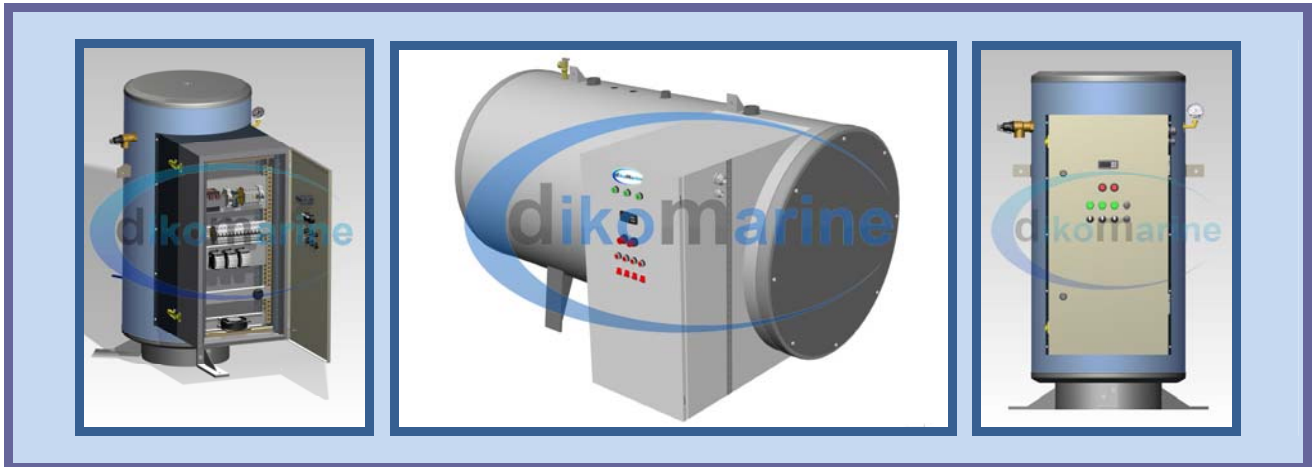




DSSY-XM SERIE



MARINE TYPE ELECTRIC WATER HEATERS WITH ELECTRICAL COMMAND PANEL

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DSSY-XM Serie Marine Type Electric Water Heaters with Electrical Command Panel

Standart Specifications :

- Vertical (Up Right)
- Capacity range between 125 – 5000 liter
- Electric heating power range between 10 KW – 600 KW
- 208-380-400-415-440-460-480-600-690 V
- [Cr/Ni – 304 quality stainless steel heater \(heating element\)](#)
- [Safety thermostat](#)
- [Heater group switches and signal lamps](#)
- [Circulation pump switch and signal lamp](#)
- [Heater group fuse / fuses](#)
- [Thermic magnetic main breaker and 24V.AC command voltage \(for 45 KW or more\)](#)
- [Leakage current relay \(human life protection\)](#)
- [Power steps control](#)
- [Electrical command panel with polyurethane cast gasket cover](#)
- Rock wool / Polyurethane (CFC Free) inner tank insulation
- [Fan coolant system](#)
- Marine type cable group
- [Deck stabilizer special mounting foot](#)
- Side body anchorage lugs (internally welded special holding points)
- Tank lifting lugs
- [Flap gate command panel \(Facility to remove heating elements easily\)](#)
- [T&P temperature and pressure safety relief valve](#)
- [Protection system against waterless operation](#)
- Audible and visual warning system incase of low water level
- [Audible and visual warning system incase of over heating](#)
- [Digital thermostat-thermometer with contact](#)
- Manometer with glycerin
- Max. Operating pressure : 8 bar
- Electrostatic epoxy powder paint coated outer jacket
- Hallogen free cables and cable channels
- Drain valve
- 2 year product guarantee
- 10 year spare part supply guarantee

[▲ up](#)



Optional Equipment and Request Options :

- Horizontal
- ASTM 304L / 316L stainless steel inner tank
- ASTM 304L / 316L stainless steel outer jacket
- Completely stainless steel 304L / 316L (inner tank & outer jacket)
- Special production for 5000 liter and more
- Special production for 600KW and more
- Incolloy type heating element
- PLC control panel
- Phase protection relay
- Safety switch for electric command panel
- Daily programmable time clock
- Thermic magnetic main breaker
- Hand-hole cleaning cover (for 500L and more)
- Vacuum safety valve
- Expansion tank
- Thermal surface preventive system
- Disinfective and preventive system for Legionella Bacteria

[▲ up](#)



Standart Equipments :

___ Stainless Steel Cr/Ni-304 Quality or Incolloy Heating Elements

Single phase or 3Phase stainless steel water heaters with 6-8-9,5mm diameter, U pipe, MgO isolation, Cr-Ni material and with various power rates. Special Gasket System as long with stainless steel connection sleeves ensures easy mounting _ No need for Cotton / Teflon.

Nicel_Chrom_Minco American alloy (Magnezyum Oksit) specially designed considering corrosive surroundings. This incoloy heating elements are much more everlasting for areas with mildy water. Operation life is being extenden and malfunction risk is being reduced with its low density between (7,75-11,63) Watt/cm2.

[▲ up](#)



Stainless Steel Connection Sleeves and special gaskets against leakage

___ Safety Thermostat

Provides tank protection via breaking electric circuit of the heaters unless tank water temperature level passes over operating temperature value. Factory adjusted and sealed. This adjustment is inconvertible.

[▲ up](#)

___ Heater Group Switches and Signal Lamps

Heater group switches placed on cover and being command manually. Operates as ON/OFF. 1 each for every heater group. Purpose of use is to take the groups into/out of the circuit .

Heater group signal lamps are placed on the group switches. Red light will be on incase the swithc is in "ON" position. Thermostat will shut all the group lamps when tank water level reaches desired temperature. This means hot water is ready for consumption.

[▲ up](#)

___ Circulation Pump Switch and Signal Lamp

Via this switch it is possible to command the pump from panel cover. Singlephase 220V command output passes through pump fuse. There is one piece og signal lamp on the out-put of the switch and phase and neutral is connected to connector.

[▲ up](#)

___ Heater Group Fuses

There are 3 pieces fuses for each heater exists in every heater group. These fuses breaks the circuit to eliminate the faulty heater incase heater malfunctions

[▲ up](#)



Thermic Magnetic Main Breaker and 24V.AC Reduced Command Voltage

A thermic magnetic breaker which is suitable with the heater power of the panel placed to provide protection for cable feed line and panel. This main breaker breaks the circuit in case of short circuits and excessive currents. It can operate manually with its latch. Diameter and isolation values of command cables are lower according to energy cables. This disadvantage is being eliminated via using devices with low voltage.

[^ up](#)

Leakage Current Relay (Human Life Protection)

Heaters leak current as milliampere as time goes by. This leakage current relay protects system and human life against short circuits and touchings.

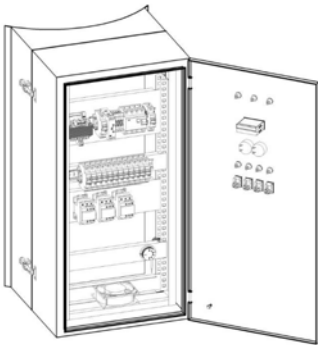
[^ up](#)

Power Steps Control

Generally total power is divided into 3 equal power values as 3 groups via switches placed on panel cover. If all the switches are in "ON" position, tank will operate with maximum power. In summer season this power will not be necessary, thus it is possible to control the heating power via shutting down some of the switches.

[^ up](#)

Electrical command panel with polyurethane cast gasket cover



Polyurethane cast gasket used between panel and its' cover provides resistance against dust and water drop.

[^ up](#)

Fan coolant system



Electric equipments of the panel are being protected against over heating and the bad effects of high temperature with the help of the fan coolant system. Thus, operating life and efficiency is being maximized.

[^ up](#)

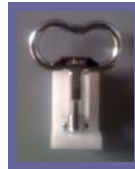


___ Flap gate command panel (Facility to remove heating elements easily)



Flap gate command panel provides easy access to electric heating elements. Maintenance and removal can be performed easily.

[▲ up](#)



Panel Key ensures protection against unauthorized access.

___ Deck stabilizer special mounting foot

Deck stabilizer special mounting foot minimizes the risk of hazardous vibrations which can be occur on board&off shore platforms.

[▲ up](#)



___ Temperature and Pressure T&P Relief Valve



T&P valve is a mechanical safety accessory against excessive heat and pressure. It discharges at max. 99°C and/or at max. 10,4bars.

[▲ up](#)

___ Protection System Against Waterless Operation



This system stops the operation and starts to warn the operator with light and voice to protect the heating elements incase the tank is empty or water level of the tank is low.

[▲ up](#)

___ Audible and Visual Warning System Against Over Heating

Safety Thermostat will break the circuit incase the tank water temperature level will pass over the limits, thus heating will stop. In this case this warning system will warn the operator with light and voice.

[▲ up](#)



Digital Thermostat – Thermometer



Usage purpose of this digital thermostatic thermometer is to adjust the desired water temperature value. Integer or decimal temperature value can be read directly from the screen.

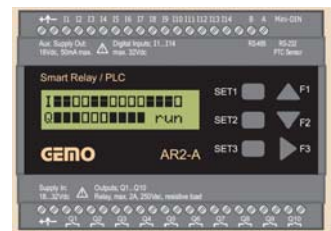
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Optional Equipments and Request Options :

PLC Control Panel

Usage purpose of this programmable logic control panel is to provide easy function follow up of the heating system. User can easily control and adjust the heating functions and follow function faults from the control panel with digital thermostat-thermometer. Data adjustment access is password locked.

[▲ up](#)



Safety Switch for Electric Command Panel

This switch provides energy cut-off before opening the tank panel cover in purpose of maintenance , test or malfunction. The panel cover can not be open unless the switch is being turned.

[▲ up](#)

Hand-Hole Cleaning Cover

This cleaning cover permits the operator to access to the inner tank for periodical maintenances.

[▲ up](#)

Vacuum Safety Valve



Watts N36-M1

Design certified by
C SP US

This is a mechanical safety valve which provides protection for system and installation pipes against negative pressure (inner vacuum).

[▲ up](#)

Expansion Tank

This is an installation accessory which absorbes expanded water and provide system protection.

[▲ up](#)





___ Thermal Surface Preventive System

This system is specially designed to prevent or at least to minimize the thermal sediments placed bottom of the water heater. This thermal sediments come into being in areas with mildy and agressive water and this factor negatively effects the tank life. Thermal sediments are being prevented and tank life is being extended via this system.

[^ up](#)

___ Dissinfective and Preventive System Against Legionella Bacterium

Water storage systems, fresh water and waste water systems are ideal places for micro-organizms. Among these micro-organizms, specially Legionella bacterium can pullulate easily in the water with 35-45°C temperature. Also these bacteriums can live in 60°C and can be re-active for pullulation when the ambient circumstances will turn suitable. An additional preventive system against such bacteriums and microorganizms is necessary for all hot water store systems and according to this our specially developped additional preventive system will protect you and your product automatically.

[^ up](#)



PRODUCT DESCRIPTION

DSSY-XM Serie marine type electric water heaters are monoblock units with their electric command panel and inner tank. Generally, electric command panel of these units developed in order to heat the tank water in one hour. Please simply inform us if your project requires a shorter heating time.

Electric command panel of DSSY-X Serie equipped with first quality marine type electric components. The product will be ready to use after performing the energy supply connections. Command panel electric installation and design is user friendly and easily accessible

Authorized technician can operate and follow up the functions of the system, easily. Functions like water temperature value, operation mode of the heater groups, water level and over heating status (if requested) can be observed from the panel.

Its' well developed structure including specially designed connection sleeves provides long life and efficient operation.



Specially designed, stainless steel connection sleeves



Normal sleeve examples from market



Anchorage Lugs for onboard mounting



PLACE OF USAGE

- Vessels
- Mega Yachts
- Tugboats
- Cruise Vessels
- Offshore Oil Plants
- Applications for Military Purpose
 - ✓ Naval Assault Boats
 - ✓ Patrol Boats
 - ✓ Reinforcement Boats
 - ✓ Amphibian Vessel Group
 - ✓ Cost Guard Boats
 - ✓ Rapid Reaction Boats
 - ✓ Sailing School Ships
 - ✓ Salvage Ships
 - ✓ Replenishment Vessels
 - ✓ Cost Guard Rescue Boats





DSSY-X SERIE

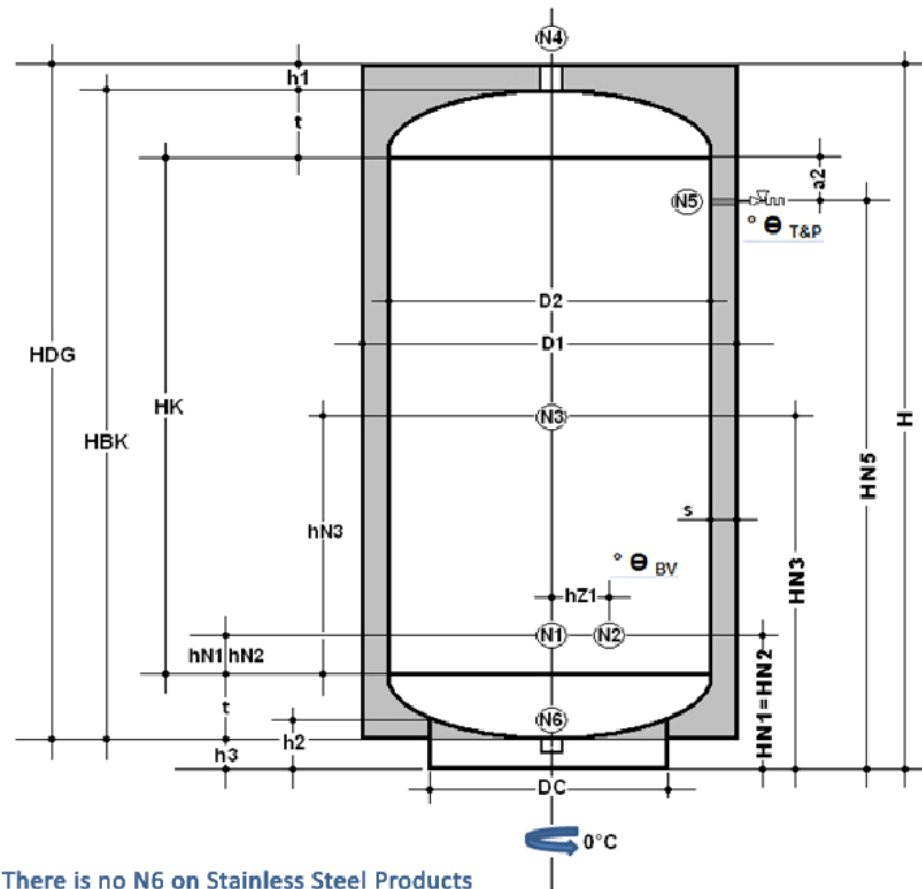


INSTALLATION CONNECTION DIAMETERS

MODEL	VOLUME (liter)	HEATER POWER (KW)	N1 (Cold Water Input)	N2 (Drain Valve)	N3 (Re-Circulation)	N4 (Hot Water Output)
DSSY-125XM.____	125		3/4"	3/4"	3/4"	3/4"
DSSY-150XM.____	150		3/4"	3/4"	3/4"	3/4"
DSSY-200XM.____	200		3/4"	3/4"	3/4"	3/4"
DSSY-250XM.____	250		3/4"	3/4"	3/4"	3/4"
DSSY-300XM.____	300		1"	3/4"	3/4"	1"
DSSY-400XM.____	400	P <= 45	1"	3/4"	3/4"	1"
DSSY-500XM.____	500	P <= 45	1"	3/4"	3/4"	1"
DSSY-750XM.____	750		1" 1/4	1"	1"	1" 1/4
DSSY-1000XM.____	1000		1" 1/4	1"	1"	1" 1/4
DSSY-1250XM.____	1250		1" 1/4	1"	1"	1" 1/4
DSSY-1500XM.____	1500	P <= 120	1" 1/4	1"	1"	1" 1/4
DSSY-2000XM.____	2000		1" 1/2	1" 1/4	1" 1/4	1" 1/2

DSSY-XM SERIE MARINE TYPE WATER HEATERS _ DIMENSIONS AND CONNECTION HEIGHTS

TECHNICAL DIMENSIONS



SYMBOLS _ DESCRIPTIONS

SYMBOLS	
N1	Cold Water Inlet
N2	Drain Valve
N3	Re-Circulation
N4	Hot Water Outlet
N5	Pressure Discharge Valve
N6	Galvanize Drain

- D1 : Outer Jacket Diameter
- D2 : Inner Tank Diameter
- HN1 : Cold Water Input Height
- HN2 : Drain Valve Height
- HN3 : Re-Circulation Height
- HN5 : T&P Safety Valve Height
- H : Product Height



DSSY-XM SERIE
MARINE TYPE ELECTRIC WATER HEATERS
INSTALLATION CONNECTION DIAMETERS & HEIGHTS



MODEL	Volume (liter)	D1 <i>Outer Jacket Diameter (mm)</i>	D2 <i>Inner Tank Diameter (mm)</i>	HN1=HN2 <i>Cold Water Input Height = Drain Valve Height (mm)</i>	HN3 <i>Re-Circulation Height (mm)</i>	HN5 <i>T&P Safety Valve Height (mm)</i>	H <i>Product Height (mm)</i>
DSSY-125XM.____	125	480	400	200	555	920	1110
DSSY-150XM.____	150	480	400	200	655	1120	1310
DSSY-200XM.____	200	580	500	205	570	945	1140
DSSY-250XM.____	250	580	500	205	700	1205	1400
DSSY-300XM.____	300	580	500	205	825	1455	1650
DSSY-400XM.____	400	700	640	229	699	1179	1398
DSSY-500XM.____	500	700	640	229	854	1489	1708
DSSY-750XM.____	750	830	750	325	950	1585	1900
DSSY-1000XM.____	1000	980	900	330	900	1480	1800
DSSY-1250XM.____	1250	1038	958	315	965	1625	1930
DSSY-1500XM.____	1500	1038	958	315	1140	1975	2280
DSSY-2000XM.____	2000	1300	1200	360	1000	1650	2000

Diko reserves the right of changing the models and dimensions without announcing.



DSSY-XM SERIE HEATING TIME



MODEL	10 KW	15 KW	20 KW	22.5 KW	30 KW	45 KW	60 KW	75 KW
DSSY-125XM	32.3 min.	21.5 min.	-	-	-	-	-	-
DSSY-150XM	38.7 min.	25.8 min.	-	-	-	-	-	-
DSSY-200XM	51.6 min.	34.4 min.	25.8 min.	-	-	-	-	-
DSSY-250XM	64.5 min.	43.0 min.	32.2 min.	28.7 min.	-	-	-	-
DSSY-300XM	77.4 min.	51.6 min.	38.7 min.	34.4 min.	25.8 min.	-	-	-
DSSY-400XM	103.3 min.	68.8 min.	51.6 min.	45.9 min.	34.4 min.	22.9 min.	-	-
DSSY-500XM	129.1 min.	86.0 min.	64.5 min.	57.4 min.	43.0 min.	28.7 min.	21.5 min.	-
DSSY-750XM	-	129.1 min.	96.8 min.	86.0 min.	64.5 min.	43.0 min.	32.3 min.	25.8 min.
DSSY-1000XM	-	-	129.1 min.	114.7 min.	86.0 min.	57.4 min.	43.0 min.	34.4 min.
DSSY-1250XM	-	-	-	143.4 min.	107.6 min.	71.7 min.	53.8 min.	43.0 min.
DSSY-1500XM	-	-	-	-	129.1 min.	86.0 min.	64.5 min.	51.6 min.
DSSY-2000XM	-	-	-	-	172.1 min.	114.7 min.	86.0 min.	68.8 min.
DSSY-2500XM	-	-	-	-	-	143.4 min.	107.6 min.	86.0 min.
DSSY-3000XM	-	-	-	-	-	172.1 min.	129.1 min.	103.3 min.
DSSY-4000XM	-	-	-	-	-	-	172.1 min.	137.7 min.
DSSY-5000XM	-	-	-	-	-	-	215.1 min.	172.1 min.
MODEL	90 KW	120 KW	150 KW	180 KW	200 KW	240 KW	260 KW	300 KW
DSSY-750XM	21.5 min.	-	-	-	-	-	-	-
DSSY-1000XM	28.7 min.	21.5 min.	-	-	-	-	-	-
DSSY-1250XM	35.9 min.	26.9 min.	21.5 min.	-	-	-	-	-
DSSY-1500XM	43.0 min.	32.3 min.	25.8 min.	21.5 min.	-	-	-	-
DSSY-2000XM	57.4 min.	43.0 min.	34.4 min.	28.7 min.	25.8 min.	21.5 min.	-	-
DSSY-2500XM	71.7 min.	53.8 min.	43.0 min.	35.9 min.	32.3 min.	26.9 min.	24.8 min.	21.5 min.
DSSY-3000XM	86.0 min.	64.5 min.	51.6 min.	43.0 min.	38.7 min.	32.3 min.	29.8 min.	25.8 min.
DSSY-4000XM	114.7 min.	86.0 min.	68.8 min.	57.4 min.	51.6 min.	43.0 min.	39.7 min.	34.4 min.
DSSY-5000XM	143.4 min.	107.6 min.	86.0 min.	71.7 min.	64.5 min.	53.8 min.	49.6 min.	43.0 min.

Mentioned heating times are calculated considering 37°C temperature difference between input&output and without consumption. Heating times are valid only for mentioned "Total Heater Power". For this chart, different KW values will effect only the heating time. Please ask for information with regard to different capacity and KW requests.



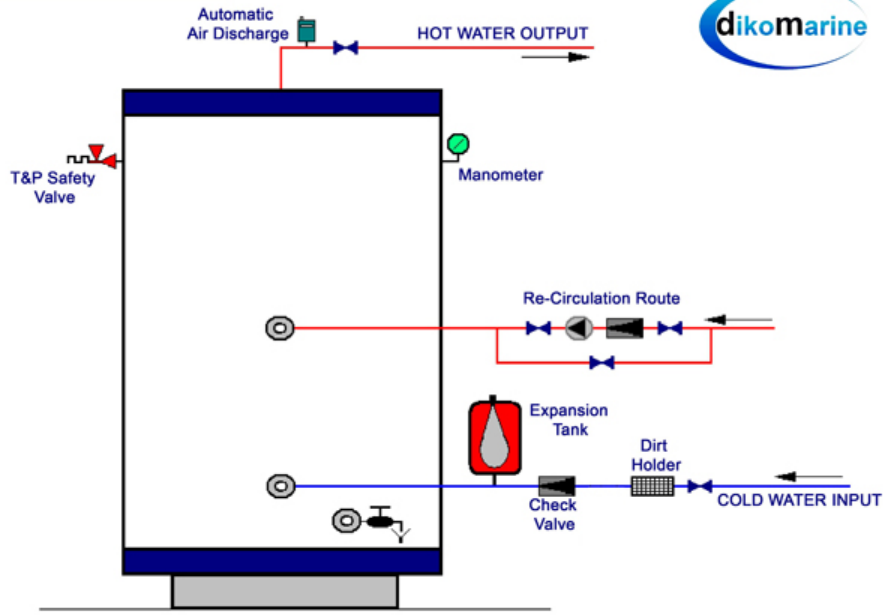
DSSY-XM SERIE MODEL TABLE



	10 KW	15 KW	20 KW	22.5 KW	30 KW	45 KW	60 KW	75 KW
125L	DSSY-125XM.10	-	-	-	-	-	-	-
150L	DSSY-150XM.10	DSSY-150XM.15	-	-	-	-	-	-
200L	DSSY-200XM.10	DSSY-200XM.15	DSSY-200XM.20	DSSY-200XM.22.5	-	-	-	-
250L	DSSY-250XM.10	DSSY-250XM.15	DSSY-250XM.20	DSSY-250XM.22.5	DSSY-250XM.30	-	-	-
300L	DSSY-300XM.10	DSSY-300XM.15	DSSY-300XM.20	DSSY-300XM.22.5	DSSY-300XM.30	-	-	-
400L	DSSY-400XM.10	DSSY-400XM.15	DSSY-400XM.20	DSSY-400XM.22.5	DSSY-400XM.30	DSSY-400XM.45	-	-
500L	DSSY-500XM.10	DSSY-500XM.15	DSSY-500XM.20	DSSY-500XM.22.5	DSSY-500XM.30	DSSY-500XM.45	DSSY-500XM.60	-
750L	-	DSSY-750XM.15	DSSY-750XM.20	DSSY-750XM.22.5	DSSY-750XM.30	DSSY-750XM.45	DSSY-750XM.60	DSSY-750XM.75
1000L	-	-	DSSY-1000XM.20	DSSY-1000XM.22.5	DSSY-1000XM.30	DSSY-1000XM.45	DSSY-1000XM.60	DSSY-1000XM.75
1250L	-	-	-	DSSY-1250XM.22.5	DSSY-1250XM.30	DSSY-1250XM.45	DSSY-1250XM.60	DSSY-1250XM.75
1500L	-	-	-	-	DSSY-1500XM.30	DSSY-1500XM.45	DSSY-1500XM.60	DSSY-1500XM.75
2000L	-	-	-	-	DSSY-2000XM.30	DSSY-2000XM.45	DSSY-2000XM.60	DSSY-2000XM.75
2500L	-	-	-	-	-	DSSY-2500XM.45	DSSY-2500XM.60	DSSY-2500XM.75
3000L	-	-	-	-	-	DSSY-3000XM.45	DSSY-3000XM.60	DSSY-3000XM.75
4000L	-	-	-	-	-	-	DSSY-4000XM.60	DSSY-4000XM.75
5000L	-	-	-	-	-	-	DSSY-5000XM.60	DSSY-5000XM.75
	90 KW	120 KW	150 KW	180 KW	200 KW	240 KW	260 KW	300 KW
750L	DSSY-750XM.90	-	-	-	-	-	-	-
1000L	DSSY-1000XM.90	DSSY-1000XM.120	-	-	-	-	-	-
1250L	DSSY-1250XM.90	DSSY-1250XM.120	DSSY-1250XM.150	-	-	-	-	-
1500L	DSSY-1500XM.90	DSSY-1500XM.120	DSSY-1500XM.150	DSSY-1500XM.180	-	-	-	-
2000L	DSSY-2000XM.90	DSSY-2000XM.120	DSSY-2000XM.150	DSSY-2000XM.180	DSSY-2000XM.200	DSSY-2000XM.240	-	-
2500L	DSSY-2500XM.90	DSSY-2500XM.120	DSSY-2500XM.150	DSSY-2500XM.180	DSSY-2500XM.200	DSSY-2500XM.240	DSSY-2500XM.260	DSSY-2500XM.300
3000L	DSSY-3000XM.90	DSSY-3000XM.120	DSSY-3000XM.150	DSSY-3000XM.180	DSSY-3000XM.200	DSSY-3000XM.240	DSSY-3000XM.260	DSSY-3000XM.300
4000L	DSSY-4000XM.90	DSSY-4000XM.120	DSSY-4000XM.150	DSSY-4000XM.180	DSSY-4000XM.200	DSSY-4000XM.240	DSSY-4000XM.260	DSSY-4000XM.300
5000L	DSSY-5000XM.90	DSSY-5000XM.120	DSSY-5000XM.150	DSSY-5000XM.180	DSSY-5000XM.200	DSSY-5000XM.240	DSSY-5000XM.260	DSSY-5000XM.300

LDiko reserves the right of changing the models without announcing. Please ask for information with regard to different capacity and KW requests.

ADVISED INSTALLATION SCHEMATIC



All the accessories mentioned in this installation schematic are OPTIONAL.

[▲ up](#)



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