Outdoor packaged unit

V-IPER 50 - 380 kW

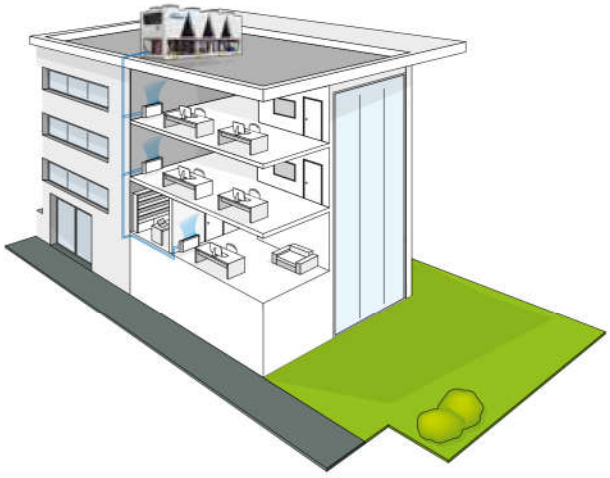
Scroll compressor | Refrigerant R-410A | Cooling only | Heating/ Cooling | UP-Wind | Continuous charge monitoring | A-class

Technology and efficiency in Galletti new solution

V-IPER is Galletti's new high efficiency range, featuring Galletti's most advanced technology in the R410A multiscroll units used in HVAC.
The range consists of 20 air-water models available as chiller and heat pump, with cooling capacities from 50 to 380 kW.
The range's main strongpoint is its high efficiency, not only as time efficiency (Class A Eurovent in chiller and heat pump mode) but especially as seasonal efficiency, aiming to permanently reduce annual energy consumption.
In order to increase the efficiency at partial loads, much of the range is comprised of trio solutions (3 compressors on a circuit); furthermore, V-IPER employs components and adjustment logic that make it possible to manage the water-side flow rate modulation.
The range allows high configurability from an acoustic point of view, having a wide range of accessories designed to reduce noise emissions. The advanced control, always present in the whole range, allows a continuous monitoring of the operating parameters, advanced adjustment logics, and connectivity. The modular structure with V configuration condensing coils is designed to optimize air-side heat exchange, to ensure structural strength with a reduced footprint, and to maintain maximum accessibility to the basic components.

PLUS

- Class A in chiller and heat pump operating mode
- High efficiency under part load conditions
- Intelligent modulation of the water flow rate
- Extended operating range
- Possibility to configure low-noise versions
- Counterflow solutions in every operating mode



V-IPER heat pumps and water chillers are designed for heating or cooling the water to be used in air-conditioning systems for residential, commercial or industrial use.
Its high efficiency ensures a considerable reduction in consumption and the ability to operate in various weather conditions.

CONFIGURATOR

The models are completely configurable by selecting the version and the options. To the right is shown an example of configuration.

Version	Field	1	2	3	4	5	6	7	8	9	10	11	12	13
VPR386CS0A		A	1	S	0	C	0	0	0	0	0	0	0	1

To verify the compatibility of the options, use the selection software or the price list.

AVAILABLE VERSIONS

Only cooling versions

VPR..CS0A Power supply 400V-3N-50Hz + circuit breaker
VPR..CS2A Power supply 400V-3N-50Hz + circuit breaker + transformer

Reversible heat pump versions

VPR..HS0A Power supply 400V-3N-50Hz + circuit breaker
VPR..HS2A Power supply 400V-3N-50Hz + circuit breaker + transformer

CONFIGURATION OPTIONS

1 Expansion valve
- A Electronic

2 Water pump and accessories
- 0 Absent
- 1 LP pump + expansion vessel
- 2 LP run and standby double pump + expansion vessel
- 3 HP pump + expansion vessel
- 4 HP run and standby double pump + expansion vessel
- A LP inverter pump + expansion vessel
- B LP run and standby double inverter pump + expansion vessel
- C HP inverter pump + expansion vessel
- D HP run and standby double inverter pump + expansion vessel

3 Water buffer tank
- 0 Absent
- S Present

4 Partial heat recovery
- 0 Absent
- D Desuperheater with water pump free contact

5 Air flow modulation
- C Condensation control by phase-cut fans
- E Condensation control performed by EC fans

6 Antifreezing kit
- 0 Absent
- E Evaporator
- P Evaporator and water pump
- S Evaporator, water pump and water buffer tank

7 Acoustic insulation and attenuation
- 0 Absent
- 1 Compressor compartment acoustic insulation
- 2 Fans noise reduction (AXITOP)
- 3 Fans noise reduction (AXITOP) + compressor sound blanket + compartment acoustic insulation

8 Refrigerant pipework accessories
- 0 Absent
- M Refrigerant pressure gauges

9 Remote control / Serial communication
- 0 Absent
- 2 RS485 serial board (Carel / Modbus protocol)
- B BACNET IP / PCOWEB serial board (advanced controller required)
- F BACNET MS/TP / PCONET card
- G BACNET IP / PCOWEB + SUPERVISOR SOFTWARE (GWeb)
- S Remote simplified user panel
- X Remote simplified user panel for advanced controller

10 Special coils / Protective treatments
- 0 Standard
- C Cataphoresis treatment on fins and coil carpentry
- I Hydrophilic
- M Microchannel outdoor heat exchanger with epoxy coat and anti UV ray protection treatment (standard for chiller)
- R Copper-copper

11 Anti vibration shock mounts
- 0 Absent
- G Rubber anti vibration shock mounts
- M Spring anti vibration shock mounts

12 Compressors options
- 0 Absent
- 1 Crankcase compressor heater (CHILLER), outdoor coil trace heater (HP)

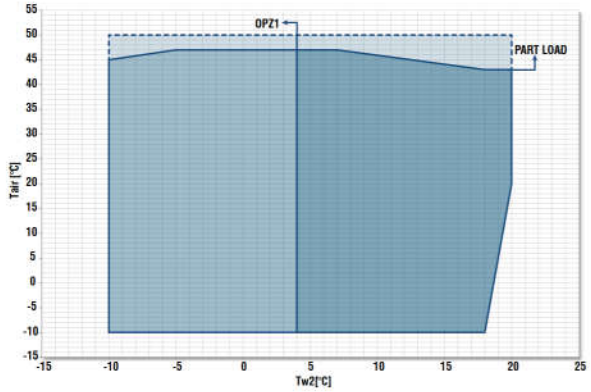
13 Onboard controller
- 1 Advanced

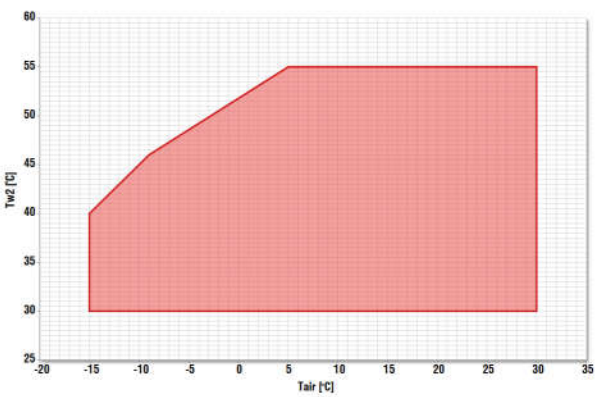
ACCESSORIES

A	Outdoor finned coil heat exchanger protection grille	**G**	Soft starter
B	Not in use	**H**	Power factor capacitors
C	Pair of couplings Victaulic	**I**	Filter regulating kit
D	ON/OFF status of the compressors	**L**	Water pipes additional insulation
E	Remote control for step capacity limit (advanced controller required)	**M**	0-10 V signal for external user pump control (on-board pump excluded)
F	Configurable digital alarm board (advanced controller required)	**N**	Compressor tandem/trio isolation valves

EXTENDED OPERATING RANGE

The generous size of the condensing coils combined with various technological solutions allows V-IPER to operate in a wide range of climatic conditions. More specifically:





MAIN COMPONENTS

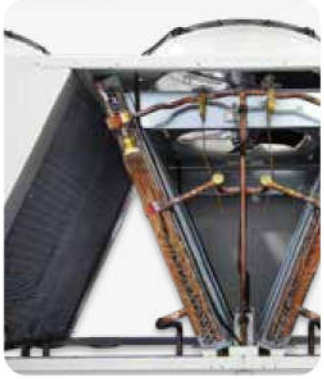
Structure
The range is designed modularly, replicating the optimized structure of V configuration condensing coils and fans. Its design ensures stability, sturdiness even during the most critical phases (such as transportation), and maximum accessibility to components in every V-IPER unit.

Electronic valve
Supplied as a standard feature, it allows optimization of operation and reduction of power consumption as a result of faster transients.

Low noise execution
The units can be supplied in a low-noise version, with noise-canceling headsets, acoustical enclosure for the compressors, and Axitop diffusors on the axial fans. This configuration, combined with the night attenuation function, provides a large reduction in the sound power level.

Scroll compressors
The range consists of mono- and dual-circuit models in order to offer maximum redundancy. The ability to distribute the load in multiple power steps (up to 6) and the use of trio solutions (3 compressors on a single circuit) ensures maximum efficiency at partial loads and, therefore, greatly increases seasonal efficiency.

Upwind
V-IPER implements a novel technology that allows, when the cycle reverses, to maintain the same direction of flow of the coolant through the condensing coils and to maintain air heat exchange that is always in counterflow.
This advanced technology makes it possible to consistently reduce the risk of frost formation on the condensing coils. At the same time, UPWIND ensures optimization of heat exchange during both evaporation and condensing, allowing the Galletti heat pumps to be categorized as Class A (high efficiency) for both heating and cooling.



Microchannel
The entire chiller range features microchannel condensing coils as a standard feature. The large exchange surface, the lack of copper-aluminum interface, and the perfect passage of air makes it possible to achieve the same performance while reducing the refrigerant charge by up to 40%, with obvious benefits from an ecological point of view. The Galletti microchannel condensing coils always have a standard epoxy and UV dual surface treatment that provide 2400 hours of resistance under salt spray test conditions, to offer maximum safety even in aggressive environments.

FUNCTIONS

Variable water flow

The advanced controller allows the management of the variable flow on the primary circuit, thus ensuring an increase in cooling cycle efficiency, reduced pumping costs, and an overall increase in seasonal energy efficiency. The plate heat exchanger has an internal configuration especially designed to operate with modulation of flow rate up to 30% of nominal flow.

Overheating dynamic management

The advanced control, a standard feature of V-IPER, synergistically manages the components in order to achieve maximum efficiency under all load conditions. In particular, when the cooling capacity is reduced, switching off the compressors will modify the superheating setting, thus increasing the efficiency of the cooling cycle.

Economy - low noise function

This feature allows, on the basis of time periods or clean contact, a reduction in the maximum speed of the fans and the compressors that can be activated. This is especially useful during the night phase, when the required power is much lower and the unit can operate in low-impact conditions, thereby reducing the noise level in a sensitive time period.

Charge monitoring

Through continuous monitoring of the cooling cycle's characteristic parameters, V-IPER will detect a possible reduction in the amount of refrigerant and promptly report this situation to prevent more serious problems and protect the main components.

Primary heat pump management

In case of a decoupled circuit, it is possible, via remote sensor, to switch off the primary circuit's pumps, when permitted, due to low thermal load. In this manner a further reduction in pumping costs is achieved.

CDS - Continuosly Data Storage

This feature makes it possible to continuously store the characteristic operating parameters of the unit and the system in the control microprocessor. This is achieved through the availability of additional memory, which is provided as a standard feature on the controls of the whole V-IPER range.

V-IPER C WATER CHILLERS RATED TECHNICAL DATA

V-IPER C			052	062	072	082	092	112	114
Power supply		V-ph-Hz	400 - 3N - 50						
Cooling capacity	(1)(E)	kW	51,6	65,4	73,8	83,9	97,4	109	103
Total power input	(1)(E)	kW	16,0	20,2	22,8	26,2	30,4	34,6	32,3
EER	(1)(E)		3,23	3,23	3,24	3,21	3,20	3,17	3,17
SEER	(2)(E)		4,44	4,50	4,19	4,31	4,35	4,41	4,13
Water flow	(1)	l/h	8876	11265	12714	14441	16763	18826	17652
Water pressure drop	(1)(E)	kPa	37	45	47	41	31	29	31
Available pressure head - LP pumps	(1)	kPa	158	149	192	186	181	146	145
Maximum current absorption		A	40,0	50,0	59,0	68,0	74,0	81,0	79,0
Start up current		A	138	194	203	212	218	269	178
Startup current with soft starter		A	97	134	142	151	157	190	137
Compressors / circuits			2/1	2/1	2/1	2/1	2/1	2/1	4/2
Expansion vessel volume		dm^3	18	18	18	18	18	18	18
Buffer tank volume		dm^3	250	250	350	350	350	350	350
Sound power level	(3)(E)	dB(A)	80	84	83	83	87	88	87
Transport weight unit with pump and tank		kg	813	823	875	888	968	1048	1866
Operating weight unit with pump and full tank		kg	1163	1173	1225	1238	1318	1398	2316

V-IPER C			133	134	164	173	174	204	213
Power supply		V-ph-Hz	400 - 3N - 50						
Cooling capacity	(1)(E)	kW	126	131	156	166	171	195	204
Total power input	(1)(E)	kW	40,2	42,2	47,7	50,8	52,0	58,7	63,4
EER	(1)(E)		3,12	3,11	3,27	3,27	3,29	3,31	3,21
SEER	(2)(E)		4,51	4,52	4,56	4,30	4,82	4,81	4,31
Water flow	(1)	l/h	21586	22602	26853	28574	29405	33465	35022
Water pressure drop	(1)(E)	kPa	24	24	36	31	24	29	34
Available pressure head - LP pumps	(1)	kPa	144	143	161	164	169	159	151
Maximum current absorption		A	98,0	101	125	125	136	148	149
Start up current		A	242	245	269	313	280	337	377
Startup current with soft starter		A	181	184	208	235	219	258	281
Compressors / circuits			3/1	4/2	4/2	3/1	4/2	4/2	3/1
Expansion vessel volume		dm^3	18	18	24	24	24	24	24
Buffer tank volume		dm^3	350	350	450	450	450	450	450
Sound power level	(3)(E)	dB(A)	87	87	86	88	87	90	92
Transport weight unit with pump and tank		kg	981	1945	1710	1228	1746	1901	1271
Operating weight unit with pump and full tank		kg	1331	2395	2160	1578	2196	2351	1621

(1) Outdoor air temperature 35°C, water temperature 12°C / 7°C (EN14511:2022)
(2) η efficiency values for heating and cooling are respectively calculated by the following formulas: [η = SCOP / 2,5 - F(1) - F(2)] e [η = SEER / 2,5 - F(1) - F(2)]. For further information, please refer to the technical document "ErP 2009/125/EC DIRECTIVE" in the catalogue introducing pages, or to the EN14825:2022 regulation.
(3) Sound power level measured according to ISO 9614
(E) EUROVENT certified data

V-IPER C WATER CHILLERS RATED TECHNICAL DATA

V-IPER C			226	256	276	306	336	386
Power supply		V-ph-Hz	400 - 3N - 50					
Cooling capacity	(1)(E)	kW	213	251	270	291	330	370
Total power input	(1)(E)	kW	66,4	80,4	84,6	89,2	104	115
EER	(1)(E)		3,21	3,12	3,18	3,27	3,18	3,20
SEER	(2)(E)		4,59	4,78	4,53	4,49	4,58	4,59
Water flow	(1)	l/h	36660	43139	46339	50085	56732	63585
Water pressure drop	(1)(E)	kPa	27	31	32	37	41	45
Available pressure head - LP pumps	(1)	kPa	155	144	181	171	157	165
Maximum current absorption		A	162	195	206	222	247	274
Start up current		A	278	339	395	411	474	502
Startup current with soft starter		A	229	278	316	332	379	407
Compressors / circuits			6/2					
Expansion vessel volume		dm^3	24	24	24	24	24	24
Buffer tank volume		dm^3	450	450	750	750	750	750
Sound power level	(3)(E)	dB(A)	90	90	90	92	93	93
Transport weight unit with pump and tank		kg	1903	1916	2634	2640	2714	3831
Operating weight unit with pump and full tank		kg	2353	2366	3384	3390	3464	4581

(1) Outdoor air temperature 35°C, water temperature 12°C / 7°C (EN14511:2022)
(2) η efficiency values for heating and cooling are respectively calculated by the following formulas: [η = SCOP / 2,5 - F(1) - F(2)] e [η = SEER / 2,5 - F(1) - F(2)]. For further information, please refer to the technical document "ErP 2009/125/EC DIRECTIVE" in the catalogue introducing pages, or to the EN14825:2022 regulation.
(3) Sound power level measured according to ISO 9614
(E) EUROVENT certified data

V-IPER H HEAT PUMPS RATED TECHNICAL DATA

V-IPER H			052	062	072	082	092	112	114
Power supply		V-ph-Hz	400 - 3N - 50						
Cooling capacity	(1)(E)	kW	52,0	65,4	72,7	84,5	96,2	108	103
Total power input	(1)(E)	kW	16,2	20,8	22,9	26,6	30,1	34,3	33,2
EER	(1)(E)		3,21	3,15	3,17	3,18	3,20	3,16	3,12
SEER	(2)(E)		4,31	4,42	4,05	4,23	4,27	4,36	4,18
Water flow	(1)	l/h	8960	11265	12517	14542	16548	18636	17784
Water pressure drop	(1)(E)	kPa	38	45	45	41	30	28	32
Available pressure head - LP pumps	(1)	kPa	153	141	190	182	177	143	141
Heating capacity	(3)(E)	kW	54,2	68,2	77,8	87,6	99,6	111	107
Total power input	(3)(E)	kW	16,4	20,2	23,8	26,8	30,0	33,4	32,8
COP	(3)(E)		3,31	3,38	3,27	3,27	3,32	3,30	3,26
SCOP	(2)(E)		3,88	3,95	3,60	3,72	3,82	3,87	3,96
Heating energy efficiency class	(4)(E)		A++	A++	A+	A+	A++	A++	A++
Water flow	(3)	l/h	9401	11815	13469	15187	17272	19163	18502
Water pressure drop	(3)(E)	kPa	41	50	52	45	32	30	35
Available pressure head - LP pumps	(3)	kPa	140	121	169	160	151	130	127
Maximum current absorption		A	40,0	50,0	59,0	68,0	74,0	81,0	79,0
Start up current		A	138	194	203	212	218	269	178
Startup current with soft starter		A	97	134	142	151	157	190	137
Compressors / circuits			2/1	2/1	2/1	2/1	2/1	2/1	4/2
Expansion vessel volume		dm^3	18	18	18	18	18	18	18
Buffer tank volume		dm^3	250	250	350	350	350	350	350
Sound power level	(5)(E)	dB(A)	80	84	83	83	87	88	87
Transport weight unit with pump and tank		kg	938	950	990	1006	1092	1177	1435
Operating weight unit with pump and full tank		kg	1288	1300	1340	1356	1442	1527	1785

V-IPER H			133	134	164	173	174	204	213
Power supply		V-ph-Hz	400 - 3N - 50						
Cooling capacity	(1)(E)	kW	125	130	154	163	168	191	205
Total power input	(1)(E)	kW	40,0	41,9	48,5	50,8	52,5	60,0	64,7
EER	(1)(E)		3,11	3,11	3,18	3,21	3,20	3,18	3,17
SEER	(2)(E)		4,42	4,60	4,46	4,24	4,05	4,41	4,64
Water flow	(1)	l/h	21421	22441	26551	28051	28915	32869	35297
Water pressure drop	(1)(E)	kPa	23	28	35	31	23	28	35
Available pressure head - LP pumps	(1)	kPa	141	135	160	161	168	157	148
Heating capacity	(3)(E)	kW	126	131	161	167	175	200	210
Total power input	(3)(E)	kW	38,2	40,1	49,8	51,8	53,0	59,9	63,8
COP	(3)(E)		3,31	3,28	3,23	3,22	3,30	3,33	3,30
SCOP	(2)(E)		3,91	3,81	3,71 (E)	3,58	3,82	3,86	3,80
Heating energy efficiency class	(4)(E)		A++	A++	A+	A+	A++	A++	A++
Water flow	(3)	l/h	21889	22789	27911	28899	30379	34639	36503
Water pressure drop	(3)(E)	kPa	24	29	38	32	25	31	37
Available pressure head - LP pumps	(3)	kPa	126	117	146	151	157	143	131
Maximum current absorption		A	98,0	101	125	125	136	148	149
Start up current		A	242	245	269	313	280	337	377
Startup current with soft starter		A	181	184	208	235	219	258	281
Compressors / circuits			3/1	4/2	4/2	3/1	4/2	4/2	3/1
Expansion vessel volume		dm^3	18	18	24	24	24	24	24
Buffer tank volume		dm^3	350	350	450	450	450	450	450
Sound power level	(5)(E)	dB(A)	87	87	86	88	87	90	91
Transport weight unit with pump and tank		kg	1114	1478	1941	2099	1981	2148	2196
Operating weight unit with pump and full tank		kg	1464	1828	2391	2549	2431	2598	2646

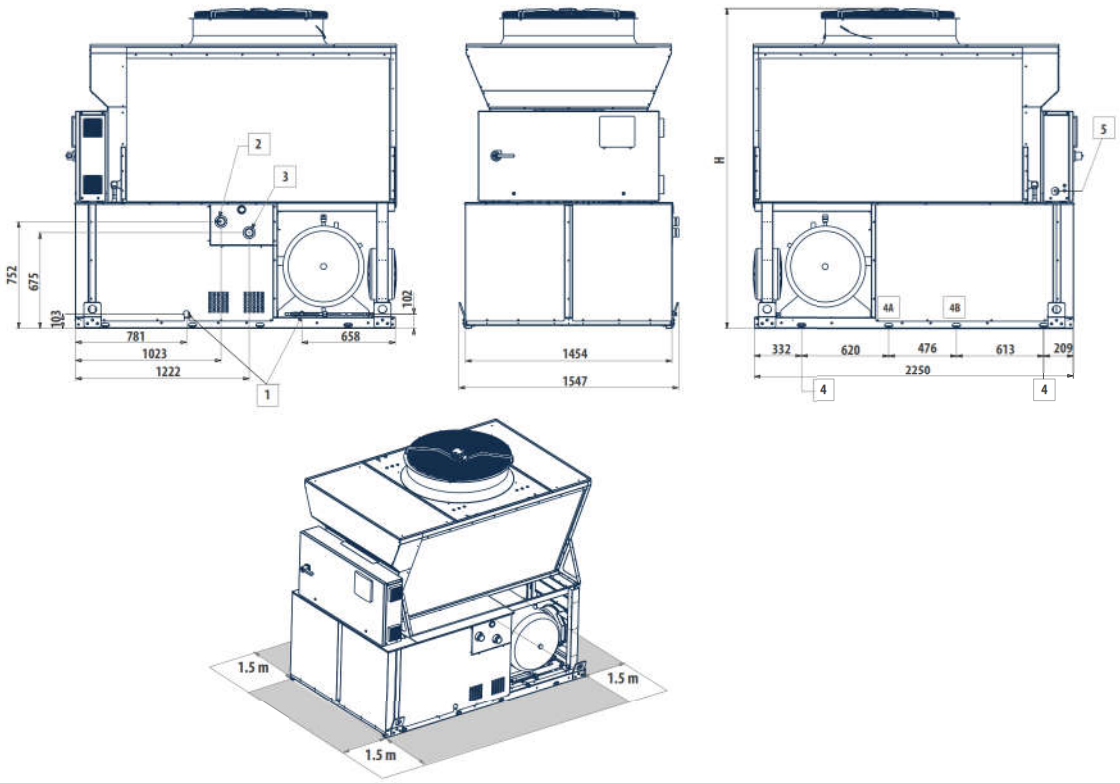
V-IPER H HEAT PUMPS RATED TECHNICAL DATA

V-IPER H			226	256	276	306	336	386
Power supply		V-ph-Hz	400 - 3N - 50					
Cooling capacity	(1)(E)	kW	213	250	271	290	327	368
Total power input	(1)(E)	kW	67,8	80,1	85,1	90,7	104	116
EER	(1)(E)		3,13	3,12	3,18	3,20	3,13	3,17
SEER	(2)(E)		4,45	4,66	4,46	4,37	4,45	4,43
Water flow	(1)	l/h	36558	42923	46547	49849	56215	63238
Water pressure drop	(1)(E)	kPa	27	31	33	37	40	45
Available pressure head - LP pumps	(1)	kPa	151	138	177	167	150	161
Heating capacity	(3)(E)	kW	219	252	278	297	336	378
Total power input	(3)(E)	kW	66,2	76,3	84,8	89,4	102	116
COP	(3)(E)		3,31	3,30	3,29	3,32	3,30	3,27
SCOP	(2)(E)		4,25	4,33	4,02	4,14	4,22	3,94
Heating energy efficiency class	(4)(E)		A++					
Water flow	(3)	l/h	38079	43757	48328	51512	58369	65670
Water pressure drop	(3)(E)	kPa	29	32	35	39	43	48
Available pressure head - LP pumps	(3)	kPa	136	116	160	146	121	141
Maximum current absorption		A	162	195	206	222	247	274
Start up current		A	278	339	395	411	474	502
Startup current with soft starter		A	229	278	316	332	379	407
Compressors / circuits			6/2					
Expansion vessel volume		dm^3	24	24	24	24	24	24
Buffer tank volume		dm^3	450	450	750	750	750	750
Sound power level	(5)(E)	dB(A)	90	90	90	91	93	93
Transport weight unit with pump and tank		kg	2160	2186	2919	2926	3032	4329
Operating weight unit with pump and full tank		kg	2610	2636	3669	3676	3782	5079

(1) Outdoor air temperature 35°C, water temperature 12°C / 7°C (EN14511:2022)
(2) η efficiency values for heating and cooling are respectively calculated by the following formulas: [η = SCOP / 2,5 - F(1) - F(2)] e [η = SEER / 2,5 - F(1) - F(2)]. For further information, please refer to the technical document "ErP 2009/125/EC DIRECTIVE" in the catalogue introducing pages, or to the EN14825:2022 regulation.
(3) Outdoor air temperature dry bulb 7°C / wet bulb 6°C, water temperature 40°C / 45°C (EN14511:2022)
(4) Seasonal energy efficiency class for LOW TEMPERATURE room heating under AVERAGE climatic conditions [EUROPEAN REGULATION No 811/2013. The energy efficiency class of this product is included in the range A+++ → D]
(5) Sound power level measured according to ISO 9614
(E) EUROVENT certified data

DIMENSIONAL DRAWINGS

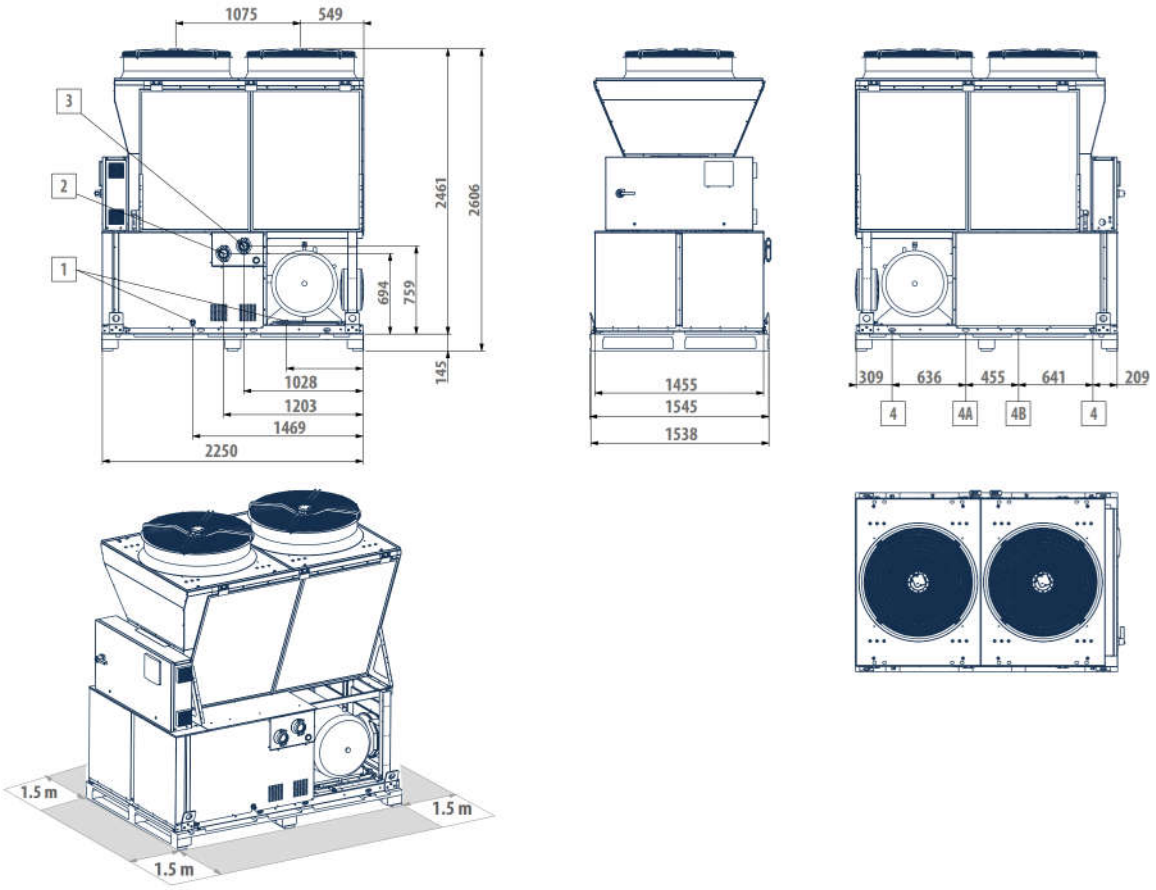
VPR 52 - 62



LEGEND	
1	Water drainage 1/2" female
2	Water inlet Victaulic 2"
3	Water outlet Victaulic 2"
4	Vibration dumpers
H	Versione C: 2459 - Versione H: 2252

DIMENSIONAL DRAWINGS

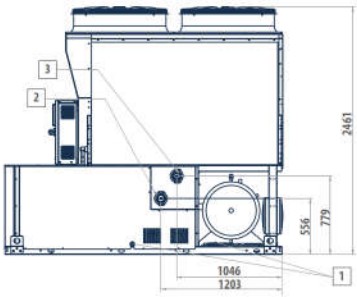
VPR 72 - 82 - 92 - 112 - 133

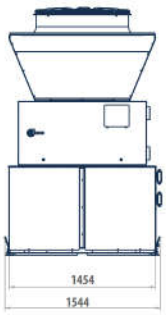


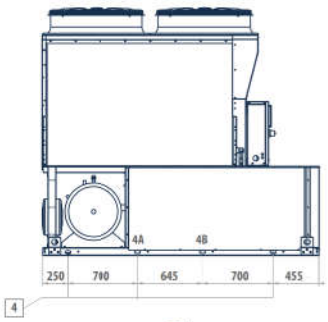
LEGEND	
1	Water drainage 1/2" female
2	Water inlet Victaulic 2 1/2"
3	Water outlet Victaulic 2 1/2"
4	Vibration dumpers (4A only for units with buffer tank, 4B only for units without buffer tank)

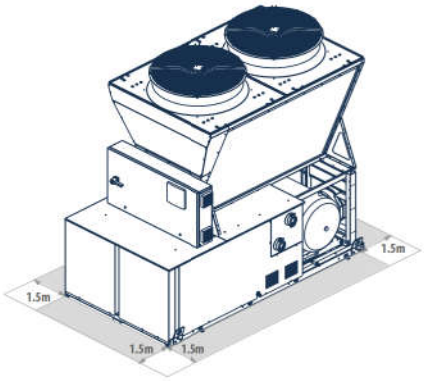
DIMENSIONAL DRAWINGS

VPR 114 - 134





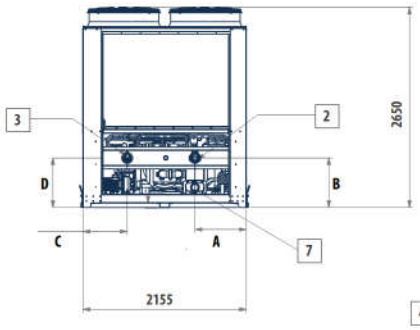


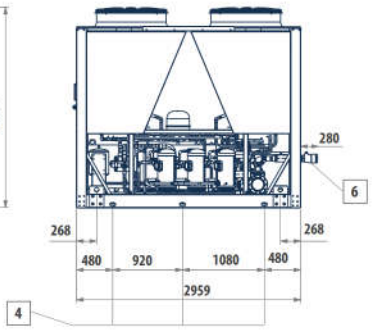


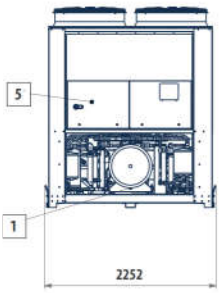
LEGEND

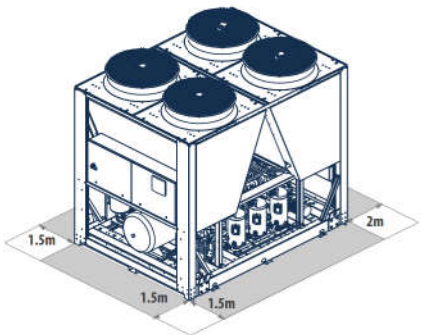
1	Water drainage 1/2" female
2	Water inlet Victaulic 2 1/2"
3	Water outlet Victaulic 2 1/2"
4	Vibration dumpers

VPR 173 - 213 - 164 - 174 - 204 - 226 - 256









LEGEND

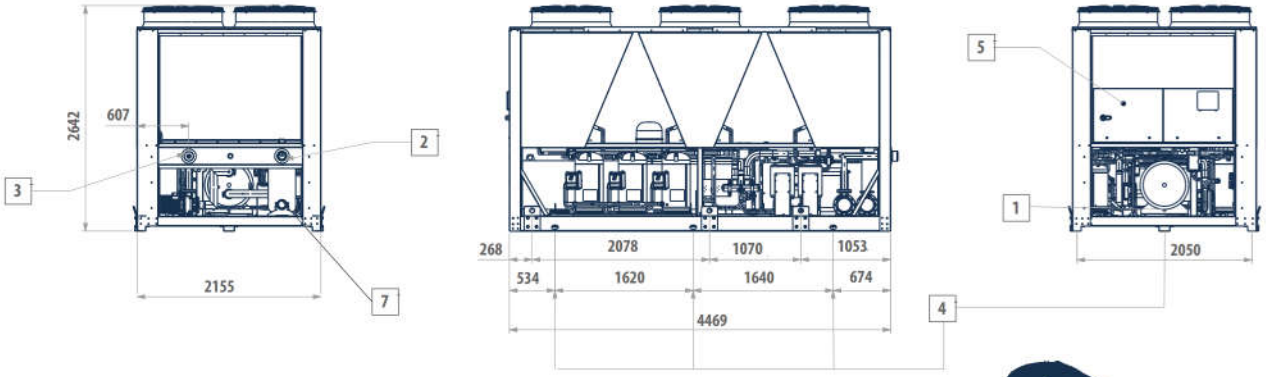
1	Water drainage 1/2" female
2	Water inlet Victaulic 4"
3	Water outlet Victaulic 4"
4	Vibration dumpers
5	Electric control board
6	Victaulic adapter from 4" to 3" to be mounted on-site
7	Water outlet, evaporator only

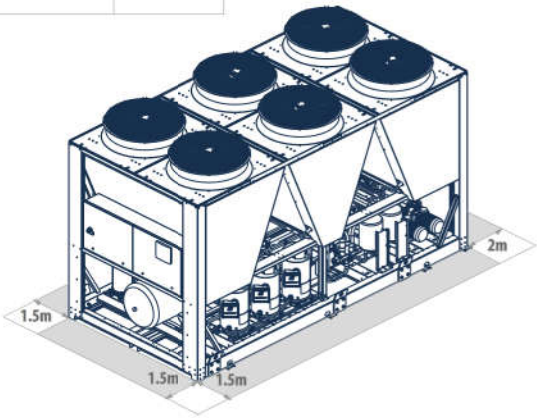
V-IPER	A mm	B mm	C mm	D mm
164 - 174 - 204 - 226 - 256	678	655	584	655 (1)
173 - 213	628	796	584	796

1. For 2 pumps version D = 889 mm

DIMENSIONAL DRAWINGS

VPR 276 - 306 - 336

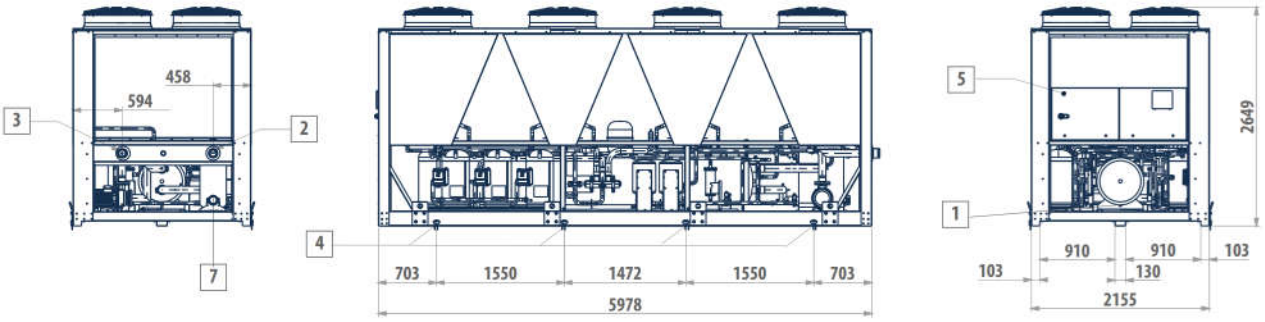


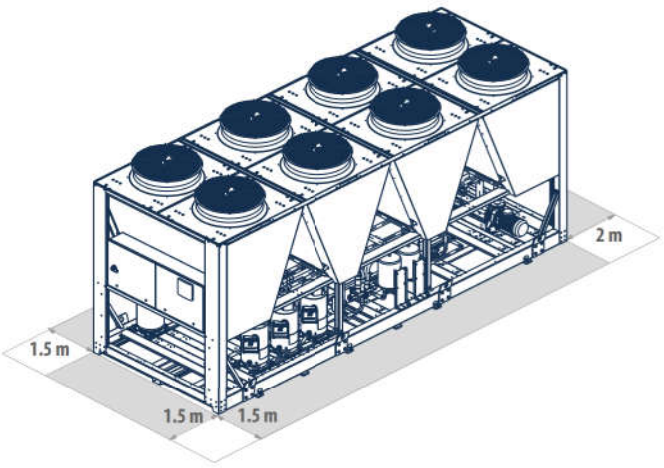


LEGEND

1	Water drainage 1/2" female
2	Water inlet Victaulic 4"
3	Water outlet Victaulic 4"
4	Vibration dumpers
5	Electric control board
6	-
7	Water outlet, evaporator only

VPR 386





LEGEND

1	Water drainage 1/2" female
2	Water inlet Victaulic 4"
3	Water outlet Victaulic 4"
4	Vibration dumpers
5	Electric control board
6	-
7	Water outlet, evaporator only