

Connect Under Pressure Threaded Flat Face Coupling



Flat Face: Threaded Coupling

Series: VEP HD

Interchange: VEP

- High working pressures: 40-55 MPa/5800-7250 psi range based on size
- Threaded coupling system eliminates brinelling, premature leakage
- Connect/disconnect under residual pressure up to 25 MPa/3625 psi
- Valve limits fluid movement during connection avoiding damage to other elements of circuit
- Low connection force required

Fire Tested and Lloyd's Certified* in compliance with API 16D Test and EUB Directive 36.

* Lloyd's document available upon request

Overview

Stucchi VEP HD Series is the ultimate solution and most popular to hydraulic circuit applications subject to high pressure impulses, and circuits which experience high residual or trapped pressure in a line. The VEP HD thread-to-connect design eliminates premature wear or brinelling associated with locking ball designs subjected to high impulse pressures. New HD version has upgraded material, yellow o-ring visual ID, and larger mating areas. The patented internal valve allows connection and disconnection with high residual pressures. Flat face design avoids loss of hydraulic fluid during connection/disconnection. Flat face design is easy to clean, limiting contamination into the circuit.

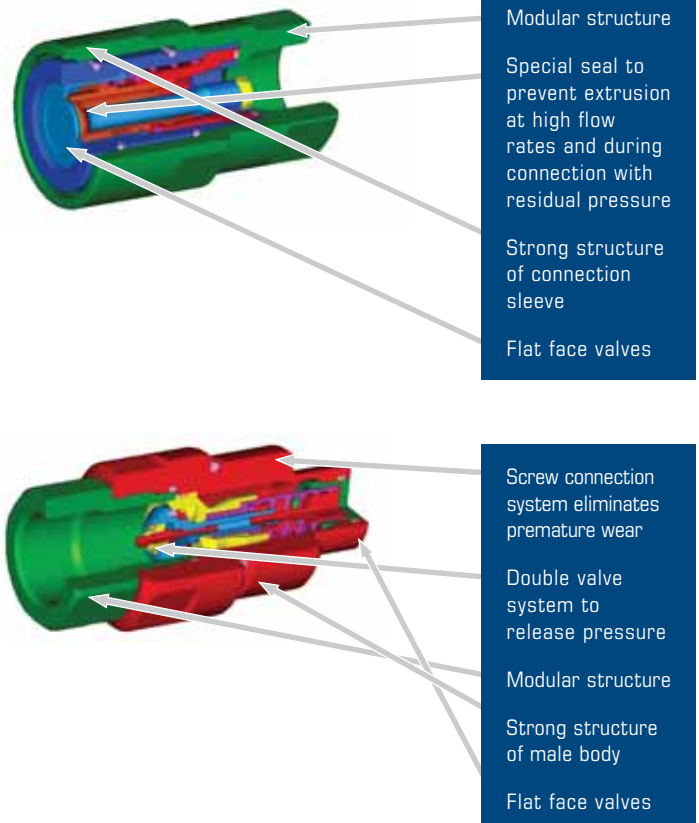
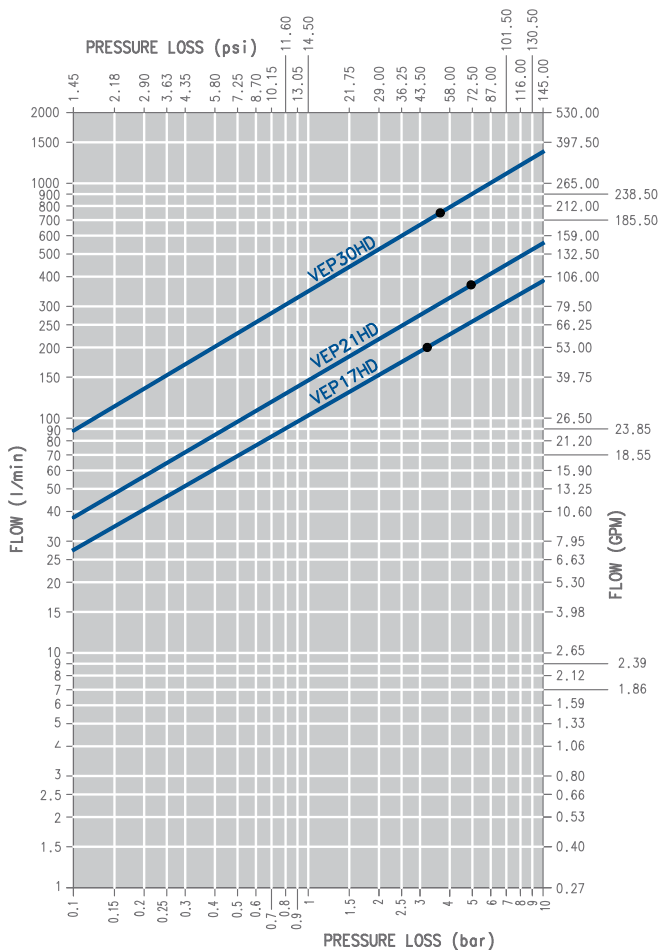
Application & Features

- Higher grade of steel for longer life, yellow o-ring visual ID, and larger mating areas
- Excavators w/auxiliary line for attachments: thumbs, grapples, hammers, and compactors/hopaks
- High impulse mobile circuits
- All construction equipment applications with higher pressure requirements or issues of connecting/disconnecting tool attachments under residual pressure
- Connect/disconnect up to 25 MPa/3625 psi residual pressure
- Save time changing tools



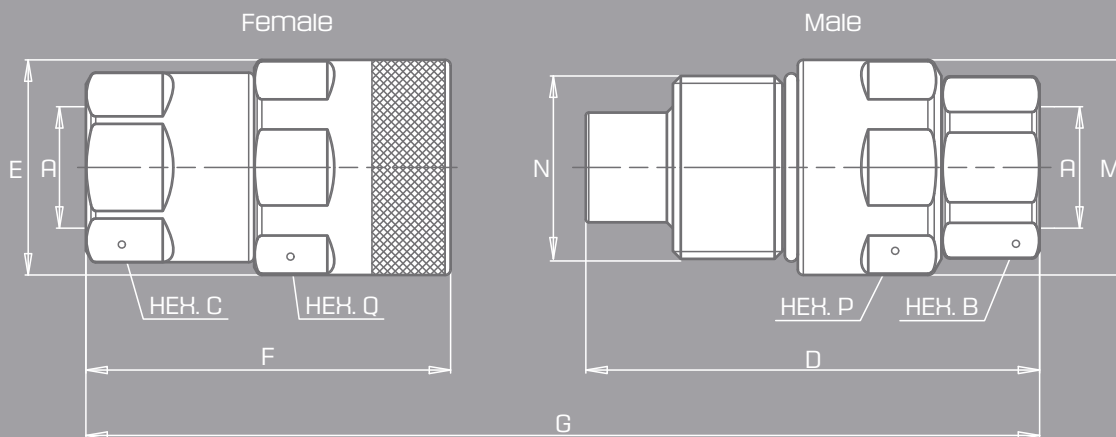
| DESCRIPTION | PORT TYPE | SIZE | MAX. OPERATING PRESSURE COUPLED | | BURST PRESSURE | | | | | | MAX. RESIDUAL PRESSURE DURING CONNECTION | | SPILLAGE* |
|---------------------------|-----------|-------|---------------------------------|------|----------------|-------|------|-------|--------|-------|--|------|-----------|
| | | | | | COUPLED | | MALE | | FEMALE | | | | |
| | | | MPa | psi | MPa | psi | MPa | psi | MPa | psi | MPa | psi | MPa |
| VEP HD FLANGE PORT | | | | | | | | | | | | | |
| VEP17HD | FLANGE | 1 | 42 | 6091 | 165 | 24000 | 165 | 24000 | 100 | 14500 | 25 | 3625 | 0.018 |
| VEP21HD | FLANGE | 1 1/4 | 42 | 6091 | 165 | 24000 | 165 | 24000 | 80 | 11600 | 25 | 3625 | 0.060 |
| VEP30HD | FLANGE | 1 1/2 | 42 | 6091 | 165 | 24000 | 165 | 24000 | 80 | 11600 | 25 | 3625 | 0.200 |
| VEP HD | | | | | | | | | | | | | |
| VEP15HD | | 3/4 | 55 | 7975 | 140 | 20300 | 140 | 20300 | 100 | 14500 | 25 | 3625 | 0.033 |
| VEP17HD | | 1 | 50 | 7250 | 125 | 18125 | 125 | 18125 | 100 | 14500 | 25 | 3625 | 0.018 |
| VEP21HD | | 1 1/4 | 47 | 6815 | 120 | 17400 | 120 | 17400 | 80 | 11600 | 25 | 3625 | 0.060 |
| VEP30HD | | 1 1/2 | 40 | 5800 | 110 | 15950 | 110 | 15950 | 80 | 11600 | 25 | 3625 | 0.200 |

* SPILLAGE IS AN INDICATIVE VALUE OF THE FLUID LOSS PER COUPLE-UNCUPLE CYCLE



Connect Under Pressure Threaded Flat Face Coupling

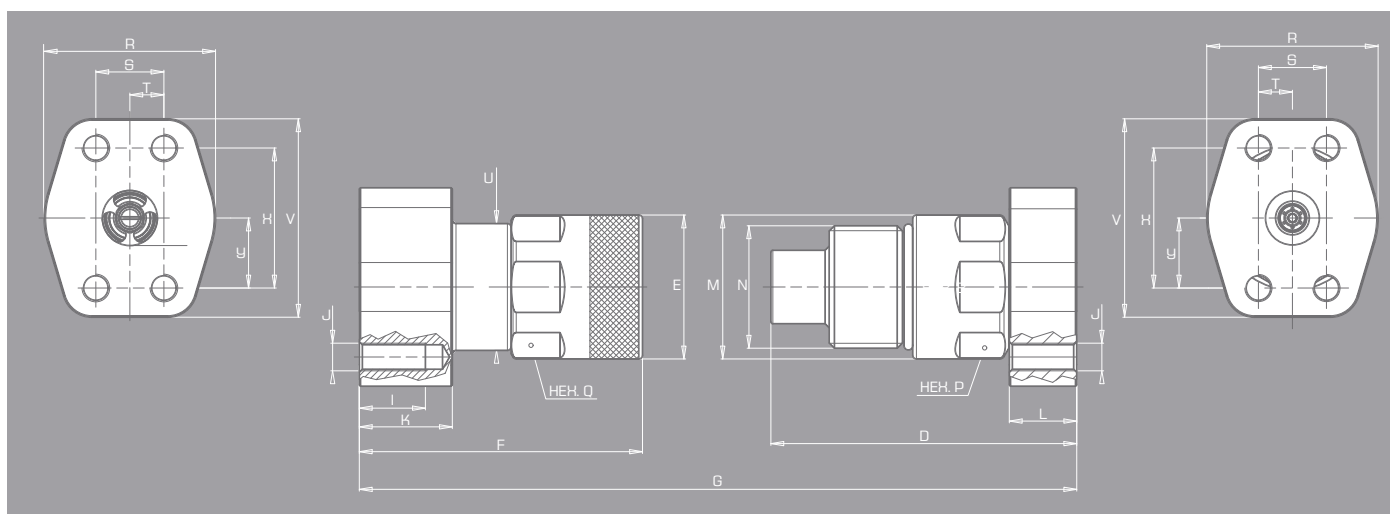
VEP HD: Connect Under Pressure



| DESCRIPTION | BODY SIZE | A | UNIT | B | C | D | E | F | G | M | N | P | Q | UNIT | WEIGHT | |
|-------------|-----------|-------|------|------|------|-------|------|-------|-------|------|-------|------|------|------|--------|--------|
| | | | | | | | | | | | | | | | MALE | FEMALE |
| VEP17HD | 1 | 3/4 | mm | 46 | 46 | 124 | 58.8 | 99.7 | 200.9 | 58.8 | M50x3 | 55 | 55 | Kg | 1.350 | 1.330 |
| | | | inch | 1.81 | 1.81 | 4.88 | 2.31 | 3.93 | 7.91 | 2.31 | | 2.17 | 2.17 | lb | 2.98 | 2.93 |
| VEP17HD | 1 | 1 | mm | 46 | 46 | 12 | 58.8 | 99.7 | 200.9 | 58.8 | M50x3 | 55 | 55 | Kg | 1.300 | 1.280 |
| | | | inch | 1.81 | 1.81 | 4.88 | 2.31 | 3.93 | 7.91 | 2.31 | | 2.17 | 2.17 | lb | 2.87 | 2.82 |
| VEP21HD | 1 1/4 | 1 | mm | 55 | 55 | 133.4 | 69.8 | 106.8 | 216.2 | 69.8 | M58x3 | 65 | 65 | Kg | 1.890 | 2.120 |
| | | | inch | 2.17 | 2.17 | 5.25 | 2.75 | 4.20 | 8.51 | 2.75 | | 2.56 | 2.56 | lb | 4.17 | 4.67 |
| VEP21HD | 1 1/4 | 1 1/4 | mm | 55 | 55 | 133.4 | 69.8 | 106.8 | 216.2 | 69.8 | M58x3 | 65 | 65 | Kg | 1.790 | 2.020 |
| | | | inch | 2.17 | 2.17 | 5.25 | 2.75 | 4.20 | 8.51 | 2.75 | | 2.56 | 2.56 | lb | 3.95 | 4.45 |
| VEP30HD | 1 1/2 | 1 1/4 | mm | 65 | 65 | 150 | 95 | 133.5 | 253.9 | 94.4 | M80x4 | 75 | 85 | Kg | 3.400 | 4.460 |
| | | | inch | 2.56 | 2.56 | 5.91 | 3.74 | 5.26 | 10.0 | 3.72 | | 2.95 | 3.35 | lb | 7.50 | 9.83 |
| VEP30HD | 1 1/2 | 1 1/2 | mm | 65 | 65 | 150 | 95 | 133.5 | 253.9 | 94.4 | M80x4 | 75 | 85 | Kg | 3.300 | 4.360 |
| | | | inch | 2.56 | 2.56 | 5.91 | 3.74 | 5.26 | 10.0 | 3.72 | | 2.95 | 3.35 | lb | 7.28 | 9.61 |



VEP HD Flange Pad: Connect Under Pressure

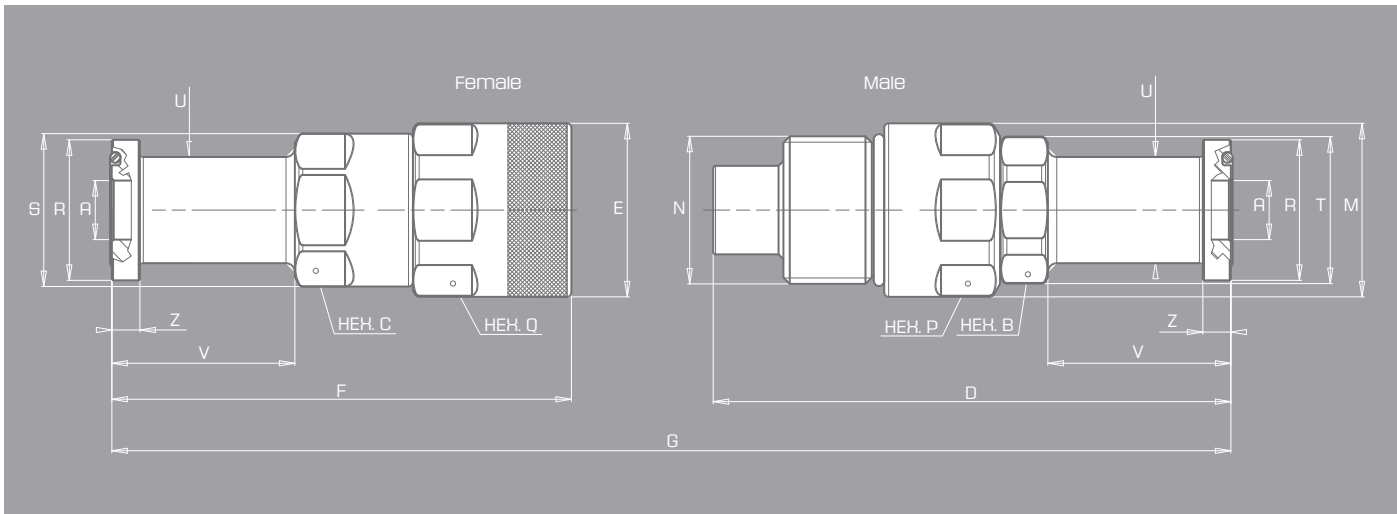


| DESCRIPTION | UNIT | D | E | F | G | I | J | K | L | M | N | P |
|---------------------------|------|-------|------|-------|-------|------|-----------------|------|-------|------|----------|------|
| VEP17HD 1 FPU CODE 62 | mm | 125 | 58.8 | 115.7 | 217.9 | 27 | UNC 7/16 - 14 | 38 | 27.55 | 58.8 | M50X3 | 55 |
| | inch | 4.92 | 2.31 | 4.56 | 8.58 | 1.06 | | 1.5 | 1.08 | 2.31 | | 2.16 |
| VEP21HD 1 FPM CODE 62 | mm | 135.2 | 69.8 | 116.8 | 228 | 27 | M12 | 38 | 38 | 69.8 | M58X3 | 65 |
| | inch | 5.32 | 2.75 | 4.6 | 8.98 | 1.06 | | 1.5 | 1.5 | 2.75 | | 2.56 |
| VEP21HD 1 1/4 FPU CODE 62 | mm | 123.2 | 69.8 | 115.8 | 215 | 25 | UNC 1/2 - 13 | 37 | 26 | 69.8 | M58X3 | 65 |
| | inch | 4.85 | 2.75 | 4.57 | 8.46 | 0.98 | | 1.46 | 1.02 | 2.75 | | 2.56 |
| VEP30HD 1 1/4 FPU CODE 62 | mm | 147.6 | 95 | 148.5 | 266.5 | 27 | UNC 1/2 - 13 2B | 37.9 | 35 | 94.4 | 80X4 TPF | 75 |
| | inch | 5.81 | 3.74 | 5.85 | 10.49 | 1.06 | | 1.49 | 1.38 | 3.72 | | 2.95 |
| VEP30HD 1 1/4 FPM CODE 62 | mm | 147.6 | 95 | 148.5 | 266.5 | 25 | M14 | 37.9 | 35 | 94.4 | 80X4 TPF | 75 |
| | inch | 5.81 | 3.74 | 5.85 | 10.49 | 0.98 | | 1.49 | 1.38 | 3.72 | | 2.95 |
| VEP30HD 1 1/2 FPU CODE 62 | mm | 149.6 | 95 | 156.6 | 276.6 | 35 | UNC 5/8 - 11 | 46 | 37 | 94.4 | 80X4 TPF | 75 |
| | inch | 5.89 | 3.74 | 6.16 | 10.89 | 1.38 | | 1.81 | 1.46 | 3.72 | | 2.95 |

| DESCRIPTION | UNIT | Q | R | S | T | U | V | W | X | Y | Z | UNIT | WEIGHT | |
|---------------------------|------|------|------|------|-------|------|-------|------|------|-------|------|------|--------|--------|
| | | | | | | | | | | | | | MALE | FEMALE |
| VEPL7HD 1 FPU CODE62 | mm | 55 | 70 | 27.8 | 13.9 | 51.8 | 81.05 | 22.5 | 57.2 | 28.6 | 22 | Kg | 1.96 | 2.34 |
| | inch | 2.16 | 2.76 | 1.09 | 0.55 | 2.04 | 3.19 | 0.89 | 2.25 | 1.13 | 0.87 | lb | 4.31 | 5.15 |
| VEP2LHD 1 FPM CODE 62 | mm | 65 | 70 | 27.8 | 13.9 | 68 | 81.05 | 22.5 | 57.2 | 28.6 | 22.5 | Kg | 2.23 | 2.82 |
| | inch | 2.56 | 2.76 | 1.09 | 0.55 | 2.68 | 3.19 | 0.89 | 2.25 | 1.13 | 0.89 | lb | 4.91 | 6.2 |
| VEP2LHD 1 1/4 FPU CODE 62 | mm | 65 | 78 | 31.8 | 15.9 | 68 | 95.25 | 25.6 | 66.6 | 33.3 | 25.6 | Kg | 2.45 | 3.29 |
| | inch | 2.56 | 3.07 | 1.25 | 0.63 | 2.68 | 3.75 | 1.01 | 2.62 | 1.3L | 1.01 | lb | 5.39 | 7.24 |
| VEP30HD 1 1/4 FPU CODE 62 | mm | 85 | 78 | 31.8 | 15.9 | 89 | 95.25 | 32 | 66.6 | 33.3 | 32 | Kg | 4.01 | 5.68 |
| | inch | 3.35 | 3.07 | 1.25 | 0.63 | 3.5 | 3.75 | 1.26 | 2.62 | 1.31 | 1.26 | lb | 8.82 | 12.5 |
| VEP30HD 1 1/4 FPM CODE 62 | mm | 85 | 78 | 31.8 | 15.9 | 89 | 95.25 | 32 | 66.6 | 33.3 | 32 | Kg | 4.01 | 5.68 |
| | inch | 3.35 | 3.07 | 1.25 | 0.63 | 3.5 | 3.75 | 1.26 | 2.62 | 1.31 | 1.26 | lb | 8.82 | 12.5 |
| VEP30HD 1 1/2 FPU CODE 62 | mm | 85 | 95 | 36.5 | 18.25 | 89 | 112.8 | 35 | 79.3 | 39.65 | 32 | Kg | 4.81 | 6.91 |
| | inch | 3.35 | 3.74 | 1.44 | 0.72 | 3.5 | 4.44 | 1.38 | 3.12 | 1.56 | 1.26 | lb | 10.58 | 15.2 |

Connect Under Pressure Threaded Flat Face Coupling

VEP HD Flange Head: Connect Under Pressure



| DESCRIPTION | A | UNIT | B | C | D | E | F | G | M | N | P |
|--------------------------|------|------|------|------|-------|------|-------|-------|------|----------|------|
| VEP17HD 1 FH CODE 62 | 20 | mm | 46 | 46 | 175.4 | 58.8 | 155.7 | 308.3 | 58.8 | M50X3 | 55 |
| | 0.79 | inch | 1.81 | 1.81 | 6.9 | 2.31 | 6.13 | 12.14 | 2.31 | | 2.16 |
| VEP21HD 1 1/4 FH CODE 62 | 25.6 | mm | 55 | 55 | 184.2 | 69.8 | 170.8 | 331 | 69.8 | M58X3 | 65 |
| | 1.01 | inch | 2.16 | 2.16 | 7.25 | 2.75 | 6.72 | 13.03 | 2.75 | | 2.56 |
| VEP30HD 1 1/4 FH CODE 62 | 28 | mm | 65 | 65 | 201.6 | 95 | 199.5 | 371.5 | 94.4 | 80X4 TPF | 75 |
| | 1.1 | inch | 2.56 | 2.56 | 7.94 | 3.74 | 7.85 | 14.63 | 3.72 | | 2.95 |
| VEP30HD 1 1/2 FH CODE 62 | 32 | mm | 65 | 65 | 211.6 | 95 | 209.5 | 391.5 | 94.4 | 80X4 TPF | 75 |
| | 1.26 | inch | 2.56 | 2.56 | 8.33 | 3.74 | 8.25 | 15.41 | 3.72 | | 2.95 |

| DESCRIPTION | UNIT | Q | R | S | T | U | V | Z | UNIT | WEIGHT | |
|--------------------------|------|------|------|------|------|------|------|------|------|--------|--------|
| | | | | | | | | | | MALE | FEMALE |
| VEP17HD 1 FH CODE 62 | mm | 55 | 47.6 | 51.8 | 49.8 | 36 | 62 | 9.5 | Kg | 1.65 | 1.68 |
| | inch | 2.16 | 1.87 | 2.04 | 1.96 | 1.42 | 2.44 | 0.37 | lb | 3.63 | 3.7 |
| VEP21HD 1 1/4 FH CODE 62 | mm | 65 | 53.9 | 68 | 59.8 | 41.9 | 69 | 10.3 | Kg | 2.16 | 2.6 |
| | inch | 2.56 | 2.12 | 2.68 | 2.35 | 1.65 | 2.72 | 0.41 | lb | 4.75 | 5.72 |
| VEP30HD 1 1/4 FH CODE 62 | mm | 85 | 53.9 | 89 | 69.8 | 44 | 69 | 10.3 | Kg | 3.61 | 5.01 |
| | inch | 3.35 | 2.12 | 3.5 | 2.75 | 1.73 | 2.72 | 0.41 | lb | 7.94 | 11.02 |
| VEP30HD 1 1/2 FH CODE 62 | mm | 85 | 63.5 | 89 | 69.8 | 49 | 79 | 12.6 | Kg | 3.85 | 5.23 |
| | inch | 3.35 | 2.5 | 3.5 | 2.75 | 1.93 | 3.11 | 0.5 | lb | 8.47 | 11.51 |



VEP-HD NPT and SAE Thread_Flat Face Thread Coupling with High Residual Pressure

| PART | BODY SIZE | PORT SIZE | THREAD TYPE | ORDER CODE | PART DESCRIPTION |
|--------------------------|-----------|-----------|-------------|------------|---------------------|
| VEP-HD NPT THREAD | | | | | |
| COUPLER | 3/4 | 3/4 | NPT | 808101010 | F. VEP 15HD 3/4 NPT |
| NIPPLE | 3/4 | 3/4 | NPT | 808101011 | M. VEP 15HD 3/4 NPT |
| COUPLER | 1 | 1 | NPT | 808101012 | F. VEP17HD 1 NPT |
| NIPPLE | 1 | 1 | NPT | 808101013 | M. VEP17HD 1 NPT |
| COUPLER | 1 1/4 | 1 1/4 | NPT | 808101014 | F. VEP21HD 114 NPT |
| NIPPLE | 1 1/4 | 1 1/4 | NPT | 808101015 | M. VEP21HD 114 NPT |
| COUPLER | 1 1/2 | 1 1/2 | NPT | 808101016 | F. VEP30HD 112 NPT |
| NIPPLE | 1 1/2 | 1 1/2 | NPT | 808101017 | M. VEP30HD 112 NPT |
| VEP-HD SAE THREAD | | | | | |
| COUPLER | 3/4 | 3/4 | SAE | 808104010 | F. VEP 15HD 3/4 SAE |
| NIPPLE | 3/4 | 3/4 | SAE | 808104011 | M. VEP 15HD 3/4 SAE |
| COUPLER | 1 | 1 | SAE | 808104012 | F. VEP17HD 1 SAE |
| NIPPLE | 1 | 1 | SAE | 808104013 | M. VEP17HD 1 SAE |
| COUPLER | 1 1/4 | 1 1/4 | SAE | 808104014 | F. VEP21HD 114 SAE |
| NIPPLE | 1 1/4 | 1 1/4 | SAE | 808104015 | M. VEP21HD 114 SAE |
| COUPLER | 1 1/2 | 1 1/2 | SAE | 808104016 | F. VEP30HD 112 SAE |
| NIPPLE | 1 1/2 | 1 1/2 | SAE | 808104017 | M. VEP30HD 112 SAE |



COUPLER



NIPPLE

VEP-HD Flange Ports_Flat Face Thread Coupling with High Residual Pressure

| PART | BODY SIZE | PORT SIZE | THREAD TYPE | ORDER CODE | PART DESCRIPTION |
|----------------------------|-----------|-----------|-------------|------------|-----------------------------------|
| VEP-HD FLANGE PORTS | | | | | |
| COUPLER | 1 | 1 | FLANGE HEAD | 808124012 | F. VEP17 HD 1FH CODE 62 |
| NIPPLE | 1 | 1 | FLANGE HEAD | 808124013 | M. VEP17 HD 1FH CODE 62 |
| COUPLER | 1 | 1 | FLANGE PAD | 808124020 | F. VEP17 HD 1 FPU CODE 62 |
| NIPPLE | 1 | 1 | FLANGE PAD | 808124021 | M. VEP17 HD 1 FPU CODE 62 |
| COUPLER | 1 1/4 | 1 1/4 | FLANGE HEAD | 808124014 | F. VEP21 HD 1 1/4 FH CODE 62 |
| NIPPLE | 1 1/4 | 1 1/4 | FLANGE HEAD | 808124015 | M. VEP21 HD 1 1/4 FH CODE 62 |
| COUPLER | 1 1/4 | 1 1/4 | FLANGE PAD | 808124022 | F. VEP21 HD 1 1/4 FPU CODE 62 |
| NIPPLE | 1 1/4 | 1 1/4 | FLANGE PAD | 808124023 | M. VEP21 HD 1 1/4 FPU CODE 62 |
| COUPLER | 1 1/2 | 1 1/2 | FLANGE HEAD | 808124016 | F. VEP30HD 1 1/2 FH CODE 62 |
| NIPPLE | 1 1/2 | 1 1/2 | FLANGE HEAD | 808124017 | M. VEP30HD 1 1/2 FH CODE 62 |
| COUPLER | 1 1/2 | 1 1/2 | FLANGE PAD | 808124024 | F. VEP30HD 1 1/2 F PU CODE 62 |
| NIPPLE | 1 1/2 | 1 1/2 | FLANGE PAD | 808124025 | M. VEP30HD 1 1/2 FPU CODE 62 |
| COUPLER | 1 1/2 | 1 1/4 | FLANGE HEAD | 808124038 | F. VEP30HD 1 1/4 FH CODE 62 |
| NIPPLE | 1 1/2 | 1 1/4 | FLANGE HEAD | 808124039 | M. VEP30HD 1 1/4 FH CODE 62 |
| COUPLER | 1 1/2 | 1 1/2 | FLANGE PAD | 808124034 | F. VEP 30HD 1 1/2 FPM CODE 62 M12 |
| NIPPLE | 1 1/2 | 1 1/2 | FLANGE PAD | 808124035 | M. VEP 30HD 1 1/2 FPM CODE 62 M12 |
| COUPLER | 1 1/2 | 1 1/2 | FLANGE PAD | 808124040 | F. VEP 30HD 1 1/2 FPM CODE 62 M14 |
| NIPPLE | 1 1/2 | 1 1/2 | FLANGE PAD | 808124041 | M. VEP 30HD 1 1/2 FPM CODE 62 M14 |



FLANGE HEAD



FLANGE PAD

2 BOLT THREAD OPTIONS FOR FLANGE PAD PORTS: UNF AND METRIC.
FOR SIZE 1 1/4 PAD METRIC OPTIONS ARE M12 & M14.