

# OIL-X EVOLUTION

## WS Water Separators High Efficiency Bulk Liquid Removal



OIL-X EVOLUTION WS water separators have been designed for the efficient removal of bulk liquid contamination from compressed air.

Compressed air purification equipment must deliver uncompromising performance and reliability while providing the right balance of air quality with the lowest cost of operation. Many manufacturers offer products for the filtration and purification of contaminated compressed air, which are often selected only upon their initial purchase cost, with little or no regard for the air quality they provide, the cost of operation throughout their life or indeed their environmental impact. When purchasing purification equipment, delivered air quality, the overall cost of ownership and the equipment's environmental impact must always be considered.



### The Parker domnick hunter Design Philosophy

Parker domnick hunter has been supplying industry with high efficiency filtration and purification products since 1963. Our philosophy 'Designed for Air Quality & Energy Efficiency' ensures products that not only provide the user with clean, high quality compressed air, but also with low lifetime costs and reduced CO<sub>2</sub> emissions.



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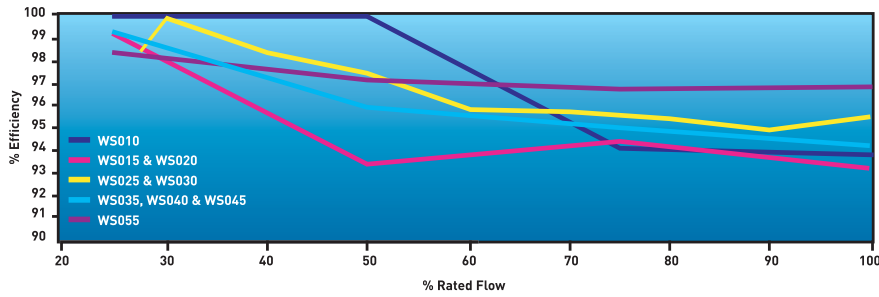
### Benefits:

- **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 OIL-X EVOLUTION water separators are covered by a 10 year housing guarantee.**
- **Helps reduce the release of CO<sub>2</sub> into the environment.**

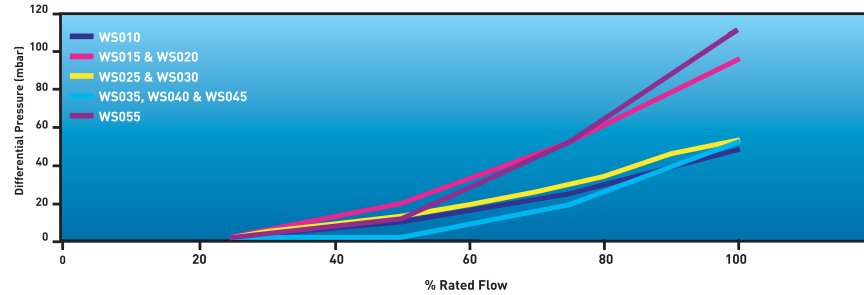


ENGINEERING YOUR SUCCESS.

## 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 <sup>3</sup> /min	m <sup>3</sup> /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
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

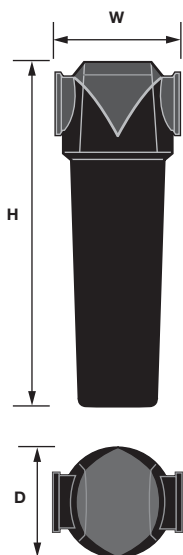
## Technical Data

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

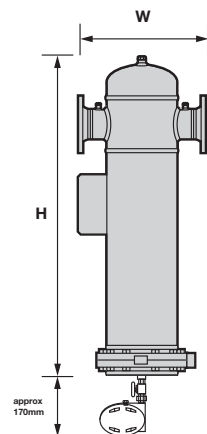
## Weights and Dimensions

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

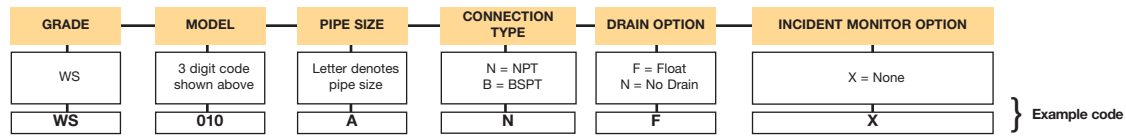


WSA800F - 7200F



# Water Separator Coding Example

WS010 - WS055



## Optional Accessories



**Filter Fixing Kits**  
Fixing clamp allows quick and simple connection of multiple filter housings.



**Filter Mounting Brackets**  
Mounting brackets provide additional support to filters installed in flexible piping systems or OEM equipment.

Filter Model	
005 - 010	FXKE1
015 - 020	FXKE2
025 - 030	FXKE3
035 - 045	FXKE4
050 - 055	FXKE5

Filter Model	
005 - 010	MBKE1
015 - 020	MBKE2
025 - 030	MBKE3
035 - 045	MBKE4
050 - 055	MBKE5

## 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