NEW

TWA 202÷1352 VV/H/A

A CLASS ENERGY EFFICIENCY AIRCOOLED LIQUID CHILLERS WITH AXIAL FANS, (INVERTER) SCREW COMPRESSORS AND SHELL AND TUBE EXCHANGER.

idroinverter

FROM 197 KW TO 1353 KW.

The TWA 202÷1352 VV/H/A units in A CLASS energy efficiency, with **HFO-R1234ze** refrigerant, are designed to provide an effective solution to highly selective system needs. The latest generation refrigerant HFO-R1234ze, with GWP<1 (Global Warming Potential), is the most environmentally sustainable refrigerant on the market, and meets the strictest international environmental regulations. The innovative heat exchangers, traditional or Microchannel, the Screw compressors and the new design optimized in every detail ensure the reach of the highest efficiency. Furthermore, accessories as the Inverter control on one or both Screw compressors, fans and on circulating pumps (EC Inverter) are also available for getting the highest efficiency at part load. The super silenced versions, obtained through acoustic insulation on compressors and on whole structure and wider exchangers, are particularly suitable for installations where extremely quiet operation are essential for the ideal execution of the system.
Are available as option the new EC Inverter fans with high available static pressure and efficiency.

The units are already compliant to ErP 2021 European Regulations if provided with EC accessory (EC Inverter fans).

VERSION

TWA
Cooling only
TWA/MC
Cooling only with MICROCHANNEL condensing coils
TWA/SSL
Super silenced cooling only
TWA/MC/SSL
Super silenced cooling only with MICROCHANNEL condensing coils

FEATURES

- Self-supporting galvanized steel frame protected with additional protection achieved via polyester powder painting.
- Screw compressors with built-in oil separator, suction filter, crankcase heater, oil sight glass, thermal protection and stepless capacity steps.
- Axial fans directly coupled to an electric motor with external rotor.
- Condenser made of copper tube and aluminum finned coils or aluminium MICROCHANNEL coils.
- Shell and tube evaporator with two independent circuits on the refrigerant side and one on the water side, complete with water differential pressure switch.
- Cooling circuit shut-off valves on discharge and liquid line.
- Electronic expansion valve.
- Electronic high and low pressure gauges.
- HFO-R1234ze refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses, thermal protection relays for compressors and thermocontacts for fans.
- Condensing Control is included: electronic proportional device that ensures efficient and continuous functioning of the unit with outside air temperature down to 0 °C. It also allows to reduce the sound level especially at night. It consists of a fans speed controller with continuous speed regulation and high and low pressure transducers on cooling circuit.
- Microprocessor control and regulation system.

ACCESSORIES

FACTORY FITTED ACCESSORIES:

IM	Automatic circuit breakers
SL	Unit silencement
CC	Condensing control down to -20 °C
BT	Low water temperature kit
EC	EC Inverter fans
ECH	EC Inverter fans with high available static pressure
HR	Desuperheater
HRT/S	Total heat recovery in series
HRT/P	Total heat recovery in parallel
TX	Coil with pre-coated fins
TXB	Coil with epoxy treatment
EW	External water connections
SP	Inertial tank
PU	Single circulating pump
PUI	Inverter single circulating pump
PD	Double circulating pump
PDI	Inverter double circulating pump
SPU	Inertial tank and single circulating pump
SPUI	Inertial tank and Inverter single circulating pump
SPD	Inertial tank and double circulating pump
SPDI	Inertial tank and Inverter double circulating pump
FE	Antifreeze heater for evaporator
FX	Antifreeze heater for evaporator and pipes
FB	Antifreeze heater for evaporator/tank
FQ	Antifreeze heater on evaporator/tank and pipes
FZ	Antifreeze heater for evaporator, single pump and pipes
FH	Antifreeze heater for evaporator, double pump and pipes
FU	Antifreeze heater for evaporator/tank, single pump and pipes
FD	Antifreeze heater for evaporator/tank, double pump and pipes
II	Inverter on one compressor
ID	Inverter on all compressors
SS	Soft start
WM	Web Monitoring - Wireless remote monitoring (GPRS/EDGE/3G/TCP-IP)
IS	Modbus RTU protocol, RS485 serial interface
ISB	BACnet MSTP protocol, RS485 serial interface
ISBT	BACnet TCP/IP protocol, Ethernet port
ISL	LonWorks protocol, FTT-10 serial interface
IAV	Remote set-point, 0-10 V signal
IAA	Remote set-point, 4-20 mA signal
IAS	Remote signal for second set-point activation
IDL	Demand limit from digital input
CP	Potential free contacts

LOOSE ACCESSORIES:

MN	High and low pressure gauges
CR	Remote control panel
RP	Coils protection metallic guards
FP	Coils protection metallic guards with filter
AG	Rubber shock absorbers
AM	Spring shock absorbers
FL	Flow switch

TECHNICAL DATA - TWA 202÷1352 VV/H/A

MODEL			202	262	312	362	412	472	552
Cooling STD version	Cooling capacity (1)	kW	197	261	309	366	406	464	548
	Absorbed power (1)	kW	63	83	98	116	129	147	168
	EER (1)		3.13	3.14	3.15	3.16	3.15	3.16	3.26
Cooling STD version (EN14511)	Cooling capacity (1)	kW	197	260	308	365	405	463	547
	Absorbed power (1)	kW	63	84	99	117	130	149	169
	EER (1)		3.13	3.10	3.11	3.12	3.12	3.11	3.24
	ESEER		3.88	3.92	4.09	3.98	4.24	4.20	4.24
	EUROVENT Class		A	A	A	A	A	A	A
	SEER (2)		3.81	3.84	4.01	3.89	4.15	4.10	4.17
	Energy Efficiency (2)	%	149	151	157	153	163	161	164
Cooling MC version	Cooling capacity (1)	kW	197	261	309	366	406	464	548
	Absorbed power (1)	kW	62	81	96	114	126	144	165
	EER (1)		3.18	3.22	3.22	3.21	3.22	3.22	3.32
Cooling MC version (EN14511)	Cooling capacity (1)	kW	197	260	308	365	405	463	547
	Absorbed power (1)	kW	62	82	97	115	127	146	166
	EER (1)		3.18	3.17	3.18	3.17	3.19	3.17	3.30
	ESEER		4.00	4.04	4.21	4.10	4.37	4.33	4.37
	EUROVENT Class		A	A	A	A	A	A	A
	SEER (2)		3.92	3.96	4.13	4.01	4.27	4.23	4.30
	Energy Efficiency (2)	%	154	155	162	157	168	166	169
Compressor	Quantity	n°	2	2	2	2	2	2	2
	Refrigerant circuits	n°	2	2	2	2	2	2	2
	Capacity steps	n°	Stepless						
Evaporator	Water flow	l/s	9.41	12.47	14.76	17.49	19.40	22.17	26.18
	Pressure drops	kPa	39	37	32	34	31	28	37
	Water connections	DN	125	125	150	150	150	150	150
Electrical characteristics	Power supply	V/Ph/Hz	400/3/50						
	Max. running current	A	203	275	319	355	413	467	512
	Max. starting current	A	291	417	488	586	642	723	783
Unit with tank and pump	Pump available static pressure	kPa	155	185	180	155	140	180	160
	Tank water volume	l	2000	2000	2000	2000	2000	2000	2000
	Water connections	DN	100	100	100	100	125	125	150
Sound pressure	STD version (3)	dB(A)	75	76	76	77	77	78	78
	With SL accessory (3)	dB(A)	72	73	73	74	74	75	75
	SSL version (3)	dB(A)	67	68	68	69	69	70	70
Weights	Transport weight (4)	Kg	2700	3215	3540	4015	4120	4625	5165
	Operating weight (4)	Kg	2790	3300	3670	4180	4280	4820	5430

MODEL			612	722	812	982	1062	1232	1352
Cooling STD version	Cooling capacity (1)	kW	608	717	809	980	1064	1228	1353
	Absorbed power (1)	kW	189	223	249	300	333	379	422
	EER (1)		3.22	3.22	3.25	3.27	3.20	3.24	3.21
Cooling STD version (EN14511)	Cooling capacity (1)	kW	606	714	806	978	1061	1224	1348
	Absorbed power (1)	kW	191	225	251	302	336	383	427
	EER (1)		3.17	3.17	3.21	3.24	3.16	3.20	3.16
	ESEER		4.22	4.24	4.25	4.26	4.19	4.20	4.18
	EUROVENT Class		A	A	A	A	A	A	A
	SEER (2)		4.16	4.17	4.17	4.18	4.11	4.14	4.11
	Energy Efficiency (2)	%	163	164	164	164	161	163	161
Cooling MC version	Cooling capacity (1)	kW	608	717	809	980	1064	1228	1353
	Absorbed power (1)	kW	185	219	244	294	326	371	414
	EER (1)		3.29	3.27	3.32	3.33	3.26	3.31	3.27
Cooling MC version (EN14511)	Cooling capacity (1)	kW	606	714	806	978	1061	1224	1348
	Absorbed power (1)	kW	187	221	246	296	329	375	418
	EER (1)		3.24	3.23	3.28	3.30	3.22	3.26	3.22
	ESEER		4.35	4.37	4.38	4.39	4.32	4.33	4.31
	EUROVENT Class		A	A	A	A	A	A	A
	SEER (2)		4.28	4.30	4.30	4.31	4.23	4.26	4.23
	Energy Efficiency (2)	%	168	169	169	169	166	168	166
Compressor	Quantity	n°	2	2	2	2	2	2	2
	Refrigerant circuits	n°	2	2	2	2	2	2	2
	Capacity steps	n°	Stepless						
Evaporator	Water flow	l/s	29.05	34.26	38.65	46.82	50.84	58.67	64.64
	Pressure drops	kPa	33	40	42	30	38	47	54
	Water connections	DN	150	200	200	200	200	250	250
Electrical characteristics	Power supply	V/Ph/Hz	400/3/50						
	Max. running current	A	597	670	731	764	831	951	1039
	Max. starting current	A	896	947	1091	1206	1244	1450	1494
Unit with tank and pump	Pump available static pressure	kPa	145	160	140	120	170	180	155
	Tank water volume	l	3000	3000	3000	-	-	-	-
	Water connections	DN	150	150	150	-	-	-	-
Sound pressure	STD version (3)	dB(A)	78	80	81	82	82	84	84
	With SL accessory (3)	dB(A)	75	77	78	79	79	81	81
	SSL version (3)	dB(A)	70	72	73	74	74	76	76
Weights	Transport weight (4)	Kg	5260	6240	7460	8995	9435	11230	11560
	Operating weight (4)	Kg	5520	6570	7880	9500	9910	11800	12190

DIMENSIONS

MODEL			202	262	312	362	412	472	552	612	722	812	982	1062	1232	1352
L	STD	mm	4400	5000	5000	5550	5550	6700	6700	6700	8900	10050	11100	12250	13400	13400
	SSL	mm	5000	5550	5550	6700	6700	8900	8900	8900	10050	11100	12250	13400	-	-
W	STD-SSL-MC-MC/SSL	mm	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
H	STD	mm	2100	2100	2100	2100	2100	2100	2100	2100	2100	2550	2550	2550	2550	2550
	SSL	mm	2100	2100	2100	2100	2100	2100	2100	2100	2550	2550	2550	2550	-	-

CLEARANCE AREA

TWA 202÷1352 VV/H/A

500	1800	1000	1800

Electrical board side

NOTES

1. Chilled water from 12 to 7 °C, ambient air temperature 35 °C.
2. Seasonal energy efficiency of cooling at low temperature. According to EU Regulation n. 2016/2281.
3. Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
4. Unit without tank and pump.

N.B. Weights of SSL versions are specified on technical brochure.
N.B. Data of MC versions are specified on technical brochure.