



鴻勁精密股份有限公司
HON. PRECISION, INC.

Triple Temp. Handler ***HT-1028C ATC 5.1***



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Specification 1

NO	Items	Specification
1	Applicable device	QFP,TQFP,CSP,PLCC,QFN,BGA,LGA,PGA,TSOP...
2	Device dimensions	Device body outside : 3 x 3 ~ 80 x 80 mm
3	Test site pitch	Single : Center offset pitch 60mm Dual 1x2 : X=120mm (Other pitch : special kit design) Quad site 2x2 : X=80mm Y=60mm, Quad site 1x4 : X=60mm Octal site 2x4 : X=60mm Y=60mm
4	Max. Throughput (test time = 0 , index time=1.1 sec)	Ambient : Single site=1250 / Dual site=2140 / 1x4 、 2x2 site=4350 / 2x4 site=8875 Hot/Cold : Single site=1020 / Dual site=1820 / 1x4 、 2x2 site=3600 / 2x4 site=7400
5	Jam rate	< 1/ 5,000
6	Index time	< 1.1 sec (Speed=100%)
7	Applicable tray	JEDEC / EIAJ
8	Tray loader / Un loader capacity	Input tray : with 250 mm stroke (Max. Weight 15 kg)
		Output bin tray 1,2,3 : with 200 mm stroke (Max. Weight 15 kg)
		Empty / Color tray : with 250 mm stroke (Max. Weight 15 kg)
		Fix bin tray 4,5,6 : One tray



Specification 2

NO	Items	Specification
9	Max. Dimension of test head	1600mm (W) x 1200mm (D) x 1100mm (H)
10	Tray arm type	Catch mode
11	Test site opening	345 x 149.5 mm
12	Handler power supply	Single-phase AC 220 V / 30A*1, 50/60 Hz, $\pm 10\%$, Max. 6.6 KVA
13	Compressor air	Handler : 5 kg/cm ² dry and clean air consumption more than 250 L/min Chamber : 6.5~7 kg/cm ² dry and clean air consumption more than 980 L/min, Dew point temp= -60 °C, Pipe diameter 1 inch
14	Operating mode	On-line Mode : Automatic mode with tester link
		Off-line Mode : Automatic mode without tester link
		Manual Mode : Manual operation mode using control panel
15	KIT exchange time	Approx. < 30 minutes
16	Socket height	1100 mm (1100~1250 mm)
17	Contact	Direct contact
18	Tester interface	Parallel I/O (TTL) option : GPIB, RS232
19	Handler body dimension & Weight	Dimension : 2170mm (W) x 1730mm (D) x 2114mm (Max. 2264mm) (H) Weight : 2550 kg (Include refrigerant inside)
20	Binning	Max. 6 Bins (base on JEDEC / EIAJ trays) Auto tray unloader x3 : Fix tray x3
21	Heating method	Test head : ATC 5.1 System



Specification 3

NO	Items	Specification
22	Contact force	Arm total Max. 240 kg (Single cylinder : 120 kg) Arm total Min. 30 kg (Single cylinder : 15 kg)
23	ESD ability	Static eliminator : Index*1, Input ion bar*4, Out put ion bar*4 1kV > 100V within 3 sec, Balance $\pm 20V$ Measuring instrument : Monroe electronics model 288B
24	Compressor power supply	Single-phase AC 220 V / 60A 50/60 Hz, $\pm 10\%$, Max. 13.2 kVA, 2EA
25	Compressor temperature	Setting range : TC -55~130 °C (Option 175 °C), Accuracy= ± 1 °C
26	Temperature	Work range : TC -55~130 °C Stability= ± 2 °C (At -50 °C applications require equipment side to provide dry air of -60 °C) Heat dissipation : Single site(base on 40*40 device) -55 °C@50 W, 25 °C@180 W, 100 °C@300 W Temperature rising time : 25~130 °C→15 min (index chuck), 25~-55 °C→30 min or less, -55~130 °C→30 min or less
27	Facility total water flow (water cooling)	1" UNF, Pressure 2.5 ~ 4.5 kg/cm ² , Flow 80 L/min, Temp 13~18 °C
28	Chiller power supply	HRS090-A-20 : Three-phase AC 220 V / 30A*1 50/60 Hz, $\pm 10\%$
29	Hot and cold cycle machine power supply	Three-phase AC 220 V / 30A*1 50/60 Hz, $\pm 10\%$



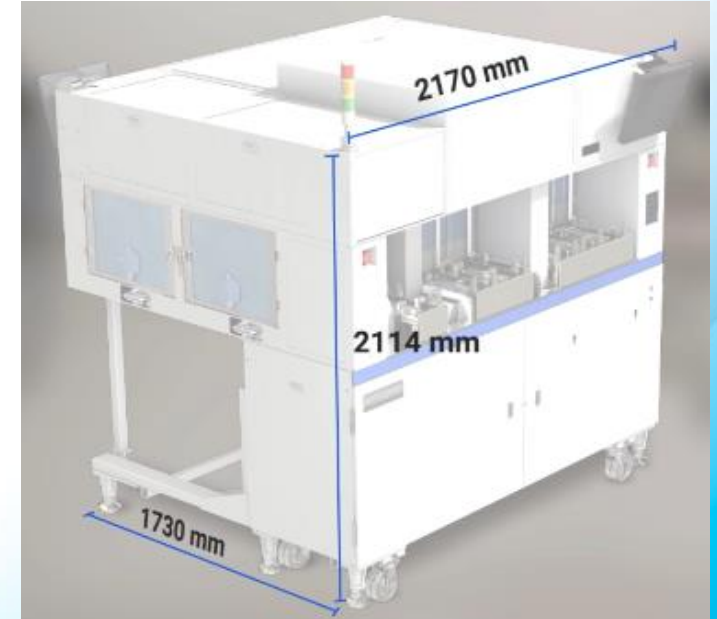
HT-1028C Appearance



Front View



Rear View

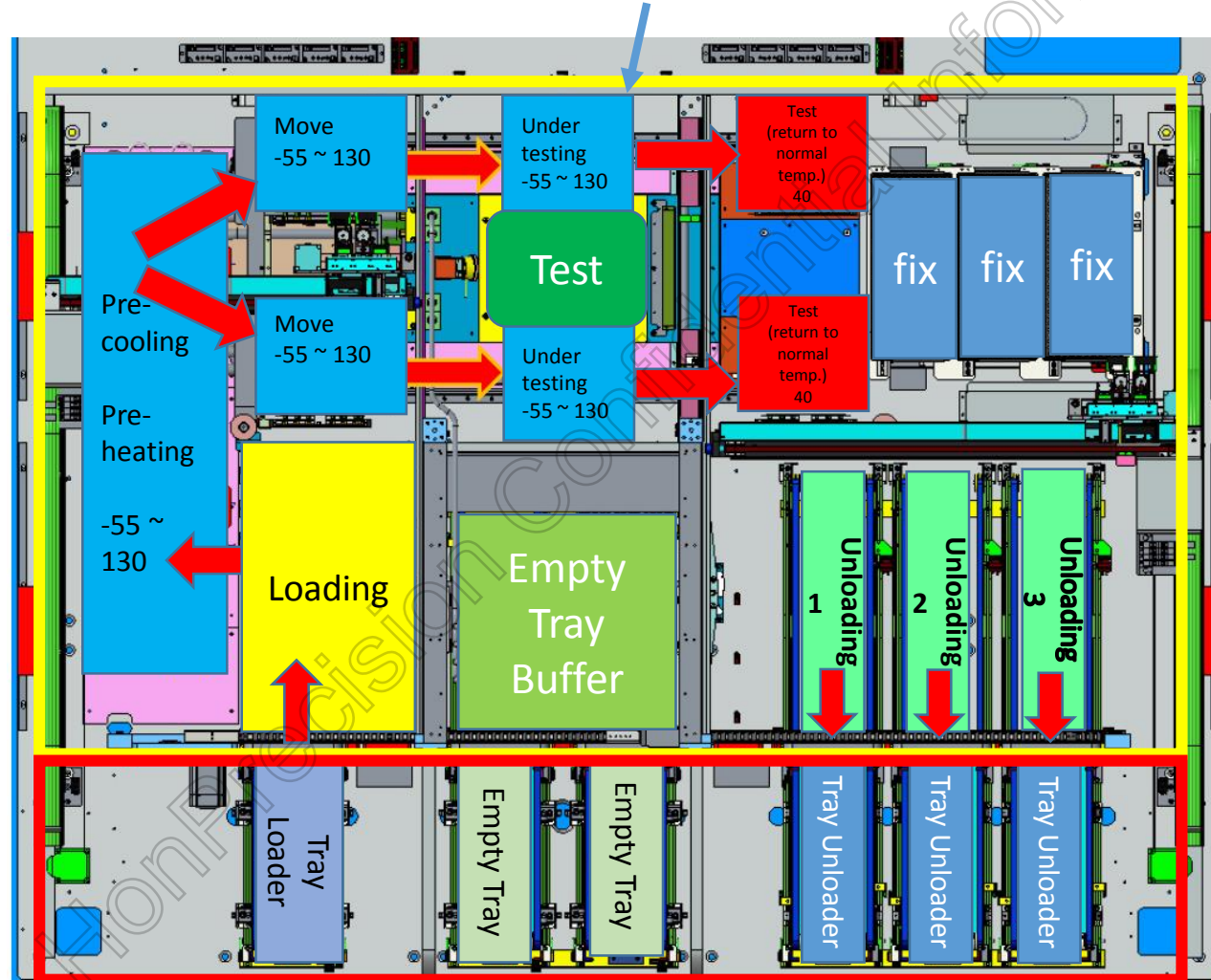


Body dimension

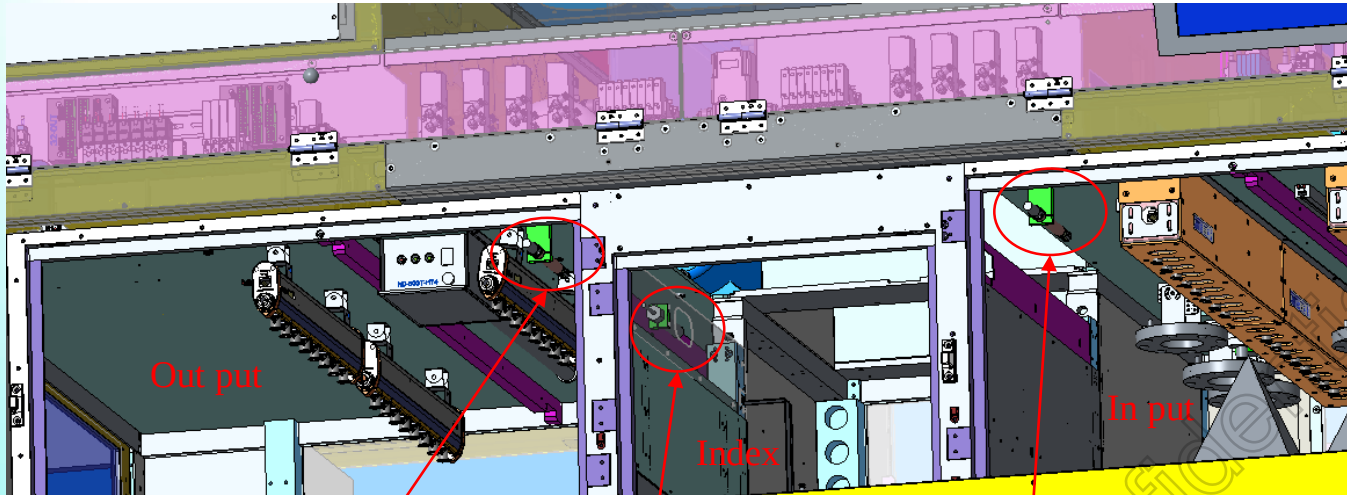


HT-1028C Layout

Temperature of dry air area is 15 ~20°C
(indicated with yellow line in the figure below)



HT-1028C Anti-frost mechanism



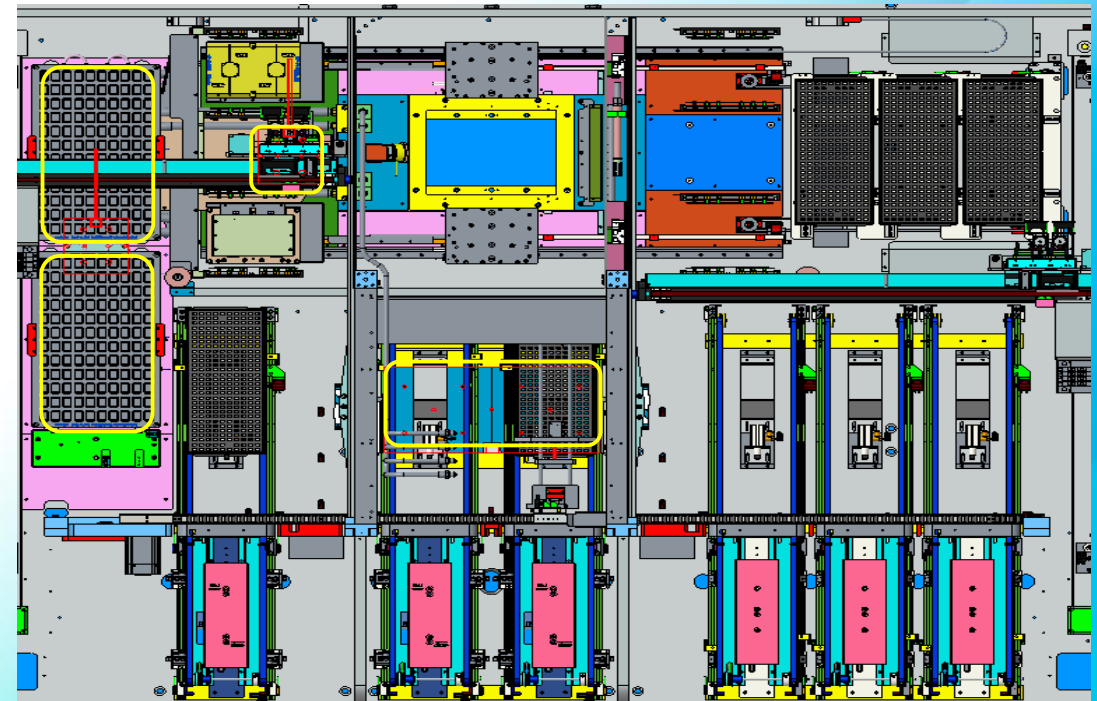
Humidity detector

Dew point detector

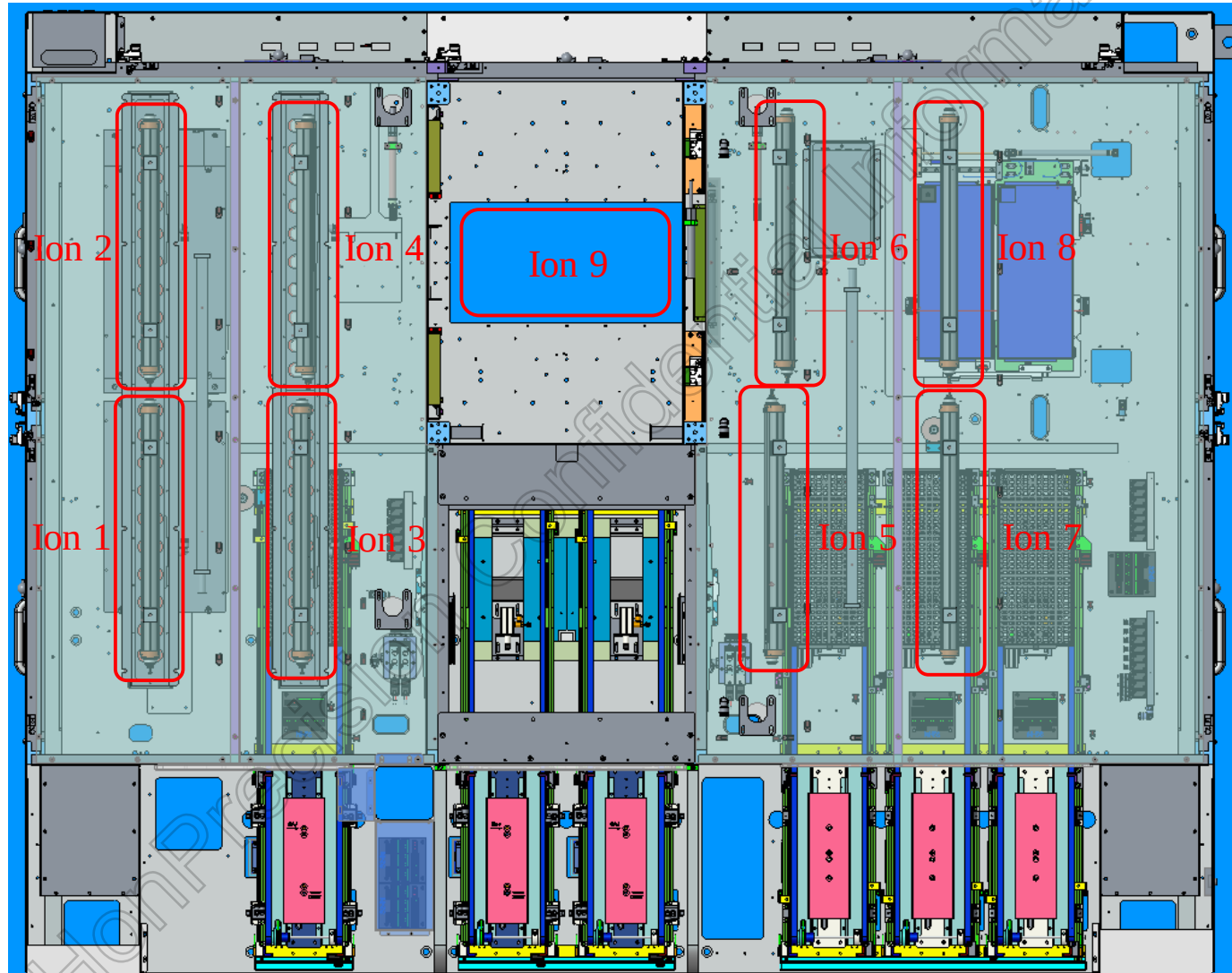
Humidity detector

HT-1028C chamber humidity & dew point detection :
We install humidity and dew point detectors in handler.
When humidity (dew point) over the set value, the indicator of humidity (dew point) controller will light on.
There are humidity detectors in Input and Output area, and dew point detector in Index area.
(indicated in the figure below)

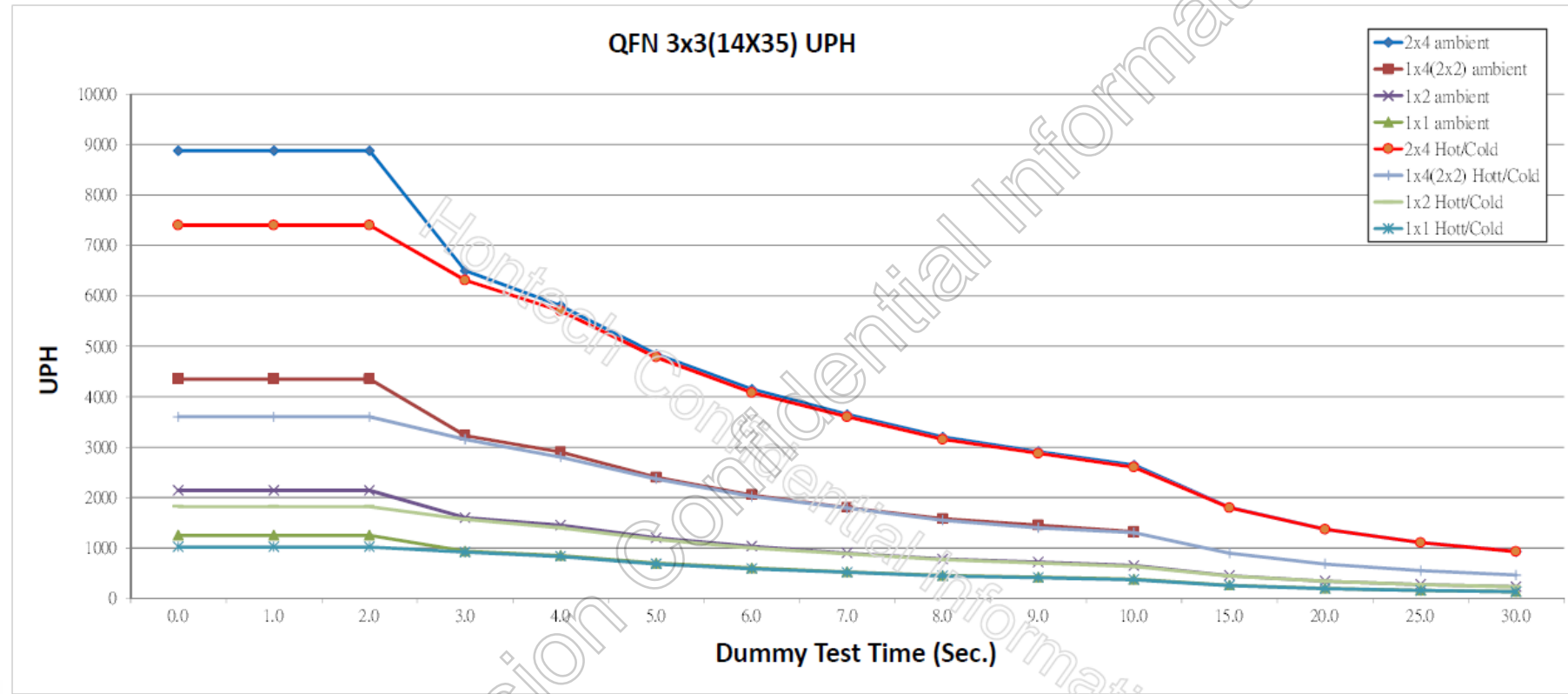
When handler operates in low temperature will easily cause frost and corrosion issue due to large temperature difference. In order to prevent the frost problem, we add heating function in bottom plate.



HT-1028C Ion bar layout



HT-1028C UPH



Device Type : QFN 3x3		Tray Type : 14x35 = 490					Hot Plate Type : 12x24			Vacuum On/Off : 0.1/0.1 sec				Start Delay Time : 0.01Sec.			
Dummy Test Time		Index Time	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	15.0	20.0	25.0	30.0
Mode	2x4 ambient	1.1	8875	8875	8875	6500	5805	4840	4147	3645	3200	2910	2642	1804	1374	1109	930
	2x4 Hot/Cold	1.1	7400	7400	7400	6310	5700	4780	4080	3600	3150	2875	2600	1797	1370	1106	928
Mode	1x4(2x2) ambient	1.1	4350	4350	4350	3230	2900	2400	2050	1800	1580	1450	1321	900	685	550	463
	1x4(2x2) Hott/Cold	1.1	3600	3600	3600	3150	2800	2370	2020	1790	1550	1400	1300	895	680	548	462
Mode	1x2 ambient	1.1	2140	2140	2140	1600	1450	1200	1035	900	780	720	650	450	342	275	231
	1x2 Hott/Cold	1.1	1820	1820	1820	1570	1400	1170	1000	880	770	700	630	445	340	272	230
Mode	1x1 ambient	1.1	1250	1250	1250	935	850	700	605	525	455	420	380	260	200	160	135
	1x1 Hott/Cold	1.1	1020	1020	1020	915	830	680	585	515	445	410	370	255	195	155	130



Thanks



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