

AWECO *COMPRESSOR TECHNICAL OVERVIEW*



*COMMERCIAL
REFRIGERATION*

HEAT PUMP

AWECO Key compressor range - typical applications

Page	AWECO Series	Refrigerant	Control	Typical Application
2	QXER	R134a	On/Off	Heat pump - Sanitary water tank
6	QXDR	R290	On/Off	Heat pump - Sanitary water tank
8	QXD	R290	On/Off	Refrigeration + Air conditioning
10	ATz	R410A	Inverter	Heat pump - Ground water

QXER Compressor Series

GENERAL SPECIFICATION

- Application: Heat Pump - Sanitary Water / Dehumidifier / Refrigeration medium temperature
- Net supply: 230V/1Ph/50Hz
- Refrigerant: R134a
- Control: On/Off

PERFORMANCE DATA - R134A

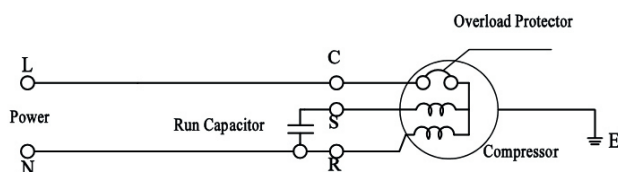
Model ¹⁾	Displacement [cm ³]	Cooling Capacity ²⁾ [W]	Power Input ²⁾ [W]	Heating Capacity ²⁾ [W]	COP Heating ²⁾	Sound Power ²⁾ [dB(A)]	Max. Ref. Charge [g]
QXER-B109 E150	10,9	1250	440	1690	3,84	≤ 67	1400
QXER-B122 C130	12,2	1430	460	1890	4,11	≤ 67	1200
QXER-B15 C030	15,0	1740	630	2370	3,76	≤ 65	1000
QXER-C18 E030	18,0	2100	700	2800	4,00	≤ 68	1300
QXER-D253 F030	25,3	2920	960	3880	4,04	≤ 71	1400
QXER-F36 F030	35,6	4360	1480	5840	3,95	≤ 71	2300

- Note:** 1) Extent of delivery: Compressor, terminal cover, nut and gasket for terminal cover and 3 pcs. grommet
 2) Conditions ASHRAE: Conditions ASHRAE: Evap. temp. 7.2°C; cond. temp. 54.4°C; liquid temp. 46.1°C; suction gas temp. 35°C
 Exception: QXER-B15 C030: Evap. temp. +10°C; cond. temp. 60°C; liquid temp. 50°C; suction gas temp. 20°C

ELECTRICAL DATA

Model	Locked Rot. Current LRA [A]	Absorbed Current ¹⁾ [A]	Run Capacitor [μF/V]
QXER-B109 E150	19,3	2,0	25/450
QXER-B122 C130	14,0	2,1	25/450
QXER-B15 C030	20,0	3,0	25/450
QXER-C18 E030	22,0	3,3	30/450
QXER-D253 F030	40,0	4,7	35/450
QXER-F36 F030	43,5	6,8	55/450

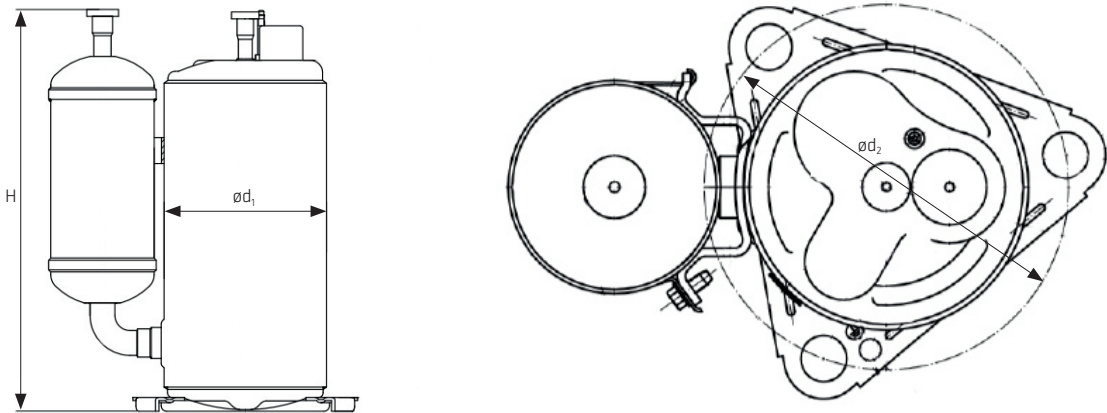
- Note:** 1) Conditions ASHRAE: Evap. temp. 7.2°C; cond. temp. 54.4°C; liquid temp. 46.1°C; suction gas temp. 35°C
 Exception: QXER-B15 C030: Evap. temp. +10°C; cond. temp. 60°C; liquid temp. 50°C; suction gas temp. 20°C



DIMENSIONS

Model	Total Height H [mm]	Comp. \varnothing_d [mm]	Bolt circle installation plate \varnothing_{d_2} [mm]	Suction Connection [mm]	Discharge Connection [mm]	Weight [kg]
QXER-B109 E150	286	118	150	12,2	9,7	11,4
QXER-B122 C130	285	118	150	12,2	9,7	12,0
QXER-B15 C030	312	118	175	12,2	9,7	12,0
QXER-C18 E030	330	128	175	12,2	9,7	15,0
QXER-D253 F030	325	132	175	12,2	9,7	16,5
QXER-F36 F030	367	146	175	16,2	9,7	21,4

Drawing: QXER-B109E150



SANHUA is the world's largest producer of Micro-Channel Heat Exchangers for Stationary HVAC&R application

SANHUA DELIVERS OVER 1,300,000 MCHE CONDENSERS (CO & HP) AND EVAPORATORS HELPING TO IMPROVE SYSTEM EFFICIENCY BY UP TO 30%

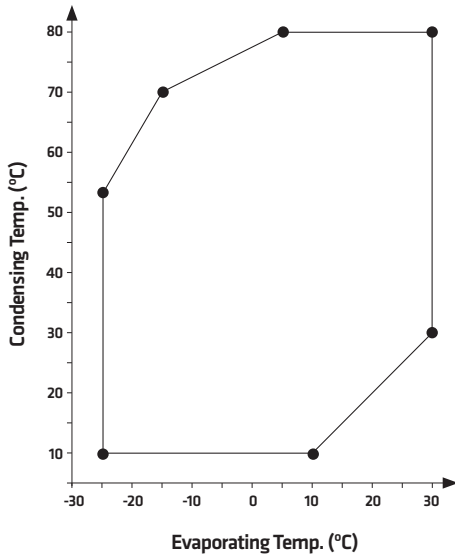
ADVANCED Technology & Solutions

- ✓ Improves efficiency by **30%**
- ✓ Refrigerant Charge Reduction by **30%** Environmental Friendly
- ✓ MCHE is lighter in weight, smaller in volume Compact Design

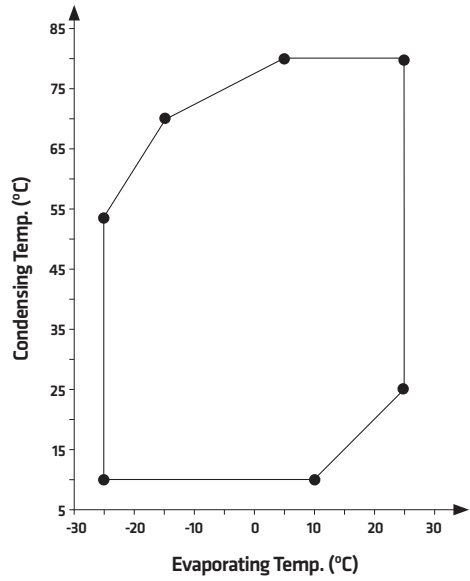


OPERATING ENVELOPES - R134A

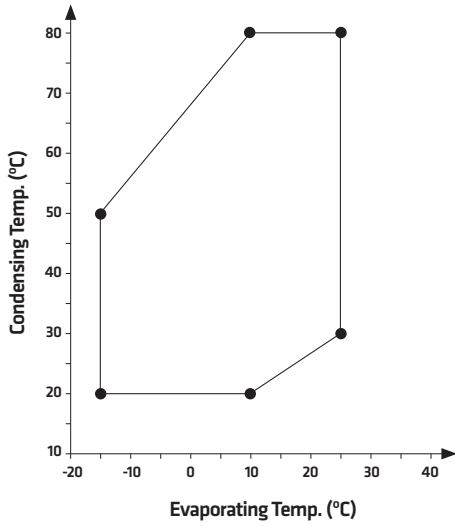
QXER-B109E150



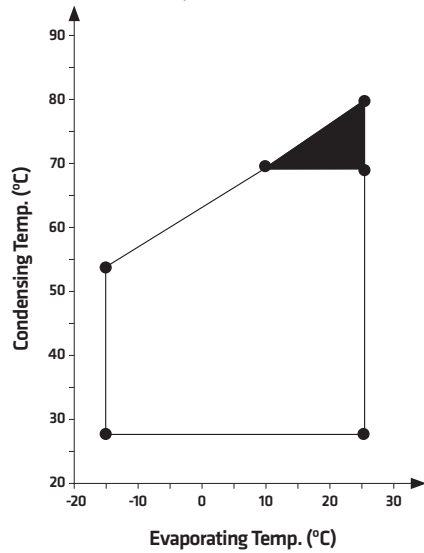
QXER-B122C130



QXER-B15C030

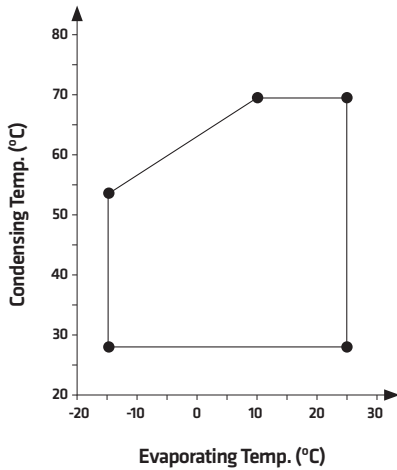


QXER-C18E030



■ = Area of emergency operation: Max. 30 min.

QXER-D253F030 and QXER-F36F030



SANHUA YOUR ROAD MAP TO THE ECO-DESIGN DIRECTIVE*

KEEPS YOU ONE STEP AHEAD OF THE COMING EFFICIENCY AND ENVIRONMENTAL EUROPEAN CHALLENGES



EEV Technology + Electronic Controls

- Improves HVAC_o-R system efficiency up to **20%**
- DPFe-VPF series from 2kW to 1400kW
*75kW and 1400kW available in Quarter 4
- Advanced MSS (Minimum Stable Superheat) control logic

2 kW

1400kW

4 Way Reversing Valve

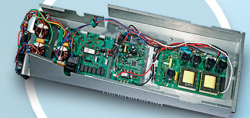
- Improves efficiency by **5%**
- SHF series 1kW to 420 kW
- Widest range in the market with Single Body Design

1 kW

420kW

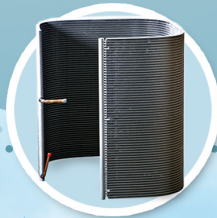
Inverter Controller for Large System

- Improves system efficiency up to **30%**
- Active Frequency Conversion Technology**
- Wide Range of voltage application



MCHE

- Improves efficiency by **30%**
- Refrigerant Charge Reduction by **30%** Environmental Friendly
- MCHE is lighter in weight, smaller in volume Compact Design



ADERALIES

ADVANCED
Technology & Solutions



CHILLING ideas worldwide

SANHUA INTERNATIONAL
info@sanhuaeurope.com

QXDR Compressor Series

GENERAL SPECIFICATION

- Application: Heat Pump - Sanitary Water
- Net supply: 230V/1Ph/50Hz
- Refrigerant: R290
- Control: On/Off

PERFORMANCE DATA - R290

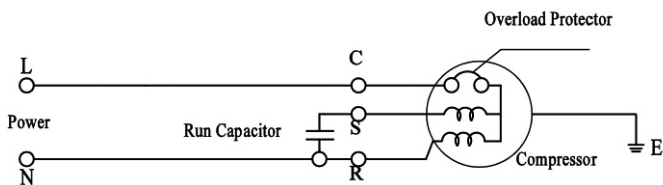
Model ¹⁾	Displacement [cm ³]	Cooling Capacity ²⁾ [W]	Power Input ²⁾ [W]	Heating Capacity ²⁾ [W]	COP Heating ²⁾	Sound Power ²⁾ [dB(A)]	Max. Ref. Charge [g]
QXDR-A058 L130	5,8	820	260	1080	4,15	≤ 64	320
QXDR-A088 T130	8,8	1320	425	1745	4,11	≤ 64	320
QXDR-B222 A030	22,2	3360	1020	4380	4,29	≤ 67	800
QXDR-D305 F050	30,8	4750	1400	6150	4,39	≤ 71	800

Note: 1) Extent of delivery: Compressor, terminal cover, nut and gasket for terminal cover and 3 pcs. grommet
 2) Conditions ASHREA: Evap. temp. 7,2°C; cond. temp. 54,4°C; liquid temp. 46,1°C; suction gas temp. 35°C

ELECTRICAL DATA

Model	Locked Rot. Current LRA [A]	Absorbed Current ¹⁾ [A]	Run Capacitor [μF/V]
QXDR-A058 L130	6,0	1,2	15/450
QXDR-A088 T130	13,0	1,9	20/450
QXDR-B222 A030	26,5	4,6	35/450
QXDR-D305 F050	33,0	6,1	45/450

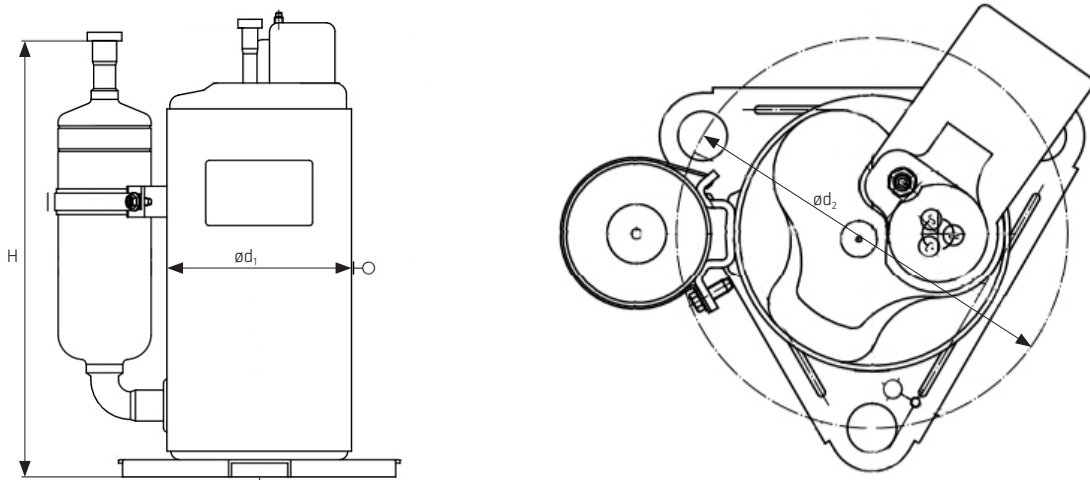
Note: 1) Conditions ASHREA: Evap. temp. 7,2°C; cond. temp. 54,4°C; liquid temp. 46,1°C; suction gas temp. 35°C



DIMENSIONS

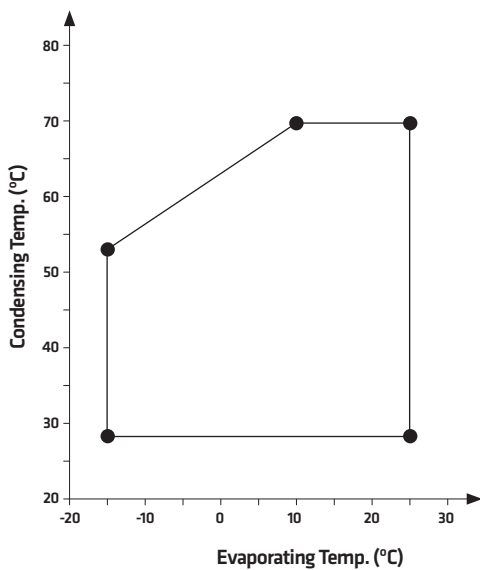
Model	Total Height H [mm]	Comp. \varnothing_1 [mm]	Bolt circle installation plate \varnothing_2 [mm]	Suction Connection [mm]	Discharge Connection [mm]	Weight [kg]
QXDR-A058 L130	254	107	150	9,7	6,2	7,9
QXDR-A088 T130	270	107	150	9,7	6,2	9,0
QXDR-B222 A030	308	118	175	12,2	9,7	13,0
QXDR-D305 F050	350	132	175	16,2	9,7	20,0

Drawing: QXDR-A088T130



OPERATING ENVELOPES - R290

QXDR-A058L130 ... QXDR-B222A030



Operating envelope QXDR-D305F050 available on request.

QXD Compressor Series

GENERAL SPECIFICATION

- Application: Refrigeration Medium Temp / Dehumidifier / Air conditioning
- Net supply: 230V/1Ph/50Hz
- Refrigerant: R290
- Control: On/Off

PERFORMANCE DATA - R290

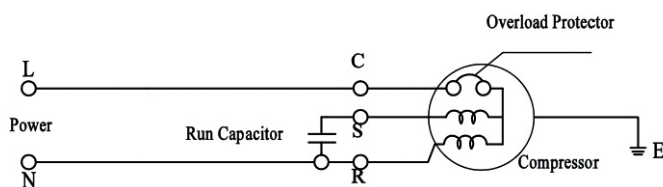
Model ¹⁾	Displacement [cm ³]	Cooling Capacity ²⁾ [W]	Power Input ²⁾ [W]	Heating Capacity ²⁾ [W]	COP Cooling ²⁾	Sound Power ²⁾ [dB(A)]	Max. Ref. Charge [g]
QXD-G058 P230	5,8	785	320	1105	2,45	≤ 52	300
QXD-A066 W130	6,6	980	330	1310	2,97	on request	320
QXD-A081 L130	8,1	1220	375	1595	3,25	≤ 64	300
QXD-A121 L130A	12,1	1780	610	2390	2,92	≤ 64	320
QXD-C173 A030	17,3	2550	795	3345	3,21	≤ 67	800
QXD-C184 A030A	18,4	2710	820	3530	3,30	≤ 67	800
QXD-C218 A030A	21,8	3200	970	4170	3,30	≤ 67	800
QXD-B222 A030	22,2	3400	1010	4410	3,37	on request	on request
QXD-E34 F050	34,0	5200	1500	6700	3,47	≤ 71	800

Note: 1) Extent of delivery: Compressor, terminal cover, nut and gasket for terminal cover and 3 pcs. grommet
 2) Conditions ASHREA: Evap. temp. 7,2°C; cond. temp. 54,4°C; liquid temp. 46,1°C; suction gas temp. 35°C

ELECTRICAL DATA

Model	Locked Rot. Current LRA [A]	Absorbed Current ¹⁾ [A]	Run Capacitor [μF/V]
QXD-G058 P230	7,0	1,6	6,5/450
QXD-A066 W130	10	1,5	15/450
QXD-A081 L130	7,0	1,7	15/450
QXD-A121 L130A	13	2,9	20/450
QXD-C173 A030	22	3,6	25/450
QXD-C184 A030A	22	3,8	25/450
QXD-B222 A030	26	4,8	30/450
QXD-E34 F050	40	6,8	40/450

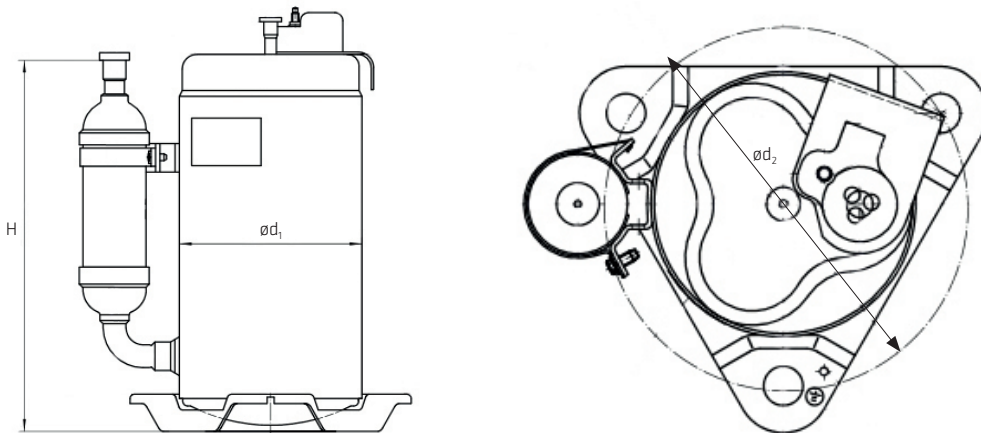
Note: 1) Conditions ASHREA: Evap temp. 7,2°C; cond. temp. 54,4°C; liquid temp. 46,1°C; suction gas temp. 35°C



DIMENSIONS

Model	Total Height H [mm]	Comp. $\varnothing d_1$ [mm]	Bolt circle installation plate $\varnothing d_2$ [mm]	Suction Connection [mm]	Discharge Connection [mm]	Weight [kg]
QXD-G058 P230	225	92	120	8,2	6,2	5,0
QXD-A066 W130	250	107	150	9,7	6,2	8,0
QXD-A081 L130	254	107	150	9,7	6,2	8,4
QXD-A121 L130A	259	107	150	9,7	6,2	8,0
QXD-C173 A030	314	128	175	12,2	9,7	13,8
QXD-C184 A030A	314	128	175	12,2	9,7	13,8
QXD-C218 A030A	314	128	175	12,2	9,7	14,9
QXD-B222 A030	308	118	175	12,2	9,7	13,2
QXD-E34 F050	357	141	176	16,2	9,7	20,2

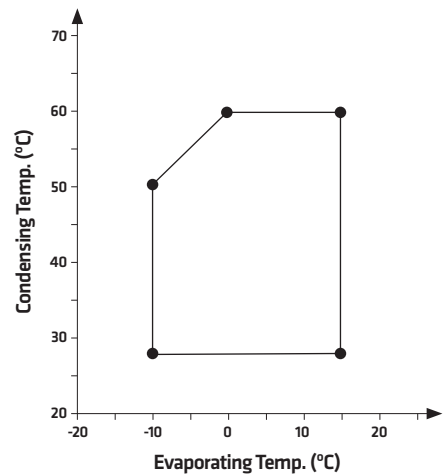
Drawing: QXD-C184A030A



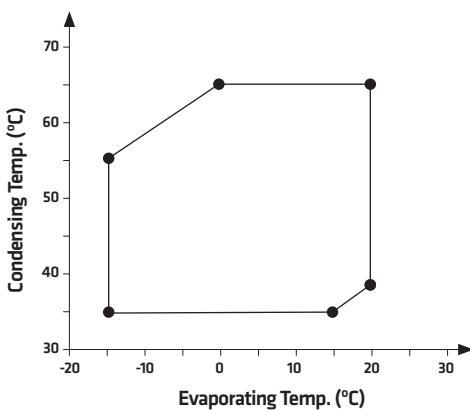
OPERATING ENVELOPES - R290

Model	Evap. temp. range [°C]	Cond. temp. range [°C]	Overload protector action temp. [°C]	Application
QXD-G058 P230	-10 ... +15	27 ... 60	115	Dehumidifier
QXD-A066 W130	0 ... +35	30 ... 75	on req.	Air Conditioner
QXD-A081 L130	-10 ... +15	27 ... 60	on req.	Air Conditioner
QXD-A121 L130A	-15 ... +15	27 ... 67	125	Air Conditioner
QXD-C173 A030	-15 ... +20	35 ... 65	115	Refrigeration MT
QXD-C184 A030A	-15 ... +20	35 ... 65	115	Refrigeration MT
QXD-C218 A030A	-15 ... +15	27 ... 68	125	Air Conditioner
QXD-B222 A030	-15 ... +15	27 ... 68	on req.	Air Conditioner
QXD-E34 F050	-15 ... +20	35 ... 65	on req.	Air Conditioner

QXD-G058P230



QXD-C173A30 and QXD-C184A030A



ATz Compressor Series

GENERAL SPECIFICATION

- Application: Heat Pump – Ground Water, Air Conditioning
- Net supply: 1-Phase and 3-phase net supply
- Refrigerant: R410A
- Control: Inverter 900 ... 7200rpm (15 ... 120Hz)

PERFORMANCE DATA – R410A

Model ¹⁾	Displacement [cm ³]	Cooling Capacity ²⁾ [W]	Power Input ²⁾ [W]	Heating Capacity ²⁾ [W]	COP Heating ²⁾	Sound Power ²⁾ [dB(A)]	Max. Ref. Charge [g]
ATz-AA098AHBA	9,8	3540	870	4410	5,07	≤ 72	1000
ATz-SM151AXBA	15,1	5380	1295	6675	5,15	≤ 74	1650
ATz-SD23AXAF	23,1	7150	2450	9600	3,92	≤ 78	2300
ATz-SD32AXAF	32,1	10060	3360	13420	3,99	≤ 79	2300

Note: 1) Extent of delivery: Compressor, terminal cover, nut and gasket for terminal cover and 3 pcs. grommet

2) Conditions: ATz-AA098 and ATz-SM151: Evap. temp. +10°C; cond. temp. 46°C; liquid temp. 41°C; suction gas temp. +18°C; 3600rpm (60Hz)

Conditions ASHREA: ATz-SD23 and ATz-SD32: Evap. temp. +7,2°C; cond. temp. 54,4°C; liquid temp. 46,1°C; suction gas temp. 35°C; 3600rpm (60Hz)

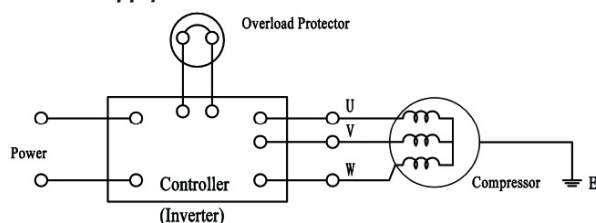
ELECTRICAL DATA

Model	Absorbed Current ¹⁾ [A]	Power supply	Motor Technology
ATz-AA098AHBA	4,0	230V/1Ph/50Hz	Permanent Magnet Synchronous Motor
ATz-SM151AXBA	4,6	230V/1Ph/50Hz	Permanent Magnet Synchronous Motor
ATz-SD23AXAF	11,5	230V/1Ph/50Hz	Permanent Magnet Synchronous Motor
ATz-SD32AXAF	15,1	230V/1Ph/50Hz	Permanent Magnet Synchronous Motor

Note: 1) Conditions: ATz-AA098 and ATz-SM151: Evap. temp. +10°C; cond. temp. 46°C; liquid temp. 41°C; suction gas temp. +18°C; 3600rpm (60Hz)

Conditions ASHREA: ATz-SD23 and ATz-SD32: Evap. temp. +7,2°C; cond. temp. 54,4°C; liquid temp. 46,1°C; suction gas temp. 35°C; 3600rpm (60Hz)

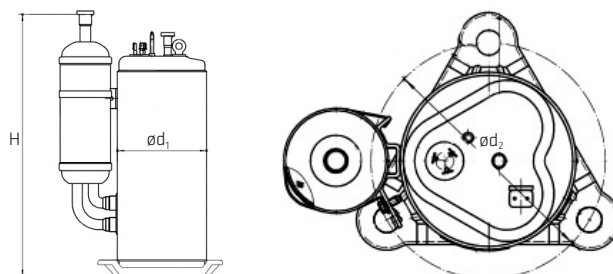
1 Phase Supply:



DIMENSIONS

Model	Total Height H [mm]	Comp. $\varnothing d_1$ [mm]	Bolt circle installation plate $\varnothing d_2$ [mm]	Suction Connection [mm]	Discharge Connection [mm]	Weight [kg]
ATz-AA098AHBA	262	108	120	12,9	8,2	7,8
ATz-SM151AXBA	311	114	150	12,2	8,2	9,4
ATz-SD23AXAF	389	132	175	16,2	9,7	15,7
ATz-SD32AXAF	391	132	175	16,2	9,7	16,5

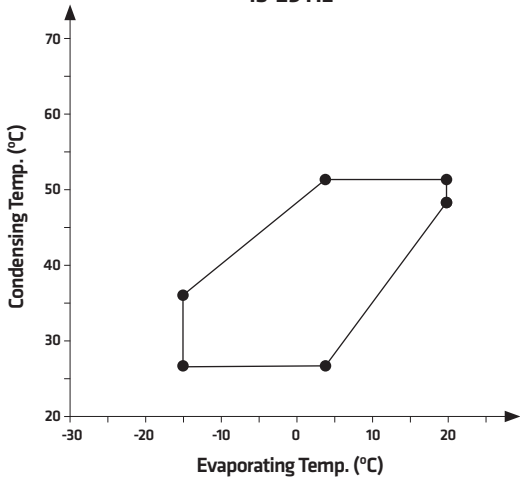
Drawing: ATz-SD23AXAF



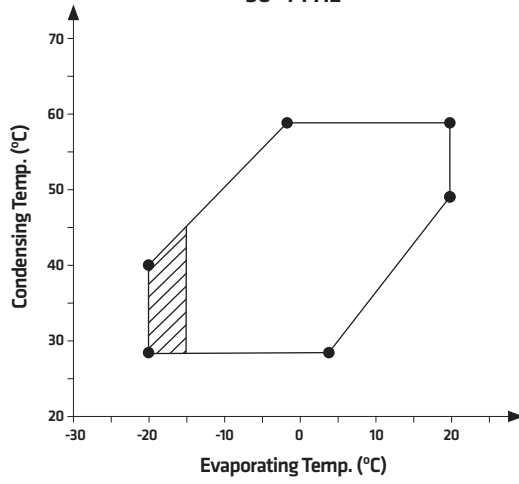
OPERATING ENVELOPES - R410A

ATZ-AA098AHBA, ATZ-SM151AXBA, ATZ-SD23AXAF, ATZ-SD32AXAF

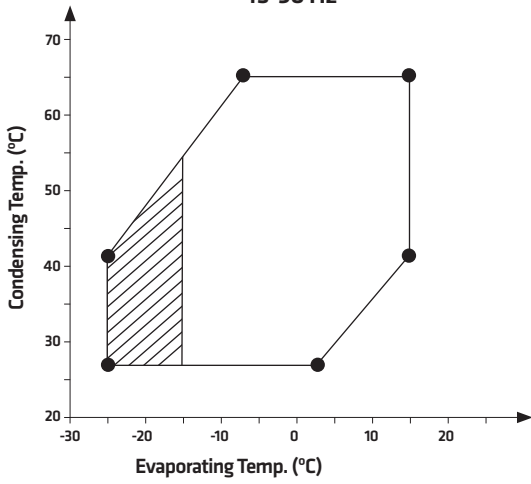
15-29 Hz



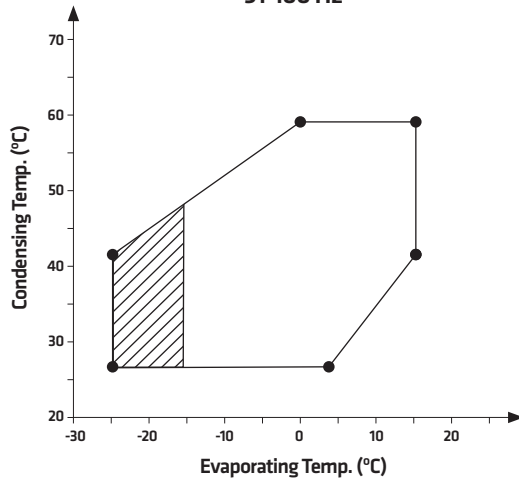
30-44 Hz



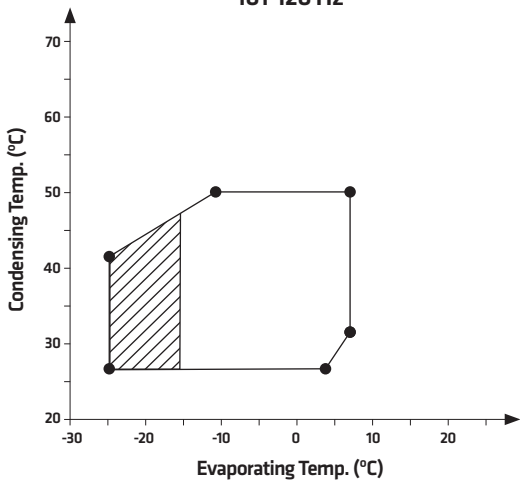
45-90 Hz



91-100 Hz



101-120 Hz



 = Area of no continuous operation



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DS-AWECO COMP-EN-R1802

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