

WRK 0200/0700 heat pump

Heat pump, reversible gas side
Water/Water for indoor installation
Scroll compressor, plate exchanger
Cooling capacity 39 - 166 kW
Heating capacity 48 - 207 kW

HFC
Refrigerant
R410A



Aermec participates in the EUROVENT Programme: LCP The products of interest can be found on the website www.eurovent-certification.com



- COOLING / HEATING / PRODUCTION OF HIGH TEMPERATURE WATER ALSO FOR THE PRODUCTION OF DHW
- WATER PRODUCED UP TO 68°C
- OPTIMISED FOR HEATING IN CENTRALISED SYSTEMS
- INDEPENDENT FROM THE GAS NETWORK

Characteristics

Indoor reversible water-cooled heat pump for air conditioning systems where, in addition to room cooling, **high temperature hot water is mainly required for heating and for domestic hot water. Particular attention has been given to winter operation, ensuring the production of hot water up to 68°C.**

All units are equipped with scroll compressors with steam injection and plate heat exchangers; the base and panelling are made of steel treated with polyester paints.

Immediately ready for installation, the heat pump can be supplied with all the components required for its installation in new systems and to replace other heat generators.

It can be combined with low temperature emission systems such as floor heating or fan coils, but also with conventional radiators.

Versions

WRK_H Standard

Construction features:

- Structure and base in hot galvanised sheet steel and with epoxy paint. (RAL 9002)
- High efficiency plate heat exchangers.
- Compressors featuring high performance and low electric absorption
- High and low pressure transducers as standard
- In compliance with Safety Directives (EC) and Standards regarding electromagnetic compatibility.

The safety of the appliance is guaranteed by the door-lock isolating switch on the electric control board and active protections on the main components.

- Command can be accessed from outdoors, with the user interface with display, showing all functioning parameters in several languages
- User-friendly remote control panel with alarm signals

Accessories

AER485P1

RS-485 interface for supervision systems with MODBUS protocol.

VT/AVX

Anti-vibration mounts.

AERNET

the device allows the control, the management and the remote monitoring of a Chiller with a PC, smartphone or tablet using Cloud connection. AERNET works as Master while every unit connected is configured as Slave (max. 6 unit); also,

with a simple click is possible to save a log file with all the connected unit datas in the personal terminal for post analysis.

PGD1

Simplified remote panel. Allows control of basic unit functions and alarm notification.

T6

double safety valve AP / BP with exchange valve

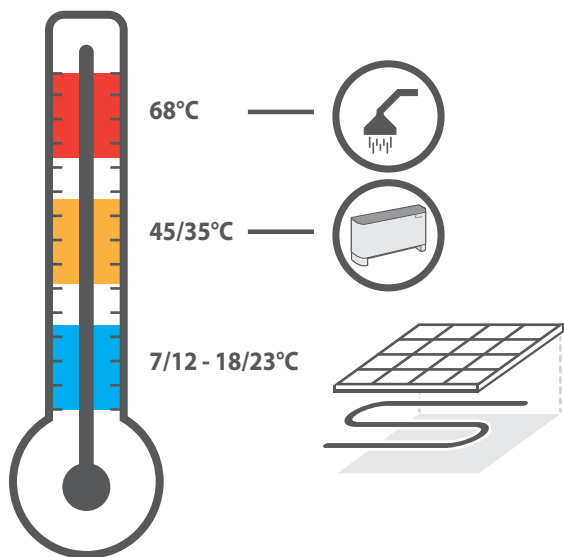
Accessories factory fitted only

DRE

Electronic soft starter which reduces starting current

RIF

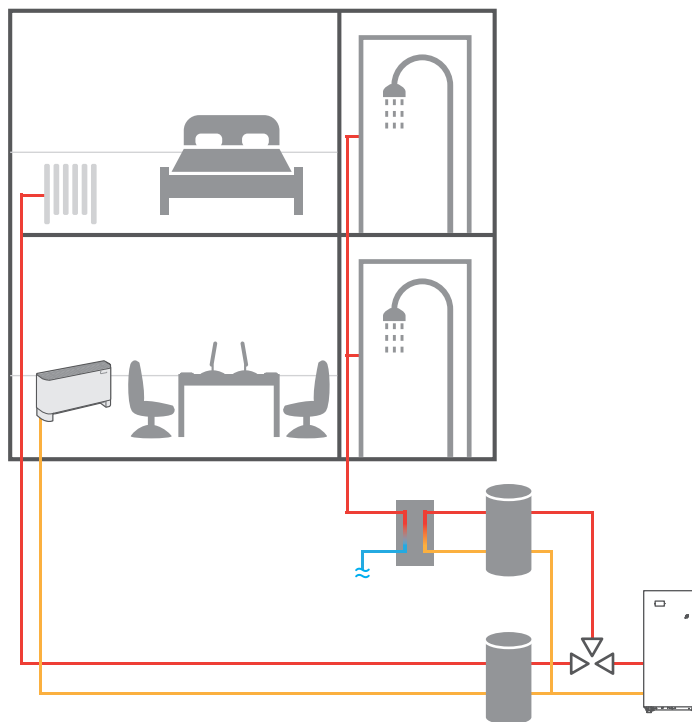
Power factor correction. Connected in parallel to the motor allowing about 10% reduction of input current.



WRK units are used in building renovations, where centralised boilers need replacing, while maintaining the existing distribution system and terminals (e.g. radiators) at the same time, to ensure the production of domestic hot water.

This situation is typical when operating in contexts such as public buildings, but also in the case of centralised residential systems such as condominiums, where costs must be limited without changing the distribution system, while also offering a renewable energy source, represented precisely by heat pumps.

Being able to upgrade a building without involving the distribution system also eliminates the inconveniences associated with the renovation of the premises, ensuring the continuity of the property's use, saving time and money



Compatibility of accessories

WRK	Ver.	0200	0280	0300	0330	0350	0500	0550	0600	0650	0700
AER485P1	All	.	.	.	.	.	.	.	.	.	.
AERNET	All	.	.	.	.	.	.	.	.	.	.
PGD1	All	.	.	.	.	.	.	.	.	.	.
T6	All	T6WRK1	T6WRK1	T6WRK1	T6WRK1	T6WRK1	T6WRK2	T6WRK2	T6WRK2	T6WRK2	T6WRK2
VT/AVX		ANTIVIBRATION - VERSIONS 00*									
	°	-	-	-	-	-	AVX345	AVX342	AVX342	AVX342	AVX342
	L	VT9	VT9	VT9	VT9	VT9	AVX345	AVX342	AVX342	AVX342	AVX342
Accessories factory fitted only											
RIF	All	.	.	.	.	.	.	.	.	.	.
DRE	All	.	.	.	.	.	.	.	.	.	.

* for the compatibility of the anti-vibration devices of the units with hydronic kit, refer to the technical documentation.

Unit Configurator

By suitably combining the numerous options available it is possible to configure each model in such a way as to meet the most demanding of system requirements.

CODE

WRK

SIZE

200-280-300-330-350-500-550-600-650-700

FIELD OF USE

- ° mechanical thermostatic valve

MODEL

- H Heat pump reversible gas side

VERSION

- ° Standard (1)
- L Silenced

EVAPORATOR

- ° Standard

HEAT RECOVERY

- ° Standard
- D Desuperheater

POWER SUPPLY

- ° 400V/3/50Hz with magnet circuit breakers

HYDRONIC KIT EVAPORATOR SIDE

- ° Without pump
- M Single low head pump
- N single and standby low head pump
- O single high head pump
- P single and standby high head pump

HYDRONIC KIT CONDENSER SIDE

- ° Without pump
- U Single low head pump
- V single and standby low head pump
- W single high head pump
- Z single and standby high head pump
- J Single inverter low head pump
- R Single and standby inverter low head pump (just for sizes 0500÷0700)
- K Single inverter high head pump
- Q Single and standby inverter high head pump (just for sizes 0500÷0700)

(1) Available just for sizes 0500 - 0550 - 0600 - 0650 - 0700

Technical Data

WRK °/L			0200*	0280*	0300*	0330*	0350*	0500	0550	0600	0650	0700
7°C/35°C	Cooling capacity	(1) kW	38,9	54,3	64,9	74,0	83,3	96,1	110,8	129,8	145,6	165,9
	Total input power	(1) kW	8,7	12,0	14,3	16,8	18,8	21,5	23,8	28,4	33,1	37,1
	EER	(1) W/W	4,48	4,51	4,53	4,41	4,44	4,48	4,65	4,57	4,40	4,47
	ESEER	(1)	5,31	5,53	5,43	5,32	5,25	5,69	5,88	5,78	5,67	5,63
	Water flow rate system side	(1) l/h	6706	9373	11198	12768	14379	16570	19103	22390	25105	28598
	Pressure drop system side	(1) kPa	13	16	16	17	17	17	17	17	16	17
	Water flow rate source side	(1) l/h	8076	11282	13478	15446	17380	20004	22919	26945	30427	34562
40°C/45°C	Pressure drop source side	(1) kPa	19	23	24	25	26	25	25	25	24	25
	Heating capacity	(2) kW	48,5	68,7	81,6	93,4	104,0	120,7	137,6	162,9	186,9	207,7
	Total input power	(2) kW	10,7	14,9	17,8	20,7	22,8	26,2	29,4	35,1	40,8	44,9
	COP	(2) W/W	4,52	4,61	4,59	4,51	4,56	4,61	4,67	4,64	4,58	4,62
	Water flow rate source side	(2) l/h	11078	15774	18711	21321	23806	27698	31664	37423	42766	47632
	Pressure drop source side	(2) kPa	37	45	47	49	50	49	49	50	47	50
	Water flow rate system side	(2) l/h	8310	11781	14003	16039	17855	20741	23637	27998	32124	35695
Performance under average climatic conditions (Average) UE n°811/2013 Pdesignh ≤ 70kW	Pressure drop system side	(2) kPa	21	26	27	28	29	28	27	28	27	28
	Pdesignh (35°C)		63	-	-	-	-	-	-	-	-	-
	SCOP		5,83	-	-	-	-	-	-	-	-	-
	ηs		225	-	-	-	-	-	-	-	-	-
	Efficiency Energy Class		A++	-	-	-	-	-	-	-	-	-
	Pdesignh (55°C)		63	89	106	122	135	157	179	212	244	271
	SCOP		4,73	4,88	4,83	4,73	4,75	4,98	5,08	5,05	5,03	5,00
	ηs		181	187	185	181	182	191	195	194	193	192
	Efficiency Energy Class		A++	-	-	-	-	-	-	-	-	-

WRK °/L			0200*	0280*	0300*	0330*	0350*	0500	0550	0600	0650	0700
23°C/18°C	Cooling capacity	(3) kW	50,8	70,9	84,7	96,2	109	126,1	144,5	169,5	189,4	216,9
	Total input power	(3) kW	8,9	11,8	14,8	17,1	19,8	21,8	23,4	29,3	33,4	39,0
	EER	(3) W/W	5,70	6,01	5,72	5,64	5,49	5,79	6,18	5,78	5,67	5,56
	Water flow rate system side	(3) l/h	8795	12273	14671	16661	18864	21824	25013	29335	32767	37525
	Pressure drop system side	(3) kPa	22	27	28	29	30	29	29	29	27	29
	Water flow rate source side	(3) l/h	10218	14152	17038	19390	22041	25321	28771	34063	38172	43835
	Pressure drop source side	(3) kPa	30	36	38	40	41	40	39	40	38	41
30°C/35°C	Heating capacity	(4) kW	46,0	65,7	77,3	88,3	99,4	115,4	131,6	154,4	176,8	196,4
	Total input power	(4) kW	8,3	11,5	13,8	16,1	18,2	20,6	22,9	27,3	31,9	35,1
	COP	(4) W/W	5,54	5,71	5,61	5,48	5,46	5,59	5,75	5,65	5,55	5,60
	Water flow rate source side	(4) l/h	6562	9418	11043	12565	14124	16487	18901	22083	25197	28047
	Pressure drop source side	(4) kPa	13	16	16	17	18	17	17	17	16	17
	Water flow rate system side	(4) l/h	7939	11326	13328	15243	17144	19925	22723	26648	30529	33920
	Pressure drop system side	(4) kPa	19	24	24	26	26	25	25	26	24	25

Dati (14511:2013)

* The sizes 0200 - 0280 - 0300 - 0330 - 0350 are only Silenced (L)

(1) Water system side (in/out) 12°C/7°C, Water source side (in/out) 30°C/35°C

(2) Water system side (in/out) 40°C/45°C, Water source side (in/out) 10°C/7°C

(3) Water system side 23°C/18°C, Water source side 30°C/35°C

(4) Water system side 30°C/35°C, Water source side 10°C/5°C

(5) Efficiencies for low applications (35°C)

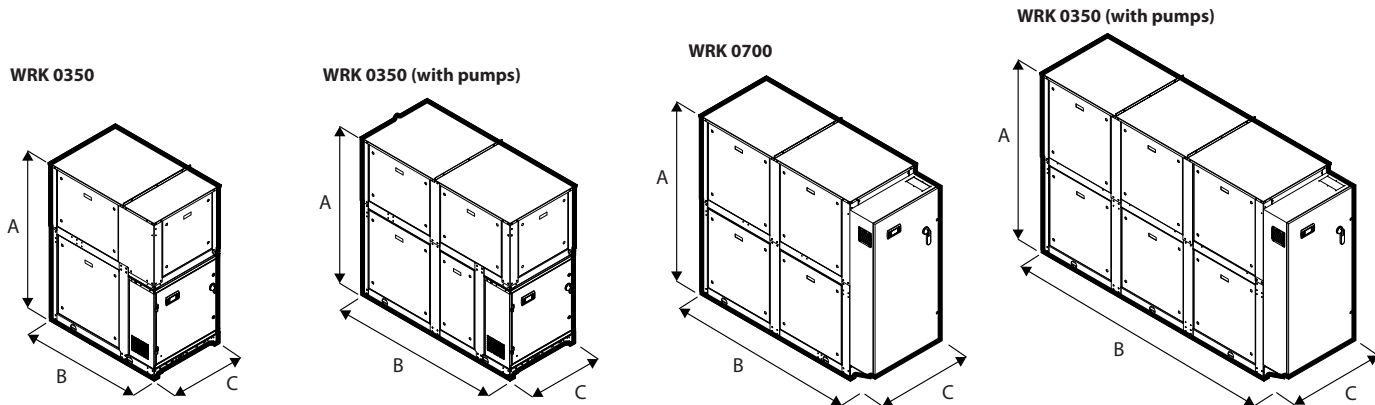
Technical Data

			0200	0280	0300	0330	0350	0500	0550	0600	0650	0700
Electrical data												
Total input current (cooling)	°	A	-	-	-	-	-	48	50	62	86	89
	L	A	20	25	31	43	45	48	50	62	86	89
Total input current (heating)	°	A	-	-	-	-	-	52	56	69	92	95
	L	A	21	28	35	46	48	52	56	69	92	95
Maximum current (FLA)	°	A	-	-	-	-	-	75	84	104	130	132
	L	A	32	42	52	65	66	75	84	104	130	132
Starting current (LRA)	°	A	-	-	-	-	-	216	181	218	271,5	273
	L	A	144	139	166	206,5	207	216	181	218	271,5	273
Scroll Compressor												
Compressors	n°		2	2	2	2	2	3	4	4	4	4
Circuits	n°		2	2	2	2	2	2	2	2	2	2
Refrigerant	type		R410A									
Heat exchanger system and source side - Plate exchanger												
Exchanger	n°		1									
hydraulic connections (In/Out)	Ø		2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"
Sound data												
Sound pressure level	°	dB(A)	-	-	-	-	-	50	51	50	51	52
Sound power level	°	dB(A)	-	-	-	-	-	81,6	82,2	81,6	82,7	83,4
Sound pressure level	L	dB(A)	40	42	41	42	44	45	45	44	46	46
Sound power level	L	dB(A)	71,6	73,9	72,4	74,0	75,6	76,3	77,0	75,9	77,5	78,0

Sound power Aermec determines sound power values on the basis of measurements made in accordance with UNI EN ISO 9614-2, as required for Eurovent certification.

Sound pressure Sound pressure in free field, at 10 m distance from the external surface of the unit (in accordance with UNI EN ISO 3744).

Dimensions (mm)



WRK	Vers.	0200	0280	0300	0330	0350	0500	0550	0600	0650	0700
A	° (mm)	-	-	-	-	-	1775	1775	1775	1775	1775
	L (mm)	1675	1675	1675	1675	1675	1885	1885	1885	1885	1885
B	° (mm)	-	-	-	-	-	3020	3020	3020	3020	3020
	L (mm)	1800	1800	1800	1800	1800	3020	3020	3020	3020	3020
C	° (mm)	-	-	-	-	-	800	800	800	800	800
	L (mm)	800	800	800	800	800	800	800	800	800	800
Weigth (empty)	° (kg)	-	-	-	-	-	740	820	840	870	900
	L (kg)	590	650	660	670	680	890	970	990	1020	1050