
RUNTAL ARTEPLANO

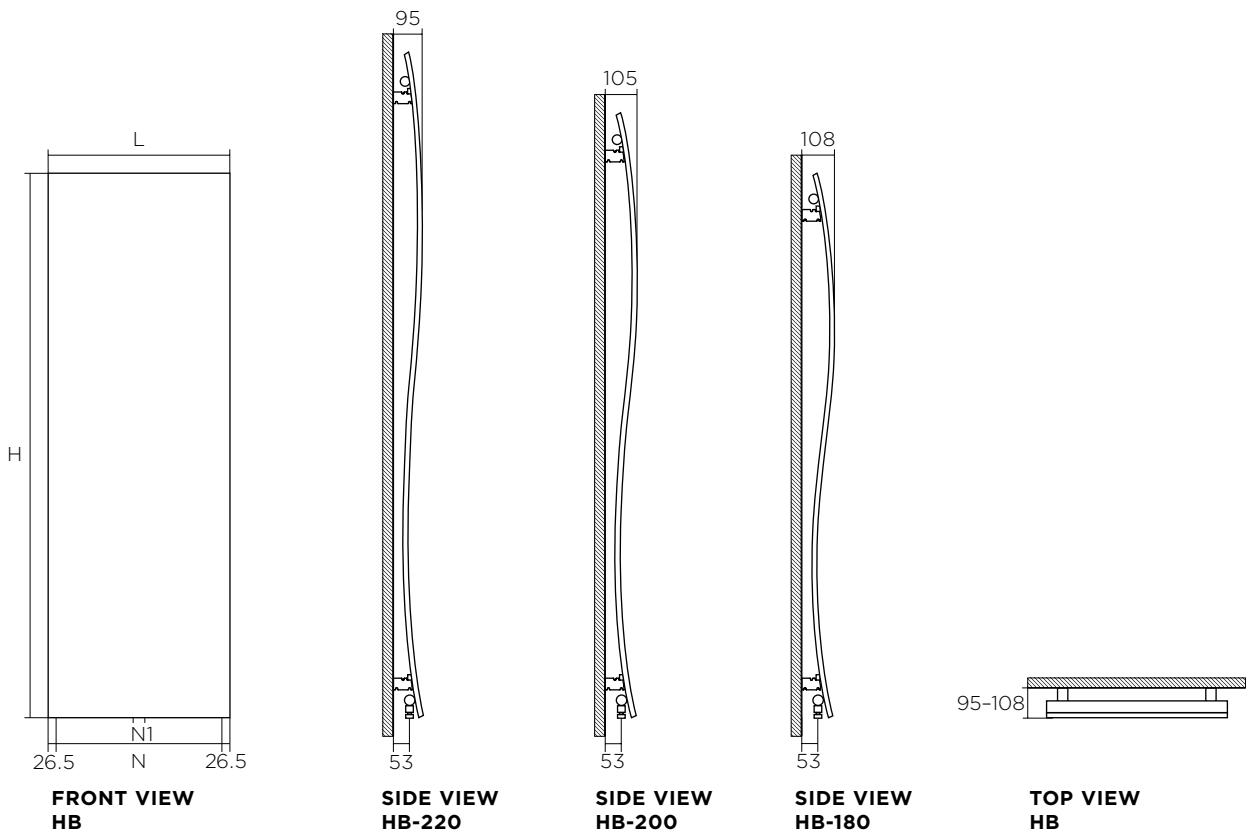
ONDA



runtal

RUNTAL ARTEPLANO ONDA TECHNICAL SPECIFICATIONS

CENTRAL HEATING



- H Height
- L Width
- N Pipe centres (mm)
- N1 Pipe centres (mm)

RUNTAL ARTEPLANO ONDA

CENTRAL HEATING

Height 1808 mm	Width mm	N mm	N1 mm	V dm ³	M kg	n	P ΔT 50K Watt	Surface (Code)
HB180-4	305	252	50	2.88	22.76	1.30	520	RAL9016(0603)
HB180-4	305	252	50	2.88	22.76	1.30	520	Anodised aluminium (0791)
HB180-4	305	252	50	2.88	22.76	1.30	473	Stainless Steel (0792)
HB180-4	305	252	50	2.88	22.76	1.30	520	Etched copper (0775)
HB180-4	305	252	50	2.88	22.76	1.30	520	Etched brass (0773)
HB180-4	305	252	50	2.88	22.76	1.30	473	Feather-finish stainless steel ⁽¹⁾
HB180-5	379	326	50	3.60	28.45	1.30	650	RAL9016 (0603)
HB180-5	379	326	50	3.60	28.45	1.30	650	Anodised aluminium (0791)
HB180-5	379	326	50	3.60	28.45	1.30	592	Stainless Steel (0792)
HB180-5	379	326	50	3.60	28.45	1.30	650	Etched copper (0775)
HB180-5	379	326	50	3.60	28.45	1.30	650	Etched brass (0773)
HB180-5	379	326	50	3.60	28.45	1.30	592	Feather-finish stainless steel ⁽¹⁾
HB180-6	453	400	50	4.32	34.14	1.30	780	RAL9016 (0603)
HB180-6	453	400	50	4.32	34.14	1.30	780	Anodised aluminium (0791)
HB180-6	453	400	50	4.32	34.14	1.30	710	Stainless Steel (0792)
HB180-6	453	400	50	4.32	34.14	1.30	780	Etched copper (0775)
HB180-6	453	400	50	4.32	34.14	1.30	780	Etched brass (0773)
HB180-6	453	400	50	4.32	34.14	1.30	710	Feather-finish stainless steel ⁽¹⁾
HB180-7	527	474	50	5.04	39.83	1.30	910	RAL9016 (0603)
HB180-7	527	474	50	5.04	39.83	1.30	910	Anodised aluminium (0791)
HB180-7	527	474	50	5.04	39.83	1.30	828	Stainless Steel (0792)
HB180-7	527	474	50	5.04	39.83	1.30	910	Etched copper (0775)
HB180-7	527	474	50	5.04	39.83	1.30	910	Etched brass (0773)
HB180-7	527	474	50	5.04	39.83	1.30	828	Feather-finish stainless steel ⁽¹⁾
HB180-8	601	548	50	5.76	45.52	1.30	1040	RAL9016 (0603)
HB180-8	601	548	50	5.76	45.52	1.30	1040	Anodised aluminium (0791)
HB180-8	601	548	50	5.76	45.52	1.30	946	Stainless Steel (0792)
HB180-8	601	548	50	5.76	45.52	1.30	1040	Etched copper (0775)
HB180-8	601	548	50	5.76	45.52	1.30	1040	Etched brass (0773)
HB200-8	601	548	50	5.76	45.52	1.30	946	Feather-finish stainless steel ⁽¹⁾
HB180-9	675	622	50	6.48	51.21	1.30	1170	RAL9016 (0603)
HB180-9	675	622	50	6.48	51.21	1.30	1170	Anodised aluminium (0791)
HB180-9	675	622	50	6.48	51.21	1.30	1065	Stainless Steel (0792)
HB180-9	675	622	50	6.48	51.21	1.30	1170	Etched copper (0775)
HB180-9	675	622	50	6.48	51.21	1.30	1170	Etched brass (0773)
HB180-9	675	622	50	6.48	51.21	1.30	1065	Feather-finish stainless steel ⁽¹⁾

(1) Code (0770)

N: pipe centres, N1: pipe centres, V: volume, M: weight, n: exponent, PΔT50K: EN 442 output

Height 1808 mm	Width mm	N mm	N1 mm	V dm³	M kg	n	P ΔT 50K Watt	Surface (Code)
HB180-10	749	696	50	7.20	56.90	1.30	1300	RAL9016 (0603)
HB180-10	749	696	50	7.20	56.90	1.30	1300	Anodised aluminium (0791)
HB180-10	749	696	50	7.20	56.90	1.30	1183	Stainless Steel (0792)
HB180-10	749	696	50	7.20	56.90	1.30	1300	Etched copper (0775)
HB180-10	749	696	50	7.20	56.90	1.30	1300	Etched brass (0773)
HB180-10	305	696	50	7.20	56.90	1.30	1183	Feather-finish stainless steel ⁽¹⁾

Height 2008 mm	Width mm	N mm	N1 mm	V dm³	M kg	n	P ΔT 50K Watt	Surface (Code)
HB200-4	305	252	50	3.12	25.12	1.30	556	RAL9016 (0603)
HB200-4	305	252	50	3.12	25.12	1.30	556	Anodised aluminium (0791)
HB200-4	305	252	50	3.12	25.12	1.30	506	Stainless Steel (0792)
HB200-4	305	252	50	3.12	25.12	1.30	556	Etched copper (0775)
HB200-4	305	252	50	3.12	25.12	1.30	556	Etched brass (0773)
HB200-4	305	252	50	3.12	25.12	1.30	506	Feather-finish stainless steel ⁽¹⁾
HB200-5	379	326	50	3.90	31.40	1.30	695	RAL9016 (0603)
HB200-5	379	326	50	3.90	31.40	1.30	695	Anodised aluminium (0791)
HB200-5	379	326	50	3.90	31.40	1.30	632	Stainless Steel (0792)
HB200-5	379	326	50	3.90	31.40	1.30	695	Etched copper (0775)
HB200-5	379	326	50	3.90	31.40	1.30	695	Etched brass (0773)
HB200-5	379	326	50	3.90	31.40	1.30	632	Feather-finish stainless steel ⁽¹⁾
HB200-6	453	400	50	4.68	37.68	1.30	834	RAL9016 (0603)
HB200-6	453	400	50	4.68	37.68	1.30	834	Anodised aluminium (0791)
HB200-6	453	400	50	4.68	37.68	1.30	759	Stainless Steel (0792)
HB200-6	453	400	50	4.68	37.68	1.30	834	Etched copper (0775)
HB200-6	453	400	50	4.68	37.68	1.30	834	Etched brass (0773)
HB200-6	453	400	50	4.68	37.68	1.30	759	Feather-finish stainless steel ⁽¹⁾
HB200-7	527	474	50	5.46	43.96	1.30	973	RAL9016 (0603)
HB200-7	527	474	50	5.46	43.96	1.30	973	Anodised aluminium (0791)
HB200-7	527	474	50	5.46	43.96	1.30	885	Stainless Steel (0792)
HB200-7	527	474	50	5.46	43.96	1.30	973	Etched copper (0775)
HB200-7	527	474	50	5.46	43.96	1.30	973	Etched brass (0773)
HB200-7	527	474	50	5.46	43.96	1.30	885	Feather-finish stainless steel ⁽¹⁾
HB200-8	601	548	50	6.24	50.24	1.30	1.112	RAL9016 (0603)
HB200-8	601	548	50	6.24	50.24	1.30	1.112	Anodised aluminium (0791)
HB200-8	601	548	50	6.24	50.24	1.30	1012	Stainless Steel (0792)
HB200-8	601	548	50	6.24	50.24	1.30	1.112	Etched copper (0775)
HB200-8	601	548	50	6.24	50.24	1.30	1.112	Etched brass (0773)
HB200-8	601	548	50	6.24	50.24	1.30	1012	Feather-finish stainless steel ⁽¹⁾

Height 2008 mm	Width mm	N mm	N1 mm	V dm³	M kg	n	P ΔT 50K Watt	Surface (Code)
HB200-9	675	622	50	7.02	56.52	1.30	1251	RAL9016 (0603)
HB200-9	675	622	50	7.02	56.52	1.30	1251	Anodised aluminium (0791)
HB200-9	675	622	50	7.02	56.52	1.30	1138	Stainless Steel (0792)
HB200-9	675	622	50	7.02	56.52	1.30	1251	Etched copper (0775)
HB200-9	675	622	50	7.02	56.52	1.30	1251	Etched brass (0773)
HB200-9	675	622	50	7.02	56.52	1.30	1138	Feather-finish stainless steel ⁽¹⁾
HB200-10	749	696	50	7.80	62.80	1.30	1390	RAL9016 (0603)
HB200-10	749	696	50	7.80	62.80	1.30	1390	Anodised aluminium (0791)
HB200-10	749	696	50	7.80	62.80	1.30	1265	Stainless Steel (0792)
HB200-10	749	696	50	7.80	62.80	1.30	1390	Etched copper (0775)
HB200-10	749	696	50	7.80	62.80	1.30	1390	Etched brass (0773)
HB200-10	749	696	50	7.80	62.80	1.30	1265	Feather-finish stainless steel ⁽¹⁾

Height 2208 mm	Width mm	N mm	N1 mm	V dm³	M kg	n	P ΔT 50K Watt	Surface (Code)
HB220-4	305	252	50	3.40	27.60	1.30	612	RAL9016 (0603)
HB220-4	305	252	50	3.40	27.60	1.30	612	Anodised aluminium (0791)
HB220-4	305	252	50	3.40	27.60	1.30	557	Stainless Steel (0792)
HB220-4	305	252	50	3.40	27.60	1.30	612	Etched copper (0775)
HB220-4	305	252	50	3.40	27.60	1.30	612	Etched brass (0773)
HB220-4	305	252	50	3.40	27.60	1.30	557	Feather-finish stainless steel ⁽¹⁾
HB220-5	379	326	50	4.25	34.50	1.30	765	RAL9016 (0603)
HB220-5	379	326	50	4.25	34.50	1.30	765	Anodised aluminium (0791)
HB220-5	379	326	50	4.25	34.50	1.30	696	Stainless Steel (0792)
HB220-5	379	326	50	4.25	34.50	1.30	765	Etched copper (0775)
HB220-5	379	326	50	4.25	34.50	1.30	765	Etched brass (0773)
HB220-5	379	326	50	4.25	34.50	1.30	696	Feather-finish stainless steel ⁽¹⁾
HB220-6	453	400	50	5.10	41.40	1.30	918	RAL9016 (0603)
HB220-6	453	400	50	5.10	41.40	1.30	918	Anodised aluminium (0791)
HB220-6	453	400	50	5.10	41.40	1.30	835	Stainless Steel (0792)
HB220-6	453	400	50	5.10	41.40	1.30	918	Etched copper (0775)
HB220-6	453	400	50	5.10	41.40	1.30	918	Etched brass (0773)
HB220-6	453	400	50	5.10	41.40	1.30	835	Feather-finish stainless steel ⁽¹⁾
HB220-7	527	474	50	5.95	48.30	1.30	1071	RAL9016 (0603)
HB220-7	527	474	50	5.95	48.30	1.30	1071	Anodised aluminium (0791)
HB220-7	527	474	50	5.95	48.30	1.30	975	Stainless Steel (0792)
HB220-7	527	474	50	5.95	48.30	1.30	1071	Etched copper (0775)
HB220-7	527	474	50	5.95	48.30	1.30	1071	Etched brass (0773)
HB220-7	527	474	50	5.95	48.30	1.30	975	Feather-finish stainless steel ⁽¹⁾

Height 2208 mm	Width mm	N mm	N1 mm	V dm³	M kg	n	P ΔT 50K Watt	Surface (Code)
HB220-8	601	548	50	6.80	55.20	1.30	1224	RAL9016 (0603)
HB220-8	601	548	50	6.80	55.20	1.30	1224	Anodised aluminium (0791)
HB220-8	601	548	50	6.80	55.20	1.30	1114	Stainless Steel (0792)
HB220-8	601	548	50	6.80	55.20	1.30	1224	Etched copper (0775)
HB220-8	601	548	50	6.80	55.20	1.30	1224	Etched brass (0773)
HB220-8	601	548	50	6.80	55.20	1.30	1114	Feather-finish stainless steel ⁽¹⁾
HB220-9	675	622	50	7.65	62.10	1.30	1377	RAL9016 (0603)
HB220-9	675	622	50	7.65	62.10	1.30	1377	Anodised aluminium (0791)
HB220-9	675	622	50	7.65	62.10	1.30	1253	Stainless Steel (0792)
HB220-9	675	622	50	7.65	62.10	1.30	1377	Etched copper (0775)
HB220-9	675	622	50	7.65	62.10	1.30	1377	Etched brass (0773)
HB220-9	675	622	50	7.65	62.10	1.30	1253	Feather-finish stainless steel ⁽¹⁾
HB220-10	749	668	50	8.50	69.00	1.30	1530	RAL9016 (0603)
HB220-10	749	668	50	8.50	69.00	1.30	1530	Anodised aluminium (0791)
HB220-10	749	668	50	8.50	69.00	1.30	1392	Stainless Steel (0792)
HB220-10	749	668	50	8.50	69.00	1.30	1530	Etched copper (0775)
HB220-10	749	668	50	8.50	69.00	1.30	1530	Etched brass (0773)
HB220-10	749	668	50	8.50	69.00	1.30	1392	Feather-finish stainless steel ⁽¹⁾

(1) Code (0770)

N: pipe centres, N1: pipe centres, V: volume, M: weight, n: exponent, P ΔT 50K: EN 442 output

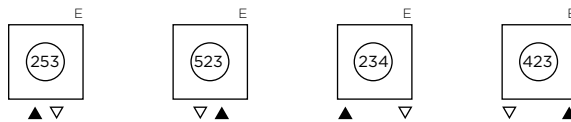
FINISH

Powder-coated finish	Code	Extra charge on RAL 9016
RAL9016 (standard)	0603	—
Classic and Trendy	See Runtal colour chart	+ 15%
Metal Look	See Runtal colour chart	+ 25%
White Quartz	0521	+ 25%

Artistic and processed finish	Code	Basic radiator
Anodised aluminium	0791	RAL9006
Stainless steel	0792	RAL9007
Etched copper	0775	RAL8003
Etched brass	0773	0337 old gold
Feather finish stainless steel	0770	RAL9007

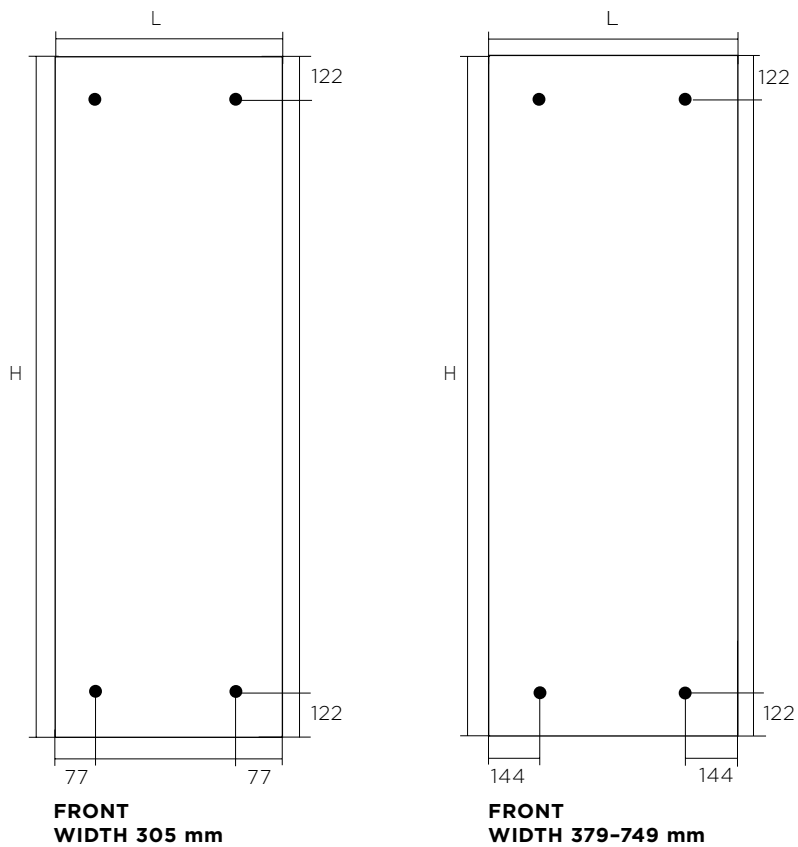
TECHNICAL DATA

Materials	Flat front powder-coated made from steel or with high-quality finish Header 37×32mm and flat oval tube 70×8 mm made from steel
Operating pressure	Standard max. 4.6 bar, high pressure max. 10 bar (extra charge 13%)
Test pressure	Standard 6.0 bar, high pressure 13.0 bar (extra charge 13%)
Operating temperature	Max. 80 °C
Standard kit	Wall brackets in same colour as radiator included in packaging
Connections	RUNTAL ARTEPLANO ONDA heating panels work on the forced-flow principle and are fitted with the necessary baffles in the factory. They may only be connected as described in the order (state code in accordance with sketch). With standard connections 2 × ½" internal thread for flow ▲ /return ▼, bottom vertical, 50mm central or alternating side, ½" air vent (E) Other connection types on request



Valves	As per ACCESSORIES price list
Minimum water flow $q_{m \text{ min.}}$	The technical data table shows the standard water flow q_{ms} for each model. The actual water flow q_m as a percentage of the standard water flow q_{ms} should normally be at least 17% for the RUNTAL ARTEPLANO ONDA
Pressure loss Δp	The pressure loss p depends on the actual water flow q_m . It is calculated using the formula: $p = q_m^{1.9125} \cdot c$ RUNTAL ARTEPLANO ONDA heating panel model HB-180-6; $t_1 = 75^\circ\text{C}$ $t_2 = 65^\circ\text{C}$ $t_r = 20^\circ\text{C}$ results in $\Phi = 780 \text{ W}$ at 50K Actual water flow $q_m \sim 63.0 \text{ kg/h}$ Factor $c = 0.1496$ $P = q_m^{1.9125} \cdot c = 63.0 \text{ kg/h}^{1.9125} \cdot 0.1496 \sim 413 \text{ Pa}$ $p = q_m^{1.9125} \cdot c \quad p = [\text{Pa}] \quad q_m = [\text{kg/h}] \quad c = \text{factor } 0.1496 = \text{constant}$
Single-entry systems	On request

RUNTAL ARTEPLANO ONDA MOUNTING INSTRUCTIONS



- H Height (mm)
- L Width (mm)
- Fixing point

For correct radiator installation, please note the corresponding installation instructions

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