



Technical Data Sheet: HSU 11" X 5,000 psi

All HEC HU Blowout Preventers are manufactured and tested according to HEC Quality Management Standards

Part Number: 115MHSU

Performance Requirement Level: PR1

Through Bore: 11"

Rated Working Pressure: 5,000 psi

Rated Hydraulic Pressure: 1,500 psi

Note: Hydraulic Pressure can be applied up to 3,000 psi. in emergency situations

Pipe Diameter Ranges: 2-3/8" to 8-5/8"

Temperature Ranges:

Metallic: -20 to 250°F

Elastomers: 20 to 200°F

Assembly Weights and Dimensions:

| 11" x 5M | Flange x Flange | Stud x Stud | Stud x Flange | Flange x Stud |
|---|-----------------|-------------|---------------|---------------|
| Weight (lbs.) w/o Shear Bonnets | 6,810 | 5,855 | 6,345 | 6,320 |
| Height (in.) | 34.312 | 17.376 | 25.969 | 25.719 |
| Width, Bonnets Closed (in.) w/ locking screws Unlocked | 110 | | | |
| Width, Bonnets Closed (in.) w/ locking screws locked | 98 | | | |
| Width, Bonnets Open (in.) w/ locking screws unlocked | 98 | | | |
| Width, Shear Bonnets Closed (in.) w/ locking screws unlocked | 137 | | | |
| Width, Shear Bonnets Open (in.) w/ locking screws unlocked | 190 | | | |

+800 lbs. with Boosters

Operating Capacities:

| SIZE AND WORKING PRESSURE | CONFIGURATION | GALLONS TO OPEN RAMS (1 SET) | GALLONS TO CLOSE RAMS (1 SET) | LOCKING SCREW TURNS (EACH END) | CLOSING RATIO | OPENING RATIO |
|---------------------------|-------------------|------------------------------|-------------------------------|--------------------------------|---------------|---------------|
| 11" 5M, 10M | Standard | 3.4 | 3.5 | 27 | 7.3:1 | 3.7:1 |
| 11" 5M, 10M | Large Bore Tandem | 6.8 | 12.2 | 34 | 19.3:1 | 3.7:1 |

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Minimum Operating Pressure For a low Pressure Seal (MOPFLPS):

| Ram Type | Operator Type | |
|------------|---------------|-----------------------------|
| | Standard | Large Bore & Tandem Booster |
| Blind | 200 | 76 |
| Pipe | 250 | 95 |
| VBR & Flex | 750 | 284 |

Operating Pressure to effect a wellbore seal at rated working pressure:

| Ram Type | Operator Type | |
|------------|---------------|-----------------------------|
| | Standard | Large Bore & Tandem Booster |
| Blind | 900 | 340 |
| Pipe | 950 | 359 |
| VBR & Flex | 1,500 | 567 |

Elastomers:

Acrylonitrile Butadiene Rubber (NBR)
Nominal Operating Range: 20 to 200°F

Test Results:

- Ram Access: 200 cycles with 10 pressure cycles
- Hang-Off
 - 11" and 13-5/8" HU Pipe Rams
 - Rated up to 600,000 lbs.
 - 5" Test mandrel with 18° taper
 - Note: Do not recommend hanging off on the smallest size pipe for VBR rams
- Fatigue Test: 546 open/close cycles, 78 pressure test
 - Ram Locking completed during fatigue testing
- Low Temperature Test: 3 pressure cycles at 20°F
- Hot Temperature Test: 10 pressure cycles and 1 hour hold time at 200°F
- Shear: Maximum shear pressure: 3000 psi.
 - Shear Doors with Tandem Boosters **must** be installed to shear pipe

Recommended Shear Operation:

- Tandem Boosters must be installed to shear
- Accumulator Pressure to Shear: 3000 psi.
- Horn Equipment recommends isolating well bore pressure using pipe rams and slip rams below the shear rams.
- It is recommended that shear rams be replaced and/or inspected after shearing operation by OEM.



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