

# Ingersoll-Rand®

## ThermoSorb Desiccant Air Dryers



# Why dry compressed air?

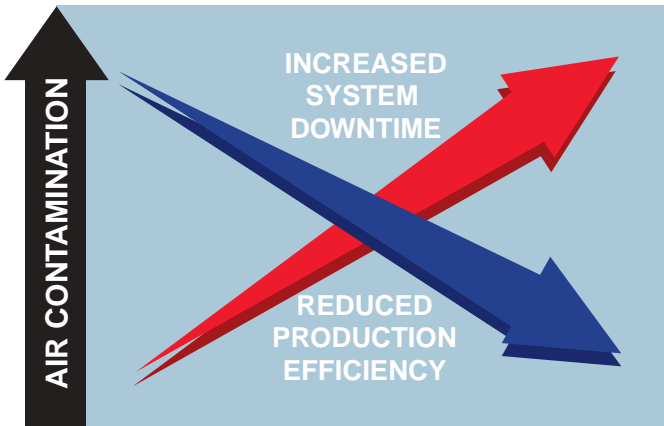
## Contamination Reduces Efficiency

The air we breathe contains contamination in the form of water vapour and airborne particles.

During the compression process an air compressor concentrates these contaminants and depending on the design and age will even add to the contamination in the form of oil carry over.

Modern air compressors generally have built in aftercoolers that reduce the discharge temperature of the compressed air and with the help of water separators, remove the bulk of liquid water.

In some applications this may be sufficient, but the remaining dirt and moisture content suspended in aerosol form, can, if not removed, damage the compressed air system and cause product spoilage.



The result - higher overall cost of operation.

These problems can be avoided with the correct selection and application of compressed air filters and dryers from Ingersoll-Rand.



Corrosion



Spoiled paint finish



Damaged tools

The Air Solutions Group at Ingersoll-Rand has the widest selection of products and application knowledge to protect your investment and your compressed air system.

- Filters
- Condensate management
- Cooling systems
- Refrigeration dryers
- Desiccant dryers
- Piping systems

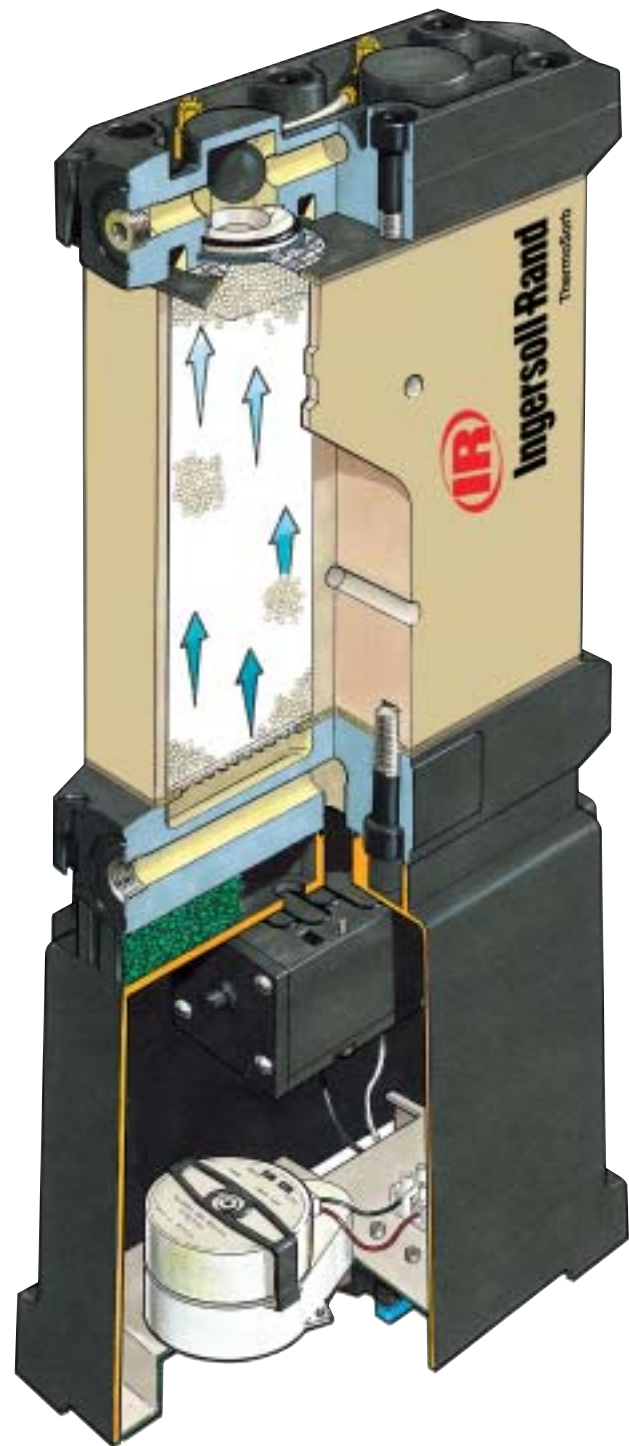
# ThermoSorb -The 'Drier' Solution

## Benefits

- **Highest Quality Air**  
Clean oil-free and dry compressed air always
- **Compact & Lightweight**  
Ideal for terminal use
- **Reduced Noise Pollution**  
Quiet operation
- **Energy Efficient**  
Gives maximum savings
- **Easy & Flexible Installation**  
Minimal space required
- **Simple Maintenance**  
Giving reduced downtime
- **Maximum Protection**  
Corrosion inhibited and dry powder epoxy painted for maximum protection.

## Features:

- Control system fully protected.
- Simple bolt on pre- and after Ingersoll-Rand high efficiency filters can be directly mounted left or right or diagonally opposing one another.
- Can be wall (TzM007 - TzM025) or floor mounted.
- Column outlet pressure gauges (TzM007 - TzM050 only).
- Modern and attractive appearance.
- Constant dewpoint.
- Snow storm filled to prevent fluidisation and channelling. This ensures even flows through the columns and maximises the use of desiccant.
- Long desiccant life.
- Simple operation valves.
- Reliable control and monitoring.



## Options:

- -70°C (-100°F) dewpoint option available on selected models.
- Pneumatic operation.

## Technical Specifications

Model	Inlet Temperature	Nominal Flow Rates*													
		4 bar g (60 psi g)		5 bar g (75 psi g)		6 bar g (90 psi g)		7 bar g (100 psi g)		8 bar g (115 psi g)		9 bar g (130 psi g)		10 bar g (145 psi g)	
		m <sup>3</sup> /min	cfm	m <sup>3</sup> /min	cfm	m <sup>3</sup> /min	cfm	m <sup>3</sup> /min	cfm	m <sup>3</sup> /min	cfm	m <sup>3</sup> /min	cfm	m <sup>3</sup> /min	cfm
TZM001	To 35°C (95°F)	0.05	1.9	0.06	2.2	0.07	2.6	0.08	3	0.09	3.4	0.10	3.7	0.11	4.1
TZM002	To 35°C (95°F)	0.10	3.8	0.12	4.5	0.15	5.3	0.17	6	0.19	6.8	0.21	7.5	0.23	8.3
TZM004	To 35°C (95°F)	0.23	8.2	0.27	9.7	0.32	11.4	0.36	13.0	0.41	14.7	0.46	16.2	0.50	18
TZM007	To 35°C (95°F)	0.45	16	0.53	19	0.62	22	0.68	24	0.80	28	0.87	31	0.96	34
TZM009	To 35°C (95°F)	0.56	20	0.68	24	0.80	28	0.90	32	1.01	36	1.13	40	1.24	44
TZM011	To 35°C (95°F)	0.73	26	0.87	31	1.01	36	1.18	42	1.33	47	1.47	52	1.61	57
TZM015	To 35°C (95°F)	0.93	33	1.10	39	1.30	46	1.50	53	1.67	59	1.86	66	2.06	73
TZM018	To 35°C (95°F)	1.13	40	1.35	48	1.61	57	1.84	65	2.06	73	2.29	81	2.52	89
TZM025	To 35°C (95°F)	1.55	55	1.86	66	2.18	77	2.49	88	2.80	99	3.11	110	3.42	121
TZM030	To 35°C (95°F)	1.86	66	2.20	78	2.60	92	3.00	106	3.34	118	3.73	132	4.13	146
TZM037	To 35°C (95°F)	2.26	80	2.71	96	3.22	114	3.68	130	4.13	146	4.58	162	5.04	178
TZM050	To 35°C (95°F)	3.11	110	3.73	132	4.36	154	4.98	176	5.60	198	6.22	220	6.85	242

Model	Dimensions in mm (inches)							Pipe Con.	Weight Kg (lbs)	Optional Inlet Filter	Recomm. Inlet Filter	Recomm. Outlet Filter	Filter Con.
	A	B	C	D	E	F	G						
TZM001	370 (14.8)	189 (7.3)	159 (6.1)	154 (6.06)	92 (3.5)	65 (2.6)	168 (6.6)	G¼	5 (11.9)	GP19	HE19	DP19	G¼
TZM002	465 (18.5)	279 (11.0)	159 (6.1)	154 (6.06)	92 (3.5)	65 (2.6)	168 (6.6)	G¼	7 (14.3)	GP19	HE19	DP19	G¼
TZM004	705 (28)	519 (20.5)	159 (6.1)	154 (6.06)	92 (3.5)	65 (2.6)	168 (6.6)	G¼	9 (20.2)	GP19	HE19	DP19	G¼
TZM007	690 (27.2)	372 (14.6)	250 (9.8)	248 (9.76)	150 (5.9)	106 (4.2)	298 (6.6)	G½	25 (54)	GP64	HE64	DP64	G½
TZM009	856 (33.7)	538 (21.1)	250 (9.8)	248 (9.76)	150 (5.9)	106 (4.2)	298 (6.6)	G½	30 (66)	GP64	HE64	DP64	G½
TZM011	1021 (40.2)	703 (27.6)	250 (9.8)	248 (9.76)	150 (5.9)	106 (4.2)	298 (6.6)	G½	36 (78)	GP64	HE64	DP64	G½
TZM015	1186 (46.7)	868 (34.9)	250 (9.8)	248 (9.76)	150 (5.9)	106 (4.2)	298 (6.6)	G½	41 (91)	GP64	HE64	DP64	G½
TZM018	1530 (60.2)	1083 (42.5)	266 (10.4)	260 (10.26)	200 (7.9)	106 (4.2)	401 (15.8)	G¾	52 (114)	GP123	HE123	DP123	G¾
TZM025	1763 (69.4)	1331 (52.2)	266 (10.4)	260 (10.26)	200 (7.9)	106 (4.2)	401 (15.8)	G¾	60 (132)	GP123	HE123	DP123	G¾
TZM030	1400 (55.1)	918 (36.1)	526 (20.7)	520 (20.47)	200 (7.9)	106 (4.2)	451 (17.7)	G¾	90 (198)	GP123	HE123	DP123	G¾
TZM037	1566 (61.6)	1084 (41.9)	526 (20.7)	520 (20.47)	200 (7.9)	106 (4.2)	451 (17.7)	G¾	100 (220)	GP216	HE216	DP216	G1
TZM050	1814 (71.4)	1332 (52.4)	526 (20.7)	520 (20.47)	200 (7.9)	106 (4.2)	451 (17.7)	G¾	120 (264)	GP216	HE216	DP216	G1

**Important NOTE:**  
Size the dryer 1 bar g (145 psi g) below the system pressure of the compressor.  
e.g. with a 7 bar g (100 psi g) compressor, size the dryer at 6 bar g (90 psi g).

**Dewpoint** -40°C (-40°F) Nominal, -70°C (-100°F) Optional (If -70°C pdp option required, divide the compressor system flow by a flow factor of 0.7)

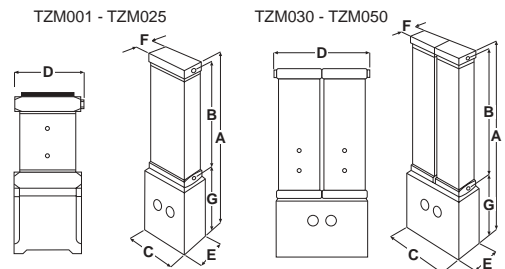
**Working Pressure** Minimum 4 bar g (58 psi g)  
Maximum 10.5 bar g (152 psi g)

**Inlet Temperature** Minimum 5°C (41°F)  
Maximum 50°C (122°F)

**Ambient Temperature** Minimum 2°C (36°F)  
Maximum 46°C (115°F)

**Standard Voltage** 240/1/50

\* Referenced to 20°C (68°F) and 1 bar a (14.5 psi a)  
† It is recommended that a GP pre-filter should be used in addition to the HE filter.  
All dryers conform to ISO 8573.1  
Air Quality Class (Dry/Water/Oil) 1.1.1 and 1.2.1



### Correct Dryer Selection

1. Select your correction factor for maximum temperature (CFT) to dryer inlet .

Maximum Temperature to Inlet of Dryer	°C	25	35	40	45	50
	°F	77	95	104	113	122
Correction Factor	(CFT)	1.0	1.0	0.97	0.88	0.73

2. Calculate dryer capacity required following the equation below.

$$\frac{\text{Inlet flow requirement}}{\text{CFT}} = \text{Dryer capacity requirement}$$

Ingersoll-Rand air compressors are not designed, intended, or approved for breathing air. Compressed air should not be used for breathing air applications unless treated in accordance with all applicable codes and regulations.

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