

PST Direct Expansion Refrigeration Dryers

Dryer Performance

Dryer Models	Dewpoint (Standard)		Dewpoint (Option 1)		Dewpoint (Option 2)	
	°C	°F	°C	°F	°C	°F
PST	+3	+37	+7	+45	+10	+50

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 Connections	Noise Level
	bar g	psi g	bar g	psi g	°C	°F	°C	°F	°C	°F				
PST 0120 - 1800	2	29	14	203	5	41	65	149	50	122	400V 3ph 50Hz	N/A	BSPP & DIN Flange	<75

Flow Rates

Model	Pipe Size	Inlet Flow Rate				Average Power kW
		L/s	m³/min	m³/hr	cfm	
PST 120	2"	200	12	720	424	1.13
PST 140	2"	233	14	840	494	1.14
PST 180	2"	300	18	1080	636	1.46
PST 220	2½"	367	22	1320	777	1.68
PST 260	2½"	433	26	1560	918	2.19
PST 300	2½"	500	30	1800	1059	2.41
PST 350	2½"	583	35	2100	1236	3.06
PST 460	DN100	767	46	2760	1625	3.14
PST 520	DN100	867	52	3120	1836	3.54
PST 630	DN100	1050	63	3780	2225	4.64
PST 750	DN150	1250	75	4500	2649	5.73
PST 900	DN150	1500	90	5400	3178	7.63
PST 1200	DN150	2000	120	7200	4238	8.92
PST 1500	DN200	2500	150	9000	5297	12.35
PST 1800	DN200	3000	180	10800	6357	15.96

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, 25°C cooling air temperature, 35 °C air inlet temperature and +3°C pressure dewpoint. All models supplied with refrigerant R407C.

For flows at other conditions, apply the correction factors shown below.

Product Selection & Correction Factors

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.

To select a dryer, first calculate the MDC (Minimum Drying Capacity) using the formula below then select a dryer from the flow rate table above with a flow rate equal to or above the MDC.

$$\text{Minimum Drying Capacity} = \text{System Flow} \times \text{CFMIT} \times \text{CFMAT} \times \text{CFMIP} \times \text{CFOD}$$

CFMIT - Correction Factor Maximum Inlet Temperature

Maximum Inlet Temperature	°C	25	30	35	40	45	50	55	60	65
	°F	77	86	95	104	113	122	131	140	149
Correction Factor		0.81	0.81	1.00	1.19	1.43	1.69	2.00	2.22	2.50

CFMAT - Correction Factor Maximum Ambient Temperature

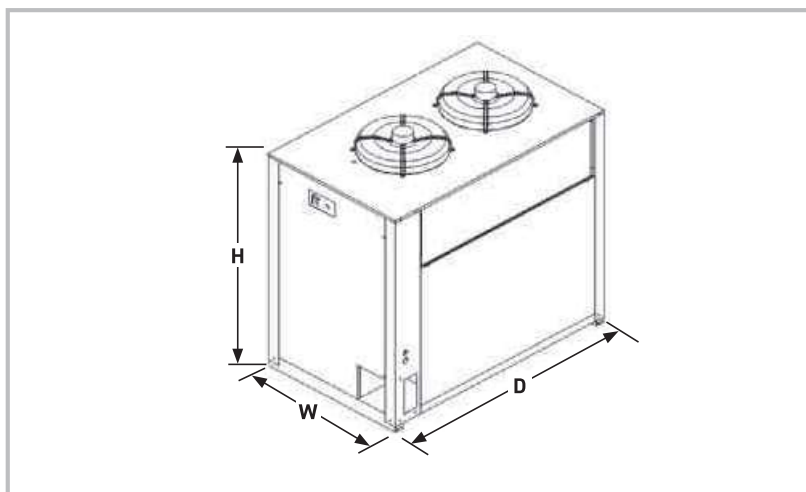
Maximum Ambient Temperature	°C	20	25	30	35	40	45	50
	°F	68	77	86	95	104	113	122
Correction Factor		0.94	1.00	1.05	1.11	1.20	1.30	1.39

CFMIP - Correction Factor Minimum Inlet Pressure

Minimum Inlet Pressure	bar g	3	4	5	6	7	8	9	10	11	12	13	14
	psi g	44	58	73	87	100	116	131	145	160	174	189	203
Correction Factor		1.35	1.20	1.11	1.04	1.00	0.96	0.93	0.93	0.90	0.89	0.88	0.87

CFOD - Correction Factor Outlet Dewpoint

Outlet Dewpoint	°C	+3	+5	+7	+10
	°F	+37	+41	+45	+50
Correction Factor		1.00	0.91	0.83	0.71



Weights & Dimensions

Model	Dimensions						Weight	
	Height (H)		Width (W)		Depth (D)			
	mm	ins	mm	ins	mm	ins	kg	lbs
PST 120	1064	41.9	706	27.8	1046	41.2	145	320
PST 140	1064	41.9	706	27.8	1046	41.2	145	320
PST 180	1064	41.9	706	27.8	1046	41.2	155	342
PST 220	1316	51.8	806	31.7	1166	45.9	230	507
PST 260	1316	51.8	806	31.7	1166	45.9	240	529
PST 300	1316	51.8	806	31.7	1166	45.9	245	540
PST 350	1316	51.8	806	31.7	1166	45.9	250	551
PST 460	1690	66.5	1007	39.6	1097	43.2	470	1036
PST 520	1722	67.8	1007	39.6	1097	43.2	490	1080
PST 630	1722	67.8	1007	39.6	1657	65.2	580	1279
PST 750	1722	67.8	1007	39.6	1657	65.2	670	1477
PST 900	1722	67.8	1007	39.6	1657	65.2	690	1521
PST 1200	2048	80.6	1007	39.6	1657	65.2	830	1830
PST 1500	2208	86.9	1007	39.6	2257	88.9	1100	2425
PST 1800	2208	86.9	1007	39.6	2257	88.9	1190	2623

Recommended Filtration

Pipe Size BSPP	Dryer Inlet	Dryer Outlet
	General Purpose Pre-Filter	High Efficiency Post Filter
2"	AOP040H	AAP040H
2"	AOP040H	AAP040H
2"	AOP045I	AAP045I
2½"	AOP050I	AAP050I
2½"	AOP055I	AAP055I
2½"	AOP055I	AAP055I
2½"	AOP055I	AAP055I
DN100	AO070O	AO070O
DN100	AO070O	AA070O
DN100	AO070O	AA070O
DN150	AO075P	AA075P
DN150	AO075P	AA075P
DN150	AO080P	AA080P
DN200	AO085Q	AA085Q
DN200	AO085Q	AA085Q

Parker Catalogue Numbers

Model	Catalogue Number 50Hz Air Cooled	Catalogue Number 50Hz Water Cooled
PST 120	PST120-A40035014EI	-
PST 140	PST140-A40035014EI	-
PST 180	PST180-A40035014EI	-
PST 220	PST220-A40035014EI	PST220-W40035014EI
PST 260	PST260-A40035014EI	PST260-W40035014EI
PST 300	PST300-A40035014EI	PST300-W40035014EI
PST 350	PST350-A40035014EI	PST350-W40035014EI
PST 460	PST460-A40035014EI	PST460-W40035014EI
PST 520	PST520-A40035014EI	PST520-W40035014EI
PST 630	PST630-A40035014EI	PST630-W40035014EI
PST 750	PST750-A40035014EI	PST750-W40035014EI
PST 900	PST900-A40035014EI	PST900-W40035014EI
PST 1200	PST1200-A40035014EI	PST1200-W40035014EI
PST 1500	PST1500-A40035014EI	PST1500-W40035014EI
PST 1800	PST1800-A40035014EI	PST1800-W40035014EI

Catalogue Number 60Hz Air Cooled	Catalogue Number 60Hz Water Cooled
PST130-A46036014EI	-
PST150-A46036014EI	-
PST250-A46036014EI	PST250-W46036014EI
PST280-A46036014EI	PST280-W46036014EI
PST340-A46036014EI	PST340-W46036014EI
PST390-A46036014EI	PST390-W46036014EI
PST490-A46036014EI	PST490-W46036014EI
PST560-A46036014EI	PST560-W46036014EI
PST700-A46036014EI	PST700-W46036014EI
PST840-A46036014EI	PST840-W46036014EI
PST1020-A46036014EI	PST1020-W46036014EI
PST1320-A46036014EI	PST1320-W46036014EI
PST1650-A46036014EI	PST1650-W46036014EI
PST1980-A46036014EI	PST1980-W46036014EI