

# HEAT PUMP MULTIFUNCTIONAL

## TRIBUS NATURAL H INV 4 kW-40 kW



# TRIBUS NATURAL H INV

## NEW CONCEPT and NEW DESIGN

OPTIMIZED  
FINNED COIL

LARGER FAN

NOISE  
REDUCTION

HIGH EFFICIENCY  
SOUND ABSORBING  
THERMAL GROUP  
ON FLOATING FRAME



### 2-PIPES

- ✓ DHW
- 3-WAY MANAGEMENT
- ✓ CHILLER
- ✓ HEAT PUMP

### 4-PIPES

- ✓ CHILLER
- ✓ HEAT RECOVERY
- ✓ HEAT PUMP

## NEW AND EXTENDED RANGE

7 SIZES 4 kW - 40 kW - 2/4 PIPES INV  
HEATING CAPACITY

TAGLIE TRIBUS		8-10	11-15		16-20	20-25	24-30	27-35	30-40
☀ (A7W35)	kW	10	15	15	20	25	30	35	40
☀ (A35W7)	kW	8	11	11	16	20	24	27	30
⚡	V	230	230	400	400	400	400	400	400
Lunghezza	mm	1265	1565	1565	1828	1828	2076	2076	2076
Larghezza	mm	620	620	620	660	660	712	712	712
Altezza	mm	995	995	995	1293	1293	1353	1353	1353
Peso 2T	kg	161	181	181	303	303	370	370	370
Peso 4T	kg	173	190	190	317	317	387	387	387



### Increasing total efficiency (TER)

Air to water heat pump for air conditioning and priority production of domestic hot water in single or combined cycle by recovering waste energy in chiller mode thus increasing total efficiency (TER)



### Domestic Hot Water (DHW)

TRIBUS can produce DHW all over the year and in any operating mode.



### Environmentally friendly refrigerant R290

(GWP=0,02) with Inverter controlled brushless rotary compressor (BLDC) to guarantee maximum efficiency.



### Hot water production up to 70°C

For a very wide range of applications. External air temperature up to -20°

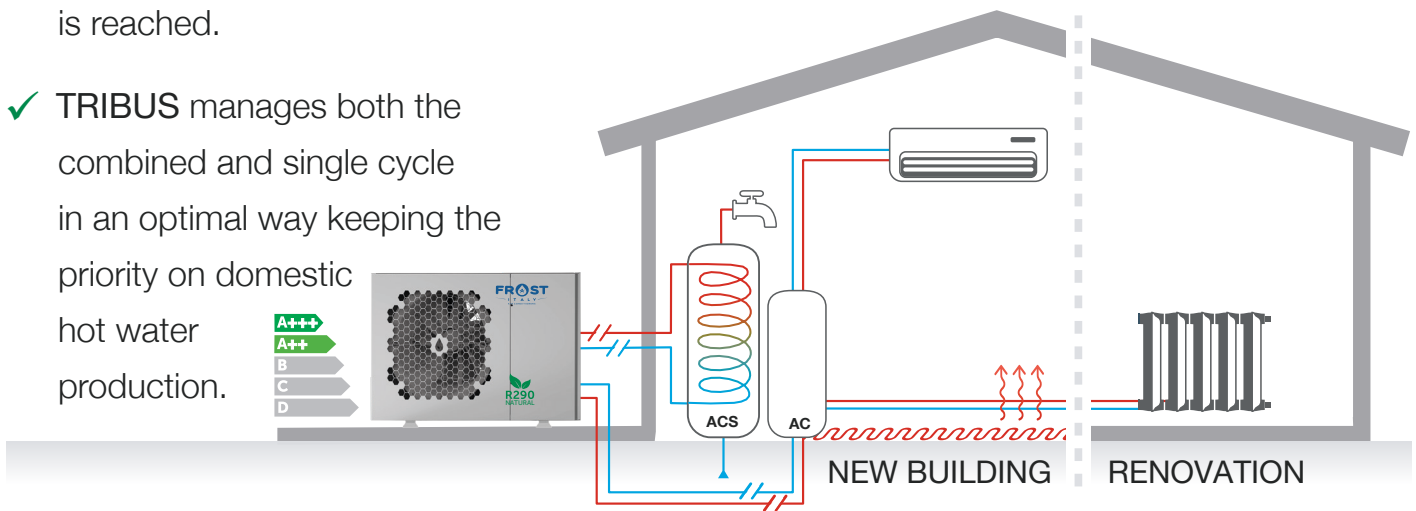
\*GWP AR6 0,02



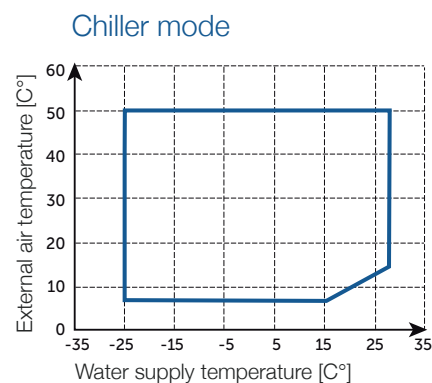
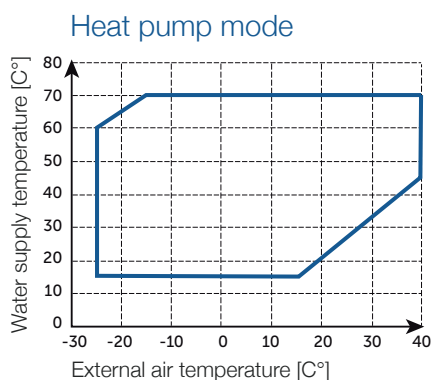
### NO INTEGRATION OF ELECTRIC RESISTANCE

Included in many competitor units and necessary to obtain 70°C of domestic water.

- ✓ 4-pipes TRIBUS, unlike the 2-pipes version, separates the conditioning water circuit from the domestic hot water circuit.
- ✓ DHW pump is **activated during** hot water production and until the desired temperature is reached.
- ✓ TRIBUS manages both the combined and single cycle in an optimal way keeping the priority on domestic hot water production.



## ENVELOPE IN HEATING AND COOLING MODE



## STANDARD COMPONENTS

- ✓ Galvanised sheet metal frame painted RAL7037PB
- ✓ Inverter driven brushless twin rotary compressor (BLDC)
- ✓ Variable speed electronic fan (EC fan)
- ✓ Finned coil with hydrophilic surface treatment
- ✓ Brazed plate heat exchanger for both conditioning and domestic hot water
- ✓ Rubber bell vibration dampers
- ✓ External flow switch

TRIBUS SIZE		8-10 230V	11-15 230V	11-15 400V	16-20 400V	20-25 400V	24-30 400V	27-35 400V	30-40 400V	
Compressor type		BLDC Rotary Compressor								
Electrical supply voltage	V/f	230V/50Hz			400V/50Hz					
	ph	1ph+N+PE		3ph+N+PE	3ph+PE					
Maximum absorbed power	kW	3,9	5,9	5,7	8,9	9,6	12,2	13,2	14,2	
Maximum absorbed current	A	14	22	214	16	18	22	26	30	
<b>SEASONAL PERFORMANCE (average climate)</b>										
SCOP (low temperatures, 35°C)		4.90	4.46	4.46	4.58	4.64	4.94	4.51	4.49	
Seasonal efficiency heating $\eta_{s,h}$ (35°C)	%	193	175	175	180	183	195	177	177	
Energy efficiency class (35°C)		A+++	A+++	A+++	A+++	A+++	A+++	A+++	A+++	
SCOP (medium temperatures 55°C)		3.90	3.72	3.72	3.55	3.68	3.93	3.65	3.65	
Seasonal efficiency heating $\eta_{s,h}$ (55°C)	%	153	146	146	139	144	154	143	143	
Energy efficiency class (55°C)		A+++	A++	A++	A++	A++	A+++	A++	A++	
SEER (low temperatures, 7°C)		3.91	3.39	3.39	4.12	4.17	3.88	3.98	3.62	
Seasonal efficiency cooling $\eta_{s,h}$ (7°C)	%	153	133	133	162	164	152	156	142	
ESEER		4.37	4.00	4.00	4.60	4.3	4.25	4.11	4.29	
<b>HEATING MODE (A7W35)</b>										
Maximum heating capacity	kW	10.13	15.81	15.81	21.15	25.43	30.48	35.07	40.69	
Minimum heating capacity	kW	5.01	5.14	5.14	9.09	9.22	11.30	11.23	11.35	
Nominal heating capacity	kW	7.66	11.7	11.7	15.91	19.32	23.3	25.36	29.11	
Nominal absorbed power	kW	1.54	2.68	2.68	3.1	3.91	4.92	5.16	6.47	
COP @ nominal conditions		4.96	4.37	4.37	5.12	4.95	4.73	4.91	4.5	
Minimum partialization	%	49	33	33	43	36	37	32	28	
<b>HEATING/DHW MODE (A7W70)</b>										
Maximum heating capacity	kW	9.10	11.70	11.70	17.38	20.09	25.25	25.95	26.53	
Minimum heating capacity	kW	4.26	4.39	4.39	6.96	7.47	9.08	8.89	9.13	
Nominal heating capacity	kW	6.78	10.61	10.61	12.74	16.44	20.91	22.58	26.53	
Nominal absorbed power	kW	2.51	4.28	4.28	4.99	6.42	8.57	8.98	11.35	
COP @ nominal conditions		2.70	2.48	2.48	2.55	2.56	2.44	2.52	2.34	
<b>COOLING MODE (A35W7)</b>										
Maximum cooling capacity	kW	7.88	11.57	11.57	16.35	19.62	22.84	26.47	29.81	
Minimum cooling capacity	kW	4.14	4.49	4.49	7.48	7.25	9.02	9.02	8.99	
Nominal cooling capacity	kW	6.11	9.49	9.49	12.98	14.94	17.88	19.59	21.94	
Nominal absorbed power	kW	1.9	3.19	3.19	3.46	4.72	5.58	6.35	8.06	
EER @ nominal conditions		3.22	2.97	2.97	3.75	3.17	3.21	3.09	2.72	
<b>COMBINED MODE (DHW W55 - COOLING W18)</b>										
Domestic hot water capacity	kW	13.43	21.33	21.33	26.26	31.92	40.75	45.12	52.72	
Cooling capacity	kW	10.29	15.27	15.27	20.28	24.38	30.98	33.87	37.95	
COP		4.28	3.52	3.52	4.38	4.23	4.17	4.01	3.57	
EER		3.28	2.52	2.52	3.38	3.23	3.17	3.01	2.57	
TER		7.56	6.04	6.04	7.76	7.46	7.34	7.02	6.14	
<b>DHW WATER CIRCUIT DATA</b>										
Water flow rate	m³/h	1.59	2.46	2.46	3.23	3.88	5.11	5.67	6.48	
Water pressure drop	kPa	9.34	20.73	20.73	20.2	28.18	20.25	24.47	31.17	
Heat exchanger type		Braze Plate Heat Exchanger								
Hydraulic connections - thread diameter		ISO G 1"			ISO G 1.1/4"		ISO G 1.1/2"			
<b>A/C WATER CIRCUIT DATA</b>										
Water flow rate	m³/h	1.68	2.61	2.61	3.52	4.25	5.32	5.9	6.73	
Water pressure drop	kPa	11.09	24.65	24.65	25.29	35.62	23.37	28.19	35.83	
Heat exchanger type		Braze Plate Heat Exchanger								
Hydraulic connections - thread diameter		ISO G 1"			ISO G 1.1/4"		ISO G 1.1/2"			
<b>SOUND DATA</b>										
Sound power	dB(A)	70	69	69	74	74	74	75	75	
Sound pressure @ 10 m in open field	dB(A)	42	41	41	46	46	46	47	47	

\*GWP AR6 0,02



**FROST ITALY S.r.l.** has been **designing** and **producing special units** for air conditioning and cooling systems with **low environmental impact** for over 45 years.



**The mission**  
Design and produce systems to satisfy customer requests in a functional, reliable and eco-friendly way.



It develops **innovative customized solutions** to satisfy special requests for size, power, yield and temperature.



**Applications:**

- Residential
- Hospital
- Airport
- Marine
- Hotel
- Data center
- Buildings
- Production processes