GTDHR Infinite

- HRU with efficiency ≥ 75%
- Counterflow
- Qv ≤ 4500 m³/h
- Horizontal

HRU with pre- and post-heating coil ≤ 4500 m³/h type GTDHR Infinite

Heat recovery unit with high efficiency 90%. The range consists of 6 sizes and 7 types for air flows from 200 up to 7000 m³/h. Each model **GTDHR** is equipped with 2 adjustable air flows
The **GTDHR Infinite** is a **GTDHR Premium** with an electrical preheater for temperatures till -20°C

Application

- Automatic ventilation and high efficiency heat recovery of air in non residential and industrial applications
- Air filtration, temperature control
- Compact monobloc ventilation unit, with plug & play and energy-saving control system (EN 15232)

Composition

- Structure with aluminium profiles, thermal bridge free
- Corners in reinforced polyamide
- Double skinned panels with high-density glass wool insulation 50 mm M0 (60 kg/m³) with fire class A1 (M0)
- Outer layer: prelacquered steel plate (RAL 7035) with protection sheet
- Inner layer: galvanized steel plate
- Internal elements access panel equipped with security bolt
- Corner pieces for floor or ceiling mounting
- Round connections with lip seals
- Condensation tray and drain dia 20 mm
- Built in 100% Bypass, motorised and auto regulating
- Built in regulation with front display IP65
- FREE-COOLING and NIGHT-COOLING function
- Built in temperature sensors (4)
- Built in clock for two flow rate function
- Built in week clock and public holidays
- Safety switch
- Pressostat on inlet filter **F7**
- Pressostat on each fan
- Standard Modbus or Bacnet available

Fan

- Single inlet centrifugal fan with back draw blades, statically and dynamically balanced G6.3 according to DIN ISO 1940
- Direct driven EC motor with thermal protection, efficiency class IE3 (Premium Efficiency)
- Fan mounted on anti-vibration blocs
- Plug fan with epoxy coating, brand Ziehl Abegg (GTDHR 9010 in galvanized steel, brand EBM Papst)
- Direct driven EC current motor with electronic commutation (EC) with high efficiency, thermal protection and integrated speed control
- The EC technology has brought together high efficient EC motors with low energetic consumption for the management, control and the supervision of the duty point (regulation from 10 to 100%)

- Low noise level for a better acoustic comfort

Exchanger

- Static flux counter-flow exchanger made of seawater resistant aluminium, brand Klingenburg type GS
- Efficiency 90% at -10°C/90% inlet air - +20°C/50% on exhaust air (EN308)

Filter

- Filters are placed directly in front of the components for optimal protection
- Mounted on sliding rails with lip seals to ensure efficient air tightness
- Basic **GTDHR** type as one **F7** - ISO 16890 ePM1 – 55% (inlet air) and one **G4** - ISO 16890 Coarse 65% (exhaust air) filters, thickness 100 mm
- **F7** high efficiency filter: 10x higher filtration surface than a gravimetric filter and life span 2.5x longer

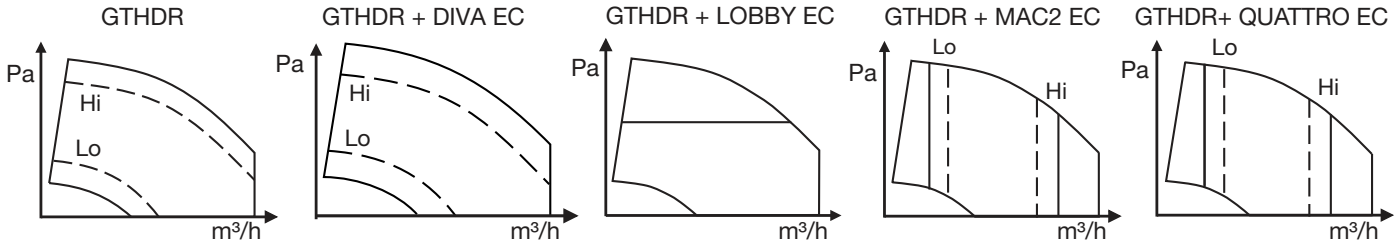
Options

- **GTDHR DIVA®EC*:** Proportional modulating flow (between a set min. And max. Flow) of each fan based on a built-in CO2 measurement.

The CO2 content (number of ppm) is adjustable in the control.

- **GTDHR LOBBY®EC*:** Constant pressure ventilation for each fan
- **GTDHR MAC2®EC*:** Two adjustable constant airflows for each fan. (except for the GTDHR 9008)
- **GTDHR QUATTRO®EC*:** Proportional ventilation between two constant air duties (high and low speed) for each fan (except for the GTDHR 9008). With built-in CO2 sensor in the exhaust side of the unit

* this regulation will be integrated in the unit. It is not possible to add this regulation afterwards



Certification

- Efficiency of the heat exchanger of more than 90% (EN308), in accordance with RT2012 and the directive ErP 2009/125/EC
- In conformity with EUROVENT classifications according to EN1886 and EN13053
- Standard construction with double skinned panels of 50 mm
- Resistance of the casing: Class 2
- Air tightness: Class L1
- Conductivity: T2
- Thermal bridge: TB2
- Exterior panel made of steel lacquered 10/10^{e}
  - Finish RAL7035 - 25µm, gloss 40%, film 80µm
  - Primer RAL7032 - 5µm
- Inner panel made of galvanized steel 10/10^{e}
- Insulation: high density 50mm mineral wool, 60 kg/m³, fire class A1 (M0)
- Structure with aluminium profiles cold bridge free

Accessories

- Motorizable opposite blade damper type **MVX-RM**
- Galvanized rain canopy type **MVX-AGC** with bird screen
- Flexible sleeves type **MTS** diameter 250 to 630 mm
- External display **E3-DSP**
- Amplifier **EO-R230K**

Order example

GTDHR 9023 IBCL-L

Explanation
GTDHR = Type heat recovery unit
9023 = Size **6**
I = Infinite
BC = With water heater
BE = With electrical heater
L = LOBBY EC
D = DIVA EC
M = MAC2 EC
Q = QUATRO EC

L = Configuration (configuration P only available on demand)

- P_{ab} [W] * = Absorbed power per fan
- Lpa @ 4m = Sound pressure level in free field with inlets and outlets connected

Technical data												
		Qv,max [m³/h]	Ps,max @ Qv,max [Pa]	U [V]	P_F [W]	P_{EPH} [kW]	P_{EPoH} [kW]	I_{max} [A]	t_m [°C]	t_o [°C]	IP	Lpa @ 4m [dB(A)]
GTDHR Infinite BC 9008		800*	250*	1 x 230	2 x 220	2.50	-	14.30	60	-20	IP44	32
GTDHR Infinite BC 9010		980*	500*	1 x 230	2 x 485	3.75	-	22.50	60	-20	IP54	37
GTDHR Infinite BC 9016		1550*	400*	3 x 400	2 x 900	5.25	-	15.40	40	-20	IP54	39
GTDHR Infinite BC 9023		2300*	350*	3 x 400	2 x 900	6.75	-	17.50	40	-20	IP54	43
GTDHR Infinite BC 9035		3500*	700*	3 x 400	2 x 2500	8.25	-	19.90	40	-20	IP54	44
GTDHR Infinite BE 9008	025	800*	250*	1 x 230	2 x 220	2.50	2.50	25.20	60	-20	IP44	32
GTDHR Infinite BE 9010	025	980*	500*	1 x 230	2 x 485	3.75	2.50	33.40	60	-20	IP54	37
GTDHR Infinite BE 9016	052	1550*	400*	3 x 400	2 x 900	5.25	5.25	23	40	-20	IP54	39
GTDHR Infinite BE 9023	067	2300*	350*	3 x 400	2 x 900	6.75	6.75	27.20	40	-20	IP54	43
GTDHR Infinite BE 9035	067	3500*	475*	3 x 400	2 x 2500	8.25	6.75	29.60	40	-20	IP54	44
	137					8.25	13.50	39.40				

*Fancurve is adjustable by means of the integrated regulation.

- P_F = Fan power
- P_{EPH} = Power electrical pre-heater
- P_{EPoH} = Power electrical post-heater
- t_m = maximum air temperature
- t_o = minimum operating temperature
- Lpa @ 4m = Sound pressure level at 4 m

Technical data water coil										
	Twr [°C/°C]	Ta,i [°C]	*	Qv,a [m³/h]						
				300	400	500	600	700	800	
GTDHR 9008 IBC	80/60	11	P [kW]/ Ta,o [°C]	4.5 / 54	5.5 / 50.9	6.4 / 48.2	7.1 / 45	7.9 / 44	8.6 / 42	
			Qv,w [l/h] / dp,w [kPa]	200 / 3	240 / 4	280 / 6	320 / 7	350 / 8	380 /10	
		15	P [kW]/ Ta,o [°C]	4.1 / 55	5 / 52	6 / 49	6.6 / 47.2	7.3 / 46	7.9 / 44	
			Qv,w [l/h] / dp,w [kPa]	100 / 2	220 / 3	260 / 5	290 / 6	320 / 7	350 / 8	
	90/70	11	P [kW]/ Ta,o [°C]	5.3 / 62	6.5 / 58	7.5 / 55	8.5 / 52	9.4 / 50	10.2 / 48	
			Qv,w [l/h] / dp,w [kPa]	240 / 4	290 / 6	340 / 8	380 / 10	420 / 12	450 /12	
		15	P [kW]/ Ta,o [°C]	4.9 / 63.9	6.1 / 59	7.05 / 56	7.9 / 54	8.7 / 52	9.5 / 50.4	
			Qv,w [l/h] / dp,w [kPa]	220 / 3	270 / 5	310 / 6	350 / 8	390 /10	420 /11	
	45/40	11	P [kW]/ Ta,o [°C]	2.4 / 34	3 / 32.7	3.5 / 31	3.9 / 30.1	4.3 / 29	4.7 / 28	
			Qv,w [l/h] / dp,w [kPa]	430 / 13	520 / 19	610 / 24	680 / 30	760 / 37	820 / 43	
		15	P [kW]/ Ta,o [°C]	2.1 / 35.6	2.5 / 34	3 / 32	3.3 / 31.8	3.7 / 30.9	4 / 30.1	
			Qv,w [l/h] / dp,w [kPa]	370 / 10	450 / 14	520 / 18	590 / 23	650 / 27	710 / 32	
	60/50	11	P [kW]/ Ta,o [°C]	3.4 / 43.7	4.2 / 41	4.8 / 39	5.4 / 37.5	6 / 36	6.5 / 34.9	
			Qv,w [l/h] / dp,w [kPa]	300 / 6	360 / 9	420 / 12	480 / 15	530 / 18	570 /20	
		15	P [kW]/ Ta,o [°C]	3 / 44	3.7 / 42	4.3 / 40	4.9 / 39.3	5.4 / 37	5.8 / 36.8	
			Qv,w [l/h] / dp,w [kPa]	270 / 5	330 / 8	380 / 10	430 / 12	470 / 14	510 / 17	
				400	**500**	**600**	**700**	**800**	**900**	
GTDHR 9010 IBC	80/60	11	P [kW]/ Ta,o [°C]	5.5 / 50.9	6.4 / 48.2	7.1 / 45	7.9 / 44	8.6 / 42	9.2 / 40.9	
			Qv,w [l/h] / dp,w [kPa]	240 / 4	280 / 6	320 / 7	350 / 8	380 /10	410 /11	
		15	P [kW]/ Ta,o [°C]	19115	18050	6.6 / 47.2	7.3 / 46	7.9 / 44	8.5 / 43	
			Qv,w [l/h] / dp,w [kPa]	220 / 3	260 / 5	290 / 6	320 / 7	350 / 8	370 / 9	
	90/70	11	P [kW]/ Ta,o [°C]	6.5 / 58	7.5 / 55	8.5 / 52	9.4 / 50	10.2 / 48	11 / 46.8	
			Qv,w [l/h] / dp,w [kPa]	290 / 6	340 / 8	380 / 10	420 / 12	450 /12	490 / 15	
		15	P [kW]/ Ta,o [°C]	6.1 / 59	7.05 / 56	7.9 / 54	8.7 / 52	9.5 / 50.4	10.3 / 48.8	
			Qv,w [l/h] / dp,w [kPa]	270 / 5	310 / 6	350 / 8	390 /10	420 /11	450 / 13	
	45/40	11	P [kW]/ Ta,o [°C]	3 / 32.7	3.5 / 31	3.9 / 30.1	4.3 / 29	4.7 / 28	5.1 / 27.5	
			Qv,w [l/h] / dp,w [kPa]	520 / 19	610 / 24	680 / 30	760 / 37	820 / 43	890 / 51	
		15	P [kW]/ Ta,o [°C]	2.5 / 34	3 / 32	3.3 / 31.8	3.7 / 30.9	4 / 30.1	4.4 / 29.5	
			Qv,w [l/h] / dp,w [kPa]	450 / 14	520 / 18	590 / 23	650 / 27	710 / 32	760 / 38	
	60/50	11	P [kW]/ Ta,o [°C]	4.2 / 41	4.8 / 39	5.4 / 37.5	6 / 36	6.5 / 34.9	7 / 33	
			Qv,w [l/h] / dp,w [kPa]	360 / 9	420 / 12	480 / 15	530 / 18	570 /20	620 / 24	
		15	P [kW]/ Ta,o [°C]	3.7 / 42	4.3 / 40	4.9 / 39.3	5.4 / 37	5.8 / 36.8	6.4 / 35.9	
			Qv,w [l/h] / dp,w [kPa]	330 / 8	380 / 10	430 / 12	470 / 14	510 / 17	550 / 20	
				600	**800**	**1000**	**1200**	**1400**	**1500**	
GTDHR 9016 IBC	80/60	11	P [kW]/ Ta,o [°C]	8.8 / 54.2	10.8 / 50.5	12.6 / 47.7	14.1 / 45.4	15.6 / 43.5	16.3 / 42.7	
			Qv,w [l/h] / dp,w [kPa]	390 / 5	480 / 7	550 / 9	620 / 11	690 / 13	720 / 15	
		15	P [kW]/ Ta,o [°C]	8.1 / 55.5	10 / 52	11.6 / 49.4	13 / 47.2	14.3 / 45.4	15 / 44.7	
			Qv,w [l/h] / dp,w [kPa]	360 / 4	440 / 6	510 / 8	570 / 10	630 / 11	660/ 13	
	90/70	11	P [kW]/ Ta,o [°C]	10.5 / 62.1	13 / 57.8	14.9 / 54.4	16.7 / 51.7	18.5 / 49.5	19.3 / 48.6	
			Qv,w [l/h] / dp,w [kPa]	460 / 6	570 / 9	660 / 12	740 / 15	820 / 18	850 / 20	
		15	P [kW]/ Ta,o [°C]	9.8 / 63.4	12 / 59	13.9 / 56.2	15.6 / 53.7	17.2 / 51.5	18 / 50.7	
			Qv,w [l/h] / dp,w [kPa]	430 / 6	530 / 8	610 / 10	690 / 13	760 / 16	800 / 18	
	45/40	11	P [kW]/ Ta,o [°C]	4.8 / 34.2	5.8 / 32.4	6.8 / 30.9	7.7 / 29.7	8.5 / 28.7	8.91 / 28.3	
			Qv,w [l/h] / dp,w [kPa]	830 / 20	1020 / 30	1190 / 40	1340 / 49.1	1480 / 60	1550 / 68	
		15	P [kW]/ Ta,o [°C]	4.1 / 35.4	5 / 33.8	5.88 / 32.5	6.6 / 31.4	7.3 / 30.6	7.6 / 30.2	
			Qv,w [l/h] / dp,w [kPa]	720 / 15	880 / 22	1020 / 30	1160 / 37.3	1280 / 45	1330 / 51	
	60/50	11	P [kW]/ Ta,o [°C]	6.6 / 43.4	8.1 / 40.8	9.4 / 38.7	10.7 / 37	11.8 / 35.6	12.3 / 35	
			Qv,w [l/h] / dp,w [kPa]	580 / 10	710 / 14	830 / 20	940 / 24	1030 / 30	1080 / 33	
		15	P [kW]/ Ta,o [°C]	5.9 / 44.6	7.3 / 42.2	8.5 / 40.3	9.6 / 38.8	10.6 / 37.5	11.1 / 36.9	
			Qv,w [l/h] / dp,w [kPa]	520 / 8	640 / 12	750 / 16	840 / 20	930 / 25	970 / 27	
				1000	**1250**	**1500**	**1750**	**2000**	**2250**	
GTDHR 9023 IBC	80/60	11	P [kW]/ Ta,o [°C]	14.5 / 53.4	16.9 / 50.6	19 / 48.2	21.2 / 46.3	23 / 44.6	24.8 / 43.1	
			Qv,w [l/h] / dp,w [kPa]	640 / 5	740 / 6	840 / 7	930 / 9	1010 / 10	1090 / 12	
		15	P [kW]/ Ta,o [°C]	13.4 / 54.7	15.6 / 52.1	17.6 / 49.9	19.5 / 48.1	21.2 / 46.5	22.8 / 45.2	
			Qv,w [l/h] / dp,w [kPa]	590 / 4	690 / 5	770 / 6	860 / 8	930 / 9	1000 / 10	
	90/70	11	P [kW]/ Ta,o [°C]	17.2 / 61.1	20.1 / 57.8	22.7 / 55.1	25.1 / 52.9	27.3 / 50.9	29.4 / 49.2	
			Qv,w [l/h] / dp,w [kPa]	760 / 6	890 / 8	1000 / 10	1110 / 12	1210 / 14	1300 / 16	
		15	P [kW]/ Ta,o [°C]	16 / 62.5	18.7 / 59.5	21.2 / 56.9	23.4 / 54.7	25.5 / 52.9	27.5 / 51.3	
			Qv,w [l/h] / dp,w [kPa]	710 / 5	830 / 7	940 / 9	1030 / 10	1130 / 13	1210 / 14	
	45/40	11	P [kW]/ Ta,o [°C]	7.83 / / 33.8	9.2 / 32.4	10.4 / 31.2	11.5 / 30.2	12.6 / 29.4	13.6 / 28.6	
			Qv,w [l/h] / dp,w [kPa]	1360 / 19	1600 / 26	1810 / 32	2000 / 38	2190 / 46	2370 / 54	
		15	P [kW]/ Ta,o [°C]	6.75 / 35	7.9 / 33.8	8.97 / 32.8	10 / 31.9	10.8 / 31.1	11.7 / 30.4	
			Qv,w [l/h] / dp,w [kPa]	1180 / 14	1380 / 20	1560 / 24	1730 / 30	1880 / 35	2040 / 41	
	60/50	11	P [kW]/ Ta,o [°C]	10.9 / 42.9	12.8 / 40.8	14.4 / 39.1	16 / 37.7	17.4 / 36.5	18.8 / 35.4	
			Qv,w [l/h] / dp,w [kPa]	950 / 10	1120 / 13	1260 / 16	1400 / 19	1520 / 22	1650 / 26	
		15	P [kW]/ Ta,o [°C]	9.8 / 44.1	11.5 / 42.2	13 / 40.7	14.4 / 39.4	15.7 / 38.3	16.9 / 37.3	
			Qv,w [l/h] / dp,w [kPa]	860 / 8	1010 / 10	1140 / 13	1260 /16	1370 / 19	1480 / 22	
				1500	**1900**	**2300**	**2700**	**3100**	**3500**	
GTDHR 9035 IBC	80/60	11	P [kW]/ Ta,o [°C]	21.3 / 52.5	25 / 49.5	28.4 / 47.1	31.5 / 45.1	34.4 / 43.4	37 / 41.9	
			Qv,w [l/h] / dp,w [kPa]	940 / 4	1100 / 5	1250 / 6	1390 / 7	1510 / 8	1630 / 9	
		15	P [kW]/ Ta,o [°C]	19.6 / 53.8	23.1 / 51.1	26.2 / 48.8	29 / 46.9	31.6 / 45.3	34.1 / 43.9	
			Qv,w [l/h] / dp,w [kPa]	860 / 3	1020 / 4	1150 / 5	1280 / 6	1390 / 7	1500 / 8	
	90/70	11	P [kW]/ Ta,o [°C]	25.3 / 60.2	29.7 / 56.7	33.8 / 53.9	37.5 / 51.5	40.9 / 49.5	44.1 / 47.8	
			Qv,w [l/h] / dp,w [kPa]	1120 / 4	1310 / 6	1490 / 8	1660 / 9	1810 / 11	1950 / 13	
		15	P [kW]/ Ta,o [°C]	23.5 / 61.6	27.7 / 58.3	31.5 / 55.6	34.9 / 53.4	38.1 / 51.5	41.1 / 49.9	
			Qv,w [l/h] / dp,w [kPa]	1040 / 4	1220 / 5	1390 / 7	1540 / 8	1680 / 10	1820 / 11	
	45/40	11	P [kW]/ Ta,o [°C]	11.5 / 33.5	13.6 / 32	15.5 / 30.7	17.3 / 29.7	18.9 / 28.8	20.4 / 28	
			Qv,w [l/h] / dp,w [kPa]	2000 / 14	2370 / 20	2700 / 25	3010 / 10	3290 / 36	3550 / 41	
		15	P [kW]/ Ta,o [°C]	10 / 34.7	11.7 / 33.4	13.4 / 32.3	14.9 / 31.3	16.3 / 30.6	17.6 / 29.9	
			Qv,w [l/h] / dp,w [kPa]	1730 / 11	2040 / 15	2330 /19	2600 / 23	2840 / 27	3070 / 32	
	60/50	11	P [kW]/ Ta,o [°C]	16 / 42.3	18.9 / 40.1	21.5 / 38.3	23.9 / 36.9	26.1 / 35.6	28.2 / 34.5	
			Qv,w [l/h] / dp,w [kPa]	1410 / 7	1650 / 9.4	1880 / 12	2090 / 15	2280 / 18	2470 / 20	
		15	P [kW]/ Ta,o [°C]	14.4 / 43.6	17 / 41.6	19.3 / 40	21.5 / 38.6	23.5 / 37.5	25.3 / 36.5	
			Qv,w [l/h] / dp,w [kPa]	1260 / 6	1490 / 8	1690 / 10	1880 /12	2060 / 15	2210 / 17	

- Twr = Temperature water regime
- Ta,i = Temperature air before the coil
- *P = Power of the coil
- *Ta, o= Temperature after the coil
- *Qv,w = Water flow
- *dp,w = Water pressure loss

Horizontal configurations - side by side flow - top view

■ GTDHR 9008 - 9035

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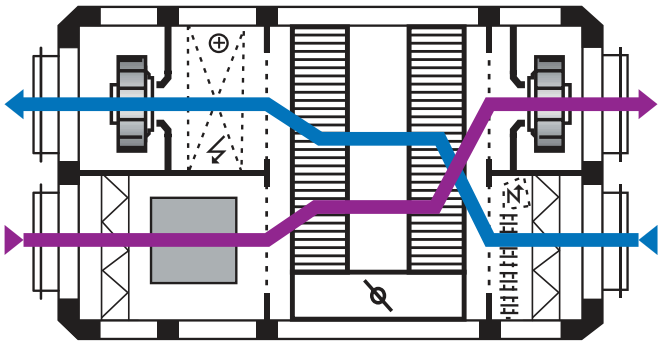
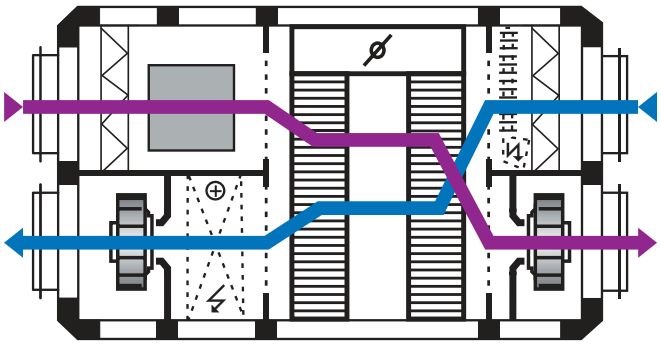


P

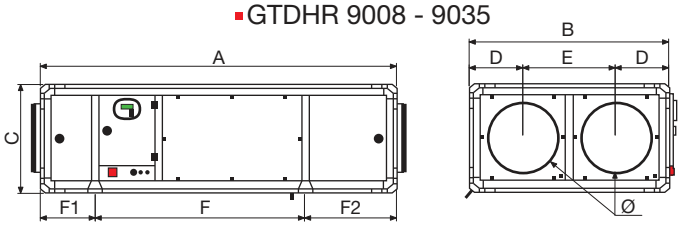


Blue arrow: Fresh air
Purple arrow: Return air

Configuration P is only available on demand

Product drawing horizontal configuration

▪ GTDHR 9008 - 9035



	Dimensions									
	Ø [mm]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	F1 [mm]	F2 [mm]	Kg
GTDHR Infinite 9008	315	1915	915	505	255	405	1097	362	456	220
GTDHR Infinite 9010	315	1915	915	505	255	405	1097	362	456	220
GTDHR Infinite 9016	400	2230	1115	605	305	505	1261	362	607	318
GTDHR Infinite 9023	450	2345	1315	705	355	605	1376	362	607	412
GTDHR Infinite 9035	500	2625	1515	805	405	705	1520	450	655	564

Attention

- The GTDHR 9048 and 9070 only excist in vertical configuration