

Technical Data Manual

Hirotec / Bigdat



**advanced
conditioning
solutions**

O/UEDA Bigdat

Model	280	AIR COOLED	
		360	460
Gross Capacity & Heat Rejection	kW	kW	kW
24°C – 50%RH			
Total	26.8	33.2	39.2
Sensible	26.2	31.6	35.6
THR	33.2	41.0	48.4
24°C – 45%RH			
Total	26.1	32.7	38.4
Sensible	26.1	32.7	38.2
THR	32.4	40.4	47.4
22°C – 50%RH			
Total	25.5	31.6	37.2
Sensible	25.5	31.0	34.8
THR	31.9	39.2	46.4
22°C – 45%RH			
Total	25.2	31.4	36.5
Sensible	25.2	31.4	36.5
THR	31.3	39.0	45.3

Fan Section – Forward curved centrifugal fan, direct drive

Nominal airflow (l/s)	2500	2780	2780
Fan motor – Nameplate kW (each)	1.5	1.5	1.5
Number of fans/motors	2	2	2
External Static Pressure (Pa)	25	25	25

Evaporator Coil – Copper tubes with rifle bore, louvred aluminium fins

Face area (m ²)	0.90	0.90	0.90
No. of rows	4	5	6
Face velocity (m/s)	2.78	3	3
Drain Connection size (O.Dmm)	25	25	25

Compressor – Hermetic scroll

No. of compressors	2	2	2
Safety controls –			
HP cutout (manual reset) 26 bar, LP cutout (auto reset) 0.7 bar			
Input power for 2 compressors (kW)	6.4	7.8	9.2

Humidifier – Immersed electrode

Capacity (kg/h)	Max 5	Max 5	Max 5
Input power (kW)	3.6	3.6	3.6
Water supply pressure range(kPa)		100 – 1000	
Connection drain (BSPF)	3/4"	3/4"	3/4"
Connection supply (BSPM)	3/4"	3/4"	3/4"

O/UEDA Bigdat

Model	280	AIR COOLED	
		360	460

Filter – Dry media disposable

No. of filters	2	2	2
Size (mm) OEDA		630x896x50	
Size (mm) UEDA		4x322x526x100	
Efficiency to AS 1132, Part 2	EU4	EU4	EU4

Heaters – Finned Tubular Element

Standard capacity (kW)	10	10	10
No. of stages	2	2	2

Controls

Standard Controls	Datalogic Electronic
Optional Controls	Datalogic Graphic Electronic
(See controls section 8 for details)	

Electrical Data

Supply (Volts/Hz/Phases)	415/50/3	415/50/3	415/50/3
Full load current (Amps) (includes condenser)	42.3	46.5	48.9

Physical Details

Width x height x depth (mm)	1490x1990x620		
Weight (kg)	450	470	490

Air cooled condenser selection – Factory Matched (ACN Series)

No. of condensers	2	2	2
Standard model	ACN500	ACN600	ACN750

Selection based on 35°C ambient temperature

Sound Pressure dB(A)	53	54	54
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Sound Pressure level measured 1 metre in front of the unit in free field with ducted air distribution (over), air distribution through raised floor (under)

Available with R407C Refrigerant. Contact your Hirotec sales office for details.

Development is continuous and Hirotec Technologies reserves the right to make changes to any stated figures without notice.

O/UEDA Bigdat

Model

AIR COOLED

13V 15V 20V

Gross Capacity & Heat Rejection

kW kW kW

24°C – 50%RH

Total	44.1	50.2	68.3
Sensible	41.8	48.7	64.6
THR	54.3	61.5	84.0

24°C – 45%RH

Total	42.9	48.8	66.4
Sensible	42.9	48.8	66.4
THR	53.1	60.1	82.0

22°C – 50%RH

Total	41.9	47.3	64.7
Sensible	40.4	46.9	62.4
THR	52.1	58.6	80.3

22°C – 45%RH

Total	41.4	46.5	63.8
Sensible	41.4	46.5	63.8
THR	51.6	57.8	79.4

Fan Section – Forward curved centrifugal fan, belt drive

Nominal airflow (l/s)	3860	4200	5500
Fan motor – Nameplate (kW)	1.5	2.2	4.0
Number of fans/motors	2	2	2
External Static Pressure (Pa)	25	25	25

Evaporator Coil – Copper tubes with rifle bore, louvred aluminium fins

Face area (m ²)	2.2	2.2	2.2
No. of rows	3	4	4
Face velocity (m/s)	1.8	1.9	2.5
Drain Connection size (O.D.mm)	25	25	25

Compressor – Hermetic scroll

No. of compressors	2	2	2
Safety controls – HP cutout (manual reset) 26 bar, LP cutout (auto reset) 0.7 bar			
Input power for 2 compressors (kW)	10.5	12.0	16.6

Humidifier – Immersed electrode

Capacity (kg/h)	Max 8	Max 8	Max 8
Input power (kW)	5.8	5.8	5.8
Water supply pressure range (kPa)	100 – 1000		
Connection drain (BSPF)	3/4"	3/4"	3/4"
Connection supply (BSPM)	3/4"	3/4"	3/4"

O/UEDA Bigdat Model

AIR COOLED

	13V	15V	20V
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Filter – Dry media disposable

No. of filters	3	3	3
Size (mm) OEDA			
Size (mm) UEDA x 100 mm deep	2 x 713 x 713 + 713 x 211		
Efficiency to AS 1132, Part 2	EU4	EU4	EU4

Heaters – Finned Tubular Element

Standard capacity (kW)	15	15	15
No. of stages	2	2	2

Controls

Standard Controls	Datalogic Electronic
Optional Controls	Datalogic Graphic Electronic
<small>(See controls section 8 for details)</small>	

Electrical Data

Supply (Volts/Hz/Phases)	415/50/3	415/50/3	415/50/3
Full load current (Amps) (includes condenser)	53	60	73

Physical Details

Width x height x depth (mm)	1870x1990x850		
Weight (kg)	800	830	860

Air cooled condenser selection – Factory Matched (ACN Series)

No. of condensers	2	2	2
Standard model	ACN900	ACN1000	ACN1500

Selection based on 35°C ambient temperature

Sound Pressure dB (A)	65	67	69
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Sound Pressure level measured 1 metre in front of the unit in free field with ducted air distribution (over), air distribution through raised floor (under)

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O/UEDA Bigdat

AIR COOLED

Model	26V	30V
Gross Capacity & Heat Rejection	kW	kW
24°C – 50%RH		
Total	83.9	96.0
Sensible	77.9	84.9
THR	103.3	118.7
24°C – 45%RH		
Total	81.5	94.0
Sensible	81.5	90.1
THR	100.9	116.7
22°C – 50%RH		
Total	80.0	91.7
Sensible	75.6	84.7
THR	99.4	114.4
22°C – 45%RH		
Total	78.2	88.5
Sensible	78.2	88.5
THR	97.6	111.2

Fan Section – Forward curved centrifugal fan, belt drive

Nominal airflow (l/s)	6610	6800
Fan motor – Nameplate (kW)	2.2	3.0
Number of fans/motors	3	3
External Static Pressure (Pa)	25	25

Evaporator Coil – Copper tubes with rifle bore, louvred aluminium fins

Face area (m ²)	2.73	2.73
No. of rows	4	4
Face velocity (m/s)	2.42	2.49
Drain Connection size (O.D.mm)	25	25

Compressor – Hermetic scroll

No. of compressors	2	2
Safety controls –		
HP cutout (manual reset) 26 bar, LP cutout (auto reset) 0.7 bar		
Input power for 2 compressors (kW)	20.9	24.7

Humidifier – Immersed electrode

Capacity (kg/h)	Max 8	Max 8
Input power (kW)	5.8	5.8
Water supply pressure range (kPa)	100 – 1000	
Connection drain (BSPF)	3/4"	3/4"
Connection supply (BSPM)	3/4"	3/4"

O/UEDA Bigdat Model

AIR COOLED
26V 30V

Filter – Dry media disposable

No. of filters	3	3
Size (mm) OEDA		
Size (mm) UEDA x 100 mm Deep	713 x 713	713 x 713
Efficiency to AS 1132, Part 2	EU4	EU4

Heaters – Finned Tubular Element

Standard capacity (kW)	15	15
No. of stages	2	2

Controls

Standard Controls	Datalogic Electronic
Optional Controls	Datalogic Graphic Electronic
<small>(See controls section 8 for details)</small>	

Electrical Data

Supply (Volts/Hz/Phases)	415/50/3	415/50/3
Full load current (Amps) (includes condenser)	73	86

Physical Details

Width x height x depth (mm)	2370x1990x850	
Weight (kg)	1000	1030

Air cooled condenser selection – Factory Matched (ACN Series)

No. of condensers	2	2
Standard model	ACN2000	ACN2500

Selection based on 35°C ambient temperature

Sound Pressure dB(A)	71	72
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O/UEDW Bigdat

WATER COOLED

Model

280 360 460

Gross Capacity and Heat Rejection

kW kW kW

24°C – 50%RH

Total	27.8	34.2	40.6
Sensible	26.4	31.8	35.8
THR	33.2	41.0	48.4

24°C – 45%RH

Total	27.0	33.3	39.4
Sensible	27.0	33.3	38.8
THR	32.5	40.0	47.5

22°C – 50%RH

Total	26.2	32.8	37.9
Sensible	26.2	31.6	36.5
THR	31.7	39.5	46.0

22°C – 45%RH

Total	25.4	31.8	36.7
Sensible	25.4	31.8	36.7
THR	30.9	38.5	44.8

Based on 30°C EWT & 35.5°C LWT

Fan Section – Forward curved centrifugal fan, direct drive

Nominal airflow (l/s)	2500	2780	2780
Fan motor – Nameplate (kW)	1.5	1.5	1.5
Number of fans/motors	2	2	2
External Static Pressure (Pa)	25	25	25

Evaporator Coil – Copper tubes with rifle bore, louvred aluminium fins

Face area (m ²)	0.90	0.90	0.90
No. of rows	4	5	6
Face velocity (m/s)	2.78	3	3
Drain Connection size (O.D.mm)	25	25	25

Compressor – Hermetic scroll

No. of compressors	2	2	2
Safety controls –			
HP cutout (manual reset) 26 bar, LP cutout (auto reset) 0.7 bar			
Input power for 2 compressors (kW)	6.4	7.8	9.2

Humidifier – Immersed electrode

Capacity (kg/h)	Max 5	Max 5	Max 5
Input power (kW)	3.6	3.6	3.6
Water supply pressure range	100-1000(kPa)		
Connection drain (BSPF)	3/4"	3/4"	3/4"
Connection supply (BSPM)	3/4"	3/4"	3/4"

O/UEDW Bigdat

WATER COOLED

Model

13V 15V 20V

Gross Capacity and Heat Rejection

kW kW kW

24°C – 50%RH

Total	46.2	53.3	72.0
Sensible	42.8	50.1	66.5
THR	55.0	63.1	85.6

24°C – 45%RH

Total	45.0	51.7	69.8
Sensible	45.0	51.7	69.8
THR	53.8	61.5	83.5

22°C – 50%RH

Total	44.0	50.1	69.2
Sensible	42.0	48.2	65.3
THR	52.8	59.9	82.7

22°C – 45%RH

Total	43.4	49.6	67.0
Sensible	43.4	49.6	67.0
THR	52.2	59.4	80.5

Based on 30°C EWT & 35.5°C LWT

Fan Section – Forward curved centrifugal fan, belt drive

Nominal airflow (l/s)	3860	4200	5500
Fan motor – Nameplate (kW)	1.5	2.2	4.0
Number of fans/motors	2	2	2
External Static Pressure (Pa)	25	25	25

Evaporator Coil – Copper tubes with rifle bore, louvred aluminium fins

Face area (m ²)	2.2	2.2	2.2
No. of rows	4	4	4
Face velocity (m/s)	1.76	1.9	2.5
Drain Connection size (O.D.mm)	25	25	25

Compressor – Hermetic scroll

No. of compressors	2	2	2
Safety controls –			
HP cutout (manual reset) 26 bar, LP cutout (auto reset) 0.7 bar			
Input power for 2 compressors (kW)	8.8	9.8	13.5

Humidifier – Immersed electrode

Capacity (kg/h)	Max 8	Max 8	Max 8
Input power (kW)	5.8	5.8	5.8
Water supply pressure range	100-1000(kPa)		
Connection drain (BSPF)	3/4"	3/4"	3/4"
Connection supply (BSPM)	3/4"	3/4"	3/4"

O/UEDW Bigdat

WATER COOLED

Model

26V 30V

Gross Capacity and Heat Rejection

kW kW

24°C – 50%RH

Total	88.1	100.9
Sensible	79.4	86.6
THR	105.1	120.5

24°C – 45%RH

Total	85.6	100.0
Sensible	84.1	93.5
THR	102.6	119.6

22°C – 50%RH

Total	84.7	95.8
Sensible	78.0	88.0
THR	101.7	115.4

22°C – 45%RH

Total	81.7	92.2
Sensible	81.7	92.2
THR	98.6	111.8

Based on 30°C EWT & 35.5°C LWT

Fan Section – Forward curved centrifugal fan, belt drive

Nominal airflow (l/s)	6610	6800
Fan motor – Nameplate (kW)	2.2	2.2
Number of fans/motors	3	3
External Static Pressure (Pa)	25	25

Evaporator Coil – Copper tubes with rifle bore, louvred aluminium fins

Face area (m ²)	2.73	2.73
No. of rows	4	4
Face velocity (m/s)	2.42	2.49
Drain Connection size (O.D.mm)	25	25

Compressor – Hermetic scroll

No. of compressors	2	2
Safety controls – HP cutout (manual reset) 26 bar, LP cutout (auto reset) 0.7 bar		
Input power for 2 compressors (kW)	17.0	19.6

Humidifier – Immersed electrode

Capacity (kg/h)	Max 8	Max 8
Input power (kW)	5.8	5.8
Water supply pressure range	100-1000(kPa)	
Connection drain (BSPF)	3/4"	3/4"
Connection supply (BSPM)	3/4"	3/4"

