

N-FORCER®

**.75 Ton to 7.5 Tons Nitrogen Gas Springs
(7.5 kN to 75 kN)**

“IS” Series

**International Standards (ISO Standards)
NAAMS Standards**



Detachable mounts shown.

Welded mounts also available as a standard.

Note: We can supply welded mounts to any “IS” series if requested.

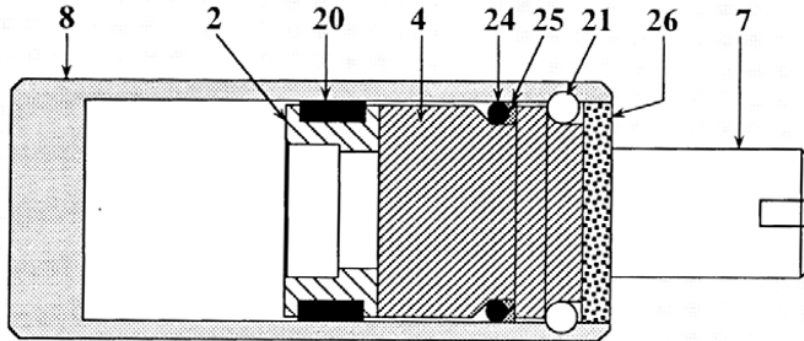
Die, Mold & Automation Components, Inc. 14400 Henn Street Dearborn, MI 48126
Phone : 1.800.220.2242 www.n-forcer.com

N-FORCER®



“CN” & "IS" SERIES PARTS LIST

CN & IS Series repair kits & parts are interchangeable.



Individual repair parts:

- | | |
|--|--|
| 8. Tube Assembly P/N: <u>N(###)-08(##)</u> | 25. O-ring back-up P/N: <u>N(###) -25</u> |
| 2. Piston Rod Retainer P/N: <u>N(###) -02</u> | 21. Retaining Rings P/N: <u>N333 -21</u> |
| 20. Wear Ring P/N: <u>N(###) -20</u> | 26. End Cover P/N: <u>N(###) -26</u> |
| 4. Cartridge P/N: <u>N(###) -4C</u> | 7. Piston Rod P/N: <u>N(###) -07(##)</u> |
| 24. Cartridge O-ring P/N: <u>N(###) -24</u> | |

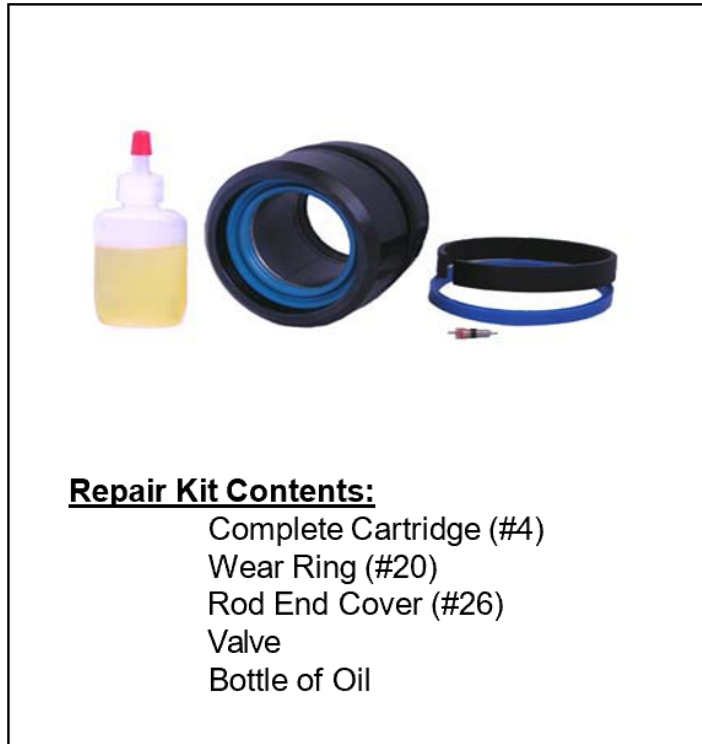
= (Series Number)
= (Stroke)

REPAIR KITS

Standard Repair Kit P/N

CN (##) - RK -21

Example: CN300-RK-21
This represents a repair kit for a 3 ton cylinders with Garloc Bearing



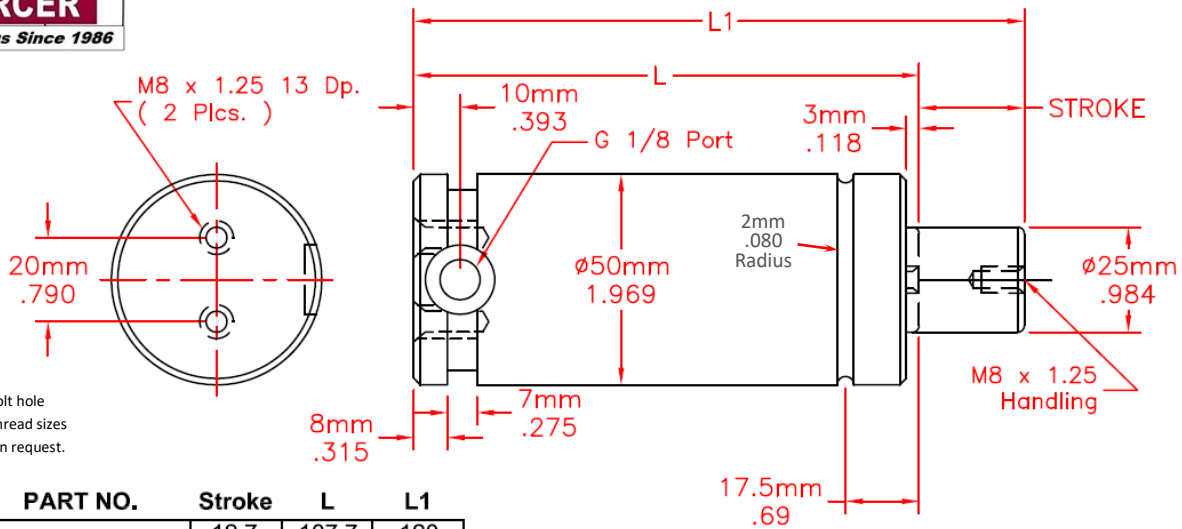
Repair Kit Contents:

- Complete Cartridge (#4)
- Wear Ring (#20)
- Rod End Cover (#26)
- Valve
- Bottle of Oil

Made in the USA



N-FORCER® IS075 - (7.5 kN - .75 Ton) Basic Mount



*Custom bolt hole patterns and thread sizes are available on request.

| PART NO. | Stroke | L | L1 |
|-------------|--------|-------|-------|
| IS075 x 013 | 12.7 | 107.7 | 120 |
| | 0.50 | 4.24 | 4.74 |
| IS075 x 025 | 25 | 120 | 145 |
| | 0.98 | 4.72 | 5.71 |
| IS075 x 038 | 38.1 | 133.1 | 171 |
| | 1.50 | 5.24 | 6.74 |
| IS075 x 050 | 50 | 145 | 195 |
| | 1.97 | 5.71 | 7.67 |
| IS075 x 063 | 63.5 | 158.5 | 222 |
| | 2.50 | 6.24 | 8.74 |
| IS075 x 075 | 75 | 170 | 245 |
| | 2.95 | 6.69 | 9.64 |
| IS075 x 080 | 80 | 175 | 255 |
| | 3.15 | 6.89 | 10.04 |
| IS075 x 088 | 88.9 | 183.9 | 273 |
| | 3.50 | 7.24 | 10.74 |
| IS075 x 100 | 100 | 195 | 295 |
| | 3.94 | 7.68 | 11.61 |
| IS075 x 114 | 114.3 | 209.3 | 324 |
| | 4.50 | 8.24 | 12.74 |
| IS075 x 125 | 125 | 220 | 345 |
| | 4.92 | 8.66 | 13.58 |
| IS075 x 138 | 139.7 | 234.7 | 374 |
| | 5.50 | 9.24 | 14.74 |
| IS075 x 150 | 150 | 245 | 395 |
| | 5.91 | 9.65 | 15.55 |
| IS075 x 160 | 160 | 255 | 415 |
| | 6.30 | 10.04 | 16.34 |
| IS075 x 175 | 175 | 270 | 445 |
| | 6.89 | 10.63 | 17.52 |
| IS075 x 200 | 200 | 295 | 495 |
| | 7.87 | 11.61 | 19.49 |
| IS075 x 225 | 225 | 320 | 545 |
| | 8.86 | 12.60 | 21.45 |
| IS075 x 250 | 250 | 345 | 595 |
| | 9.84 | 13.58 | 23.42 |
| IS075 x 275 | 275 | 370 | 645 |
| | 10.83 | 14.57 | 25.39 |
| IS075 x 280 | 280 | 375 | 655 |
| | 11.02 | 14.76 | 25.78 |
| IS075 x 300 | 300 | 395 | 695 |
| | 11.81 | 15.55 | 27.36 |

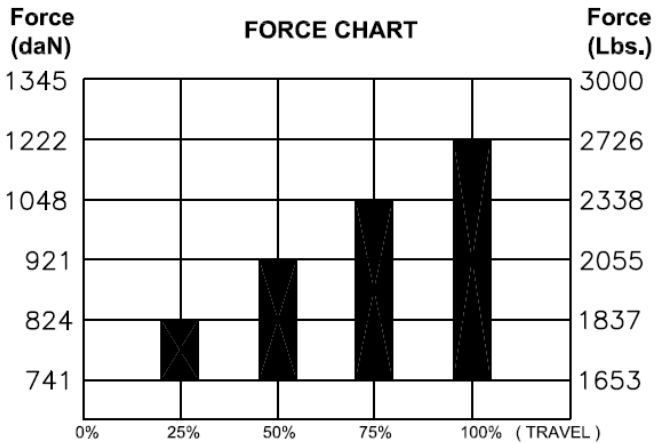


Chart is showing maximum force base on 2175 psl (150 bar) charging pressure. If less than max. the force is reduced proportionally.
Example: Forces on chart are multiplied by .69 at 1500 psi (103 bar), by .46 at 1000 psi (69 bar), etc.

NOTE: MAXIMUM TRAVEL RECOMMENDED IS 90% OF STROKE.

● Denotes NAAMS standard stroke lengths.

ORDERING EXAMPLE

IS075 x 013 - D - 150

Part No. Series, Model and Stroke

Charging Pressure
H = open flow or hoses, no pressure, no valve.
Self contained = 51-150 bar or 750 - 2175 psi. If not specified the 2175 psi is default.

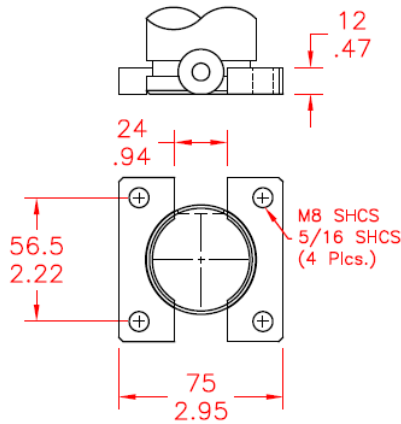
Mounting Option
"D" Basic, optional mounts on next page

Repair Kits

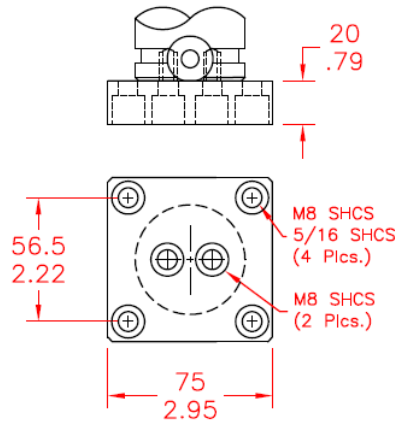
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IS075 - (7.5 kN - .75 Ton) Optional Mounts

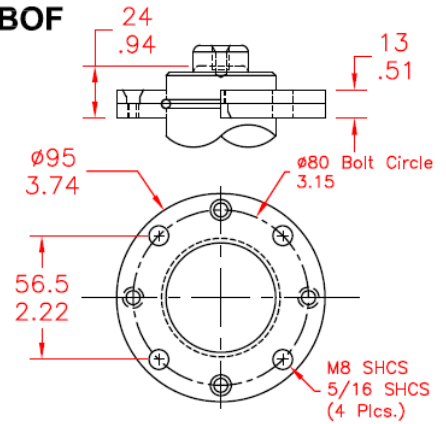
BSF



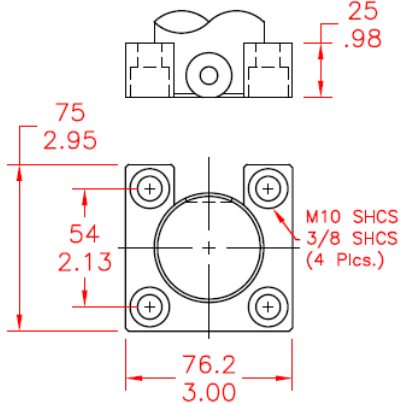
BF



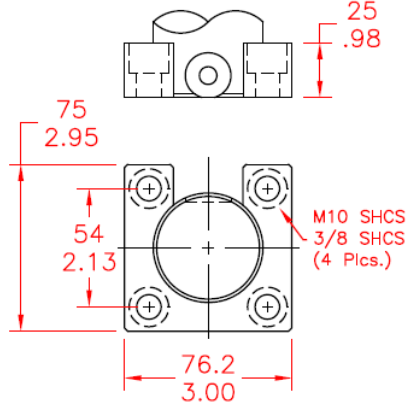
BOF



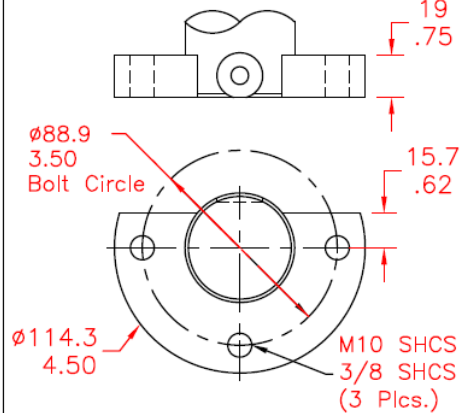
SF - Welded



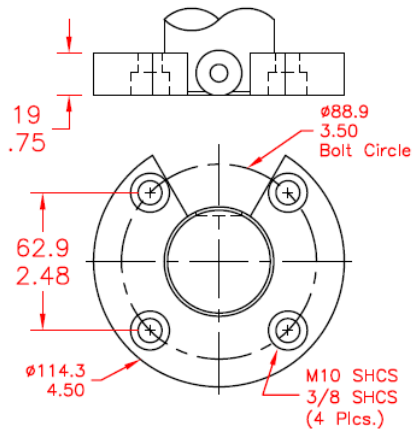
SF1 - Welded



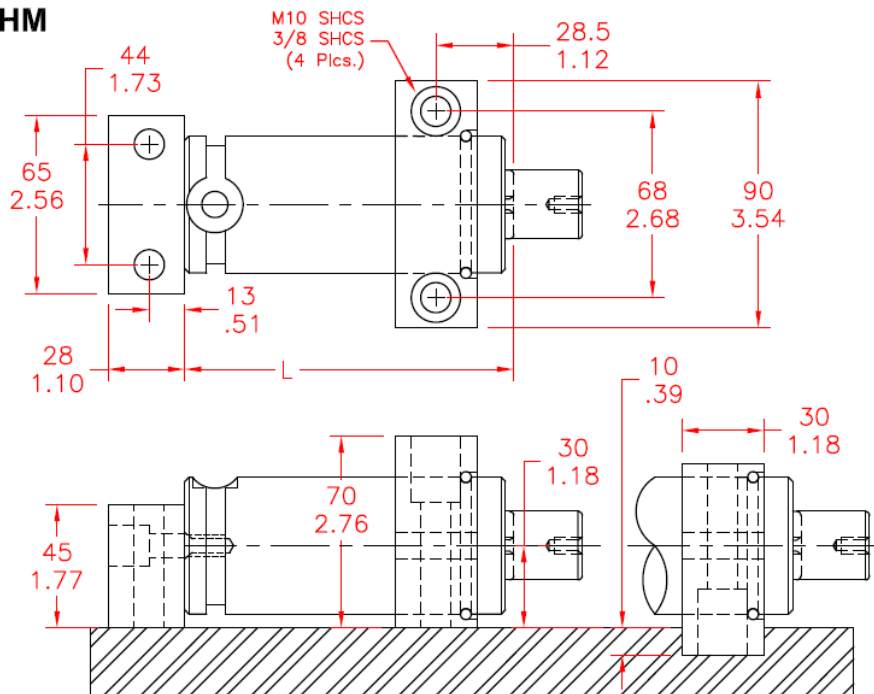
R2 - Welded



RF - Welded



HM

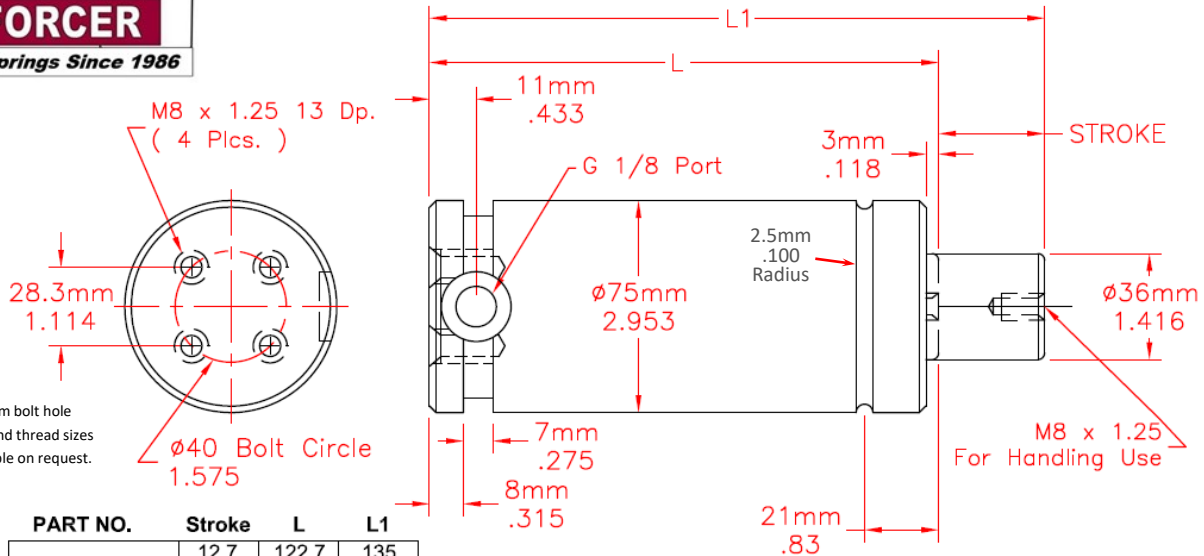


Made in the USA



N-FORCER
GAS Springs Since 1986

N-FORCER® IS150 - (15 kN - 1.5 Ton) Basic Mount



*Custom bolt hole patterns and thread sizes are available on request.

| PART NO. | Stroke | L | L1 |
|---------------|--------|-------|-------|
| IS150 x 013 | 12.7 | 122.7 | 135 |
| | 0.50 | 4.83 | 5.33 |
| IS150 x 025 | 25 | 135 | 160 |
| | 0.98 | 5.31 | 6.30 |
| IS150 x 038 | 38.1 | 148.1 | 186 |
| | 1.50 | 5.83 | 7.33 |
| IS150 x 050 | 50 | 160 | 210 |
| | 1.97 | 6.30 | 8.27 |
| IS150 x 063 | 63.4 | 173.4 | 237 |
| | 2.50 | 6.83 | 9.32 |
| IS150 x 075 | 75 | 185 | 260 |
| | 2.95 | 7.28 | 10.24 |
| IS150 x 080 | 80 | 190 | 270 |
| | 3.15 | 7.48 | 10.63 |
| IS150 x 088 | 88.9 | 198.9 | 288 |
| | 3.50 | 7.83 | 11.33 |
| IS150 x 100 | 100 | 210 | 310 |
| | 3.94 | 8.27 | 12.20 |
| IS150 x 114 | 114.3 | 224.3 | 339 |
| | 4.50 | 8.83 | 13.33 |
| IS150 x 125 | 125 | 235 | 360 |
| | 4.92 | 9.25 | 14.17 |
| IS150 x 139 | 139.7 | 249.7 | 389 |
| | 5.50 | 9.83 | 15.33 |
| IS150 x 150 | 150 | 260 | 410 |
| | 5.91 | 10.24 | 16.14 |
| IS150 x 160 | 160 | 270 | 430 |
| | 6.30 | 10.63 | 16.93 |
| IS150 x 165.1 | 165.1 | 275 | 440.2 |
| | 6.5 | 10.63 | 17.33 |
| IS150 x 175 | 175 | 285 | 460 |
| | 6.89 | 11.22 | 18.11 |
| IS150 x 200 | 200 | 310 | 510 |
| | 7.87 | 12.20 | 20.08 |
| IS150 X 203 | 203 | 313 | 516 |
| | 8.00 | 12.32 | 20.32 |
| IS150 X 215.9 | 215.3 | 215.3 | 540.6 |
| | 8.5 | 8.05 | 20.86 |
| IS150 x 225 | 225 | 335 | 560 |
| | 8.86 | 13.19 | 22.05 |
| IS150 X 228.6 | 228.6 | 228.6 | 567.2 |
| | 9.00 | 9.0 | 22.33 |
| IS150 x 250 | 250 | 360 | 610 |
| | 9.84 | 14.17 | 24.02 |
| IS150 x 275 | 275 | 385 | 660 |
| | 10.83 | 15.16 | 25.98 |
| IS150 x 300 | 300 | 410 | 710 |
| | 11.81 | 16.14 | 27.95 |

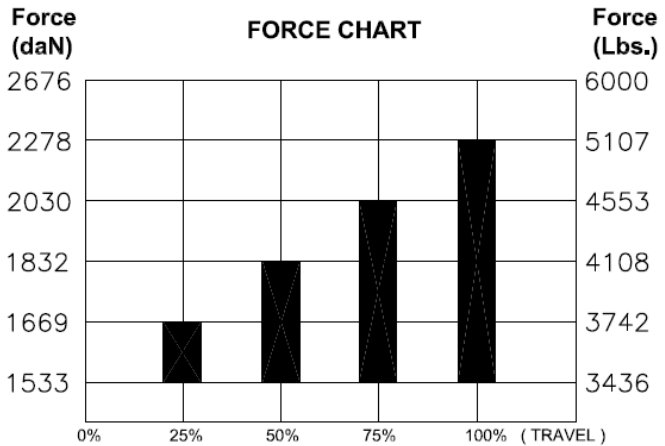


Chart is showing maximum force base on 2175 psi (150 bar) charging pressure. If less than max, the force is reduced proportionally.
Example: Forces on chart are multiplied by .69 at 1500 psi, (103 bar), by .46 at 1000 psi (69 bar), etc.

NOTE: MAXIMUM TRAVEL RECOMMENDED IS 90% OF STROKE.

● Denotes NAAMS standard stroke lengths.

ORDERING EXAMPLE

IS150 x 013 - D - 150

Part No.
Series, Model
and Stroke

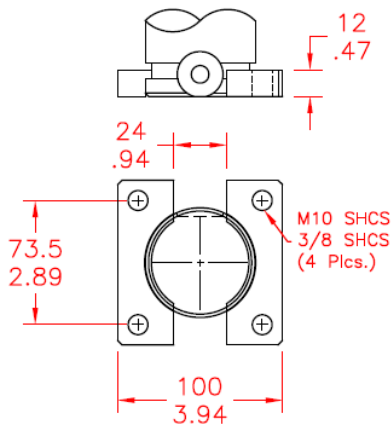
Mounting Option
"D" Basic, optional
mounts on next page

Charging Pressure
H = open flow or hosed, no
pressure, no valve.
Self contained = 51-150 bar
or 750 - 2175 psi. If not
specified the 2175 psi
is default.

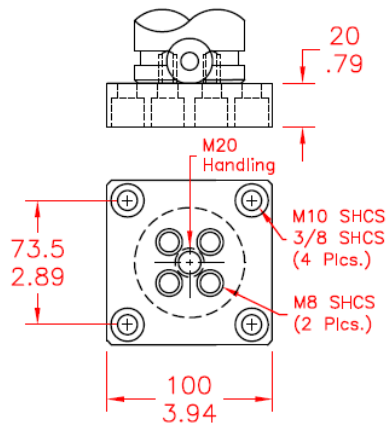
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IS150 - (15 kN - 1.5 Ton) Optional Mounts

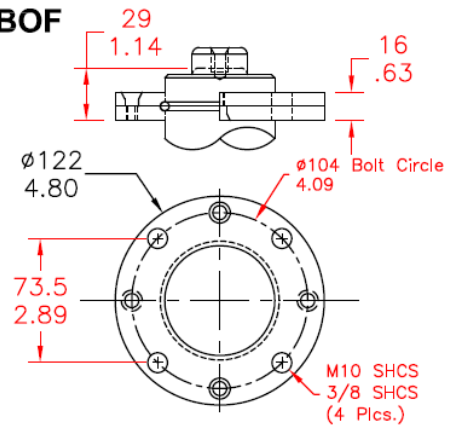
BSF



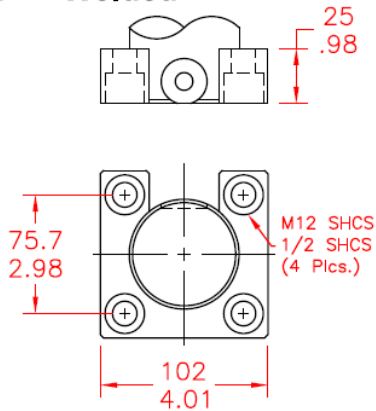
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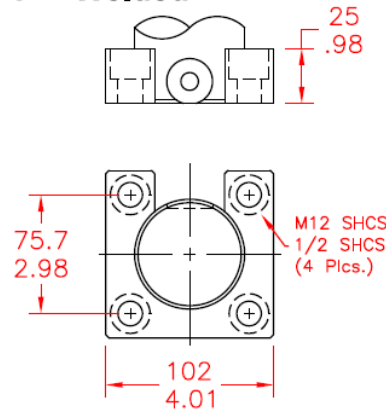
BOF



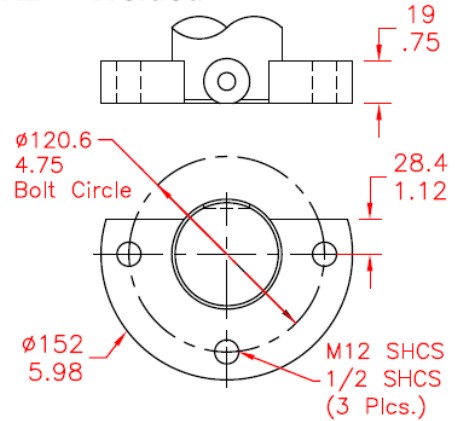
SF - Welded



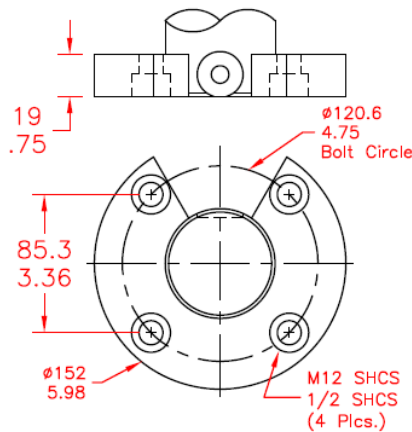
SF1 - Welded



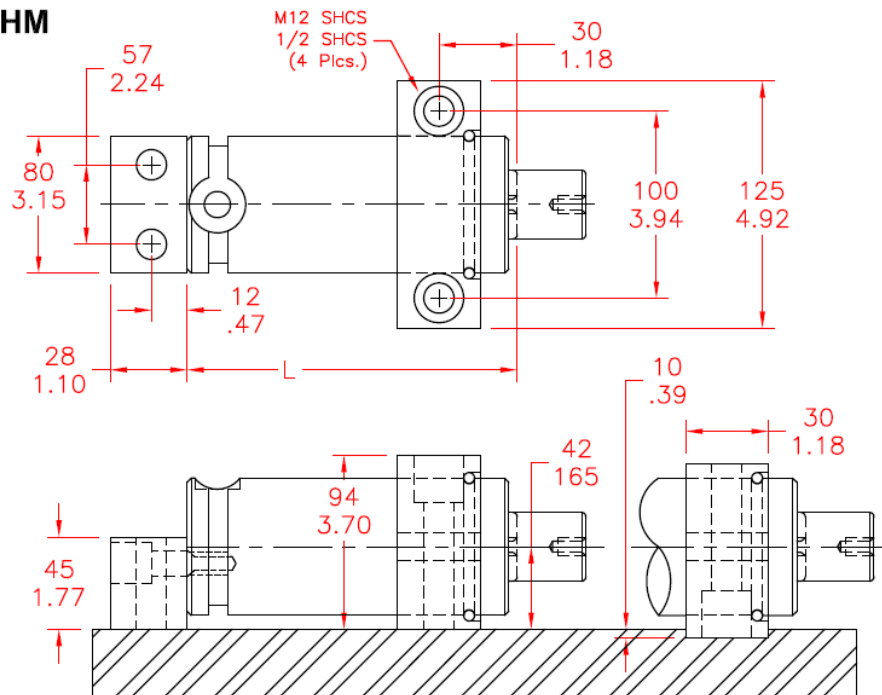
R2 - Welded



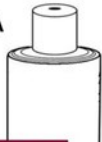
RF - Welded



HM



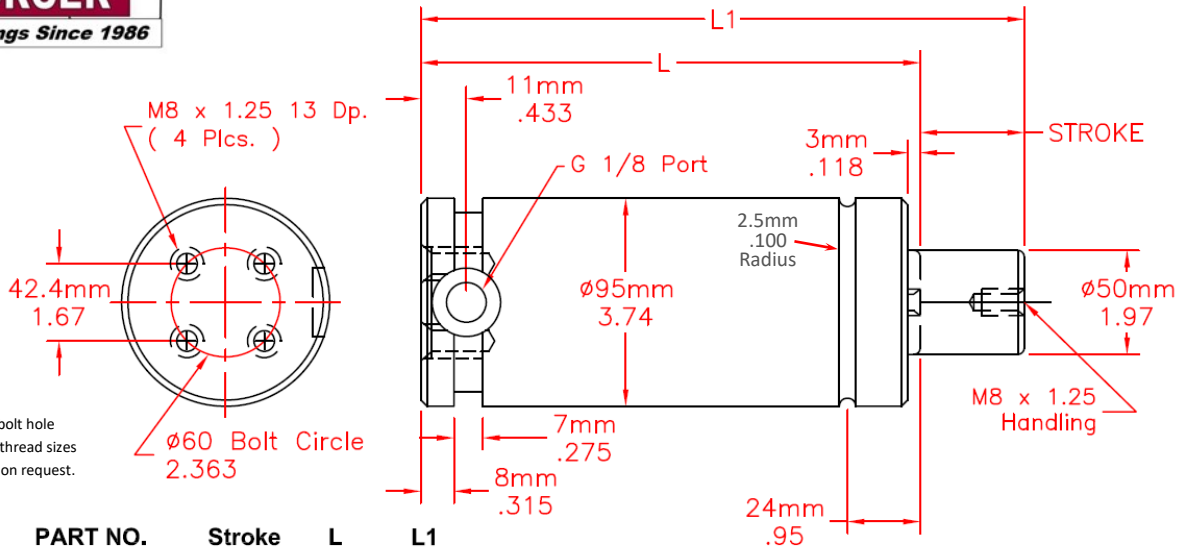
Made in the USA



N-FORCER

GAS Springs Since 1986

N-FORCER® IS300 - (30 kN - 3.0 Ton) Basic Mount



*Custom bolt hole patterns and thread sizes are available on request.

| PART NO. | Stroke | L | L1 |
|-------------|--------|-------|-------|
| IS300 x 013 | 12.7 | 132.7 | 145 |
| IS300 x 025 | 0.50 | 5.22 | 5.72 |
| IS300 x 025 | 25 | 145 | 170 |
| IS300 x 038 | 0.98 | 5.71 | 6.69 |
| IS300 x 038 | 38.1 | 158.1 | 196 |
| IS300 x 050 | 1.50 | 6.22 | 7.72 |
| IS300 x 050 | 50 | 170 | 220 |
| IS300 x 063 | 1.97 | 6.69 | 8.66 |
| IS300 x 063 | 63.4 | 183.4 | 247 |
| IS300 x 075 | 2.50 | 7.22 | 9.72 |
| IS300 x 075 | 75 | 195 | 270 |
| IS300 x 080 | 2.95 | 7.68 | 10.63 |
| IS300 x 080 | 80 | 200 | 280 |
| IS300 x 080 | 3.15 | 7.87 | 11.02 |
| IS300 x 088 | 3.15 | 7.87 | 11.02 |
| IS300 x 088 | 88.9 | 208.9 | 298 |
| IS300 x 100 | 3.50 | 8.22 | 11.72 |
| IS300 x 100 | 100 | 220 | 320 |
| IS300 x 100 | 3.94 | 8.66 | 12.60 |
| IS300 x 114 | 4.50 | 9.22 | 13.72 |
| IS300 x 114 | 114.3 | 234.3 | 349 |
| IS300 x 125 | 4.92 | 9.65 | 14.57 |
| IS300 x 125 | 125 | 245 | 370 |
| IS300 x 139 | 4.92 | 9.65 | 14.57 |
| IS300 x 139 | 139.7 | 259.7 | 399 |
| IS300 x 150 | 5.50 | 10.22 | 15.72 |
| IS300 x 150 | 150 | 270 | 420 |
| IS300 x 150 | 5.91 | 10.63 | 16.53 |
| IS300 x 160 | 6.30 | 11.02 | 17.32 |
| IS300 x 160 | 160 | 280 | 440 |
| IS300 x 175 | 6.30 | 11.02 | 17.32 |
| IS300 x 175 | 175 | 295 | 470 |
| IS300 x 175 | 6.89 | 11.61 | 18.50 |
| IS300 x 200 | 7.87 | 12.60 | 20.47 |
| IS300 x 200 | 200 | 320 | 520 |
| IS300 x 225 | 7.87 | 12.60 | 20.47 |
| IS300 x 225 | 225 | 345 | 570 |
| IS300 x 225 | 8.86 | 13.58 | 22.44 |
| IS300 x 250 | 8.86 | 13.58 | 22.44 |
| IS300 x 250 | 250 | 370 | 620 |
| IS300 x 250 | 9.84 | 14.57 | 24.41 |
| IS300 x 275 | 9.84 | 14.57 | 24.41 |
| IS300 x 275 | 275 | 395 | 670 |
| IS300 x 275 | 10.83 | 15.55 | 26.38 |
| IS300 x 300 | 10.83 | 15.55 | 26.38 |
| IS300 x 300 | 300 | 420 | 720 |
| IS300 x 300 | 11.81 | 16.54 | 28.35 |
| IS300 x 325 | 11.81 | 16.54 | 28.35 |
| IS300 x 325 | 325 | 445.1 | 770 |
| IS300 x 325 | 12.80 | 17.53 | 30.32 |

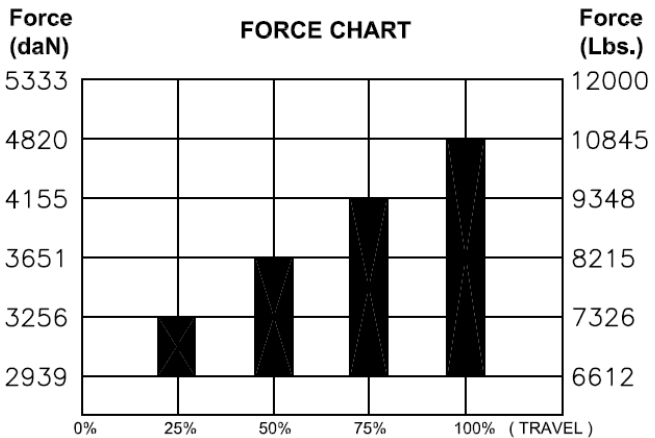


Chart is showing maximum force base on 2175 psi (150 bar) charging pressure. If less than max the force is reduced proportionally.
Example: Forces on chart are multiplied by .69 at 1500 psi (103 bar), by .46 at 1000 psi (69 bar), etc.

NOTE: MAXIMUM TRAVEL RECOMMENDED IS 90% OF STROKE.

● Denotes NAAMS standard stroke lengths.

ORDERING EXAMPLE

IS300 x 013 - D - 150

Part No. Series, Model and Stroke

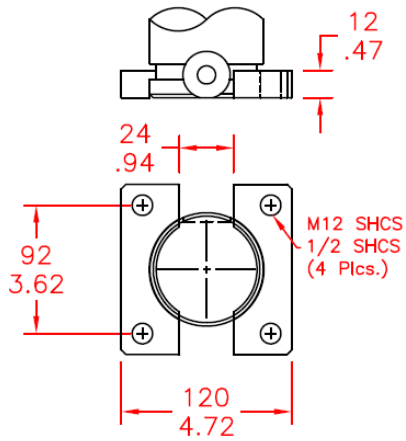
Charging Pressure
H = open flow or hosed, no pressure, no valve.
Self contained = 51-150 bar or 750 - 2175 psi. If not specified the 2175 psi is default.

Mounting Option
"D" Basic, optional mounts on next page

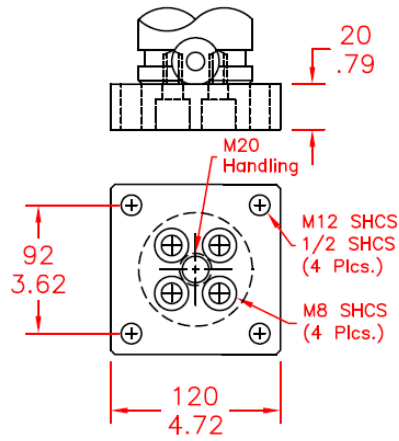
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IS300 - (30 kN - 3.0 Ton) Optional Mounts

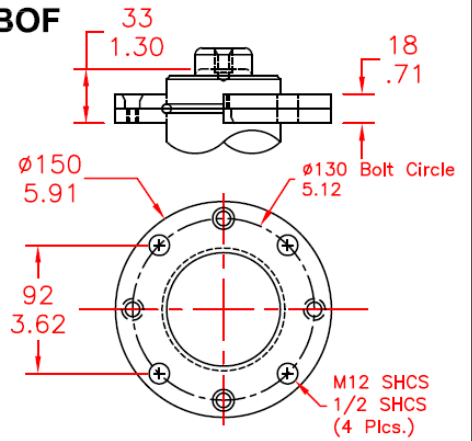
BSF



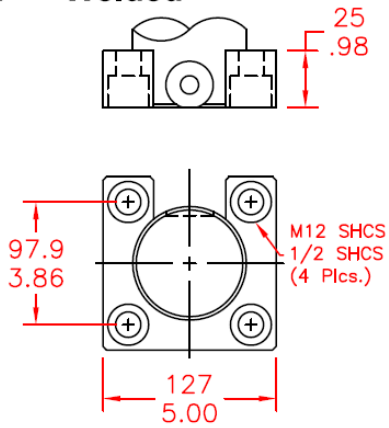
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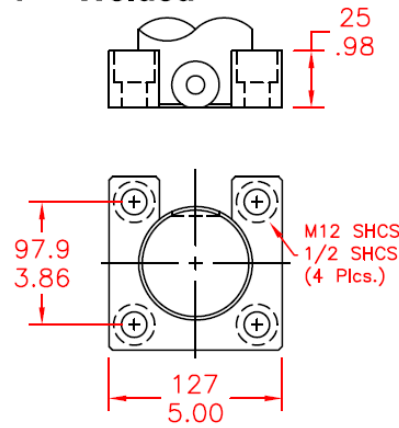
BOF



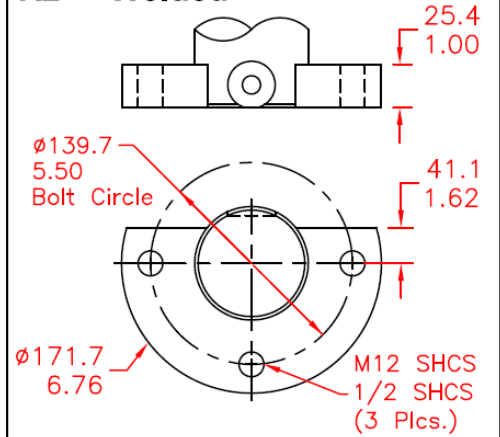
SF - Welded



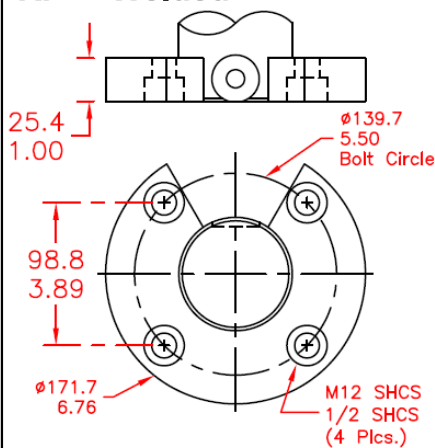
SF1 - Welded



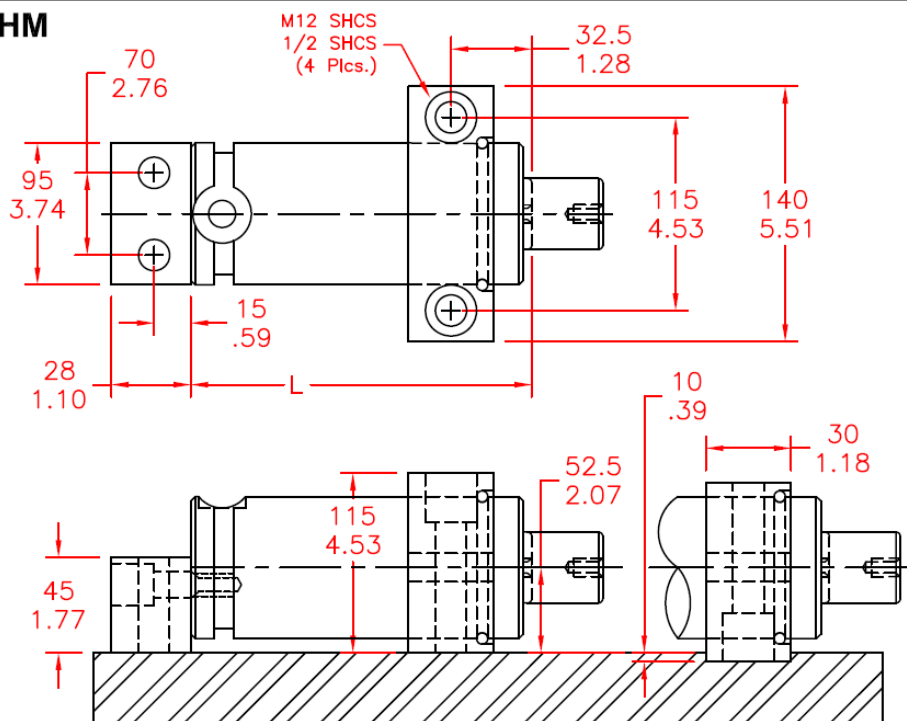
R2 - Welded



RF - Welded



HM



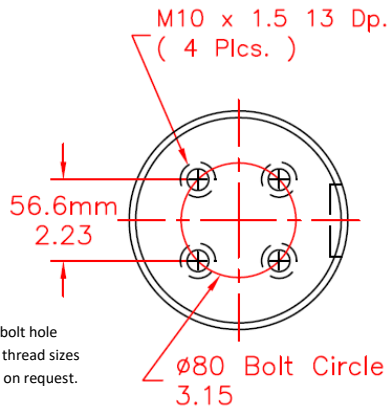
Made in the USA



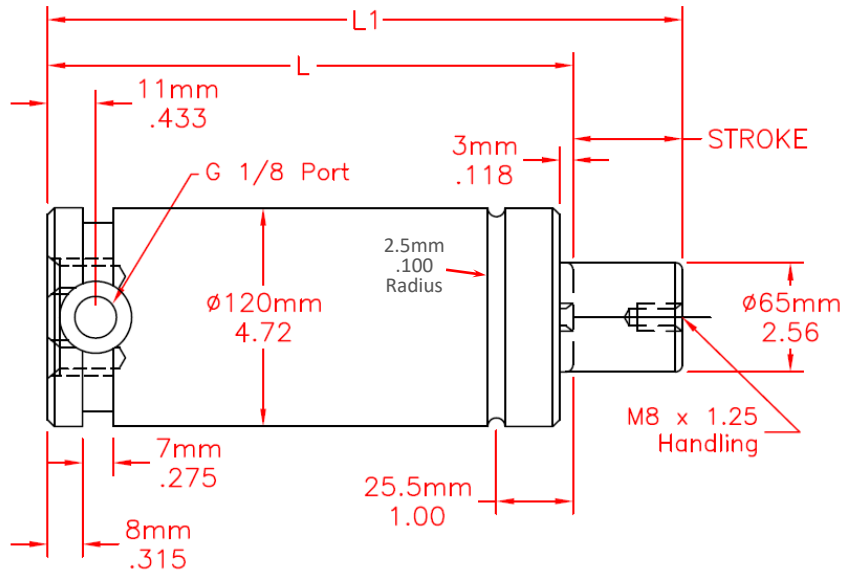
N-FORCER

GAS Springs Since 1986

N-FORCER® IS500 - (50 kN - 5.0 Ton) Basic Mount



*Custom bolt hole patterns and thread sizes are available on request.



Part No. Stroke L L1

| Part No. | Stroke | L | L1 |
|---------------|--------|--------|--------|
| IS500 x 025 | 25 | 165.00 | 190.00 |
| | 0.98 | 6.49 | 7.47 |
| IS500 x 038 | 38.1 | 178.10 | 216.20 |
| | 1.5 | 7.01 | 8.51 |
| IS500 x 050 | 50 | 190.00 | 240.00 |
| | 1.97 | 7.48 | 9.45 |
| IS500 x 063 | 63.5 | 203.50 | 267.00 |
| | 2.5 | 8.01 | 10.51 |
| IS500 x 075 | 75 | 215.00 | 290.00 |
| | 2.95 | 8.46 | 11.41 |
| IS500 x 080 | 80 | 220.00 | 300.00 |
| | 3.15 | 8.66 | 11.81 |
| IS500 x 088 | 88.9 | 228.90 | 317.80 |
| | 3.5 | 9.01 | 12.51 |
| IS500 x 100 | 100 | 240.00 | 340.00 |
| | 3.94 | 9.45 | 13.39 |
| IS500 x 114 | 114.3 | 254.30 | 368.60 |
| | 4.5 | 10.01 | 14.51 |
| IS500 x 125 | 125 | 265.00 | 390.00 |
| | 4.92 | 10.43 | 15.35 |
| IS500 x 139 | 139.7 | 279.70 | 419.40 |
| | 5.500 | 11.01 | 16.51 |
| IS500 x 150 | 150 | 290.00 | 440.00 |
| | 5.91 | 11.42 | 17.33 |
| IS500 x 160 | 160 | 300.00 | 460.00 |
| | 6.3 | 11.81 | 18.11 |
| is500 x 165 | 165 | 305.00 | 470.00 |
| | 6.496 | 12.01 | 18.50 |
| IS500 x 175 | 175 | 315.00 | 490.00 |
| | 6.89 | 12.40 | 19.29 |
| IS500 x 177.8 | 177.8 | 317.80 | 495.60 |
| | 7 | 12.51 | 19.51 |
| is500 x 190 | 190 | 330.00 | 520.00 |
| | 7.5 | 13.01 | 20.51 |
| IS500 x 200 | 200 | 340.00 | 539.80 |
| | 7.87 | 13.38 | 21.25 |
| IS500 x 203.2 | 203.2 | 343.20 | 546.40 |
| | 8 | 13.51 | 21.51 |
| IS500 x 225 | 225 | 365.00 | 590.00 |
| | 8.86 | 14.37 | 23.23 |
| IS500 x 228.9 | 228.9 | 368.90 | 597.80 |
| | 9 | 14.51 | 23.51 |
| IS500 x 250 | 250 | 390.00 | 640.00 |
| | 9.84 | 15.35 | 25.19 |
| IS500 x 275 | 275 | 415.00 | 690.00 |
| | 10.83 | 16.34 | 27.17 |
| IS500 x 300 | 300 | 440.00 | 740.00 |
| | 11.81 | 17.32 | 29.13 |

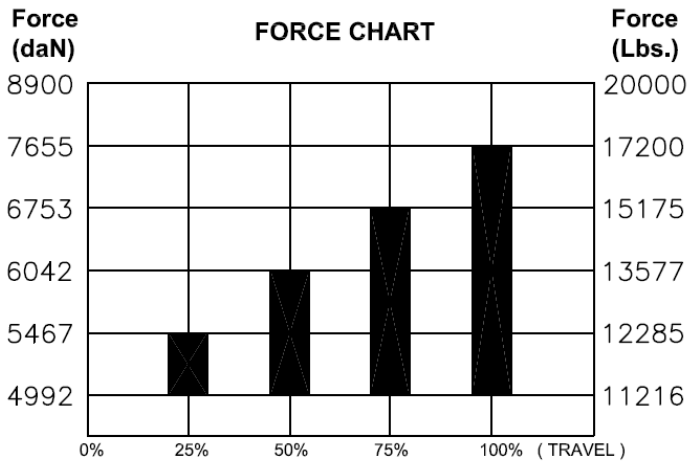


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● Denotes NAAMS standard stroke lengths.

ORDERING EXAMPLE

IS500 x 025 - D - 150

Part No. Series, Model and Stroke

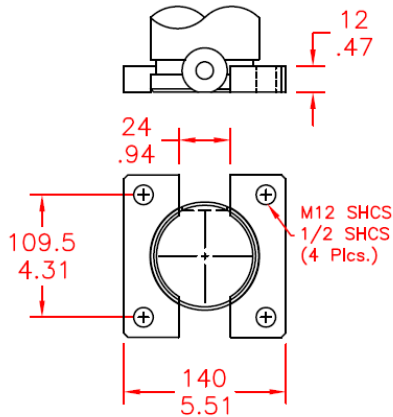
Mounting Option "D" Basic, optional mounts on next page

Charging Pressure H = open flow or hosed, no pressure, no valve. Self contained = 51-150 bar or 750 - 2175 psi. If not specified the 2175 psi is default.

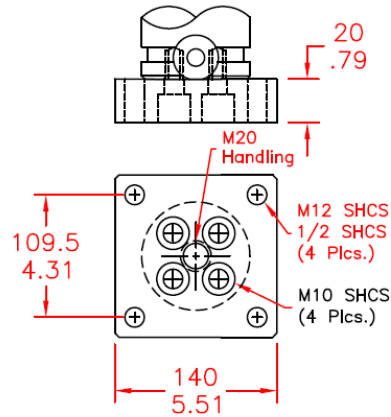
N-FORCER[®]

IS500 - (50 kN - 5.0 Ton) Optional Mounts

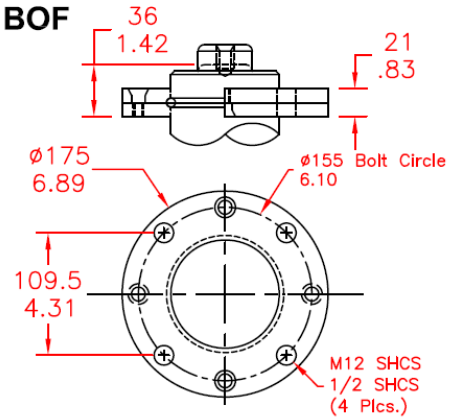
BSF



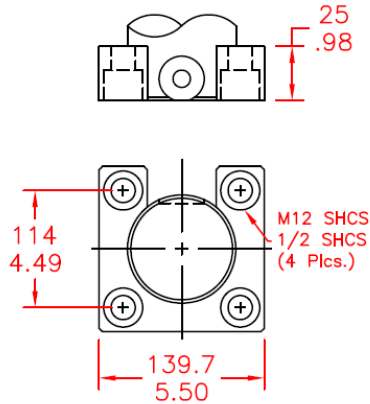
BF



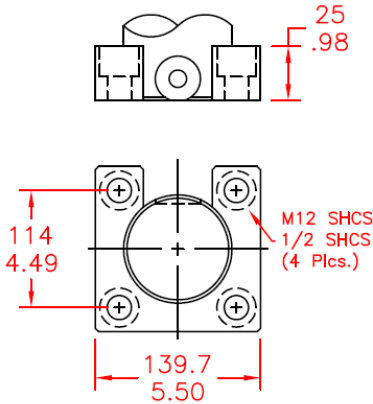
BOF



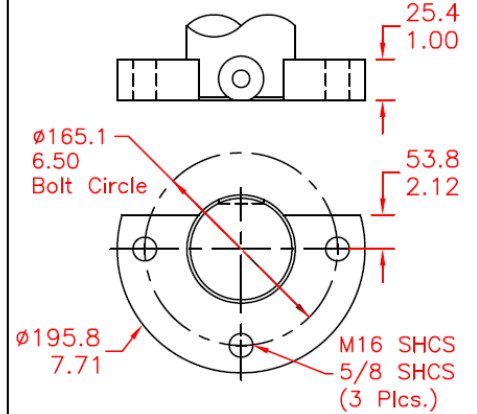
SF - Welded



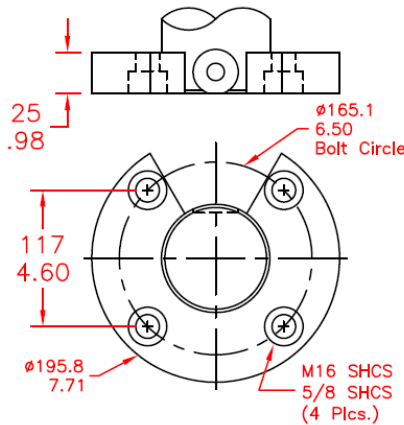
SF1 - Welded



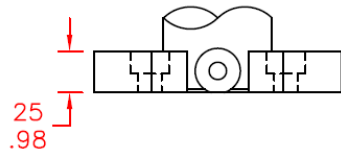
R2 - Welded



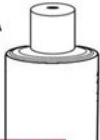
RF - Welded



RF1 - Welded



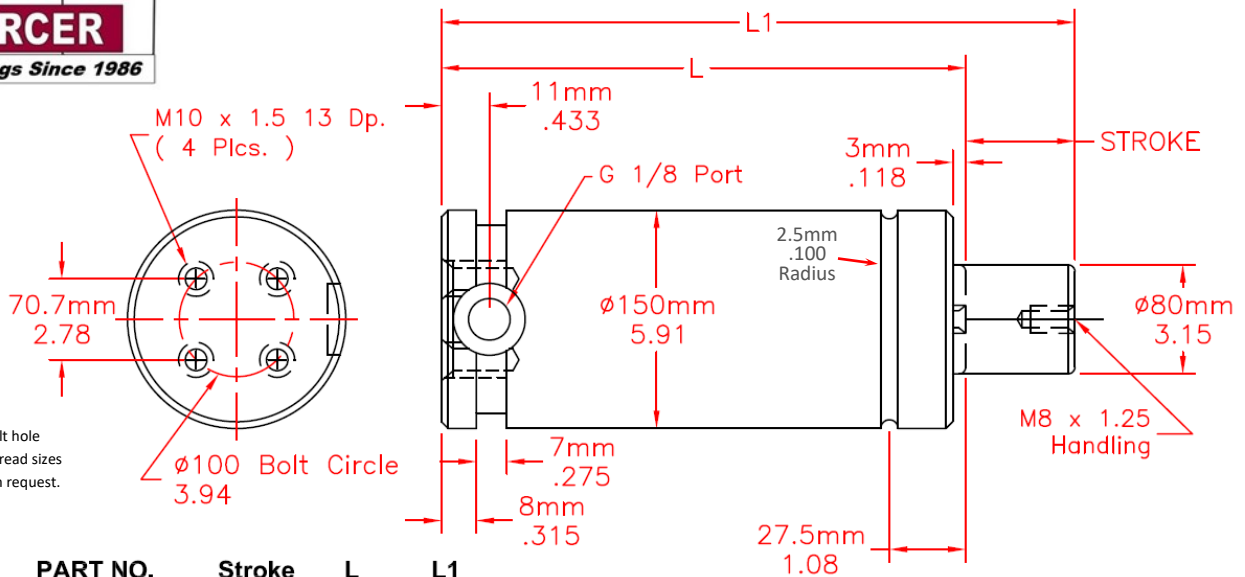
Made in the USA



N-FORCER

GAS Springs Since 1986

N-FORCER® IS800 - (75 kN - 7.5 Ton) Basic Mount



*Custom bolt hole patterns and thread sizes are available on request.

| PART NO. | Stroke | L | L1 |
|---------------|--------|-------|-------|
| ● IS800 x 025 | 25 | 180 | 205 |
| | 0.98 | 7.09 | 8.07 |
| ● IS800 x 038 | 38.1 | 193.1 | 231 |
| | 1.50 | 7.60 | 9.10 |
| ● IS800 x 050 | 50 | 205 | 255 |
| | 1.97 | 8.07 | 10.04 |
| IS800 x 063 | 63.5 | 218.5 | 282 |
| | 2.50 | 8.60 | 11.10 |
| IS800 x 075 | 75 | 230 | 305 |
| | 2.95 | 9.06 | 12.01 |
| ● IS800 x 080 | 80 | 235 | 315 |
| | 3.15 | 9.25 | 12.40 |
| IS800 x 088 | 88.9 | 243.9 | 333 |
| | 3.50 | 9.60 | 13.10 |
| ● IS800 x 100 | 100 | 255 | 355 |
| | 3.94 | 10.04 | 13.98 |
| IS800 x 114 | 114.3 | 269.3 | 384 |
| | 4.50 | 10.60 | 15.10 |
| ● IS800 x 125 | 125 | 280 | 405 |
| | 4.92 | 11.02 | 15.95 |
| IS800 x 139 | 139.7 | 294.7 | 434 |
| | 5.50 | 11.60 | 17.10 |
| IS800 x 150 | 150 | 305 | 455 |
| | 5.91 | 12.01 | 17.91 |
| ● IS800 x 160 | 160 | 315 | 475 |
| | 6.30 | 12.40 | 18.70 |
| IS800 x 175 | 175 | 330 | 505 |
| | 6.89 | 12.99 | 19.88 |
| ● IS800 x 200 | 200 | 355 | 555 |
| | 7.87 | 13.98 | 21.85 |
| IS800 x 225 | 225 | 380 | 605 |
| | 8.86 | 14.96 | 23.82 |
| IS800 x 250 | 250 | 405 | 655 |
| | 9.84 | 15.94 | 25.79 |
| IS800 x 275 | 275 | 430 | 705 |
| | 10.83 | 16.93 | 27.76 |
| IS800 x 300 | 300 | 455 | 755 |
| | 11.81 | 17.91 | 29.72 |

Force (daN)

FORCE CHART

Force (Lbs.)

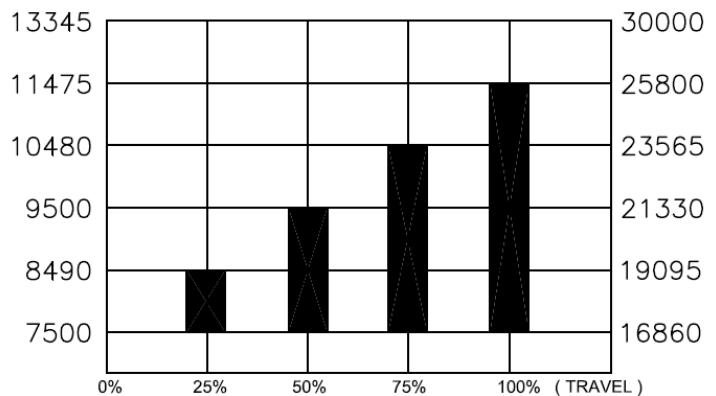


Chart is showing maximum force base on 2175 psi (150 bar) charging pressure. If less than max. the force is reduced proportionally.

Example: Forces on chart are multiplied by .69 at 1500 psi (103 bar), by .46 at 1000 psi (69 bar), etc.

NOTE: MAXIMUM TRAVEL RECOMMENDED IS 90% OF STROKE.

● Denotes NAAMS standard stroke lengths.

ORDERING EXAMPLE

IS800 x 025 - D - 150

Part No.
Series, Model
and Stroke

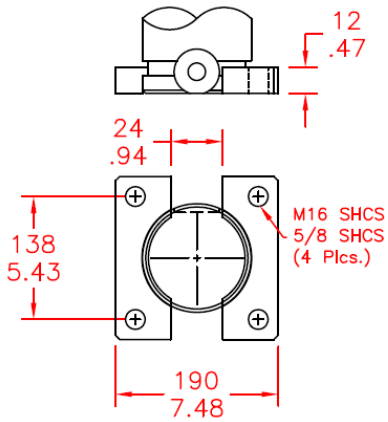
Mounting Option
"D" Basic, optional
mounts on next page

Charging Pressure
H = open flow or hosed, no
pressure, no valve.
Self contained = 51-150 bar
or 750 - 2175 psi. If not
specified the 2175 psi
is default.

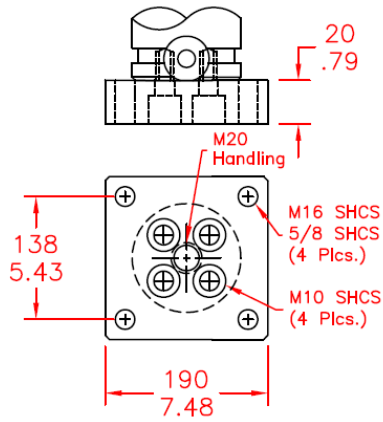
N-FORCER[®]

IS800 - (75 kN - 7.5 Ton) Optional Mounts

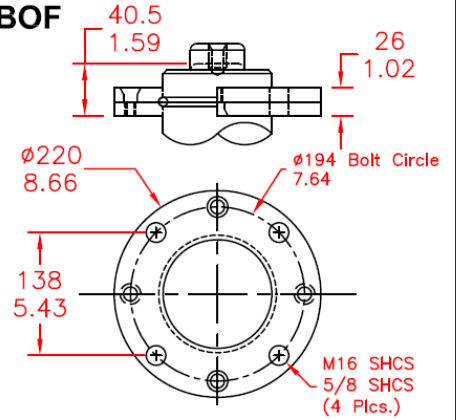
BSF



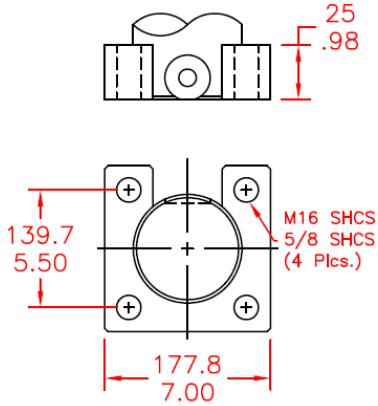
BF



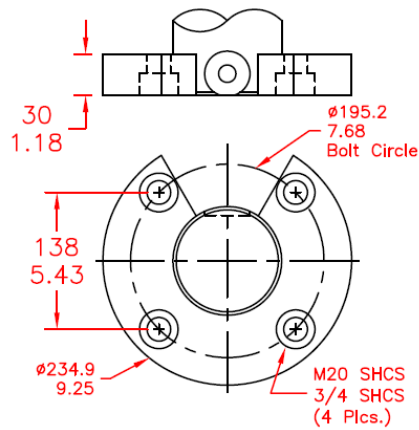
BOF



SF2 - Welded



RF - Welded



R2 - Welded

