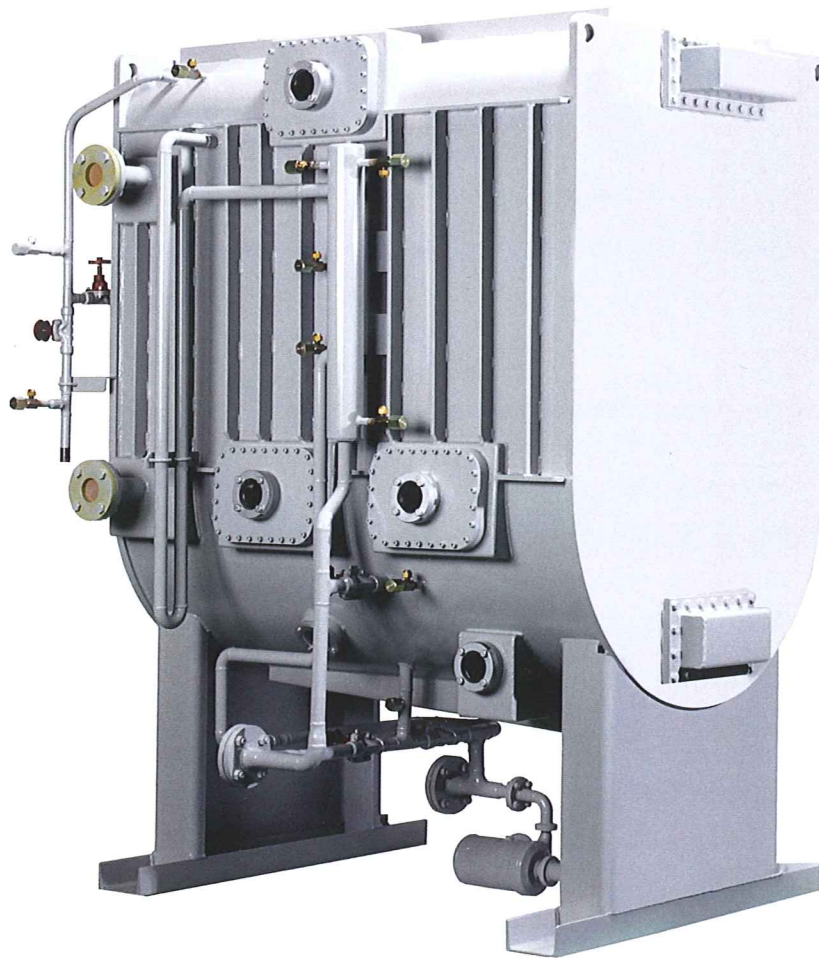




NEW ADSORPTION CHILLER

AdRef-Noa



The AdRef-Noa

is a new type of adsorption chiller product belong to the MAYEKAWA NATURAL 5 program. The AdRef-Noa uses the ultimate natural material “H₂O” as a refrigerant. The power source of the AdRef-Noa is hot water; therefore, electricity consumption is very small. As a result the COP can be reached as high as 9.0.*1

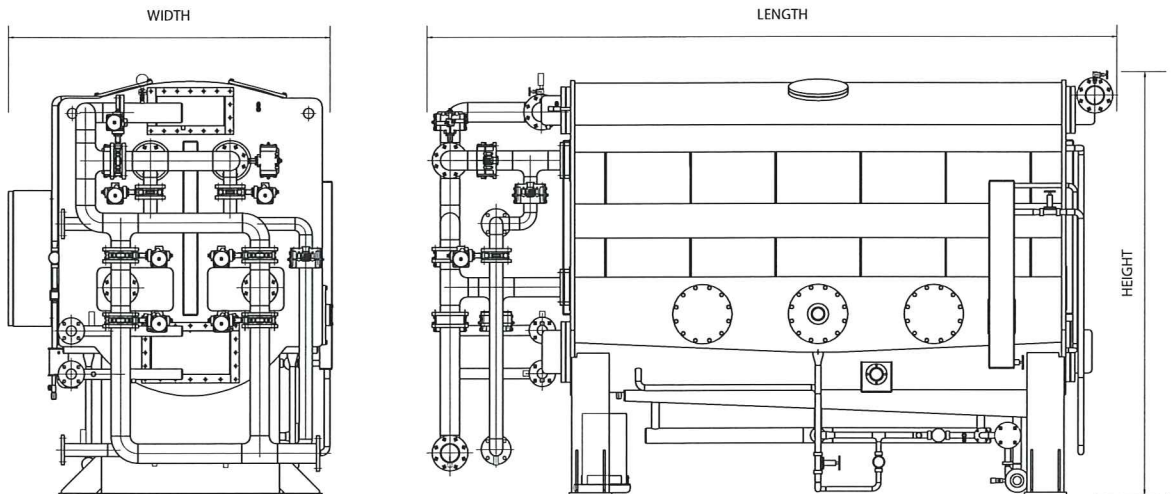
European Union draw up “20-20-20 rules by 2020”.

20% Reduction Green house gas / 20% Reduction Energy consumption / 20% Improve Renewable energy part in all energy

The AdRef-Noa is one of the best solutions. Customer can improve the part of renewable energy because he can use; for example, hot drain water from factory, geothermal heat, hot spring, vapor condensate, waste heat from fuel cells and solar heat as a power source.

The AdRef-Noa is using the new adsorbent Zeolite instead of Silica gel. Zeolite is the highest efficient adsorbent so we can achieve more compact design compared to the precious design.

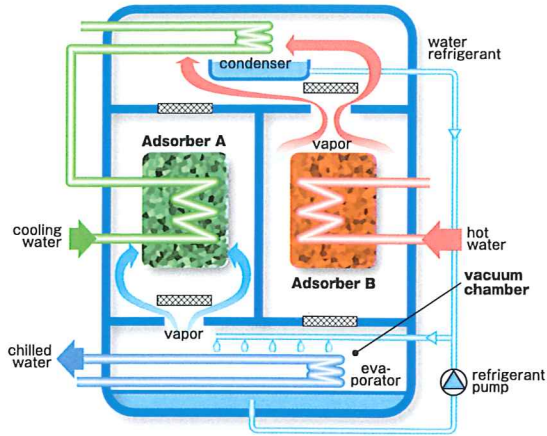
*1;Our standard design condition.



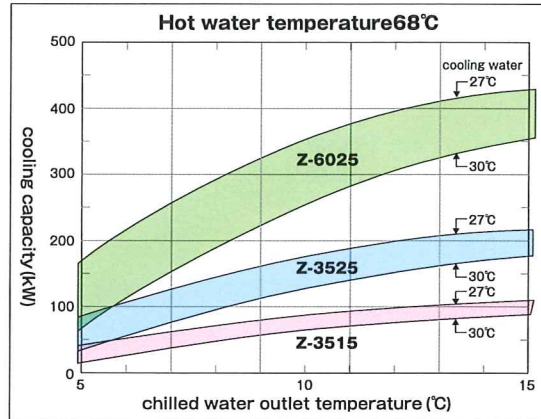
UNIT TYPE	WEIGHT (kg)	WIDTH (mm)	LENGHT (mm)	HEIGHT (mm)
ADR-Z3515	5800	2000	4000	2550
ADR-Z3525	10000	3200	3500	3000
ADR-Z6025	19000	3200	5700	5700

Note: Above drawing is subject to change without notice.

Operating principle



Performance comparison of models



*Standard design conditions
 Provided hot water temperature: 60~80°C
 Chilled water outlet temperature: 5~25°C
 Cooling water inlet temperature: 32°C or below
 Please contact us for other conditions.

AdRef-Noa

consists of two identical adsorption / desorption heat exchanging sections, one for each evaporative and condensing heat exchanger. Adsorption / desorption process, describe below, is interchanged and repeated in these two sections.

ADSORPTION CYCLE

Water as a refrigerant evaporates in the evaporator section. This produces chilled water by using water evaporative latent heat. The vapor is then adsorbed by an adsorber A. The adsorber generates heat, but removing this heat by cooling water further enhances the evaporating process.

DESORPTION CYCLE

Hot water (the heat source) is using to remove the moisture that is desorbed in the adsorber B. The released moisture enters the condensing section and is condensed for next evaporation.

Standard Specifications of AdRef-Noa

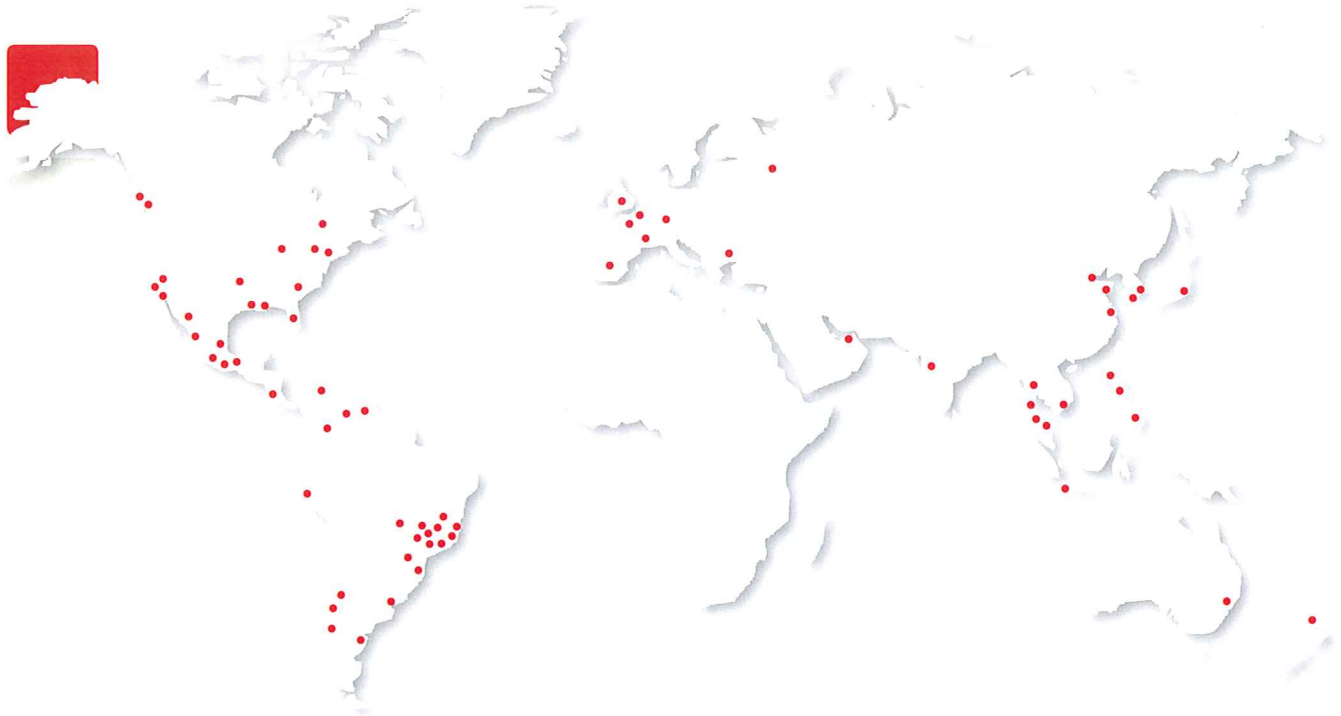
TYPE		ADR-Z3515	ADR-Z3525	ADR-Z6025	
Chilled water	Capacity	kW	92,0	184,0	369,0
	Inlet	°C	15,6		
	Outlet	°C	9,0		
	Flow rate	m³/h	12,0	24,0	48,0
	Fluid	-	Normal water ¹⁾		
Heat source water	Capacity	kW	200,0	400,0	801,0
	Inlet	°C	75,0		
	Outlet	°C	66,9		
	Flow rate	m³/h	21,3	42,6	85,3
	Fluid	-	Normal water ¹⁾		
Cooling water	Capacity	kW	301,0	602,0	1205,0
	Inlet	°C	29,0		
	Outlet	°C	34,2		
	Flow rate	m³/h	49,5	99,0	198,0
	Fluid	-	Normal water		
Refrigerant Pump	kW	0,40	0,55	1,10	
Vacuum Pump	kW	0,40	0,40	0,75	

1) Both water is mixed on switching of adsorptions / desorption time.

*Above information is subject to change without notice

WORLDWIDE

- 33 countries / 119 offices
- 8 production plants



MAYEKAWA

Europe Organization

SWITZERLAND

Rosenbergstrasse 31,
CH - 6300, Zug
Tel. +41 41 726 8626
Fax +41 41 726 8620
<http://www.mayekawa.ch/>
E-mail info@mayekawa.ch

SPAIN

Calle Montevideo 5,
Nave 13 PCL.
Industrial Campoporoso
28806 Alcala de Henares, Madrid
Tel. +34 91 830 0392
Fax +34 91 830 0397
<http://www.mayekawa.es/>
E-mail mayekawa@mayekawa.es

RUSSIA

House 3, Flat 54, Mytnaya
St., Moscow, 119049
Tel. +7 499 230 01 76
Fax +7 499 230 21 12
<http://www.mayekawa.ru/>
E-mail info@mayekawa.ru

GERMANY

Gabriele-Münter Strasse 3,
82110 Germering
Tel. +49 89 5527 989 0
Fax +49 89 5527 989 19
E-mail info@mayekawa.de

FRANCE

9, Rue Michael Faraday,
78180 Montigny-Le-Bretonneux,
Tel. +33 1 30 58 2600
Fax +33 1 30 58 1937
<http://www.mayekawa.fr/>
E-mail mycom-france@mayekawa.eu

UNITED KINGDOM

16 Oakhurst Gardens,
Bexleyheath, Kent DA7 5JP
Tel. +44 1322 433558
Fax +44 1322 433164

BULGARIA

94, Hristo Botev Str.1202 Sofia
Tel. +359 2 8910130
Fax +359 2 8910131

DUBAI

P.O.Box.61349, LOB. 11. No.126,
Jebel Ali Free Zone, Dubai, U.A.E
Tel. +971 4 887 2232
Fax +971 4 887 2238

INDIA

1st Floor, Balaji House,
Nr. Mahalaxmi Heights,
Mumbai-Pune Road, Pimpri,
Pune-411 018
Maharashtra, India
Tel. +91 20 2746 4537
Fax +91 20 2746 4539

AUSTRALIA

Unit 2,44 McCauley
Street Matraville NSW 2036 Australia
Tel. +61 2 9695 7000
Fax +61 2 9695 7001
E-mail mycomaus@mayekawa.com.au

NEW ZEALAND

30 Tui Street Othahuhu PO. Box 12106
Auckland New Zealand
Tel. +64 9 276 2305
Fax +64 9 276 2306
E-mail mycom@ihug.co.nz

JAPAN HEAD OFFICE

3-14-15 Botan Koto-ku,
Tokyo 135-8482, JAPAN
Tel. (81)-3-3642-8181
Fax (81)-3-3643-7094
E-mail e-public@mayekawa.co.jp

MAYEKAWA Europe nv/sa

Leuvensesteenweg 605
1930 Zaventem - Belgium
Tel. +32 2 757 90 75
Fax +32 2 757 90 23
URL <http://www.mayekawa.eu>
E-mail info@mayekawa.eu

Global web site

<http://www.mayekawa.com/>