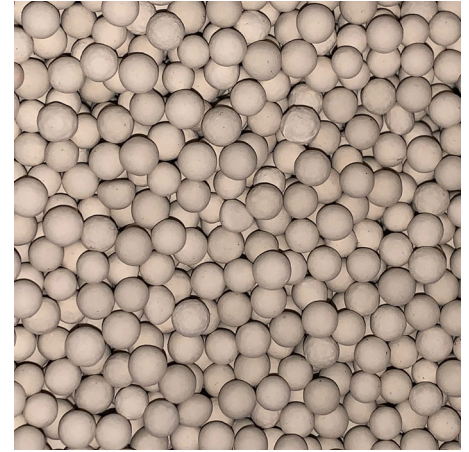


# Clean, Dry Compressed Air Vacuum Regeneration

WVM 40 - WVM 1450



## Adsorption Dryers

Whether a compressed air user wants to control the growth of micro-organisms (essential for direct and in-direct contact applications in the food, beverage & pharmaceutical industries), ensure air used for critical applications / instrumentation is free from water contamination or has external piping where low ambient temperature can cause condensation, adsorption dryers are the go to dryer technology.

There are many different adsorption dryer technologies available and whilst they all reduce water from the compressed air in the same way, they differ in the way they regenerate the desiccant material.

## Vacuum Regeneration Adsorption Dryers

Vacuum regeneration dryers do not use process air to regenerate the adsorbent desiccant material, instead they use ambient air for both regeneration and cooling (reducing energy consumption and process air loss).

For regeneration, the ambient air is heated and pulled across the desiccant bed using a vacuum pump. To cool the desiccant and ensure it is at the optimum temperature for adsorption, the heat source is simply removed, and the desiccant cooled to ambient temperature.

Vacuum regeneration dryers can be supplied with electric heaters or heat exchangers that utilise existing heat sources on site (steam, hot oil, etc.)



## Advantages

- Parker WVM dryers provide a constant outlet dewpoint in accordance with ISO8573-1 classes 1, 2 or 3 for water vapour
- Air purity is complemented by installing Parker OIL-X General Purpose & High Efficiency Coalescing pre-filtration and General Purpose Dry Particulate post filtration
- No process air is used during regeneration & cooling of the desiccant material, reducing energy consumption
- Regeneration under vacuum further improves energy efficiency
- Can utilise existing heat sources (eliminating need for electrical heater) to further reduce energy consumption
- Full feature electronic control with dewpoint display and Energy Saving Technology fitted as standard
- Large flow capacities



ENGINEERING YOUR SUCCESS.

## Dryer Performance

Dryer Models	Dewpoint (Standard)		ISO8573-1:2010 Classification (Standard)	Dewpoint (Option 1)		ISO8573-1:2010 Classification (Option 1)
	°C	°F		°C	°F	
<b>WVM</b>	-40	-40	Class 2.2.2	-20	-4	Class 2.3.2

ISO8573-1 Classifications when used with Parker domnick hunter OIL-X pre / post filtration

## Technical Data

Dryer Models	Minimum Operating Pressure		Maximum Operating Pressure		Minimum Operating Temperature		Maximum Operating Temperature		Maximum Ambient Temperature		Electrical Supply (Standard)	Electrical Supply (Optional)	Thread Type	Noise Level dB(A)
	bar g	psi g	bar g	psi g	°C	°F	°C	°F	°C	°F				
<b>WVM</b>	4	58	10	145	5	41	40	104	40	104	400V 3ph 50Hz	N/A	DIN Flange	<75

## Flow Rates

Model	Pipe Size	Inlet Flow Rate				Average Power kW
		L/s	m³/min	m³/hr	cfm	
<b>WVM 40</b>	DN 40	117	7.00	420	247	3
<b>WVM 50</b>	DN 40	142	8.50	510	300	4
<b>WVM 65</b>	DN 50	178	10.67	640	377	5
<b>WVM 85</b>	DN 50	236	14.17	850	500	7
<b>WVM 120</b>	DN 80	328	19.67	1180	695	8
<b>WVM 150</b>	DN 80	417	25.00	1500	883	11
<b>WVM 200</b>	DN 80	550	33.00	1980	1165	12
<b>WVM 235</b>	DN 100	653	39.17	2350	1383	16
<b>WVM 300</b>	DN 100	814	48.83	2930	1725	20
<b>WVM 355</b>	DN 100	986	59.17	3550	2090	24
<b>WVM 410</b>	DN 150	1139	68.33	4100	2413	28
<b>WVM 475</b>	DN 150	1317	79.00	4740	2790	30
<b>WVM 525</b>	DN 150	1458	87.50	5250	3090	32
<b>WVM 620</b>	DN 150	1725	103.50	6210	3655	44
<b>WVM 710</b>	DN 150	1972	118.33	7100	4179	47
<b>WVM 800</b>	DN 200	2222	133.33	8000	4709	56
<b>WVM 920</b>	DN 200	2556	153.33	9200	5415	63
<b>WVM 1080</b>	DN 200	3000	180.00	10800	6357	72
<b>WVM 1230</b>	DN 250	3417	205.00	12300	7240	84
<b>WVM 1450</b>	DN 250	4028	242.67	14500	8535	98

Stated flows are for operation at 7 bar (g) (102 psi g) with reference to 20°C, 1 bar (a), 0% relative water vapour pressure. For flows at other pressures, apply the correction factors shown below.

For correct operation, compressed air dryers must be sized using for the maximum (summer) inlet temperature, maximum (summer) ambient temperature, minimum inlet pressure, required outlet dewpoint and maximum flow rate of the installation.

Example: Outlet dewpoint required -40°C. Maximum inlet flow = 4095 m³/hr, at a minimum pressure of 9 bar g, and a maximum inlet temperature of 30 °C: The correction factor for those parameters (from the table below = 0.85) should be applied to the maximum inlet flow.

4095 m³/hr x 0.85 = 3481 m³/hr.

Using the flow rates table above, select a dryer model with a flow rate equal to or greater than 3481 m³/hr.

Model selected = WVM 355

Correction Factors	4 bar g (58 psi g)	5 bar g (73 psi g)	6 bar g (87 psi g)	7 bar g (102 psi g)	8 bar g (116 psi g)	9 bar g (131 psi g)	10 bar g (145 psi g)
30°C (86°F)	1.45	1.25	1.11	0.98	0.94	0.85	0.78
35°C (95°F)	2.27	1.61	1.25	1.00	0.95	0.86	0.78
40°C (104°F)	3.57	2.38	1.69	1.43	1.27	1.14	1.04

## Controller Functions

Dryer	Controller Function							
	Power On Indication	Visual Fault Indication	Dewpoint Display	EST - Energy Saving Technology	Filter Service Indicator	Dryer Service Indicator	Fault Relay: Power Loss Dewpoint Alarm Sensor Failure	4-20mA Dewpoint Re-transmission
<b>WVM</b>	•	•	•	•		•	•	•

## Quality Assurance / IP Rating / Pressure Vessel Approvals

<b>Development / Manufacture</b>	ISO 9001 / ISO 14001
<b>Ingress Protection Rating</b>	IP54 Indoor Use Only
<b>EU</b>	Pressure vessel approved for fluid group 2 in accordance with the Pressure Equipment Directive 2014/68/EU
<b>USA</b>	Approval to ASME VIII Div. 1 not required
<b>AUS</b>	Approval to AS1210 not required
<b>GUS</b>	TR (formerly GOST-R)
<b>For use with Compressed Air Only</b>	

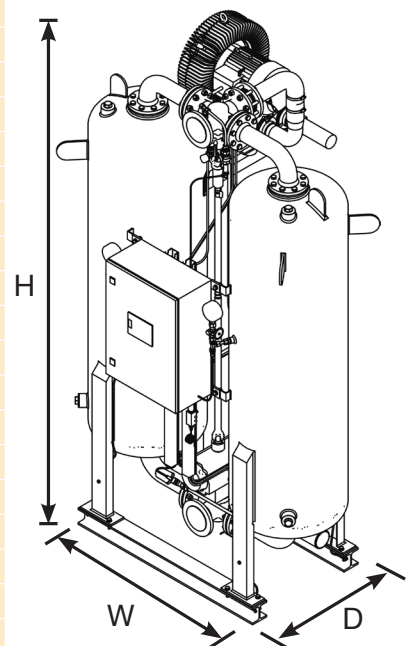
## Recommended Filtration

Model	Pipe Size	Dryer Inlet		Dryer Outlet		
		General Purpose Pre-filter	High Efficiency Filter	Oil Vapour Reduction Filter	General Purpose Dry Particulate Filter	High Efficiency Dry Particulate Filter
WVM 40	DN 40	AOP035GGFX	AAP035GGFX	-	AOP035GGMX	-
WVM 50	DN 40	AOP035GGFX	AAP035GGFX	-	AOP035GGMX	-
WVM 65	DN 50	AOP040HGFX	AAP040HGFX	-	AOP040HGMX	-
WVM 85	DN 50	AOP045IGFX	AAP045IGFX	-	AOP045IGMX	-
WVM 120	DN 80	AO065NDFX	AA065NDFX	-	AO065NDMX	-
WVM 150	DN 80	AO065NDFX	AA065NDFX	-	AO065NDMX	-
WVM 200	DN 80	AO065NDFX	AA065NDFX	-	AO065NDMX	-
WVM 235	DN 100	AO070ODFX	AA070ODFX	-	AO070ODMX	-
WVM 300	DN 100	AO070ODFX	AA070ODFX	-	AO070ODMX	-
WVM 355	DN 100	AO070ODFX	AA070ODFX	-	AO070ODMX	-
WVM 410	DN 150	AO075PDFX	AA075PDFX	-	AO075PDMX	-
WVM 475	DN 150	AO075PDFX	AA075PDFX	-	AO075PDMX	-
WVM 525	DN 150	AO075PDFX	AA075PDFX	-	AO075PDMX	-
WVM 620	DN 150	AO075PDFX	AA075PDFX	-	AO075PDMX	-
WVM 710	DN 150	AO080PDFX	AA080PDFX	-	AO080PDMX	-
WVM 800	DN 200	AO085QDFX	AA085QDFX	-	AO085QDMX	-
WVM 920	DN 200	AO085QDFX	AA085QDFX	-	AO085QDMX	-
WVM 1080	DN 200	AO085QDFX	AA085QDFX	-	AO085QDMX	-
WVM 1230	DN 250	AO090RDFX	AA090RDFX	-	AO090RDMX	-
WVM 1450	DN 250	AO090RDFX	AA090RDFX	-	AO090RDMX	-

Filtration Performance	General Purpose Pre-filter	High Efficiency Filter	Oil Vapour Reduction Filter	General Purpose Dry Particulate Filter	High Efficiency Dry Particulate Filter
Filtration Grade	Grade AO	Grade AA	-	Grade AO	-
Filtration Type	Coalescing	Coalescing	-	Dry Particulate	-
Particle Reduction (inc water & oil aerosols)	Down to 1 micron	Down to 0.01 micron	-	Down to 1 micron	-
Maximum Remaining Oil Aerosol Content at 21°C	≤0.5 mg/m <sup>3</sup> (≤0.5 ppm(w))	≤0.01 mg/m <sup>3</sup> (≤0.01 ppm(w))	-	N/A	-
Maximum Remaining Oil Vapour Content at System Temperature	N/A	N/A	-	N/A	-
Filtration Efficiency	99.925%	99.9999%	-	99.925%	-

## Weights & Dimensions

Model	Pipe Size	Dimensions (Dryer Only)						Weight (Dryer Only)	
		Height (H)		Width (W)		Depth (D)		kg	lbs
		mm	ins	mm	ins	mm	ins		
WVM 40	DN 40	2230	87.8	1140	44.9	990	39.0	770	1698
WVM 50	DN 40	2230	87.8	1140	44.9	990	39.0	770	1698
WVM 65	DN 50	2300	90.6	1260	49.6	1110	43.7	800	1764
WVM 85	DN 50	2300	90.6	1260	49.6	1110	43.7	800	1764
WVM 120	DN 80	2690	105.9	1460	57.5	1160	45.7	1150	2535
WVM 150	DN 80	2700	106.3	1540	60.6	1200	47.2	1300	2866
WVM 200	DN 80	2750	108.3	1605	63.2	1405	55.3	1650	3638
WVM 235	DN 100	2870	113.0	2025	79.7	1490	58.7	2000	4409
WVM 300	DN 100	2890	113.8	2050	80.7	1565	61.6	2250	4960
WVM 355	DN 100	2960	116.5	2160	85.0	1750	68.9	2650	5842
WVM 410	DN 150	3230	127.2	2430	95.7	1710	67.3	3250	7165
WVM 475	DN 150	3260	128.3	2490	98.0	1710	67.3	3650	8047
WVM 525	DN 150	3265	128.5	2550	100.4	1775	69.9	4050	8929
WVM 620	DN 150	3540	139.4	2570	101.4	1865	73.4	4700	10362
WVM 710	DN 150	3560	140.2	2635	103.7	1900	74.8	5050	11133
WVM 800	DN 200	3625	142.7	3085	121.5	2110	83.1	6450	14220
WVM 920	DN 200	3645	143.5	3125	123.0	2235	88.0	7500	16535
WVM 1080	DN 200	3710	146.1	3225	127.0	2285	90.0	8700	19180
WVM 1230	DN 250	4050	159.4	3475	136.8	2350	92.5	11900	26235
WVM 1450	DN 250	4200	165.4	3500	137.8	2380	93.7	15870	34987



# Parker Worldwide

## Europe, Middle East, Africa

**AE – United Arab Emirates,**  
Dubai

Tel: +971 4 8127100  
parker.me@parker.com

**AT – Austria,** St. Florian

Tel: +43 (0)7224 66201  
parker.austria@parker.com

**AZ – Azerbaijan,** Baku

Tel: +994 50 2233 458  
parker.azerbaijan@parker.com

**BE/NL/LU – Benelux,**

Hendrik Ido Ambacht  
Tel: +31 (0)541 585 000  
parker.nl@parker.com

**BG – Bulgaria,** Sofia

Tel: +359 2 980 1344  
parker.bulgaria@parker.com

**BY – Belarus,** Minsk

Tel: +48 (0)22 573 24 00  
parker.poland@parker.com

**CH – Switzerland,** Etoy

Tel: +41 (0)21 821 87 00  
parker.switzerland@parker.com

**CZ – Czech Republic,** Klecany

Tel: +420 284 083 111  
parker.czechrepublic@parker.com

**DE – Germany,** Kaarst

Tel: +49 (0)2131 4016 0  
parker.germany@parker.com

**DK – Denmark,** Ballerup

Tel: +45 43 56 04 00  
parker.denmark@parker.com

**ES – Spain,** Madrid

Tel: +34 902 330 001  
parker.spain@parker.com

**FI – Finland,** Vantaa

Tel: +358 (0)20 753 2500  
parker.finland@parker.com

**FR – France,** Contamine s/Arve

Tel: +33 (0)4 50 25 80 25  
parker.france@parker.com

**GR – Greece,** Piraeus

Tel: +30 210 933 6450  
parker.greece@parker.com

**HU – Hungary,** Budaörs

Tel: +36 23 885 470  
parker.hungary@parker.com

**IE – Ireland,** Dublin

Tel: +353 (0)1 466 6370  
parker.ireland@parker.com

**IL – Israel**

Tel: +39 02 45 19 21  
parker.israel@parker.com

**IT – Italy,** Corsico (MI)

Tel: +39 02 45 19 21  
parker.italy@parker.com

**KZ – Kazakhstan,** Almaty

Tel: +7 7273 561 000  
parker.easteurope@parker.com

**NO – Norway,** Asker

Tel: +47 66 75 34 00  
parker.norway@parker.com

**PL – Poland,** Warsaw

Tel: +48 (0)22 573 24 00  
parker.poland@parker.com

**PT – Portugal**

Tel: +351 22 999 7360  
parker.portugal@parker.com

**RO – Romania,** Bucharest

Tel: +40 21 252 1382  
parker.romania@parker.com

**RU – Russia,** Moscow

Tel: +7 495 645-2156  
parker.russia@parker.com

**SE – Sweden,** Spånga

Tel: +46 (0)8 59 79 50 00  
parker.sweden@parker.com

**SK – Slovakia,** Banská Bystrica

Tel: +421 484 162 252  
parker.slovakia@parker.com

**SL – Slovenia,** Novo Mesto

Tel: +386 7 337 6650  
parker.slovenia@parker.com

**TR – Turkey,** Istanbul

Tel: +90 216 4997081  
parker.turkey@parker.com

**UA – Ukraine,** Kiev

Tel: +48 (0)22 573 24 00  
parker.poland@parker.com

**UK – United Kingdom,** Warwick

Tel: +44 (0)1926 317 878  
parker.uk@parker.com

**ZA – South Africa,** Kempton Park

Tel: +27 (0)11 961 0700  
parker.southafrica@parker.com

## North America

**CA – Canada,** Milton, Ontario

Tel: +1 905 693 3000

**US – USA,** Cleveland

Tel: +1 216 896 3000

## Asia Pacific

**AU – Australia,** Castle Hill

Tel: +61 (0)2-9634 7777

**CN – China,** Shanghai

Tel: +86 21 2899 5000

**HK – Hong Kong**

Tel: +852 2428 8008

**IN – India,** Mumbai

Tel: +91 22 6513 7081-85

**JP – Japan,** Tokyo

Tel: +81 (0)3 6408 3901

**KR – South Korea,** Seoul

Tel: +82 2 559 0400

**MY – Malaysia,** Shah Alam

Tel: +60 3 7849 0800

**NZ – New Zealand,** Mt Wellington

Tel: +64 9 574 1744

**SG – Singapore**

Tel: +65 6887 6300

**TH – Thailand,** Bangkok

Tel: +662 186 7000

**TW – Taiwan,** Taipei

Tel: +886 2 2298 8987

## South America

**AR – Argentina,** Buenos Aires

Tel: +54 3327 44 4129

**BR – Brazil,** Sao Jose dos Campos

Tel: +55 800 727 5374

**CL – Chile,** Santiago

Tel: +56 2 623 1216

**MX – Mexico,** Toluca

Tel: +52 72 2275 4200



### EMEA Product Information Centre

Free phone: 00 800 27 27 5374

(from AT, BE, CH, CZ, DE, DK, EE, ES, FI, FR, IE, IL, IS, IT, LU, MT, NL, NO, PL, PT, RU, SE, SK, UK, ZA)

### US Product Information Centre

Toll-free number: 1-800-27 27 537

[www.parker.com/gsf](http://www.parker.com/gsf)