

Low GWP Refrigerant

HFO-1233zd(E)

Next generation centrifugal chiller



FY2018

**Grand Prize for Excellence
in Energy Efficiency
and Conservation**

(Product Category & Business Model Category)

Sponsor: The Energy Conservation Center, Japan

**Minister's Prize, The Ministry of Economy,
Trade and Industry**

ETI-Z

Variable speed
series

527kW (150RT) ~ 2461kW (700RT)



AHRI CERTIFIED®
www.ahridirectory.org

Water-Cooled Water Chilling and
Heat Pump Water-Heating Packages
AHRI Standards 550/590 and 551/591

Contributing to a carbon-neutral society

Centrifugal Chillers with Low-GWP Refrigerants

The range starts from 150RT up to 6000RT for cooling capacity

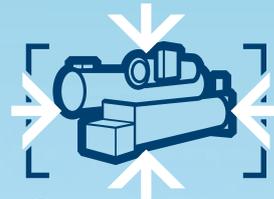


Environment

Lower environmental impact than the ETI series(HFC-134a).
In addition to "high-performance and compact", it is easier to operate.



High Performance



Compact

For protecting the ozone layer and solving global warming

The ETI-Z series were developed to reduce greenhouse gas emissions

In the past, in order to protect the ozone layer, the use of CFCs (HFC -134a), which do not destroy the ozone layer, has been sought as a substitute for specified CFCs. In recent years, the regulatory movement around CFCs has been intensified all over the world, not only in terms of protecting the ozone layer but also in terms of preventing global warming. Products using refrigerants with lower global warming potential are in demand. In response to this need, we have developed Japan's first "Variable Speed Drive Centrifugal Chiller ETI-Z series" that uses the new refrigerant HFO-1233zd(E), which has zero ozone depletion potential and a global warming potential of 1. The ETI-Z series is a "high-performance and compact" model that inherits the concept of the ETI series. Equipped with an advanced microcomputer control panel which has improved controllability and operationability, the ETI-Z series can contribute to the your stable operation. This is the next generation of greener centrifugal chillers that has a high performance with lower environmental impact.

ETI-Z

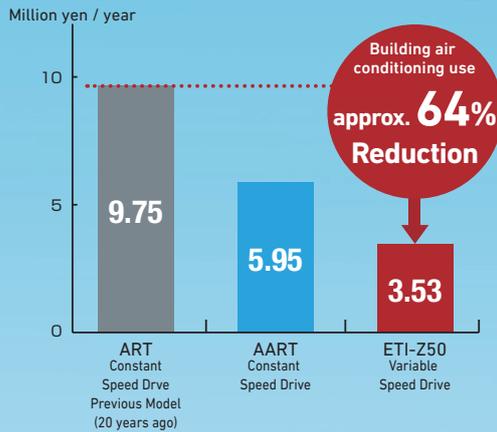
Variable Speed
series

Built-in Inverter Panel

527kW (150RT) ~2461kW (700RT)

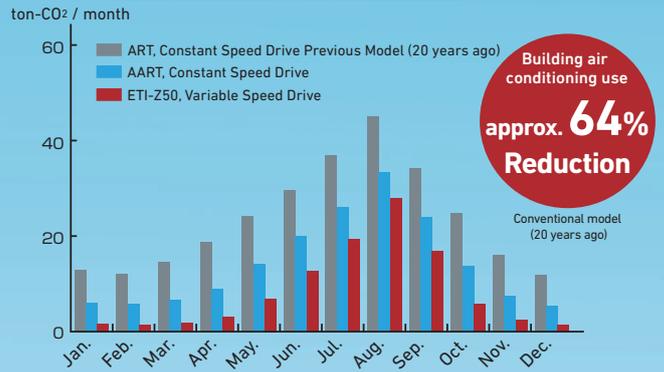
Cost Saving

Annual Electricity Power Cost



CO₂ Saving

Annual CO₂ emissions



Product Line adapting Low GWP Refrigerant

Drive (Constant speed / Variable speed)			ETI-Z	GART-ZE	GART-ZEI	GART-ZE GART-ZE	GART-ZE HR GART-ZE I.HR
			Variable	Constant	Variable	Constant/Variable	Constant/Variable
Cooling Capacity			150-700RT*1	300-5000RT*1	300-5000RT*1	260-3100RT	330-2300RT
			*Subject to temp.condition				
Temperature	Chilled Water Leaving	Lower Limit	4°C	3°C	3°C	Minus 5°C Low Temp. use	3°C
	Cooling Water Entering	Lower Limit	12°C	12°C	12°C	12°C	12°C
	Hot Water Leaving	Higher Limit	45°C*5	50°C	50°C	—	—
		Higher Limit	—	50°C	50°C	—	50°C
Load	Control range in a Constinious Operation	Standard	100% - 10%	100% - 20%	100% - 20%	100% - 30%	100% - 30%
		Option	100% - 0%	100% - 10%	100% - 0%	100% - 10%*4	100% - 10%
Flow Range	Chilled Water/Cooling Water Flow Rate Control Range	Standard	100%	100%	100%	100%	100%
		Option *2	100% - 50%	100% - 50%	100% - 50%	100% - 50%	100% - 50%
	Chilled Water Flow Rate Control Range	Standard	100%	100%	100%	100%	100%
		Option	—	100% - 150%	100% - 150%	100% - 150%	100% - 150%
Refrigerant			HFO-1233zd(E)	HFO-1234ze(E)			

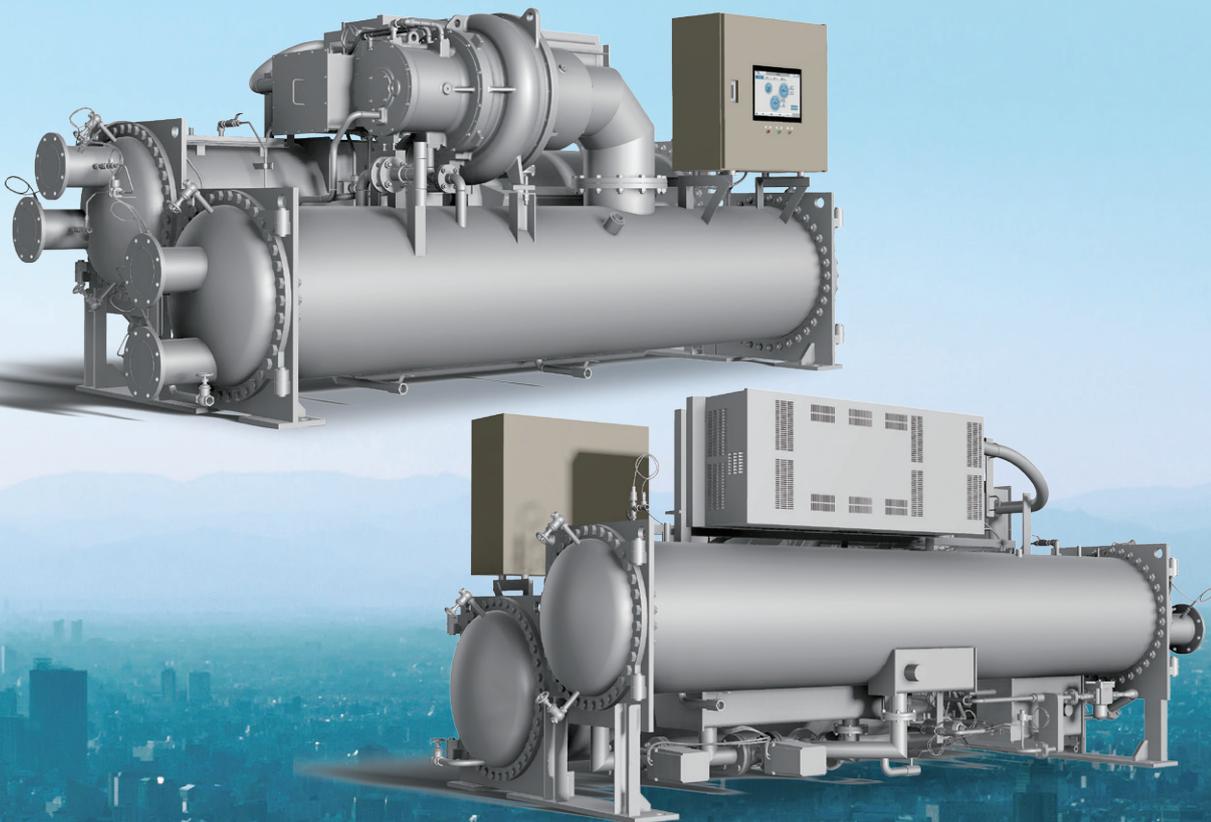
*1 Air-Conditioning use : Cooling Water 12°C / 7°C

*2 Control with load of less than 50% depending on model

*3 Control with load of more than 150% depending on model

*4 Control range should be changed subject to temperature condition of brine

*5 Control range : 100% - 30 %



Features



Environment

Adoption of Low GWP Refrigerant HFO-1233zd(E)

Global Warming Potential (GWP)

1



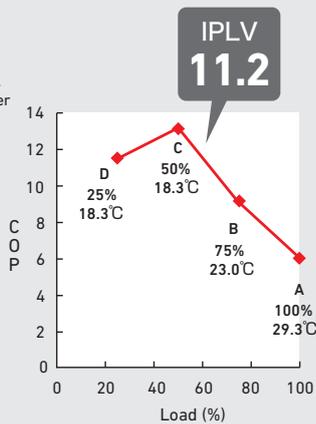
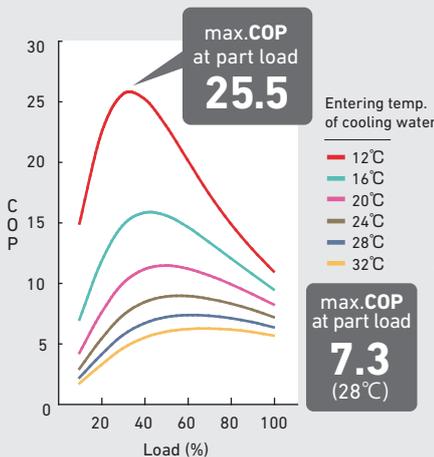
High Performance

Adoption of high-speed motor direct connection type compressor

The adoption of a structure of compressor with high-speed direct motor drive, the elimination of step-up gears, and the use of fewer bearings allows for superlative performance by reducing motor drive-energy loss.



Performance Characteristic (ETI-Z50)



IPLV

IPLV is the formula developed by AHRI to measure the efficiency of chillers under an actual annual operating conditions. IPLV is calculated when the unit is operating at 25%, 50%, 75% and 100% of capacity and at different cooling water temperature. [AHRI Standard 550/590(I-P)]

IPLV : Integrated Part Load Value

AHRI : Air-Conditioning, Heating and Refrigeration Institute

$$IPLV = 0.01A + 0.42B + 0.45C + 0.12D$$

A = COP at 100% load (29.4°C) B = COP at 75% load (23.9°C)

C = COP at 50% load (18.3°C) D = COP at 25% load (18.3°C)

Leaving temperature of chilled water: 6.7°C

* : Entering temperature of cooling water



Operability



Intuitive touch panel

You can access various information and configure the setting just by touching the LCD screen.



More Convenient

More visible, More usable, More diverse

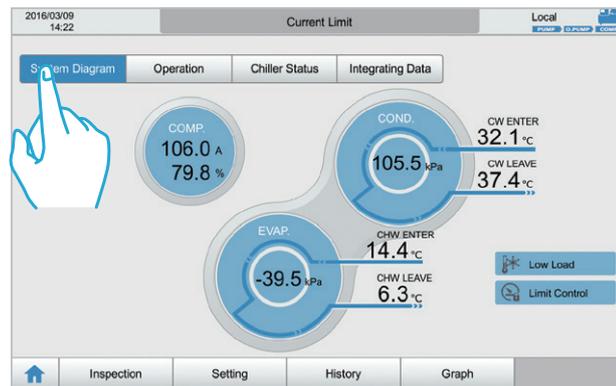
Control Panel (7th Generation)

Liquid Crystal Display (LCD) with automatic lighting-up function. Light up by human detection sensor without touching panel

For environmental standards

Use of lead-free substrate, compatible with RoHS.

System Diagram Screen



12.1-inch wide screen

More visible and easier to operate compared with the previous 10.4-inch screen.

Information

- In the case of failure, solution method (help screen) is displayed to support speedy solution.
- Automatically notify a maintenance time and others.

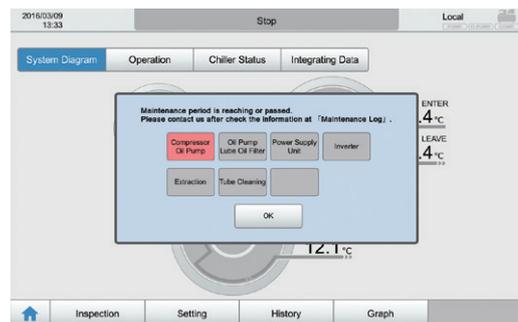
Operation Data Screen

Can display up to a maximum of 18 pieces of data at one time.



Maintenance Information Data Screen

Notifies chiller maintenance period with pop-up when it approaches.



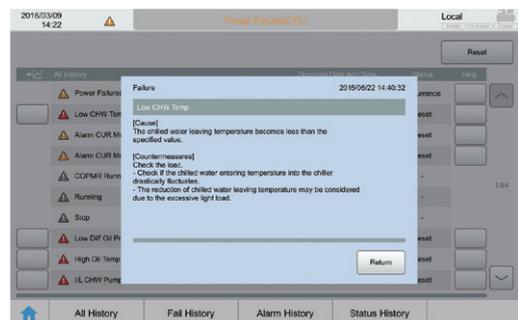
Temperature Control Screen

Can set chilled water leaving temperature and temperature at demand control.



Failure Help Screen

Displays help information on failure recovery.



Specification

Standard specifications

■ AHRI 550/590 (I-P) Condition

Model	ETI-	Z15	Z20	Z25	Z27	Z30	Z35	Z40	Z50	Z55	Z60	Z70	
Cooling Capacity	RT	150	200	250	250	300	350	400	500	500	600	700	
	kW	527	703	879	879	1,055	1,231	1,407	1,758	1,758	2,110	2,461	
Motor Output	kW	71	95	132	118	144	181	191	266	244	302	402	
Inverter Input	kW	80	106	-	131	158	198	213	-	271	333	-	
Auxiliary power	kW	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	
COP(Not include auxiliary power)	—	6.58	6.65	-	6.69	6.66	6.23	6.62	-	6.49	6.34	-	
COP(Include auxiliary power)	—	6.55	6.63	-	6.67	6.65	6.21	6.60	-	6.48	6.33	-	
Chilled Water	Entering temperature	°C	12.2										
	Leaving temperature	°C	6.7										
	Flow rate	m ³ /h	82.3	109.7	137.1	137.1	164.5	192.0	219.4	274.2	274.2	329.1	383.9
	No.of pass	—	2	2	2	2	2	2	2	2	2	2	2
	Pressure drop	kPa	20	33	49	26	35	46	48	71	39	54	70
	Piping connection/Nozzle size	inch	6	6	6	6	6	6	8	8	10	10	10
Cooling Water	Entering temperature	°C	29.4										
	Leaving temperature	°C	34.5										
	Flow rate	m ³ /h	102.9	137.0	173.5	171.2	205.5	241.9	274.2	347.3	343.7	413.6	491.1
	No.of pass	—	2	2	2	2	2	2	2	2	2	2	2
	Pressure drop	kPa	20	33	50	23	32	44	53	83	37	52	72
	Piping connection/Nozzle size	inch	6	6	6	8	8	8	8	8	10	10	10
Power source: main	—	Three-phase 380V-440V (50/60Hz free)											
Power source: auxiliary	—	Three-phase 200V-220V (50/60Hz free)											

Notes:

- This specification is based on AHRI STANDARD 550/590 (I-P) conditions for temperature and fouling factor of chilled water and cooling water.
- Max. working pressure (Chilled water and Cooling water): 1 MPa (G)
- Installation environment: Inside installation
Install in a place avoiding rain, wind, direct sunlight, salinity, and steam. Do not install in a place where oil mist, dust, corrosive gas, and flammable gas, etc. are suspended. Ambient temperature must be between 0°C and 40°C and ambient humidity must be between 5% and 95%.
- Design and specifications are subject to change without notice.

■ JIS B8621: 2011 Condition

Chilled Water 12°C / 7°C, Cooling Water 32°C/37°C

Item(unit)	ETI-	Z15	Z20	Z25	Z27	Z30	Z35	Z40	Z50	Z55	Z60	Z70	
Cooling Capacity	RT	150	200	250	250	300	350	400	500	500	600	700	
	kW	527	703	879	879	1,055	1,231	1,407	1,758	1,758	2,110	2,461	
Motor Output	kW	76	100	134	124	150	185	200	272	256	314	408	
Inverter Input	kW	85	111	-	138	165	203	222	-	284	345	-	
Auxiliary power	kW	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	
COP(Not include auxiliary power)	—	6.19	6.35	-	6.39	6.38	6.08	6.34	-	6.20	6.11	-	
COP(Include auxiliary power)	—	6.17	6.34	-	6.37	6.37	6.07	6.32	-	6.18	6.10	-	
IPLV	—	7.42	8.60	9.25	7.85	8.52	8.87	8.61	9.13	7.71	8.35	8.38	
Chilled Water	Flow rate	m ³ /h	90.5	120.7	150.8	150.8	181.0	211.2	241.3	301.6	301.6	362.0	422.3
	No.of pass	—	2	2	2	2	2	2	2	2	2	2	2
	Pressure drop	kPa	24	39	58	30	42	55	57	84	46	64	83
	Piping connection/Nozzle size	A	150	150	150	150	150	150	200	200	250	250	250
Cooling Water	Flow rate	m ³ /h	105.9	140.7	177.4	175.8	211.0	247.8	281.6	355.7	353.0	424.4	502.4
	No.of pass	—	2	2	2	2	2	2	2	2	2	2	2
	Pressure drop	kPa	20	34	52	24	34	45	55	87	39	54	75
	Piping connection/Nozzle size	A	150	150	150	200	200	200	200	200	250	250	250
Power source: main	—	Three-phase 380V-440V (50/60Hz free)											
Power source: auxiliary	—	Three-phase 200V-220V (50/60Hz free)											

Notes:

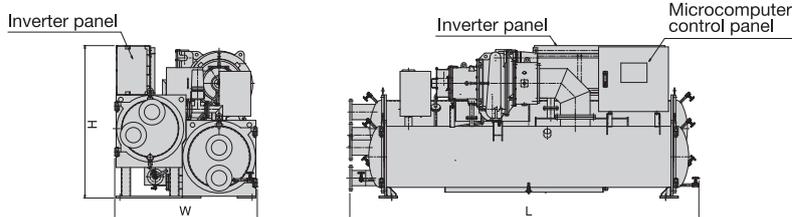
- Chilled/Cooling water fouling factor: 0.000086 m²K/W (0.0001 m²h°C/kcal)
- Max. working pressure (Chilled water and Cooling water): 1 MPa (G)
- Installation environment: Inside installation
Install in a place avoiding rain, wind, direct sunlight, salinity, and steam. Do not install in a place where oil mist, dust, corrosive gas, and flammable gas, etc. are suspended. Ambient temperature must be between 0°C and 40°C and ambient humidity must be between 5% and 95%.
- Design and specifications are subject to change without notice.

Dimensions and Weight

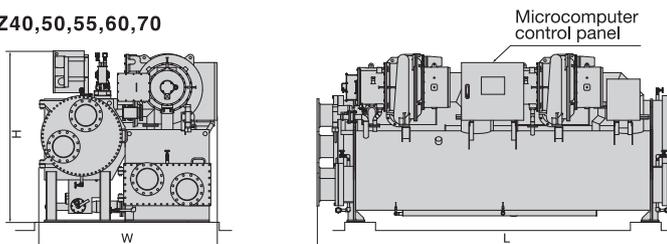


Model		ETI-	Z15	Z20	Z25	Z27	Z30	Z35	Z40	Z50	Z55	Z60	Z70
Chiller	Length (L)	m	3.8			3.8			4.3		4.3		
	Width(W)	m	1.6			1.9			2.0		2.2		
	Height (H)	m	1.8			2.0			2.1		2.3		
	Shipping weight	t	4.3			5.4			7.6		10.4		
	Operation weight	t	5.1			6.6			9.2		12.5		

◎ ETI-Z15,20,25,27,30,35



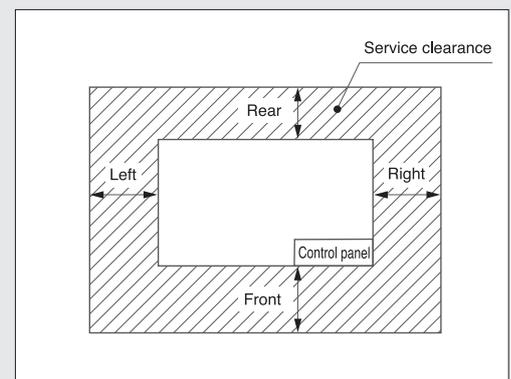
◎ ETI-Z40,50,55,60,70



- Notes:
1. Please refer to the "MACHINE LAYOUT" drawing by MHI Thermal Systems* for installation.
 2. The shipping weight is for integrated type shipping. Please contact MHI Thermal Systems* about divided shipment.
 3. Dimensions and weight are subject to change without notice.

■ Service Clearance

Model	ETI-	Z15 Z20 Z25	Z27 Z30 Z35	Z40 Z50	Z55 Z60 Z70
Front	m	1.2	1.2	1.2	1.2
Both end (Right/ Left)	m	0.8	0.9	1.0	1.1
Rear	m	0.9	0.9	0.9	0.9
Upside	m	0.9	0.9	0.9	0.9



Notes:

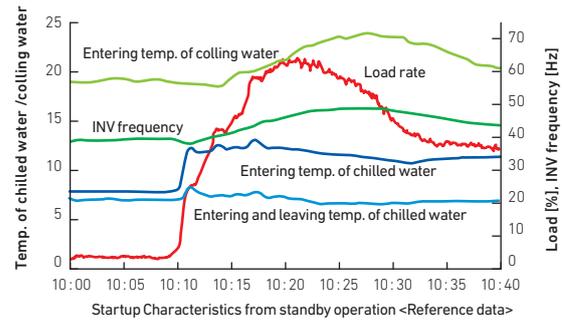
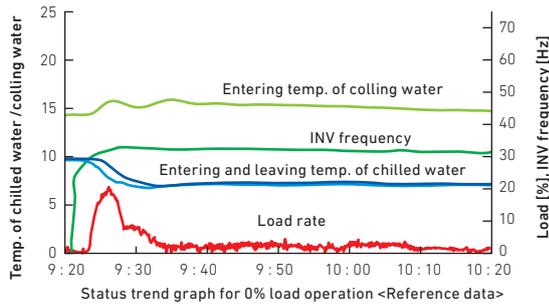
1. Service clearance must be provided more than the data of above table.
2. Tube removal space must be provided at either end of the tube, Please contact MHI Thermal Systems* about the length.
3. The piping must be arranged with offsets for flexibility, and adequately supported and balanced independently to avoid strain and vibration transmission on the chiller unit.
4. Piping connections of chilled water and cooling water for monitoring are made by welding flanges rating : JIS-10K
5. Thermometers of chilled water and cooling water are furnished by the purchaser.
6. Prepare the hooks for lifting compressor and motor unit.
(for removing compressor at overhauling)
7. Refer to dimension of chiller for planning suitable and adequate entrance for machine installation, enough clearance should be provided.
(caution: the above dimension data are the size without insulation, After insulation, the size will increase by the thickness of insulator)
8. Antivibration rubber and rubber bushing installation are supplied by MHI Thermal Systems*. (standard accessories)
Scope of anchor bolt, anchor bolt's accessories, washers and nuts shall be confirm with the specification.(not standard accessories)
9. The construction of foundation bed and installation work of foundation bolts is with the scope of the purchaser.
Please complete foundation work before installation chiller with reference to MHI Thermal Systems* drawing "INSPECTION RECORD".
10. The Purchaser must conned the rupture disc to the piping for releasing the refrigerant into the atmosphere in a safe manner.
Use flexible joints s for connecting parts with the rupture disc piping, and Install proper piping supports for them.

Option

Extreme Low Load Function

*Patented technology

- The temporary boiler for initial trial operation of cooling plant will be unnecessary.
- Stand by operation at around zero percent load is available and accommodates rapid rise in loads.
- Can continuously operate in a very low load range where conventional models were operated with the ON/OFF control, and minimize the fluctuation of chilled water - leaving temperature.



Variable Flow Rate Function

For energy saving of air conditioning equipment, it is possible to install more than one chilled and cooling water pumps, change the number of unit of start/stop, and use an inverter for controlling the flow

rate corresponding to the load. It is possible to operate chillers between 50% and 100% of rated flow rate of chilled water and cooling water (The range varies depending on the rated flow conditions.)

*The customer may need to input chilled water flow signals.

Instantaneous Power Failure Restart

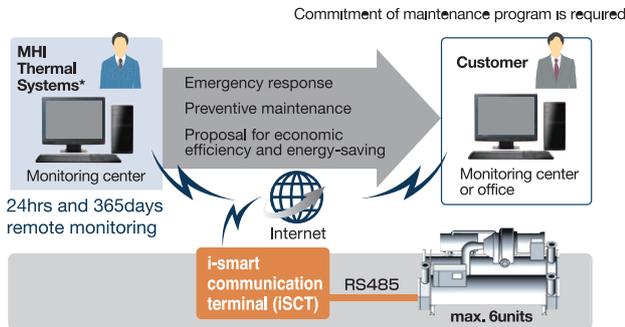
Can detect power failure due to voltage drop, shutdown the chiller, and automatically restart after recovery from the power failure.

Others

Item	Standard	Option
Capacity control	Continuous control between 10% and 100% of cooling capacity (ON/OFF control at less than 10%)	Extra-low load control. (Continuous Control between approx 0% and 100%)
Individual error display	Error is displayed on LCD	Individual failure signal output is possible by communication and digital signal output
Remote start/stop signal	No-voltage pulse (instant)signal	Dry contact make (continuous) signal Wet contact pulse (instantaneous) signal Wet contact make (continuous) signal
Demand operation	-	Power consumption is controlled.
External signal output (digital)	Signals for "operation","error","start/stop position remote","alarm data","inverter operation" and "low load"can be output.	Individual failure signal can be output
External signal output (analog)	-	Either A or B, but not both can be output by the terminal switching - A:"Condenser Pressure" or B: "Set Chilled Water Leaving Temperature" - A:"Evaporator Pressure" or B:"Oil Tank Temperature" - A:"Chilled Water Leaving Temperature" or B:"Differential Oil Pressure" - A:"Chilled Water Entering Temperature" or B:"Intermediate Pressure"
Painting	<ul style="list-style-type: none"> • Chiller body: Rust preventive paint(painting color:Munsell N-5 • Control panel inverter: Munsell 5Y7/1, semi gloss 	Color can be specified by customer. Chiller body will be painted according to MHI Thermal Systems* procedure before delivery. Only standard colour is available for control panel and inverter
Shipping style	Undivided	2-divided (condenser+evaporator,c ompresser+inverter+otherd evice) 3-divided (condenser,evaporator,c ompresser+inverter+otherd evice)
Cold Insulation	Not insulation (customer's scope)	Cold insulation is performed according to MHI Thermal Systems* cold insulation procedure before delivery. (The nitrile-based synthetic rubber cold insulation is used as standard.)
Installation of ball cleaning device	-	Ball cleaning device can be installed.

Consult MHI Thermal Systems* for Details

Remote Monitoring Program (WEB communication)



Notes: Cable connection work between chiller and iSCT: customer's scope

24-hour and 365-day remote monitoring program is suitable for maintaining the performance and function of the centrifugal chiller.

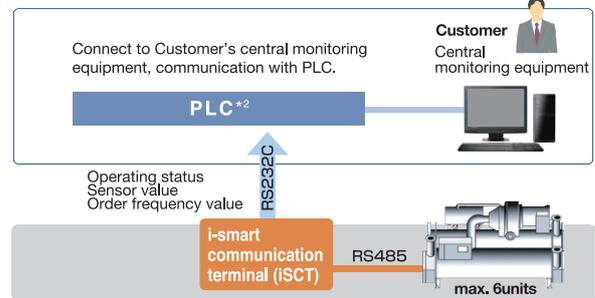
Features

The remote monitoring program enables various performances.

- 1) Monitoring the operation status
- 2) Emergency response/treatment and report of the result
- 3) Submission of monthly report of data and customer's observation
- 4) Proposal for preventive maintenance and economical use based on the result of the analysis of accumulated data

This program is not available for poor quality internet connections environment.

Central Monitoring



** PLC: MELCO MELSEC or Modbus

Features

- 1) Output operation data at customer's central monitor through MHI i-smart communication terminal.
- 2) Operation data can be used for the following items at customer's central monitor.
 - Trend
 - Operation status of chillers
 - Daily report and monthly report etc.
- 3) Total connection/transmission distance of RS485 with max. 500 m

Feature of i-smart communication terminal (iSCT)

Compact size (W317 x H78 x D265 mm:excluding projection portion)

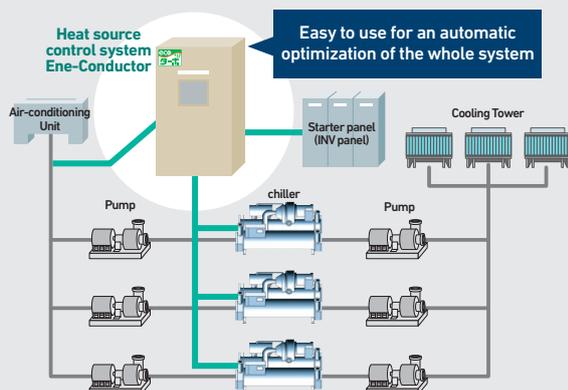
Connected to AC 100 V plug

High speed data processing by 32 bit CPU

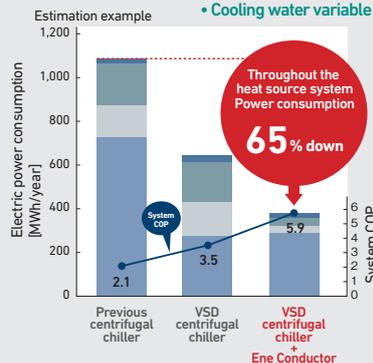
More Energy saving

Heat Source Control System Ene-Conductor

- Improvement of system COP by optimal control which gets the best performance out of centrifugal chiller
- Various energy-saving control functions

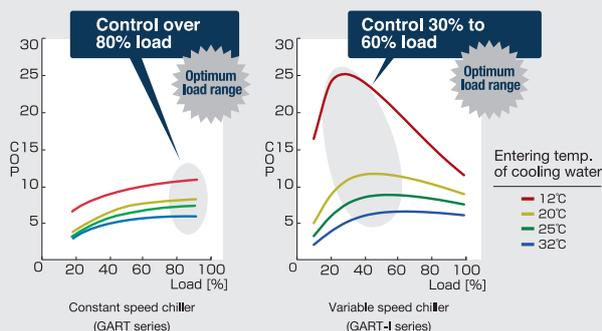


- Improvement in COP of centrifugal chiller
- Chilled water variable flow control
- Cooling water variable flow control



● Optimize load distribution and operation number

In the case where the system combines multiple chillers with different performance, the Ene-Conductor automatically calculates the best load for each chiller to obtain the highest COP of the complete system.



- Multiple chiller control
- Chilled / hot water variable flow rate control (Primary pump)
- Cooling water variable flow rate control
- Cooling tower operation/fan control
- Cooling water bypass valve control
- Chilled/ hot water bypass valve control
- Chilled/ hot water secondary pump control

Scope of Supply & Standard Specification and Options

○ : Standard × : Out of MHI Thermal Systems* scope △ : Option — : Not available

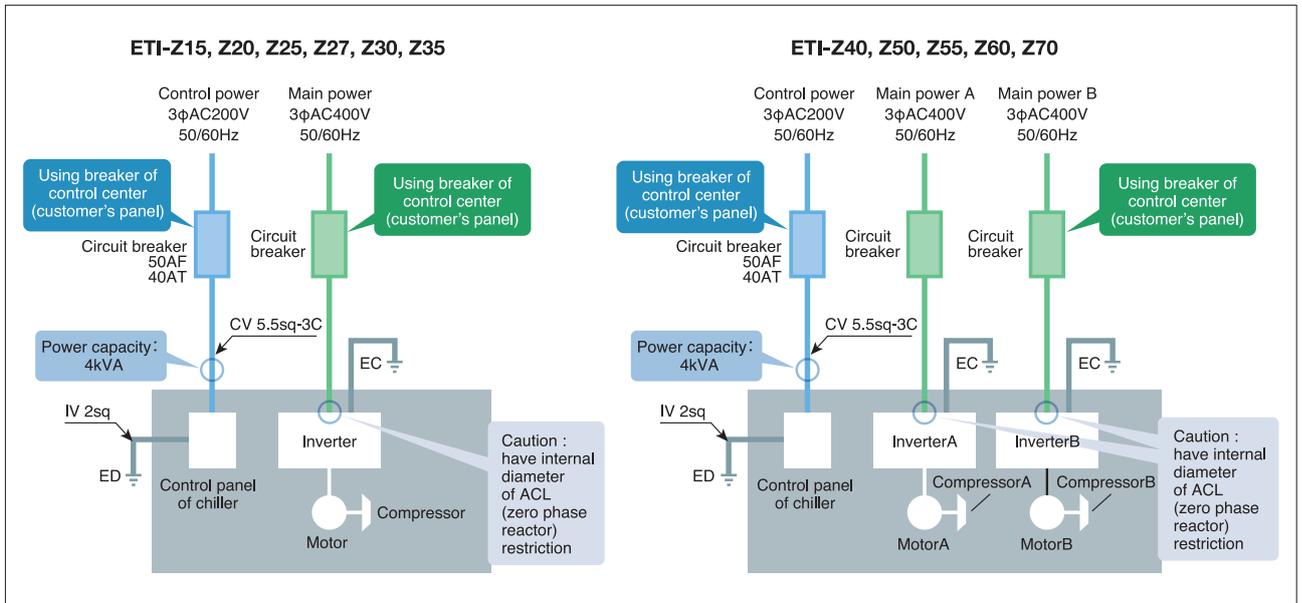
Item		Specifications / Description		
Equipment	Chiller Assembly	Indoor type (including control panel)	○	
		Outdoor type (including control panel)		—
	Compressor	Hermetic, two-stage, single suction, centrifugal type	○	
	Compressor Motor	Liquid refrigerant cooled, hermetic, squirrel cage, 3-phase, induction type motor, 2 pole, insulated grade E	○	
	Step-up Gear	Compressor directly connects to motor	○	
	Lubrication System	Trochoid pump with submerged motor, refrigerant cooled oil cooler, single oil filter, oil heater with temperature control	○	
		Double oil filter		—
	Evaporator & Condenser	Horizontal shell and tube type with copper tube (5/B"OD) Design pressure of water side: 1.0 MPa (G)	○	
		Marine type water box with hinge		—
		Tube material other than copper (ex: cupronickel, admiralty brass, titanium)		—
		Tube sheet material other than steel (ex: naval brass clad steel, titanium clad steel)		—
	Safety Device	Design pressure of water side: Over than 1.0 MPa (G)		—
		High condenser pressure, Low evaporator pressure, Low oil pressure, Low chilled water outlet temperature, Low chilled water flow rate, Low cooling water flow rate, High oil temperature, High compressor motor coil temperature, Low voltage, Compressor motor over load, Abnormal inverter	○	
	Microcomputer Control Panel	Mounted on heat exchanger, indoor non hazardous type with color liquid crystal display, lamps and control switches on control panel	○	
	Inverter Panel	Mounted on heat exchanger	○	
		Integrating watt meter		—
		Power fuse medium voltage		—
		DC reactor for power factor improvement and harmonic mitigation	○	
		380 - 440 V power for compressor motor	○	
		200 V, 3 kV, 6 kV, 10 kV and 11 kV power for compressor motor		—
	Tie transformer for control power (ex: 400/200 V)		—	
Refrigerant	HFO-1233zd(E) in cylinder for one (initial) charge		△	
Lubrication Oil	Canned mineral oil for one (initial) charge	○		
Accessory	A thermometer of oil reservoir, Sight glasses, Anti-vibration rubber pad	○		
	Differential pressure sensor for chilled water and cooling water			
	Foundation bolt		△	
	Spring pad for vibration isolating, Anti-vibration spring pad		△	
	General tool and tool box		△	
Spare Parts	An oil filter element, A filter drier	○		
Other	Mesh for tube cleaning		△	
Test	Shop Test	Test in accordance with JIS B8621	○	
		Test in accordance with AHRI 550/590		—
Witness Test	Owner and/or representative witness test in factory		△	
Painting	Chiller	Rust preventing paint (three coat)	○	
		Finish coat		△
	Control Panel	Rust preventing and finish coat (color: Munsell 5Y7/1)	○	
Inverter Panel	Rust preventing and finish coat (color: Munsell 5Y7/1)	○		
Insulation of chiller	Not provided (Purchaser's scope. Insulation will be carried out in accordance with MHI Thermal Systems* insulation procedure.)		×	
Delivery	FOB Kobe port in Japan	○		
	Ex warehouse at Kobe port in Japan (on truck)		△	
	CIF port near site		△	
Shipping Style of chiller	Integrated style	○		
	Divided style		△	
Site Works	Foundation	Chiller		×
	Installation	Chiller installation, fabrication, setting of anchor bolt, water pipe and piping works, and cable and wiring works at site		△
		Supervisor for site installation		×
Commissioning	Supervisor for site commissioning		△	
Others	Code and Standard	JIS (Japan Industrial Standard), JEC (Japan Electrotechnical Committee), JEM (The Standard of Japan Electrical Manufacture's Association)	○	
		DOSH (Malaysia), MOM (Singapore), ASME ASTM		—
	Capacity Control	100-10%, Controlling compressor speed, compressor inlet guide vane (1st and 2nd stage) and hot gas bypass valve	○	
		100% - approx.a%		△
	Instantaneous restart			△
	Drawings	Specification and scope of supply	○	
		General arrangement (including foundation)	○	
Outline of control panel		○		
Sequence diagram		○		
Documents	Operation and maintenance manual	○		
	Performance test report	○		

*MHI Thermal Systems : Mitsubishi Heavy Industries Thermal Systems, Ltd.

Power Supply Construction Procedure

The powers to be supplied by the customer are main power (400V level) and control power (200V level).
Be sure to install a circuit breaker to the customer's power panel in the main power circuit.

Electric Wiring



Recommended wire size for each power supply

Model of Chiller	Power Supply	Rated Current for Breaker Wiring [A]	Zero Phase Reactor (Internal Diameter)	Customer Side Main Power Supply Wire Size	Grounding Conductor [sq]
ETI-Z15	Main power	400AF 250AT	ACL-74C (φ 74mm)	CV60sqx2 or CV100sq and more	22
ETI-Z20	Main power	400AF 300AT	ACL-74C (φ 74mm)	CV60sqx2 or CV150sq and more	22
ETI-Z25	Main power	400AF 350AT	ACL-74C (φ 74mm)	CV80sqx2 or CV200sq and more	22
ETI-Z27	Main power	400AF 350AT	ACL-74C (φ 74mm)	CV80sqx2 or CV200sq and more	22
ETI-Z30	Main power	630AF 500AT	F11080GB (φ 74mm)	CV100sqx2 or CV200sq and more	30
ETI-Z35	Main power	630AF 630AT	F11080GB (φ 74mm)	CV100sqx2 or CV250sq and more	38
ETI-Z40	Main power A	400AF 300AT	ACL-74C (φ 74mm)	CV60sqx2 or CV150sq and more	22
	Main power B	400AF 300AT	ACL-74C (φ 74mm)	CV60sqx2 or CV150sq and more	22
ETI-Z50	Main power A	400AF 350AT	ACL-74C (φ 74mm)	CV80sqx2 or CV200sq and more	22
	Main power B	400AF 350AT	ACL-74C (φ 74mm)	CV80sqx2 or CV200sq and more	22
ETI-Z55	Main power A	400AF 350AT	ACL-74C (φ 74mm)	CV80sqx2 or CV200sq and more	22
	Main power B	400AF 350AT	ACL-74C (φ 74mm)	CV80sqx2 or CV200sq and more	22
ETI-Z60	Main power A	630AF 500AT	F11080GB (φ 74mm)	CV100sqx2 or CV200sq and more	30
	Main power B	630AF 500AT	F11080GB (φ 74mm)	CV100sqx2 or CV200sq and more	30
ETI-Z70	Main power A	630AF 630AT	F11080GB (φ 74mm)	CV100sqx2 or CV250sq and more	38
	Main power B	630AF 630AT	F11080GB (φ 74mm)	CV100sqx2 or CV250sq and more	38

Mitsubishi Heavy Industries Thermal Systems, Ltd.

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Our factories are
ISO9001 and
ISO14001 certified.

Certified ISO 9001



Certificate number: JQA-0709



Certified ISO 14001



- Because of our policy of continuous improvement, we reserve right to make changes in all specifications without notice.
- Option items are included in the pictures of chiller.
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