

Platform **TRF Evolution**

TRF DX W/Z



WATER CONDENSED PERIMETER MOUNTED UNITS FOR DATA CENTERS

TRF DX W > 24-165 kW

TRF DX Z > 28-185 kW



TRF DX W units are water-condensed perimeter-mounted cabinets that use Dry Cooler water. The TRF units of this series are "monobloc" units inside which **the entire cooling circuit is concentrated**. Cooling is via a **brazed-plate exchanger made of stainless steel AISI 304**.

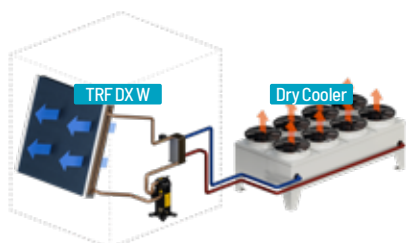
TRF DX Z units are water-condensed perimeter-mounted cabinets that use low temperature mains water or groundwater (15°C). The TRF units of this series are "monobloc" units inside which **the entire cooling circuit is concentrated**. Cooling is via a **brazed-plate exchanger made of stainless steel AISI 304**.



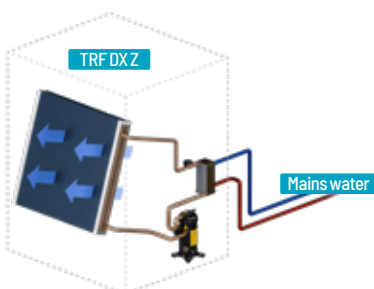
Easier scheduled maintenance

The unit has been painstakingly designed to ensure frontal access to components even with the units running. This makes **routine maintenance easier in full compliance with safety standards**.

WATER CONDENSED



MAINS WATER CONDENSED



Efficiency

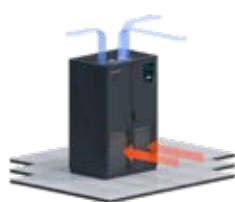
The performance, reliability and efficiency of HiRef units are guaranteed **by using the best quality components and by cleverly designed internal and external layouts**.

Dual circuit

Double-circuit versions are already available at low power levels. This solution offers **maximum unit redundancy and ensures continuity of service, more precise refrigerating power and less absorption for partial Data Center loads**.

- Refrigerant R410A or R513A
- EC Fans
- Scroll on/off compressors
- Temperature control through heating and post-heating systems with electric heating elements, hot water and hot gas (optional)
- Humidity control through dehumidification and humidification (optional)
- Low temperature kits for optimal operation in the case of installation in particularly cold environments (on request)
- Broad choice of accessories, including base modules and plenums for ducting
- Air filter class G3 as standard. Air Filters G4, M5, F7 (optional)
- Double power supply with automatic switch (optional)
- Constant-flow (airflow control) or constant available overpressure (ΔP control) ventilation modulation (optional)
- Electronic expansion valves (optional)

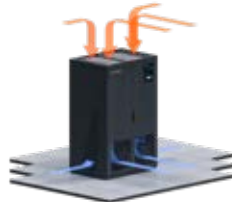
AIRFLOW CONFIGURATIONS



Upflow



Downflow



Displacement



Safety in the server room

All models in the TRF DX W range feature heat exchange coils with hydrophilic coating as standard. This special coating - together with an adequate selection of air through-flow speeds - **aids condensate collection during the dehumidification process, preventing any dripping on the inside and outside of the unit.**

Green

HiRef is constantly striving to find refrigerants with an ever decreasing environmental impact.

The use of ASHRAE class A1, non-toxic and non-flammable refrigerants is essential in close control applications.

TRF DX W		0241	0261	0291	0331	0361	0391	0441	0481	0521	0382	0432	0492	0532	0602	0632	0682	0762	0802	0872	0962	1204	1304	
R410A - Indoor air 30°C - 35% / Water 40°C - 45°C																								
Cooling capacity	kW	28.4	31.4	34.2	4.0	42.1	46.8	50.2	56.9	61.2	45.3	52.5	57.4	63.9	70.1	76.3	81.5	89.2	95.6	105.1	111.7	138.4	150.3	
Total absorbed power	kW	6.9	7.3	8.4	8.8	9.7	10.8	12.1	12.9	14.3	10.7	12.3	14	14.7	17	17.9	19.7	22.2	24	26.6	29.4	35.2	39	
EER		5	5.22	4.74	5.69	5.32	5.16	4.84	5.52	5.23	5.64	5.46	5.05	5.32	4.89	5.46	5.18	4.88	5.27	5.06	4.75	4.71	4.54	
SHR		1	1	1	1	0.99	1	1	1	1	0.98	1	0.98	1	1	1	1	1	1	1	1	1	1	
R410A - Indoor air 35°C - 30% / Water 40°C - 45°C																								
Cooling capacity	kW	31.3	34.8	37.8	44.5	46.8	51.7	55.4	63.2	68	49.9	57.9	63.6	70.6	77.6	84.3	90.4	98.8	106.3	116	122.6	153.1	165.1	
Total absorbed power	kW	6.9	7.1	8.3	8.6	9.5	10.7	12	12.8	14.2	10.7	12.3	14	14.4	16.8	17.6	19.4	22.1	23.7	26.4	29.2	34.9	38.6	
EER		5.53	5.91	5.31	6.47	6.05	5.79	5.4	6.23	5.88	6.22	6.03	5.59	5.99	5.47	6.15	5.86	5.45	5.95	5.65	5.24	5.27	5.04	
SHR		1	1	1	0.99	1	1	1	1	1	0.95	1	1	1	1	1	1	1	1	1	1	1	0.99	
R513A - Indoor air 30°C - 35% / Water 40°C - 45°C																								
Cooling capacity	kW	26.5	29.6	32	37.8	42.5	-	-	46.4	-	-	51.8	57.8	62	-	72.8	80.7	-	87.2	-	-	103.3	122.6	
Total absorbed power	kW	6.5	7.4	8.2	9.7	11.2	-	-	12	-	-	13	14.8	16.1	-	19	22	-	24.1	-	-	27.6	34.3	
EER		5.16	4.9	4.69	4.85	4.55	-	-	5.04	-	-	5.09	4.84	4.66	-	4.82	4.48	-	4.8	-	-	5	4.48	
SHR		1	1	1	1	1	-	-	0.99	-	-	1	1	1	-	1	1	-	1	-	-	1	1	
R513A - Indoor air 35°C - 30% / Water 40°C - 45°C																								
Cooling capacity	kW	29.8	33.1	35.8	42.3	47.5	-	-	52.5	-	-	58	64.5	69.1	-	81.4	90.4	-	98	-	-	116	137.1	
Total absorbed power	kW	6.6	7.5	8.3	9.8	11.4	-	-	12.2	-	-	13.1	14.9	16.3	-	19.2	22.2	-	24.4	-	-	27.9	34.6	
EER		5.71	5.41	5.18	5.35	5.03	-	-	5.6	-	-	5.63	5.33	5.13	-	5.32	4.94	-	5.3	-	-	5.54	4.96	
SHR		0.99	0.99	0.99	1	0.99	-	-	1	-	-	0.98	1	1	-	1	1	-	1	-	-	1	1	
Rated air flow	m³/h	8800			11800				15500							19900			25300			32100		
Power supply	V/ph/Hz	400/3+N/50																						
Number of circuits		1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	
Lp @ nominal rpm; dist.=2m Q=2	db(A)	61	62	63	66	66	67	67	71	71	71	71	71	71	71	66	66	66	69	69	69	66	66	
Dimensions [LxHxD]	mm	1010x2000x890			1270x2000x890				1760x2000x890							2020x2000x890			2510x2000x890			3160x2000x960		
TRF DX Z		0241	0261	0291	0331	0361	0391	0441	0481	0521	0382	0432	0492	0532	0602	0632	0682	0762	0802	0872	0962	1204	1304	
R410A - Indoor air 30°C - 35% / Water 15°C - 30°C																								
Cooling capacity	kW	32.1	35.3	38.3	45.2	47.3	52.3	56.6	64.2	68.9	52	59.8	65	71.3	77.7	84.9	90.3	99	106.9	117.9	125.1	155.2	169.3	
Total absorbed power	kW	5.4	5.1	6.1	6.2	6.9	7.7	8.7	9.4	10.6	8.5	9.7	10.9	10.5	12.5	13.1	14.5	16.5	17.5	19.7	22.1	25.3	27.9	
EER		7.78	9.14	7.92	10.24	9.25	8.88	8.14	9.5	8.64	8.97	8.55	7.86	9.07	7.9	9.22	8.55	7.89	9.21	8.52	7.72	8	7.69	
SHR		0.99	1	1	1	0.98	1	1	1	1	0.99	1	1	1	1	1	1	1	1	1	1	1	0.97	
R410A - Indoor air 35°C - 30% / Water 15°C - 30°C																								
Cooling capacity	kW	35.5	38.6	42	49.9	52.1	57.4	62.1	70.3	75.6	57.4	65.9	72	78.3	85.3	93.7	99.8	108.8	118.1	130.1	137.3	170.3	184.7	
Total absorbed power	kW	5.4	4.8	5.8	5.8	6.6	7.3	8.5	9.1	10.4	8.4	9.7	10.9	10.1	12.1	12.6	14	15.9	16.7	19.1	21.6	24.4	27.2	
EER		8.59	10.7	9.12	12.24	10.88	10.35	9.25	10.88	9.8	9.92	9.39	8.7	10.56	9.05	10.87	9.96	9.1	10.93	9.81	8.71	9.19	8.68	
SHR		1	0.98	1	1	0.99	1	1	0.98	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
R513A - Indoor air 30°C - 35% / Water 15°C - 30°C																								
Cooling capacity	kW	29.3	32.7	35.4	41.8	47.2	-	-	51.6	-	-	57	63.7	68.1	-	80.5	88.7	-	97.3	-	-	115.3	136.6	
Total absorbed power	kW	5.4	6.1	6.7	7.8	8.9	-	-	9.8	-	-	10.7	12	13.1	-	15.4	17.7	-	19.6	-	-	22.6	27.4	
EER		7.3	6.97	6.72	7.11	6.71	-	-	7.38	-	-	7.28	6.96	6.64	-	7	6.46	-	7.13	-	-	7.39	6.68	
SHR		0.99	1	1	1	1	-	-	1	-	-	0.98	1	1	-	1	1	-	1	-	-	1	1	
R513A - Indoor air 35°C - 30% / Water 15°C - 30°C																								
Cooling capacity	kW	32.7	36.4	39.3	46.8	52.2	-	-	57.6	-	-	63.9	70.6	75.6	-	89.1	98.6	-	108.3	-	-	128.4	152.2	
Total absorbed power	kW	5.5	6.2	6.8	7.9	9.1	-	-	9.9	-	-	10.8	12.2	13.3	-	15.6	17.9	-	19.8	-	-	22.9	27.7	
EER		8.02	7.61	7.34	7.77	7.27	-	-	8.1	-	-	8.01	7.58	7.24	-	7.62	7.07	-	7.8	-	-	8.07	7.33	
SHR		0.98	1	1	1	0.98	-	-	0.99	-	-	1	1	1	-	1	1	-	1	-	-	0.99	1	
Rated air flow	m³/h	8800			11800				15500							19900			25300			32100		
Power supply	V/ph/Hz	400/3+N/50																						
Number of circuits		1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	
Lp @ nominal rpm; dist.=2m Q=2	db(A)	61	62	63	66	66	67	67	71	71	71	71	71	71	71	66	66	66	69	69	69	66	66	
Dimensions [LxHxD]	mm	1010x2000x890			1270x2000x890				1760x2000x890							2020x2000x890			2510x2000x890			3160x2000x960		

Also available with 60 Hz power supply. | Height of model Displacement 2250 mm.