

SPECIALTY PRODUCTS

WDS Series

Steam Moisture Separator

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| Model | WDS | |
|-----------------------------|--|--|
| Body Material | Cast Iron | Carbon Steel |
| Sizes | 3/4", 1", 1-1/4", 1-1/2", 2", 2-1/2", 3", 4", 5" | 1", 1-1/4", 1-1/2", 2", 2-1/2", 3", 4", 5", 6", 8", 10", 12" |
| Connections | NPT, 125# Flanged | NPT, SW, 150# & 300# Flanged |
| PMO Max. Operating Pressure | 160 PSIG | 300 PSIG (NPT & SW) |
| Pressure/Temperature Rating | NPT 160 PSIG @ 450°F 125# FLG 150 PSIG @ 450°F | NPT, SW 300 PSIG @ 650°F 150 # FLG 150 PSIG @ 450°F 300 # FLG 300 PSIG @ 650°F |



TYPICAL APPLICATION

The **WDS Series** Separators are used for the removal of entrained liquid or solids from steam. Effective in applications where the system has an entrained liquid flow rate of up to 40% by weight of the units flow capacity.

HOW IT WORKS

Moisture-laden steam enters the inlet of the separator where it is deflected in a centrifugal downward motion. The entrained moisture is separated out by reduction in velocity. Separated liquid then falls below the Vortex containment plate where it cannot be re-entrained. Dry, clean steam then flows upward and exits through the outlet of the separator.

FEATURES

- High efficiency: 99% of all particles 10 microns and larger
- Maximum separation
- Minimum pressure drop
- Code constructed

SAMPLE SPECIFICATION

Steam Moisture Separator shall be "T" style for horizontal piping installations. Separator to be code constructed in cast iron or carbon steel and available in FNPT and flanged connections.

INSTALLATION

The WDS Steam Moisture Separator must be installed in a horizontal run of pipe. Exercise standard piping and structural practices when installing this unit. Proper drainage of the separator utilizing a float and thermostatic steam trap is essential for good operation.

MATERIALS

| | |
|------------------------|-----------------------------------|
| WDS Cast Iron Model | All Parts Cast Iron |
| WDS Carbon Steel Model | All Parts Fabricated Carbon Steel |

CAPACITIES – Steam – (lbs/hr)

| Size | Operating Pressure (PSIG) | | | | | | | | | | | |
|------|---------------------------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|
| | 5 | 10 | 25 | 50 | 100 | 150 | 200 | 250 | 300 | 400 | 450 | 500 |
| 1" | 192 | 219 | 289 | 384 | 536 | 661 | 772 | 872 | 964 | 1132 | 1210 | 1284 |
| 1¼" | 305 | 348 | 459 | 609 | 851 | 1050 | 1225 | 1384 | 1531 | 1797 | 1921 | 2038 |
| 1½" | 434 | 495 | 653 | 868 | 1211 | 1495 | 1744 | 1970 | 2179 | 2559 | 2734 | 2902 |
| 2" | 769 | 877 | 1156 | 1536 | 2143 | 2646 | 3087 | 3487 | 3857 | 4529 | 4839 | 5136 |
| 2½" | 1220 | 1391 | 1834 | 2437 | 3401 | 4199 | 4900 | 5535 | 6121 | 7188 | 7680 | 8151 |
| 3" | 1912 | 2181 | 2876 | 3821 | 5333 | 6583 | 7682 | 8677 | 9597 | 11269 | 12041 | 12779 |
| 4" | 3183 | 3632 | 4787 | 6362 | 8878 | 10959 | 12788 | 14446 | 15977 | 18760 | 20046 | 21274 |
| 5" | 4823 | 5501 | 7252 | 9637 | 13449 | 16603 | 19373 | 21884 | 24203 | 28420 | 30367 | 32229 |
| 6" | 7465 | 8516 | 11226 | 14917 | 20818 | 25699 | 29988 | 33874 | 37464 | 43992 | 47006 | 49887 |
| 8" | 12444 | 14196 | 18713 | 24867 | 34704 | 42840 | 49989 | 56468 | 62452 | 73334 | 78359 | 83161 |
| 10" | 19376 | 22104 | 29137 | 38720 | 54036 | 66705 | 77836 | 87924 | 97241 | 114186 | 122009 | 129487 |
| 12" | 28560 | 32580 | 42947 | 57071 | 79648 | 98320 | 114728 | 129597 | 143331 | 168306 | 179836 | 190859 |

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WDS CAST IRON MODEL DIMENSIONS – inches / pounds

| Size | Threaded A | FLG A | B | Water Gauge C | | NPT Drain | | Threaded Weight | 125# FLG Weight |
|--------|---------------|----------|--------|---------------------|--------|-----------|-------|--------------------|--------------------|
| | | | | D | | Std. | Opt. | | |
| 3/4" | 5-1/2 | – | 9-1/4 | – | 4-1/8 | 3/4 | – | 14 | – |
| 1" | 6 | – | 9-1/4 | – | 4-3/4 | 1 | – | 16 | – |
| 1-1/4" | 6 | – | 9-1/4 | Opt. | 5-1/4 | 1 | 1-1/4 | 19 | – |
| 1-1/2" | 7-1/4 | – | 11-3/4 | Opt. | 5-7/8 | 1 | 1-1/2 | 29 | – |
| 2" | 8-1/8 | 10-3/4 | 13 | Opt. | 6-5/8 | 1 | 2 | 40 | 47 |
| 2-1/2" | 9-3/8 | 11-1/2 | 14-1/2 | 4-3/4 | 7-3/4 | 1 | 2 | 57 | 70 |
| 3 | 11-1/16 | 14-1/4 | 16-1/4 | 4-3/4 | 9-1/8 | 1-1/4 | 2-1/2 | 90 | 98 |
| 4 | – | 15-7/8 | 19-1/2 | 5-3/4 | 11-1/4 | 1-1/4 | 2-1/2 | – | 138 |
| 5 | – | 18-5/8 | 24-3/4 | 7-7/8 | 13-5/8 | 1-1/2 | 2-1/2 | – | 305 |

WDS CARBON STEEL MODEL DIMENSIONS – inches / pounds

| Size | Threaded, SW A | 150#, 300# FLG A | B | Cast C | Carbon C | D | G | NPT Drain | | Weight | | |
|--------|----------------------|------------------------|--------|-----------|-------------|--------|-------|-----------|-------|-----------------|-------------|-------------|
| | | | | | | | | Std. | Opt. | Threaded, SW | 150# FLG | 300# FLG |
| 1" | 6-3/8 | 10-1/2 | 10-1/2 | 12 | 16 | 5-9/16 | Opt. | 1 | 1-1/2 | 29 | 33 | 35 |
| 1-1/4" | 6-3/8 | 10-1/2 | 10-1/2 | 12 | 16 | 5-9/16 | Opt. | 1 | 1-1/2 | 30 | 35 | 37 |
| 1-1/2" | 7-5/8 | 11-1/2 | 12-1/2 | 14 | 19 | 6-5/8 | Opt. | 1 | 2 | 55 | 50 | 56 |
| 2" | 7-7/8 | 11-1/2 | 12-1/2 | 14 | 19 | 6-5/8 | Opt. | 1 | 2 | 57 | 55 | 59 |
| 2-1/2" | – | 16 | 15 | – | 22 | 8-5/8 | 5-3/4 | 1 | 2 | – | 100 | 110 |
| 3" | – | 18 | 18 | – | 26 | 10-3/4 | 5-3/4 | 1-1/2 | 2-1/2 | – | 140 | 150 |
| 4" | – | 20 | 22 | – | 31 | 12-3/4 | 5-3/4 | 1-1/2 | 2-1/2 | – | 195 | 220 |
| 5" | – | 22 | 26 | – | 36 | 14 | 7-7/8 | 1-1/2 | 2-1/2 | – | 230 | 290 |
| 6" | – | 24 | 30 | – | 41 | 16 | 7-7/8 | 1-1/2 | 2-1/2 | – | 350 | 380 |
| 8" | – | 28 | 37 | – | 50 | 18 | 7-7/8 | 2 | 3 | – | 475 | 610 |
| 10" | – | 34 | 55 | – | 70 | 24 | 7-7/8 | 2 | 3 | – | 780 | 1180 |
| 12" | – | 38 | 58 | – | 75 | 28 | 7-7/8 | 2-1/2 | 4 | – | 940 | 1510 |

