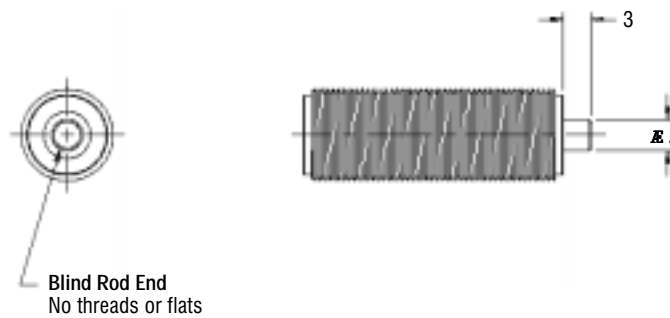
12mm and 16mm Bore

	Part Number	Stock Stroke Length	A	B
12mm	TB12x__	2,5 5 7,5 10	39	M17x1
	TB12x__	12,5 15 17,5 20 22,5 25	64	M17x1
16mm	TB16x__	2,5 5 7,5 10 12,5 15	50	M22x1
	TB16x__	17,5 20 22,5 25	65	M22x1



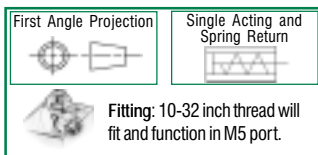
Optional Blind Rod End

Bore	A
8	4
12	6
16	6



BE
Ordering Suffix BE

Modifications Welcome!



Snap-Cap® Design

8mm, 12mm, & 16mm Bore

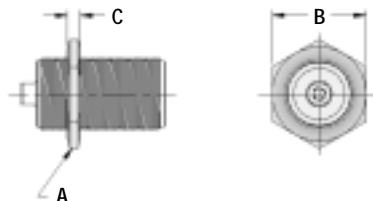
Threaded Body Accessories

TB Series



Jam Nut (1 each) *Sold Separately*

Bore	A	B	C	Torque (Recommended Value)		Part Number
				Lb-Ft	N-M	
8	M12x1	15	2,0-2,5	5,0	6,8	JNM12
12	M17x1	23	2,5-3,0	6,3	8,5	JNM17
16	M22x1	27	2,5-3,0	7,5	10,2	JNM22



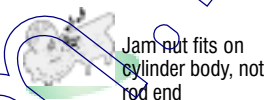
1 Jam Nut

JNM

Specify 12, 17, 22

Ordering Suffix
Material

JNM
Zinc Plated
Steel

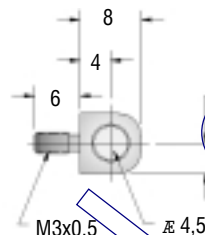


Rod Eye

12mm & 16mm bore only



Rod eye screws flush with cylinder rod face
(Factory Installed)



RE

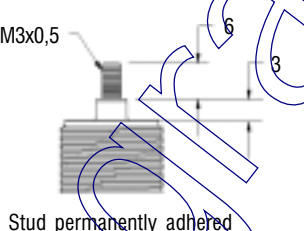
Ordering Suffix
Bore
Pressure Rating
Material

RE
12mm & 16mm
only
5 BAR
Steel black oxide
with sintered
bronze bearing

Studded Male Rod End

12mm & 16mm bore only

M3x0,5



MS

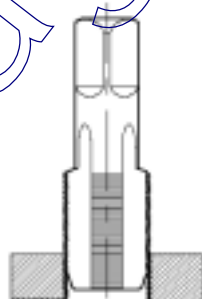
Ordering Suffix
Bore
Material

MS
12mm & 16mm
Steel black oxide

Metric Tap *Sold Separately*

High speed steel, 4 flute bottom tap

Bore	Body Thread	Part Number
8	M12x1	TBTAPM12
12	M17x1	TBTAPM17
16	M22x1	TBTAPM22



TBTAPM__

Specify 12, 17, 22

Part Number
Material

TBTAPM__
High speed steel

Technical Reference

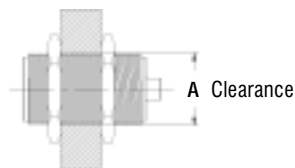
Cylinder Ratings

Pneumatic:
8.5 BAR (125 PSI) Maximum

Seal:
Buna-N (-18° - 93°C)

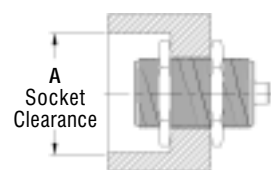
Drop Thru Clearance

Bore	A
8	12,5
12	17,5
16	22,5



Socket Clearance

Bore	A	Socket or Open-end Wrench Size	
		Metric	Inch
8	29	15mm	9/16"
12	39	23mm	7/8"
16	42	27mm	1-1/16"



TB12

Part Number

x

2,5

Stroke

RE

Option - See 'Accessories' section

COMPACT® Threaded Body Cylinders



8mm Bore

Snap-Cap® Design

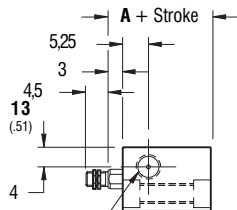
Non Magnetic and Magnetic Piston

First Angle Projection	Double Acting
Fitting: 10-32 inch thread will fit and function in M5 port.	

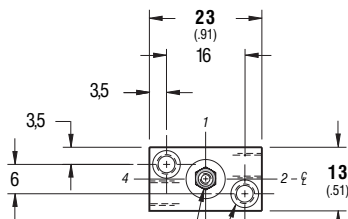
		Part Number		
Duty	Single Rod	Stock Stroke Length	A	
Non Magnetic Piston	Standard	WS8x_____	5	16

Standard Mounting:

- TF TR
- TM TBE

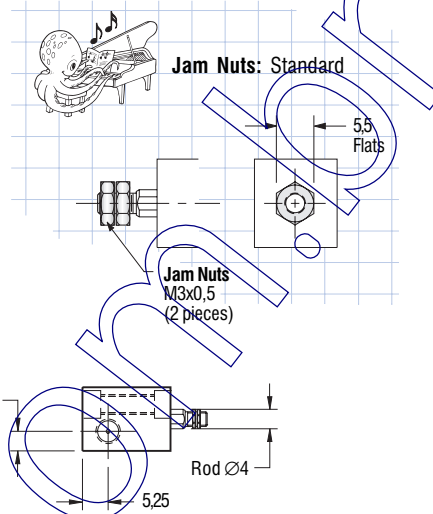


Port
M5x0,8 Tap x 5 Dp
(2 Places)



Rod End
M3x0,5 Turned Male Threads
3,5 Wrench Flats
(See jam nut note above)

Mounting Hole
M4x0,7 Tap Thru
Thru Mount for M3x0,5 SHCS
5,65 Dia C' bore x 3,5 Dp
(2 Per End)



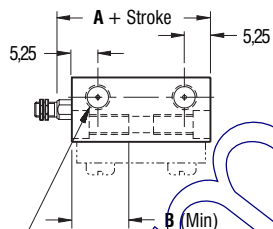
		Part Number		
Duty	Single Rod	Stock Stroke Length (in 5mm increments)	A	B
Non Magnetic Piston	Standard	WS8x_____	10 - 15	16, 9,5
	Intermediate	WSHH8x_____	5 - 10	21, 9,5
	Heavy	WSFH8x_____	5	26, 9,5
Magnetic Piston	Standard	AWS8x_____	5	26, 11,5

Standard Mounting:

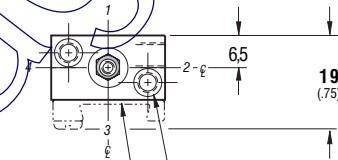
- TF TR TM TBE

This stroke length allows only one sensor.

— Information same as above except where noted —

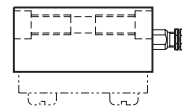


Port
M5x0,8 Tap x 5 Dp
(2 Places)



Mounting Hole
M4x0,7 Tap
Thru Mount for M3x0,5 SHCS
5,65 Dia C' bore x 3,5 Dp
(2 Per End)

Optional Sensor
Mounting Track



		Part Number		
Duty	Single Rod	Stock Stroke Length (in 5mm increments)	A	
Non Magnetic Piston	Standard	WS8x_____	20 - 25	16
	Intermediate	WSHH8x_____	15 - 30	21
	Heavy	WSFH8x_____	10 - 40	26
Magnetic Piston	Standard	AWS8x_____	10 - 25	26
	Intermediate	AWSHH8x_____	5 - 30	31
	Heavy	AWSFH8x_____	5 - 30	36

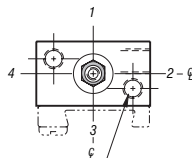
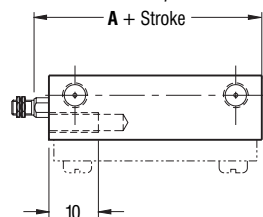
Standard Mounting: TF
Optional Mounting: Specify suffix

- TR TBE TM*

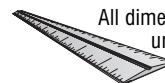
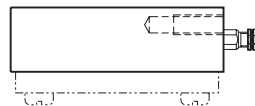
*38mm body length and shorter

Body lengths 42mm and shorter allow only one sensor.

— Information same as above except where noted —



Mounting Hole
M4x0,7 Tap
(2 Places)





First Angle Projection Double Acting

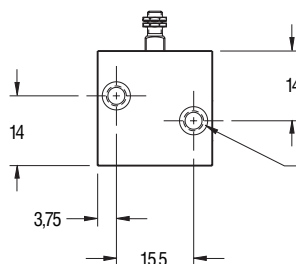
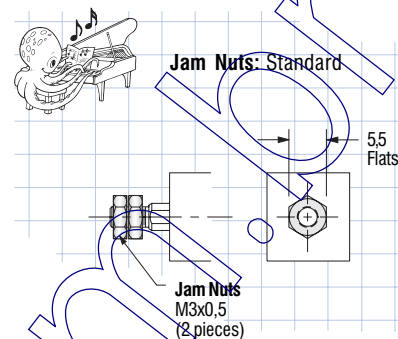
Fitting: 10-32 inch thread will fit and function in M5 port.

Snap-Cap® Design

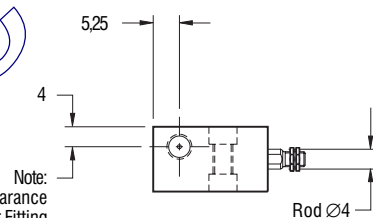
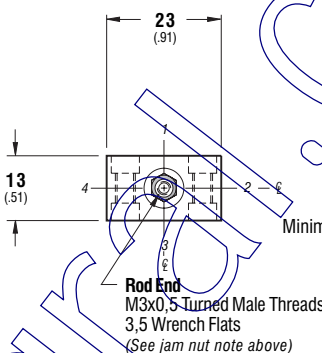
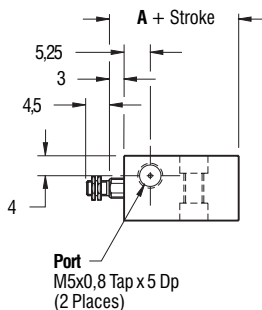
8mm Bore

Non Magnetic and Magnetic Piston

		Part Number		
Duty	Single Rod	Stock Stroke Length (in 5mm increments)	A	
Non Magnetic Piston	Standard	WB8x____	5 - 10	16
	Intermediate	WBHH8x____	5	21



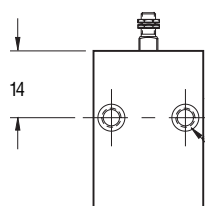
Mounting Hole
M4x0,7 Tap Thru
Thru Mount for M3x0,5 SHCS
5,65 Dia C' bore x 3,5 Dp
(2 Per Side)



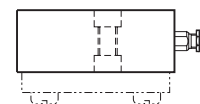
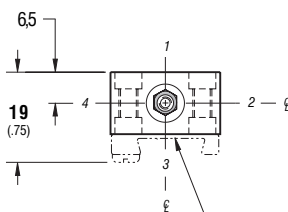
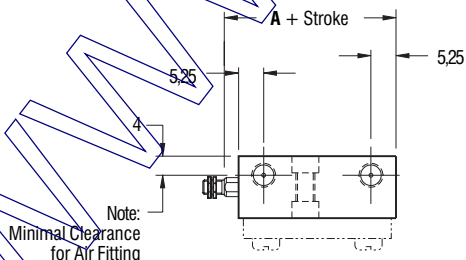
		Part Number		
Duty	Single Rod	Stock Stroke Length (in 5mm increments)	A	
Non Magnetic Piston	Standard	WB8x____	15 - 25	16
	Intermediate	WBHH8x____	10 - 30	21
	Heavy	WBFH8x____	5 - 40	26
Magnetic Piston	Standard	AWB8x____	5 - 25	26
	Intermediate	AWBHH8x____	5 - 30	31
	Heavy	AWBFH8x____	5 - 30	36

—Information same as above except where noted—

Body lengths 42mm and shorter allow only one sensor.



Mounting Hole
M4x0,7 Tap Thru
Thru Mount for M3x0,5 SHCS
5,65 Dia C' bore x 3,5 Dp
(2 Per Side)



All dimensions are in millimeters unless otherwise noted.

Part Number X

Stroke Option - See 'Accessories' section



8mm Bore

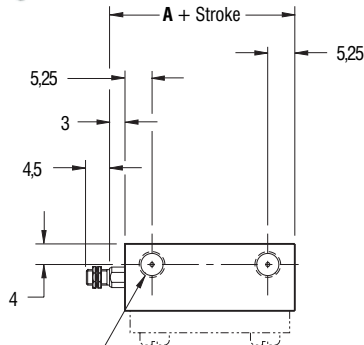
Snap-Cap® Design

Non Magnetic and Magnetic Piston

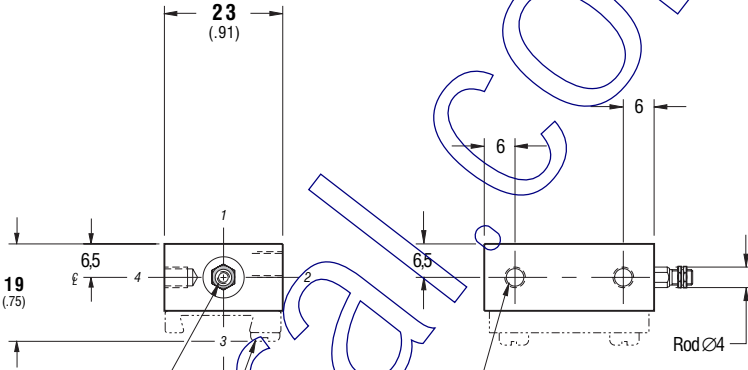
<p>First Angle Projection</p>	<p>Double Acting</p>
<p>Fitting: 10-32 inch thread will fit and function in M5 port.</p>	

Duty	Part Number			
	Single Rod	Stock Stroke Length (in 5mm increments)	A	
Non Magnetic Piston	Standard	WT8x_____	10 - 25	16
	Intermediate	WTHH8x_____	5 - 30	21
	Heavy	WTFH8x_____	5 - 40	26
Magnetic Piston	Standard	AWT8x_____	5 - 25	26
	Intermediate	AWTHH8x_____	5 - 30	31
	Heavy	AWTFH8x_____	5 - 30	36

Body lengths 42mm and shorter allow only one sensor.



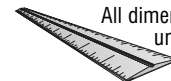
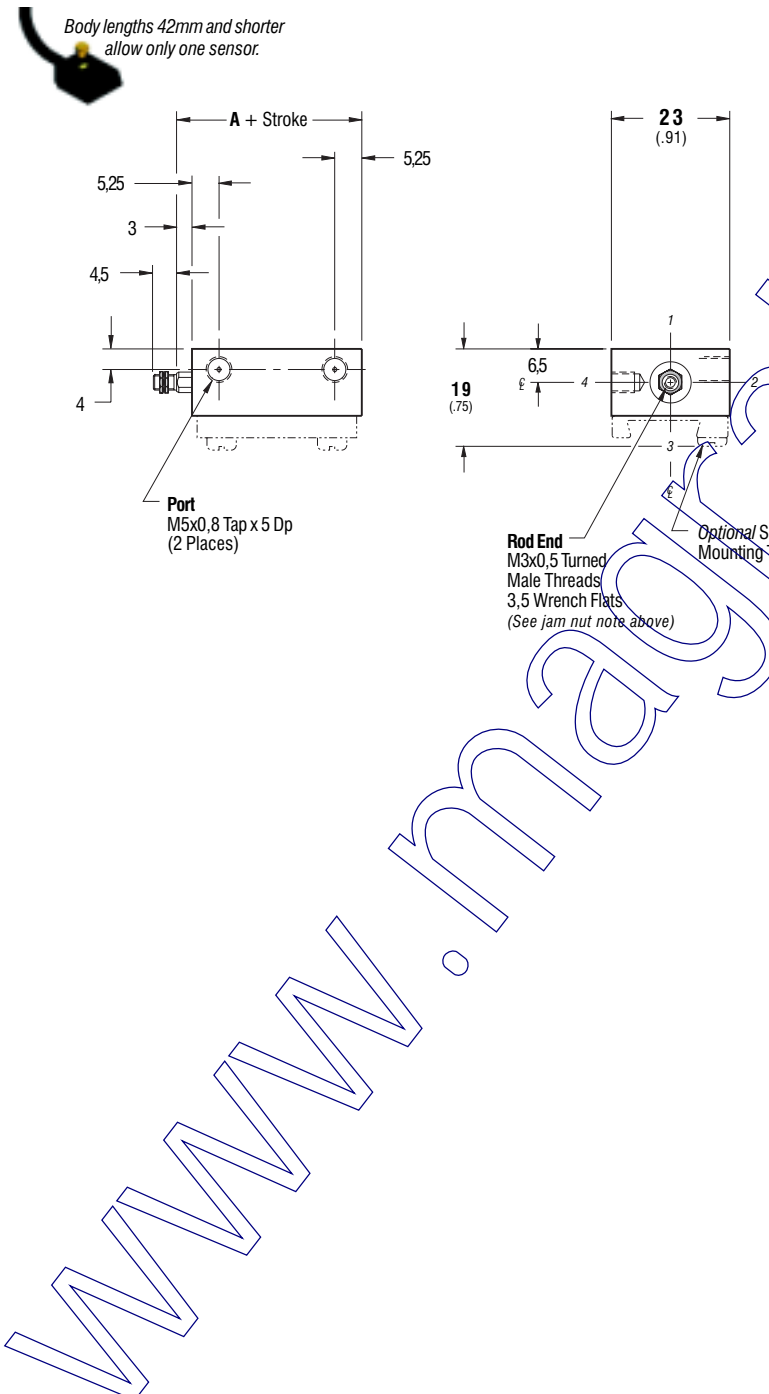
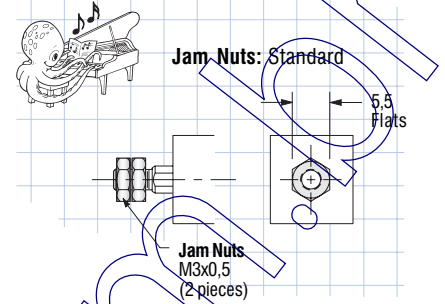
Port
M5x0,8 Tap x 5 Dp
(2 Places)

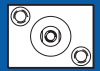


Rod End
M3x0,5 Turned Male Threads
3,5 Wrench Flats
(See jam nut note above)

Optional Sensor Mounting Track

Mounting Hole
M4x0,7 Tap x 4,5 Dp
(2 Places)





End Mount

First Angle Projection Double Acting

Fitting: 10-32 inch thread will fit and function in M5 port.

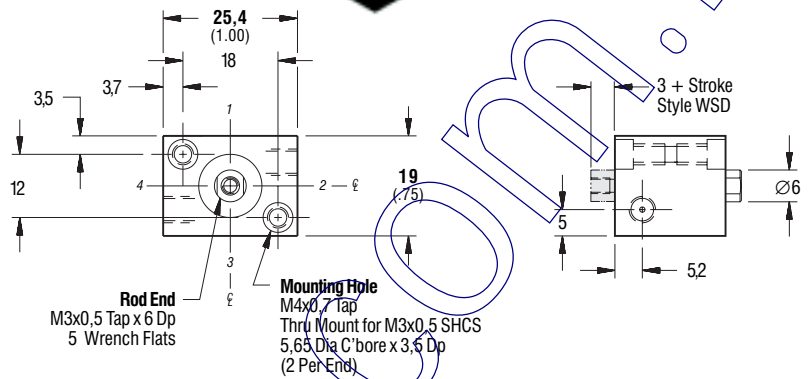
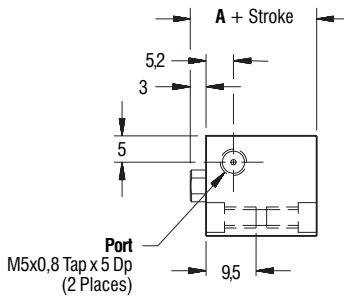
Snap-Cap® Design

12mm Bore Non Magnetic and Magnetic Piston

Duty	Part Number		Stock Stroke Length (in 5mm increments)	A
	Single Rod	Double Rod		
Non Magnetic Piston	Standard	WS12x___ WSD12x___	5	19

Standard Mounting: TF TR TM TBE

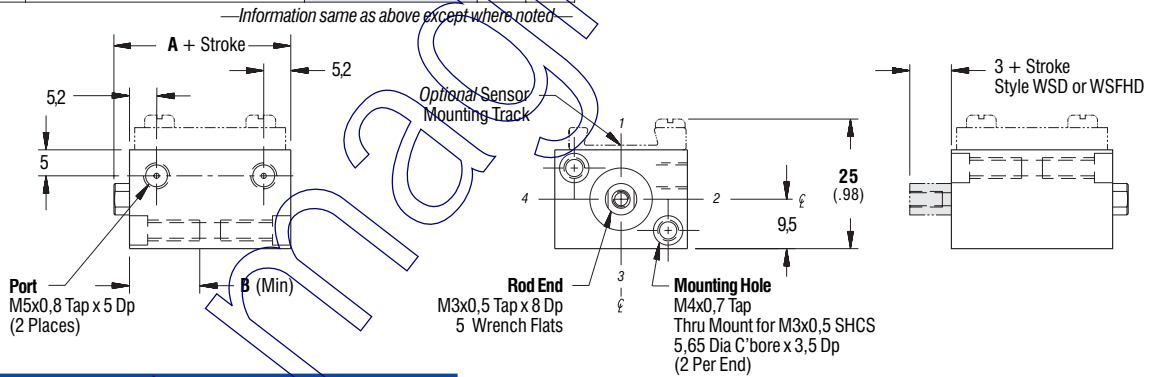
This stroke length allows only one sensor.



Duty	Part Number		Stock Stroke Length (in 5mm increments)	A	B
	Single Rod	Double Rod			
Non Magnetic Piston	Standard	WS12x___ WSD12x___	10 - 15	19	11.5
	Intermediate	WSSH12x___	5 - 10	24	11.5
	Heavy	WSFH12x___ WSFHD12x___	5	29	13.8
Magnetic Piston	Standard	AWS12x___ AWSD12x___	5	29	13.5

Standard Mounting: TF TR TM TBE

This stroke length allows only one sensor.



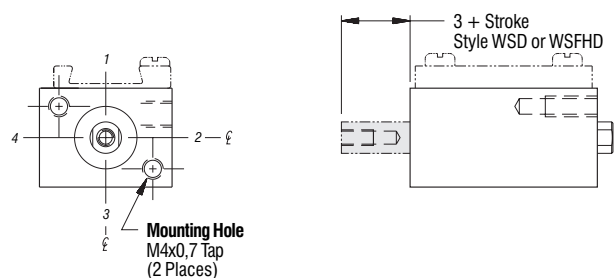
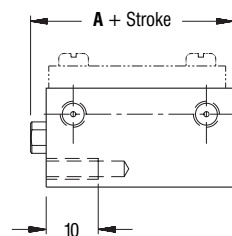
Duty	Part Number		Stock Stroke Length (in 5mm increments)	A
	Single Rod	Double Rod		
Non Magnetic Piston	Standard	WS12x___ WSD12x___	20 - 50	19
	Intermediate	WSSH12x___	15 - 50	24
	Heavy	WSFH12x___ WSFHD12x___	10 - 50	29
Magnetic Piston	Standard	AWS12x___ AWSD12x___	10 - 50	29
	Intermediate	AWSH12x___	5 - 50	34
	Heavy	AWSFH12x___ AWSFHD12x___	5 - 50	39

Standard Mounting: TF
Optional Mounting: Specify suffix

TR TBE TM*

*41mm body length and shorter

Body lengths 45mm and shorter allow only one sensor.



All dimensions are in millimeters unless otherwise noted.

Part Number X Stroke Option - See 'Accessories' section

COMPACT® Metric Cylinders

12mm Bore • 12mm Bore • 12mm Bore • 12mm Bore • 12mm Bore • 12mm Bore



12mm Bore

Snap-Cap® Design

Non Magnetic and Magnetic Piston

First Angle Projection

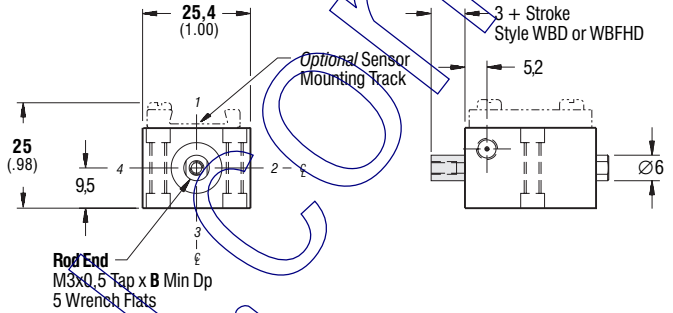
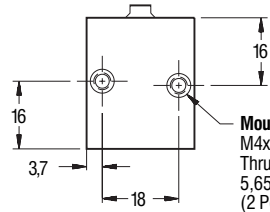
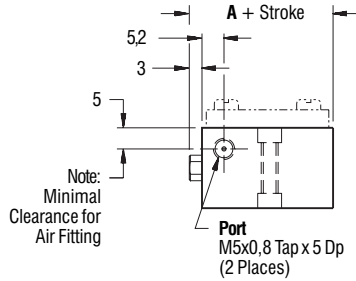
Double Acting

Fitting: 10-32 inch thread will fit and function in M5 port.

12mm Bore • 12mm Bore • 12mm Bore • 12mm Bore • 12mm Bore

		Part Number		Stock Stroke Length (in 5mm increments)	A	B
Duty		Single Rod	Double Rod			
Non Magnetic Piston	Standard	WB12x___	WBD12x___	5 - 15	19	6
	Intermediate	WBHH12x___		5 - 10	24	8
	Heavy	WBFH12x___	WBFHD12x___	5	29	8
Magnetic Piston	Standard	AWB12x___	AWBD12x___	5	29	8

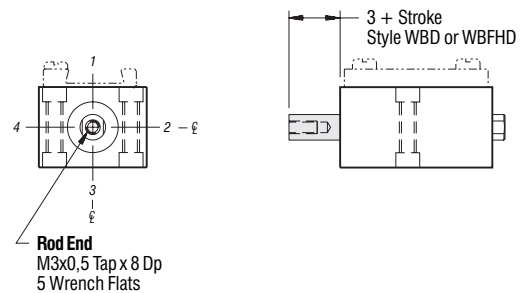
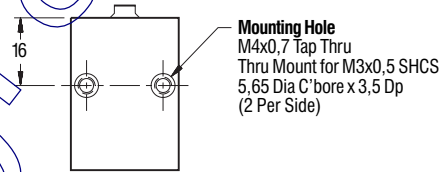
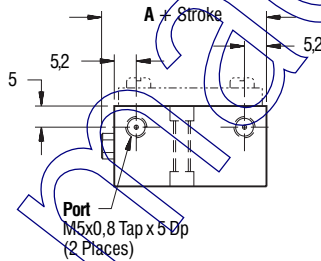
This stroke length allows only one sensor.



		Part Number		Stock Stroke Length (in 5mm increments)	A
Duty		Single Rod	Double Rod		
Non Magnetic Piston	Standard	WB12x___	WBD12x___	20 - 50	19
	Intermediate	WBHH12x___		15 - 50	24
	Heavy	WBFH12x___	WBFHD12x___	10 - 45	29
Magnetic Piston	Standard	AWB12x___	AWBD12x___	10 - 50	29
	Intermediate	AWBHH12x___		5 - 50	34
	Heavy	AWBFH12x___	AWBFHD12x___	5 - 45	39

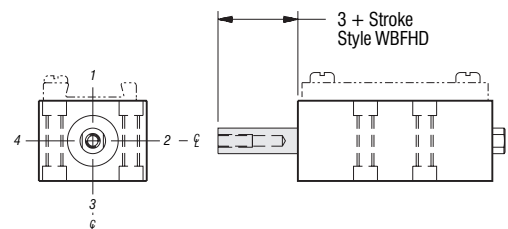
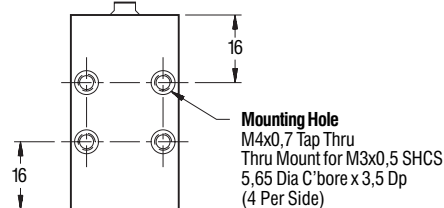
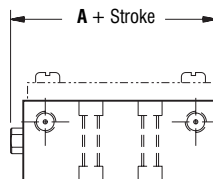
Body lengths 45mm and shorter allow only one sensor.

—Information same as above except where noted—



		Part Number		Stock Stroke Length (in 5mm increments)	A
Duty		Single Rod	Double Rod		
Non Magnetic Piston	Heavy	WBFH12x___	WBFHD12x___	50	29
Magnetic Piston	Heavy	AWBFH12x___	AWBFHD12x___	50	39

—Information same as above except where noted—



All dimensions are in millimeters unless otherwise noted.



First Angle Projection

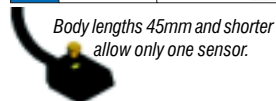
Double Acting

Fitting: 10-32 inch thread will fit and function in M5 port.

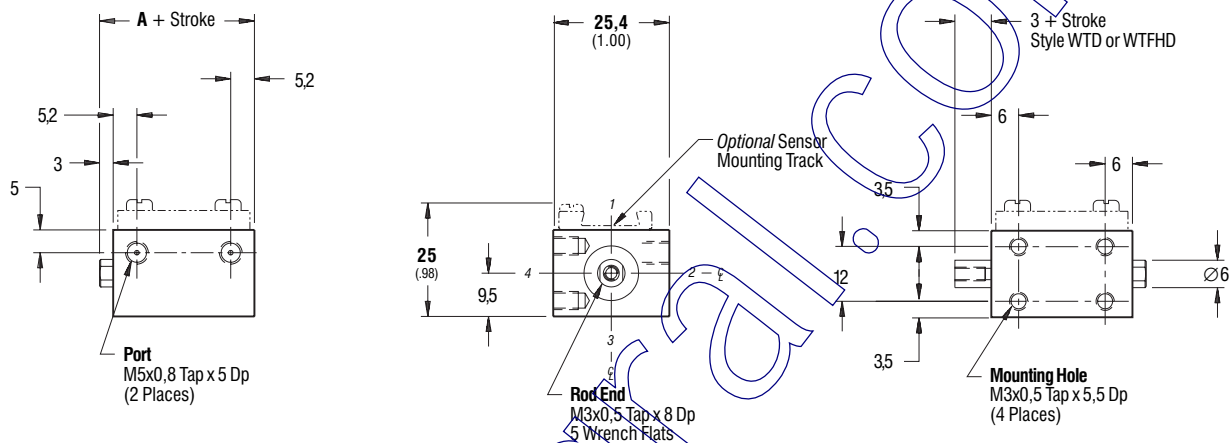
Snap-Cap® Design

12mm Bore Non Magnetic and Magnetic Piston

		Part Number		Stock Stroke Length (in 5mm increments)	A
Duty		Single Rod	Double Rod		
Non Magnetic Piston	Standard	WT12x_____	WTD12x_____	10 - 50	19
	Intermediate	WTHH12x_____		5 - 50	24
	Heavy	WTFH12x_____	WTFHD12x_____	5 - 50	29
Magnetic Piston	Standard	AWT12x_____	AWTD12x_____	5 - 50	29
	Intermediate	AWTHH12x_____		5 - 50	34
	Heavy	AWTFH12x_____	AWTFHD12x_____	5 - 50	39



Body lengths 45mm and shorter allow only one sensor.



12mm Bore • 12mm Bore • 12mm Bore • 12mm Bore • 12mm Bore • 12mm Bore

All dimensions are in millimeters unless otherwise noted.

x

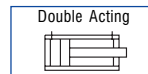
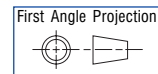
Part Number Stroke Option - See 'Accessories' section



20mm Bore

End Mount

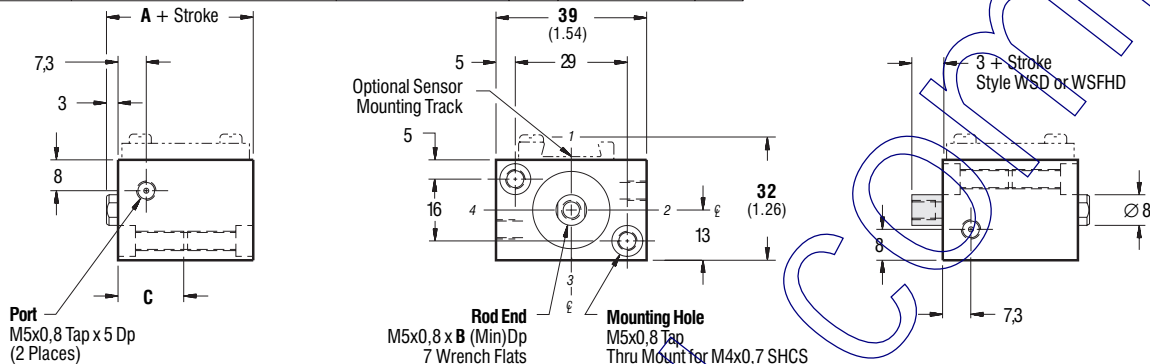
Non Magnetic and Magnetic Piston



		Part Number		Stock Stroke Length in 5mm increments	A	B per 5mm, respectively	C
Duty		Single Rod	Double Rod				
Non Magnetic Piston	Standard	WS20x	WSD20x	5, 10, 15	23	8, 10, 12,5	12,5
	Intermediate	WSHH20x		5, 10	28	10, 12,5	15
	Heavy	WSFH20x	WSFHD20x	5	33	12,5	17,5
Magnetic Piston	Standard	AWS20x	AWSD20x	5	33	10	17,5

Standard Mounting:
TF TR TM TBE

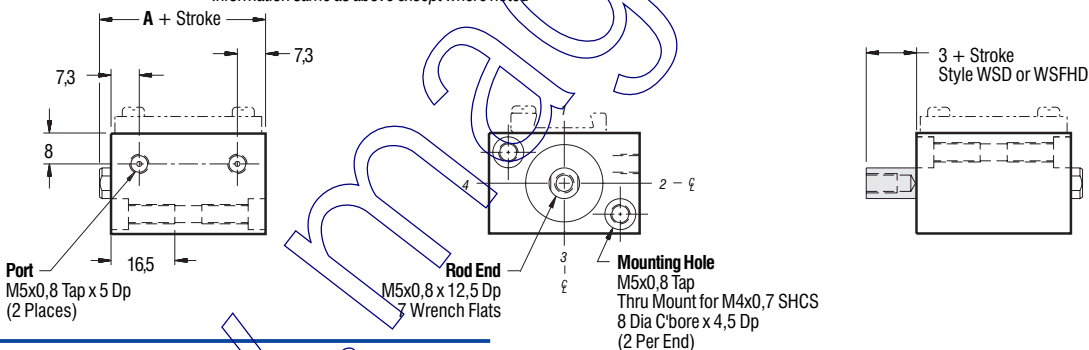
This stroke length allows only one sensor.



		Part Number		Stock Stroke Length (in 5mm increments)	A
Duty		Single Rod	Double Rod		
Non Magnetic Piston	Standard	WS20x	WSD20x	20 - 25	23
	Intermediate	WSHH20x		15 - 20	28
	Heavy	WSFH20x	WSFHD20x	10 - 15	33
Magnetic Piston	Standard	AWS20x	AWSD20x	10 - 15	33
	Intermediate	AWSHH20x		5 - 10	38
	Heavy	AWSFH20x	AWSFHD20x	5	43

Standard Mounting:
TF TR TM TBE

Body lengths 44mm and shorter allow only one sensor.

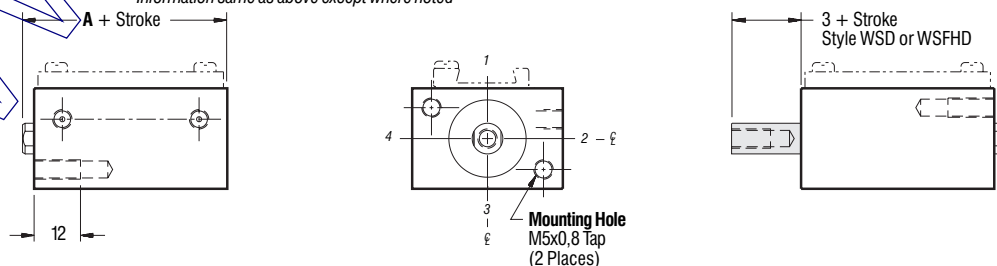


		Part Number		Stock Stroke Length (in 5mm increments)	A
Duty		Single Rod	Double Rod		
Non Magnetic Piston	Standard	WS20x	WSD20x	30 - 100	23
	Intermediate	WSHH20x		25 - 100	28
	Heavy	WSFH20x	WSFHD20x	20 - 100	33
Magnetic Piston	Standard	AWS20x	AWSD20x	20 - 100	33
	Intermediate	AWSHH20x		15 - 100	38
	Heavy	AWSFH20x	AWSFHD20x	10 - 100	43

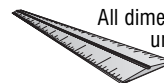
Standard Mounting: **TF**
Optional Mounting: Specify suffix

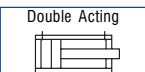
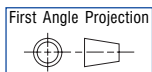
TR TBE TM*

*70mm body length and shorter



All dimensions are in millimeters unless otherwise noted.

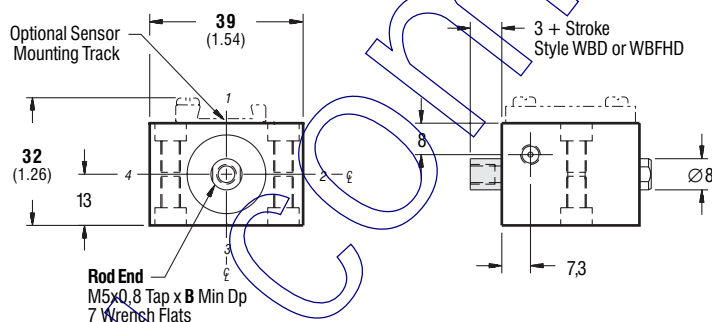
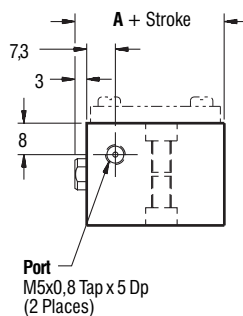




20mm Bore

Non Magnetic and Magnetic Piston

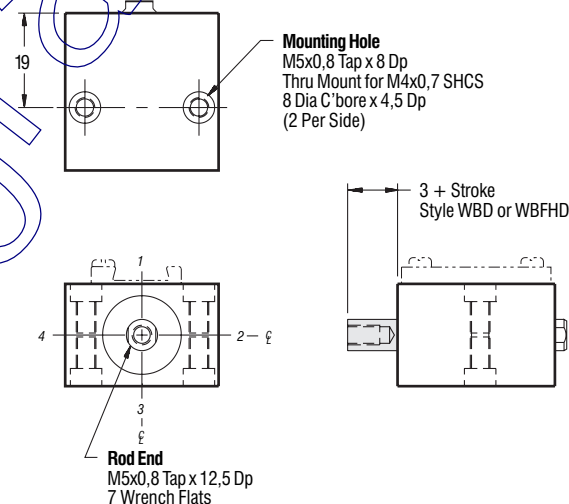
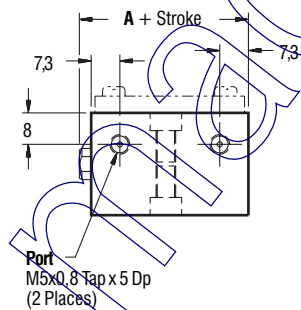
Duty	Part Number		Stock Stroke Length (in 5mm increments)	A	B per 5mm respectively
	Single Rod	Double Rod			
Non Magnetic Piston	Standard	WB20x___ WBD20x___	5, 10, 15	23	8, 10, 12,5
	Intermediate	WBHH20x___	5, 10	28	10, 12,5
	Heavy	WBFH20x___ WBFHD20x___	5	33	12,5
Magnetic Piston	Standard	AWB20x___ AWBD20x___	5	33	10



Duty	Part Number		Stock Stroke Length (in 5mm increments)	A
	Single Rod	Double Rod		
Non Magnetic Piston	Standard	WB20x___ WBD20x___	20 - 55	23
	Intermediate	WBHH20x___	15 - 50	28
	Heavy	WBFH20x___ WBFHD20x___	10 - 45	33
Magnetic Piston	Standard	AWB20x___ AWBD20x___	10 - 45	33
	Intermediate	AWBHH20x___	5 - 40	38
	Heavy	AWBFH20x___ AWBFHD20x___	5 - 35	43

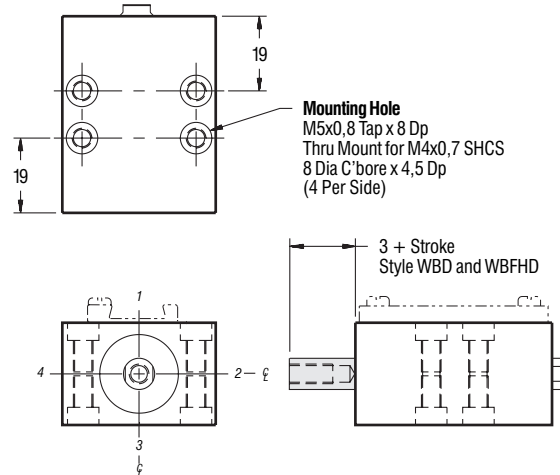
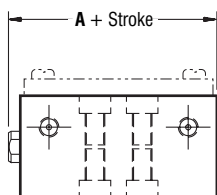


— Information same as above except where noted —



Duty	Part Number		Stock Stroke Length (in 5mm increments)	A
	Single Rod	Double Rod		
Non Magnetic Piston	Standard	WB20x___ WBD20x___	60 - 100	23
	Intermediate	WBHH20x___	55 - 100	28
	Heavy	WBFH20x___ WBFHD20x___	50 - 100	33
Magnetic Piston	Standard	AWB20x___ AWBD20x___	50 - 100	33
	Intermediate	AWBHH20x___	45 - 100	38
	Heavy	AWBFH20x___ AWBFHD20x___	40 - 100	43

— Information same as above except where noted —



All dimensions are in millimeters unless otherwise noted.

Part Number x

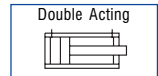
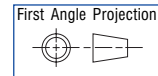
Stroke Option - See 'Accessories' section



20mm Bore

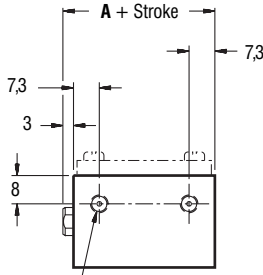
Side Mount

Non Magnetic and Magnetic Piston

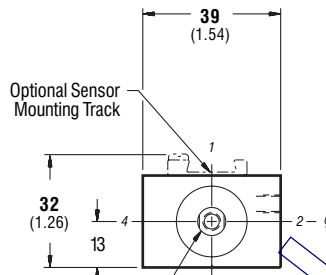


		Part Number		Stock Stroke Length (in 5mm increments)	A
Duty		Single Rod	Double Rod		
Non Magnetic Piston	Standard	WT20x_____	WTD20x_____	20 - 100	23
	Intermediate	WTHH20x_____		15 - 100	28
	Heavy	WTFH20x_____	WTFHD20x_____	10 - 100	33
Magnetic Piston	Standard	AWT20x_____	AWTD20x_____	10 - 100	33
	Intermediate	AWTHH20x_____		5 - 100	38
	Heavy	AWTFH20x_____	AWTFHD20x_____	5 - 100	43

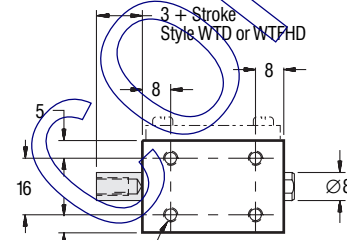
Body lengths 44mm and shorter allow only one sensor.



Port
M5x0.8 Tap x 5 Dp
(2 Places)



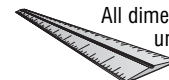
Rod End
M5x0.8 Tap x 12.5 Dp
7 Wrench Flats

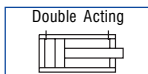
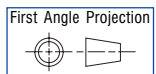
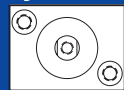


Mounting Hole
M4x0.7 Tap x 8.5 Dp
(4 Places)

20mm Bore • 20mm Bore • 20mm Bore • 20mm Bore • 20mm Bore • 20mm Bore

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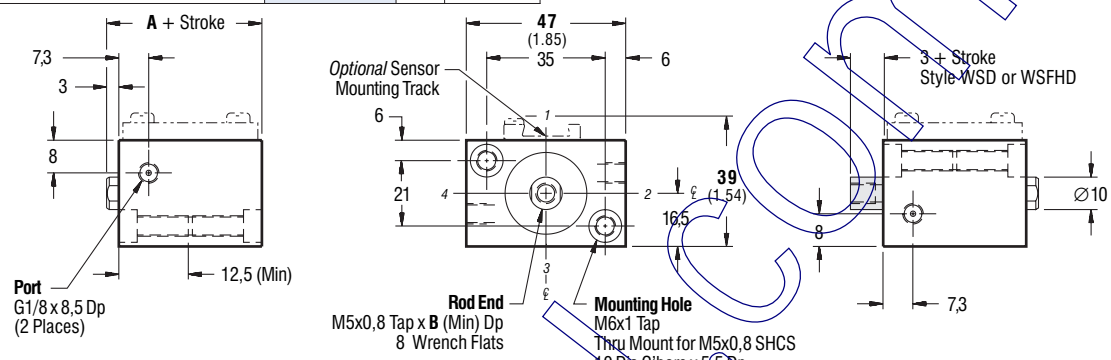


25mm Bore

Non Magnetic and Magnetic Piston

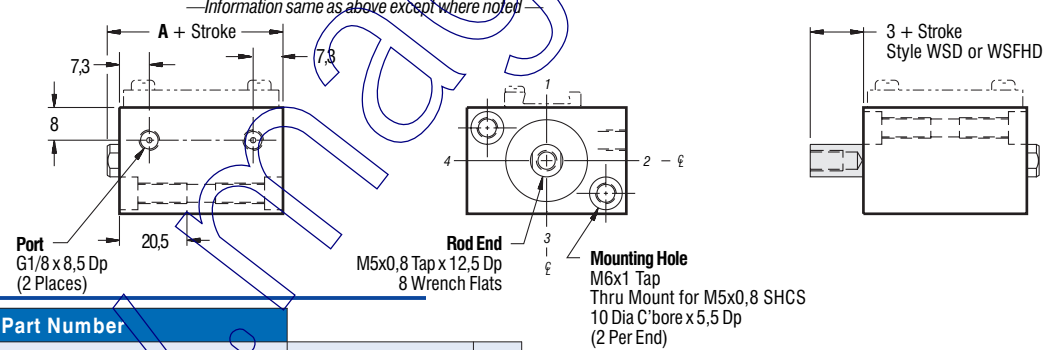
		Part Number		Stock Stroke Length (in 5mm increments)	A	B per 5mm respectively
Duty		Single Rod	Double Rod			
Non Magnetic Piston	Standard	WS25x	WSD25x	5, 10, 15	23	8, 10, 12,5
	Intermediate	WSHH25x		5, 10	28	10, 12,5
	Heavy	WSFH25x	WSFHD25x	5	33	12,5
Magnetic Piston	Standard	AWS25x	AWSD25x	5, 10	28	10
	Intermediate	AWSHH25x		5	33	12,5

Standard Mounting:
TF TR TM TBE



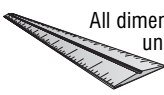
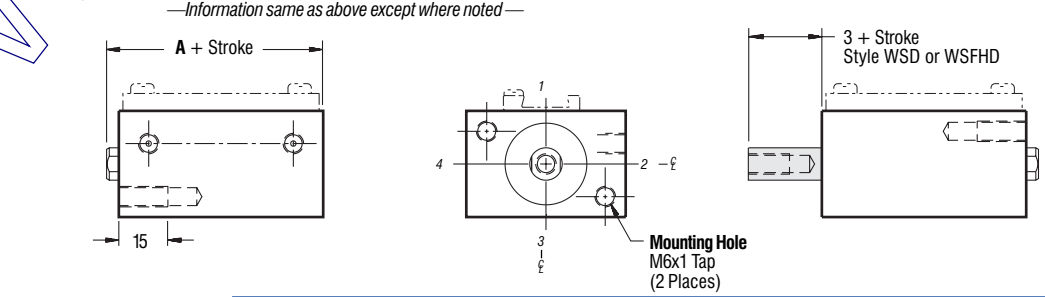
		Part Number		Stock Stroke Length (in 5mm increments)	A
Duty		Single Rod	Double Rod		
Non Magnetic Piston	Standard	WS25x	WSD25x	20 - 25	23
	Intermediate	WSHH25x		15 - 20	28
	Heavy	WSFH25x	WSFHD25x	10 - 15	33
Magnetic Piston	Standard	AWS25x	AWSD25x	15 - 20	28
	Intermediate	AWSHH25x		10 - 15	33
	Heavy	AWSFH25x	AWSFHD25x	5 - 10	38

Standard Mounting:
TF TR TM TBE



		Part Number		Stock Stroke Length (in 5mm increments)	A
Duty		Single Rod	Double Rod		
Non Magnetic Piston	Standard	WS25x	WSB25x	30 - 100	23
	Intermediate	WSHH25x		25 - 100	28
	Heavy	WSFH25x	WSFHD25x	20 - 100	33
Magnetic Piston	Standard	AWS25x	AWSD25x	25 - 100	28
	Intermediate	AWSHH25x		20 - 100	33
	Heavy	AWSFH25x	AWSFHD25x	15 - 100	38

Standard Mounting: TF
Optional Mounting: Specify suffix
TR TBE TM*
*70mm body length and shorter

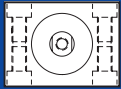


All dimensions are in millimeters unless otherwise noted.

Part Number X

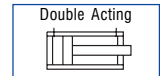
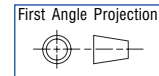
COMPACT Metric Cylinders

25mm Bore • 25mm Bore • 25mm Bore • 25mm Bore • 25mm Bore • 25mm Bore



25mm Bore

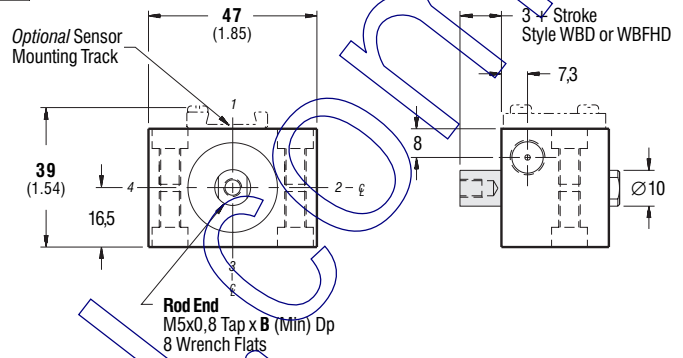
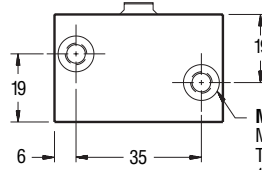
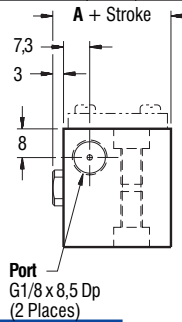
Side Mount Non Magnetic and Magnetic Piston



25mm Bore • 25mm Bore • 25mm Bore • 25mm Bore

Duty	Part Number		Stock Stroke Length in 5mm increments	A	B per 5mm respectively
	Single Rod	Double Rod			
Non Magnetic Piston	Standard	WB25x___ WBD25x___	5, 10, 15	23	8, 10, 12,5
	Intermediate	WBHH25x___	5, 10	28	10, 12,5
	Heavy	WBFH25x___ WBFHD25x___	5	33	12,5
Magnetic Piston	Standard	AWB25x___ AWBD25x___	5, 10	28	10, 12,5
	Intermediate	AWBHH25x___	5	33	12,5

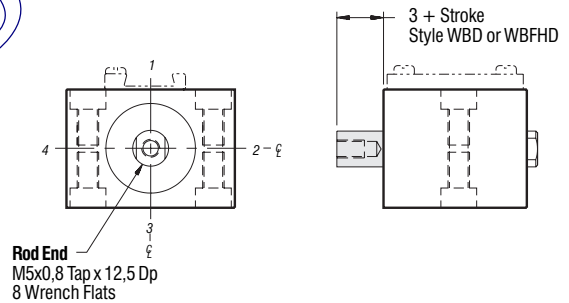
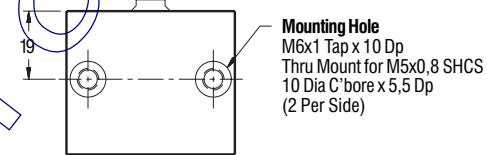
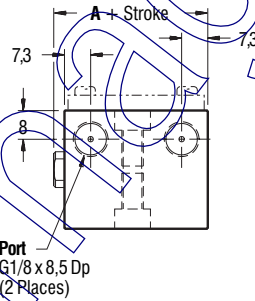
This stroke length allows only one sensor.



Duty	Part Number		Stock Stroke Length (in 5mm increments)	A
	Single Rod	Double Rod		
Non Magnetic Piston	Standard	WB25x___ WBD25x___	20 - 55	23
	Intermediate	WBHH25x___	15 - 50	28
	Heavy	WBFH25x___ WBFHD25x___	10 - 45	33
Magnetic Piston	Standard	AWB25x___ AWBD25x___	15 - 50	28
	Intermediate	AWBHH25x___	10 - 45	33
	Heavy	AWBFH25x___ AWBFHDx25___	5 - 40	38

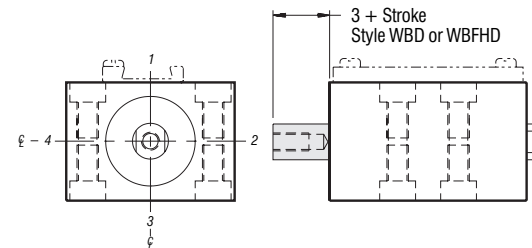
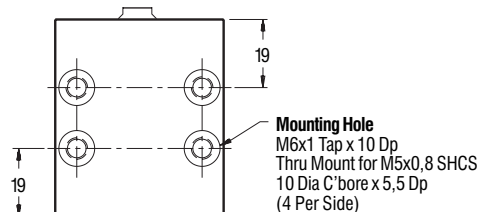
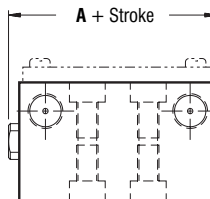
—Information same as above except where noted—

Body lengths 44mm and shorter allow only one sensor.

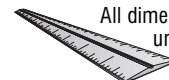


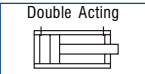
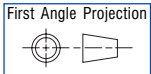
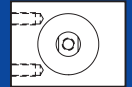
Duty	Part Number		Stock Stroke Length (in 5mm increments)	A
	Single Rod	Double Rod		
Non Magnetic Piston	Standard	WB25x___ WBD25x___	60 - 100	23
	Intermediate	WBHH25x___	55 - 100	28
	Heavy	WBFH25x___ WBFHD25x___	50 - 100	33
Magnetic Piston	Standard	AWB25x___ AWBD25x___	55 - 100	28
	Intermediate	AWBHH25x___	50 - 100	33
	Heavy	AWBFH25x___ AWBFHDx25___	45 - 100	38

—Information same as above except where noted—



All dimensions are in millimeters unless otherwise noted.

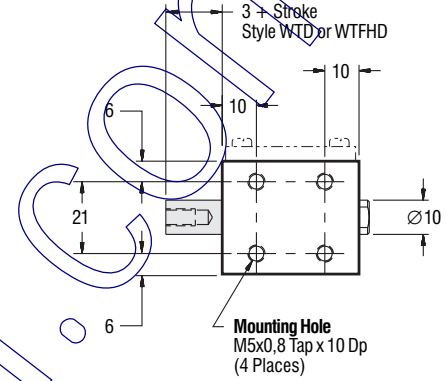
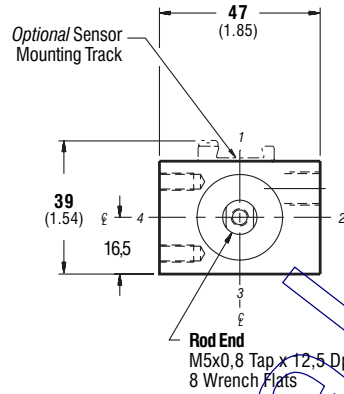
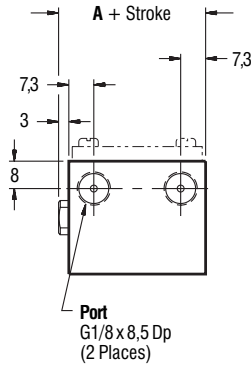




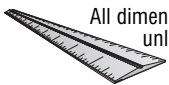
25mm Bore

Non Magnetic and Magnetic Piston Side Mount

		Part Number		Stock Stroke Length (in 5mm increments)	A
Duty		Single Rod	Double Rod		
Non Magnetic Piston	Standard	WT25x_____	WTD25x_____	20 - 100	23
	Intermediate	WTHH25x_____		15 - 100	28
	Heavy	WTFH25x_____	WTFHD25x_____	10 - 100	33
Magnetic Piston	Standard	AWT25x_____	AWTD25x_____	15 - 100	28
	Intermediate	AWTHH25x_____		10 - 100	33
	Heavy	AWTFH25x_____	AWTFHD25x_____	5 - 100	38



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All dimensions are in millimeters unless otherwise noted.

Part Number X

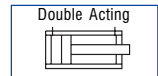
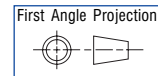
Stroke Option - See 'Accessories' section



40mm Bore

End Mount

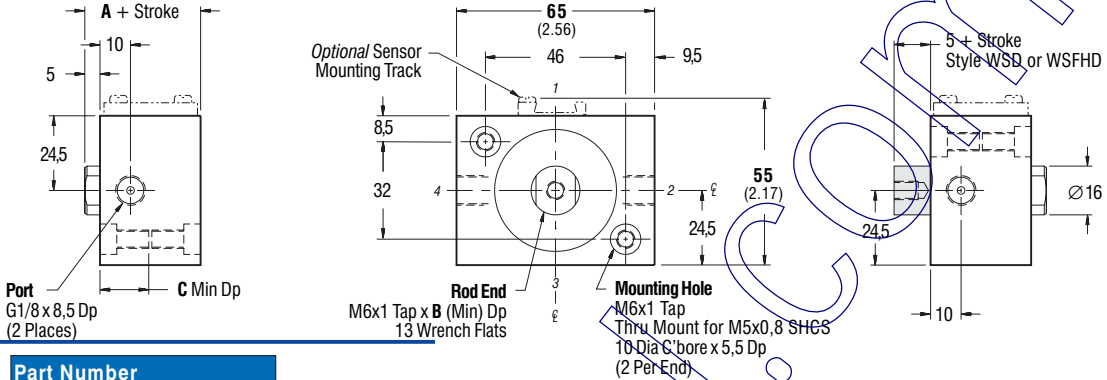
Non Magnetic and Magnetic Piston



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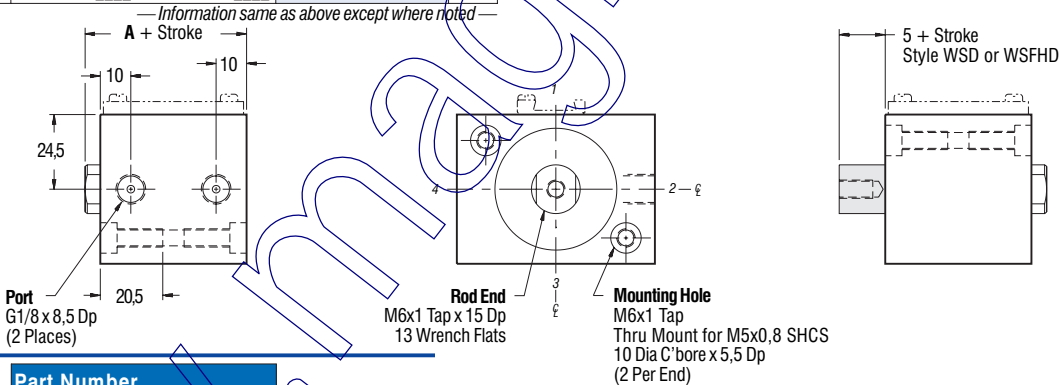
		Part Number		Stock Stroke Length in 5mm increments	A	B per 5mm respectively	C
Duty		Single Rod	Double Rod				
Non Magnetic Piston	Standard	WS40x	WSD40x	5, 10, 15	31	9, 12, 14	15,5
	Intermediate	WSHH40x		5, 10	36	12, 14	18
	Heavy	WSFH40x	WSFHD40x	5	41	14	20,5
Magnetic Piston	Standard	AWS40x	AWSD40x	5, 10	36	12, 14	18
	Intermediate	AWSHH40x		5	41	14	20,5

Standard Mounting:
TF TR TM TBE



		Part Number		Stock Stroke Length (in 5mm increments)	A
Duty		Single Rod	Double Rod		
Non Magnetic Piston	Standard	WS40x	WSD40x	20 - 25	31
	Intermediate	WSHH40x		15 - 20	36
	Heavy	WSFH40x	WSFHD40x	10 - 15	41
Magnetic Piston	Standard	AWS40x	AWSD40x	15 - 20	36
	Intermediate	AWSHH40x		10 - 15	41
	Heavy	AWSFH40x	AWSFHD40x	5 - 10	46

Standard Mounting:
TF TR TM TBE

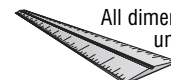
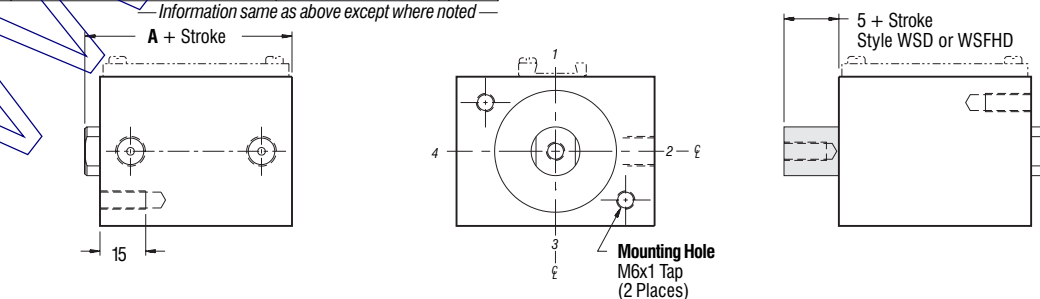


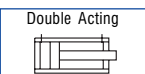
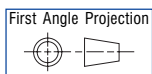
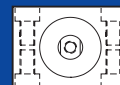
		Part Number		Stock Stroke Length (in 5mm increments)	A
Duty		Single Rod	Double Rod		
Non Magnetic Piston	Standard	WS40x	WSD40x	30 - 100	31
	Intermediate	WSHH40x		25 - 100	36
	Heavy	WSFH40x	WSFHD40x	20 - 100	41
Magnetic Piston	Standard	AWS40x	AWSD40x	25 - 100	36
	Intermediate	AWSHH40x		20 - 100	41
	Heavy	AWSFH40x	AWSFHD40x	15 - 100	46

Standard Mounting: TF
Optional Mounting: Specify suffix

TR TBE TM*

*76mm body length and shorter





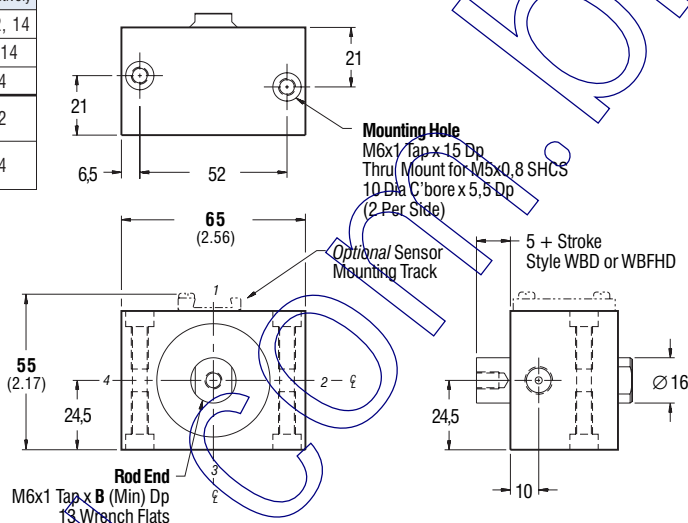
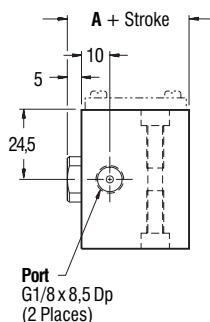
40mm Bore

Non Magnetic and Magnetic Piston Side Mount

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		Part Number		Stock Stroke Length (in 5mm increments)	A	B per 5mm respectively
Duty		Single Rod	Double Rod			
Non Magnetic Piston	Standard	WB40x	WBD40x	5, 10, 15	31	9, 12, 14
	Intermediate	WBHH40x		5, 10	36	12, 14
	Heavy	WBFH40x	WBFHD40x	5	41	14
Magnetic Piston	Standard	AWB40x	AWBD40x	5, 10	36	12
	Intermediate	AWBHH40x		5	41	14

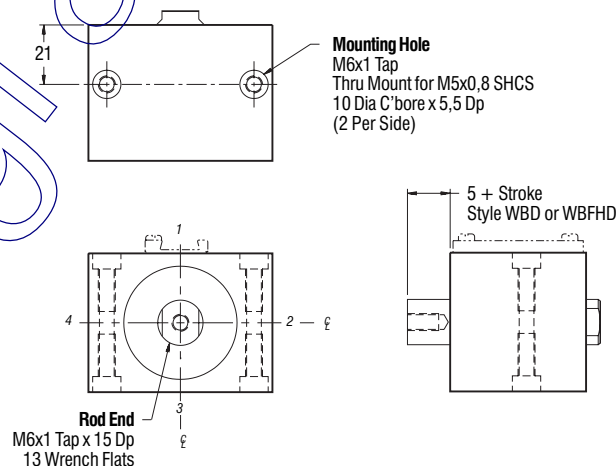
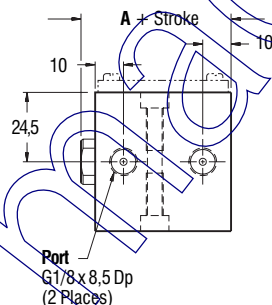
This stroke length allows only one sensor.



		Part Number		Stock Stroke Length (in 5mm increments)	A
Duty		Single Rod	Double Rod		
Non Magnetic Piston	Standard	WB40x	WBD40x	20 - 55	31
	Intermediate	WBHH40x		15 - 50	36
	Heavy	WBFH40x	WBFHD40x	10 - 45	41
Magnetic Piston	Standard	AWB40x	AWBD40x	15 - 50	36
	Intermediate	AWBHH40x		10 - 45	41
	Heavy	AWBFH40x	AWBFHD40x	5 - 40	46

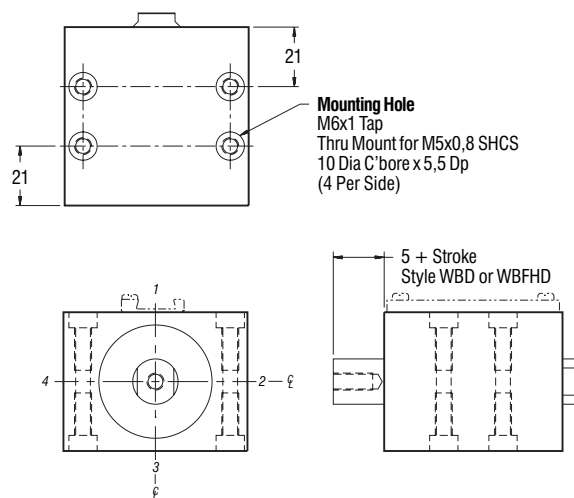
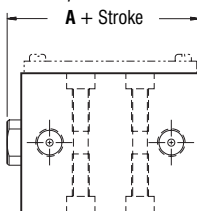
Information same as above except where noted

Body lengths 50mm and shorter allow only one sensor.

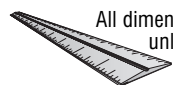


		Part Number		Stock Stroke Length (in 5mm increments)	A
Duty		Single Rod	Double Rod		
Non Magnetic Piston	Standard	WB40x	WBD40x	60 - 100	31
	Intermediate	WBHH40x		55 - 100	36
	Heavy	WBFH40x	WBFHD40x	50 - 100	41
Magnetic Piston	Standard	AWB40x	AWBD40x	55 - 100	36
	Intermediate	AWBHH40x		50 - 100	41
	Heavy	AWBFH40x	AWBFHD40x	45 - 100	46

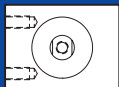
Information same as above except where noted



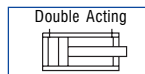
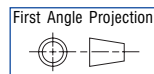
All dimensions are in millimeters unless otherwise noted.



Part Number X Stroke Option - See 'Accessories' section



40mm Bore

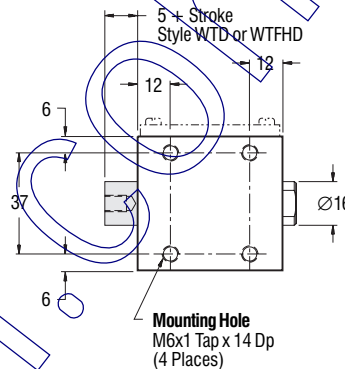
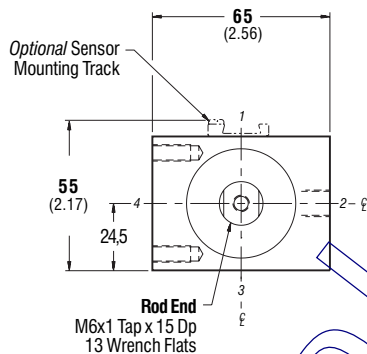
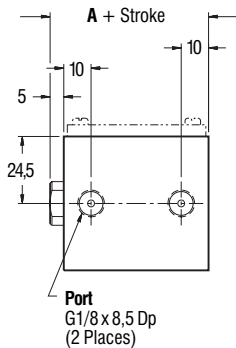


Side Mount

Non Magnetic and Magnetic Piston

Duty	Part Number		Stock Stroke Length (in 5mm increments)	A
	Single Rod	Double Rod		
Non Magnetic Piston	Standard	WT40x_____	20 - 100	31
	Intermediate	WTHH40x_____	15 - 100	36
	Heavy	WTFH40x_____	10 - 100	41
Magnetic Piston	Standard	AWT40x_____	15 - 100	36
	Intermediate	AWTHH40x_____	10 - 100	41
	Heavy	AWTFH40x_____	5 - 100	46

Body lengths 50mm and shorter allow only one sensor.



40mm Bore • 40mm Bore • 40mm Bore • 40mm Bore • 40mm Bore • 40mm Bore • 40mm Bore • 40mm Bore • 40mm Bore • 40mm Bore

www.magnum.br

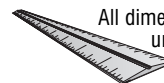


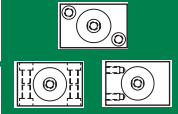
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RF - Rear Flange	
RCE - Rear Clevis with Eye Mount	
RCHE - Rear Clevis with Eye Mount (horizontal version)	
RC - Rear Clevis	
RCH - Rear Clevis (horizontal version)	

Seal Descriptions

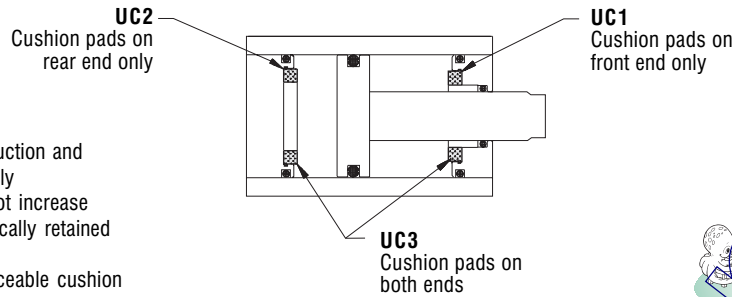
Conversion Formula: $C^{\circ} = (F^{\circ} - 32^{\circ}) \times 5/9$

Type	Bore	Ordering Suffix	Rating	Description
Pneumatic Seals				
Nitrile	8mm thru 40mm	Standard	-18° to 93° C 0° to 200° F	Most commonly used elastomer O-ring due to its excellent resistance to petroleum products, wear, tear and friction. Works with lubricated or non-lubricated air in the noted temperature range. Recommended for general purpose sealing with petroleum oils and fluids, water and silicone greases and oils.
Fluorocarbon	12mm thru 40mm	HTV	-18° to 204° C 0° to 400° F	Used mainly for elevated temperatures, harsh environments where some coolants, solvents, cleaning agents or other chemicals will contact the seal gland. Lower compression set is characteristic. For your specific requirements, consult factory.
Hydraulic Seals				
Nitrile	20mm thru 40mm	HYD	-18° to 121° C 0° to 250° F	Seal material is Nitrile and Urethane. Moderate resistance to abrasion, high pressure and shock. Low temperature decreases flexibility. Recommended for hydraulic fluids, dilute acids, and water.
Fluorocarbon & Nitrile		HYHD	-18° to 204° C 0° to 400° F	Seal material is fluorocarbon and PTFE. This option is designed to operate over an extremely wide elevated temperature range, harsh environment or with any non-oil based synthetic hydraulic fluids.



Urethane Cushion Pads

- Designed for noise reduction and minor piston impact only
- Cylinder length does not increase
- Cushion pads mechanically retained within the endcap
- Repairable part - replaceable cushion pads



UC _____

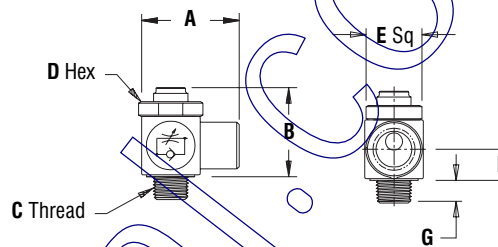
Example: UC1, UC2, UC3

Ordering Suffix	UC
Bore	20mm - 40mm
Temperature	-18° - 66° C
Service	Pneumatic only
Material	Polyurethane

This option **does not** replace external shock absorbers needed for high loads.

Flow Controls

Model #	A	B	C	D	E	F	G
MO5 MI5 NV5	17,46	15,08	M5	7,94	9,53	5,56	3,18
MOG18 MIG18 NVG18	25,4	23,37	1/8-28 (G1/8)	14,29	14,29	8,13	6,10
MOG14 MIG14 NVG14	28,58	26,42	1/4-19 (G1/4)	17,46	17,46	9,65	6,60



"Flip" to our Flow Control flier for more information.



Hollow Rod

Our hollow rod option is available for applications that require passage through a double ended rod.



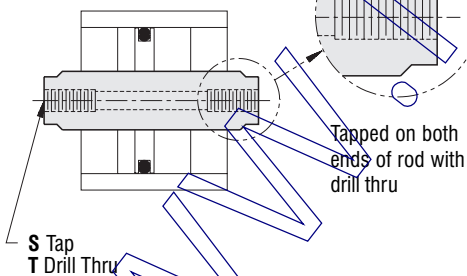
Not for use with Hydraulic cylinders or Non-Rotating rods

HR _____

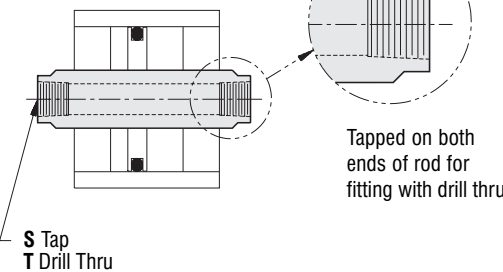
Specify option 1 or 3

Ordering Suffix	HR _____
Bore	20mm - 40mm only
Duty	Standard and Full Husky only
Rod Service Applications	Double only Pneumatic only Gases, Liquids, Vacuum, Linear/Rotary, Clamp & Punch, Blow Molding

HR1



HR3



Bore	HR1		HR3	
	S Tap	T Drill Thru	S Tap	T Drill Thru
20	M5x0,8 x 12,5 Dp	4,3	NA	NA
25	M5x0,8 x 12,5 Dp	4,3	NA	NA
40	M6x1,0 x 15 Dp	5,2	G 1/8	8,5

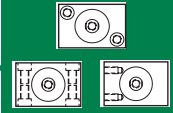
Styles	Stock Stroke Lengths									
	Strokes									
	5	10	15	20	25	30	35	40	45	50
WSD, WBD, WTD		✓		✓	✓	✓		✓	✓	✓
WSFHD, WBFHD, WTFHD	✓		✓	✓	✓		✓	✓	✓	✓
AWSD, AWBD, AWTD		✓		✓	✓	✓		✓	✓	✓
AWSFHD, AWBFHD, AWTFHD	✓		✓	✓	✓		✓	✓	✓	✓

SPECIALS: Consult factory with ID requirements, thread information, pipe taps, etc.

X
 Cylinder Part Number Stroke Option

Rod End & Flange Options

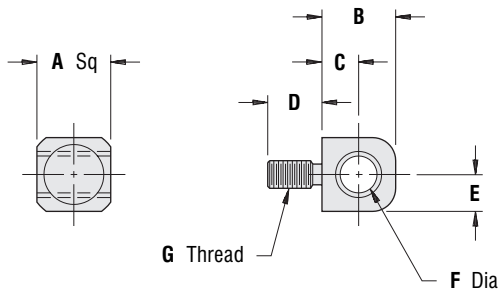
All Styles



12mm - 40mm Bore

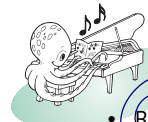
RE / FF / RF

Rod Eye



Ordering Suffix RE
Pressure Rating 12mm: thru 8 BAR
 20mm - 40mm: thru 15 BAR
Material CRS with black oxide finish and sintered bronze bearing

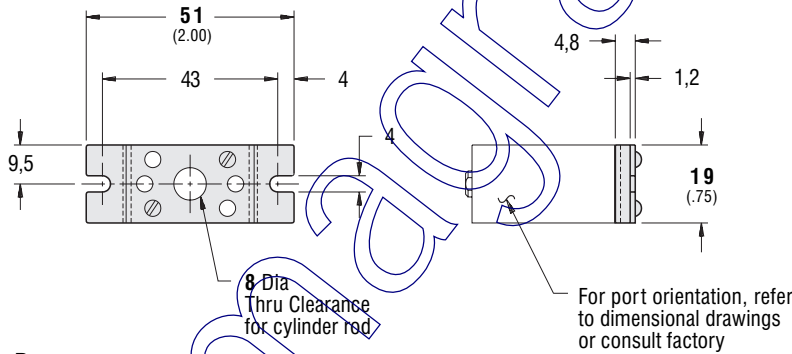
Bore	A	B	C	D	E	F	G
12	8	8	4	6	4	3	M3x0,5
20	9,5	10	5	10	4,8	5	M5x0,8
25	9,5	10	5	10	4,8	5	M5x0,8
40	16	16	8	12	8	8	M6x1



• Rod eye screws flush with cylinder rod face

Flange Mount (Shown as Rear Flange)

12mm Bore



Front Flange

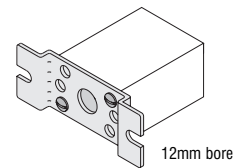
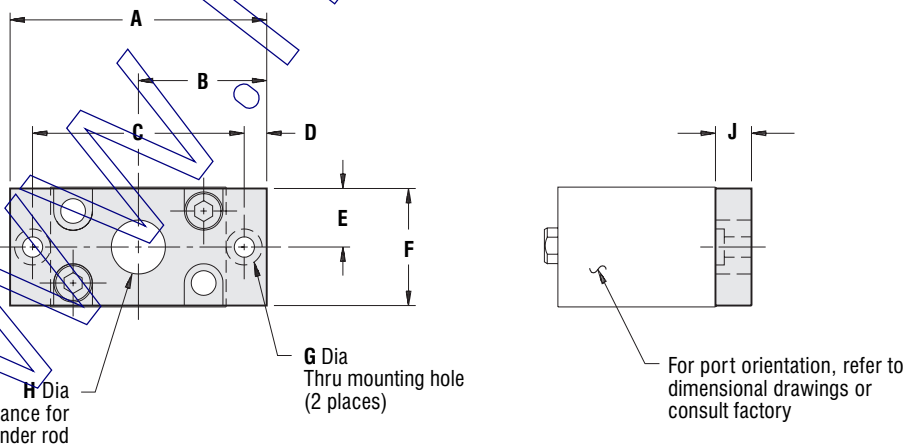


Rear Flange



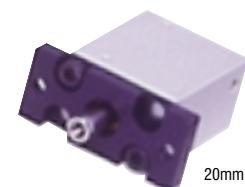
Ordering Suffix FF or RF
Bore 12mm - 40mm
Style "S" only
Material 12mm: Steel black oxide
 20mm - 40mm: Aluminum black anodized

20mm - 40mm Bore



12mm bore

Bore	A	B	C	D	E	F	G	H	J
20	57	28,5	47	5	12,7	25,5	4,5	12	8
25	69	34,5	57	6	15,9	31,8	5,5	16	9,5
40	87	43,5	75	6	22,2	44,5	5,5	24	9,5



20mm - 40mm bore

Cylinder Part Number X Stroke Option

COMPACT® Metric Cylinders

Accessories • Accessories • Accessories • Accessories • Accessories

Rod Tap Depth

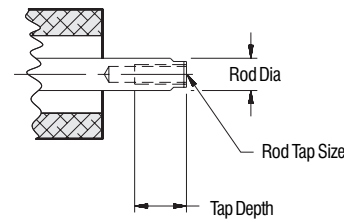
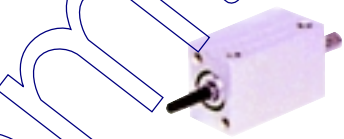
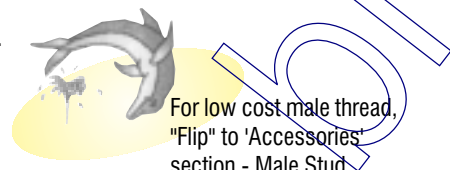
8mm - 40mm
Bore

Usable Female Rod Thread

On magnetic piston style cylinders, refer to longer **stroke** when determining tap depth.

- 12mm - 20mm use 10mm longer stroke
- 25mm - 40mm use 5mm longer stroke

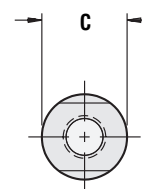
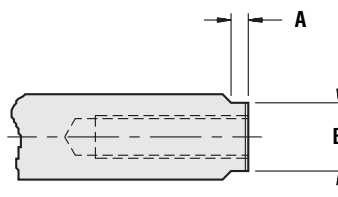
Bore	Rod Diameter	Standard Rod Tap	Duty	Tap Depths				
				Stroke (in millimeters)				
				5	10	15	20	25 & longer
8	4	NA	Standard	All duty types and strokes have M3 turned male threads as a standard rod end option.				
			Intermediate					
			Heavy					
12	6	M3x0,5	Standard	6	8	8	8	8
			Intermediate	8	8	8	8	8
			Heavy	8	8	8	8	8
20	8	M5x0,8	Standard	8	10	12,5	12,5	12,5
			Intermediate	10	12,5	12,5	12,5	12,5
			Heavy	12,5	12,5	12,5	12,5	12,5
25	10	M5x0,8	Standard	8	10	12,5	12,5	12,5
			Intermediate	10	12,5	12,5	12,5	12,5
			Heavy	12,5	12,5	12,5	12,5	12,5
40	16	M6x1	Standard	9	12	14	15	15
			Intermediate	12	14	15	15	15
			Heavy	14	15	15	15	15



Usable Wrench Flats

Bore	A	B Flat	C Dia
8*	3	3,5	4
12	3	5	6
20	3	7	8
25	3	8	10
40	5	13	16

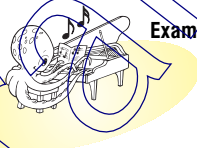
* Turned male threads not shown



Unit Weights

Cylinder Unit Weights (approximate weight in grams)

Bore	Duty	Non-Magnetic Piston					Magnetic Piston				
		Standard		Intermediate	Heavy		Standard		Intermediate	Heavy	
	Rod End	Single	Double	Single	Single	Double	Single	Double	Single	Single	Double
8	Zero stroke	10,1	NA	13	16,5	NA	23,3	NA	28,2	34	NA
	per 5mm stroke	4	NA	4	4	NA	5	NA	6	5	NA
12	Zero stroke	22,6	24,5	28,1	33	44,4	44,6	39,2	52,7	62,4	68
	per 5mm stroke	5	6	5	5	7	6	7	6	6	7
20	Zero stroke	55,5	62,3	63,1	78,6	80	68,3	79,7	83,1	108,9	136,5
	per 5mm stroke	12	11	12	12	12	13	12	13	13	12
25	Zero stroke	83,2	88,9	95	122,5	132,6	115,8	106,3	135,3	143,6	156,5
	per 5mm stroke	17	16	17	17	19	18	19	18	18	19
40	Zero stroke	242,1	253	276,5	294,3	344,7	262,2	253	308	353,6	316,8
	per 5mm stroke	32	35	32	32	35	33	35	33	33	35



Example: AS12x15

AS12 - Magnetic 12mm bore = 44.60 g
 15 - 15mm stroke = 6.00 x 3 = 18.00 g
 44.60 + 18.00 = **62.60 grams**

Grams to Ounces (Grams x .03527 = Ounces)
 62.60 x .03527 = 2.208 ounces

Threaded Body Unit Weights (approximate weight in grams)

Threaded Body weights do not include jam nuts.

Bore	Stroke	Weight
8	5 mm	14,2
	20 mm	28,4
12	10 mm	28,4
	25 mm	42,6
16	15 mm	42,6
	25 mm	49,7

Grams to Ounces Conversion Formula

• Grams x .03527 = Ounces
 Example: 14,2 x .03527 = .5 ounces

Accessory Unit Weights (approximate weight in grams)

Suffix	Description	Bore				
		8	12	20	25	40
FF	Front Flange	—	10,80	28,35	49,70	83,25
MS	Male Stud	—	,45	1,65	1,65	3,80
RE	Rod Eye	—	3,30	6,05	6,05	25,25
RF	Rear Flange	—	10,80	28,35	47,30	83,25
RC/RCH	Rear Clevis	—	9,85	67,40	76,50	177,00
RCE/RCHE	Rear Clevis with Eye Mount	—	—	48,25	64,55	130,80

Grams to Ounces Conversion Formula

• Grams x .03527 = Ounces
 Example: 10,80 x .03527 = .38 ounces

Repair Kits



Repair Kits apply to Non Magnetic and Magnetic piston cylinders — any duty.

Repair Kits, 8mm thru 40mm Bore

Bore	Rod End	Repair Kits				Tools			Lubrication
		Pneumatic Seals		Hydraulic Seals		Urethane Cushions	Assembly Wrench	Flat Wrench	
		Standard	Viton®	Hydraulic	Viton® Hyd.				
8	Single	RKW8	—	—	—	—	—	WFW0S	Lube-1 (Description: 5.3 oz. tube) Lubricates approximately 30 medium size cylinders
12	Single	RKW12	RKWV12	—	—	—	—	WFW1S	
	Double	RKWD12	RKWDV12						
20	Single	RKW20	RKWV20	RKWH20	RKWVH20	RKWD20UC	MW-1	WFW2S	
	Double	RKWD20	RKWDV20	RKWDH20	RKWDVH20				
25	Single	RKW25	RKWV25	RKWH25	RKWVH25	RKWD25UC	W-2	WFW2S	
	Double	RKWD25	RKWDV25	RKWDH25	RKWDVH25				
40	Single	RKW40	RKWV40	RKWH40	RKWVH40	RKWD40UC	W-2	WFW2S	
	Double	RKWD40	RKWDV40	RKWDH40	RKWDVH40				

Part No. WFS
Includes one each:
WFW0S, WFW1S, WFW2S



NEW!

All universal repair kits now include magnets.

All Repair Kits Include:

- Endcap Seals
- Shaft Seals
- Piston Seals
- Retaining Wire *
- Nyliner Bearing
- Magnet
- Lubrication (1 to 4 milliliters)
- Snap Rings - *RDK kits only*

* 20mm - 40mm only

Repair Kits, Threaded Body

Bore	Repair Kits	
	Stroke	Part Number
8	2,5 5	RKTB8S
	7,5 10 12,5 15 17,5 20	RKTB8L
12	2,5 5 7,5 10	RKTB12S
	12,5 15 17,5 20 22,5 25	RKTB12L
16	2,5 5 7,5 10	RKTB16S
	12,5 15 17,5 20 22,5 25	RKTB16L

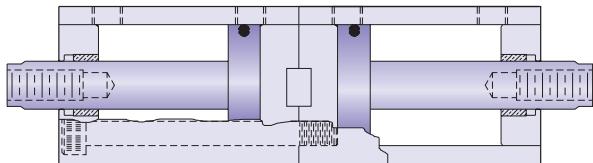


Repair Kit for 12mm Bore
Threaded Body Cylinders
(Part Number: RKTB12S)

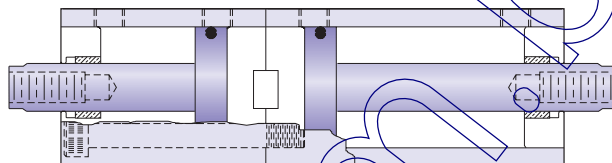
Application Ideas

Back-to-Back - 3 or 4 positions

Equal stroke increments provide 3 positions



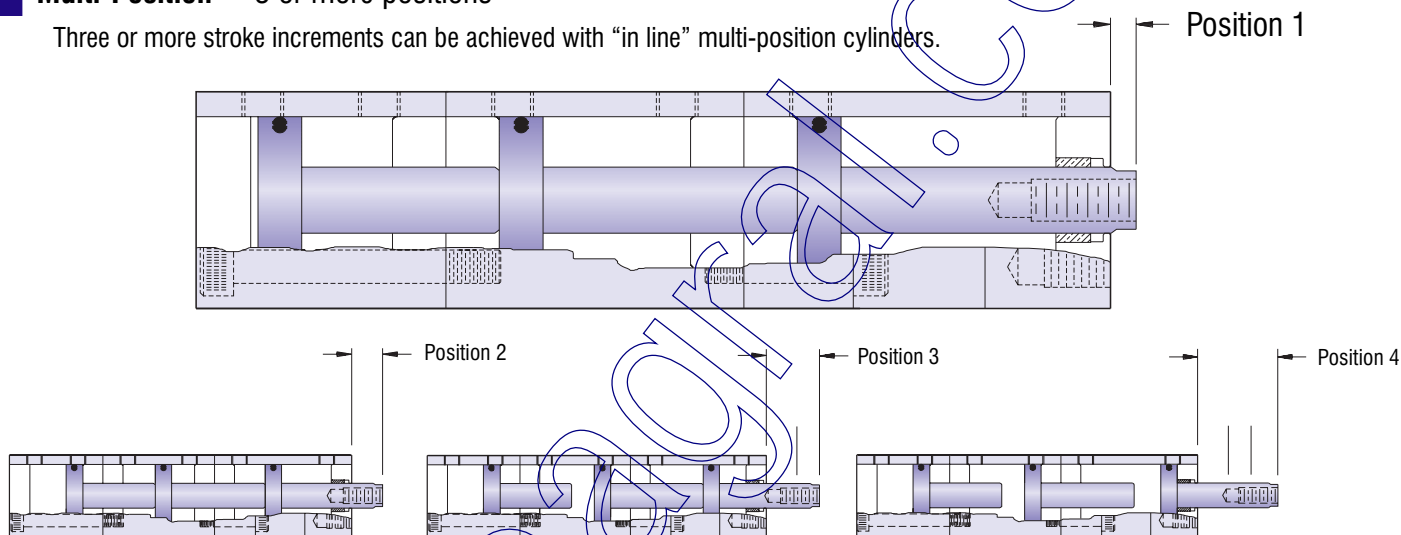
Unequal stroke increments provide 3 or 4 positions, depending on sequence of operation.



- Back-to-back assemblies feature a pilot locator between the cylinder to assure positive alignment.
- Cylinder must have support when used in a non-vertical application.
- 4-way valve circuit required for each cylinder.

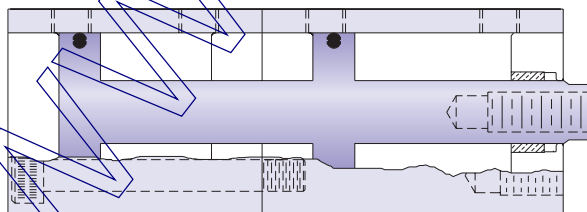
Multi-Position - 3 or more positions

Three or more stroke increments can be achieved with "in line" multi-position cylinders.



- Precise valve circuit design is critical.
- Front cylinder must include all previous cylinder increments. Example: Increments include 5mm + 5mm + 5mm. Front cylinder stroke = 15mm; middle cylinder stroke = 10mm; back cylinder stroke = 5mm.

Multi-Piston - High output



- Numerous pistons can be coupled to achieve extra output in limited space applications.
- Individual cylinders with a common rod, as shown in this diagram, can provide multiple output for push and pull.

For special requirements, design assistance, or quotes contact your local distributor or our Technical Sales Department.

Special Conditions and Limited Warranty

Determination of the suitability of any information or product for the application contemplated by any user or the manner of that use is the sole responsibility of the user.

Compact Automation Products, LLC reserves the right to improve or change designs without notice.

All orders are subject to acceptance by the factory sales department.

Compact Automation Products, LLC agrees to repair or replace to the original purchaser any standard parts or products for a period of 12 months from date of shipment which Compact Automation Products, LLC determines upon inspection to be defective in workmanship or material. Wear components including but not limited to seals and bearings are excluded from this warranty.

Under no circumstance may merchandise be returned without written authorization from the factory.

This warranty is void in the event the product has been tampered with, altered, or serviced by unauthorized personnel.

Compact Automation Products, LLC's total responsibility for any claims, damages, losses or liabilities related to the product covered thereunder shall not exceed the purchase price of such product. In no event shall Compact Automation Products, LLC be liable for any special, indirect, incidental or consequential damages of any character, including but not limited to loss of use of productive facilities or equipment, lost profit, property damage, transportation, installation or removal or lost production whether suffered by purchaser or third party. Compact Automation Products, LLC Inc. disclaims all liability for any and all cost, claims demands, charges, expenses, and other damages, either direct or indirect, incident to all property damage arising out of any cause of action based on strict liability. This warranty gives you specific legal rights and you may have other rights, which vary from state to state.

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