THE CLASS & PERFORMANCE OF BRASS



CYLINDERS & VALVES, INC.

Welcome to Cylinders & Valves, Inc.

Since 1958, the Gardner-family-owned Cylinders and Valves, Inc. has been meticulously building and supplying high quality small bore cylinders and accompanying valves. The production of a dependable, hardworking product is a family tradition never more important than today.

They work even better than they look!

Utilizing some of the best brass, stainless steel, anodized aluminum and seal products, C&V cylinders and valves do have the look of real quality, but it's more than just looks. These products perform! No short-cuts are taken in producing a complete line of serviceable/repairable cylinders and valves that give you top performance cycle after cycle, day after day.

TERMS AND CONDITIONS OF SALE:

The following policy applies to all CYLINDERS & VALVES, INC. standard catalogued items.

GUARANTEE:

CYLINDERS & VALVES, INC. guarantees its products to be free from defects in materials and workmanship for a period of 90 days from the date of shipment of the order from our factory. Normal wear, misapplication or misuse is by necessity excluded from this guarantee. Liability under this guarantee shall be limited to allowance for credit, or replacement of the defective cylinders, valves or parts.

SELLER shall not be liable for any consequential damages, nor will claims for labor, loss of profits, repairs or transportation or other expenses incidental to replacement of material be allowed.

CYLINDERS & VALVES, INC. makes no other guarantees, or warranties, expressed or implied in connection with the manufacture and sale of its product.

PRICES AND QUOTATIONS:

Prices are subject to change without notice, but any such charge shall not affect orders already accepted. Quotations are firm for 30 days only.

MINIMUM CHARGE:

Minimum billing on any cylinder order is $30.00. No minimum on repair kits or parts.

DESIGN:

Manufacturer reserves the right to alter specifications and/or dimensions without notice. Seller assumes no responsibility for revision of models already in the field.

RETURNED GOODS:

No purchases are to be returned after shipment for any reason unless our written acceptance has first been obtained. All returns are subject to a handling charge. All shipping charges shall be prepaid.

SPECIAL PRODUCTS AND COMPONENTS FOR TEST:

Orders for special products are not subject to cancellation. Cylinder orders are considered special due to stroke, rod extension, thread, etc., and are therefore non-cancellable.

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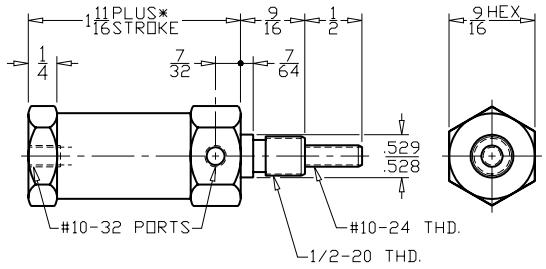
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SPECIAL FEATURES

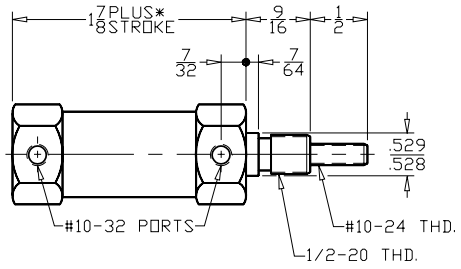
- Non-corrosive throughout
- Heavy wall tube (1/8"" thick brass, pump cylinder finish)
- Polished & ground stainless steel piston rods
- Threaded rods standard
- All parts easily & economically serviced
- Aircraft type "O" ring seals (Buna "N" standard compound)
- 0-500 PSI operating pressure range
- Non-rotating rods available (single acting spring return only)

Rod End Mounted



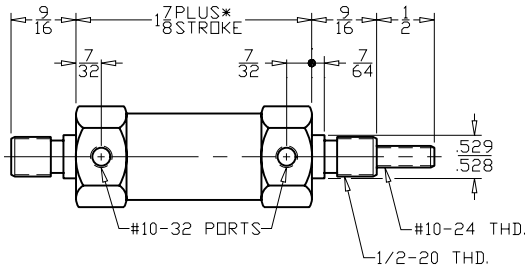
MODEL: RC-300

Stud Mount (Ports in Line)



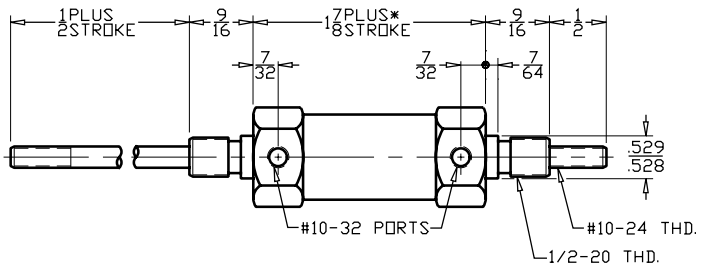
MODEL: DC-300

Foot Mount



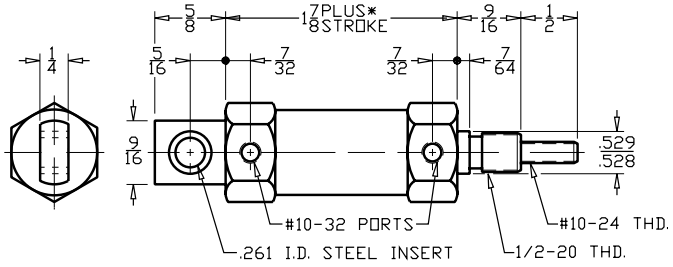
MODEL: FC-300

Double Piston Rod



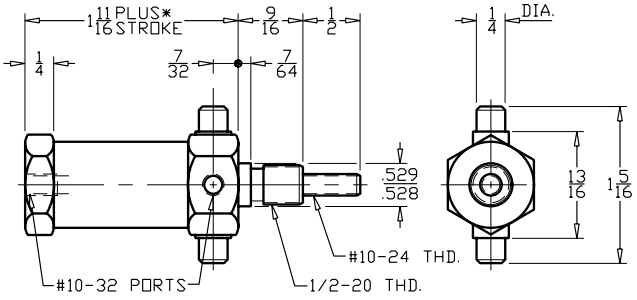
MODEL: DPC-300

Clevis Mount



MODEL: CC-300

Front Trunnion Mount

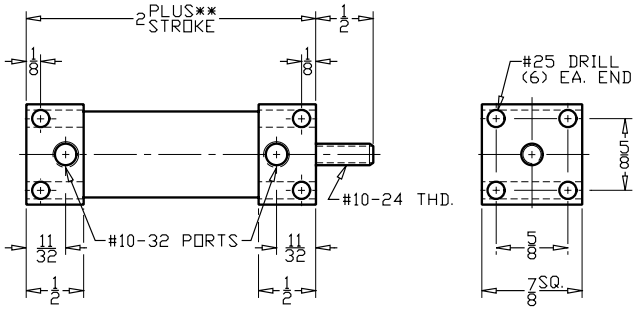


MODEL: TFC-300

Additional Information for 300 Series Cylinders

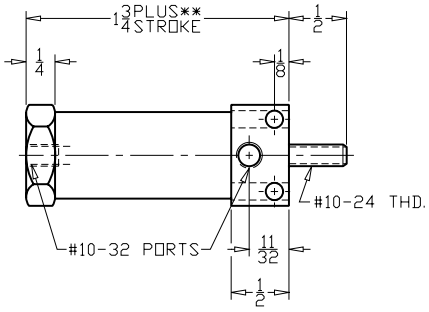
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Universal Mount



MODEL: UC-300

Universal Front Mount



MODEL: UFC-300

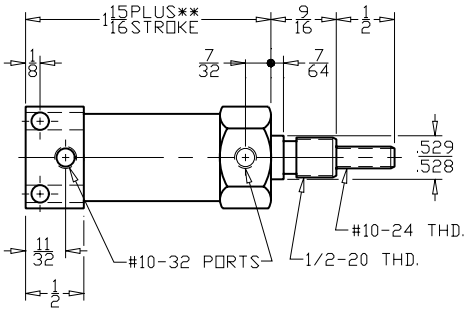
They work even better than they look!

* For spring return cylinders -- To base length:	
For Stroke	Add
0 to 1-1/4"	0"
1-5/16" to 4-1/4"	2"

**** For spring return cylinders -- To base length:**

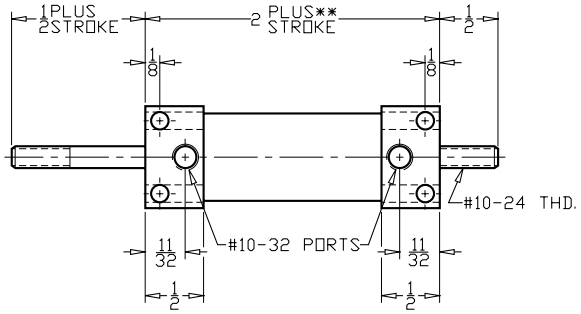
To base length, add 1" for each 2" of stroke

Universal Rear Mount



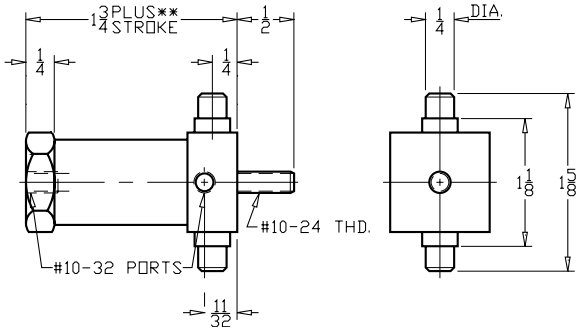
MODEL: URC-300

Double Piston Rod -- Universal Mount



MODEL: UPDC-300

Universal Trunnion Mount



MODEL: UTC-300

ORDERING DATA

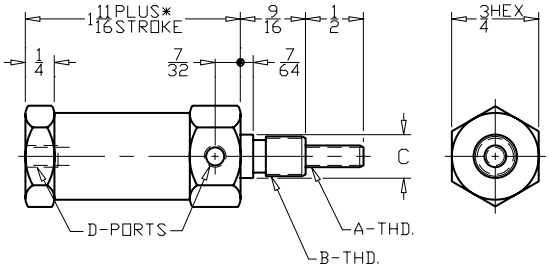
When ordering, please specify the following:

1. Model number
2. Stroke in inches
3. SINGLE or DOUBLE acting
4. If plain rod required
5. Media
6. Temperature
7. Pressure
8. Optional attachments
9. Flats on rod (optional)
10. Low swell seals (optional)
11. Consult factory on high temperature applications

SPECIAL FEATURES

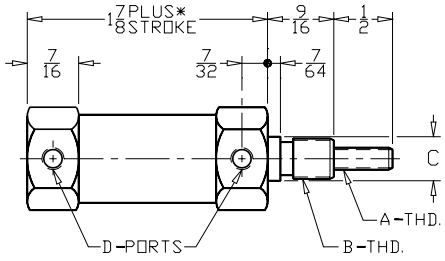
- *Non-corrosive throughout*
- *Heavy wall tube (1/8”” thick brass, pump cylinder finish)*
- *Polished & ground stainless steel piston rods*
- *Threaded rods standard*
- *All parts easily & economically serviced*
- *Aircraft type “O” ring seals (Buna “N” standard compound)*
- *0-500 PSI operating pressure range*
- *“U” cup piston seals available (add 1/2” to length)*
- *Non-rotating rods available (single acting spring return only)*

Rod End Mounted



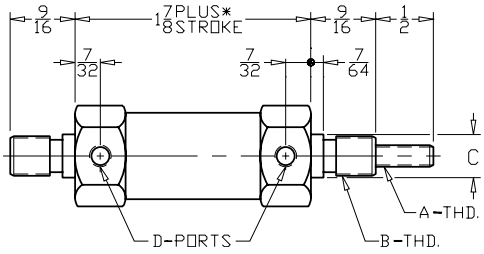
MODELS: RC-500, RC-500-1

Stud Mount (Ports in Line)



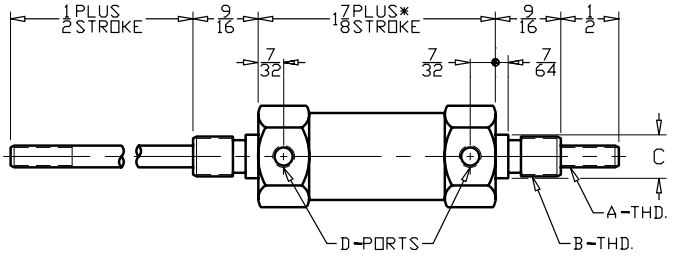
MODELS: DC-500, DC-500-1

Foot Mount



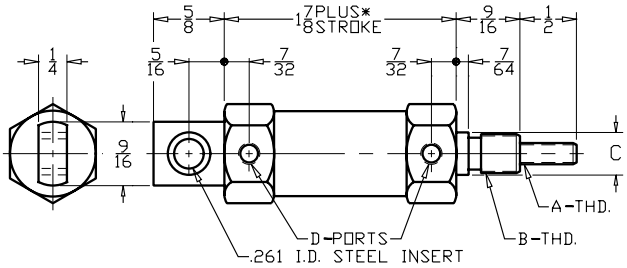
MODELS: FC-500, FC-500-1

Double Piston Rod



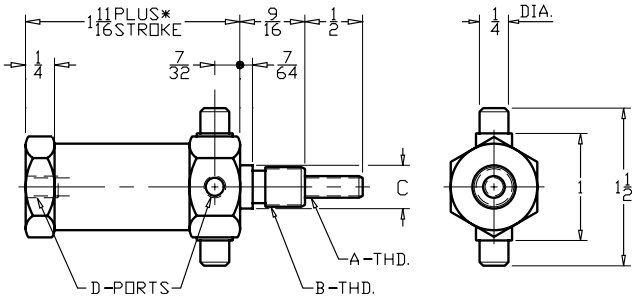
MODELS: DPC-500, DPC-500-1

Clevis Mount



MODELS: CC-500, CC-500-1

Front Trunnion Mount

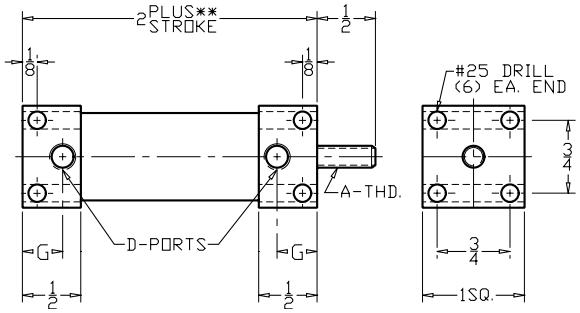


MODELS: TFC-500, TFC-500-1

Additional Information for 500 Series Cylinders

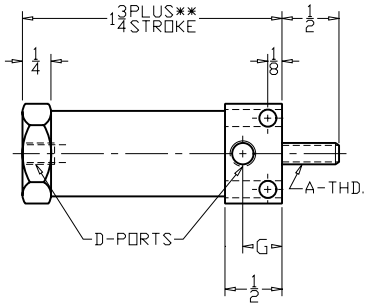
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Fittings and Accessories for 500 Series Cylinders ..... See Page 35
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Small Bore Cylinder Service Parts List ..... See Pages 44-45

Universal Mount



MODELS: UC-500, UC-500-1

Universal Front Mount



MODELS: UFC-500, UC-500-1

Cylinder Model Specification Chart

Model	500	500-1
Rod Dia.	3/16	1/4
A	10-24	1/4-20
B	1/2-20	5/8-18
C	.529	.686
D	#10-32	1/8NPT
G	11/32	1/4

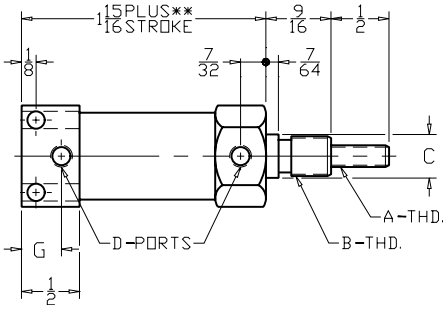
*** For spring return cylinders -- To base length:**

	3/16" Rod	1/4" Rod
For Stroke	Add	Add
0 to 2"	0"	1"
2-1/8" to 4"	1"	1-1/2"
4-1/8" to 5"	1-1/2"	2"

**** For spring return cylinders -- To base length:**

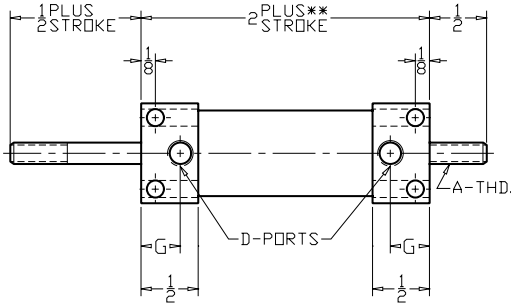
To base length, add 1" for each 2" of stroke

Universal Rear Mount



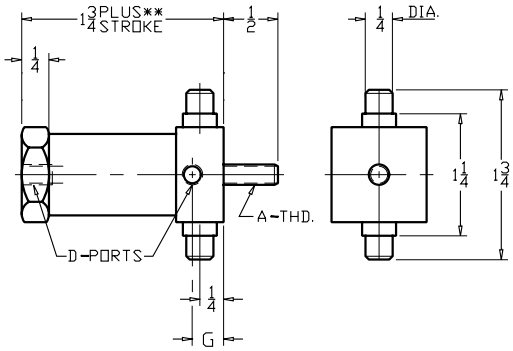
MODELS: URC-500, URC-500-1

Double Piston Rod -- Universal Mount



MODELS: UDPC-500, UDPC-500-1

Universal Trunnion Mount



MODELS: UTC-500, UTC-500-1

ORDERING DATA

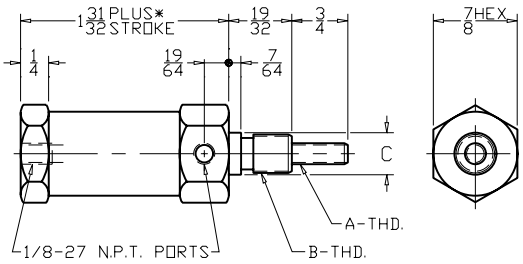
When ordering, please specify the following:

1. Model number
2. Stroke in inches
3. SINGLE or DOUBLE acting
4. If plain rod required
5. Media
6. Temperature
7. Pressure
8. Optional attachments
9. Flats on rod (optional)
10. "U" cups, if required
11. Low swell seals (optional)
12. Consult factory on high temperature applications

SPECIAL FEATURES

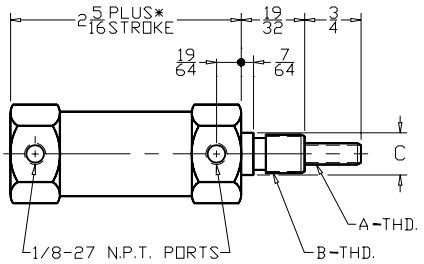
- Non-corrosive throughout
- Heavy wall tube (1/8"" thick brass, pump cylinder finish)
- Polished & ground stainless steel piston rods
- Threaded rods standard
- All parts easily & economically serviced
- Aircraft type "O" ring seals (Buna "N" standard compound)
- 0-500 PSI operating pressure range
- "U" cup piston seals available (add 1/2" to length)
- 1/4", 5/16", & 3/8" non-rotating rods available (single acting spring return only), 1" stop on stroke from 0" to 3-1/8"

Rod End Mounted



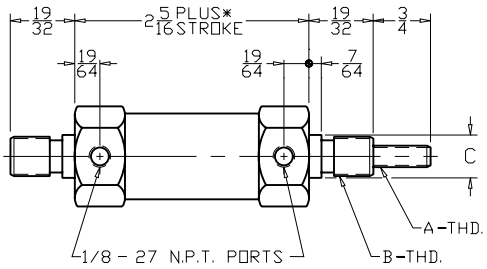
MODELS: RC-700, RC-700-1, RC-700-2

Stud Mount (Ports in Line)



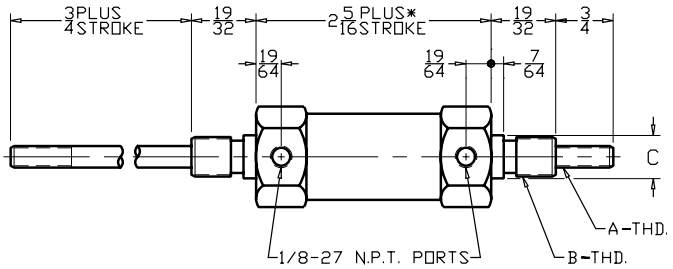
MODELS: DC-700, DC-700-1, DC-700-2

Foot Mount



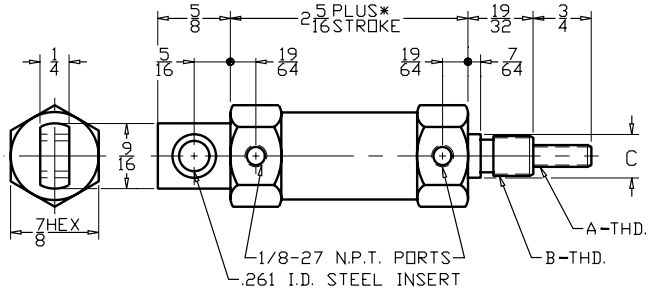
MODELS: FC-700, FC-700-1, FC-700-2

Double Piston Rod



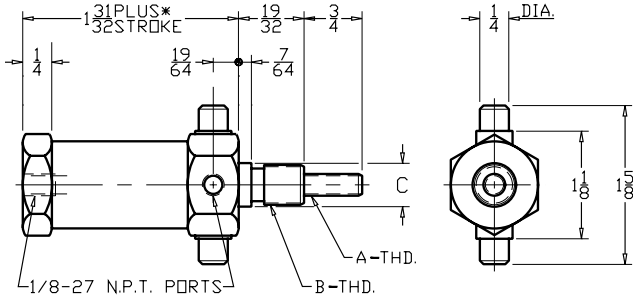
MODELS: DPC-700, DPC-700-1, DPC-700-2

Clevis Mount



MODELS: CC-700, CC-700-1, CC-700-2

Front Trunnion Mount

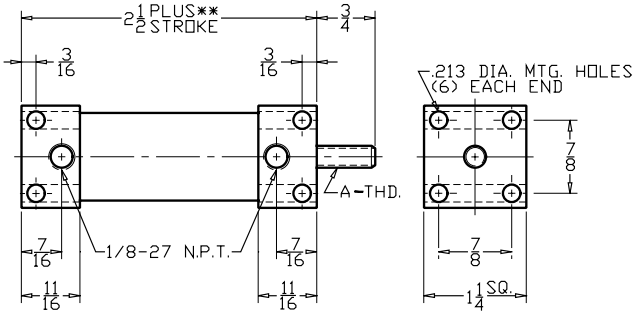


MODELS: TFC-700, TFC-700-1, TFC-700-2

Additional Information for 700 Series Cylinders

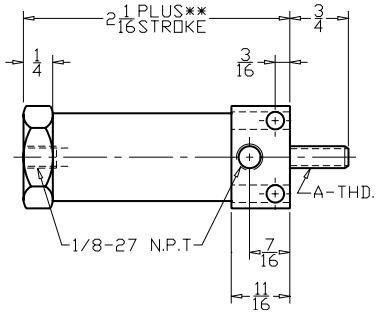
Cylinder Specification Chart and Ordering Data ..... See Page 9
Fittings and Accessories for 700 Series Cylinders ..... See Page 36
Cylinder Engineering Data ..... See Pages 42-43
Small Bore Cylinder Service Parts List ..... See Pages 44-45

Universal Mount



MODELS: UC-700, UC-700-1, UC-700-2

Universal Front Mount



MODELS: UFC-700, UFC-700-1, UFC-700-2

Cylinder Model Specification Chart

Model	700	700-1	700-2
Rod Dia.	1/4	5/16	3/8
A	1/4-20	5/16-18	3/8-16
B	5/8-18	3/4-16	3/4-16
C	.686	.751	.751

*** For spring return cylinders -- To base length:**

*For spring return cylinders -- To base length:	
For Stroke	Add
0 to 2"	0"
2-1/8" to 3-1/8"	1"
3-1/4" to 4-7/8"	1-1/2"
5" to 7"	2"

Note:
All Model 700-2 spring return cylinders with strokes from 0" to 3-1/8" require a 1" stop

**** For spring return cylinders -- To base length:**

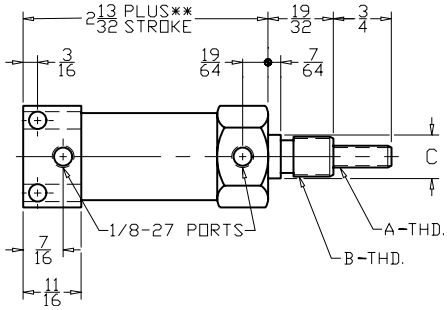
To base length, add 1" for each 2" of stroke

ORDERING DATA

When ordering, please specify the following:

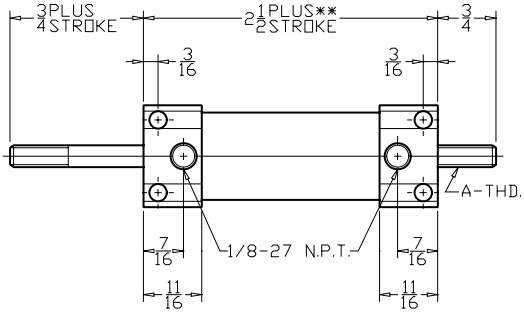
1. Model number
2. Stroke in inches
3. SINGLE or DOUBLE acting
4. Cushions if required (nonadjustable only; no addition to length for cushions)
5. If plain rod required
6. Media
7. Temperature
8. Pressure
9. Optional attachments
10. Flats on rod (optional)
11. "U" cups, if required
12. Low swell seals (optional)
13. Consult factory on high temperature applications

Universal Rear Mount



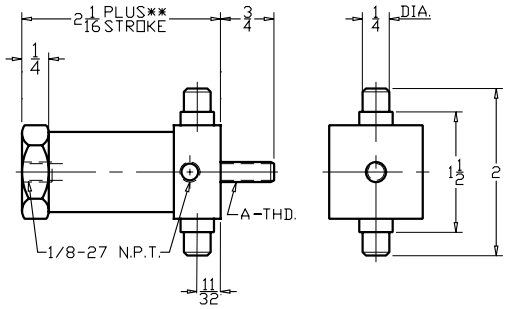
MODELS: URC-700, URC-700-1, URC-700-2

Double Piston Rod -- Universal Mount



MODELS: UDPC-700, UDPC-700-1, UDPC-7002

Universal Trunnion Mount

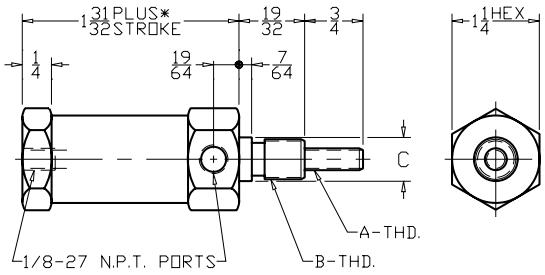


MODELS: UTC-700, UTC-700-1, UTC-700-2

SPECIAL FEATURES

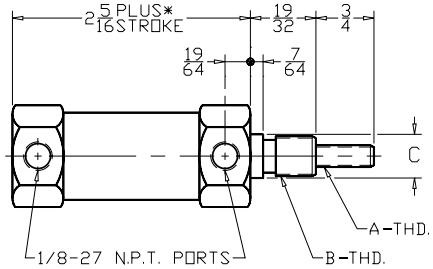
- Non-corrosive throughout
- Heavy wall tube (1/8"" thick brass, pump cylinder finish)
- Polished & ground stainless steel piston rods
- Threaded rods standard
- All parts easily & economically serviced
- Aircraft type "O" ring seals (Buna "N" standard compound)
- 0-500 PSI operating pressure range
- "U" cup piston seals available (add 1/2" to length)
- 5/16", 3/8", & 1/2" non-rotating rods available (single acting spring return only), 1" stop on stroke from 0" to 4"

Rod End Mounted



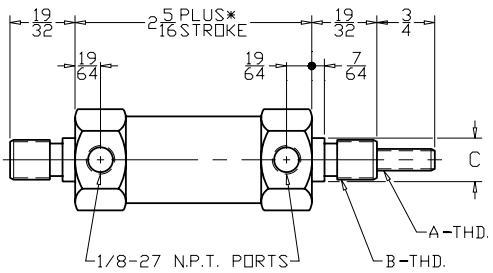
MODELS: RC-1000, RC-1000-1, RC-1000-2

Stud Mount (Ports in Line)



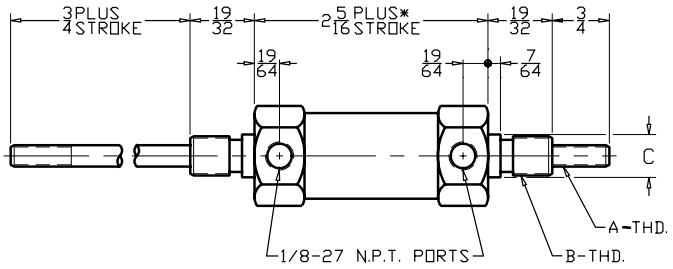
MODELS: DC-1000, DC-1000-1, DC-1000-2

Foot Mount



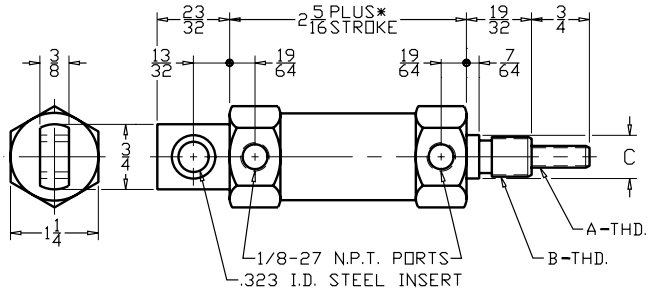
MODELS: FC-1000, FC-1000-1, FC-1000-2

Double Piston Rod



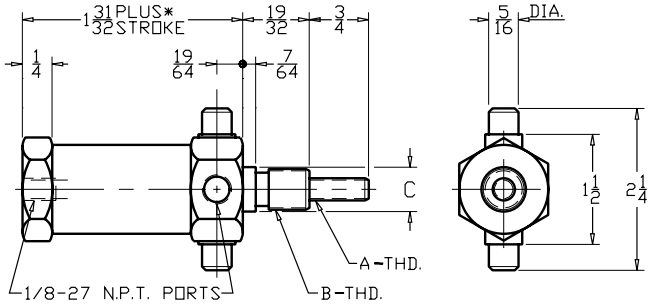
MODELS: DPC-1000, DPC-1000-1, DPC-1000-2

Clevis Mount



MODELS: CC-1000, CC-1000-1, CC-1000-2

Front Trunnion Mount

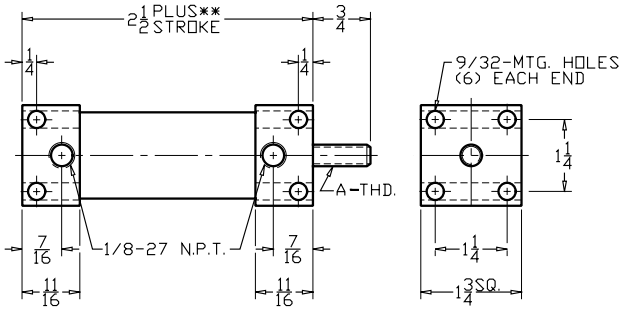


MODELS: TFC-1000, TFC-1000-1, TFC-1000-2

Additional Information for 1000 Series Cylinders

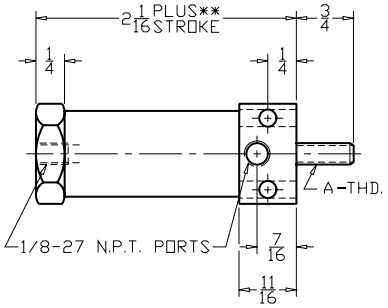
Cylinder Specification Chart and Ordering Data ..... See Page 11
Fittings and Accessories for 1000 Series Cylinders ..... See Page 37
Cylinder Engineering Data ..... See Pages 42-43
Small Bore Cylinder Service Parts List ..... See Pages 44-45

Universal Mount



MODELS: UC-1000, UC-1000-1, UC-1000-2

Universal Front Mount



MODELS: UFC-1000, UFC-1000-1, UFC-1000-2

Cylinder Model Specification Chart

Model	1000	1000-1	1000-2
Rod Dia.	5/16	3/8	1/2
A	5/16-18	3/8-16	1/2-20
B	5/8-18	7/8-14	7/8-14
C	.686	.875	.875

*** For spring return cylinders -- To base length:**

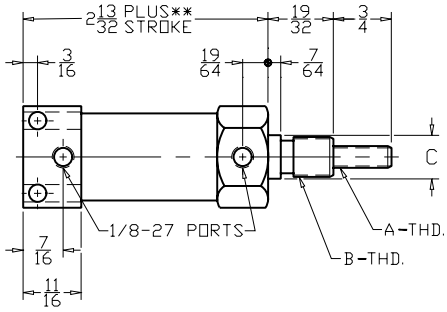
For Stroke	Add
0 to 2"	0"
2-1/8" to 4"	1"
4-1/8" to 5"	1-1/2"
5-1/8" to 7"	2"

Note:
All Model 1000-2 spring return cylinders with strokes from 0" to 4" require a 1" stop

**** For spring return cylinders -- To base length:**

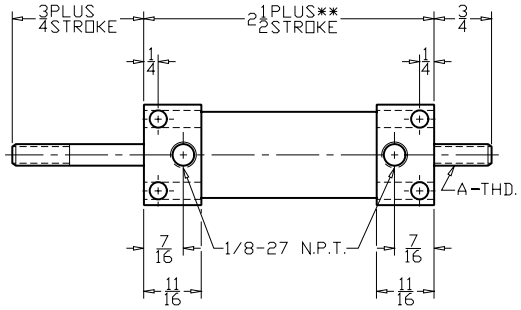
To base length, add 1" for each 2" of stroke

Universal Rear Mount



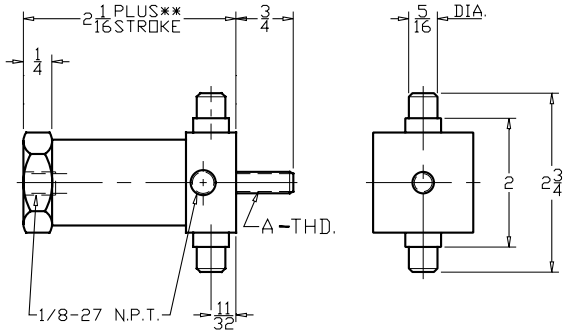
MODELS: URC-1000, URC-1000-1, URC-1000-2

Double Piston Rod -- Universal Mount



MODELS: UDPC-1000, UDPC-1000-1, UDPC-1000-2

Universal Trunnion Mount



MODELS: UTC-1000, UTC-1000-1, UTC-1000-2

ORDERING DATA

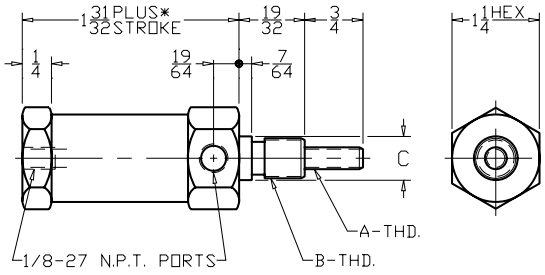
When ordering, please specify the following:

1. Model number
2. Stroke in inches
3. SINGLE or DOUBLE acting
4. Cushions if required (adjustable or nonadjustable; no addition to length for cushions)
5. If plain rod required
6. Media
7. Temperature
8. Pressure
9. Optional attachments
10. Flats on rod (optional)
11. "U" cups, if required
12. Low swell seals (optional)
13. Consult factory on high temperature applications

SPECIAL FEATURES

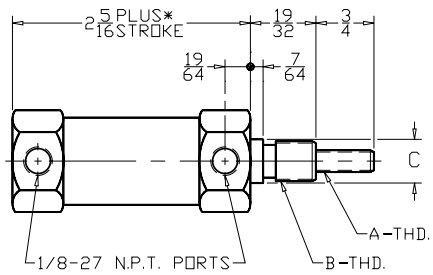
- Non-corrosive throughout
- Heavy wall tube (1/8"" thick brass, pump cylinder finish)
- Polished & ground stainless steel piston rods
- Threaded rods standard
- All parts easily & economically serviced
- Aircraft type "O" ring seals (Buna "N" standard compound)
- 0-500 PSI operating pressure range
- "U" cup piston seals available (add 1/2" to length)
- 5/16", 3/8", & 1/2" non-rotating rods available (single acting spring return only), 1" stop on stroke from 0" to 4"

Rod End Mounted



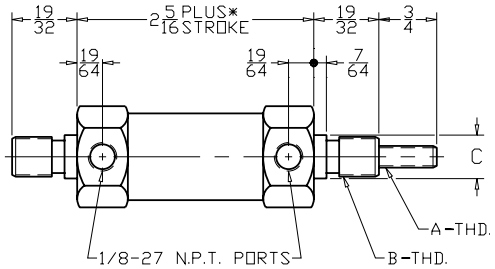
MODELS: RC-1100, RC-1100-1, RC-1100-2

Stud Mount (Ports in Line)



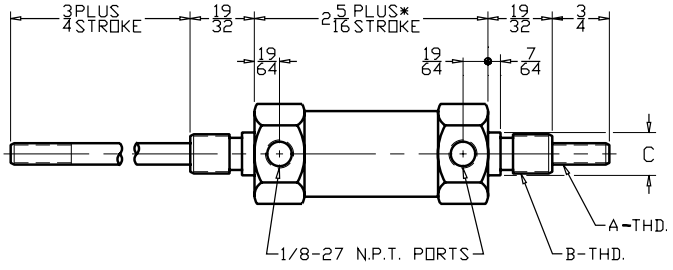
MODELS: DC-1100, DC-1100-1, DC-1100-2

Foot Mount



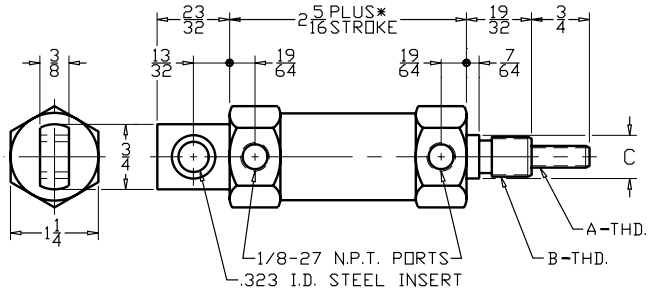
MODELS: FC-1100, FC-1100-1, FC-1100-2

Double Piston Rod



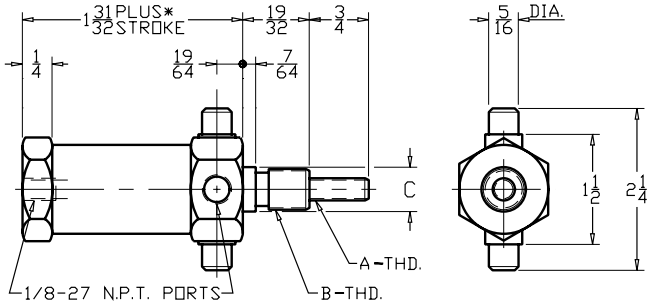
MODELS: DPC-1100, DPC-1100-1, DPC-1100-2

Clevis Mount



MODELS: CC-1100, CC-1100-1, CC-1100-2

Front Trunnion Mount



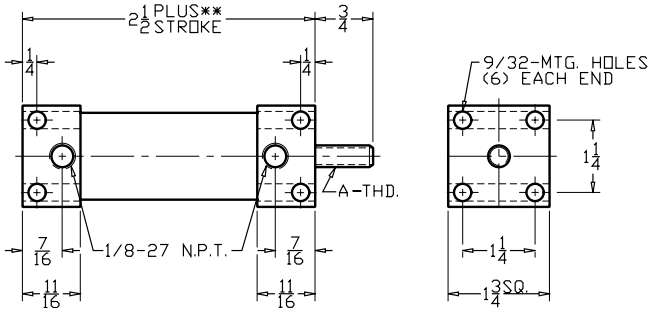
MODELS: TFC-1100, TFC-1100-1, TFC-1100-2

Additional Information for 1100 Series Cylinders

Cylinder Specification Chart and Ordering Data ..... See Page 13
Fittings and Accessories for 1100 Series Cylinders ..... See Page 38
Cylinder Engineering Data ..... See Pages 42-43
Small Bore Cylinder Service Parts List ..... See Pages 44-45

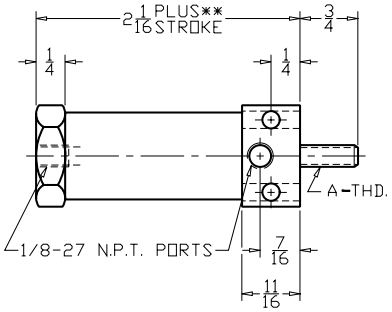
Cylinders & Valves, Inc. 20811 Westwood Drive P.O. Box 360555 Strongsville, Ohio 44149
Phone: (440) 238-7343 or 238-7344 Fax: (440) 238-3812 Web: www.cylval.com Email: corporate@cylval.com

Universal Mount



MODELS: UC-1100, UC-1100-1, UC-1100-2

Universal Front Mount



MODELS: UFC-1100, UFC-1100-1, UFC-1100-2

Cylinder Model Specification Chart

Model	1100	1100-1	1100-2
Rod Dia.	5/16	3/8	1/2
A	5/16-18	3/8-16	1/2-20
B	5/8-18	7/8-14	7/8-14
C	.686	.875	.875

*** For spring return cylinders -- To base length:**

For Stroke	Add
0 to 2"	0"
2-1/8"	1"
4-1/8"	1-1/2"
5-1/8" to 7"	2"

Note:
All Model 1100-2 spring return cylinders with strokes from 0" to 4" require a 1" stop

**** For spring return cylinders -- To base length:**

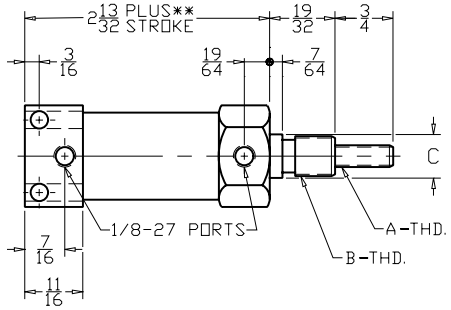
To base length, add 1" for each 2" of stroke

ORDERING DATA

When ordering, please specify the following:

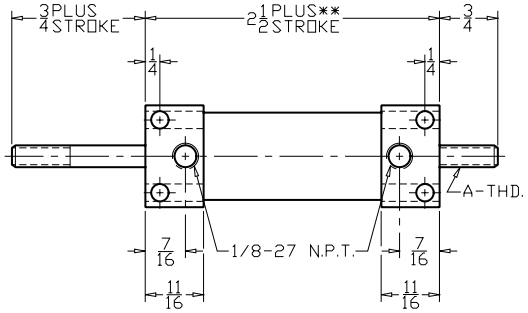
1. Model number
2. Stroke in inches
3. SINGLE or DOUBLE acting
4. Cushions if required (adjustable or nonadjustable; no addition to length for cushions)
5. If plain rod required
6. Media
7. Temperature
8. Pressure
9. Optional attachments
10. Flats on rod (optional)
11. "U" cups, if required
12. Low swell seals (optional)
13. Consult factory on high temperature applications

Universal Rear Mount



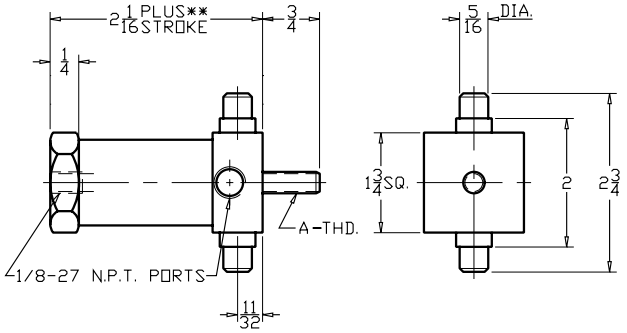
MODELS: URC-1100, URC-1100-1, URC-1100-2

Double Piston Rod -- Universal Mount



MODELS: UDPC-1100, UDPC-1100-1, UDPC-1100-2

Universal Trunnion Mount

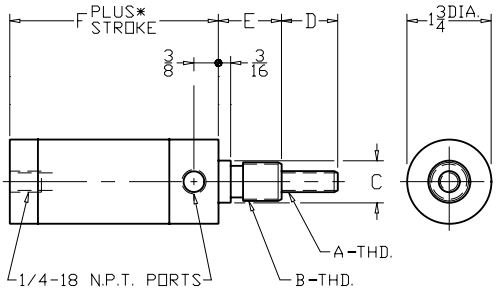


MODELS: UTC-1100, UTC-1100-1, UTC-1100-2

SPECIAL FEATURES

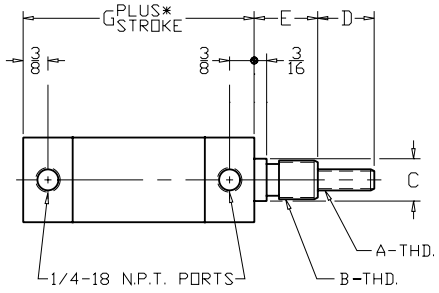
- Non-corrosive throughout
- Heavy wall tube (1/8"" thick brass, pump cylinder finish)
- Polished & ground stainless steel piston rods
- Threaded rods standard
- All parts easily & economically serviced
- Aircraft type "O" ring seals (Buna "N" standard compound)
- 0-500 PSI operating pressure range
- "U" cup piston seals available (add 1" to length)
- 1/2" or 5/8" non-rotating rod available (single acting spring return only), 1" stop on stroke from 0" to 4"

Rod End Mounted



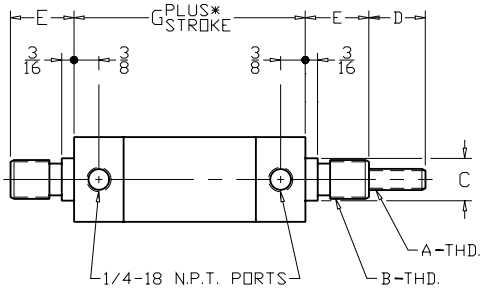
MODELS: RC-1500, RC-1500-1, RC-1500-2, RC-1500-3

Stud Mount (Ports in Line)



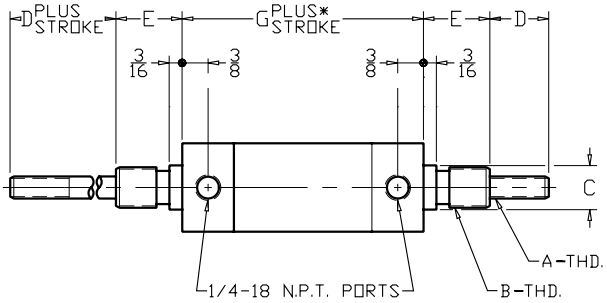
MODELS: DC-1500, DC-1500-1, DC-1500-2, DC-1500-3

Foot Mount



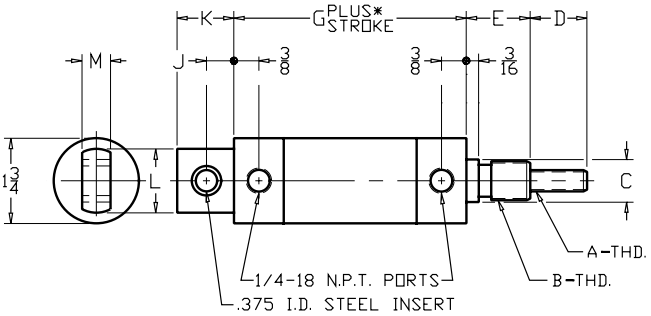
MODELS: FC-1500, FC-1500-1, FC-1500-2, FC-1500-3

Double Piston Rod



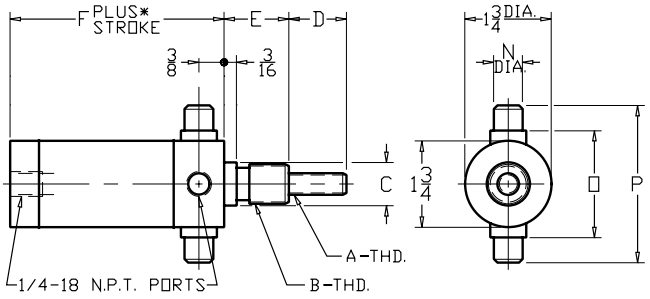
MODELS: DPC-1500, DPC-1500-1, DPC-1500-2, DPC-1500-3

Clevis Mount



MODELS: CC-1500, CC-1500-1, CC-1500-2, CC-1500-3

Front Trunnion Mount



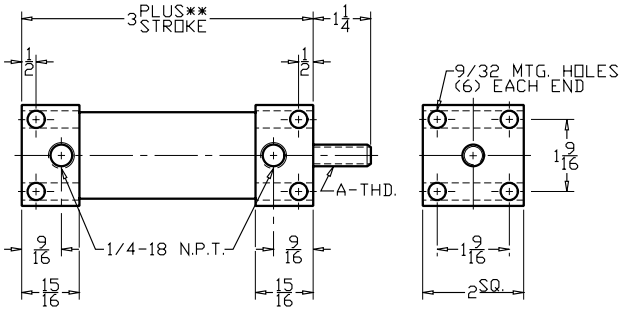
MODELS: TFC-1500, TFC-1500-1, TFC-1500-2, TFC-1500-3

Additional Information for 1500 Series Cylinders

Cylinder Specification Chart and Ordering Data ..... See Page 15
Fittings and Accessories for 1500 Series Cylinders ..... See Page 39
Cylinder Engineering Data ..... See Pages 42-43
Small Bore Cylinder Service Parts List ..... See Pages 44-45

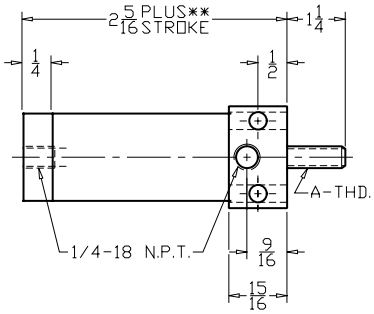
Cylinders & Valves, Inc. 20811 Westwood Drive P.O. Box 360555 Strongsville, Ohio 44149
Phone: (440) 238-7343 or 238-7344 Fax: (440) 238-3812 Web: www.cylval.com Email: corporate@cylval.com

Universal Mount



MODELS: UC-1500, UC-1500-2, UC-1500-3

Universal Front Mount



MODELS: UFC-1500, UFC-1500-2, UFC-1500-3

Cylinder Model Specification Chart

Model	1500	1500-1	1500-2	1500-3
Rod Dia.	1/2	1/2	5/8	3/4
A	1/2-20	1/2-20	5/8-18	3/4-16
B	7/8-14	1-14	1-14	1-1/4-12
C	.933	1.222	1.222	1.373
D	1-1/4	1	1	1
E	45/64	13/16	13/16	13/16
F	2-1/8	2-5/8	2-5/8	2-5/8
G	2-5/8	3-1/8	3-1/8	3-1/8
J	5/8	11/16	11/16	11/16
K	1-1/8	1-3/8	1-3/8	1-3/8
L	1-1/4	1-3/8	1-3/8	1-3/8
M	1/2	.615	.615	.615
N	5/16	3/8	3/8	3/8
O	2-1/8	2-1/4	2-1/4	2-1/4
P	2-7/8	3	3	3

*** For spring return cylinders -- To base length:**

For Stroke	Add
0 to 2"	0"
2-1/8" to 4"	1"
4-1/8" to 5"	1-1/2"
5-1/8" to 7"	2"

Note: All Model 1500-3 spring return cylinders with strokes from 0" to 4" require a 1" stop

**** For spring return cylinders -- To base length:**

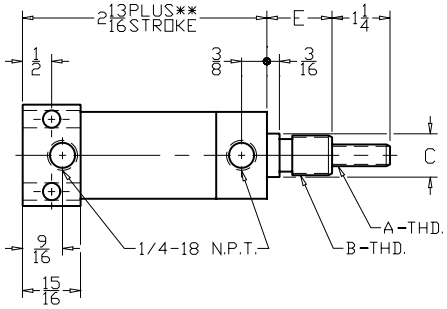
To base length, add 1" for each 2" of stroke

ORDERING DATA

When ordering, please specify the following:

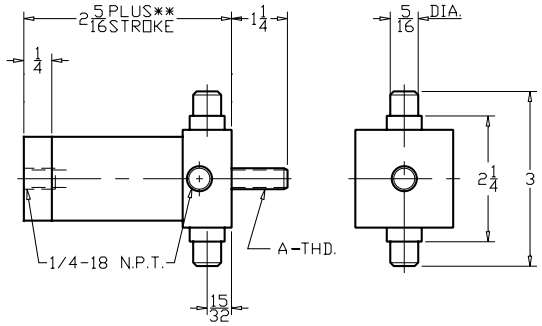
1. Model number
2. Stroke in inches
3. SINGLE or DOUBLE acting
4. Cushions if required (adjustable or nonadjustable; no addition to length for cushions)
5. If plain rod required
6. Media
7. Temperature
8. Pressure
9. Optional attachments
10. Flats on rod (optional)
11. "U" cups, if required
12. Low swell seals (optional)
13. Consult factory on high temperature applications

Universal Rear Mount



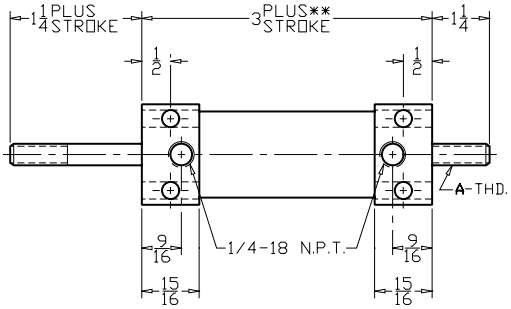
MODELS: URC-1500, URC-1500-1, URC-1500-2, URC-1500-3

Double Piston Rod -- Universal Mount



MODELS: UDPC-1500, UDPC-1500-2, UDPC-1500-3

Universal Trunnion Mount

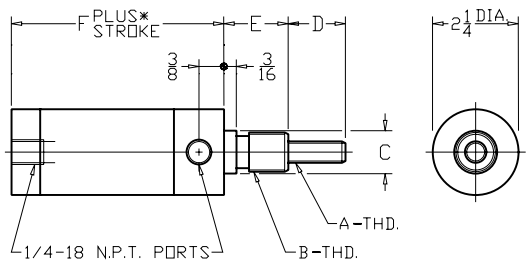


MODELS: UTC-1500, UTC-1500-2, UTC-1500-3

SPECIAL FEATURES

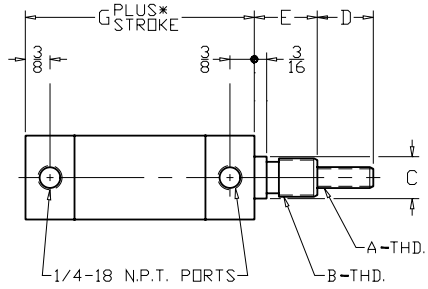
- Maximum Stroke is 40"
- Non-corrosive throughout
- Heavy wall tube (1/8" thick brass, pump cylinder finish)
- Polished & ground stainless steel piston rods
- Threaded rods standard
- All parts easily & economically serviced
- Aircraft type "O" ring seals (Buna "N" standard compound)
- 0-200 PSI operating pressure range
- "U" cup piston seals available (add 1" to length)

Rod End Mounted



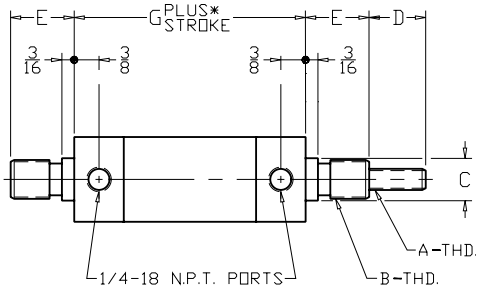
MODELS: RC-2100, RC2100-1, RC-2100-2

Stud Mount (Ports in Line)



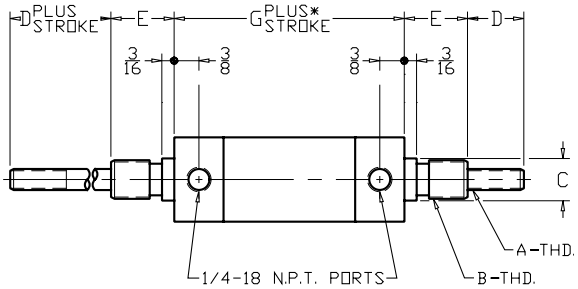
MODELS: DC-2100, DC2100-1, DC-2100-2

Foot Mount



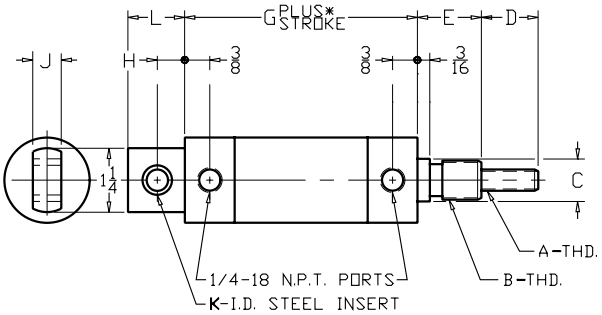
MODELS: FC-2100, FC-2100-1, FC-2100-2

Double Piston Rod



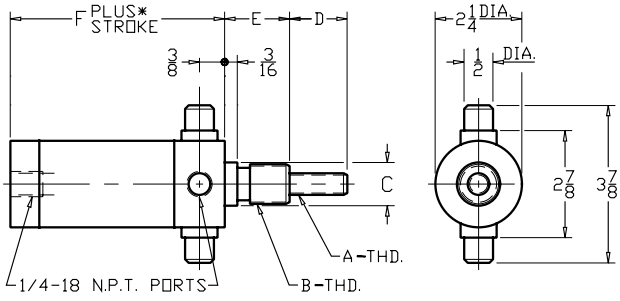
MODELS: DPC-2100, DPC-2100-1, DPC-2100-2

Clevis Mount



MODELS: CC-2100, CC-2100-1, CC-2100-2

Front Trunnion Mount

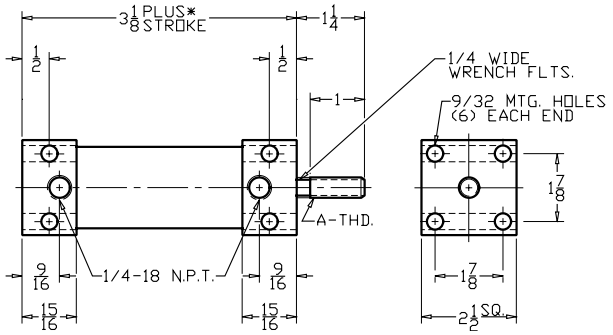


MODELS: TFC-2100, TFC-2100-1, TFC-2100-2

Additional Information for 2100 Series Cylinders

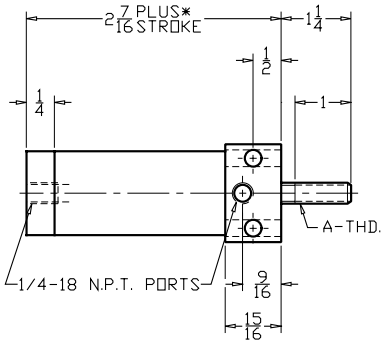
Cylinder Specification Chart and Ordering Data ..... See Page 17
Fittings and Accessories for 2100 Series Cylinders ..... See Page 40
Cylinder Engineering Data ..... See Pages 42-43
Small Bore Cylinder Service Parts List ..... See Pages 44-45

Universal Mount



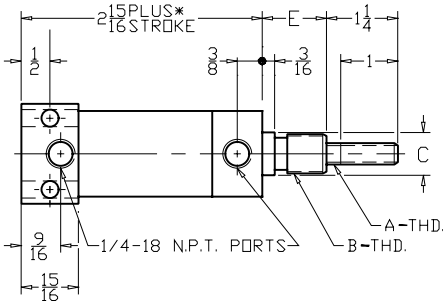
MODELS: UC-2100, UC-2100-2

Universal Front Mount



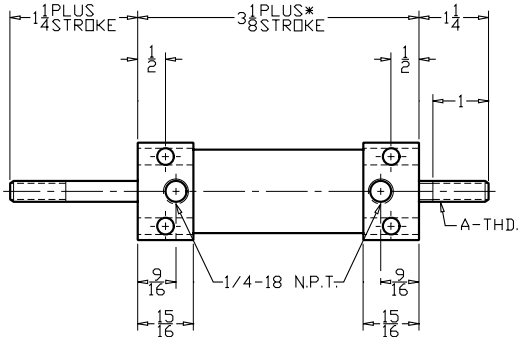
MODELS: UFC-2100, UFC-2100-2

Universal Rear Mount



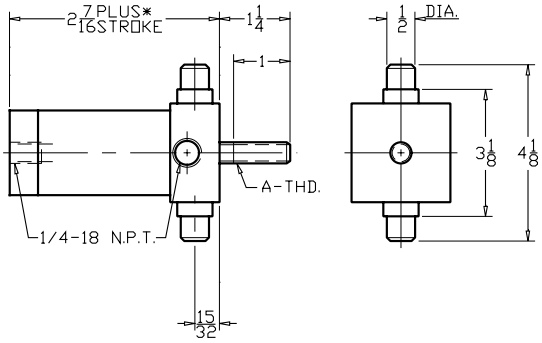
MODELS: URC-2100, URC-2100-1, URC-2100-2

Double Piston Rod -- Universal Mount



MODELS: UDPC-2100, UDPC-2100-2

Universal Trunnion Mount



MODELS: UTC-2100, UTC-2100-2

Cylinder Model Specification Chart

Model	2100	2100-1	2100-2
Rod Dia.	5/8	5/8	3/4
A	5/8-18	5/8-18	3/4-16
B	1-14	1-1/4-12	1-1/4-12
C	1.060	1.373	1.373
D	1-1/4	1-1/2	1-1/2
E	7/8	1	1
F	2-1/4	2-5/8	2-5/8
G	2-3/4	3-1/8	3-1/8
H	7/8	3/4	3/4
J	1/2	.734/.740	.734/.740
K	3/8	1/2	1/2
L	1-1/4	1-3/8	1-3/8

*** For spring return cylinders -- To base length:**

For Stroke	Add
0 to 1" (except UC-2100)	0"
UC-2100: 0" to 2"	1-1/2"
1-1/16" to 2"	1-1/2"
2-1/8" to 4"	2"
4-1/8" to 6"	3"

ORDERING DATA

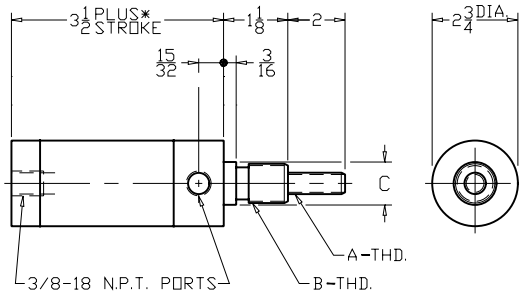
When ordering, please specify the following:

1. Model number
2. Stroke in inches
3. SINGLE or DOUBLE acting
4. Cushions if required (adjustable or nonadjustable; no addition to length for cushions)
5. If plain rod required
6. Media
7. Temperature
8. Pressure
9. Optional attachments
10. Flats on rod (optional)
11. "U" cups, if required
12. Low swell seals (optional)
13. Consult factory on high temperature applications

SPECIAL FEATURES

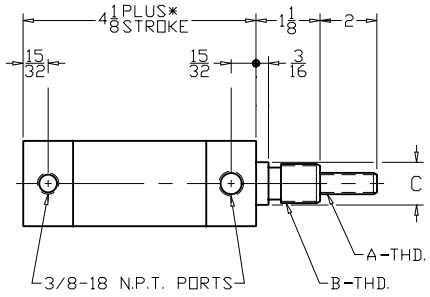
- Maximum stroke is 35" for 2500 Series
- Maximum stroke is 36" for 3100 Series
- Non-corrosive throughout
- Heavy wall tube (1/8"" thick brass, pump cylinder finish)
- Polished & ground stainless steel piston rods
- Threaded rods standard
- All parts easily & economically serviced
- Aircraft type "O" ring seals (Buna "N" standard compound)
- 0-200 PSI operating pressure range
- "U" cup piston seals available (add 1" to length)

Rod End Mounted



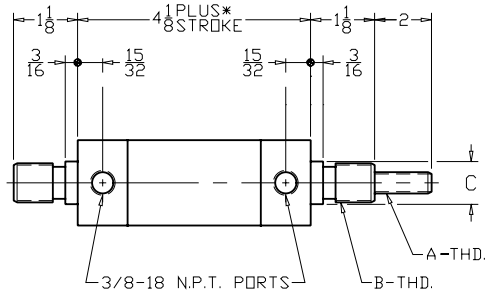
MODELS: RC-2500, RC-2500-1

Stud Mount (Ports in Line)



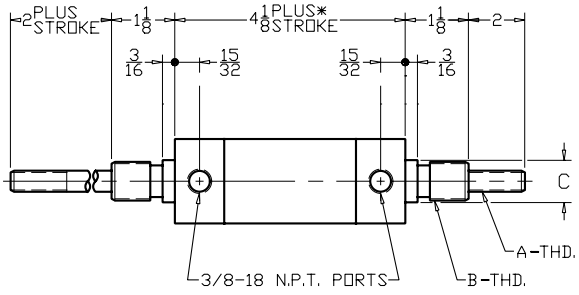
MODELS: DC-2500, DC-2500-1

Foot Mount



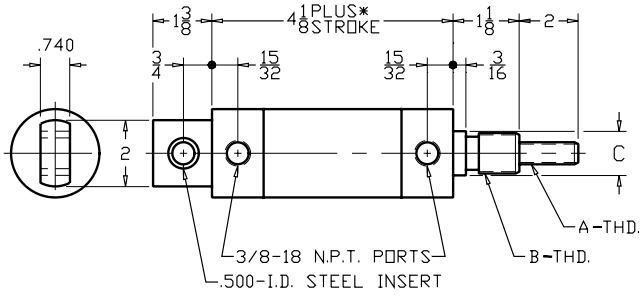
MODELS: FC-2500, FC-2500-1,

Double Piston Rod



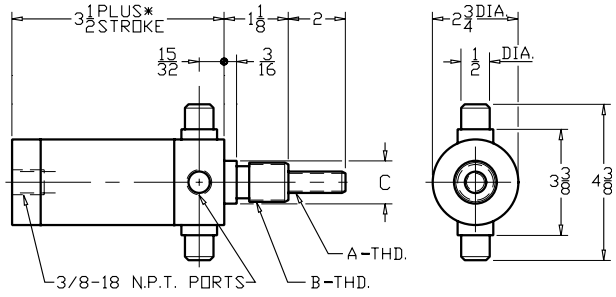
MODELS: DPC-2500, DPC-2500-1,

Clevis Mount



MODELS: CC-2500, CC-2500-1

Front Trunnion Mount

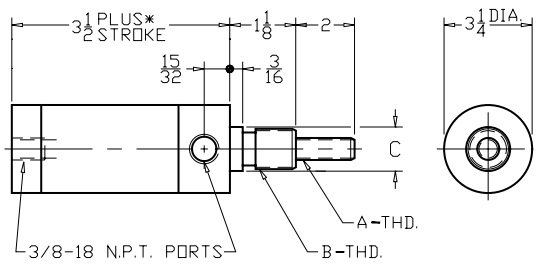


MODELS: TFC-2500, TFC-2500-1

Additional Information for 2500 & 3100 Series Cylinders

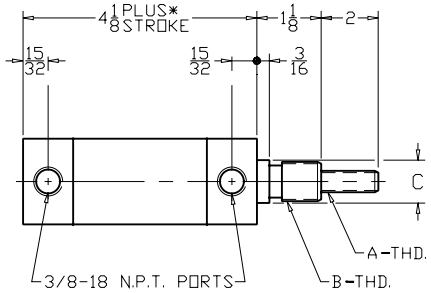
Cylinder Specification Chart and Ordering Data ..... See Page 19
Fittings and Accessories for 2500 & 3100 Series Cylinders ..... See Page 41
Cylinder Engineering Data ..... See Pages 42-43
Small Bore Cylinder Service Parts List ..... See Pages 44-45

Rod End Mounted



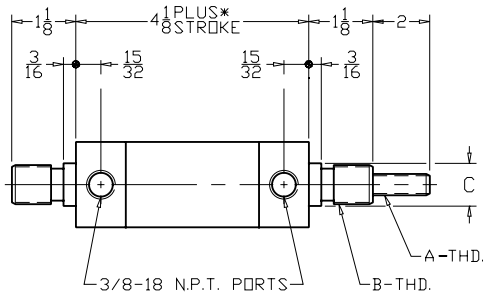
MODELS: RC-3100, RC-3100-1

Stud Mount (Ports in Line)



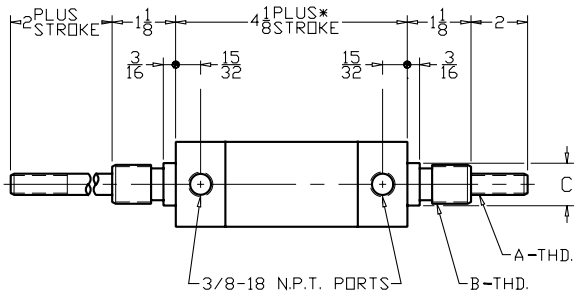
MODELS: DC-3100, DC-3100-1

Foot Mount



MODELS: FC-3100, FC-3100-1

Double Piston Rod



MODELS: DPC-3100, DPC-3100-1

Cylinder Model Specification Chart

Model	2500 & 3100	2500-1 & 3100-1
Rod Dia.	3/4	1
A	3/4-16	1-14
B	1-3/8-12	1-5/8-12
C	1.499	1.745

*** For spring return cylinders -- To base length:**

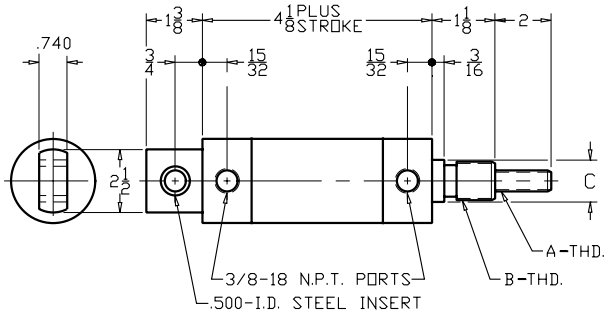
For Stroke	Add
0 to 2"	1-1/2"
2-1/8" to 4"	2"
4-1/8" to 6"	3"

ORDERING DATA

When ordering, please specify the following:

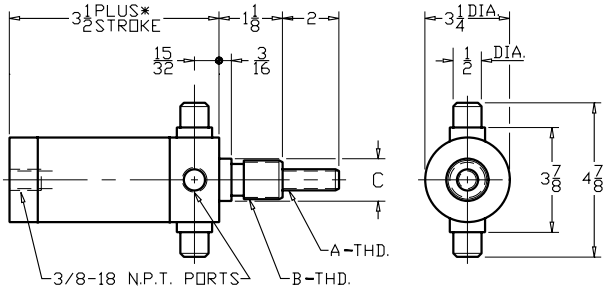
1. Model number
2. Stroke in inches
3. SINGLE or DOUBLE acting
4. Cushions if required (adjustable or nonadjustable; no addition to length for cushions)
5. If plain rod required
6. Media
7. Temperature
8. Pressure
9. Optional attachments
10. Flats on rod (optional)
11. "U" cups, if required
12. Low swell seals (optional)
13. Consult factory on high temperature applications

Clevis Mount



MODELS: CC-3100, CC-3100-1

Front Trunnion Mount



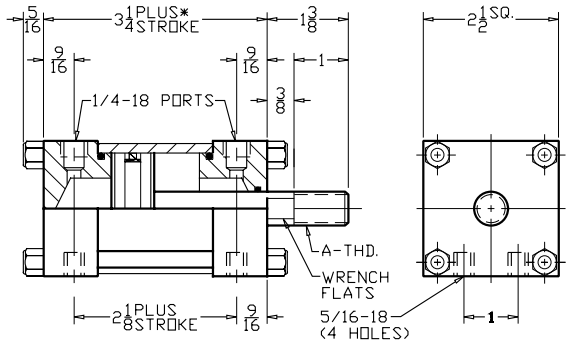
MODELS: TFC-3100, TFC-3100-1

2000 Series Cylinders with Tie Rods
2" Bore Cylinder, 0-200 PSI, Air or Hydraulic

SPECIAL FEATURES

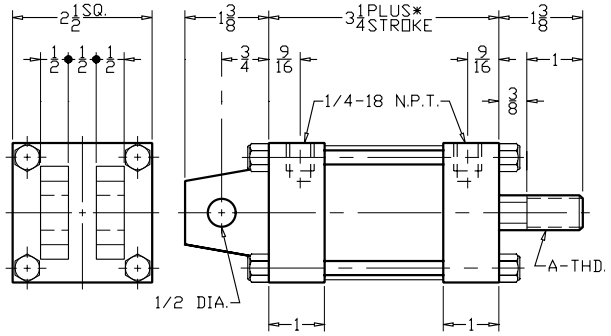
- *Non-corrosive throughout*
- *Heavy wall tube (1/8"" thick brass, pump cylinder finish)*
- *Polished & ground stainless steel piston rods and tie rods*
- *Threaded rods standard*
- *All parts easily & economically serviced*
- *Piston seals "T" ring (Buna "N" standard compound)*
- *Front or rear flange mounts available by extending tie rods*
- *0-200 PSI operating pressure range*

Foot Mount



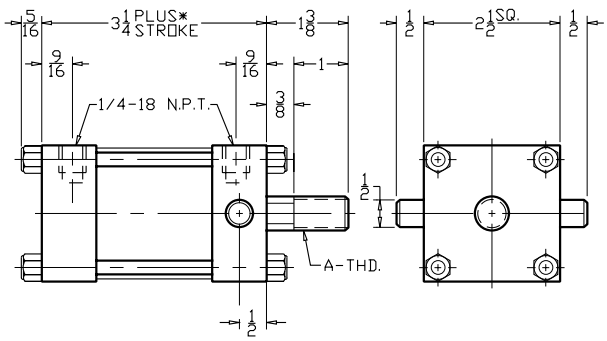
MODEL: 2000-F

Clevis Mount



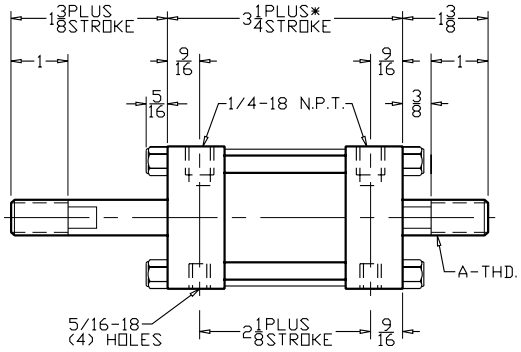
MODEL: 2000-C

Trunnion Mount



MODEL: 2000-T

Double Piston Rod



MODEL: 2000-FDP

Cylinder Rod Diameter	* For spring return cylinders -- To base length:	
	For Stroke	Add
A = 5/8-18	0 to 2"	1-1/2"
5/8" Rod Diameter	2-1/8" to 4"	2"
	4-1/8" to 6"	3"

All Series Cylinders are available with larger piston rods (add -1 after each model number)

Additional Information for 2000, 3000 & 4000 Series Cylinders

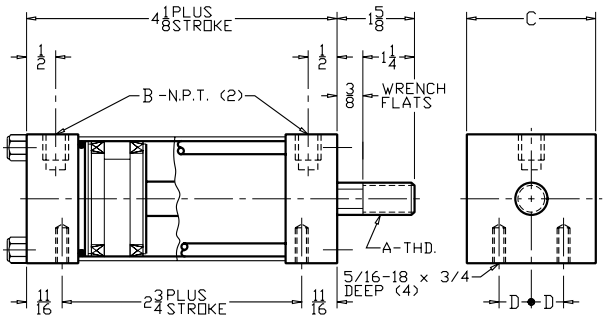
Cylinder Specification Chart and Ordering Data ..... See Page 21
Fittings and Accessories for 2000, 3000 & 4000 Series Cylinders ..... See Pages 40-41
Cylinder Engineering Data ..... See Pages 42-43
Small Bore Cylinder Service Parts List ..... See Page 46

Cylinders & Valves, Inc. 20811 Westwood Drive P.O. Box 360555 Strongsville, Ohio 44149
Phone: (440) 238-7343 or 238-7344 Fax: (440) 238-3812 Web: www.cylval.com Email: corporate@cylval.com

SPECIAL FEATURES

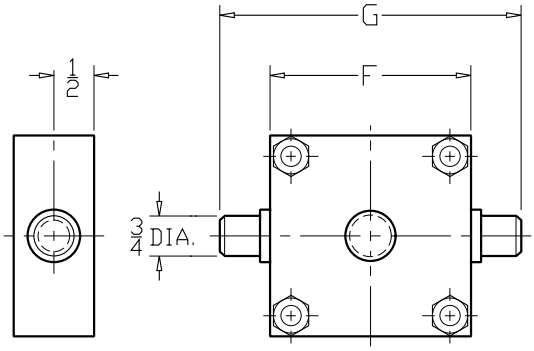
- *Non-corrosive throughout*
- *Heavy wall tube (1/8”” thick brass, pump cylinder finish)*
- *Polished & ground stainless steel piston rods and tie rods*
- *Threaded rods standard*
- *All parts easily & economically serviced*
- *Piston seals “U” cup (Buna “N” standard compound)*
- *Front or rear flange mounts available by extending tie rods*
- *0-150 PSI operating pressure range*

Foot Mount



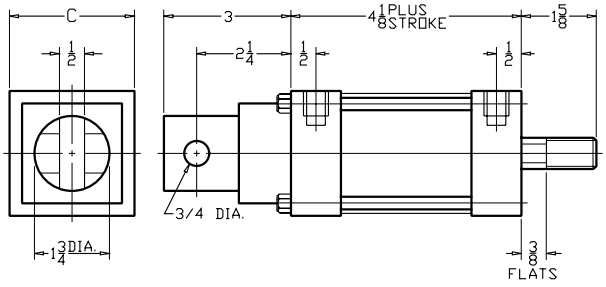
MODELS: 3000-F (3”), 4000-F (4”)

Trunnion Mount



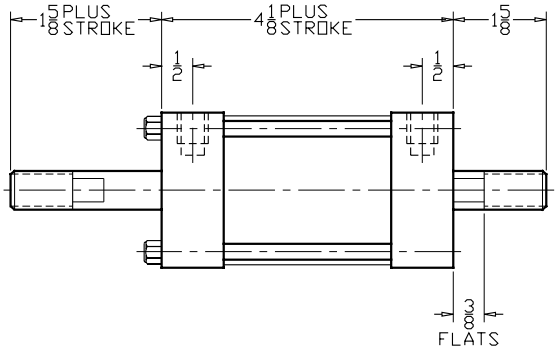
MODELS: 3000-T (3”), 4000-T (4”)

Clevis Mount



MODELS: 3000-C (3”), 4000-C (4”)

Double Piston Rod



MODELS: UDPC-3000 (3”), UDPC-4000 (4”)

Cylinder Model Specification Chart

Model	3000	4000
Rod Dia.	5/8	3/4
A	5/8-18	3/4-16
B	3/8” NPT	1/2” NPT
C	3-1/2	4-1/2
D	3/4	1-1/8
F	4	5
G	5-1/2	6-1/2
Tie Rod	5/16	3/8
3” Bore Tie Rods	2-3/4” Centers	
4” Bore Tie Rods	3-5/8” Centers	

ORDERING DATA

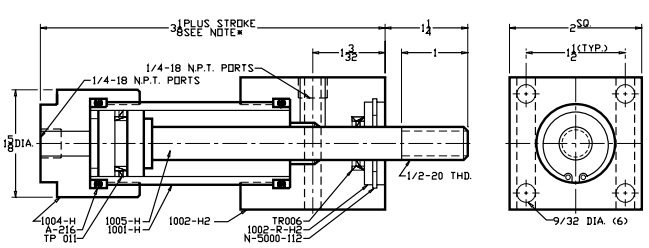
When ordering, please specify the following:

1. *Model number*
2. *Stroke in inches*
3. *SINGLE or DOUBLE acting*
4. *Cushions if required (adjustable or nonadjustable; no addition to length for cushions)*
5. *If plain rod required*
6. *Media*
7. *Temperature*
8. *Pressure*
9. *Optional attachments*
10. *Extended tie rods (optional)*
11. *Consult factory on high temperature applications*

SPECIAL FEATURES

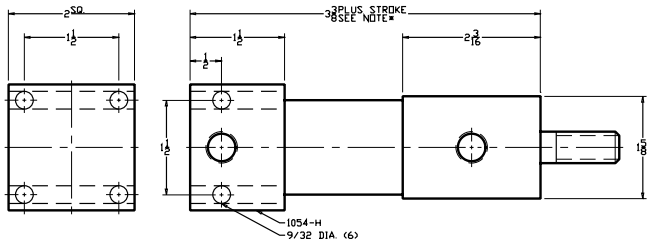
- *Non-corrosive throughout*
- *Heavy wall tube (1/8”” thick brass, pump cylinder finish)*
- *Polished & ground stainless steel piston rods*
- *Threaded rods standard*
- *All parts easily & economically serviced*
- *Aircraft type “O” ring seals and “T” ring seals (Buna “N” standard compound)*
- *0-1500 PSI operating pressure range*

Universal Front Mount



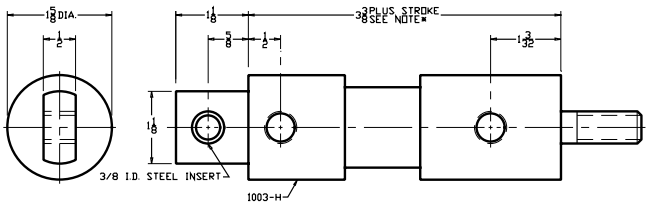
MODEL: HC-1000 1” Stroke Minimum

Universal Rear Mount



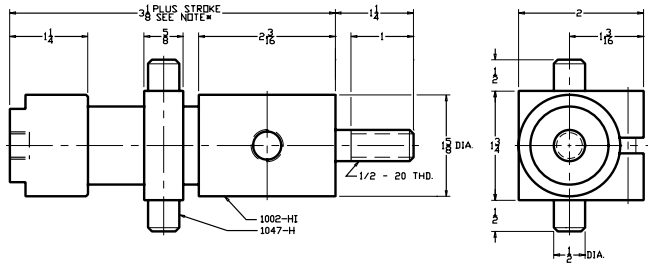
MODEL: HRC-1000 1” Stroke Minimum

Clevis Mount



MODEL: HCC-1000 1” Stroke Minimum

Adjustable Trunnion Mount



MODEL: HTC-1000 1” Stroke Minimum

* For spring return cylinders -- To base length:	
For Stroke	Add
1” to 4-1/2”	1”
4-5/8” to 6-1/2”	1-1/2”
6-5/8” to 8-1/2”	2”

1-1/8” Bore Cylinder, 0-1500 PSI, Air or Hydraulic, High Pressure Cylinders available on request

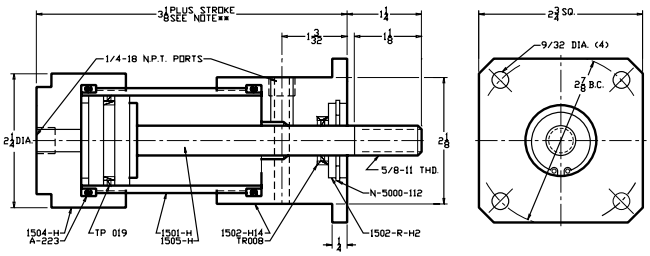
Additional Information for H-1000 & H-1500 Series Cylinders

Cylinder Specification Chart and Ordering Data ..... See Page 23
Fittings and Accessories for H-1000 & H-1500 Series Cylinders ..... See Page 37 & 39
Cylinder Engineering Data ..... See Page 44-45
Small Bore Cylinder Service Parts List ..... See Page 46-47

SPECIAL FEATURES

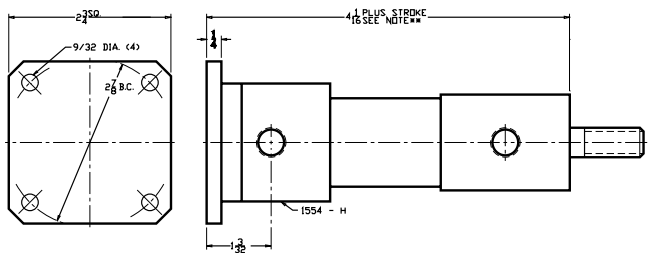
- *Non-corrosive throughout*
- *Heavy wall tube (1/8"" thick brass, pump cylinder finish)*
- *Polished & ground stainless steel piston rods*
- *Threaded rods standard*
- *All parts easily & economically serviced*
- *Aircraft type "O" ring seals and "T" ring seals (Buna "N" standard compound)*
- *0-1500 PSI operating pressure range*

Front Flange Mount



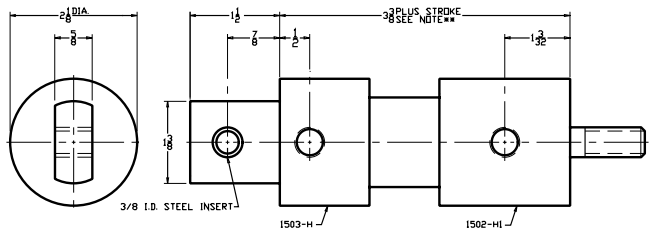
MODEL: HC-1500 1" Stroke Minimum

Rear Flange Mount



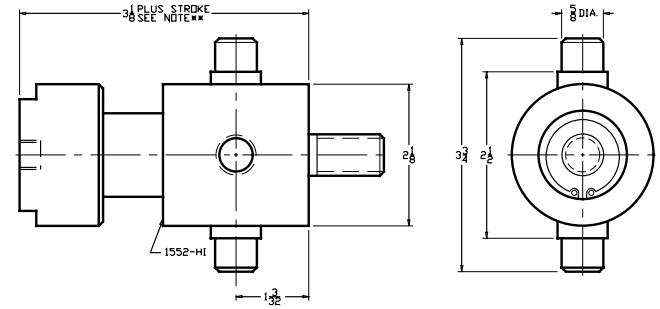
MODEL: HRC-1500 1" Stroke Minimum

Clevis Mount



MODEL: HCC-1500 1" Stroke Minimum

Front Trunnion Mount



MODEL: HTC-1500 1" Stroke Minimum

ORDERING DATA

When ordering, please specify the following:

1. *Model number*
2. *Stroke in inches*
3. *SINGLE or DOUBLE acting*
4. *If plain rod required*
5. *Media*
6. *Temperature*
7. *Pressure*
8. *Optional attachments*
9. *Flats on rod (optional)*
10. *Consult factory on high temperature applications*

***** For spring return cylinders -- To base length:***

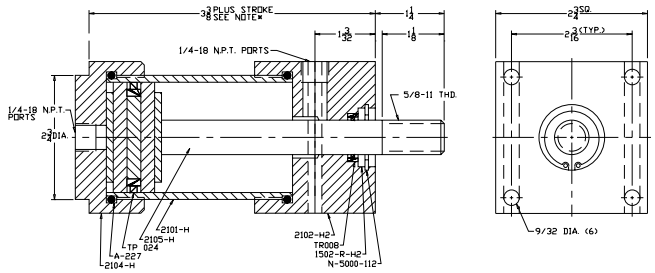
For Stroke	Add
1" to 2"	1"
2-1/8" to 4"	2"
4-1/8" to 8"	3"

H-2100 Series High Pressure Cylinders
2” Bore Cylinder, 0-1500 PSI, Air or Hydraulic

SPECIAL FEATURES

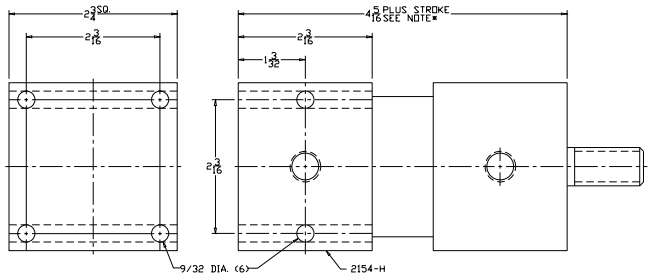
- *Non-corrosive throughout*
- *Heavy wall tube (1/8”” thick brass, pump cylinder finish)*
- *Polished & ground stainless steel piston rods*
- *Threaded rods standard*
- *All parts easily & economically serviced*
- *Aircraft type “O” ring seals and “T” ring seals (Buna “N” standard compound)*
- *0-1500 PSI operating pressure range*

Universal Front Mount



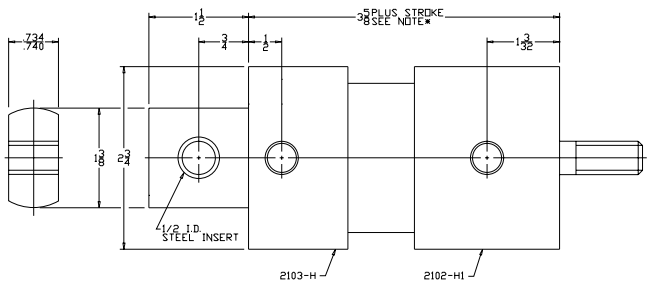
MODEL: HC-2100 1” Stroke Minimum

Universal Rear Mount



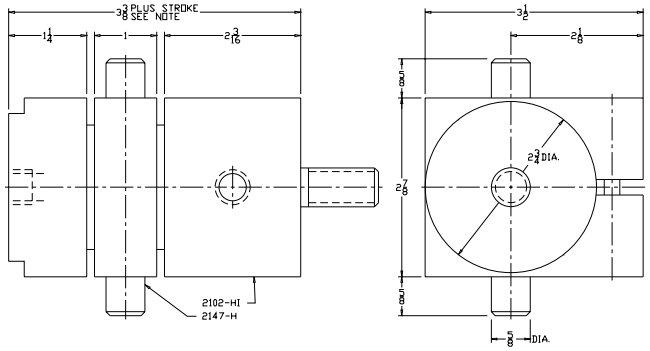
MODEL: HRC-2100 1” Stroke Minimum

Clevis Mount



MODEL: HCC-2100 1” Stroke Minimum

Adjustable Trunnion Mount



MODEL: HTC-2100 1” Stroke Minimum

* For spring return cylinders -- To base length:	
For Stroke	Add
1” to 2”	1-1/2”
2-1/8” to 4”	2”
4-1/8” to 8”	3”

Additional Information for H-2100 Series Cylinders

Fittings and Accessories for H-2100 Series Cylinders ..... See Page 40
Cylinder Engineering Data ..... See Page 44-45
Small Bore Cylinder Service Parts List ..... See Page 46-47

ORDERING DATA

When ordering, please specify the following:

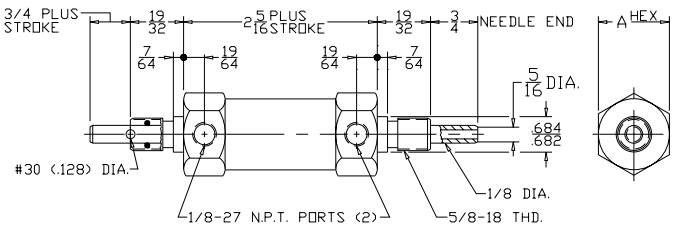
1. *Model number*
2. *Stroke in inches*
3. *SINGLE or DOUBLE acting*
4. *If plain rod required*
5. *Media*
6. *Temperature*
7. *Pressure*
8. *Optional attachments*
9. *Flats on rod (optional)*
10. *Consult factory on high temperature applications*

Cylinders & Valves, Inc. 20811 Westwood Drive P.O. Box 360555 Strongsville, Ohio 44149
Phone: (440) 238-7343 or 238-7344 Fax: (440) 238-3812 Web: www.cylval.com Email: corporate@cylval.com

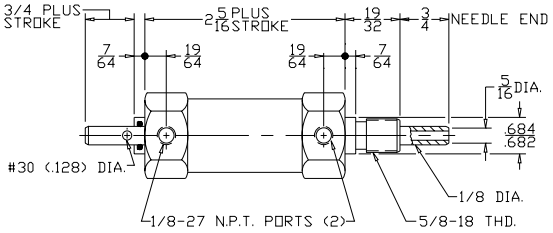
SPECIAL FEATURES

- Heavy duty brass tube
- Polished & ground stainless steel piston rods
- "O"" ring, Buna ""N"" seals "Non-corrosive throughout
- Needle end of piston can be altered to customer specifications

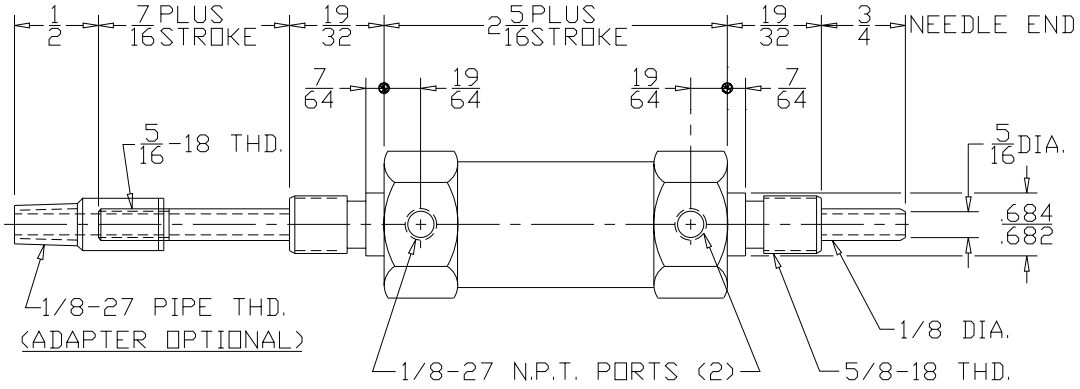
Series BM with Built-In Blow Control
3/4" Minimum Stroke



Series MBM with Built-In Blow Control
3/8" Minimum Stroke



Series BMA with Hollow Rod & 1/8-27 Adapter



ORDERING DATA

When ordering, please specify the following:

1. Model number
2. Stroke in inches
3. SINGLE or DOUBLE acting
4. Media
5. Temperature
6. Pressure

Cylinder Model Specification Chart

Model No.	700	1000	1100
Bore	3/4	1	1-1/8
A-Hex	7/8	1-1/4	1-1/4

Additional Information for BM, MBM & BMA Series Cylinders

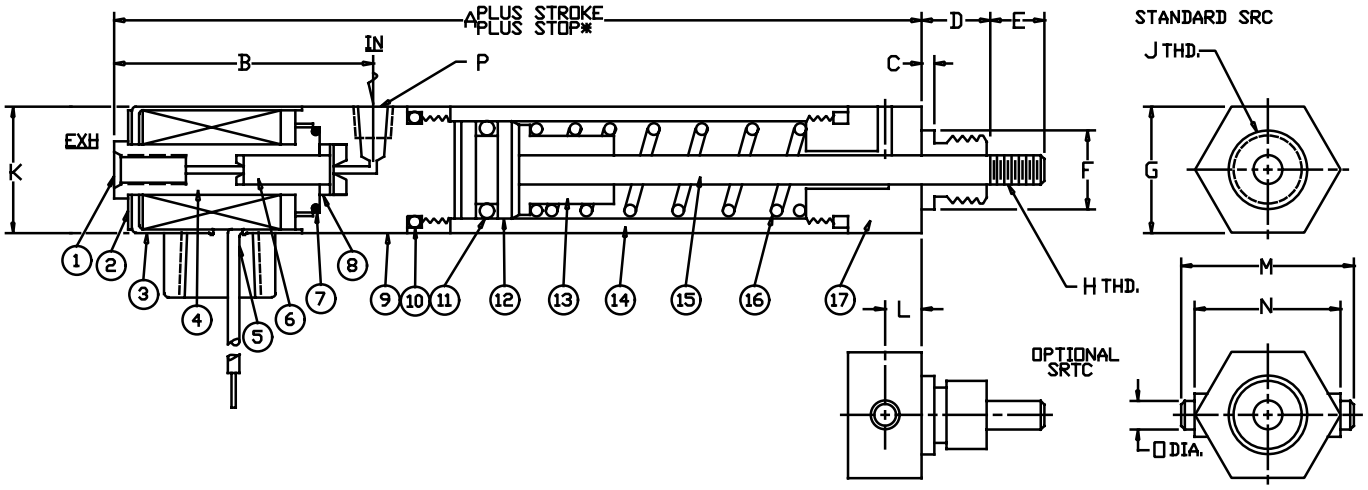
Cylinder Engineering Data ..... See Page 44-45
Small Bore Cylinder Service Parts List .....See Page 46-47

SRC & SRTC Solenoid Operated Cylinders

1/2" thru 2" Bore, 0-150 PSI, Single Acting Spring Return

SPECIAL FEATURES

- 1/2", 3/4", 1-1/8", 1-1/2" and 2" bore sizes available from stock
- Non-corrosive throughout
- Heavy wall tube (1/8"" thick brass, pump cylinder finish)
- Polished & ground stainless steel piston rods
- Threaded rods standard
- Aircraft type "O" ring seals (Buna "N" standard compound)
- 0-150 PSI operating pressure range



Dimensions for SRC & SRTC Series

MODEL	500	700	700-1	700-2	1100	1100-1	1100-2	1500	1500-1	2100
BORE	1/2"		3/4"			1-1/8"			1-1/2"	2"
A	3.87			4.15				4.31		4.44
B				2.12					2.22	
C				0.109				0.203		0.234
D	0.562			0.593				0.703		0.875
E	0.500			0.750				1.250		1.500
F	0.685		0.750		0.685	0.875		0.933		1.057
G	0.750		0.875			1.250		1.750		2.250
H	1/4-20		5/16-18	3/8-16	5/16-18	3/8-16	1/2-20		1/2-13	5/8-18
J	5/8-18		3/4-16		5/8-18		7/8-14			1-14
K				1.03					1.75	
L	0.218			2.96					0.375	
M	1.50		1.62			2.250		2.87		3.250
N	1.00		1.12			1.500		2.12		2.500
O		0.250					0.312			0.500
P				1/8" NPT					1/4" NPT	

Additional Information for SRC & SRTC Series Cylinders continued on Page 27

Part Directory & Ordering Data ..... See Page 27
Fittings and Accessories for SRC & SRTC Series Cylinders ..... See Page 42-43
Cylinder Engineering Data ..... See Page 44-45
Small Bore Cylinder Service Parts List ..... See Page 46-47

Cylinders & Valves, Inc. 20811 Westwood Drive P.O. Box 360555 Strongsville, Ohio 44149
Phone: (440) 238-7343 or 238-7344 Fax: (440) 238-3812 Web: www.cylval.com Email: corporate@cylval.com

SRC & SRTC Solenoid Operated Cylinders

1/2" thru 2" Bore, 0-150 PSI, Single Acting Spring Return

CYLINDER DESCRIPTION

- Single acting spring return
- Media: air, water or oil
- Operating pressure to 150 PSI
- Temperature range: -40 degrees F to +180 degrees F
- Operating speed to 600 CPM

SOLENOID DESCRIPTION

- Most AC or DC voltages available
- Continuous or intermittent solenoid coil
- 185 degrees F max. heat rise for continuous duty
- 10 watt power consumption
- AC response time: 4-8ms to open, 6-12ms to close

Part Directory for SRC & SRTC Series (see illustration on page 26)

ITEM	PART NAME	MODEL NUMBER				
		500	700	1100	1500	2100
1	NUT		350		360	
2	NAME PLATE		361			
3	COVER		353		363	
4	TUBE ASS'Y		354		364	
5*	COIL		355-1		365-1	
6	PLUNGER		356		366	
7	WASHER		358		368	
8	PLUNGER SPRING		357		367	
9	BODY ASSEMBLY	590-1	790-1	1190-1	1590-1	2190-1
10	TUBE SEAL	A-111	A-114	A-211	A-220	A-22
11	PISTON SEAL	A-012	A-113	A-212	A-218	A-326
12	PISTON	SEE 15	SEE 15	SEE 15	SEE 15	SEE 15
	SPRING STOP FOR STROKE UP TO AND INCLUDING					
13**	1" STOP	0"-2" 765-1	0"-2" 1165-1	0"-2" 1565-1	0"-2"	0"-2"
	1-1/2" STOP	2-1/8"-4" 565-2	2-1/8"-4" 765-2	4-1/8"-6" 1165-2	2-1/8"-4"	2-1/8"-4" 2165-2
	2" STOP	4-1/8"-5" 565-3	4-1/8"-5" 765-3	6-1/8"-8" 1165-3	4-1/8"-5" 1565-3	4-1/8"-5" 2165-3
14	TUBE	501	701	1101	1501	210115
15	PISTON ROD ASS'Y	505	705	1105	1505	2105
16	SPRING: (DENOTE STROKE)	566-1	766-1	1166-1	1566-1	2166-1
17	ROD END	502-A1	752-A1	1102-A1	1502-A1	2102-A1

ORDERING DATA

When ordering, please specify the following:

1. Model number
2. Stroke in inches
3. If plain rod required
4. Media
5. TEMPERATURE APPLICATIONS
6. Pressure
7. Voltage
8. Optional attachments
9. Flats on rod (optional)
10. Low swell seals (optional)
11. Consult factory on high temperature applications

* 355-1 & 365-1 standard 110 volt 60 cycle coils. 220/60 & 440/60 and most DC coils available. Please specify voltage when ordering

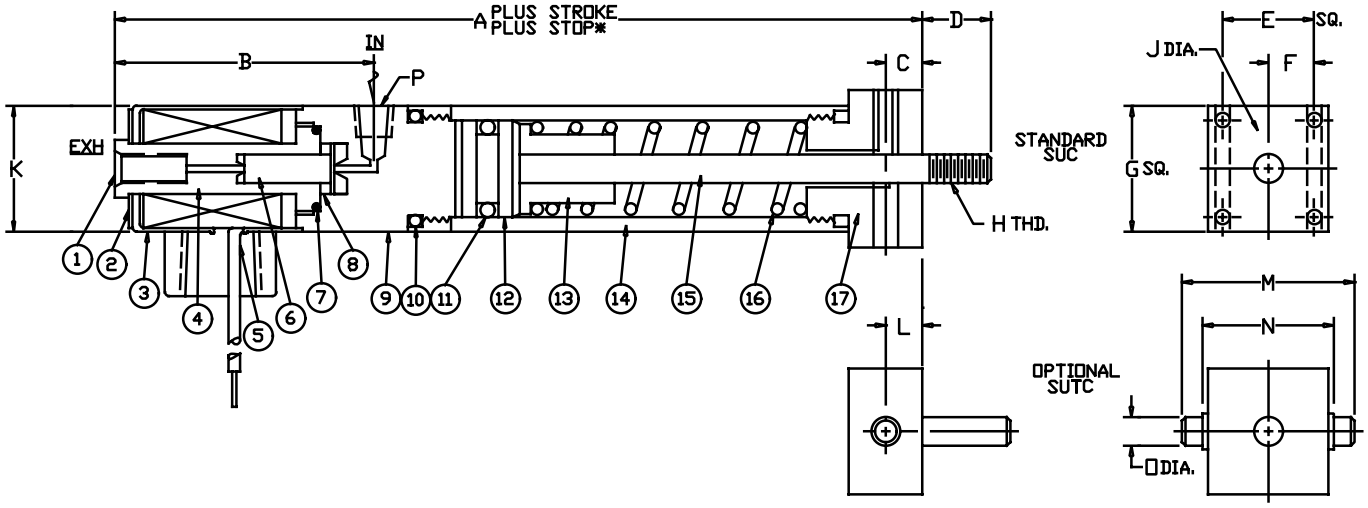
** Add stop length to ""A"" dimension for stroke required as specified "Stroke Up To and Including"

SUC & SUTC Solenoid Operated Cylinders

1/2" thru 2" Bore, 0-150 PSI, Single Acting Spring Return

SPECIAL FEATURES

- 1", 1-1/8", 1-1/2" and 2" bore sizes available from stock
- Non-corrosive throughout
- Heavy wall tube (1/8"" thick brass, pump cylinder finish)
- Polished & ground stainless steel piston rods
- Threaded rods standard
- Aircraft type "O" ring seals (Buna "N" standard compound)
- 0-150 PSI operating pressure range



Dimensions for SUC & SUTC Series

MODEL	500	700	700-1	700-2	1100	1100-1	1100-2	1500	1500-1	2100
BORE	1/2"		3/4"			1-1/8"			1-1/2"	2"
A	3.93			4.25				4.44		4.63
B				2.12					2.22	
C	0.12		0.18			0.25			0.50	
D	0.50			0.593				0.703		0.875
E	0.750			0.870				1.560		1.870
F	0.370		0.430			0.620		0.780		0.930
G	1.000		1.250			1.750		2.000		2.500
H	1/4-20		5/16-18	3/8-1	5/16-18	3/8-1	1/2-20		1/2-13	5/8-18
J		#6					0.250			
K				1.03					1.75	
L	0.250			0.340				0.460		0.500
M	1.62		2.000			2.750		3.000		3.500
N	1.12		1.150			2.000		2.250		2.750
O		0.250					0.312			0.500
P				1/8" NPT					1/4" NPT	

Additional Information for SUC & SUTC Series Cylinders continued on Page 29

Part Directory & Ordering Data ..... See Page 29
Fittings and Accessories for SUC & SUTC Series Cylinders ..... See Page 42-43
Cylinder Engineering Data ..... See Page 44-45
Small Bore Cylinder Service Parts List ..... See Page 46-47

Cylinders & Valves, Inc. 20811 Westwood Drive P.O. Box 360555 Strongsville, Ohio 44149
Phone: (440) 238-7343 or 238-7344 Fax: (440) 238-3812 Web: www.cylval.com Email: corporate@cylval.com

CYLINDER DESCRIPTION

- Single acting spring return
- Media: air, water or oil
- Operating pressure to 150 PSI
- Temperature range: -40 degrees F to +180 degrees F
- Operating speed to 600 CPM

SOLENOID DESCRIPTION

- Most AC or DC voltages available
- Continuous or intermittent solenoid coil
- 185 degrees F max. heat rise for continuous duty
- 10 watt power consumption
- AC response time: 4-8ms to open, 6-12ms to close

Part Directory for SUC & SUTC Series (see illustration on page 28)

ITEM	PART NAME	MODEL NUMBER				
		500	700	1100	1500	2100
1	NUT		350		360	
2	NAME PLATE		361			
3	COVER		353		363	
4	TUBE ASS'Y		354		364	
5*	COIL		355-1		365-1	
6	PLUNGER		356		366	
7	WASHER		358		368	
8	PLUNGER SPRING		357		367	
9	BODY ASSEMBLY	590-1	790-1	1190-1	1590-1	2190-1
10	TUBE SEAL	A-111	A-114	A-211	A-220	A-22
11	PISTON SEAL	A-012	A-113	A-212	A-218	A-326
12	PISTON	SEE 15	SEE 15	SEE 15	SEE 15	SEE 15
	SPRING STOP FOR STROKE UP TO AND INCLUDING					
13**	1" STOP	0"-2" 765-1	0"-2" 1165-1	0"-2" 1565-1	0"-2"	0"-2"
	1-1/2" STOP	2-1/8"-4" 565-2	2-1/8"-4" 765-2	4-1/8"-6" 1165-2	2-1/8"-4"	2-1/8"-4" 2165-2
	2" STOP	4-1/8"-5" 565-3	4-1/8"-5" 765-3	6-1/8"-8" 1165-3	4-1/8"-5" 1565-3	4-1/8"-5" 2165-3
14	TUBE	501	701	1101	1501	210115
15	PISTON ROD ASS'Y	505	705	1105	1505	2105
16	SPRING: (DENOTE STROKE)	566-1	766-1	1166-1	1566-1	2166-1
17	ROD END	402-A1	602	1102-A4	1502-A4	2102-A4

ORDERING DATA

When ordering, please specify the following:

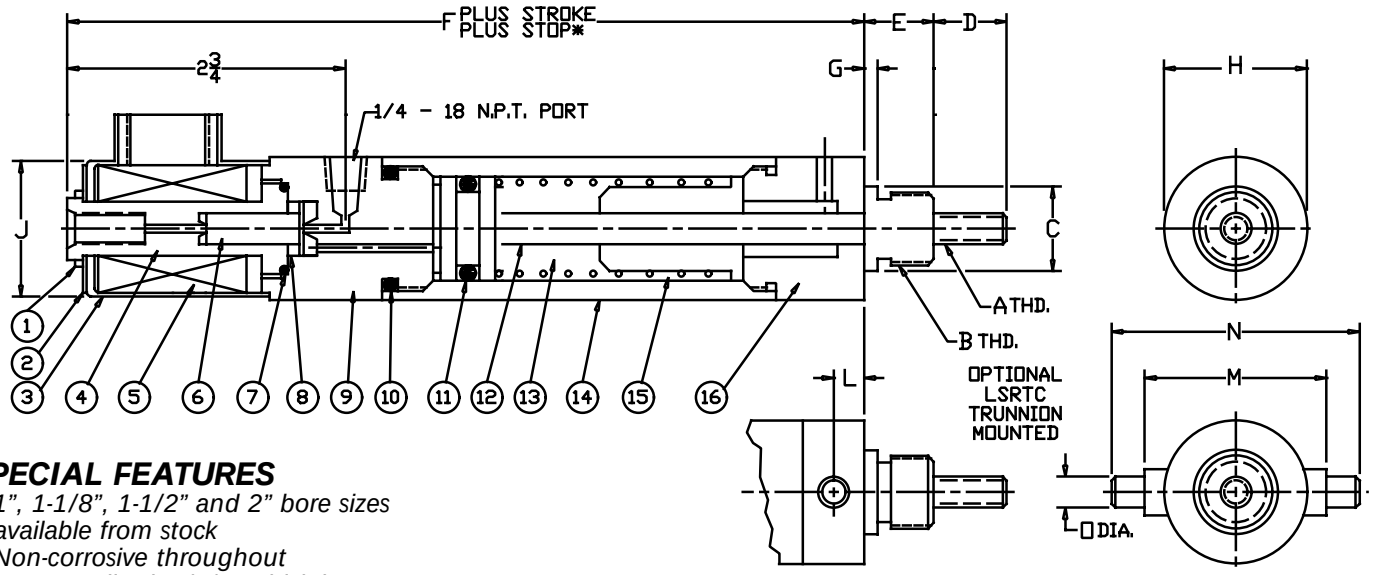
1. Model number
2. Stroke in inches
3. If plain rod required
4. Media
5. TEMPERATURE APPLICATIONS
6. Pressure
7. Voltage
8. Optional attachments
9. Flats on rod (optional)
10. Low swell seals (optional)
11. Consult factory on high temperature applications

* 355-1 & 365-1 standard 110 volt 60 cycle coils. 220/60 & 440/60 and most DC coils available. Please specify voltage when ordering

** Add stop length to ""A"" dimension for stroke required as specified "Stroke Up To and Including"

LSRC & LSRTC Solenoid Operated Cylinders

1” thru 2” Bore, 0-150 PSI, Single Acting Spring Return Only



SPECIAL FEATURES

- 1”, 1-1/8”, 1-1/2” and 2” bore sizes available from stock
- Non-corrosive throughout
- Heavy wall tube (1/8”” thick brass, pump cylinder finish)
- Polished & ground stainless steel piston rods
- Threaded rods standard
- Aircraft type “O” ring seals (Buna “N” standard compound)
- 0-150 PSI operating pressure range

CYLINDER DESCRIPTION

- Single acting spring return
- Media: air, water or oil
- Operating pressure to 150 PSI
- Temperature range: -40 degrees F to +180 degrees F
- Operating speed to 600 CPM

SOLENOID DESCRIPTION

- Most AC or DC voltages available
- Continuous or intermittent solenoid coil
- 185 degrees F max. heat rise for continuous duty
- 10 watt power consumption
- AC response time: 4-8ms to open, 6-12ms to close

ORDERING DATA

When ordering, please specify the following:

1. Model number
2. Stroke in inches
3. If plain rod required
4. Media
5. TEMPERATURE APPLICATIONS
6. Pressure
7. Voltage
8. Optional attachments
9. Flats on rod (optional)
10. Low swell seals (optional)
11. Consult factory on high temperature applications

MODEL NO.	1000	1100	1500	2100
BORE	1”	1-1/8”	1-1/2”	2”
A	5/16-18		1/2-20	5/8-18
B	5/8-18		1-14	1-1/4—12
C	0.686		1.122	1.373
D	3/4		1	1-1/2
E	19/32		13/16	1
F	4-27/32+		5-1/2”+	
G	7/64		3/16	
H	1-1/4” HEX	1-3/4” DIA	2-1/4” DIA	
J	1-3/4			
L	19/64		3/8	
M	1-1/2		2-1/4	2-7/8
N	2-1/4		3	3-7/8
O	5/16		3/8	1/2

Item	Description	Model Number			
		1000	1100	1500	2100
1	Nut	P-360			
2	Name Plate	P-361			
3	Cover	P-363			
4	Tube	P-364			
5	Coil	P-365-1 (Specify Voltage)			
6	Plunger	P-366			
7	Seal	P-368			
8	Spring	P-367			
9	Body	1090-L	1190-L	1590-L	2190-L
10	Tube Seal	A-210	A-212	A-219	A-224
11	Piston Seal	A-210	A-212	A-218	A-326
12**	Piston Ass’y	1005	1105	1505-A1	2105-A1
13**	Stop	1065	1165	1565	2165
14**	Tube	1001	1101	1501	2101
15**	Spring	1166	1566	2166	
16	Rod End	1002-A1	1102-A1	1502-A12	2102-A12

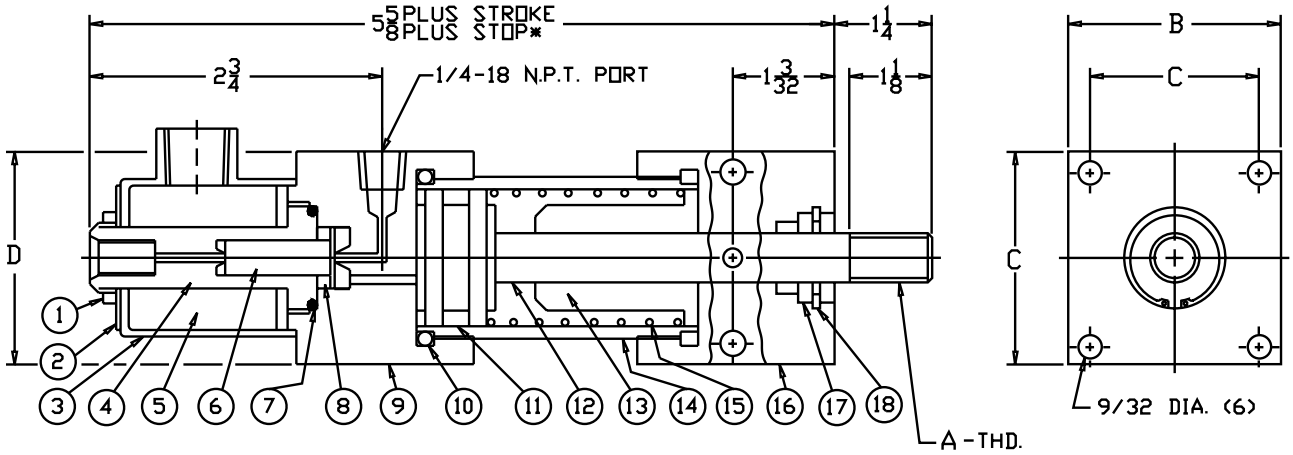
**Please specify cylinder stroke

Cylinders & Valves, Inc. 20811 Westwood Drive P.O. Box 360555 Strongsville, Ohio 44149
Phone: (440) 238-7343 or 238-7344 Fax: (440) 238-3812 Web: www.cylval.com Email: corporate@cylval.com

HSUC Solenoid Operated Cylinders

1” thru 2” Bore, 0-150 PSI, Single Return Spring Acting Only

Manufacturing since 1958



Model No.	1000	1100	1500	2100
Bore	1	1-1/8	1-1/2	2
A	1/2-20		5/8-11	5/8-18
B (SQ)	2		2-1/4	2-3/4
C	1-1/2		1-11/16	2-3/16
D (DIA)	1-3/4		2-1/4	2-3/4

Item	Description	Model Number			
		1000	1100	1500	2100
1	Nut	P-360			
2	Name Plate	P-361T			
3	Cover	P-363			
4	Tube	P-364			
5	Coil	P-365-1 (Specify Voltage)			
6	Plunger	P-366			
7	Seal	P-368			
8	Spring	P-367			
9	Body	1090-H1	1190-H1	1590-H1	2190-H1
10	Tube Seal	A-216	A-218	A-223	A-227
11	Piston Seal	TPO11	TP013	TPO19	TPO24
12**	Piston Ass’y	1005-H	1105-H	1505-H	2105-H
13**	Spring Stop for Stroke Up to and Including				
	1” Stop	0 to 4-1/2” 1065-H1	0 to 4-1/2” 1165-H1		
	1-1/2” Stop	4-5/8” to 6-1/2” 1065-H2	4-5/8” to 6-1/2” 1165-H2	0” to 2” 1565-H1	0” to 2” 2165-H1
	2” Stop	6-5/8” to 8-1/2” 1065-H3	6-5/8” to 8-1/2” 1165-H3	2-1/8” to 4” 1564-H2	2-1/8” to 4” 2165-H2
	3” Stop			4-1/8” to 8” 1565-H3	4-1/8” to 8” 2165-H3
14**	Tube	1001-H	1101-H	1501-H	2101-H
15**	For Stroke Up To and Including				
		0” to 4-1/2” 1066-H1	0” to 4-1/2” 1166-H1	0” to 2” 1566-H1	0” to 2 2166-H1
	Spring	4-5/8” to 6-1/2” 1066-H2	4-5/8” to 6-1/2” 1166-H2	2-1/8” to 4” 1566-H2	2-1/8” to 4” 2166-H2
		6-5/8” to 8-1/2” 1066-H3	6-5/8” to 8-1/2” 1161-H3	4-1//8” to 8” 1566-H3	4-1//8” to 8” 2166-H3
16	Rod End	1002-H2	1102-H2	1502-H2	2102-H2
17	Washer	1101-R-H2		1502-R-H2	1502-R-H21
18	Retainer	N-5000-112			

**Please specify cylinder stroke

SPECIAL FEATURES

- 1”, 1-1/8”, 1-1/2” and 2” bore sizes available from stock
- Non-corrosive throughout
- Heavy wall tube (1/8”” thick brass, pump cylinder finish)
- Polished & ground stainless steel piston rods
- Threaded rods standard
- Aircraft type “O” ring seals (Buna “N” standard compound)
- 0-150 PSI operating pressure range

CYLINDER DESCRIPTION

- Single acting spring return
- Media: air, water or oil
- Operating pressure to 150 PSI
- Temperature range: -40 degrees F to +180 degrees F
- Operating speed to 600 CPM

SOLENOID DESCRIPTION

- Most AC or DC voltages available
- Continuous or intermittent solenoid coil
- 185 degrees F max. heat rise for continuous duty
- 10 watt power consumption
- AC response time: 4-8ms to open, 6-12ms to close

ORDERING DATA

When ordering, please specify the following:

1. Model number
2. Stroke in inches
3. If plain rod required
4. Media
5. TEMPERATURE APPLICATIONS
6. Pressure
7. Voltage
8. Optional attachments
9. Flats on rod (optional)
10. Low swell seals (optional)
11. Consult factory on high temperature applications

CV SERIES Double Acting Cylinders
10-150 PSI, with Integral 4-Way Solenoid Operated Valve

CYLINDER FEATURES

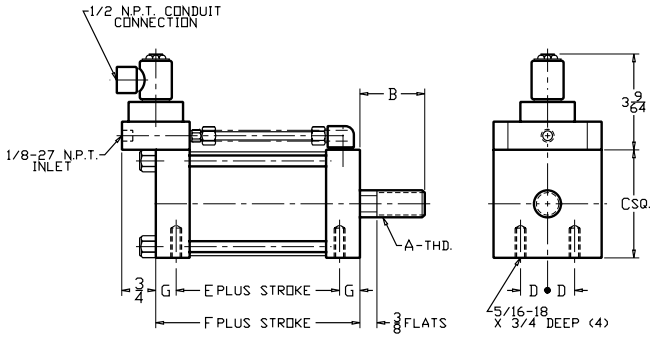
- Non-corrosive throughout
- Heavy duty 1/8" brass tube
- Extruded brass heads
- Polished and ground #303
- Stainless steel piston rods
- Threaded rods standard
- T" ring piston seal on 2" bore
- "U" cup piston seal on 3" & 4" bore
- Adjustable cushions (front and rear) available

SOLENOID FEATURES

- 1/8" DIAMETER ORIFICE
- Aluminum body
- Brass spool
- "O" ring seals
- Operating temperature:
  -40 degrees F to +180 degrees F
- Continuous or intermittent duty cycle
- Power consumption: 7 watts
- Most AC or DC voltages available
- Varnish impregnated, layer wound, Class A coil with 24" wire leads

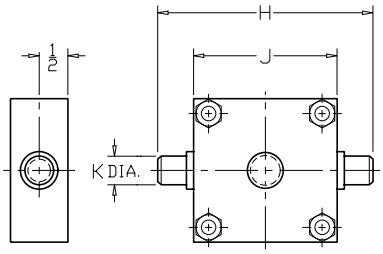
Foot Mount

MODELS:
2000-F-CV
3000-F-CV
4000-F-CV



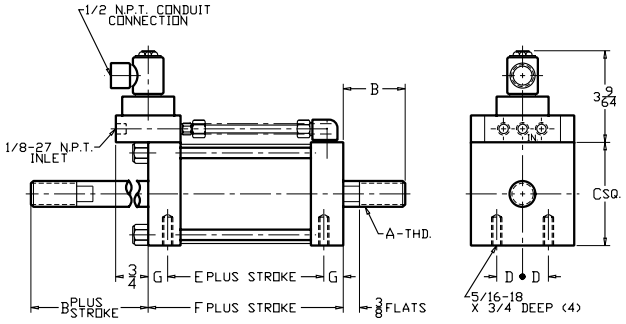
Trunnion Mount

MODELS:
2000-T-CV
3000-T-CV
4000-T-CV



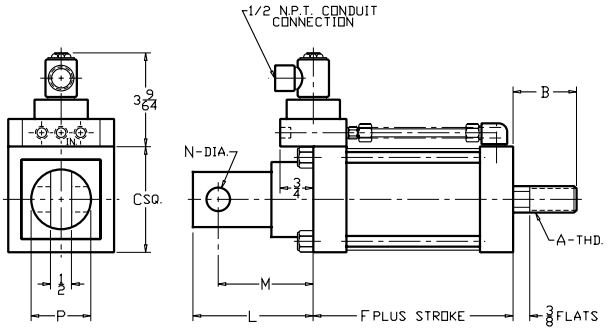
Double Piston Rod

MODELS:
UDPC-2000-CV
UDPC-3000-CV
UDPC-4000-CV



Clevis Mount

MODELS:
2000-C-CV
3000-C-CV
4000-C-CV



Model	2000	3000	4000
Bore	2	3	4
A	5/8-18		3/4-16
B	1-3/8		1-5/8
C	2-1/2	3-1/2	4-1/2
D	1/2	3/4	1-1/8
E	2-1/8	2-3/4	
F	3-1/4	4-1/8	
G	9/16	11/16	
H	3-1/2	5-1/2	6-1/2
J	2-1/2	4	5
K	1/2	3/4	
L	1-3/8	3	
M	3/4	2-1/4	
N	1/2	3/4	
P	1-1/2	1-3/4	

ORDERING DATA

When ordering,
please specify the following:

1. Model number
2. Stroke in inches
3. Temperature
4. Media
5. Pressure
6. Voltage
7. Cushions if required
8. Extended tie rods (optional)
9. Low swell seals (optional)

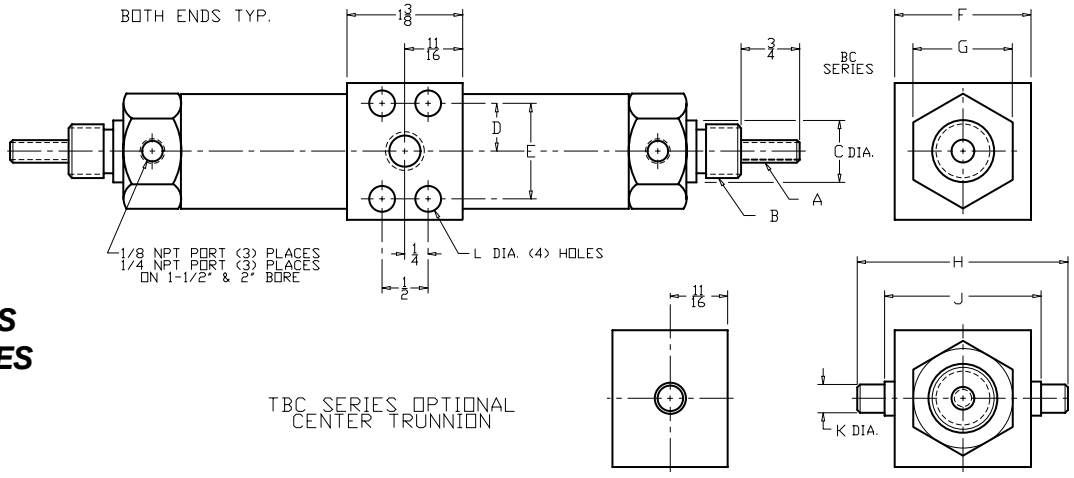
Front or rear flange mounts available by extending tie rod length.

Additional Information for CV Series Cylinders

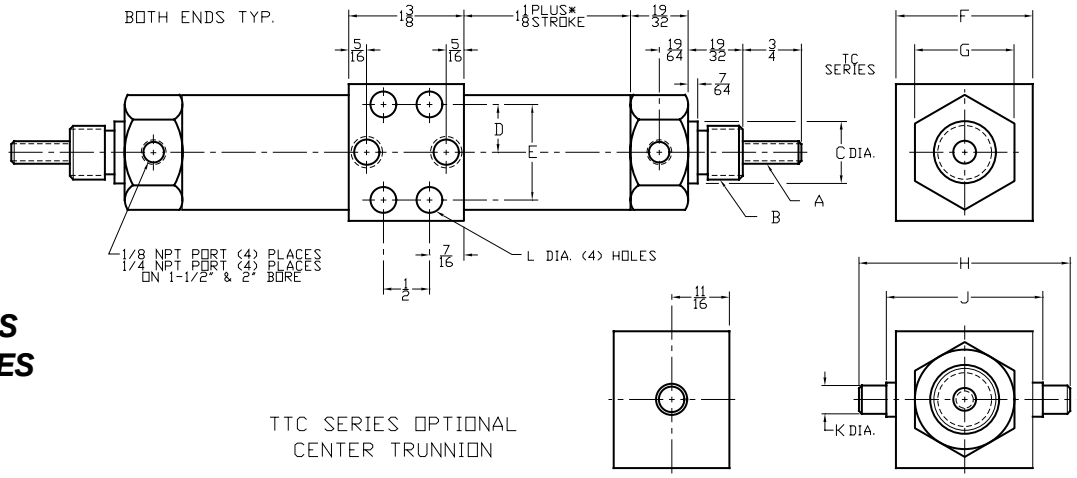
Cylinder Engineering Data..... See Page 44-45
Small Bore Cylinder Service Parts List ..... See Page 46-47

Cylinders & Valves, Inc. 20811 Westwood Drive P.O. Box 360555 Strongsville, Ohio 44149
Phone: (440) 238-7343 or 238-7344 Fax: (440) 238-3812 Web: www.cylval.com Email: corporate@cylval.com

AVAILABLE IN 3/8", 1/2", 3/4", 1-1/8", 1-1/2" AND 2" BORES
CHECK STANDARD CYLINDERS FOR DIMENSION ON TUBE & ROD END, 3/4" EXTENSION ON ALL MODELS



BC SERIES
TBC SERIES

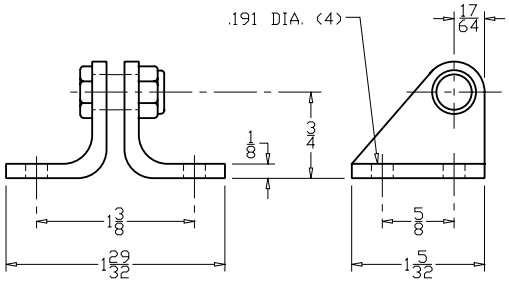


TC SERIES
TTC SERIES

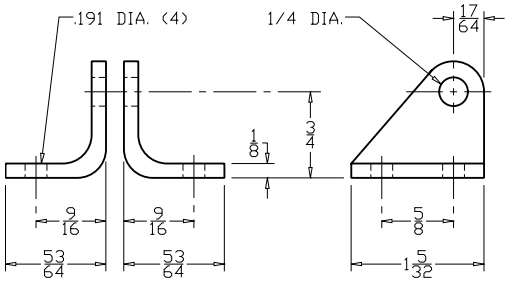
All heavy wall 1/8" brass cylinder tubes
Polished and ground #303 stainless steel piston rods
Threaded rods standard
"O" ring or "U" cup seals (specify)

Available as Single or Double Acting, or one end Double Acting & one end Single Acting. Stroke lengths may be identical or different. Standard stroke lengths 1" upward in 1" increments.Other lengths may be ordered.

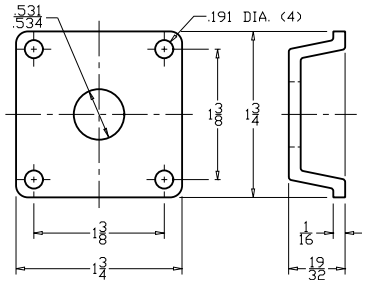
Model	300	500	500-1	700	700-1	700-2	1100	1100-1	1100-2	1500	1500-1	2100	2100-1
Rod Dia.	3/16		1/4		5/16	3/8	5/16	3/8	1/2			5/8	
Bore	3/8	1/2		3/4			1-1/8			1-1/2		2	
A	10-24		1/4-20		5/16-18	3/8-16	5/16-18	3/8-16	1/2-20		5/8-18		5/8-11
B	1/2-20		5/8-18		3/4-16		5/8-18	7/8-14			1-14		
C	.528/.529		.684/.686		.749/.751		.684/.686	.874/.876			1.057		
D	5/16			7/16			5/8					3/4	
E	5/8			7/8			1-1/4					1-1/2	
F	7/8	1		1-1/4			1-3/4		2			2-1/2	
G	5/8	3/4		7/8			1-1/4		1-3/4			2-1/4	
H	1.525			2.000			2.750		2.87	3.000		3.750	
J	1.125			1.500			2.000		2.125	2.250		2.750	
K	.250						0.312					.500	
L	#6			#5			9/32						



#394 Clevis Bracket

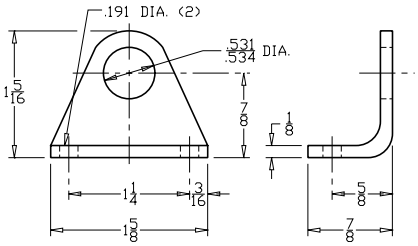


#395 Trunnion Bracket

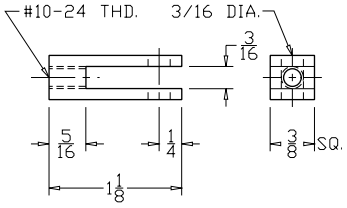


#507 Flange Mounting Bracket

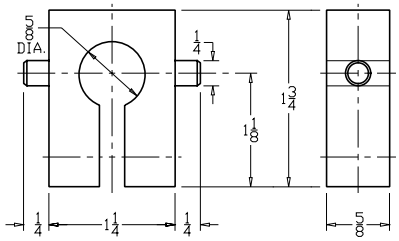
Optional Attachments for 3/8" BORE CYLINDERS



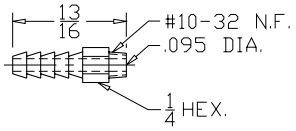
#508 Foot Mounting Bracket



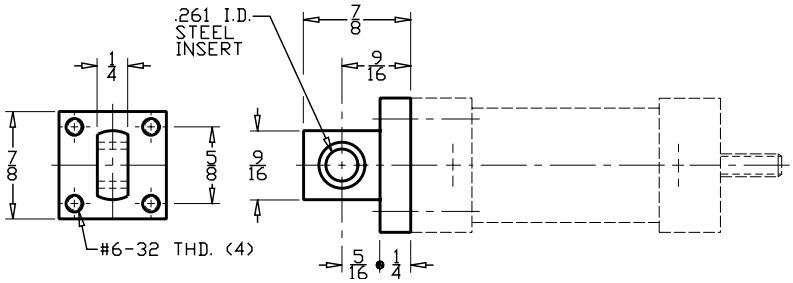
#509 Rod Clevis & Nut



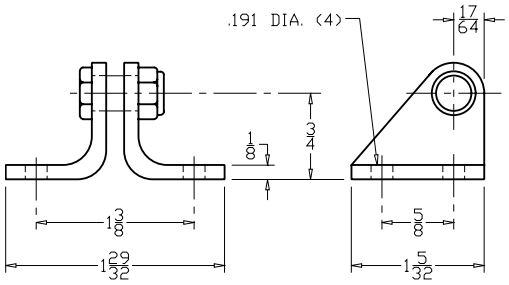
#347 Adjustable Tube Trunnion



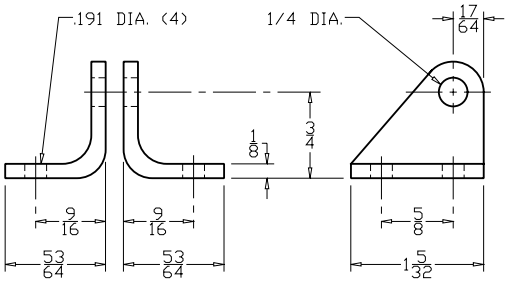
#601 Hose Fitting



#352
Clevis Mounting Bracket for Universal Mount Cylinders

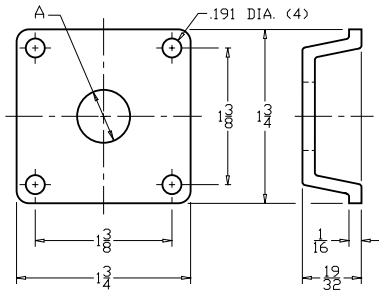


#394 Clevis Bracket



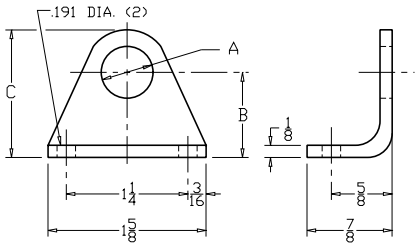
#395 Trunnion Bracket

Optional Attachments for 1/2" BORE *CYLINDERS*



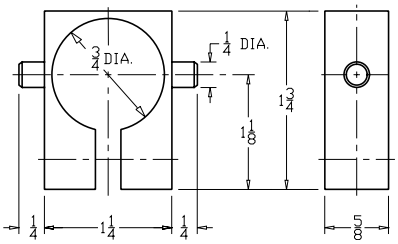
#507 & #1152
Flange Mounting Bracket

Bracket:	#507	#1152
A	17/32	11/16

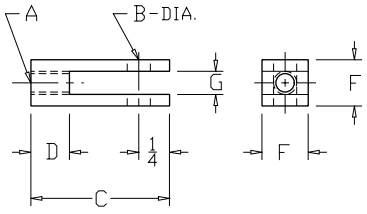


#508 & #1153
Foot Mounting Bracket

Bracket:	#508	#1153
A	17/32	11/16
B	7/8	1
C	1-5/16	1-9/16

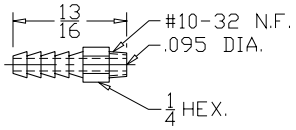


#547 Adjustable Tube Trunnion

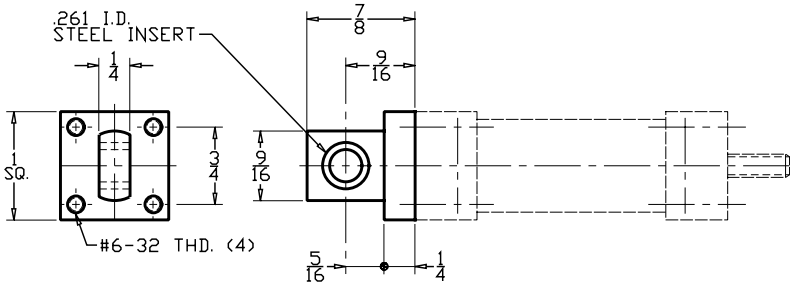


#509 & #763
Rod Clevis & Nut

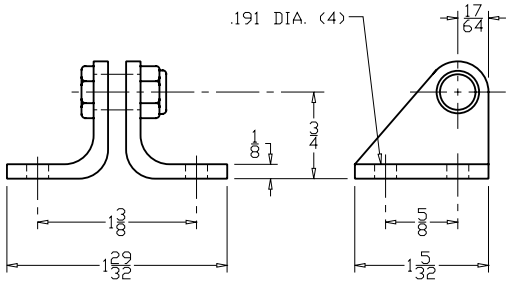
Rod Clevis:	#509	#763
A	#10-24	1/4-20
B	3/16	1/4
C	1-1/8	1-3/8
D	5/16	9/16
F	3/8	1/2
G	3/16	1/4



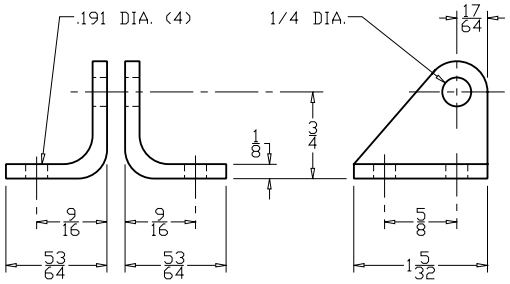
#601 Hose Fitting



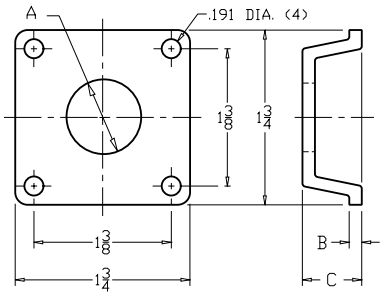
#552
Clevis Mounting Bracket for Universal Mount Cylinders



#394 Clevis Bracket



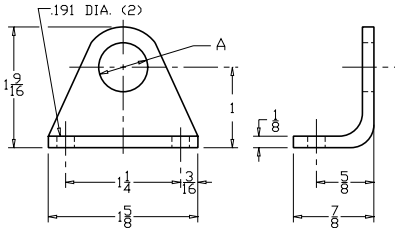
#395 Trunnion Bracket



#752 & #1152
Flange Mounting Bracket

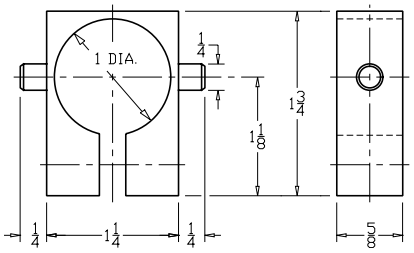
Bracket:	#752	#1152
A	3/4	11/16
B	1/8	1/16
C	N/A	19/32

Optional Attachments for 3/4" BORE CYLINDERS

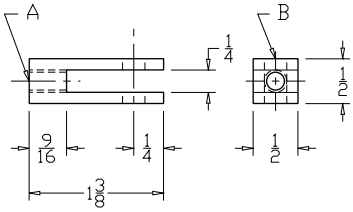


#1153 & #1153-2
Foot Mounting Bracket

Bracket:	#1153	#1153-2
A	11/16	3/4

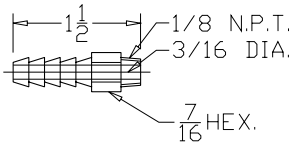


#747 Adjustable Tube Trunnion

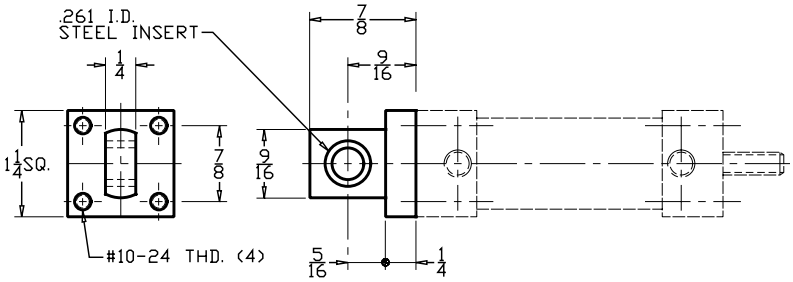


#763, #1154 & #1154-1
Rod Clevis & Nut

Rod Clevis:	#763	#1154	#1154-1
A	1/4-20	5/16-18	3/8-16
B	1/4	5/16	5/16

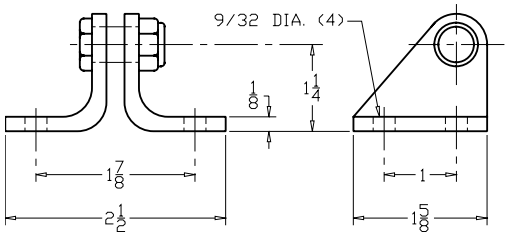


#602 Hose Fitting

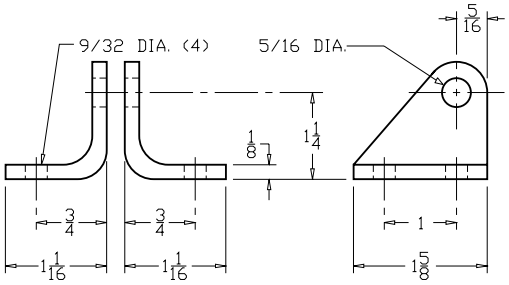


#702
Clevis Mounting Bracket for Universal Mount Cylinders

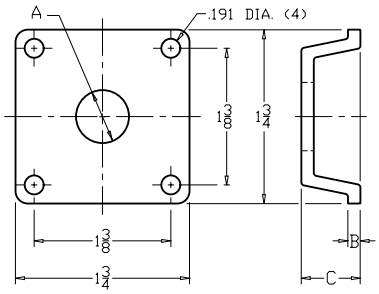
Cylinders & Valves, Inc. 20811 Westwood Drive P.O. Box 360555 Strongsville, Ohio 44149
Phone: (440) 238-7343 or 238-7344 Fax: (440) 238-3812 Web: www.cylval.com Email: corporate@cylval.com



#1294 Clevis Bracket



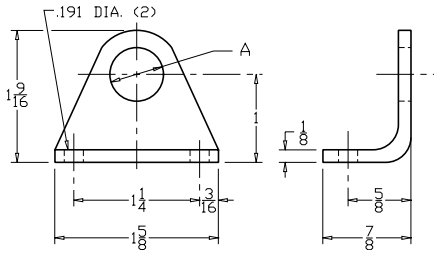
#1295 Trunnion Bracket



#1152 & #1152-1
Flange Mounting Bracket

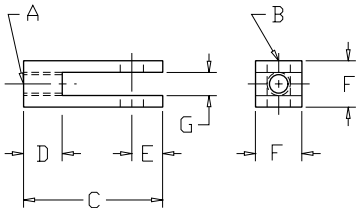
Bracket:	#1152	#1152-1
A	11/16	7/8
B	1/16	1/8
C	19/32	N/A

Optional Attachments for 1" BORE CYLINDERS



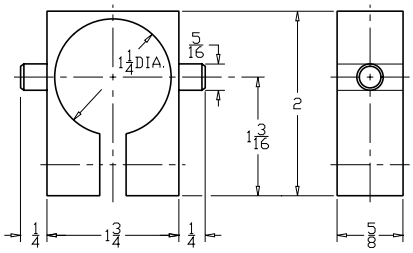
#1153 & #1153-1
Foot Mounting Bracket

Bracket:	#1153	#1153-1
A	11/16	7/8

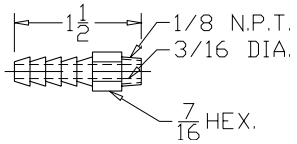


#1154, #1154-1 & #1554
Rod Clevis & Nut

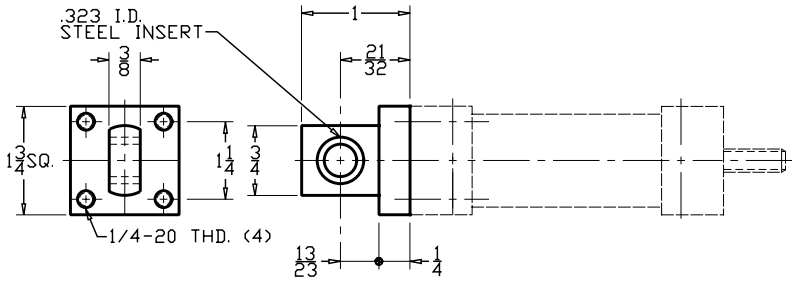
Rod Clevis:	#1154	#1154-1	#1554
A	5/16-18	3/8-16	1/2-20
B	5/16	5/16	1/2
C	1-3/8	1-3/8	2
D	9/16	9/16	3/4
E	1/4	1/4	5
F	1/2	1/2	1
G	1/4	1/4	1/2



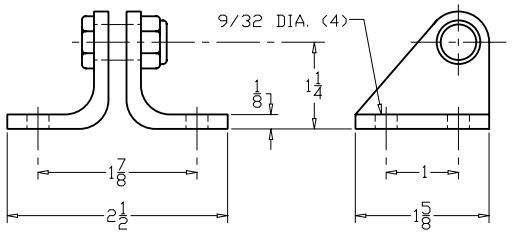
#1047 Adjustable Tube Trunnion



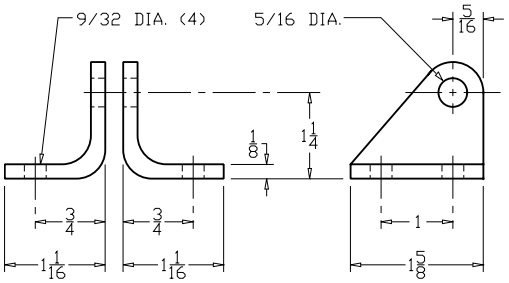
#602 Hose Fitting



#1155
Clevis Mounting Bracket for Universal Mount Cylinders

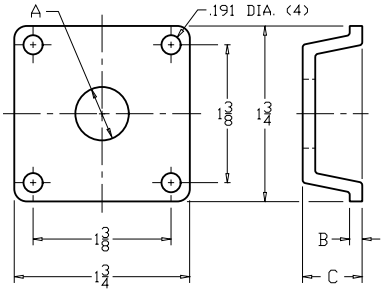


#1294 Clevis Bracket



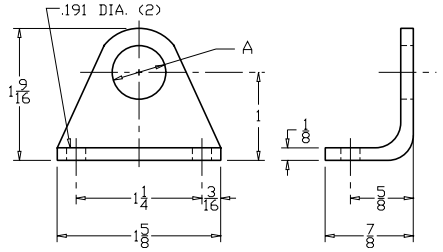
#1295 Trunnion Bracket

Optional Attachments for 1-1/8" BORE CYLINDERS



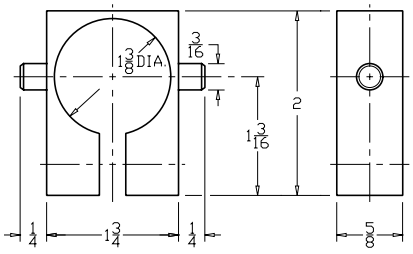
#1152 & #1152-1
Flange Mounting Bracket

Bracket:	#1152	#1152-1
A	11/16	7/8
B	1/16	1/8
C	19/32	N/A

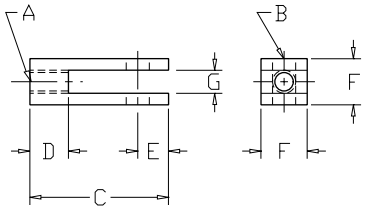


#1153 & #1153-1
Foot Mounting Bracket

Bracket:	#1153	#1153-1
A	11/16	7/8

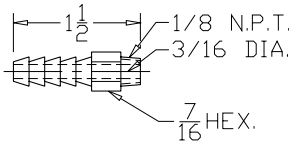


#1147 Adjustable Tube Trunnion

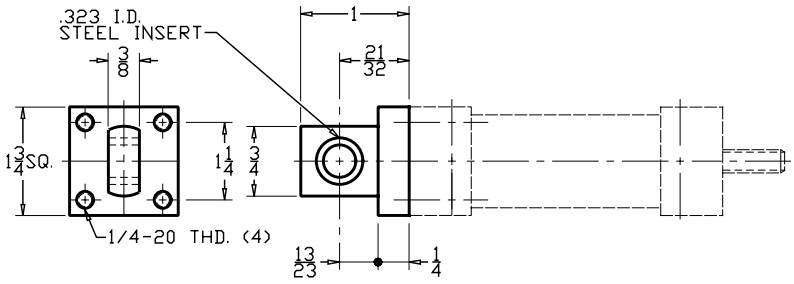


#1154, #1154-1 & #1554
Rod Clevis & Nut

Rod Clevis:	#1154	#1154-1	#1554
A	5/16-18	3/8-16	1/2-20
B	5/16	5/16	1/2
C	1-3/8	1-3/8	2
D	9/16	9/16	3/4
E	1/4	1/4	5/8
F	1/2	1/2	1
G	1/4	1/4	1/2

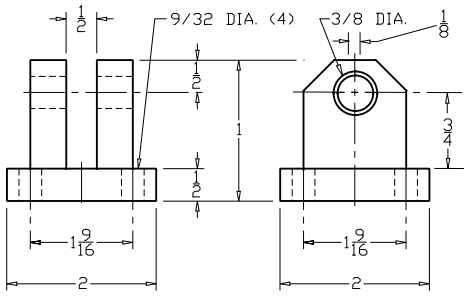


#602 Hose Fitting

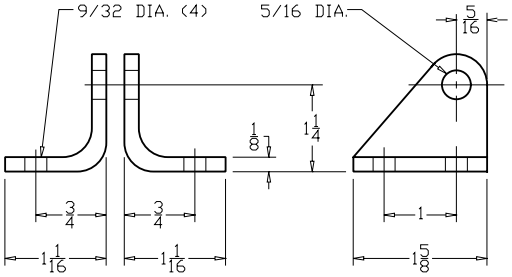


#1155
Clevis Mounting Bracket for Universal Mount Cylinders

Cylinders & Valves, Inc. 20811 Westwood Drive P.O. Box 360555 Strongsville, Ohio 44149
Phone: (440) 238-7343 or 238-7344 Fax: (440) 238-3812 Web: www.cylval.com Email: corporate@cylval.com

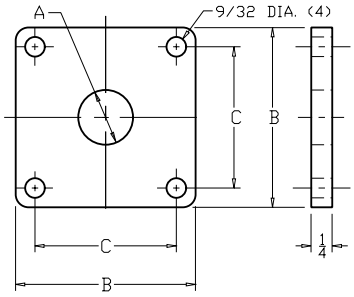


#1594 Clevis Bracket



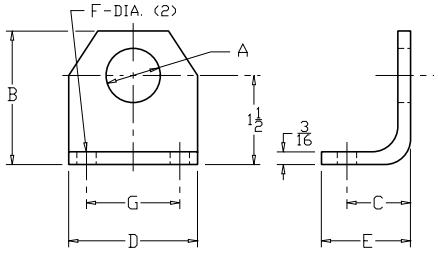
#1295 Trunnion Bracket

Optional Attachments for 1-1/2" BORE CYLINDERS



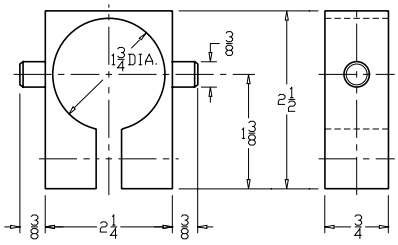
#1552, #1552-1 & #2152-1
Flange Mounting Bracket

Bracket:	#1552	#1552-1	#2152-1
A	15/16	1-1/8	1-3/8
B	2-1/2	2-1/2	3-1/2
C	1-3/4	1-7/8	2-1/2

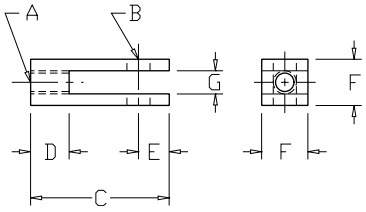


#1153, #1153-1 & 2153-1
Foot Mounting Bracket

Bracket:	#1153	#1153-1	#2153-1
A	15/16	1-1/8	1-3/8
B	2-1/4	2-5/8	2-5/8
C	1	1-1/4	1-1/4
D	2	3	3
E	1-1/2	1-3/4	1-3/4
F	9/32	11/32	11/32
G	1	2-1/8	2-1/8

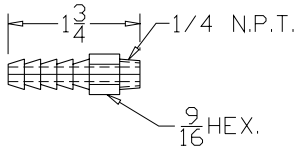


#1547 Adjustable Tube Trunnion

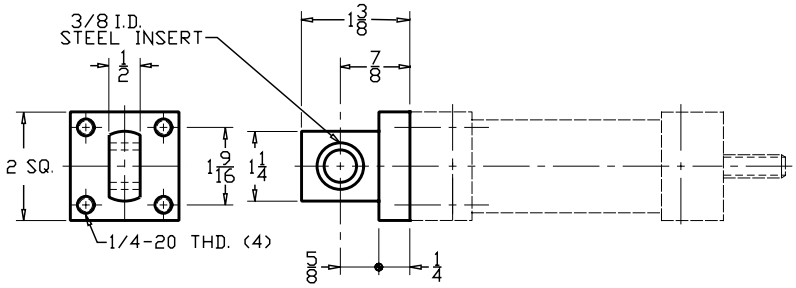


#1554, #2054 & #2554
Rod Clevis & Nut

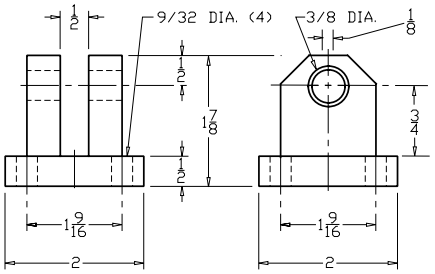
Rod Clevis:	#1554	#2054	#2554
A	1/2-20	5/8-18	3/4-16
B	1/2	1/2	1/2
C	2	2	2-1/2
D	3/4	3/4	1
E	5/8	5/8	1/2
F	1	1	1-1/4
G	1/2	1/2	3/4



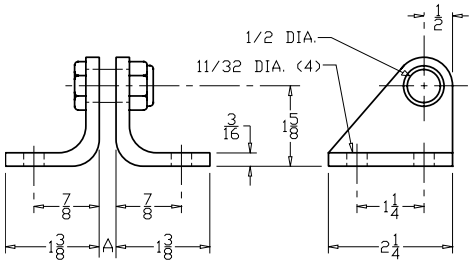
#603 Hose Fitting



#1555
Clevis Mounting Bracket for Universal Mount Cylinders

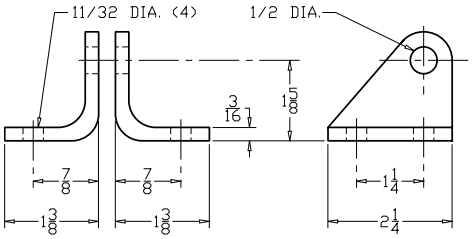


#1594 Clevis Bracket

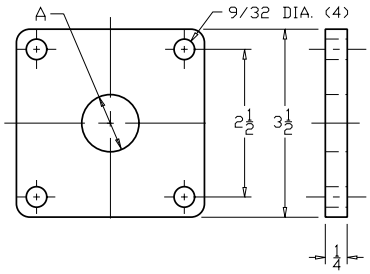


#21941 Clevis Bracket

Bracket:	#21941
A	3/4



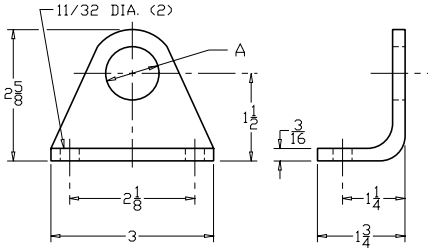
#2595 Trunnion Bracket



#2152 & #2152-1
Flange Mounting Bracket

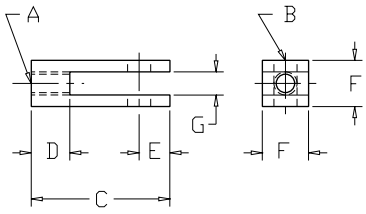
Bracket:	#2152	#2152-1
A	1-1/16	1-3/8

Optional Attachments for 2" BORE CYLINDERS



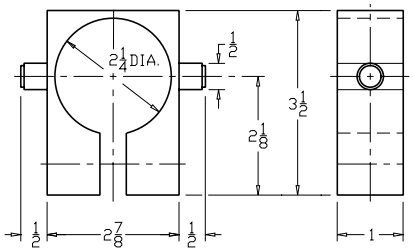
#2153 & #2153-1
Foot Mounting Bracket

Bracket:	#2153	#2153-1
A	1-1/16	1-3/8

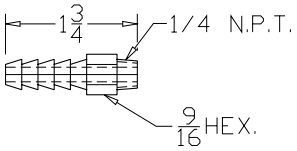


#2054 & #2554
Rod Clevis & Nut

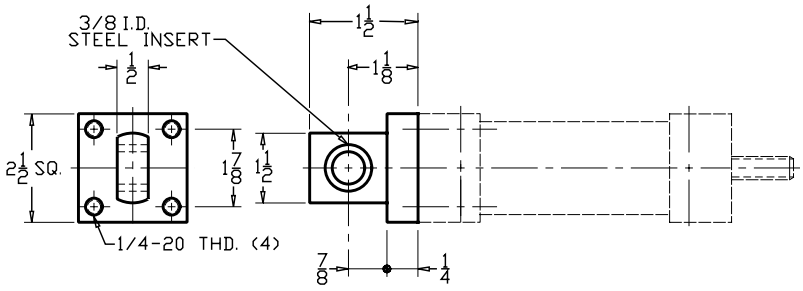
Rod Clevis:	#2054	#2554
A	5/8-18	3/4-16
B	1/2	1/2
C	2	2-1/2
D	3/4	1
E	5/8	1/2
F	1	1-1/4
G	1/2	3/4



#2147 Adjustable Tube Trunnion



#603 Hose Fitting



#2155
Clevis Mounting Bracket for Universal Mount Cylinders

#21941
Clevis Bracket

Bracket:	#2194
A	1-5/8

#2595
Trunnion Bracket

Bracket:	#2595
A	1-5/8

Optional Attachments for 2-1/2" BORE CYLINDERS

#2552
Flange Mounting Bracket

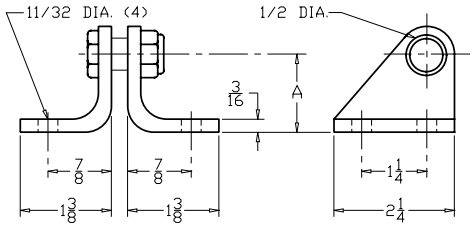
Bracket:	#2552
A	1-1/2
B	3-1/2
C	2-3/4

#2547
Adjustable Tube Trunnion

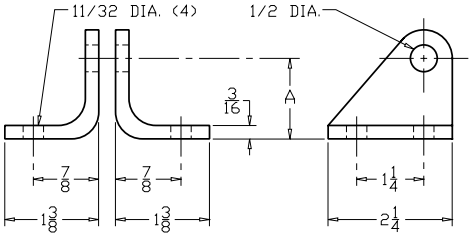
Bracket:	#2547
A	3-1/2
B	1-7/8
C	3-3/8
D	2-3/4

#2554
Rod Clevis & Nut

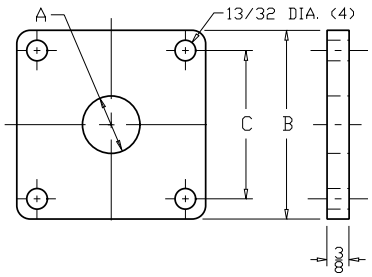
Rod Clevis:	#2554
A	3/4-16



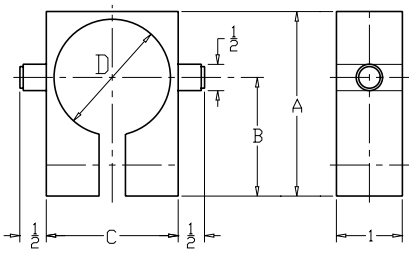
Clevis Bracket



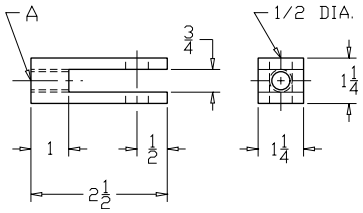
Trunnion Bracket



Flange Mounting Bracket



Adjustable Tube Trunnion



Rod Clevis & Nut

#3194
Clevis Bracket

Bracket:	#3194
A	1-7/8

#3195
Trunnion Bracket

Bracket:	#3195
A	1-7/8

Optional Attachments for 3"& 4" BORE CYLINDERS

#3152 & #3162
Flange Mounting Bracket

Bracket:	#3152	#316
A	1-1/2	1-3/4
B	4-1/2	4-1/4
C	3-1/4	3-1/4

#3147
Adjustable Tube Trunnion

Bracket:	#3147
A	4-1/2
B	2-9/16
C	3-7/8
D	3-1/4

#2554
Rod Clevis & Nut

Rod Clevis:	#2554
A	3/4-16

CYLINDER PUSH FORCE IN POUNDS AT VARIOUS PRESSURES

CYL. BORE (INCHES)	PISTON AREA (SQ. IN.)	OPERATING PRESSURE (PSI) 25	50	80	100	150	200	250	500	750	1000	1500
3/8	0.110	2.75	5.5	8.8	11	16.5	22	27.5	55			
1/2	0.196	4.9	9.8	15.7	19.6	29.4	39.2	49	98			
3/4	0.422	11	22	35	44	66	88	110	220			
1	0.785	20	39	65	79	118	158	196	392	588	785	1177
1-1/8	0.994	25	50	80	100	150	200	250	500	750	1000	1500
1-1/2	1.767	44	88	142	177	265	354	443	885	1325	1770	2651
2	3.140	78	157	251	314	471	628	785	1570	2357	3140	4713
2-1/2	4.910	123	245	393	491	736	982	1228				
3	7.070	177	354	566	707	1061	1414	1768				
4	12.570	314	628	1006	1257	1885	2514	3143				

CYLINDER PULL FORCE

To determine the *CYLINDER PULL FORCE*, find the following *FORCE VALUE* corresponding to *ROD SIZE* and *pressure* from the table below and *DEDUCT* it from the selected *PUSH FORCE* corresponding to *BORE SIZE* and *pressure* found in the table above.

PISTON ROD FORCE IN POUNDS AT VARIOUS PRESSURES

PISTON ROD DIA.	PISTON ROD AREA	OPERATING PRESSURE (PSI) 25	50	80	100	150	200	250	500	700	1000	1500
3/16	0.028	0.7	1.4	2.24	2.8	4.2	5.6	7	14			
1/4	0.049	1.27	2.45	3.84	4.9	7.35	9.8	12.25	24.5			
5/16	0.077	1.94	3.85	6.16	7.7	11.55	15.4	19.25	38.5			
3/8	0.11	2.75	5.5	8.8	11	16.5	22	27.5	55			
1/2	0.196	4.9	9.8	17.5	19.6	29.4	39.2	49	98	147	196	294
5/8	0.307	7.5	15	24.5	30	45	60	75	150	225	300	450
3/4	0.442	11	22	35	44	66	88	110	220	330	440	660
1	0.785	20	39	65	79	118	158	196	392	588	785	1177

TO DETERMINE CYLINDER FORCE VALUES OTHER THAN IN CHART:

PUSH STROKE: LINE PRESSURE (PSI) X CYLINDER PISTON AREA (SQ. IN.)

PULL STROKE: LINE PRESSURE (PSI) x CYLINDER PISTON AREA LESS PISTON ROD AREA

AIR CONSUMPTION IN C.F.M. EQUALS: C.F. X CYCLES PER MINUTE X STROKE IN INCHES

CUBIC FEET OF FREE AIR PER INCH OF STROKE EQUALS:

$$\frac{14.7 + \text{GAUGE PRESSURE}}{14.7} \times \frac{\text{AREA OF CYLINDER}}{1728}$$

Cylinders & Valves, Inc. 20811 Westwood Drive P.O. Box 360555 Strongsville, Ohio 44149
Phone: (440) 238-7343 or 238-7344 Fax: (440) 238-3812 Web: www.cylval.com Email: corporate@cylval.com

DISPLACEMENT PER INCH OF STROKE (for Cylinder Bore Sizes)

CYL. BORE (INCHES)	PISTON AREA (SQ. IN.)	COMPRESSED AIR CONSUMED (CFM@ 80 PSI)	FREE AIR CONSUMED @ 80 PSI (C.F.)	OIL REQUIRED (GALLONS)
3/8	0.110	0.00006	0.0004	0.00034
1/2	0.196	0.00011	0.00075	0.00085
3/4	0.422	0.00026	0.0017	0.002
1	0.785	0.0005	0.003	0.003
1-1/8	0.994	0.0006	0.004	0.004
1-1-1/2	1.767	0.001	0.007	0.007
2	3.140	0.002	0.012	0.014
2-1/2	4.910	0.003	0.019	0.021
3	7.070	0.004	0.026	0.031
4	12.570	0.007	0.047	0.054

SPECIAL NOTE:

The DISPLACEMENT tables for Cylinder Bore Sizes above and Piston Rod Diameters below should be used in conjunction with the Cylinder Push Force and Piston Rod Force found on the preceding page. Please print page 42 and page 43 for complete cylinder data.

DISPLACEMENT PER INCH OF STROKE (for Piston Rod Diameters)

PISTON ROD DIA.	PISTON ROD AREA	COMPRESSED AIR CONSUMED (CFM @ 80 PSI)	FREE AIR CONSUMED @ 80 PSI (C.F.)	OIL REQUIRED (GALLONS)
3/16	0.028	0.000015	0.0001	0.00008
1/4	0.049	0.00002	0.00019	0.00021
5/16	0.077	0.00003	0.0002	0.00025
3/8	0.11	0.00006	0.0004	0.00034
1/2	0.196	0.0001	0.00075	0.00085
5/8	0.307	0.00013	0.0009	0.001
3/4	0.442	0.00026	0.0017	0.002
1	0.785	0.0005	0.0003	0.003

PISTON ROD DIAMETERS AVAILABLE

CYLINDER BORE (INCHES)	PISTON ROD DIAMETERS AVAILABLE		
3/8	3/16	N/A	N/A
1/2	3/16	1/4	N/A
3/4	1/4	5/16	3/8
1	5/16	3/8	1/2
1-1/8	5/16	3/8	1/2
1-1/2	1/2	5/8	3/4
2	5/8	3/4	N/A
2-1/2	3/4	1	N/A
3	5/8	3/4	1
4	5/8	3/4	1

Small Bore Cylinder Service Parts List
for 300 SERIES through 1100 SERIES Bore Cylinders



ITEM NO.	DESCRIPTION	CYLINDER BORE 3/8"	1/2"	3/4"	1"	1-1/8"
1	O' RING ROD END	A-8	A-8	A-10	A-11	A-11
	-1 ROD END		A-10	A-11	A-12	A-12
	-2 ROD END			A-12	A-14	A-14
2	ROD END STANDARD	302-A1	502-A1	752-A1	1002-A1	1102-A1
	-1 ROD END		502-A12	752-A12	1002-A12	1102-A12
	-2 ROD END			752-A13	1002-A13	1102-A12
	-3 ROD					
3	ROD END SQUARE HEAD	202	402	602	1002-A14	1002-A14
	-1 ROD END		402-A1	602-A15	1002-A15	1102-A15
	-2 ROD END					
	-3 R0D END					
4	TUBE 'O' RING (2)	A-12	A-111	A-114	A-210	A-212
5**	PISTON ASSEMBLY STD.	305	505	705	1005	1105
	-1 ROD		505-1	705-1	1005-1	1105-1
	-2 ROD			705-2	1005-2	1105-2
	-3 ROD					
6	PISTON SEAL	A-10	A-12	A-113	A-210	A-212
7	CYLINDER TUBE	301	501	701	1001	1101
8	END CAP (RC SERIES)	304	504	704	1004	1104
9	END CAP (CC SERIES)	303	503	703	1003	1103
	-1 CC					
10	END CAP (FC SERIES)	344	544	744	1044	1144
	-1 FC		544-1	744-1	1044-1	1144-1
	-3 FC					
11	END CAP (DC SERIES)	304-1	504-1	704-1	1004-1	1104-1
12	END CAP (SQUARE HEAD)	2021	4021	6021	10021	10021
13	SPRING	364	364	764	1164	1164
	STROKE	0-1-1/4	0-2	0-2	0-2	0-2
	SPRING	364-1	364-1	764-1	1164-1	1164-1
	STROKE	1-5/16-4-1/4	2-1/8-4	2-1/8-3-1/8	2-1/8-4	2-1/8-4
	SPRING	364-2	364-2	764-2	1164-2	1164-2
	STROKE	4-5/16-6	4-1/16-5	3-1/4-5	4-1/8-5	4-1/8-5
14	SPRING STOP	NONE	NONE	NONE	NONE	NONE
	STROKE	0-1-1/4	0-2	0-2	0-2	0-2
	STOP	390	391	791	1091	1191
	STROKE	1-5/16-4-1/4	2-1/8-4	2-1/8-3-1/8	2-1/8-4	2-1/8-4
	STOP		392	792	1092	1192
	STROKE		4-1/8-5	3-1/4-5	4-1/8-5	4-1/8-5
15	HEAD TRUNNION (STD)	302-T1	502-T1	752-T1	1052-T1	1152-T1
	-1 ROD END		502-T1-1	752-T1-1	1052-T1-1	1152-T1-1
	-2 ROD END			752-T1-2	1052-T1-2	1152-T1-2
	-3 ROD END					
16	SQUARE HEAD TRUNNION	202-T1	402-T1	602-T1	1002-T1	1002-T1
	-1 SQUARE END		402-T1-1	602-T1-1	1002-T1-1	1102-T1-1
	-2 SQUARE END				1002-T1-2	1102-T1-2
	-3 SQUARE END					
	TC-BC CENTER HEAD (SQ)	311	511	711	1011	1111

**** STATE FOR WHAT MODEL # (RC or UC —— DPC or UDPC)**

Cylinders & Valves, Inc. 20811 Westwood Drive P.O. Box 360555 Strongsville, Ohio 44149
Phone: (440) 238-7343 or 238-7344 Fax: (440) 238-3812 Web: www.cylval.com Email: corporate@cylval.com

Small Bore Cylinder Service Parts List
for 1500 SERIES through 3100 SERIES Bore Cylinders

Manufacturing since 1958



ITEM NO.	DESCRIPTION	CYLINDER BORE 1-1/2"	2"	2-1/2"	3"
1	O' RING ROD END	A-14	A-114	A-210	A-210
	-1 ROD END	A-14	A-114	A-214	A-214
	-2 ROD END	A-114	A-210		
2	ROD END STANDARD	1502-A1	2102-A1	2502	3102
	-1 ROD END	1502-A1-1	2102-A12	2502-A12	3102-A12
	-2 ROD END	1502-A12	2102-A13		
	-3 ROD	1502-A13			
3	ROD END SQUARE HEAD	1502-A14	2102-A14		
	-1 ROD END				
	-2 ROD END	1502-A15	2102-A15		
	-3 R0D END	1502-A16			
4	TUBE 'O' RING (2)	A-219	A-224	A-228	A-232
5**	PISTON ASSEMBLY STD.	1505	2105	2505	3105
	-1 ROD	1505-1	2105-1	2505-1	3105-1
	-2 ROD	1505-2	2105-2		
	-3 ROD	1505-3			
6	PISTON SEAL	A-218	A-326	A-330	A-334
7	CYLINDER TUBE	1501	2101	2501	3101
8	END CAP (RC SERIES)	1504	2104	2504	3104
9	END CAP (CC SERIES)	1503	2103	2503	3103
	-1 CC	1503-1	2103-1		
10	END CAP (FC SERIES)	1544	2144	2544	3144
	-1 FC	1544-1	2144-1	2544-1	3144-1
	-3 FC	1544-3			
11	END CAP (DC SERIES)	1504-1	2104-1	2504-1	3104-1
12	END CAP (SQUARE HEAD)	14021	21021		
13	SPRING	1564	2164	2564	3164
	STROKE	0-2	0-1	0-2	0-2
	SPRING	1564-1	2164-1	2564-1	3164-1
	STROKE	2-1/8-4	1-1/16-2	2-1/8-4	2-1/8-4
	SPRING	1564-2	2164-2	2564-2	3164-2
	STROKE	4-1/8-5	2-1/8-4	4-1/8-6	4-1/8-6
14	SPRING STOP	NONE	2190	2590	3190
	STROKE	0-2	0-1	0-2	0-2
	STOP	1591	2191	2591	3191
	STROKE	2-1/8-4	1-1/16-2	2-1/8-4	2-1/8-4
	STOP	1592	2192	2592	3192
	STROKE	4-1/8-5	2-1/8-4	4-1/8-6	4-1/8-6
15	HEAD TRUNNION (STD)	1552-T1	2152-T1	2552-T1	3152-T1
	-1 ROD END	1552-T1-1	2152-T1-1	2552-T1-1	3152-T1-1
	-2 ROD END	1152-T1-2	2152-T1-2		
	-3 ROD END	1552-T1-3			
16	SQUARE HEAD TRUNNION	1402-T1	2102-T1		
	-1 SQUARE END		2102-T1-1		
	-2 SQUARE END	1402-T1-1			
	-3 SQUARE END	1402-T1-2			
	TC-BC CENTER HEAD (SQ)	1511	2111		

** STATE FOR WHAT MODEL # (RC or UC —— DPC or UDPC)

TIE ROD CYLINDER PARTS LIST

DESCRIPTION	CYLINDER BORE 2"	3"	4"
	2000 SERIES	3000 SERIES	4000 SERIES
0' RING ROD END	A-114	A-114	A-210
-1 ROD	A-210	A-210	A-214
ROD END SQ.	2002	3002	4002
-1 ROD END	2002-1	3002-1	4002-1
0' RING (2 REQ'D)	2-224	A-232	A-240
**PISTON ROD ASSEMBLY	2005	3005	4005
-1 OVERSIZE ROD	2005-1	3005-1	4005-1
PISTON SEAL(T-RING)	TPO-24	A-1434(U-CUP)	3-1/4X4X3/8(U-CUP)
CYL. TUBE	2001	3001	4001
END CAP SQ.	2021	3021	4021
TRUNNION ROD END	2052	3052	4052
-1 OVERSIZE END	2052-1	3052-1	4052-1
TIE RODS (4 REQ'D)	2025	3025	4025
TIE ROD NUTS (8 REQ'D)	1/4-20 NUT	5/16-18 NUT	3/8-16 NUT
CLEVIS BRACKET	2003	3055	3055
SOCKET CAP SCREWS(4 REQ'D)	X	3/8-16 X 1	3/8-16 X 1
NEEDLE FLOW CONTROL	1125	1125	1125
NUT-FLOW CONTROL	1126	1126	1126
O'RING NEEDLE SEAL	A-008	A-008	A-008

** SPECIFY STD OR DPC MODEL

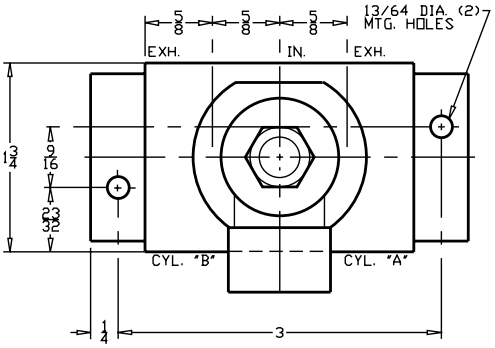
HEAVY DUTY CYLINDER PARTS LIST

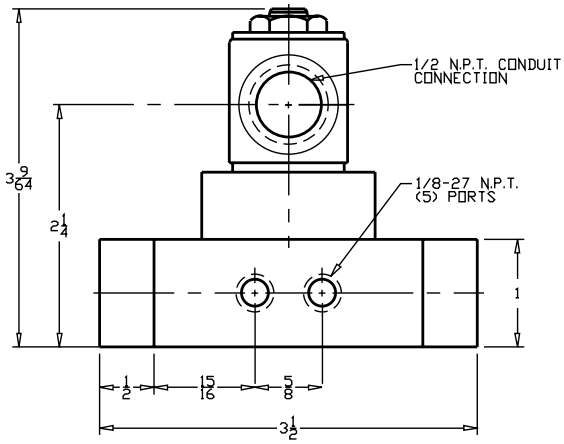
DESCRIPTION	CYLINDER BORE 1"	1-1/2"	2"
	H-1000 SERIES	H-1500 SERIES	H-2100 SERIES
ROD SEAL	TR-006	TR-008	TR-008
ROD END ROUND	1002-H1	1502-H1	2102-H1
ROD END SQUARE	1002-H2	1502-H14	2102-H2
TUBE SEAL (2 REQ/D)	A-216	A-223	A-227
PISTON ROD ASSEMBLY	1005-H	1505-H	2105-H
PISTON SEAL	TPO-11	TPO-19	TPO-24
CYLINDER TUBE	1001-H	1501-H	2101-H
END CAP	1004-H	1504-H	2104-H
CLEVIS END CAP	1003-H	1503-H	2103-H
END CAP REAR FLANGE	1054-H	1554-H	2154-H
SPRING 1"-4-1/2" STROKE	1064	1564	2164
SPRING 4-5/8"-6-1/2" STROKE	1064-1	1564-1	2164-1
SPRING 6-5/8"-8-1/2" STROKE	1064-2	1564-2	2164-2
STOP (1" LONG)	1091	1592	2192
STOP (1-1/2" LONG)	1092	1593	2193
STOP (2" LONG)	1093	1594	2194
WASHER RETAINER	1102-R-H2	1502-R-H2	1502-R-H2
RETAINER	N-5000-112	N-5000-112	N-5000-112
TRUNNION ROD END	X	1552-H	X
ADJUSTABLE TUBE TRUNNION	1047-H	X	2147-H

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Phone: (440) 238-7343 or 238-7344 Fax: (440) 238-3812 Web: www.cylval.com Email: corporate@cylval.com

Solenoid Pilot Operated

This compact 4-way valve was primarily designed as a pneumatic control valve for operation of double-acting cylinders to 2" bore. But in fact, the applications for this valve are unlimited.





CV-412
CV-412-M with Manual Override



Model CV-412

SPECIAL FEATURES

- *Compact size*
- *Single Solenoid*
- *5 ports (1/8" NPT)*
- *1/8" diameter orifice*
- *Aluminum body*
- *Brass spool*
- *"O" ring seals*
- *Zero leakage*

OPERATIONAL SEQUENCE

De-energized: *Air will flow from "In" port and pressurize Port "B". Air will exhaust from Port "B" to exhaust port.*

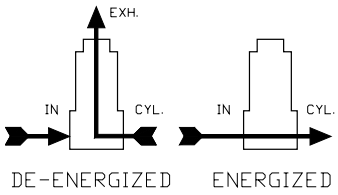
Energized: *Air will flow from "In" port and pressurize Port "A". Air will exhaust from Port "A" to exhaust port.*

Note: All pressure porting is thru valve body-- only pilot pressure to shift spool flows thru solenoid operator; therefore, no flow restriction.

DESCRIPTION

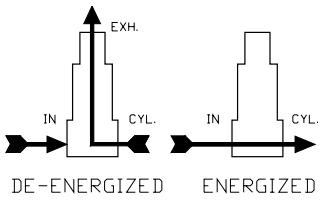
- *Operating Pressure: 30-150 PSI*
- *Operating Temperature: -40 degrees F. to + 180 degrees F.*
- *Duty Cycle: Continuous or Intermittent*
- *Power Consumption: 7 Watts*
- *Coil Voltage: Most standard AC or DC voltages available*
- *Coils: Varnish impregnated - layer wound*
  Class "A" coil - 24" lead wires

PORTING ARRANGEMENTS



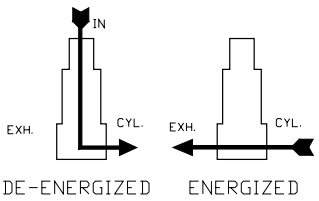
3-Way Normally Closed Valves Exhaust to Atmosphere

(in) Orifice	Port Size	Oper. Press.	Valve No.
3/64	1/8	150 PSI	SA31NC
3/64	1/4	150 PSI	SA32NC



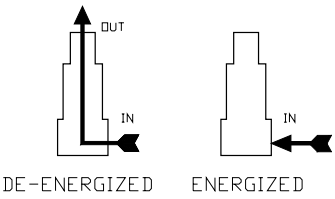
3-Way Normally Closed Valves with Piped Exhaust

(in) Orifice	Port Size	Oper. Press.	Valve No.
3/64	1/8	150 PSI	SA31NC
3/64	1/4	150 PSI	SA32NC



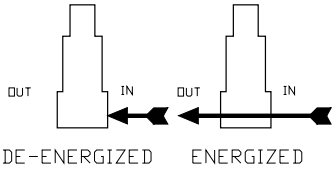
3-Way Normally Open Valves with Piped Inlet

(in) Orifice	Port Size	Oper. Press.	Valve No.
1/16	1/8	125 PSI	SA31NO
1/16	1/4	125 PSI	SA32NO



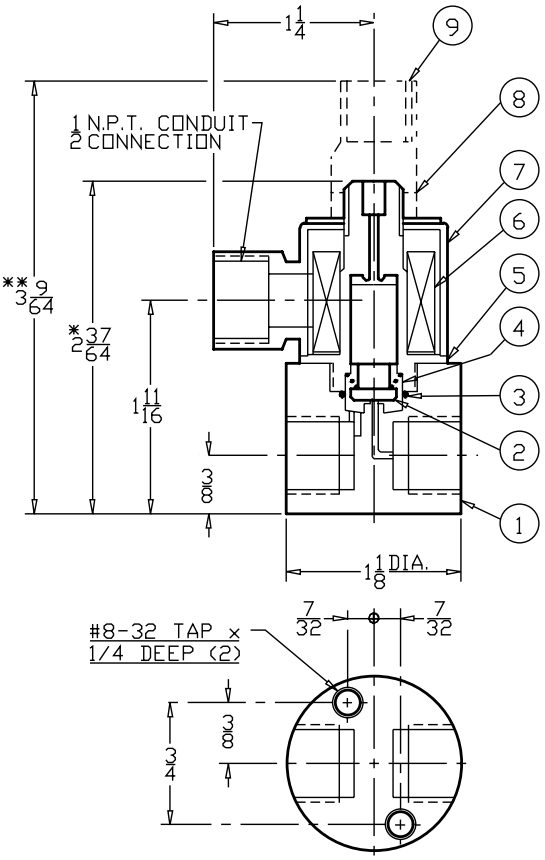
2-Way Normally Open Valves with Piped Exhaust

(in) Orifice	Port Size	Oper. Press.	Valve No.
1/16	1/8	125 PSI	SA21NO
1/16	1/4	125 PSI	SA22NO



2-Way Normally Closed Valves

(in) Orifice	Port Size	Oper. Press.	Valve No.
3/64	1/8	150 PSI	SA21NC
3/64	1/4	150 PSI	SA22NC



* 2-Way Normally Closed & 3-Way Exhaust To Atmosphere
** 2-Way Normally Open & 3-Way Piped Inlet

Item	Part Name	Part No.
1	Body	S32-1
2	Plunger	S32-2
3	Seal	S32-3
4	Spring	S32-4
5	Tube	S32-5
6	Coil	S32-6
7	Cover	S32-7
8	Nut	S32-8
9	Connector	S32-9

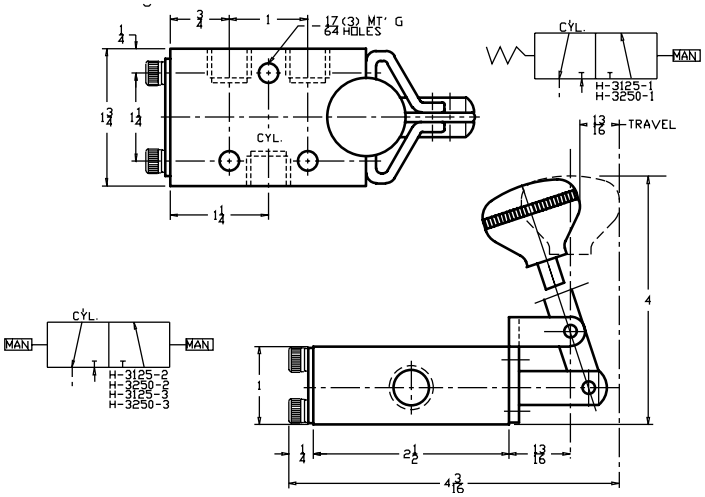
SPECIFICATIONS

- Leakage: Zero bubble tight
- Operating Temperature: 0-140 degrees F.
- Operating Speed: To 600 CPM
- Power Consumption: 7 watts
- Duty Cycle: Continuous or Intermittent
- Material: Interior parts - stainless steel
- Body - Aluminum
- Life Expectancy: Millions of cycles
- Voltages: All standard voltages AC or DC
- Coils: Varnish Impregnated - layer wound
  Class "A" coil - 4" lead wires

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Hand Lever

Operating Pressure 0-200 PSI

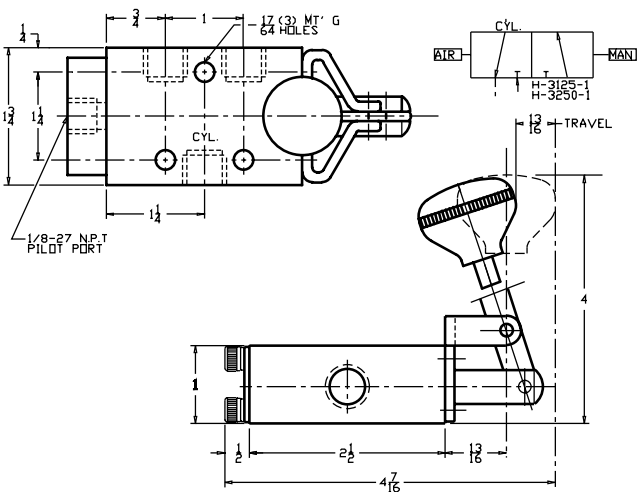


Spring Return
H-3125-1
H-3250-1

Friction Position
H-3125-2
H-3250-2

Detent (2) Position
H-3125-3
H-3250-3

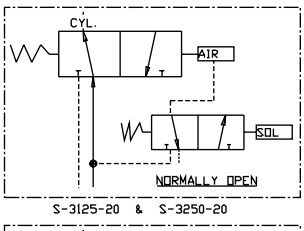
Operating Pressure 50-200 PSI



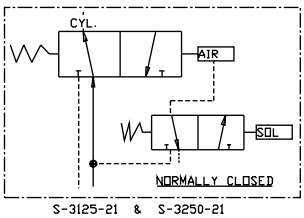
Air Pilot Return
H-3125-7
H-3250-7

Single Solenoid Pilot Operated

Manual override for Solenoid Valves available as optional item.

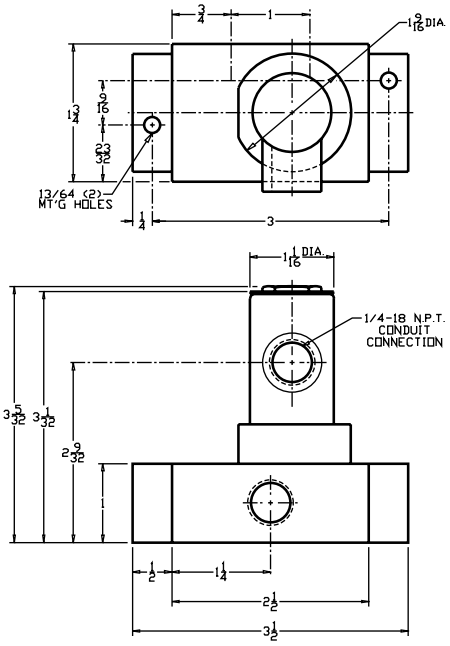


S-3125-20 & S-3250-20



S-3125-21 & S-3250-21

Please specify manual override when ordering Solenoid Pilot Valves.



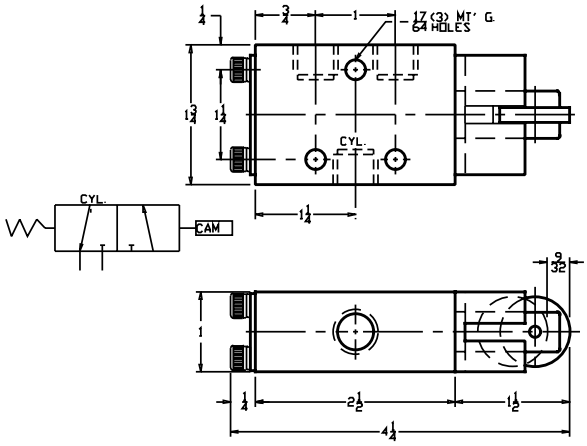
For Coil Voltage, see page 55
Operating Pressure 50-200 PSI

Spring Return Normally Open
S-3125-20
S-3250-20

Spring Return Normally Closed
S-3125-21
S-3250-21

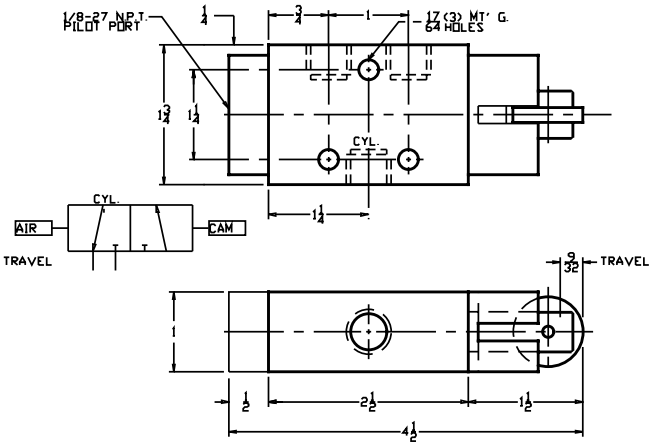
Roller Cam Operated

Operating Pressure 0-200 PSI



Spring Return
R-3125-8
R-3250-8

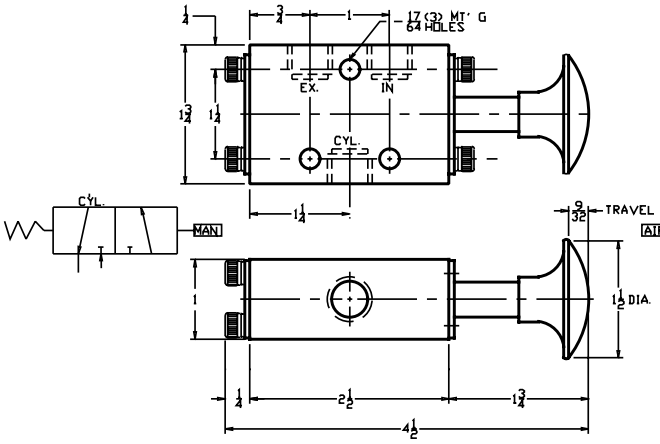
Operating Pressure 50-200 PSI



Air Pilot Return
R-3125-9
R-3250-9

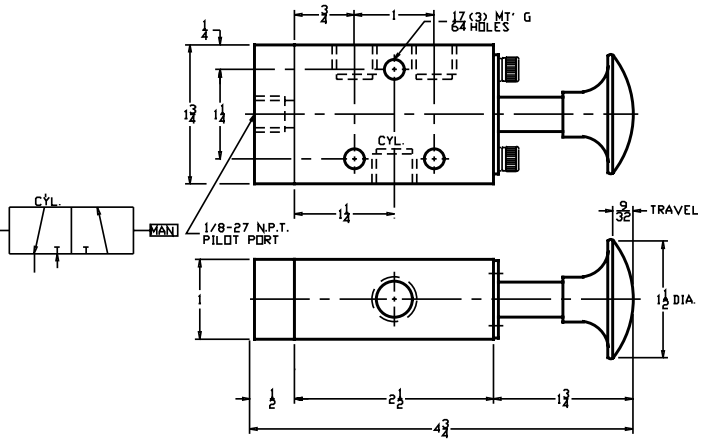
Palm Button Operated

Operating Pressure 0-200 PSI



Spring Return
B-3125-10
B-3250-10

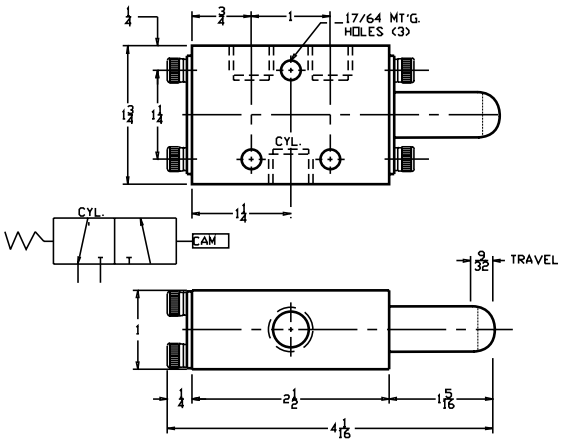
Operating Pressure 50-200 PSI



Air Pilot Return
B-3125-11
B-3250-11

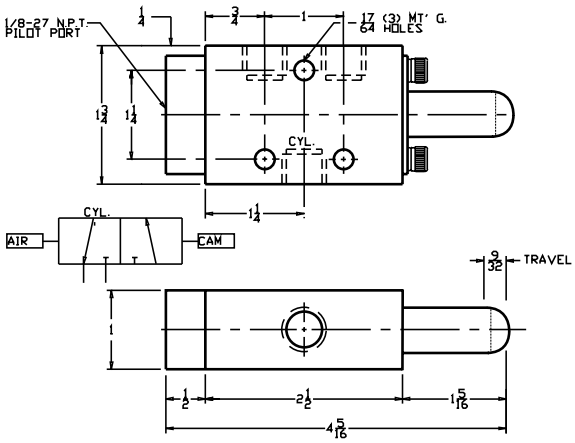
Cam Stem Operated

Operating Pressure 0-200 PSI



Spring Return
C-3125-12
C-3250-12

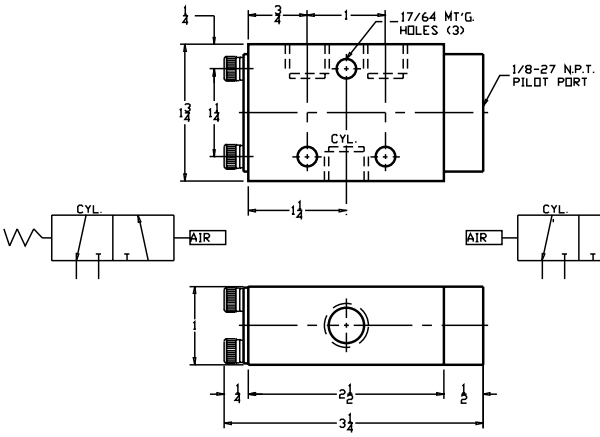
Operating Pressure 50-200 PSI



Air Pilot Return
C-3125-13
C-3250-13

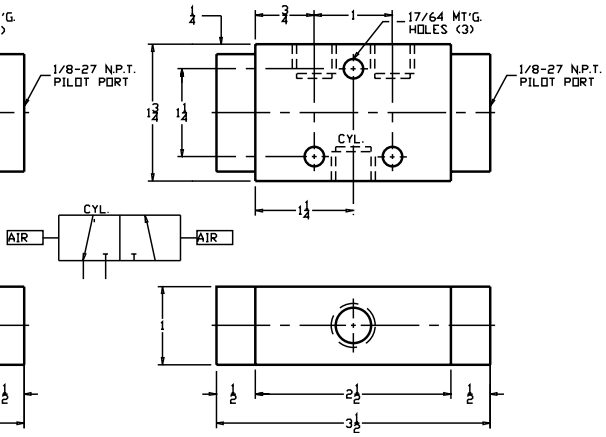
Air Pilot Operated

Operating Pressure 0-200 PSI



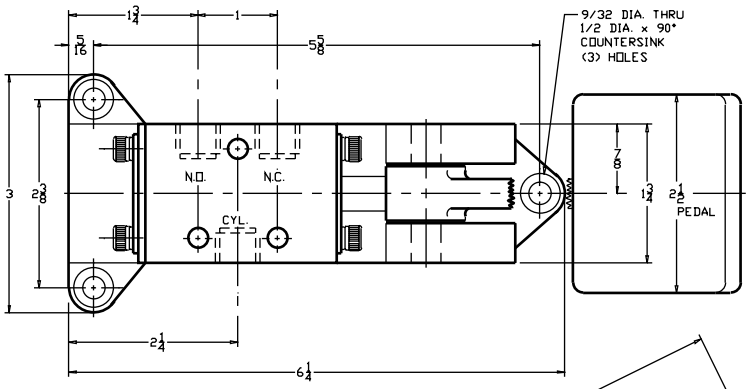
Spring Return
P-3125-14
P-3250-14

Operating Pressure 50-200 PSI

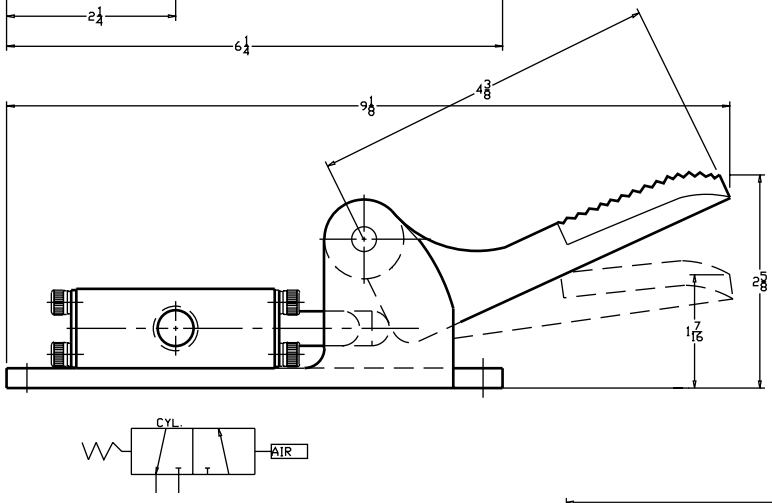


Double Air Pilot
P-3125-15
P-3250-15

Foot Pedal & Treadle Operated

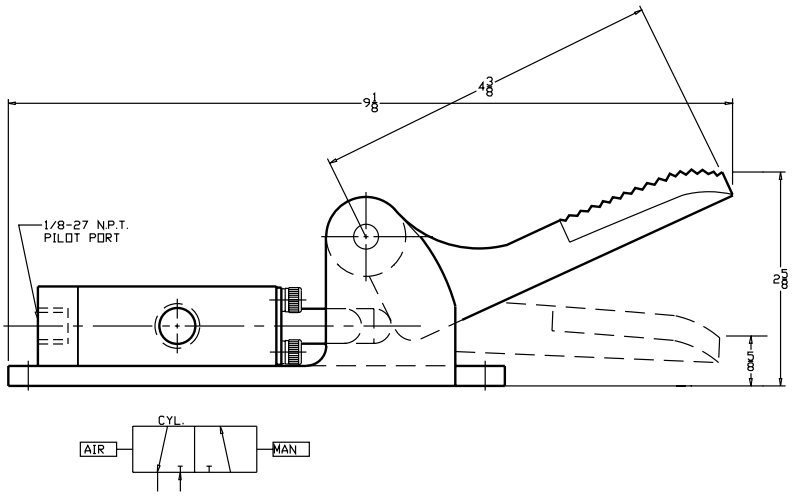


Note: Base & Mounting Dimensions Typical for Valves



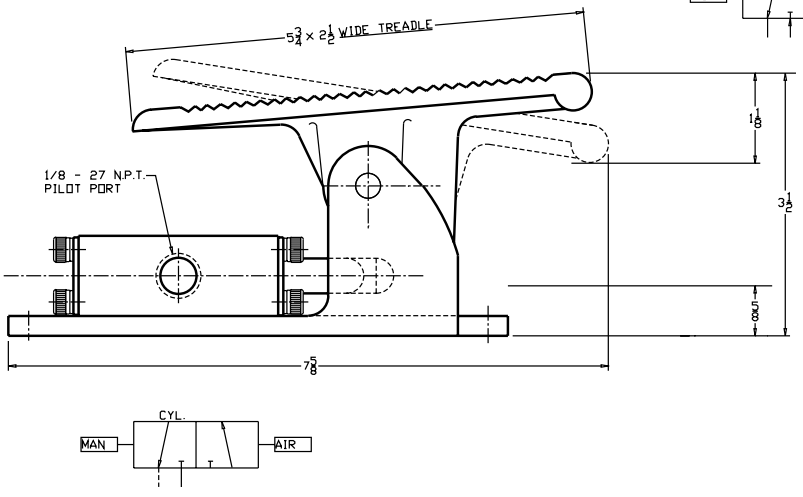
Spring Return
F-3250-25
F-3125-25

Operating Pressure 0-200 PSI



Air Pilot Return
F-3125-26
F-3250-26

Operating Pressure 50-200 PSI

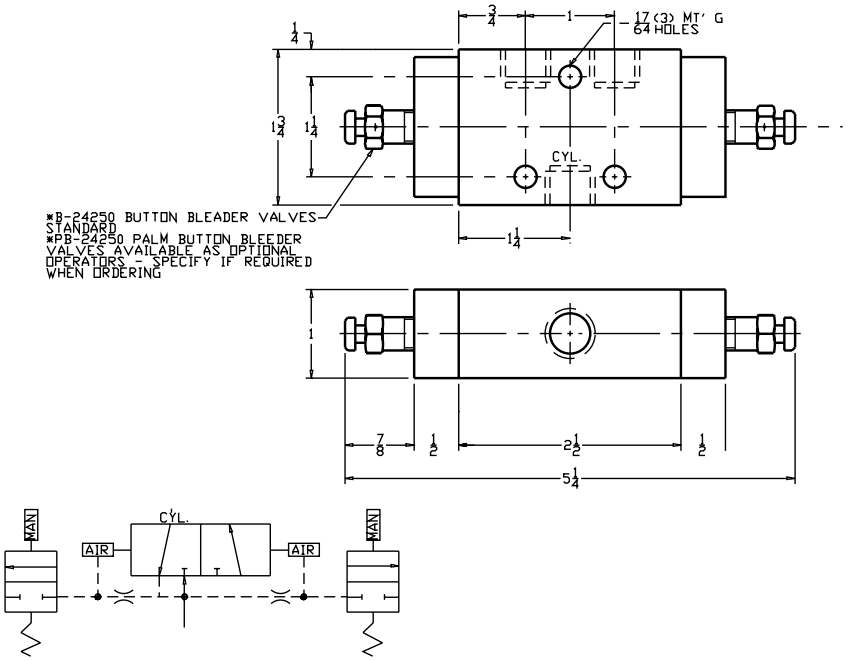


Friction Position
T-3125-27
T-3250-27

Operating Pressure 0-200 PSI

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Button Bleeder Operated



Double Button Bleeder
P-3125-17
P-3250-17

Operating Pressure 20-200 PSI

Note: 2-Way Bleeder Button Valves can be remotely mounted up to 8' apart with 1/8" I.D. (maximum) tubing.

Button Bleeder Valve

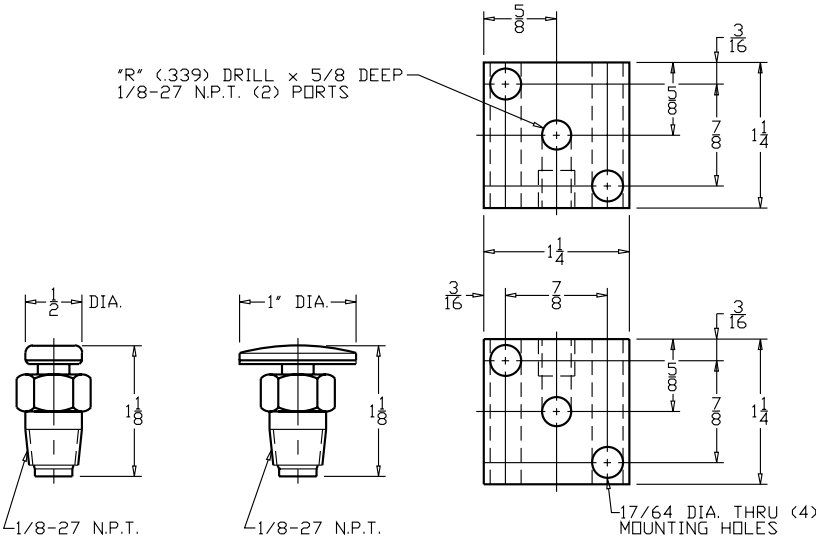
B-24250
Button Bleeder Valve (1/8" NPT)

PB-24250
Palm Button Bleeder Valve (1/8" NPT)

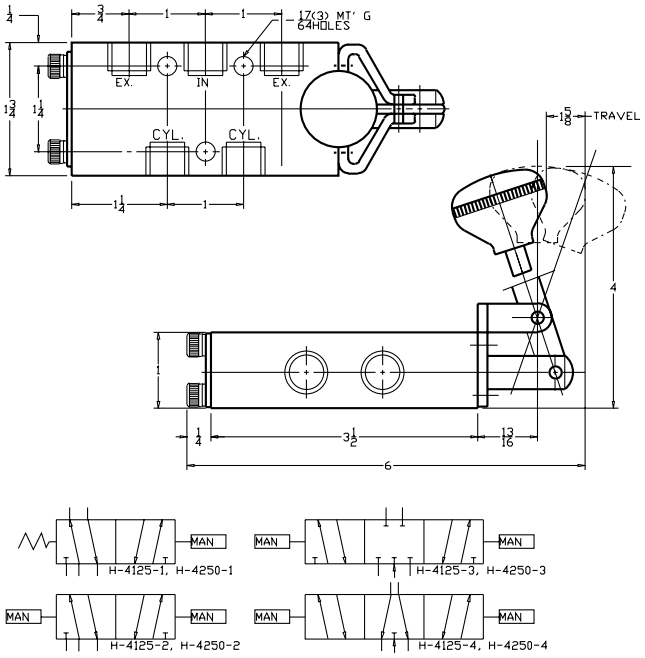
24250-6
*Remote Mounting Block**

Operating Pressure 0-150 PSI

** Optional Mounting Blocks with special mounting holes and 2 to 6 ports can be supplied to suit many industrial applications.*



Hand Lever



Spring Return
H-4125-1, H-4250-1

Friction (2) Position
H-4125-2, H-4250-2

Detent (3) Position All Ports Blocked in Neutral
H-4125-3, H-4250-3

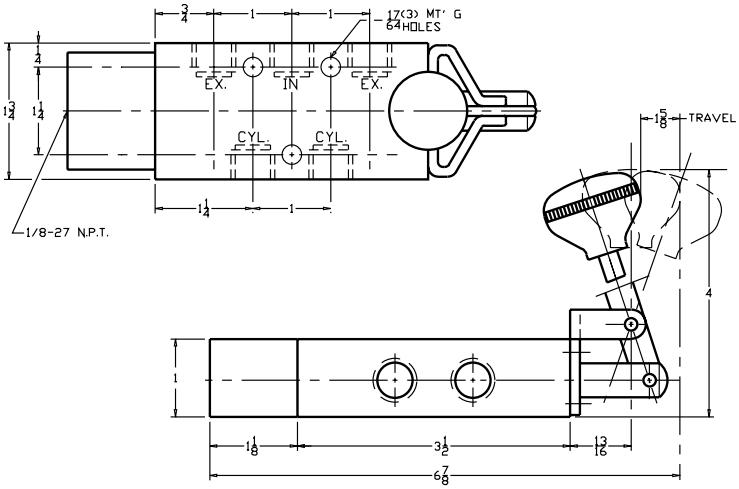
Detent (3) Position Pressure Ports Blocked, Cylinder Ports Exhaust in Neutral
H-4125-4, H4250-4

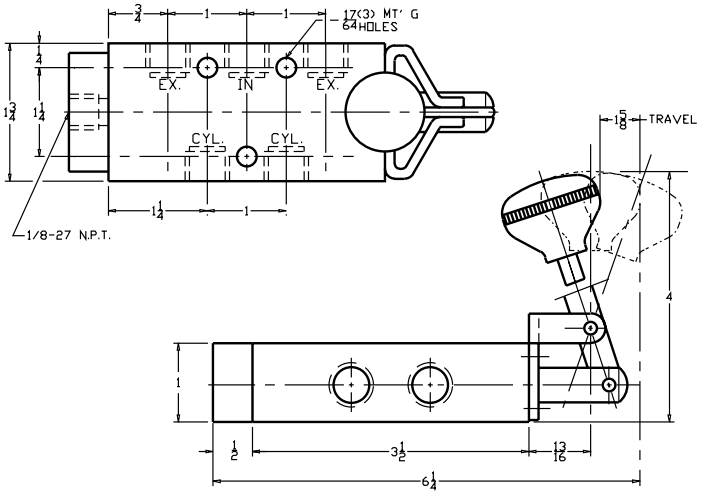
Operating Pressure 0-200 PSI

Spring Centered, All Ports Blocked in Neutral
H-4125-5, H-4250-5

Spring Centered, Pressure Port Blocked, Cylinder Ports exhaust in Neutral
H-4125-6, H-4250-6

Operating Pressure 0-200 PSI





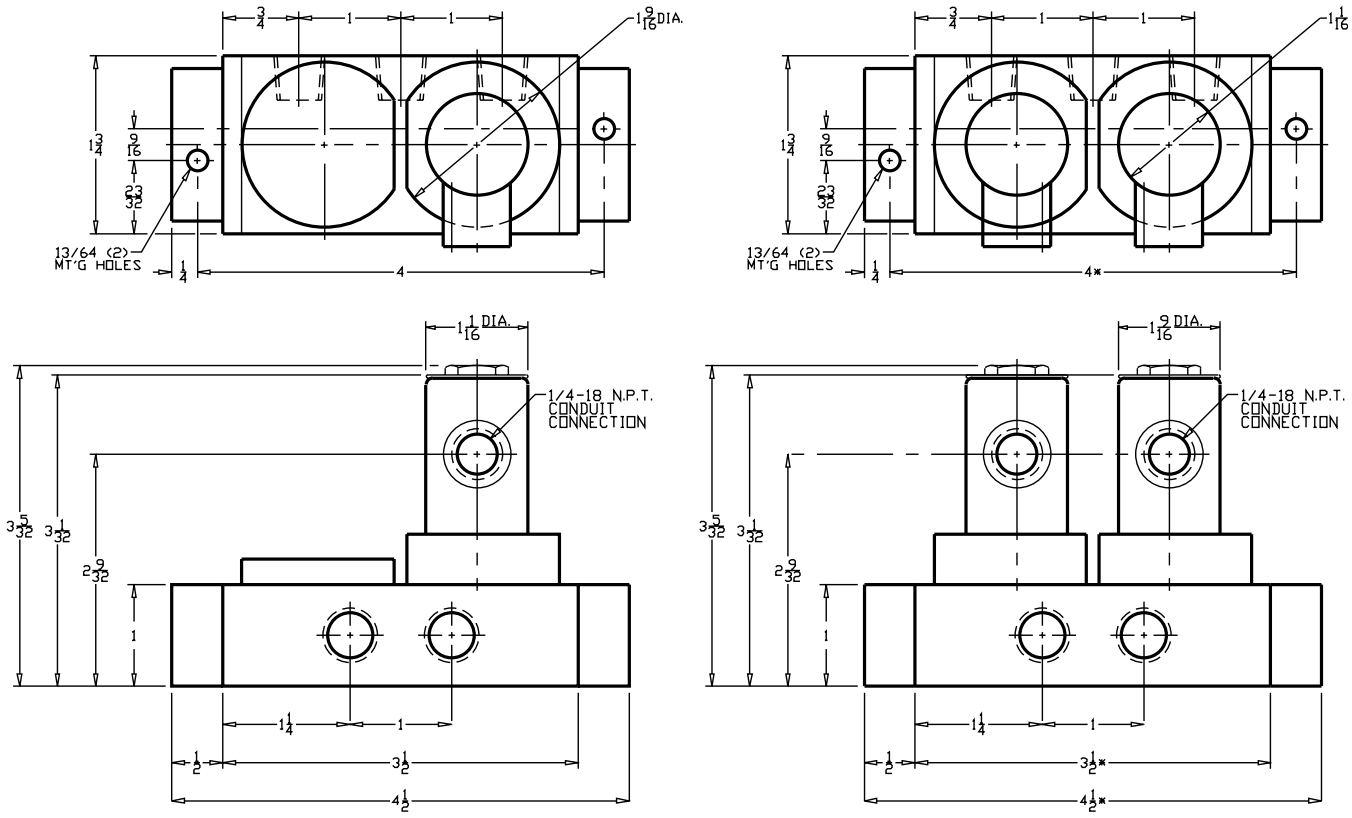
Air Pilot Return
H-4125-7, H-4250-7

Operating Pressure 50-200 PSI

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Phone: (440) 238-7343 or 238-7344 Fax: (440) 238-3812 Web: www.cylval.com Email: corporate@cylval.com

Double Solenoid Pilot Operated

Operating Pressure 50-200 PSI



Spring Return
S-4125-20
S-4250-20

Double Solenoid Pilot
DS-4125-21
DS-4250-21

Double Solenoid Pilot, Spring Centered, All Ports Blocked
DS-4250-22

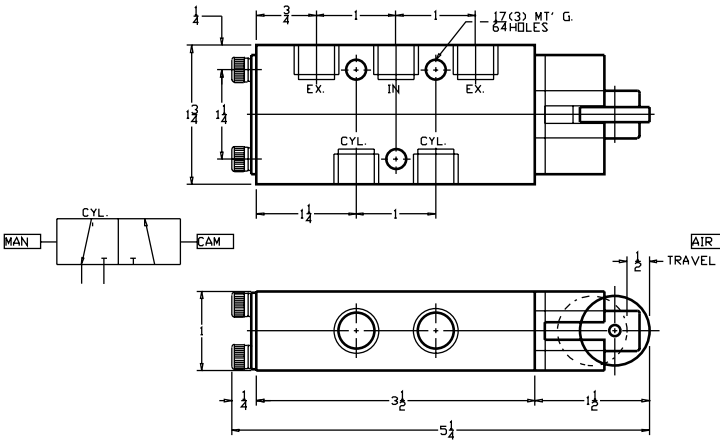
SOLENOID COILS AVAILABLE

Part No.	AC Voltage, 60 Hz	Part No.	DC Voltage
355-2	12	355-10	6
355-3	24	355-11	12
355-1	120	355-12	24
355-4	240		

Manual override for solenoid valves available as optional item. Please specify desired voltage and manual override, if desired, when ordering solenoid pilot valves.

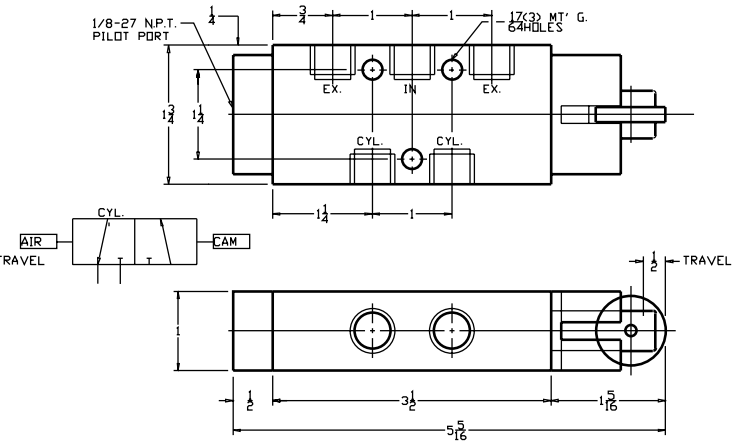
Roller Cam Operated

Operating Pressure 0-200 PSI



Spring Return
R-4125-8
R-4250-8

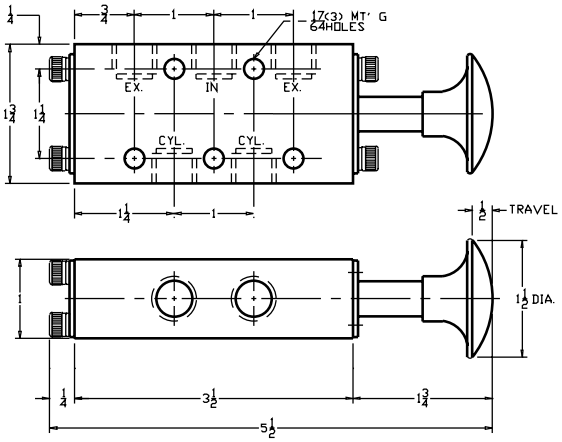
Operating Pressure 50-200 PSI



Air Pilot Return
R-4125-9
R-4250-9

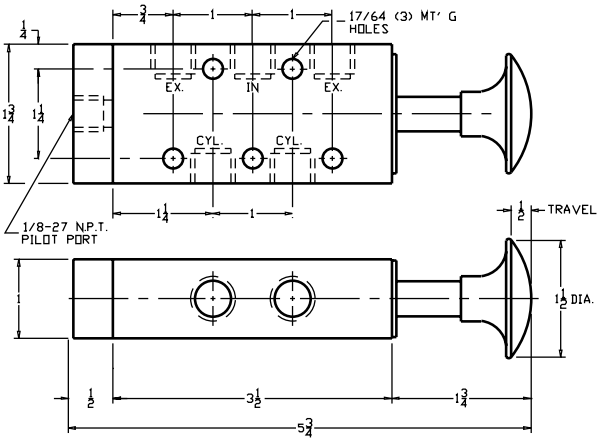
Palm Button Operated

Operating Pressure 0-200 PSI



Spring Return
B-4125-10
B-4250-10

Operating Pressure 50-200 PSI

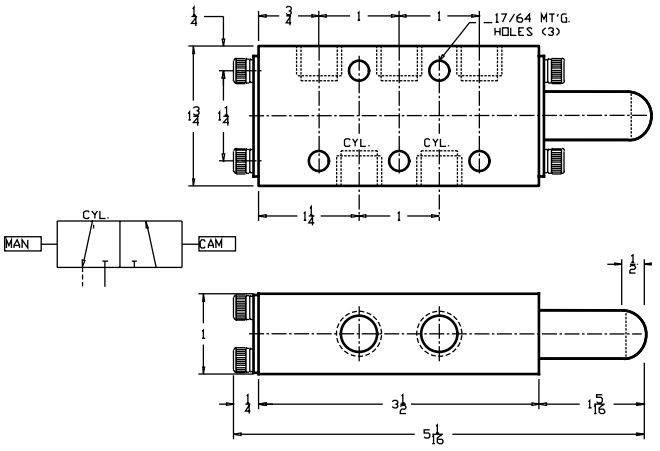


Air Pilot Return
B-4125-11
B-4125-11

Cylinders & Valves, Inc. 20811 Westwood Drive P.O. Box 360555 Strongsville, Ohio 44149
Phone: (440) 238-7343 or 238-7344 Fax: (440) 238-3812 Web: www.cylval.com Email: corporate@cylval.com

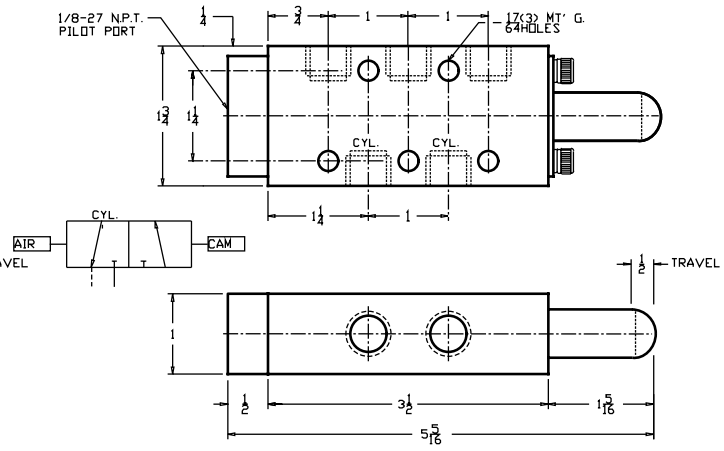
Cam Stem Operated

Operating Pressure 0-200 PSI



Spring Return
C-4125-12
C-4250-12

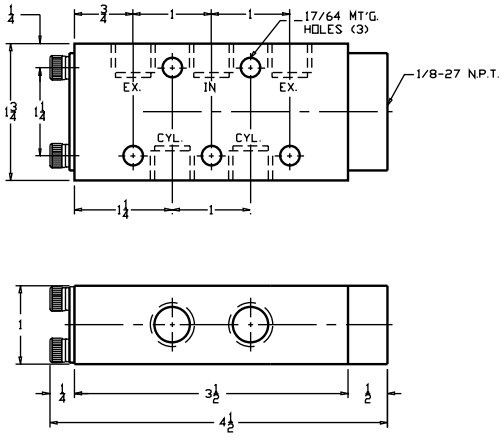
Operating Pressure 50-200 PSI



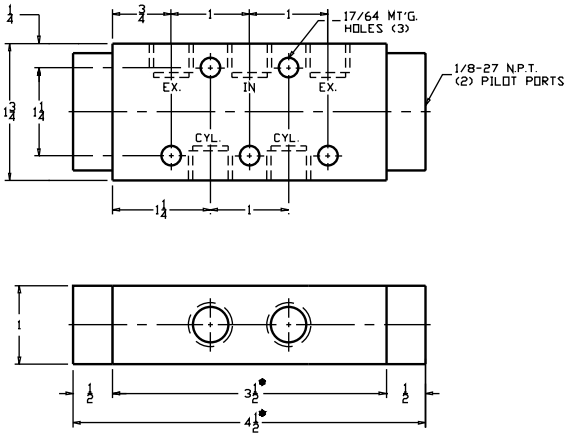
Air Pilot Return
C-4125-13
C-4250-13

Air Pilot Operated

Operating Pressure 50-200 PSI



Spring Return
P-4125-14
P-4250-14

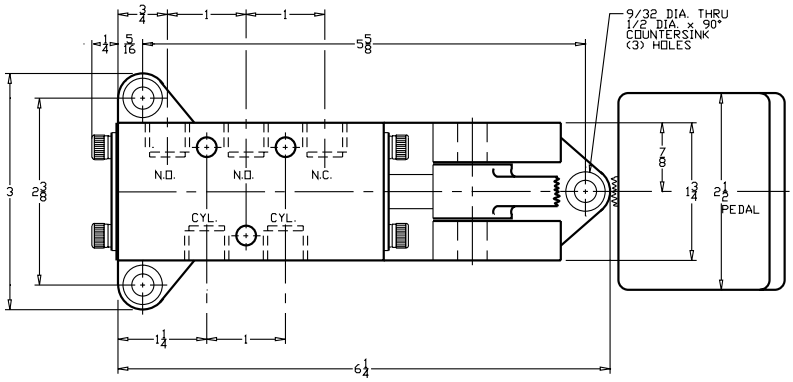


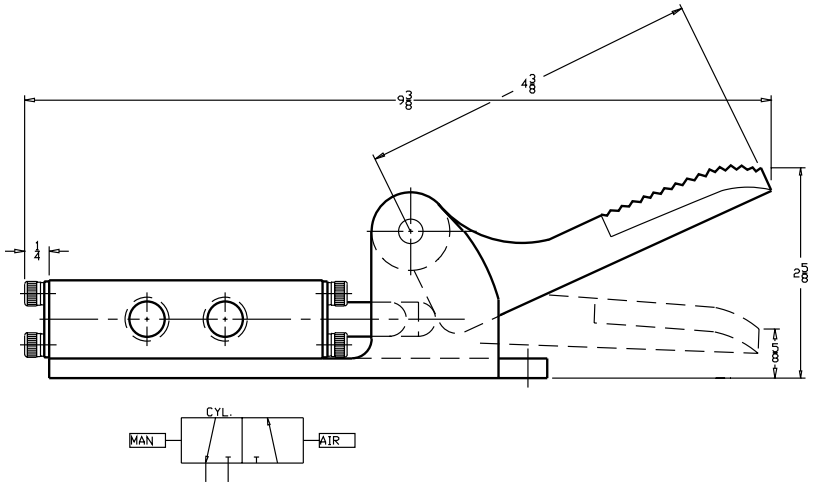
*ADD 7/16 TO LENGTH FOR SPRING CENTERED ALL PORTS BLOCKED IN NEUTRAL VALVE.

Double Air Pilot
P-4250-15
Double Solenoid Pilot, Spring Centered, All Ports Blocked
P-4250-16

Foot Pedal Operated

Note: Base & Mounting Dimensions Typical for Valves.



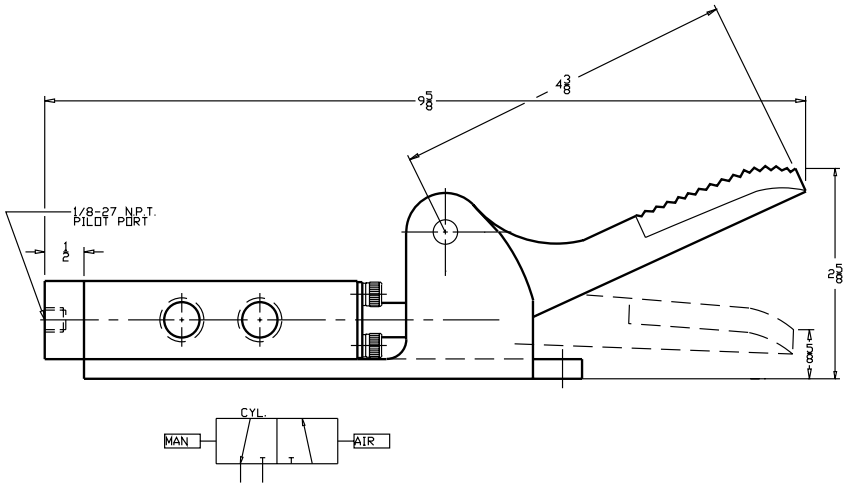


Spring Return
F-4125-25
F-4250-25

Operating Pressure 0-200 PSI

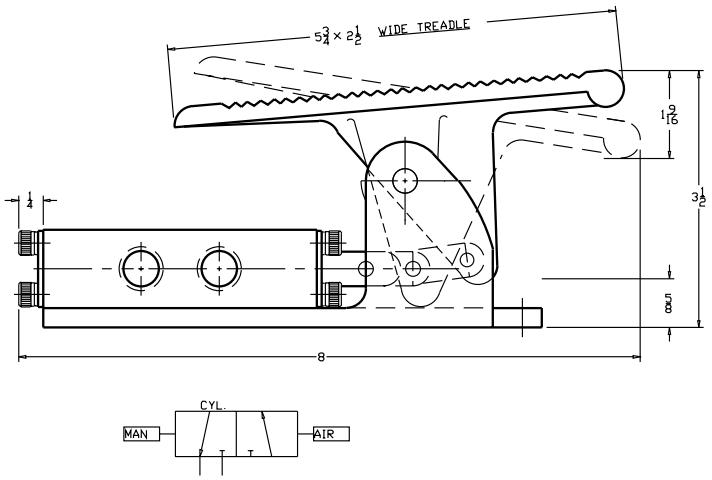
Air Pilot Return
F-4125-26
F-4250-26

Operating Pressure 50-200 PSI



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Phone: (440) 238-7343 or 238-7344 Fax: (440) 238-3812 Web: www.cylval.com Email: corporate@cylval.com

Foot Treadle Operated



Friction Position
T-4125-27
T-4250-27

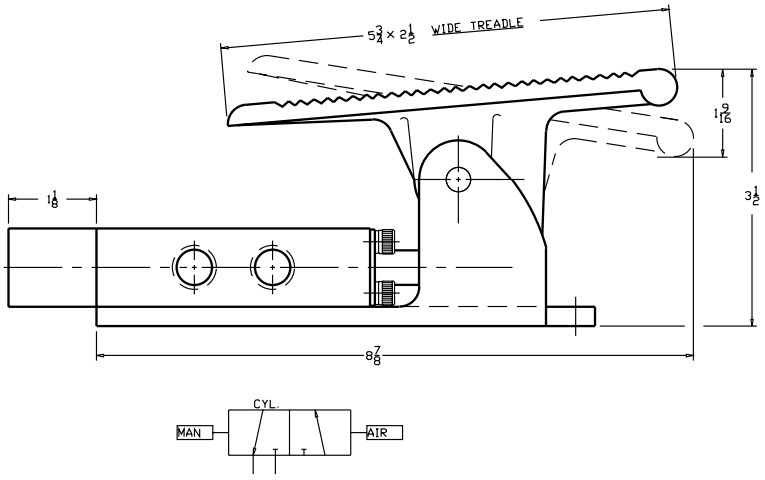
Detent (3) Position
T-4125-28
T-4250-28

Operating Pressure 0-200 PSI

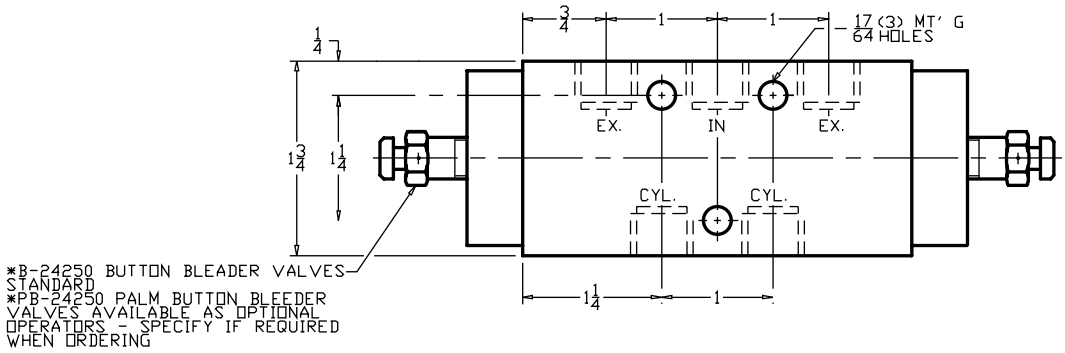
Spring Centered, All Ports Blocked in Neutral
T-4125-29
T-4250-29

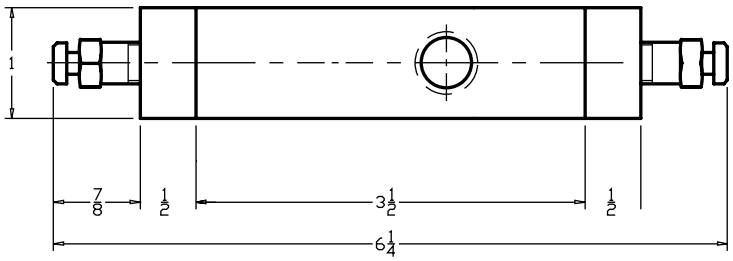
Spring Centered, Pressure Port Blocked
Cylinder Ports exhaust in Neutral
T-4125-30
T-4250-30

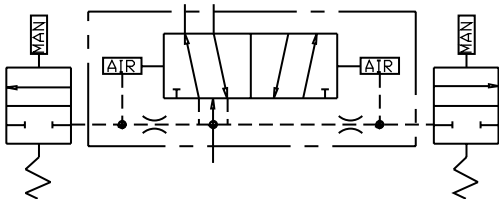
Operating Pressure 0-200 PSI



Button Bleeder Operated



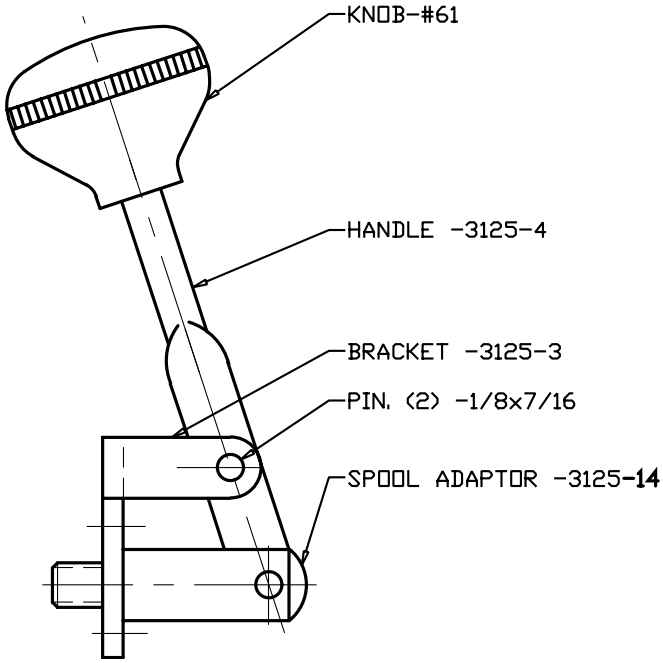




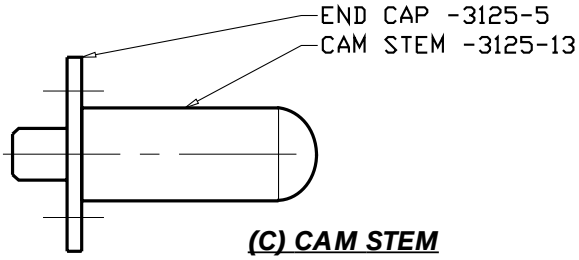
Double Button Bleeder
P-4250-17

Operating Pressure 20-200 PSI

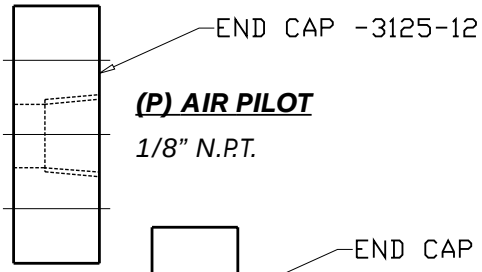
Note: 2-Way Bleeder Buttons can be remotely mounted up to 8' apart with 1/8"" I.D. (maximum) tubing.



(H) HAND OPERATOR

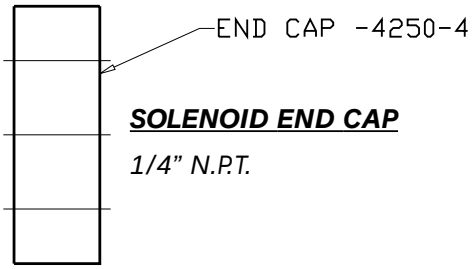


(C) CAM STEM



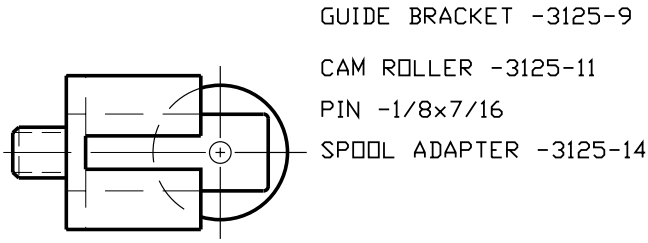
(P) AIR PILOT

1/8" N.P.T.

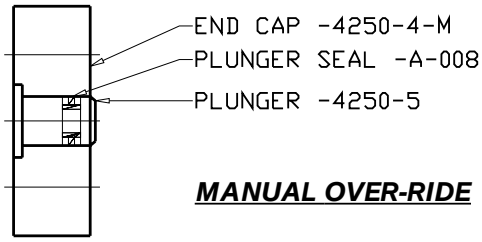


SOLENOID END CAP

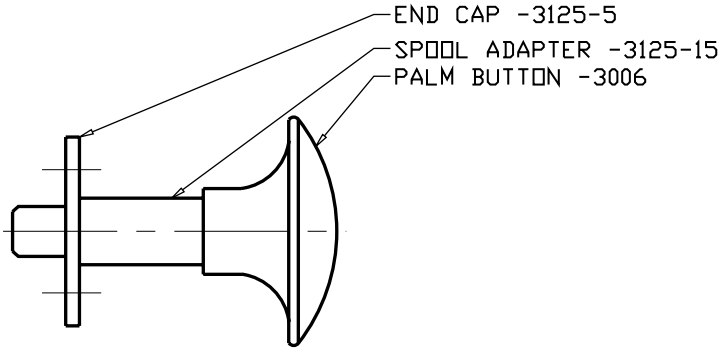
1/4" N.P.T.



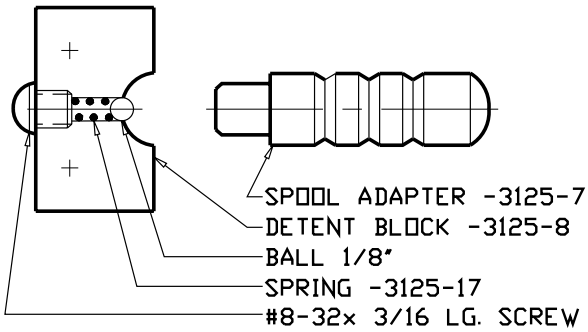
(R) ROLLER CAM



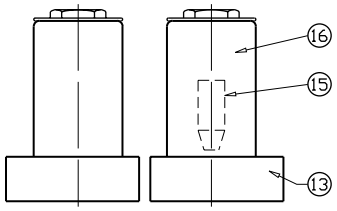
MANUAL OVER-RIDE

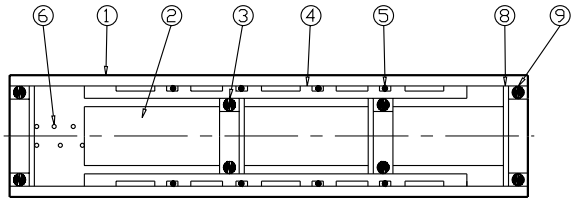


(B) PALM BUTTON

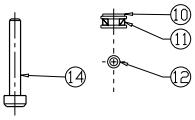


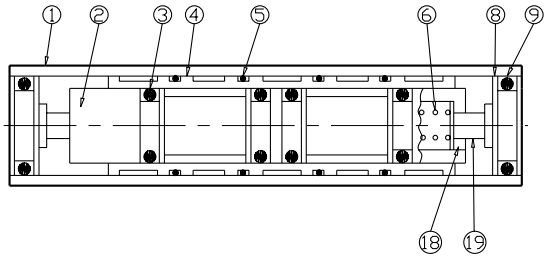
DETENT ADAPTER



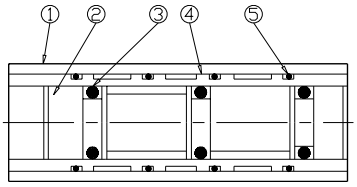


1/8" OR 1/4" 4-WAY VALVES
Single or Double Solenoid or Pilot Operators
Spring or Air Pilot Return for Single Operators





1/4" 4-WAY VALVES
Double Solenoid or Air Pilot Operators
Spring Centered Spool
All Ports Blocked in Neutral



1/8" OR 1/4" 3-WAY VALVES
Manual, Air or Solenoid Operators

To order service kits, add letter "K" after valve number.

4-Way Valves, Series 4125 (1/8") & Series 4250 (1/4")

Item	Part No.	Description
1	4250-1A	Body—Air Pilot, 1/4" NPT
1	4125-15	Body—Solenoid Pilot, 1/8" NPT
1	4250-15	Body—Solenoid Pilot, 1/4" NPT
1	4250-9	Body—Dbl. Sol. Pilot, Spring Centered, 1/4" NPT
1	4250-15	Body—Dbl. Air Pilot, Spring Centered, 1/4" NPT
2	4250-52	Spool—Spring or Operator Return
2	4250-53	Spool—Spring Centered, All Ports Blocked
3*	A110	Spool Seal (All Valves)
4	4250-25	Sleeve
5*	A-015	Sleeve Seal 1/4" Valves On;y
6*	3125-16	Spring—Single Operators Only
6*	4250-17	Spring—Spring Centered Spool
7	3125-6	End Cap—Single Solenoid or Pilot Operated
7	3125-12	End Cap—Dbl. Air Pilot
7	4250-4	End Cap—Dbl. Solenoid Pilot
8	4250-3	Piston
9*	A113	Piston Seal
10	4250-12	Sleeve Retainer
11	A-008	Retainer Seal
12	3/16x3/4	Pin—Air Pilot Only
13	4250-10	Solenoid Pilot Body
14	#8-32x1"lg.	Solenoid Pilot Mounting Screws, 2 per Solenoid
15	356	Solenoid Arm Assembly
16**	355-1	Solenoid Coil
17	4250-6	Cover Plate—Single Solenoid Only
18	N-5000-37	Retaining Ring
19	4250-7	Spring Plunger

3-Way Valves—Series 3125 (1/8") & Series 3250 (1/4")

Item	Part No.	Description
1	3125-1	Body—1/8" NPT Valves
1	3250-1	Body—1/4" NPT Valves
1	3125-15	Body—1/8" Single Solenoid
1	3250-15	Body—1/4" Single Solenoid Valve
2	3250-50	Spool
3*	A110	Spool Seal
4	3250-2	Sleeve—1/4" Only
5*	A116	Sleeve Seal, 1/4" Only
6*	3125-16	Spring—All Spring Return Valves
7	3125-6	End Cap—Spring Return or Detent Hand Hand Valve
7	3125-12	End Cap—Air Pilot Return
13	4250-10A	Solenoid Pilot Body
14	#8-32x1"lg.	Mounting Screws (2)
15	356	Solenoid Arm Assembly
16**	355-1	Solenoid Coil

* *Items included in valve service kits.*
** *355-1 standard coil, 110 V, 60 Hz, Other AC & DC voltages available. Please specify when ordering.*
(see pages 55 for coil data)

To order service kits, add letter ”K” after valve number.

4-Way Valves, Series 4125 (1/8”) & Series 4250 (1/4”)

Item	Part No.	Description
1	4125-1	Body—1/8 NPT Valves
1	4250-1	Body—1/4 NPT Valves
2	4250-50	Spool—Manual, Spring or Pilot Return & Spring or Detent Centered, All Ports Blocked in Neutral
2	4250-51	Spool—Spring or Detent Centered, Pressure Port Blocked & Cylinder Ports Exhaust in Neutral
3*	A110	Spool Seal (All Valves)
4	4250-2	Sleeve 1/4”” Manual Operated Valves Only
5*	A015	Sleeve Seal 1/4”” Valves On;y
6*	3125-16	Spring—All Spring Return Valves
6*	4240-16	Spring—Spring Centered Hand Valves On
7	3125-6	End Cap—Spring Return or Detent Hand Valves
7	4250-11	End Cap—Spring Centered Hand Valves
7	3125-12	End Cap—Air Pilot Return Valves
8	4250-13	Washer—Spring Centered Valves
9	4250-8	Spool Adaptor—Spring Centered Valves
10*	5100-31	Retaining Ring—Spring Centered Valves

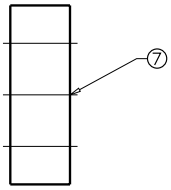
* *Items included in valve service kits.*

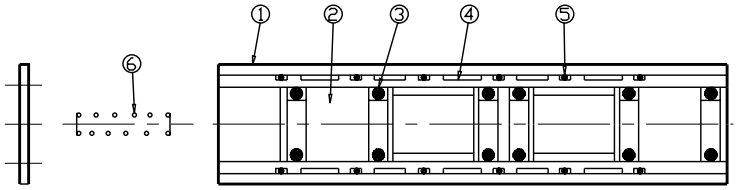
Note:

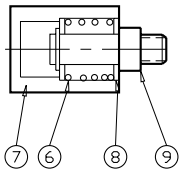
For a complete listing of

Valve Replacement Parts

please print
pages 61 through 63







1/8” OR 1/4” 4-WAY VALVES
with Manual or Air Pilot Operators

THE CLASS & PERFORMANCE OF BRASS



SPECIALS

We welcome the opportunity to help our customers meet any unusual needs.



VALVES

Manual or Solenoid Operated



PARTS

Mounting Brackets and Replacement Parts

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Strongsville, Ohio 44149

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Web: www.cylval.com
Email: corporate@cylval.com

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