FUSHENG

FR Series Dryer Selection

Compressed air refrigerant dryer capacity varies with inlet air temperature, ambient temperature and inlet air pressure.

To select the correct Fusheng FR Series dryer for your application:

1. Check that the operating temperatures and pressure do not exceed the maximum values stated in the perfomance specifications table.
2. Obtain the temperature correction factor, CF1, by selecting the value from the table corresponding to the application's inlet compressed air and ambient temperatures.
3. Obtain the pressure correction factor, CF2, by selecting the value from the table corresponding to the application's inlet compressed air pressure.
4. Calculate the corrected air flow capacity required by using the formula:

   Corrected Air Flow Capacity =
   Air Consumption ÷ (CF1 × CF2)

5. Refer again to the perfomance specifications table and select the dryer model with air flow capacity that exceeds the corrected air flow capacity.

Dryer selection example:

1. An application has a maximum compressed air consumption rate of 3.8 m^3/min, operating pressure of 1,000 kPa, inlet temperature of 40°C and ambient temperature of 35°C.
2. With reference to the perfomance specifications table, the operating temperatures and pressure do not exceed the maximum allowable values. Result OK.
3. The temperature correction factor, CF1, by lookup from its table is 0.78.
4. The pressure correction factor, CF2, by lookup from its table is 1.2.
5. Then by applying the capacity correction formula,

   Corrected Air Flow Capacity =
   3.8 m^3/min ÷ (0.78 × 1.2) = 4.1 m^3/min

6. The result is that the minimum size of dryer suitable for this application would be a Fusheng model FR030A, which has an air flow capacity of 4.4 m^3/min.

Performance Specifications

Dryer Model		FR005A	FR010A	FR020A	FR030A	FR050A	FR075A	FR100A
Air Flow Capacity	m^3/min (cfm)	0.6 (21.2)	1.2 (42.4)	2.4 (84.8)	4.4 (155)	7.0 (247)	11.0 (388)	14.0 (494)
Inlet Air Temperature	°C	35 Nominal / 50 Maximum						
Ambient Temperature	°C	32 Nominal / 40 Maximum						
Inlet Air Pressure	kPa (psi)	700 (102) Nominal / 1,000 (145) Maximum						

Temperature Correction Factor (CF1)

		Maximum Inlet Temperature (°C)			
		35	40	45	50
Ambient Temperature (°C)	32	1	0.82	0.7	0.45
	35	0.96	0.78	0.65	0.43
	40	0.9	0.7	0.55	0.37

Pressure Correction Factor (CF2)

Minimum Inlet Pressure (kPa)	200	300	400	500	600	700	800	900	1,000
Correction Factor	0.67	0.73	0.8	0.87	0.93	1	1.07	1.13	1.2

Glenco Air & Power Pty Ltd I ABN 21101370085 I 21 Resource Street, Parkinson QLD 4115 I Australia
tel 07 3386 9999 I **fax** 07 3386 9988 I **email** sales@glencomfg.com.au I **www**.glencoairpower.com.au