



## **DOLPHIN RADIATORS & COOLING SYSTEM LTD.**

P.O.BOX 1424, SHARJAH, UAE

TEL: 00971 6 5432526

FAX: 00971 6 5432415

E-MAIL: [dolcool@emirates.net.ae](mailto:dolcool@emirates.net.ae)

WEBSITE: [www.dolphinheattransfer.com](http://www.dolphinheattransfer.com)

## **FRESH WATER SHELL AND TUBE CONDENSERS**

**Shell and tube condensers** are currently the most popular type of condensers used worldwide. Dolphin has manufactured and installed shell and tube condensers for a wide range of applications. Custom engineering capabilities and application oriented features ensure a shell and tube condenser that is a perfect match to your requirements. The only maintenance required is tube cleaning every 6 to 12 months.

- Dolphin's horizontal Shell and Tube condensers are made from carbon steel shell fitted out with copper tubes (Plain/low fin).
- Dimensions: The diameters vary from **6" to 14"**, lengths vary from **900 mm to 1500 mm**. (For other sizes, please contact us)
- Capacities: **From 10 TR to 100TR**. (Higher capacities are also possible, for higher capacities please contact us)

Each condenser undergoes a pressure test according to the standards. The safety requirements are assured by strictly following the main codes during the design, the choice and use of suitable materials, manufacturing and inspection, pressure testing and final documentation.

### **MATERIAL OF CONSTRUCTION:**

**SHELL:** Steel pipes shell fabricated to [ASME specification SA-53 grade B](#).

**TUBES:** Copper tubes (plain or low fin) as per [ASME specification SB-359-122](#). Tubes are roller expanded into multiple grooved tube sheets.

**TUBE SHEETS:** Flange quality carbon steel fabricated to [ASME specification SA-516 GR70](#).

**HEADS:** [Carbon steel](#) heads with integral pass partitions.

**GASKETS:** Die-cut gaskets between tube sheets and heads. Material to be compatible with water and typical additives.

**Codes:** The refrigerant side is constructed and tested in accordance with [section VIII Div.1 ASME code](#) for unfired pressure vessels.



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### **PERFORMANCE DATA FOR FRESH WATER SHELL AND TUBE CONDENSERS**

<b>DOLPHIN ITEM #.</b>	<b>RATED TONS</b>	<b>NUMBER OF PASSES</b>	<b>WATER FLOW RATE, LPM</b>	<b>WATER PRESSURE DROP, KPa</b>
DOL001	10	4	100.5	50.0
DOL002	20	2	200.95	9.5
DOL003	25	4	251.2	22.7
DOL004	30	4	301.43	28.7
DOL005	40	2	401.92	33.0
DOL006	50	2	502.4	24.7
DOL007	60	2	602.9	35.9
DOL008	70	2	703.35	41.4
DOL009	80	2	803.8	50.1
DOL010	90	2	904.3	33.9
DOL011	100	2	1004.8	42.63

- a. R-22 Refrigerant, water on the fluid side
- b. Entering water temperature 40 °C
- c. Leaving water temperature 45 °C
- d. R-22 Condensing temperature 55 °C



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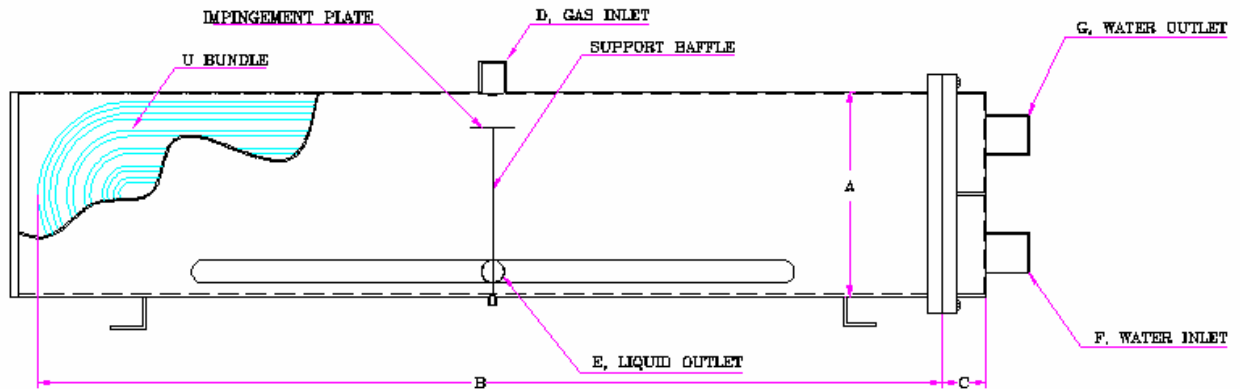
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FRESH WATER SHELL & TUBE CONDENSER

## DIMENSIONAL DATA

(All Dimensions are in mm unless otherwise specified)

DOLPHIN ITEM #.	A	B	C	D	E	F	G
DOL001	6"	900	60	25.4	25.4	38.1	38.1
DOL002	8"	950	80	38.1	25.4	50.8	50.8
DOL003	10"	1000	120	38.1	25.4	50.8	50.8
DOL004	10"	1200	120	38.1	25.4	76.2	76.2
DOL005*	10"	1400	120	38.1	25.4	76.2	76.2
DOL006*	12"	1300	120	50.8	25.4	76.2	76.2
DOL007*	12"	1400	120	50.8	25.4	76.2	76.2
DOL008*	12"	1500	120	50.8	25.4	101.6	101.6
DOL009*	12"	1600	120	50.8	25.4	101.6	101.6
DOL010*	14"	1400	160	76.2	38.1	101.6	101.6
DOL011*	14"	1500	160	76.2	38.1	101.6	101.6

\* Low fin copper tubes



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**QUOTE REQUEST FORM FOR FRESH WATER CONDENSER**

**Condenser**

To: \_\_\_\_\_ Customer: \_\_\_\_\_

From: \_\_\_\_\_ Contact: \_\_\_\_\_

Date: \_\_\_\_\_ Phone/Fax: \_\_\_\_\_

Subject: \_\_\_\_\_ Address: \_\_\_\_\_

**Technical Details: (Please provide the data as much as possible)**

Load-Total Heat Rejection (Ton or kW): \_\_\_\_\_

Refrigerant: \_\_\_\_\_ Condensing Temp.: \_\_\_\_\_

Entering Water Temp.: \_\_\_\_\_ Leaving Water Temp.: \_\_\_\_\_

Water Flow Rate: \_\_\_\_\_ Fouling Factor: \_\_\_\_\_

Max. Water Pressure Drop: \_\_\_\_\_ Design Pressure (Shell): \_\_\_\_\_

Design Pressure (Tube): \_\_\_\_\_ Design Temp.: \_\_\_\_\_

Dimensional Limitations: \_\_\_\_\_

Other Conditions: \_\_\_\_\_

Original Manufacturer and Model Number: \_\_\_\_\_