Moisture Separator for Air or Steam

WDS Series

Ductile Iron • Carbon Steel • Stainless Steel

Model	WDS (DI)	WDS (FS)	WDS (FSS)
Body Material	Ductile Iron	Carbon Steel	Stainless Steel
Sizes	3/4" thru 3"	1/2" thru 12"	
Connections	NPT, 150# Flanged	150# & 300# Flanged	
PMO Max. Operating Pressure	300 PSIG (NPT)	500 PSIG (300# FLG)	350 PSIG (300# FLG)
Pressure/ Temperature Rating	NPT: 300 PSIG @ 550°F 150# FLG: 200 PSIG @ 400°F	Carbon Steel 150# FLG:150 PSIG @ 550°F 300# FLG: 500 PSIG @ 650°F	Stainless Steel 150 PSIG @ 450°F 350 PSIG @ 650°F



WDS (DI)
Ductile Iron
(NPT Shown)
3/4" – 3"



WDS
Carbon Steel or
Stainless Steel
(FLG Only)
1/2" – 12"

Typical Applications

The **WDS Series Centrifugal Style Separators** are used for the removal of entrained liquid or particles from steam or air. Effective in applications where the system has entrained liquids of up to 40% by weight of the unit's flow capacity.

How It Works

Wet 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 its velocity. Separated liquid then falls below the cyclone drip plate where it cannot be re-entrained into the steam or air flow. Dry steam or air then flows upward and exits through the outlet of the separator.

Features

- Removes 99% of all particles ≥ 10 microns in size
- Minimum pressure drop
- Gauge ports available; See chart.
- ASME Code constructed

Sample Specification

Steam / Air Moisture Separator shall be "T" style for horizontal piping installations. Separator to be ASME code constructed in ductile iron, carbon steel, or stainless steel and available in FNPT and flanged connections.

Installation

The WDS Steam / Air 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 & thermostatic steam trap or liquid drainer (for air applications) is essential for proper operation.

MATERIALS	
WDS Cast (DI)	Ductile Iron
WDS Carbon Steel (FS)	Fabricated Carbon Steel
WDS Stainless Steel (FSS)	Fabricated Stainless Steel

PIPELINE ACCESSORIES

CAPACITIES — *Steam (lbs/hr)*

Size	Operating Pressure (PSIG) 5	10	25	50	100	150	200	250	300	400*	450*	500*
1/2", 3/4", 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

* For pressures 400 psig and above, use 300# Carbon Steel WDS only.

Ductile Iron

DI = Ductile Iron

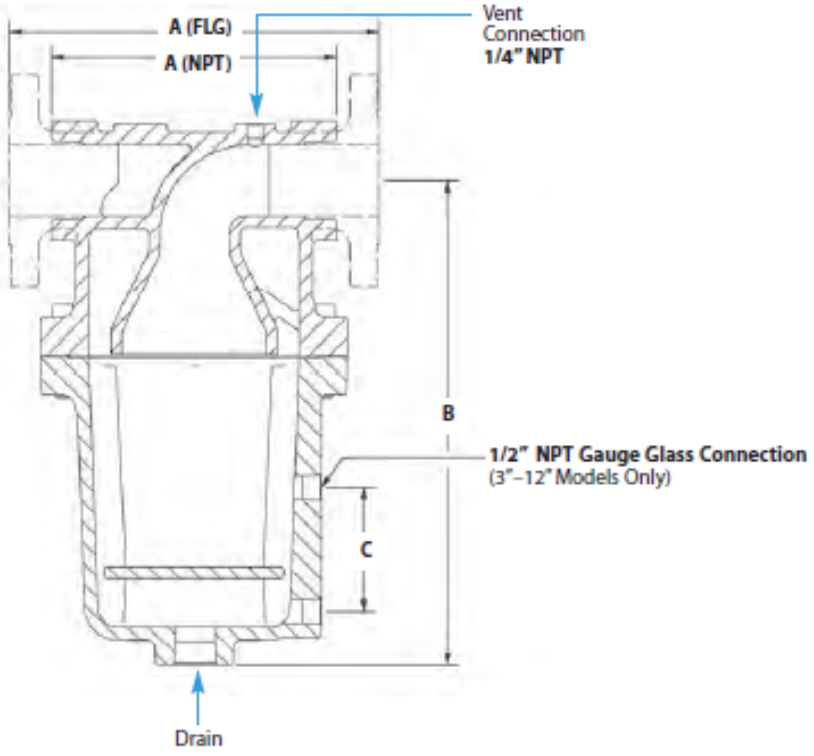
WDS (Ductile Iron)

WDS NPT DUCTILE IRON • DIMENSIONS – inches

Size (NPT)	Model Code	A	B	Vent NPT	Drain NPT	Gauge Centers C	Weight (lbs)
3/4"	WDS-13-N-DI	6	9 3/4	1/4	1	N/A	23
1"	WDS-14-N-DI	6	9 3/4	1/4	1	N/A	26
1 1/4"	WDS-15-N-DI	6	9 3/4	1/4	1	N/A	30
1 1/2"	WDS-16-N-DI	8 1/8	13 3/4	1/4	1	3 1/2	45
2"	WDS-17-N-DI	8 1/8	13 3/4	1/4	1	3 1/2	50
2 1/2"	WDS-18-N-DI	11	16 1/8	1/4	1 1/4	3 1/2	90
3"	WDS-19-N-DI	11	16 1/8	1/4	1 1/4	3 1/2	90

WDS FLANGED DUCTILE IRON • DIMENSIONS – inches

Size (Flanged)	Model Code	A	B	Vent NPT	Drain NPT	Gauge Centers C	Weight (lbs)
2"	WDS-17-F150-DI	10 1/2	13 3/4	1/4	1	3 1/2	50
3"	WDS-19-F150-DI	14	16 1/8	1/4	1 1/4	3 1/2	95



Carbon Steel • Stainless Steel

WDS
Fabricated Carbon Steel (FS)
or
Fabricated Stainless Steel (FSS)



FS = Fabricated Steel FSS = Fabricated Stainless Steel

Fabricated Separators

Size/Connection	Carbon Steel Model Code	Stainless Steel Model Code	Dimensions (inches) A	B	C	D	Drain (NPT)	lbs
150# Connections								
1/2" 150#	WDS-12-F150-FS	WDS-12-F150-FSS	10 1/2	12 1/2	18	6 5/8	1	30
3/4" 150#	WDS-13-F150-FS	WDS-13-F150-FSS	10 1/2	12 1/2	18	6 5/8	1	31
1" 150#	WDS-14-F150-FS	WDS-14-F150-FSS	11 1/2	12 1/2	18	6 5/8	1	33
1 1/2" 150#	WDS-16-F150-FS	WDS-16-F150-FSS	11 1/2	12 1/2	18	6 5/8	1	50
2" 150#	WDS-17-F150-FS	WDS-17-F150-FSS	11 1/2	12 1/2	18	6 5/8	1	55
2 1/2" 150#	WDS-18-F150-FS	WDS-18-F150-FSS	16	15	22	8 5/8	1	100
3" 150#	WDS-19-F150-FS	WDS-19-F150-FSS	18	18	26	10 3/4	1 1/2	140
4" 150#	WDS-20-F150-FS	WDS-20-F150-FSS	20	22	31	12 3/4	1 1/2	195
5" 150#	WDS-21-F150-FS	WDS-21-F150-FSS	22	26	36	12 3/4	1 1/2	230
6" 150#	WDS-22-F150-FS	WDS-22-F150-FSS	24	30	41	16	1 1/2	350
8" 150#	WDS-23-F150-FS	WDS-23-F150-FSS	28	37	51	18	2	475
10" 150#	WDS-24-F150-FS	WDS-24-F150-FSS	34	55	70	24	2	780
12" 150#	WDS-25-F150-FS	WDS-25-F150-FSS	38	58	75	28	2 1/2	940
300# Connections								
1/2" 300#	WDS-12-F300-FS	WDS-12-F300-FSS	10 1/2	12 1/2	18	6 5/8	1	32
3/4" 300#	WDS-13-F300-FS	WDS-13-F300-FSS	10 1/2	12 1/2	18	6 5/8	1	33
1" 300#	WDS-14-F300-FS	WDS-14-F300-FSS	11 1/2	12 1/2	18	6 5/8	1	35
1 1/2" 300#	WDS-16-F300-FS	WDS-16-F300-FSS	11 1/2	12 1/2	18	6 5/8	1	56
2" 300#	WDS-17-F300-FS	WDS-17-F300-FSS	11 1/2	12 1/2	18	6 5/8	1	59
2 1/2" 300#	WDS-18-F300-FS	WDS-18-F300-FSS	16	15	22	8 5/8	1	110
3" 300#	WDS-19-F300-FS	WDS-19-F300-FSS	18	18	26	10 3/4	1 1/2	150
4" 300#	WDS-20-F300-FS	WDS-20-F300-FSS	20	22	31	12 3/4	1 1/2	220
5" 300#	WDS-21-F300-FS	WDS-21-F300-FSS	22	26	36	12 3/4	1 1/2	290
6" 300#	WDS-22-F300-FS	WDS-22-F300-FSS	24	30	41	16	1 1/2	380
8" 300#	WDS-23-F300-FS	WDS-23-F300-FSS	28	37	51	18	2	610
10" 300#	WDS-24-F300-FS	WDS-24-F300-FSS	34	55	70	24	2	1180
12" 300#	WDS-25-F300-FS	WDS-25-F300-FSS	38	58	75	28	2 1/2	1510

Carbon Steel • Stainless Steel

