

WS Water Separators

High Efficiency Bulk Liquid Removal



Parker Zander Water Separators have been designed for the efficient removal of bulk liquid contamination from compressed air.

Today, many products are offered for the removal of bulk liquid from compressed air, however, these are often selected only upon their initial purchase cost, with little or no regard for the separation efficiency they provide or the cost of operation throughout their life.

Parker Zander Water Separators have been designed from the ground up with the key design focus in critical areas such as air flow management, separation efficiency at all flow conditions, minimal pressure losses and independently validated performance.

Typical applications include: bulk liquid removal at any point in a compressed air system, protection of refrigerated and desiccant dryer pre-filtration, liquid removal from compressor intercoolers/aftercoolers and liquid separation within refrigerated dryers.



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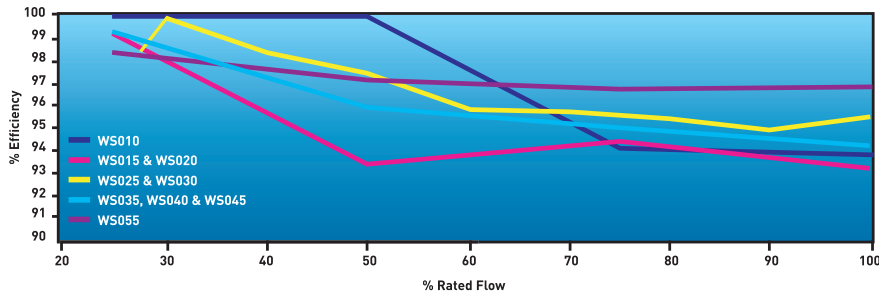
Benefits:

- Protects coalescing filters from bulk liquid contamination.
- Helps provide air quality in accordance with ISO 8573-1:2001 the international standard for compressed air quality.
- High liquid removal efficiencies at all flow conditions.
- Suitable for all compressed air applications.
- Suitable for all compressor types, including variable flow.
- The world's most energy efficient compressed air water separators.
- Low pressure losses for low operational costs.
- Low lifetime costs.
- All Parker Zander water separators are covered by a 10 year housing guarantee.
- Helps reduce the release of CO₂ into the environment.

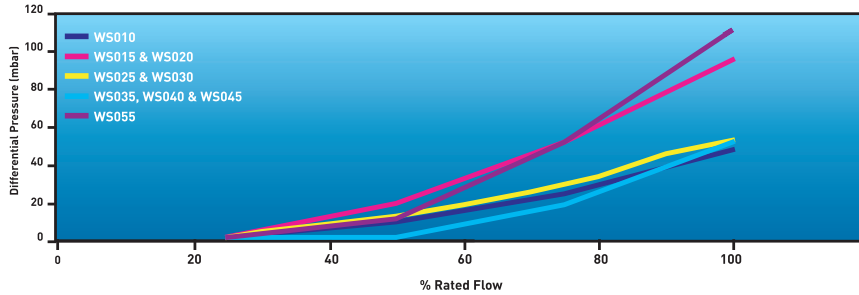


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Separation Efficiency (models 010 - 7200F)



Differential Pressure versus Flow (models 010 - 055)



Product Selection

Stated flows are for operation at 100 psi g (7 bar g) with reference to 68°F (20°C), 1 bar a, 0% relative water vapor pressure.

	Model	Pipe Size	cfm	m ³ /min	m ³ /hr	L/s
Cast Aluminum Range	WS010AN [F] X/US	1/4" NPT	21	0.6	36	10
	WS010BN [F] X/US	3/8" NPT	21	0.6	36	10
	WS010CN [F] X/US	1/2" NPT	21	0.6	36	10
	WS015BN [F] X/US	3/8" NPT	85	2.4	144	40
	WS020CN [F] X/US	1/2" NPT	85	2.4	144	40
	WS020DN [F] X/US	3/4" NPT	85	2.4	144	40
	WS020EN [F] X/US	1" NPT	85	2.4	144	40
	WS025DN [F] X/US	3/4" NPT	233	6.6	396	110
	WS030EN [F] X/US	1" NPT	233	6.6	396	110
	WS030FN [F] X/US	1 1/4" NPT	233	6.6	396	110
	WS030GN [F] X/US	1 1/2" NPT	233	6.6	396	110
	WS035FN [F] X/US	1 1/4" NPT	742	21	1260	350
	WS040GN [F] X/US	1 1/2" NPT	742	21	1260	350
	WS045HN [F] X/US	2" NPT	742	21	1260	350
	WS055IN [F] X/US	2 1/2" NPT	1695	48	2880	800
	WS055JN [F] X/US	3" NPT	1695	48	2880	800
Carbon Steel Range	WSA800F	3" Flg	1700	48.1	2888	802
	WSA1000F	4" Flg	2100	59.5	3568	991
	WSA1800F	6" Flg	3780	107.0	6422	1784
	WSA3000F	8" Flg	6300	178.4	10704	2973
	WSA4800F	10" Flg	10080	285.4	17126	4757
	WSA7200F	12" Flg	15120	428.2	25689	7136

Note: Connection sizes, (010 - 055) available with BSPT connections as option. □ Drain Option: F = Float Drain, N = No Drain
To correctly select a water separator model, the flow rate of the water separator must be adjusted for the minimum operating pressure of the system.

1. Obtain the minimum operating pressure and maximum compressed air flow rate at the inlet of the filter.
2. Select the correction factor for minimum operating pressure from the CFP table (always round down e.g. for 76.9 psi (5.3 bar), use 72.5 psi (5 bar) correction factor).
3. Calculate the minimum filtration capacity.
Minimum Filtration Capacity = Compressed Air Flow Rate x CFP
4. Using the minimum filtration capacity, select a water separator model from the flow rate tables above (water separator selected must have a flow rate equal to or greater than the minimum filtration capacity).

Correction Factors

Line Pressure		Correction Factor pressure (CFP)
psi g	bar g	
15	1	4.00
22	1.5	3.20
29	2	2.67
37	2.5	2.29
44	3	2.00
51	3.5	1.78
58	4	1.60
66	4.5	1.45
73	5	1.33
80	5.5	1.23
87	6	1.14
95	6.5	1.07
100	7	1.00
110	7.5	0.97
116	8	0.94
124	8.5	0.91
131	9	0.88
139	9.5	0.86
145	10	0.84
153	10.5	0.82
160	11	0.80
168	11.5	0.78
174	12	0.76
183	12.5	0.75
189	13	0.73
197	13.5	0.72
203	14	0.71
212	14.5	0.69
218	15	0.68
226	15.5	0.67
232	16	0.66
241	16.5	0.65
248	17	0.64
256	17.5	0.63
263	18	0.62
270	18.5	0.62
277	19	0.61
285	19.5	0.60
292	20	0.59

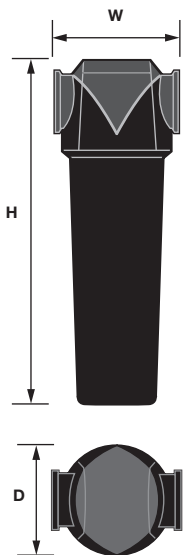
Technical Data

Grade	Water Separator Models	Min Operating Pressure		Max Operating Pressure		Min Operating Temp		Max Operating Temp	
		psi g	bar g	psi g	bar g	°F	°C	°F	°C
WS	010AN X/US - 055JN X/US	15	1	232	16	35	2	176	80
WSA	800F - 7200F	15	1	150	10.4	35	2	140	60

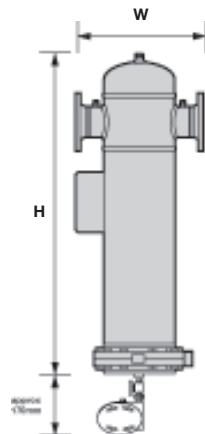
Weights and Dimensions

Model	Pipe Size	Height (H)		Width (W)		Depth (D)		Weight	
		ins	mm	ins	mm	ins	mm	lbs	kg
WS010AN X/US	1/4" NPT	7.2	181	3.0	76	2.5	64	1.3	0.6
WS010BN X/US	3/8" NPT	7.2	181	3.0	76	2.5	64	1.3	0.6
WS010CN X/US	1/2" NPT	7.2	181	3.0	76	2.5	64	1.3	0.6
WS015BN X/US	3/8" NPT	9.3	235	3.8	97	3.3	84	2.4	1.1
WS020CN X/US	1/2" NPT	9.3	235	3.8	97	3.3	84	2.4	1.1
WS020DN X/US	3/4" NPT	9.3	235	3.8	97	3.3	84	2.4	1.1
WS020EN X/US	1" NPT	9.3	235	3.8	97	3.3	84	2.4	1.1
WS025DN X/US	3/4" NPT	10.8	275	5.1	129	4.5	115	4.8	2.2
WS030EN X/US	1" NPT	14.3	364	5.1	129	4.5	115	5.9	2.7
WS030FN X/US	1 1/4" NPT	14.3	364	5.1	129	4.5	115	5.9	2.7
WS030GN X/US	1 1/2" NPT	14.3	364	5.1	129	4.5	115	5.9	2.7
WS035FN X/US	1 1/4" NPT	17	432	6.7	170	6.1	156	11.2	5.1
WS040GN X/US	1 1/2" NPT	20.6	524	6.7	170	6.1	156	12.5	5.7
WS045HN X/US	2" NPT	20.6	524	6.7	170	6.1	156	12.5	5.7
WS055IN X/US	2 1/2" NPT	32.8	832	8.1	205	7.1	181	30.6	13.9
WS055JN X/US	3" NPT	32.8	832	8.1	205	7.1	181	30.6	13.9
WSA800F	3" Flg	44	1118	14	356	-	-	112	50.8
WSA1000F	4" Flg	48	1219	19	483	-	-	180	81.6
WSA1800F	6" Flg	53	1346	22	559	-	-	257	116.6
WSA3000F	8" Flg	54	1372	29	737	-	-	554	251.3
WSA4800F	10" Flg	55	1397	29	737	-	-	711	322.5
WSA7200F	12" Flg	61	1549	39	991	-	-	913	414.1

WS010 - 055



WSA800F - 7200F



Water Separator Coding Example

WS010 - WS055

GRADE	MODEL	PIPE SIZE	CONNECTION TYPE	DRAIN OPTION	INCIDENT MONITOR OPTION
WS	3 digit code shown above	Letter denotes pipe size	N = NPT B = BSPT	F = Float N = No Drain	X = None
WS	010	A	N	F	X

} Example code

Optional Accessories



Parker Zander No Air Loss Drains
For higher efficiencies and lower energy costs

Other Filtration Products

- Compressed air filters
- Oil vapor removal filters
- Filters with working pressures to 725 psi g (50 bar g)
- Filters with working pressures to 5076 psi g (350 bar g)
- Alternative compressed air filter elements
- Oil/water separators
- Sterile air filtration
- Stainless steel filters
- Vacuum pump protection filters
- Vacuum pump exhaust filters
- Medical vacuum filters

For more information on extended warranty and preventative maintenance contract availability, please contact your local **Parker Zander** sales office or log on to www.zanderusa.com

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Catalog: ZWS-NA
Rev 001 NA 09/2011



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