# Snap-tite H, IH \& PH Series 

General Purpose Hydraulic and Pneumatic Quick Couplings


## Many Standard Configurations Suitable for Hydraulic and Pneumatic Applications:

Snap-tite H Series couplings have been proven by years of use on hydraulic and pneumatic applications.
H Series is best suited for general purpose fluid applications where either single or double shut-off valving is desired. A wide range of sizes, materials and end configurations are available.
PH version couplers and nipples are valved with a connect-under-pressure feature. These steel couplers and nipples allow connection with H Series valved couplers and nipples when there is residual pressure on the PH coupler/nipple side.
IH version couplers are steel with a cylindrical valve designed specifically for pneumatic use. When paired with an unvalved/plain H Series nipple, it functions as a durable single-shut-off connection.


## Contact Information:

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## H Series Features:

- Sizes 1/4"-4"
- Available in steel, brass, aluminum and 316 stainless steel
- Seal material options available
- Optional sleeve lock helps to prevent accidental disconnection
- Double-shut-off version has low pressure drop
- Manually operated sleeve provides secure connection


## Technical and Dimensional Information

H Series couplings are suitable for general purpose applications and a variety of media. They are very versatile in material, size and end configuration. Valve combinations include:

- Double shut-off poppet valves
- Single shut-off on the coupler or nipple side
- Straight through (unvalved/plain)

PH version couplers and nipples make it possible to overcome the high connection force caused by residual pressure. The poppet valves have an added pressure relief feature to allow connection under static pressures up 3000 psi (210 bar). With a PH Series coupler or nipple installed on the pressurized line you can easily connect with a mating valved H Series. Available in steel, sizes $3 / 8^{\prime \prime}, 1 / 2^{\prime \prime}, 3 / 4^{\prime \prime}$ and $1^{\prime \prime}$.

IH version couplers have a cylindrical valve designed specifically for pneumatic systems and reciprocating, pulsating, rotary motion air tools. The IH valve provides $360^{\circ}$ contact when connected with an unvalved/plain H Series nipple, enabling efficient operation and long life. Available in steel, sizes $1 / 4^{\prime \prime}, 3 / 8^{\prime \prime}, 1 / 2^{\prime \prime}$ and $3 / 4^{\prime \prime}$.


Working Pressures

| Size | Valved on both coupler and nipple (Double Shut-off) Valved on one half and Unvalved/Plain on other half (Single Shut-off) |  |  |  |  |  |  |  | Unvalved/Plain on both coupler and nipple (Straight Through) |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Steel |  | Aluminum |  | Brass |  | Stainless Steel |  | Steel |  | Aluminum |  | Brass |  | Stainless Steel |  |
|  | psi | bar | psi | bar | psi | bar | psi | bar | psi | bar | psi | bar | psi | bar | psi | bar |
| 1/4" | 6500 | 448 | 2250 | 155 | 2250 | 155 | 5000 | 345 | 11000 | 759 | 4000 | 276 | 4000 | 276 | 10000 | 690 |
| 3/8" | 4500 | 310 | 2250 | 155 | 2250 | 155 | 4000 | 276 | 11000 | 759 | 4000 | 276 | 4000 | 276 | 8000 | 552 |
| 1/2" | 4000 | 276 | 1750 | 121 | 2000 | 138 | 3750 | 259 | 11000 | 759 | 4000 | 276 | 4000 | 276 | 8000 | 552 |
| 3/4" | 3500 | 241 | 1750 | 121 | 2000 | 138 | 2000 | 138 | 9000 | 621 | 3500 | 241 | 3500 | 241 | 7000 | 483 |
| 1" | 2000 | 138 | 1500 | 103 | 1750 | 121 | 2000 | 138 | 6000 | 414 | 3000 | 207 | 3000 | 207 | 4000 | 276 |
| 1-1/4" | 1750 | 121 | 375 | 26 | 350 | 24 | 1500 | 103 | 5000 | 345 | 1000 | 69 | 1000 | 69 | 3000 | 207 |
| 1-1/2" | 1500 | 103 | 375 | 26 | 350 | 24 | 1500 | 103 | 5000 | 345 | 1000 | 69 | 1000 | 69 | 3000 | 207 |
| 2" | 1500 | 103 | 300 | 21 | 400 | 28 | 500 | 34 | 4000 | 276 | 750 | 52 | 750 | 52 | 1000 | 69 |
| 2-1/2" | 1000 | 69 | 300 | 21 | 400 | 28 | 400 | 28 | 1000 | 69 | 300 | 21 | 400 | 28 | 400 | 28 |
| $3{ }^{\prime \prime}$ | 750 | 52 | 200 | 14 | 200 | 14 | 400 | 28 | 750 | 52 | 200 | 14 | 200 | 14 | 400 | 28 |
| 4" | 500 | 34 | 150 | 10 | 150 | 10 | 300 | 21 | 500 | 34 | 150 | 10 | 150 | 10 | 300 | 21 |

NOTE: Pressure ratings were established under static pressure conditions. Therefore, pressure ratings for any given flow, pressure surge and/or vibration may vary from these ratings. Burst pressures listed were taken at the point at which failure rendered the quick disconnect inoperative. (Proof pressure equals 1-1/2 times the working pressure; burst pressure equals 2 times working pressure.)

## Flow Charts



## Valved Coupler and Nipple Dimensions (without end fitting)

|  |  |  | SEE E | TING $\qquad$ <br> D (Hex) |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size |  | 1/4" | 3/8" | 1/2" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 4" |
| A | in | 1.34 | 1.50 | 1.62 | 1.92 | 2.07 | 2.28 | 2.57 | 3.14 | 3.63 | 3.88 | 4.58 |
|  | mm | 34.04 | 38.10 | 41.15 | 48.77 | 52.58 | 57.91 | 65.28 | 79.76 | 92.20 | 98.55 | 116.33 |
| B | in | 1.00 | 1.19 | 1.39 | 1.63 | 2.00 | 2.19 | 2.75 | 3.50 | 4.50 | 5.45 | 6.75 |
|  | mm | 25.40 | 30.23 | 35.31 | 41.40 | 50.80 | 55.63 | 69.85 | 88.90 | 114.30 | 138.13 | 171.45 |
| C | in | 1.28 | 1.44 | 1.51 | 1.79 | 1.95 | 2.15 | 2.41 | 2.94 | 3.42 | 3.79 | 4.47 |
|  | mm | 32.51 | 36.58 | 38.35 | 45.47 | 49.53 | 54.61 | 61.21 | 74.68 | 86.87 | 96.27 | 113.54 |
| D*2 | in | . 88 | 1.00 | 1.19 | 1.50 | 1.88 | 2.00 | 2.75 | 3.75 | 4.50 | 4.75 | 6.75 |
|  | mm | 22.35 | 25.40 | 30.23 | 38.10 | 47.75 | 50.80 | 69.85 | 95.25 | 114.30 | 120.65 | 171.45 |
| H | in | . 58 | . 71 | . 72 | . 88 | . 91 | . 90 | 1.06 | 1.32 | 1.41 | 1.56 | 1.93 |
|  | mm | 14.73 | 18.03 | 18.29 | 22.35 | 23.11 | 22.86 | 26.92 | 33.53 | 35.81 | 39.62 | 49.02 |

Valved Coupler and Nipple End Fitting Dimensions

|  | Size |  | 1/4" | 3/8" | 1/2" | 3/4" | 1" | 1-1/4" | 1-1/2 | 21 | 2-1/2" | $3{ }^{\prime \prime}$ | 4" |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Male <br> Tapered Pipe | F | in | . 75 | . 69 | . 95 | . 96 | 1.14 | 1.31 | 1.44 | 1.40 | 1.83 | 1.88 | 2.88 |
|  |  | mm | 19.05 | 17.53 | 24.13 | 24.38 | 28.96 | 33.27 | 36.58 | 35.56 | 46.48 | 47.75 | 73.15 |
|  | $G^{* 1}$ | in | . 88 | 1.00 | 1.19 | 1.50 | 1.88 | 2.00 | 2.50 | 3.38 | 4.00 | 4.75 | 6.00 |
|  |  | mm | 22.35 | 25.40 | 30.23 | 38.10 | 47.75 | 50.80 | 63.50 | 88.90 | 101.60 | 120.65 | 152.40 |
|  | $F$ | in | . 74 | . 74 | . 84 | 1.13 | 1.16 | 1.27 | 1.46 | 1.71 |  |  |  |
|  |  | mm | 18.80 | 18.80 | 21.34 | 28.70 | 29.46 | 32.26 | 37.08 | 43.43 |  |  |  |
|  | $\mathrm{G}^{* 1}$ | in | . 88 | 1.00 | 1.19 | 1.50 | 1.88 | 2.00 | 2.50 | 3.38 |  |  |  |
|  |  | mm | 22.35 | 33.27 | 30.23 | 38.10 | 47.75 | 50.80 | 63.50 | 88.90 |  |  |  |
| MS33657 | F | in | 1.23 | 1.31 | 1.47 | 1.84 | 1.84 | 1.95 |  |  |  |  |  |
|  |  | mm | 31.31 | 33.27 | 37.34 | 46.74 | 46.74 | 49.53 |  |  |  |  |  |
|  | $\mathrm{G}^{* 1}$ | in | . 88 | 1.00 | 1.19 | 1.50 | 1.88 | 2.00 |  |  |  |  |  |
|  |  | mm | 22.35 | 25.40 | 30.23 | 38.10 | 47.75 | 50.80 |  |  |  |  |  |
| Female Tapered Pipe | F | in | . 31 | . 40 | . 47 | . 50 | . 60 | 1.26 | . 70 | . 78 | . 90 | . 88 | 1.13 |
|  |  | mm | 7.87 | 10.16 | 11.94 | 12.70 | 15.24 | 32.00 | 17.78 | 19.81 | 22.86 | 22.35 | 28.70 |
|  | $\mathrm{G}^{* 1}$ | in | . 88 | 1.00 | 1.19 | 1.50 | 1.88 | 2.00 | 2.50 | 3.50 | 4.00 | 4.75 | 6.00 |
|  |  | mm | 22.35 | 25.40 | 30.23 | 38.10 | 47.75 | 50.80 | 63.50 | 88.90 | 101.60 | 120.65 | 152.40 |
| EF <br> Female Straight and MS33649 | F | in | . 46 | . 70 | . 57 | 1.00 | . 87 | 1.11 | . 85 | 1.01 |  |  |  |
|  |  | mm | 11.68 | 17.78 | 14.48 | 25.40 | 22.10 | 28.19 | 21.59 | 25.65 |  |  |  |
|  | $\mathrm{G}^{* 1}$ | in | . 88 | 1.00 | 1.19 | 1.50 | 1.88 | 2.00 | 2.50 | 3.50 |  |  |  |
|  |  | mm | 22.35 | 25.40 | 30.23 | 38.10 | 47.75 | 50.80 | 63.50 | 88.90 |  |  |  |
|  | F | in | 1.39 | 1.56 | 1.67 | 2.03 | 1.84 | 2.14 |  |  |  |  |  |
|  |  | mm | 35.30 | 39.62 | 42.42 | 51.56 | 46.74 | 54.36 |  |  |  |  |  |
|  | $\mathrm{G}^{* 1}$ | in | . 88 | 1.00 | 1.19 | 1.50 | 1.88 | 2.00 |  |  |  |  |  |
|  |  | mm | 22.35 | 25.40 | 30.23 | 38.10 | 47.75 | 50.80 |  |  |  |  |  |
|  | F | in | . 39 | . 40 | . 53 | . 56 | . 60 | 1.26 | . 70 | . 78 | . 90 | . 88 | 1.13 |
|  |  | mm | 9.91 | 10.16 | 13.46 | 14.22 | 15.24 | 32.00 | 17.78 | 19.81 | 22.86 | 22.35 | 28.70 |
|  | $\mathbf{G}^{* 1}$ | in | . 88 | 1.00 | 1.19 | 1.50 | 1.88 | 2.00 | 2.50 | 3.50 | 4.00 | 4.75 | 6.00 |
|  |  | mm | 22.35 | 25.40 | 30.23 | 38.10 | 47.75 | 50.80 | 63.50 | 88.90 | 101.60 | 120.65 | 152.40 |

## Unvalved/Plain Coupler and Nipple End Configurations

| Female Pipe Thread |  |  |  |  |  | emale RP British Parallel Thread |  |  |  | Male Pipe Thread |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| Size |  | 1/4" | 3/8" | 1/2" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | $4{ }^{\prime \prime}$ |
| A | in | 1.34 | 1.50 | 1.62 | 1.91 | 2.07 | 2.28 | 2.57 | 2.48 | 3.11 | 3.35 | 3.88 |
|  | mm | 34.04 | 38.10 | 41.15 | 48.51 | 52.58 | 57.91 | 65.28 | 62.99 | 78.99 | 85.09 | 98.55 |
| B | in | 1.00 | 1.19 | 1.39 | 1.63 | 2.00 | 2.19 | 2.75 | 3.50 | 4.50 | 5.45 | 6.75 |
|  | mm | 25.40 | 30.23 | 35.31 | 41.40 | 50.80 | 55.63 | 69.85 | 88.90 | 114.30 | 138.43 | 171.45 |
| C | in | 1.32 | 1.52 | 1.72 | 1.92 | 2.10 | 2.22 | 2.44 | 2.60 | 2.95 | 3.40 | 3.73 |
|  | mm | 33.53 | 38.61 | 43.69 | 48.77 | 53.34 | 56.39 | 61.98 | 66.04 | 74.93 | 86.36 | 94.74 |
| D | in | . 88 | 1.00 | 1.19 | 1.50 | 1.88 | 2.00 | 2.50 | 3.25 | 3.75 | 4.75 | 5.50 |
|  | mm | 22.35 | 25.40 | 30.23 | 38.10 | 47.75 | 50.80 | 63.50 | 82.55 | 95.25 | 120.65 | 139.70 |
| $E^{* 1,2}$ | in | . 63 | . 81 | 1.00 | 1.19 | 1.50 | 1.88 | 2.13 | 2.75 | 3.25 | 4.00 | 5.00 |
|  | mm | 16.00 | 20.57 | 25.40 | 30.23 | 38.10 | 47.75 | 54.10 | 69.85 | 82.55 | 101.60 | 127.00 |
| H | in | . 58 | . 71 | . 72 | . 88 | . 91 | . 90 | 1.06 | 1.32 | 1.41 | 1.56 | 1.93 |
|  | mm | 14.73 | 18.03 | 18.29 | 22.35 | 23.11 | 22.86 | 26.92 | 33.53 | 35.81 | 39.62 | 49.02 |
| K | in | . 78 | . 98 | 1.01 | 1.14 | 1.16 | 1.17 | 1.34 | 2.03 | 2.08 | 2.59 | 2.58 |
|  | mm | 19.81 | 24.89 | 25.65 | 28.96 | 29.46 | 29.72 | 34.04 | 51.56 | 52.83 | 65.79 | 65.53 |
| J* | in | . 56 | . 69 | . 88 | 1.06 | 1.38 | 1.88 | 2.13 | 2.50 | 3.25 | 4.00 | 5.00 |
|  | mm | 14.22 | 17.53 | 22.35 | 26.92 | 35.05 | 47.75 | 54.10 | 63.50 | 82.55 | 101.60 | 127.00 |
| L | in | 1.27 | 1.44 | 1.72 | 1.86 | 2.13 | 2.22 | 2.44 | 2.60 | 2.95 | 3.40 | 3.73 |
|  | mm | 32.26 | 36.58 | 43.69 | 47.24 | 54.10 | 56.39 | 61.98 | 66.04 | 74.93 | 86.36 | 94.74 |

NOTES: ${ }^{* 1}$ Dimensions taken across the hex flats. Round stock with two milled flats may be substituted for hex stock. Dimensions across flats same as dimensions across hex flats. Max O.D. of round stock will not exceed the dimensions across the points of the hex stock. Valve coupler and nipple bodies may be supplied from round bar stock without wrench flats.
${ }^{*} 2$ Notch on hex indicates RP British parallel threads.

## Accessories

 $\begin{array}{cc}\text { Metal Dust Plug } & \text { Metal Dust Cap } \\ \text { AMPH } & \text { ADCH }\end{array}$


Dust caps, dust plugs and pressure caps protect disconnected couplers and nipples from damage, dirt and other contaminants. Dust caps and dust plugs are available in plastic and clear anodized aluminum.

## Plastic Cap and Plug

Designed with a loop to fit over fitting or affixing to equipment with a sheet metal screw. Available in sizes $1 / 4$ " thru $1^{1 " .}$

## Aluminum Dust Caps and Plugs

Aluminum dust caps and plugs are available in sizes $1 / 4^{\prime \prime}$ thru $3^{\prime \prime}$. The $1 / 4^{\prime \prime}$ thru $3 / 4$ " sizes come with 10 " chrome plated brass bead chain. The 1 " and above come with steel zinc plated sash chain.

## Pressure Caps

Pressure-tight pressure caps for nipples are standard in steel, Trivalent plated. Other materials such as brass, aluminum and stainless steel available on special order. Sizes available $1 / 4^{\prime \prime}$ thru $3^{\prime \prime}$. Sizes $1 / 4^{\prime \prime}$ thru $3 / 4^{\prime \prime}$ come with 10" length of corrosion resistant steel cable. Sizes $1^{\prime \prime}$ thru $3^{\prime \prime}$ come with 12" of cable-all with adjustable loop at end of cable. Consult QCD for special lengths.

| Sizes | Plastic Cap | Plastic Plug | Aluminum Plug | Aluminum Cap | Pressure Cap |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $1 / 4^{\prime \prime}$ | PDC-4 | PDP-4 | AMPH-4 | ADCH-4 | MCH-4 |
| $3 / 8^{\prime \prime}$ | PDC-6 | PDP-6 | AMPH-6 | ADCH-6 | MCH-6 |
| $1 / 2^{\prime \prime}$ | PDC-8 | PDP-8 | AMPH-8 | ADCH-8 | MCH-8 |
| $3 / 4^{\prime \prime}$ | PDC-12 | PDP-12 | AMPH-12 | ADCH-12 | MCH-12 |
| $1^{\prime \prime}$ | PDC-16 | PDP-16 | AMPH-16 | ADCH-16 | MCH-16 |
| $1-1 / 4^{\prime \prime}$ |  |  | AMPH-20 | ADCH-20 | MCH-20 |
| $1-1 / 2^{\prime \prime}$ |  |  | AMPH-24 | ADCH-24 | MCH-24 |
| $2^{\prime \prime}$ |  |  | AMPH-32 | ADCH-32 | MCH-32 |
| $2-1 / 2^{\prime \prime}$ |  |  | AMPH-40 | ADCH-40 | MCH-40 |
| $3^{\prime \prime}$ |  |  | AMPH-48 | ADCH-48 | MCH-48 |

## Ordering Information



- Material:

Blank = Steel, clear trivalent plating
A = Aluminum, clear anodized
B = Brass
S = 316 Stainless Steel
${ }^{1}$ PH Valve option recommended on one side, not both. Available in steel only. ${ }^{2} \mathrm{IH}$ available in steel only.
${ }^{3}$ For sizes up to 1" NPTF threads in steel.
For sizes up to 1" NPSF threads in stainless steel.
For sizes over 1' NPT threads.

|  | H | PH | IH |
| :--- | :---: | :---: | :---: |
| Double Shut-Off <br> Valved Coupler <br> Valved Nipple | $\bullet$ | $\bullet$ |  |
| Single Shut-Off <br> Valved Coupler <br> Unvalved/Plain Nipple | $\bullet$ |  | $\bullet$ |
| Straight Through <br> Unvalved/Plain Coupler <br> Unvalved/Plain Nipple | $\bullet$ |  |  |

Note: Not all configurations are standard product offering.
Contact QCD for price and delivery.

## Replacement Parts

| Valve Kits | Valve Seals | Coupler Interface Seals |
| :---: | :---: | :---: |
| Includes valve, valve spring and stop. Valve seal is included in sizes $3 / 8^{\prime \prime}$ thru $1^{\prime \prime}$ in steel, brass and aluminum only. <br> Part Number - Use the base part number followed by SPK. <br> Example: <br> VHC4-SPK <br> VIHC6-SPK | $1 / 4$ " valve seal is staked in the coupler and nipple bodies in all materials and is not considered field repairable. $3 / 8^{\prime \prime}$ and above are available for repair. <br> Part Number - "H (size)-55 (seal material)" <br> Example: <br> H6-55A* <br> H8-55A* | Includes O-ring and back-up ring. Part Number "H (size)-56-9 (seal material)". Example: <br> O-ring and H6-56-9A* <br> Previous design was U-Packer. Consult QCD for availability. |

*"A" required for Nitrile Seal Kits. Refer to the part number code for other seal options.

Standard Configurations for General Purpose Hydraulic and Pneumatic Applications

|  | H Series Hydraulic Coupler/Nipple | PH Series Hydraulic Coupler/Nipple | IH Series Pneumatic Coupler |
| :---: | :---: | :---: | :---: |
| Valve Styles: | - Poppet Valve <br> - Unvalved/Plain | - Connect-Under-Pressure Poppet Valve | - Cylindrical Valve |
| Connection Types: | - Double Shut-off <br> - Single Shut-off <br> - Straight Through/Unvalved | - Double Shut-off (connects with valved H Series Coupler or Nipple) | - Single Shut-off (connects with unvalved/plain H Series Nipple) |
| Body Sizes: | 1/8" - 4" | 3/8" - 1" | 1/4" - 3/4" |
| Materials: | - Steel <br> - 316 Stainless Steel <br> - Aluminum <br> - Brass | - Steel | - Steel |



