R290

AIR SOURCE HEAT PUMP RANGE

TECHNICAL SPECIFICATION

4 | 6 | 8 | 12 | 18 kW
REV 01 / SEPTEMBER 2026

HISA R290 / SINGLE-FAN FAMILY RENDER

High-temperature R290 monobloc heat pumps designed around efficient operation, simple system integration and long-term HISA support.

75°C	R290	–25°C
MAXIMUM HEATING WATER OUTLET	REFRIGERANT	HEATING AMBIENT LIMIT

01 / THE RANGE

ONE RANGE. FIVE OUTPUTS.

One range. Five outputs. Current Generation 2 product data.

SPECIFICATION	4 kW HR290-004-1PH	6 kW HR290-006-1PH	8 kW HR290-008-1PH	12 kW HR290-012-1PH	18 kW HR290-018-1PH
Power supply V/Ph/Hz	220-240 / 1 / 50	220-240 / 1 / 50	220-240 / 1 / 50	220-240 / 1 / 50	220-240 / 1 / 50
Max. input power kW	2.1	3.5	5.5	6.2	8.5
Max. input current A	9	15	24	27	37
Refrigerant	R290	R290	R290	R290	R290
Refrigerant charge kg	0.65	0.65	1.1	1.1	1.5
ErP sound power - W35 dB(A)	51	50	49	51	51
IP class	IPX4	IPX4	IPX4	IPX4	IPX4
Water connection inch	G1	G1	G1	G1	G1-1/4
Rated water flow m^3/h	0.77	1.0	1.4	2.06	3.1
Water pressure drop kPa	15	15	15	20	25
Water pressure min/max MPa	0.1 / 0.3	0.1 / 0.3	0.1 / 0.3	0.1 / 0.3	0.1 / 0.3
Net dimensions (L x W x H) mm	1100 × 438 × 660	1220 × 458 × 865	1320 × 478 × 913	1320 × 478 × 913	1187 × 488 × 1456
Net weight kg	83	110	162	162	205

Common Gen 2 equipment

DC inverter twin rotary compressor • DC inverter brushless fan motor • DC inverter circulation pump • 90 W base tray heater • 24 W compressor crankcase heater.

STANDARD CONDITIONS. CLEAR COMPARISON.

Standard-condition data from the Generation 2 specification dataset.

A7 / W35

Outdoor air 7°C / water outlet 35°C

SPECIFICATION	4 kW	6 kW	8 kW	12 kW	18 kW
Rated heating capacity kW	4.5	6.0	8.0	12.0	18.0
Heating capacity min/max kW	1.39-5.78	2.64-7.78	4.05-11.69	4.12-15.15	5.99-21.24
Power input min/max kW	0.26-1.12	0.52-1.59	0.77-2.27	0.82-3.36	1.19-5.11
COP	5.36	5.04	5.33	4.76	4.75

A7 / W55

Outdoor air 7°C / water outlet 55°C

SPECIFICATION	4 kW	6 kW	8 kW	12 kW	18 kW
Rated heating capacity kW	4.5	6.0	8.0	12.0	18.0
Heating capacity min/max kW	1.14-5.27	2.31-7.51	3.55-10.56	3.61-14.55	5.31-20.43
Power input min/max kW	0.40-1.55	0.77-2.59	1.15-3.02	1.17-4.50	1.58-7.41
COP	3.44	3.16	3.33	3.2	3.21

Test notation: A7/W35 = outdoor air 7°C / water outlet 35°C. A7/W55 = outdoor air 7°C / water outlet 55°C.

Important: For design at different outdoor and flow temperatures, use HISA's verified model-specific performance data rather than nominal model size alone.

03 / OPERATING ENVELOPE

THE OPERATING ENVELOPE.

Core design data for system selection and integration.
The ranges below apply to all five models in this document.

	AMBIENT	WATER / OUTLET
HEATING	−25 → +35 °C	+20 → +75 °C
COOLING	+15 → +45 °C	+5 → +25 °C
DHW	−25 → +35 °C	+20 → +65 °C

Operating pressures

AS LISTED IN THE APPROVED SPECIFICATION

0.8 MPa	3.0 MPa	3.2 MPa
LOW-SIDE OPERATING PRESSURE	HIGH-SIDE OPERATING PRESSURE	MAXIMUM ALLOWABLE PRESSURE

ACOUSTICS. ELECTRICAL. HYDRAULICS.

Generation 2 model data.

Acoustics

AVERAGE CLIMATE / W35°C

SPECIFICATION	4 kW	6 kW	8 kW	12 kW	18 kW
ErP sound power — W35°C dB(A)	**51**	**50**	**49**	**51**	**51**
Sound pressure at 1 m — W35°C dB(A)	38	36	34	35	36

Electrical

SUPPLY / INPUT

SPECIFICATION	4 kW	6 kW	8 kW	12 kW	18 kW
Power supply V/Ph/Hz	220-240 / 1 / 50	220-240 / 1 / 50	220-240 / 1 / 50	220-240 / 1 / 50	220-240 / 1 / 50
Max. input power kW	2.1	3.5	5.5	6.2	8.5
Max. input current A	9	15	24	27	37

Hydraulics

MODEL-SPECIFIC

SPECIFICATION	4 kW	6 kW	8 kW	12 kW	18 kW
Water connection inch	G1	G1	G1	G1	G1-1/4
Rated water flow m^3/h	0.77	1.0	1.4	2.06	3.1
Water pressure drop kPa	15	15	15	20	25
Water pressure min/max MPa	0.1 / 0.3	0.1 / 0.3	0.1 / 0.3	0.1 / 0.3	0.1 / 0.3

90 W

Base tray heater

24 W

Compressor crankcase heater

05 / PHYSICAL SPECIFICATIONS

THE RANGE. IN DETAIL.

Generation 2 model data.

4 kW
HR290-004-1PH

6 / 8 / 12 kW
Shared family render

18 kW
HR290-018-1PH

SPECIFICATION	4 kW	6 kW	8 kW	12 kW	18 kW
Net dimensions (L x W x H) mm	1100 × 438 × 660	1220 × 458 × 865	1320 × 478 × 913	1320 × 478 × 913	1187 × 488 × 1456
Packing dimensions (L x W x H) mm	1155 × 485 × 680	1250 × 493 × 1010	1352 × 533 × 1055	1352 × 533 × 1055	1217 × 538 × 1460
Net weight kg	83	110	162	162	205
Gross weight kg	98	125	182	182	225
IP class	IPX4	IPX4	IPX4	IPX4	IPX4

Dimensions are listed as L × W × H. Product images are not dimension drawings and are not shown to a common scale.

HISA system schematics should be used for the applicable heating-only, heating + buffer, heating + DHW, two-zone, cascade and hybrid arrangements. Final system design and component selection must be appropriate to the individual installation.

SYSTEM SCHEMATICS ↗

06 / CERTIFICATION & SUPPORT

BUILT FOR THE LONG TERM.

HISA+

10-YEAR PARTS & LABOUR

Subject to HISA terms, registration and eligibility requirements.

Certification

GENERATION 2

Generation 2 certification details will be published against each applicable model following completion of certification.

EXPLORE HISA R290

Performance, system design, technical data and support.

SCAN TO EXPLORE →

hisauk.com/heat-pumps

Technical information is correct at the date of publication. HISA Engineering Ltd reserves the right to make product and specification changes as part of continuous product development. Always refer to the latest HISA technical documentation before installation.

DOCUMENT
HISA R290 Gen 2
Technical Specification

REFERENCE / REVISION
HISA-R290-G2-TS-01
REV 01

ISSUE DATE
September 2026

PRODUCT GENERATION
Generation 2
4 | 6 | 8 | 12 | 18 kW