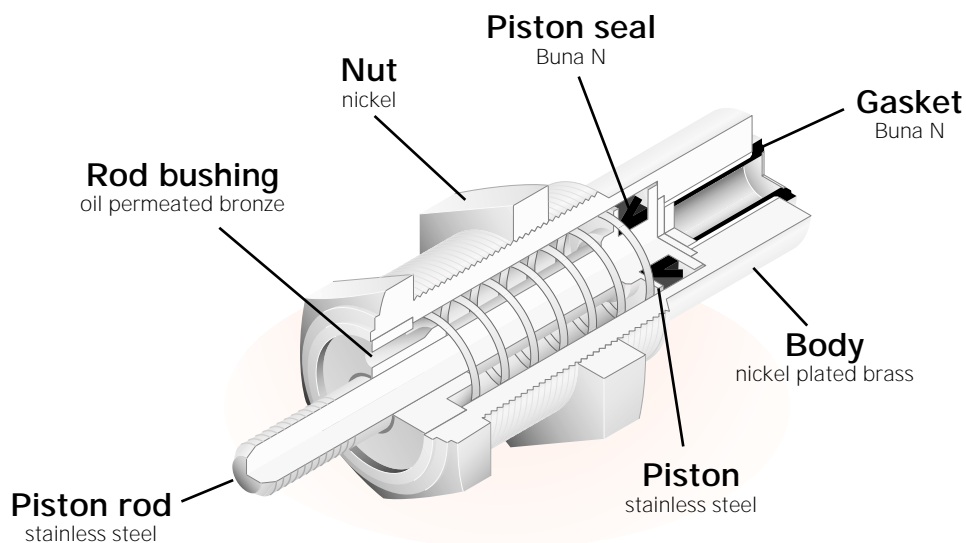


Knock Cutaway and specifications

Cutaway view (HNSA standard model shown)



See terms and definitions page for more information.

Single acting, push (HNSA)



| Media | | Air | | |
|--|---|--------------------|----------------------|--|
| Temperature °C (°F) | 0° to 60° (32° to 140°) | | | |
| Lubrication | None required. If used, must be compatible with seal materials. | | | |
| Bore mm (in) | 6 (.236) | 10 (.394) | 16 (.630) | |
| Piston area "A" cm ² (in ²) | .282 (.044) | .785 (.122) | 2.01 (.312) | |
| Pressure "P" kgf/cm ² (psi) | 28 to 100 (2.0 to 7.0) | | | |
| Piston force "F" kgf (lbf) | F = [A X P] - Spring force | | | |
| Spring force "S" kgf (lbf) | Bore mm(in) | Zero stroke | End of stroke | |
| | 6 (.236) | .15 (.33) | .35 (.77) | |
| | 10 (.394) | .25 (.55) | .75 (1.65) | |
| | 16 (.630) | 1.21 (.55) | 3.31 (1.50) | |

Recommended load to be no more than 70% of piston force "F" for normal operation and no more than 50% for high speed cycle rates.

Weight chart

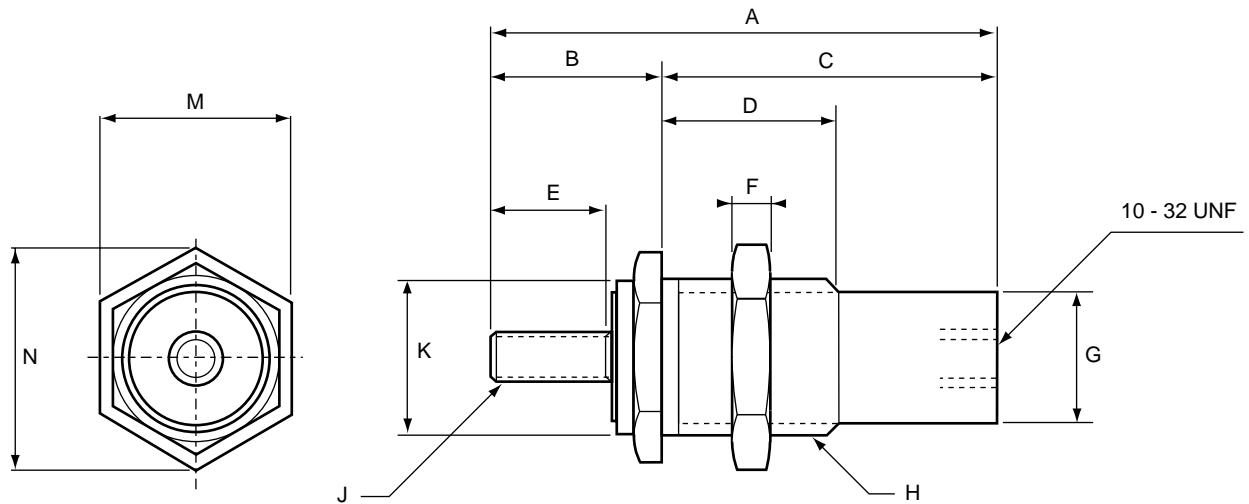
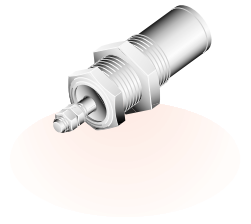
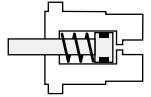
| Stroke | 1/4" stroke | | 3/8" stroke | | 1/2" stroke | |
|--------------------|-------------|-------|-------------|-------|-------------|-------|
| | gm | oz | gm | oz | gm | oz |
| Panel mount | | | | | | |
| 6 (.236) | 13 | 0.459 | 15 | 0.529 | 17 | 0.6 |
| 10 (.394) | 28 | 0.988 | 31 | 1.093 | 35 | 1.234 |
| 16 (.630) | 77 | 2.716 | 85 | 2.998 | 94 | 3.315 |
| Foot mount | | | | | | |
| 6 (.236) | 29 | 1.023 | 31 | 1.093 | 33 | 1.164 |
| 10 (.394) | 58 | 2.046 | 61 | 2.151 | 65 | 2.293 |
| 16 (.630) | 166 | 5.855 | 174 | 6.137 | 183 | 6.454 |

Knock Single acting, push (HNSA)

The cylinder is available in 6, 10, and 16 mm bore and 1/4 and 1/2 inch stroke.

Accessories (see page 6)

Foot mount
Insert mount
Rod nuts



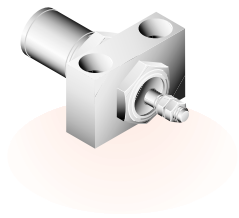
| Bore mm (in) | A | | | B | C | | | D | | |
|------------------|-------------|-------------|-------------|-----------|------------|-------------|-------------|-----------|------------|-----------|
| | 1/4" | 3/8" | 1/2" | | 1/4" | 3/8" | 1/2" | 1/4" | 3/8" | 1/2" |
| 6 (.236) | 36 (1.42) | 41 (1.61) | 43.5 (1.71) | 17 (.67) | 19 (.75) | 24 (.94) | 26.5 (1.04) | 7 (.28) | 12 (.47) | 7 (.28) |
| 10 (.394) | 40 (1.57) | 45 (1.77) | 50 (1.97) | 50 (1.97) | 20 (.79) | 25 (.98) | 30 (1.18) | 7 (.28) | 12 (.47) | 7 (.28) |
| 16 (.630) | 44.5 (1.75) | 49.5 (1.95) | 55.5 (2.19) | 24 (.94) | 20.5 (.81) | 25.5 (1.00) | 31.5 (1.24) | 7.5 (.30) | 12.5 (.49) | 7.5 (.30) |

| Bore mm (in) | E | F | G | H | J | K | M | N |
|------------------|-----------|---------|------------|---------|-----------|----------|----------|-------------|
| 6 (.236) | 7 (.28) | 3 (.12) | 8.5 (.33) | M10 x 1 | 4-40 UNC | 10 (.39) | 12 (.47) | 15.5 (.61) |
| 10 (.394) | 10 (.390) | 4 (.16) | 12.3 (.48) | M12 x 1 | 8-32 UNC | 12 (.47) | 14 (.55) | 19 (.75) |
| 16 (.630) | 12 (.47) | 5 (.20) | 20 (.79) | M14 x 1 | 10-32 UNF | 14 (.55) | 17 (.67) | 25.5 (1.00) |

General note

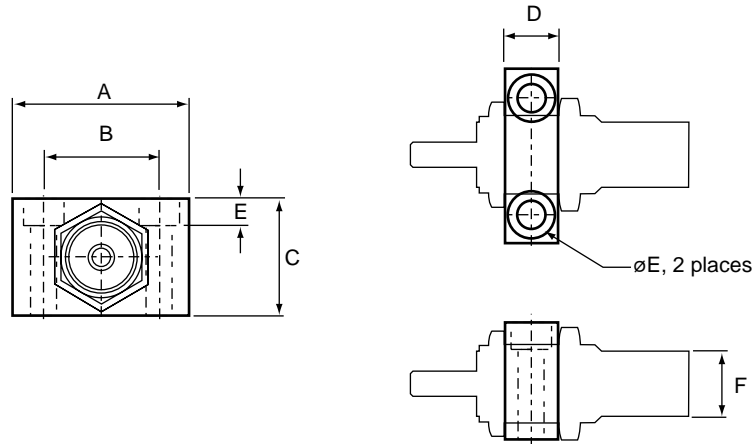
6 mm bore is 1/4 inch nominal bore
10 mm bore is 3/8 inch nominal bore
16 mm bore is 5/8 inch nominal bore

Knock Accessories



Foot mount

The foot mount option provides "feet" for mounting the cylinder to any surface parallel to the cylinder.



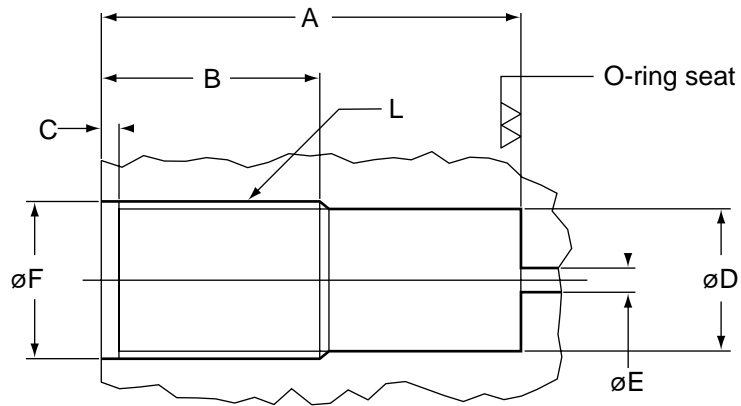
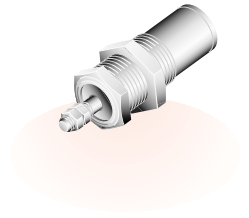
| Bore mm (in) | A | B | C | D | E | F |
|---------------|------------|------------|------------|-----------|------------|--------------|
| 6 (.236) | 22 (.866) | 14 (.551) | 14 (.551) | 9 (.354) | 3.4 (.134) | 13.9 (.547) |
| 10 (.394) | 32 (1.260) | 20 (.787) | 20 (.787) | 9 (.354) | 4.5 (.177) | 19.6 (.772) |
| 16 (.630) | 42 (1.654) | 30 (1.181) | 32 (1.260) | 12 (.472) | 5.5 (.217) | 31.2 (1.228) |

General notes

6 mm bore is 1/4 inch nominal bore
 10 mm bore is 3/8 inch nominal bore
 16 mm bore is 5/8 inch nominal bore

Insert mount

The insert mount cylinder option allows the cylinder to be directly inserted into the finished product to become an unrecognizable, integral part of the equipment.



| Bore mm (in) | A | | | B | | | C | D | E | F |
|------------------|------------|-------------|-------------|----------|----------|----------|-----------|------------|---------|----------|
| | 1/4" | 3/8" | 1/2" | 1/4" | 3/8" | 1/2" | | | | |
| 6 (.236) | 20.8(.819) | 24(.945) | 29.1(1.150) | 13(.512) | 15(.591) | 15(.591) | 2(.079) | 9(.354) | 4(.157) | 10(.394) |
| 10 (.394) | 22.3(.878) | 25.5(1.000) | 30.6(1.200) | 15(.591) | 18(.709) | 18(.709) | 2(.079) | 12.7(.500) | 4(.157) | 14(.551) |
| 16 (.630) | 23.8(.937) | 27(1.060) | 31.6(1.240) | 17(.669) | 20(.787) | 20(.787) | 2.5(.098) | 20.4(.803) | 4(.157) | 22(.866) |

Rod nuts

Rod nuts. Order separately

