



VUZ Series

The VUZ series check valves are used in any type of hydraulic circuit, with a safe, compact design suitable to any hydraulic application using non-corrosive liquids. The VU size range includes two different standard openings at 5 to 65 psi. The VU series can also be used as a pressure sequence valve by adjusting the internal spring loading to the required cracking point, according to the valve size.

Category: [Check Valves](#) Tags: [Industry: Agricultural](#), [Industry: Industrial](#), [Industry: Mobile](#), [Industry: Oil & Gas](#)

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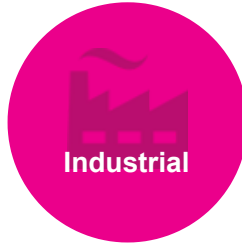
DESCRIPTION

FEATURES

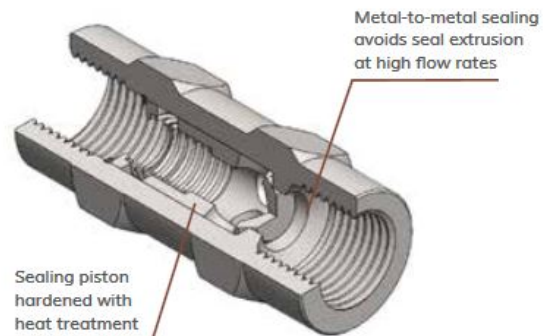
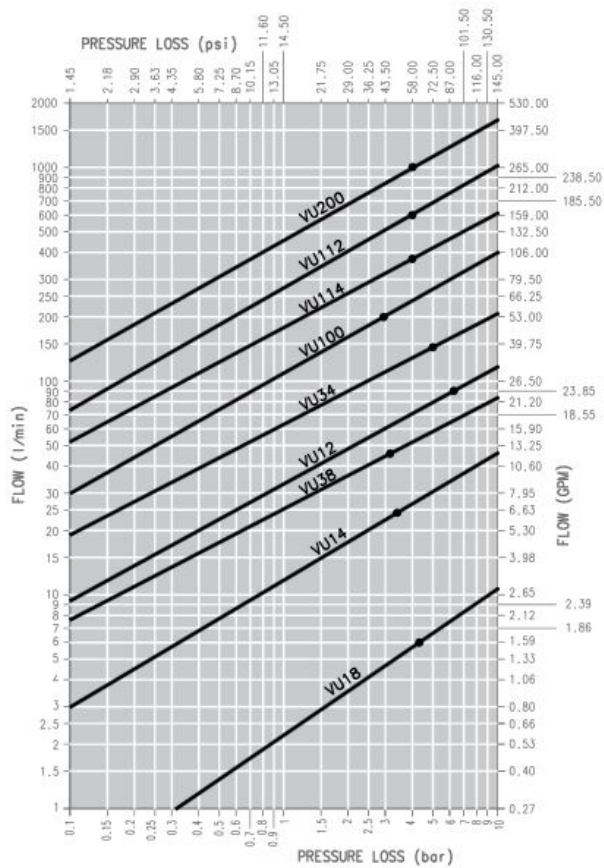
- Size range: 1/8" thru 2"
- Port options: NPT, SAE
- Standard SAE threads
- Standard crack 5 psi and 65 psi; various crack pressures optional
- Material: high strength carbon steel with zinc plating

APPLICATIONS

- Any type of hydraulic circuit
- Any hydraulic application using non-corrosive liquids



Pressure Drop



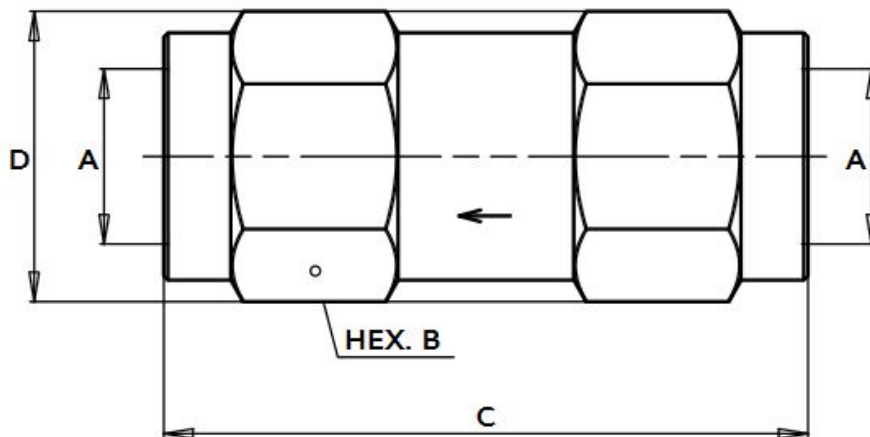
OIL = ISO VG32, TEMP = 40C, VISCOSITY = 28.8-35.2 MM²/S

| DESCRIPTION | SIZE | MAX SUGGESTED FLOW | | MAX OPERATING PRESSURE | | BURST PRESSURE | |
|-------------|------|--------------------|------|------------------------|------|----------------|-------|
| | | inch | l/mm | GPM | MPa | psi | MPa |
| VU 18 | 1/8 | 6 | 1.59 | 40 | 5800 | 160 | 23200 |

| | | | | | | | |
|--------|-------|------|--------|----|------|-----|-------|
| VU 14 | 1/4 | 24 | 6.36 | 35 | 5075 | 140 | 20300 |
| VU 38 | 3/8 | 46 | 12.19 | 35 | 5075 | 140 | 20300 |
| VU 12 | 1/2 | 90 | 23.85 | 30 | 4350 | 120 | 17400 |
| VU 34 | 3/4 | 148 | 39.22 | 30 | 4350 | 120 | 17400 |
| VU 100 | 1 | 200 | 53 | 30 | 4350 | 120 | 17400 |
| VU 114 | 1 1/4 | 378 | 100.17 | 25 | 3625 | 100 | 14500 |
| VU 112 | 1 1/2 | 600 | 159 | 25 | 3625 | 100 | 14500 |
| VU 200 | 2 | 1000 | 265 | 15 | 2175 | 45 | 6525 |

Temperature range: from -20 C (-4 F) to 120 oC (248 F)

Size Diagram



| DESCRIPTION | A | B | | C | | D | | WEIGHT | |
|-------------|-----|------|------|-------|------|------|------|--------|------|
| | | mm | inch | mm | inch | mm | inch | kg | lb |
| VU 18 | 1/8 | 14.0 | 0.55 | 44.0 | 1.73 | 16.2 | 0.64 | 0.038 | 0.08 |
| VU 14 | 1/4 | 19.0 | 0.75 | 60.0 | 2.36 | 21.9 | 0.86 | 0.090 | 0.20 |
| VU 38 | 3/8 | 24.0 | 0.94 | 70.0 | 2.76 | 27.7 | 1.09 | 0.185 | 0.41 |
| VU 12 | 1/2 | 30.0 | 1.18 | 77.0 | 3.03 | 34.6 | 1.36 | 0.303 | 0.67 |
| VU 34 | 3/4 | 36.0 | 1.42 | 90.0 | 3.54 | 41.6 | 1.64 | 0.499 | 1.10 |
| VU 100 | 1 | 45.0 | 1.77 | 106.0 | 4.17 | 52.0 | 2.05 | 0.901 | 1.99 |

| | | | | | | | | | |
|--------|-------|------|------|-------|------|------|------|-------|------|
| VU 114 | 1 1/4 | 55.0 | 2.17 | 125.0 | 4.92 | 63.5 | 2.50 | 1.513 | 3.34 |
| VU 112 | 1 1/2 | 65.0 | 2.56 | 140.0 | 5.51 | 75.1 | 2.96 | 2.430 | 5.36 |
| VU 200 | 2 | 75.0 | 2.95 | 160.0 | 6.30 | 86.6 | 3.41 | 3.130 | 6.90 |

| DESCRIPTION | A | B | | C | | D | | WEIGHT | |
|-------------|-------------|------|------|-------|------|------|------|--------|------|
| | | mm | inch | mm | inch | mm | inch | kg | lb |
| VU 14 SAE | 7/16-20UNF | 19.0 | 0.75 | 60.0 | 2.36 | 21.9 | 0.86 | 0.100 | 0.22 |
| VU 38 SAE | 9/16-18UNF | 24.0 | 0.94 | 70.0 | 2.76 | 27.7 | 1.09 | 0.192 | 0.42 |
| VU 12 SAE | 3/4-16UNF | 30.0 | 1.18 | 77.0 | 3.03 | 34.6 | 1.36 | 0.315 | 0.69 |
| VU 34 SAE | 1-1/16-12UN | 36.0 | 1.42 | 94.0 | 3.70 | 41.6 | 1.64 | 0.490 | 1.08 |
| VU 100 SAE | 1-5/16-12UN | 45.0 | 1.77 | 106.0 | 4.17 | 52.0 | 2.05 | 0.870 | 1.92 |
| VU 114 SAE | 1-5/8-12UN | 55.0 | 2.17 | 125.0 | 4.92 | 63.5 | 2.50 | 1.486 | 3.28 |
| VU 112 SAE | 1-7/8-12UN | 65.0 | 2.56 | 140.0 | 5.51 | 75.1 | 2.96 | 2.410 | 5.31 |
| VU 200 SAE | 2-1/2-12UN | 75.0 | 2.95 | 160.0 | 6.30 | 86.6 | 3.41 | 2.995 | 6.60 |

VUS NPT Thread Soft Seal Check Valves

| CRACK POINT | BODY SIZE | PORT SIZE | THREAD TYPE | ORDER CODE | DESCRIPTION |
|-----------------------|-----------|-----------|-------------|------------|------------------------------|
| VUS NPT THREAD | | | | | |
| 5 psi | 3/4 | 3/4 | NPT | 810701100 | VUS 34 NPT 5 PSI SOFT SEAT |
| 50 psi | 3/4 | 1 | NPT | 810701400 | VUS 100 NPT 50 PSI SOFT SEAT |

VU NPT and SAE Thread

| | | | | | |
|--------|-------|-------|-----|-----------|-------|
| | | | | | |
| 5 psi | 1/8 | 1/8 | NPT | 810201100 | 81050 |
| 5 psi | 1/4 | 1/4 | NPT | 810201101 | 81050 |
| 5 psi | 3/8 | 3/8 | NPT | 810201102 | 81050 |
| 5 psi | 1/2 | 1/2 | NPT | 810201103 | 81050 |
| 5 psi | 3/4 | 3/4 | NPT | 810201104 | 81050 |
| 5 psi | 1 | 1 | NPT | 810201105 | 81050 |
| 5 psi | 1 1/4 | 1 1/4 | NPT | 810201106 | 81050 |
| 5 psi | 1 1/2 | 1 1/2 | NPT | 810201107 | 81050 |
| 5 psi | 2 | 2 | NPT | 810201108 | 81050 |
| 5 psi | 3/4 | 3/4 | NPT | 810201109 | 81050 |
| 5 psi | 1 | 1 | NPT | 810201110 | 81050 |
| 5 psi | 1/2 | 1/2 | NPT | 810201112 | 81050 |
| 65 psi | 1/8 | 1/8 | NPT | 810201400 | 81050 |
| 65 psi | 1/4 | 1/4 | NPT | 810201401 | 81050 |
| 65 psi | 3/8 | 3/8 | NPT | 810201402 | 81050 |
| 65 psi | 1/2 | 1/2 | NPT | 810201403 | 81050 |
| 65 psi | 3/4 | 3/4 | NPT | 810201404 | 81050 |

| | | | | | |
|--------|-------|-------|-----|-----------|-------|
| 65 psi | 1 | 1 | NPT | 810201405 | 81050 |
| 65 psi | 1 1/4 | 1 1/4 | NPT | 810201406 | 81050 |
| 65 psi | 1 1/2 | 1 1/2 | NPT | 810201407 | 81050 |
| 65 psi | 2 | 2 | NPT | 810201408 | 81050 |
| | | | | | |
| 5 psi | 1/4 | 1/4 | SAE | 810204100 | 81050 |
| 5 psi | 3/8 | 3/8 | SAE | 810204101 | 81050 |
| 5 psi | 1/2 | 1/2 | SAE | 810204102 | 81050 |
| 5 psi | 3/4 | 3/4 | SAE | 810204103 | 81050 |
| 5 psi | 1 | 1 | SAE | 810204104 | 81050 |
| 5 psi | 1 1/4 | 1 1/4 | SAE | 810204105 | 81050 |
| 5 psi | 1 1/2 | 1 1/2 | SAE | 810204106 | 81050 |
| 5 psi | 2 | 2 | SAE | 810204107 | 81050 |
| 65 psi | 1/4 | 1/4 | SAE | 810204400 | 81050 |
| 65 psi | 3/8 | 3/8 | SAE | 810204401 | 81050 |
| 65 psi | 1/2 | 1/2 | SAE | 810204402 | 81050 |
| 65 psi | 3/4 | 3/4 | SAE | 810204403 | 81050 |
| 65 psi | 1 | 1 | SAE | 810204404 | 81050 |
| 65 psi | 1 1/4 | 1 1/4 | SAE | 810204405 | 81050 |

| | | | | | |
|--------|-------|-------|---------------------------------|-----------|-------|
| 65 psi | 1 1/2 | 1 1/2 | SAE | 810204406 | 81050 |
| 65 psi | 2 | 2 | SAE | 810204407 | 81050 |
| | | | *Available upon special request | | |

VU NPT Thread

| CRACK POINT | BODY SIZE | PORT SIZE | THREAD TYPE | ORDER CODE | DESCRIPTION |
|----------------------|-----------|-----------|-------------|------------|--------------------|
| VU NPT THREAD | | | | | |
| 14 psi | 1/4 | 1/4 | NPT | 810201200 | VU 14 NPT 14 PSI |
| 14 psi | 1/2 | 1/2 | NPT | 810201201 | VU 12 NPT 14 PSI |
| 14 psi | 3/4 | 3/4 | NPT | 810201202 | VU 34 NPT 14 PSI |
| 14 psi | 1 | 1 | NPT | 810201203 | VU 100 NPT 14 PSI |
| 14 psi | 1 1/4 | 1 1/4 | NPT | 810201204 | VU 114 NPT 14 PSI |
| 14 psi | 1 1/2 | 1 1/2 | NPT | 810201205 | VU 112 NPT 14 PSI |
| 21 psi | 1 | 1 | NPT | 810201300 | VU 100 NPT 21 PSI |
| 57 psi | 1/2 | 1/2 | NPT | 810201409 | VU 12 NPT 57 PSI |
| 115 psi | 1/2 | 1/2 | NPT | 810201600 | VU 12 NPT 115 PSI |
| 115 psi | 3/4 | 3/4 | NPT | 810201601 | VU 34 NPT 115 PSI |
| 145 psi | 1 | 1 | NPT | 810201602 | VU 100 NPT 145 PSI |
| 215 psi | 1/4 | 1/4 | NPT | 810201700 | VU 14 NPT 215 PSI |

290 psi

1/2

1/2

NPT

810201701

VU 12 NPT 290
PSI

ADDITIONAL INFORMATION

| | |
|-------------------------|---|
| Body Size | <u>1/4", 3/8", 1/2", 3/4", 1", 1 1/4", 1 1/2", 2"</u> |
| Material | <u>Carbon</u> |
| Port Options | <u>NPT, SAE</u> |
| Port Size | <u>1/4", 3/8", 1/2", 3/4", 1", 1 1/4", 1 1/2", 2"</u> |
| Working Pressure | <u>Up to 5000</u> |

Related products

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PPC Series

The PPC Series (Push-Pull Coupler) is built on the A Premier platform, featuring breakaway capabilities that engage when the coupler is unintentionally left coupled, preventing leakage and damage. Its clamp fixture is designed to be mounted to the structure; when pulled apart in line with the coupler, the PPC coupler will break away. For mobile applications: the APM series nipple is recommended with this series.

[Read more](#)

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I-IP SERIES

The I-IP Series is an extension of ISO A style couplings, popular worldwide for its versatile interchangeability. This ISO interchange coupler features a push pull mounting feature and a nipple with a modular port design that allows for a range of port options.

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IRC SERIES

The IRC Series Interchange Coupler, commonly referred to as a Nordic interchange, offers a safety sleeve to prevent accidental disconnection and a poppet valve with elastomer seal to provide maximum sealing of the couplings once disconnected. Standard poppet and pressure eliminator poppet available. Connection under residual pressure is allowed in male or female; counterpart side should be without pressure.

[Read more](#)

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GR PLATE SERIES

The GR Series of Multi-Coupling Plates allows the simultaneous couple and uncouple of two to ten hydraulic and/or electrical lines with a single, simple movement requiring very little force. The circuit lines can all have the same nominal coupler diameter and different media or different size couplers. A dust cap is supplied, and options include: an electrical connector for low voltage requirements and a parking station. Watch this quick video on [How to Connect and Disconnect Hydraulic and Electrical Lines using the GR Series of Multi-Coupling Plates.](#)

[Read more](#)