CHEVON™

The Cooling Specialist

COMPANY PROFILE

CHEVON International (S) Pte Ltd, was established in 1994. It is currently a leading manufacturer of Cooling Equipment. The growing company presently has 5 factories, 11 sale offices and employed more than 500 staffs in 4 countries. With its full range of machineries installed and a total manufacturing space of 90 000 square meters, CHEVON is devoted to provide the best product and service to its customers.

CHEVON, with technology originating from Germany and USA, specialises in designing and manufacturing of cooling equipment. With its invaluable experience gained over the past 2 decades, it has applied aptly its expertise in the heat transfer industry. CHEVON products include radiators, plate heat exchangers, charged air coolers, water coolers, air conditioner coils, condensers, fins & tubes, chillers, fans and block heaters. These are used in industries such as power generation, oil and gas, marine, locomotive, automobile, building and construction, pharmaceutical and air-conditioning.

There are 2 main criteria as a manufacturer of cooling equipment; product performance and manufacturing cost effectiveness. The company is therefore devoted to ISO9001:2000 quality management system, which defined and managed a systemic approach towards a set of consistent process in a controlled environment. The objective was to improve and continue to innovate product that meets a stated quality standard consistently.

In the current competitive environment, CHEVON is committed to deliver its products in a shortest possible time without compromising on the quality. And CHEVON has extended its offer in providing excellent after-sales services, which includes repairs and servicing of the cooling equipment at a very competitive cost.

With all these business setups, we are in a resourceful one-stop solution-based position in providing our customers all the heat transfer needs.

Professional
Prompt
Pleasant

PROFESSIONAL

- CHEVON products were govern by ISO9001:2000 Quality Management system.
- CHEVON products were developed and innovated by a team of committed engineers through continuous research and development.
- CHEVON products were blend intensively with decades of experiences that offers a customer problem-free goods.
- CHEVON products were designed and manufactured fully with the latest appropriate equipment and proprietary design programs.
- CHEVON products were designed extensively with the customer requirement in mind. It could be designed to meet unique operation condition, environmental challenge, installation limitation and product life cycle expectancy.

PROMPT

- CHEVON is committed to deliver the product promptly.
- CHEVON uses Singapore and Shanghai ports, which are the most convenient and have the most network routes around the world, to fulfill its delivery commitment promptly.
- CHEVON offers a speedy after-sales service solution to customer in the most achievable circumstance.

PLEASANT

- CHEVON has one of the most competitive and assuring pricing systems.
- CHEVON sales staffs are committed to 24/7 contactable routine.

THEREFORE... CHEVON products are highly recommended and approved by MANY engine manufacturers as a preferred choice for their applications.

CHEVON is a one – stop provider for all your cooling requirements.

PRODUCTS & QUALITY ARE CERTIFIED BY

Lloyds, Nippon Kaiji Kyokai, ABS and EQA (European Quality Assurance)

WHAT MAKES CHEVON SPECIAL OVER OTHER SUPPLIERS?

- We listen very carefully to you and readily customise to your requirement.
- We are flexible in changing our existing standard design and product to meet your specific application conditions.
- We offer exhaustively a variety of solution-based cooling equipment for your selection.
- We strive to meet your expectation consistently.
- We deliver a high quality product with unquestionable performance.
- We adhere strictly to your delivery schedule with competitive price.
- Your choice is our preferred standard.

CHEVON'S RADIATOR MOUNTED ON ENGINE

CHEVON'S RADIATOR ARE CLASSIFIED INTO 6 TYPES

Set mounted radiator where fan is mounted on engine

Vertical remote radiator comes with motor and fan and the air flows horizontally

Set mounted radiator where fan is mounted on radiator and driven via pulley and belts

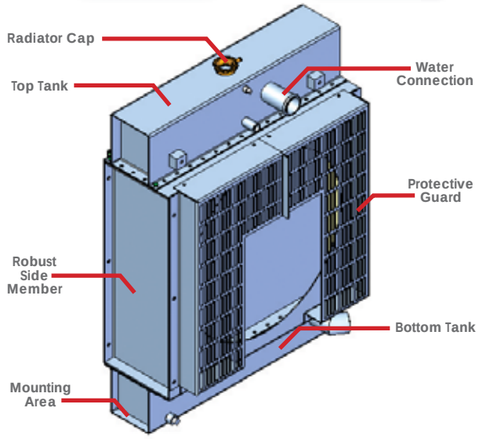
Space saving and vertical air discharge remote radiator

Any radiator, which has Solder Coated Cores

Horizontal remote radiator that comes with motor and fan and the air flows vertically upwards

C SERIES RADIATOR

Set mounted radiator.

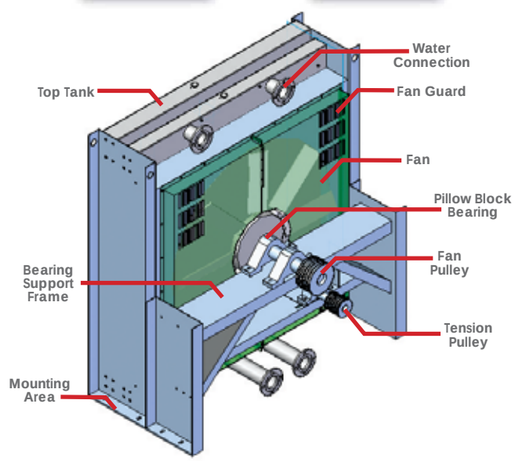


ADVANTAGES

- This radiator is mounted on the same skid as the engine.
- Cooling airflow by engine driven fan.
- Radiator of high efficient fin profile.

E SERIES RADIATOR

Set mounted radiator with pulley and fan.

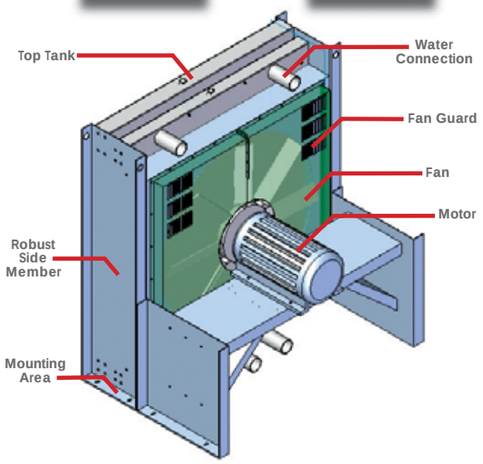


ADVANTAGES

- This radiator is mounted on the same skid as the engine.
- It utilized aerofoil designed fan blades (impellers) of high efficiency with lower power consumption.
- Radiator of high efficient fin profile.

M SERIES RADIATOR

Remote radiator (vertical) with motor and fan.

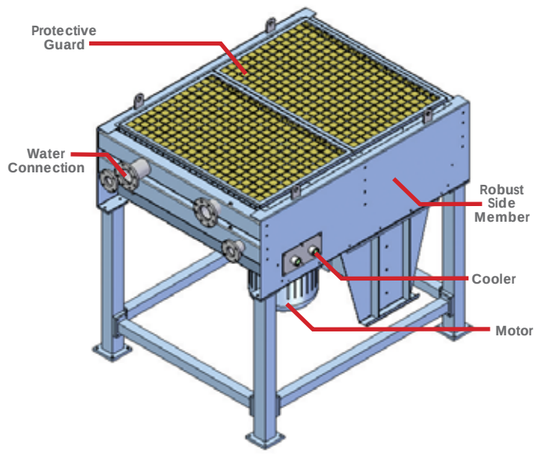


ADVANTAGES

- This radiator is mounted away from the engine, an added flexibility to installed cooling system at desired location.
- Low power consumption, high efficiency aerofoil designed fans are used.
- If it is installed outside engine room, static pressure is reduced, ducting cost is eliminated, and room size can be fully utilized.
- Radiator of high efficient fin profile

H SERIES RADIATOR

Horizontal remote radiator with motor and fan.

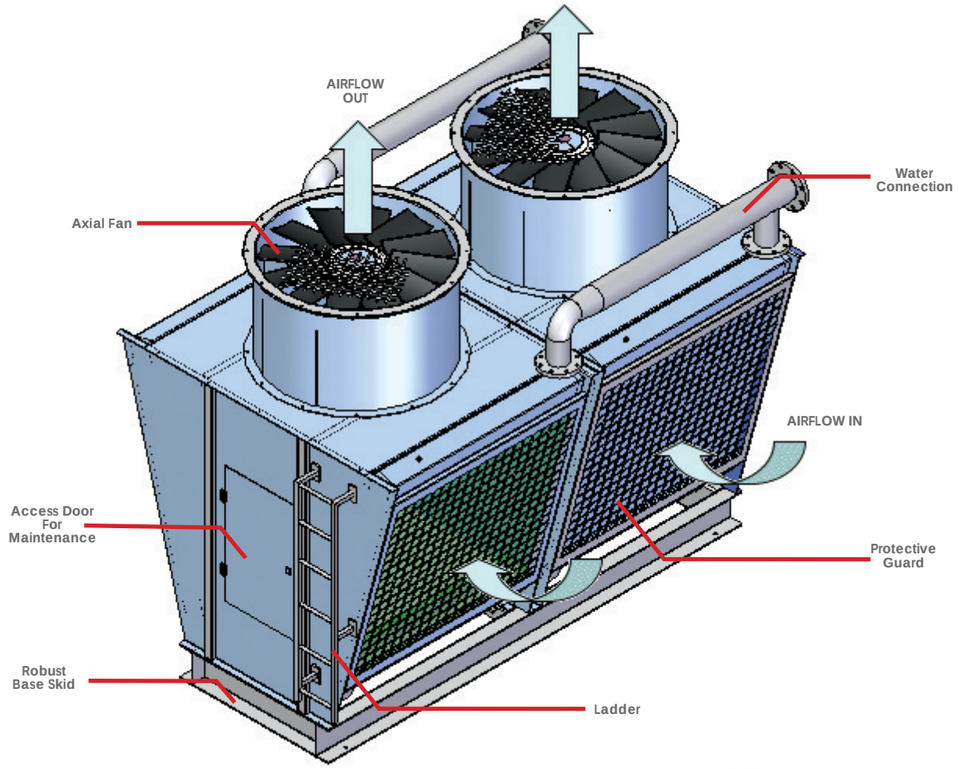


ADVANTAGES

- This radiator is mounted away from the engine, an added flexibility to installed cooling system at desired location.
- Low power consumption, high efficiency aerofoil designed fans are used.
- Cooling airflow is discharged upward. This minimized distraction for those working around the cooling equipment.
- Radiator of high efficient fin profile.

AFT SERIES RADIATOR

Space-saving, vertical air discharge remote radiator with motor and fan.



ADVANTAGES

- This radiator is mounted away from the engine, an added flexibility to installed cooling system at desired location.
- Low power consumption, high efficiency aerofoil designed fans are used.
- Lower noise level.
- Radiator of high efficient fin profile.

SOLDER COATED RADIATORS

INFORMATION ON SOLDERED COATED CORE

Solder coated cores are usually used in the Marine and Oil & Gas industries due to a salt-laden environment, where corrosion is imminent. In order to prevent any consequential loss because of that defect mode, CHEVON radiator with solder coated core is recommended.

Corrosion is an electrochemical process, and all metals and alloys, when operating in a salt-laden environment, such as getting in contact with seawater or a sodium-filled atmosphere, has a specific electrical potential (or a corrosion potential). Seawater, by virtue of its chloride content, is a most efficient electrolyte. With an omni-presence of oxygen in marine environment it increases the aggressiveness of salt attack on metals.

CHEVON adopted two methods to control this defect mode:

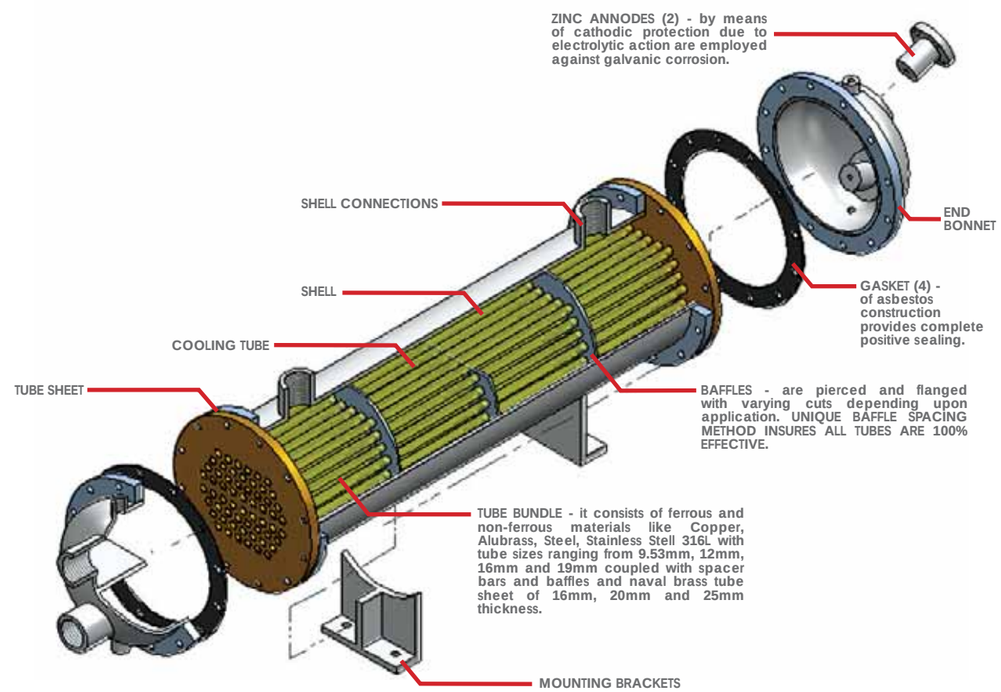
- Isolation of radiator core from the seawater by painting and solder coating.
- Isolation of supporting metal structures by galvanising steel and/or by making a change to a more corrosion resistant material, such as stainless steel.

Solder coating isolates the core from the corrosive media. This approach retards the corrosion defect mode and extends the useful life span of the radiator. When it is used in a marine environment, this approach strictly controlled to ensure full and effective coverage of the core. Over the years, CHEVON has been able to achieve and to control an effective solder coating process that provides a reliable and lasting protection on the delivered products.

Depending on cost sensitivity, design effectiveness and application factors, the supporting metal structures can be manufactured from stainless steels or galvanized steels. Both of these approaches enhance the resistance of the product against corrosion in a salt-laden environment.

These methods, in return, gave the customers a peace of their minds and increase the confidence of CHEVON product consistently repeatedly.

SHELL AND TUBE HEAT EXCHANGER



CHEVON Shell and Tube Heat Exchangers can be customised to meet customer requirements. They are available in a wide range of design variations, special materials and features to meet virtually any heat transfer requirement. With customers' application needs in mind, CHEVON design team could design appropriately and suggest accordingly any foreseen limitation or otherwise application possible challenges.

Where application is sensitive to salt-laden environment, such as seawater usage, additional steps could be considered to keep corrosion at bay. There are three main methods for controlling the tendency of metals to corrode in seawater:

- Glass flake coating at end bonnets.
- Cathodic protection by coupling to a sacrificial zinc anode.
- Use a more corrosion resistant metal, such as stainless steel, titanium, naval bronze, copper nickel and aluminium brass.

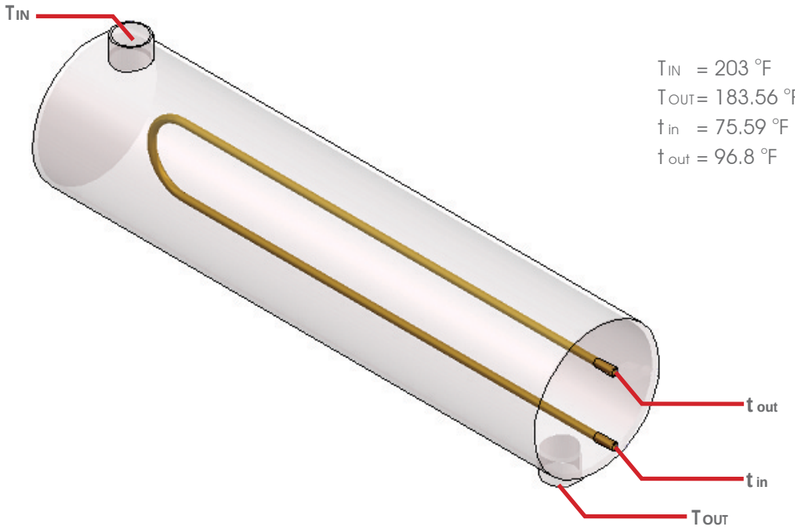
Typical construction materials are as follows:

- Shell and end bonnets: Carbon Steel or Stainless Steel.
- Tube sheets: Carbon Steel or Stainless Steel or Naval Brass.
- Tubes: Aluminium Brass, Stainless Steel or Copper Nickels.

By equipping virtually any type of design concept to meet customer needs, CHEVON design team is most willing to engage in active discussion with customers to ensure best solution provided.

SHELL AND TUBE HEAT EXCHANGER SELECTION

EXAMPLE: Select a suitable shell and tube heat exchanger based on engine 6BT5.9-G12 (1500rpm) using sea water.



T_{IN} = 203 °F
T_{OUT} = 183.56 °F
t_{in} = 75.59 °F
t_{out} = 96.8 °F

STEP 1
Heat load calculations
45 GPM x 500 (FC) x [203 °F – 183.56 °F] = 437400 BTU/HR
***Factor FC is found in Table 1 for correct units used**

STEP 2
Calculate Fluid temperature changes
Hot Fluid ΔT = 203 (T_{IN}) – 183.56 (T_{OUT}) = 19.44°F
Cold Fluid Δt = 96.8 (t_{out}) – 75.59 (t_{in}) = 21.21°F

STEP 3
Calculate LMTD

$$LMTD = \frac{(T_{IN} - t_{out}) - (T_{OUT} - t_{in})}{\ln (T_{IN}-t_{out})/ (T_{out}-t_{in})} = 107.01\ °F$$

STEP 4
Correct LMTD for multiple pass exchangers

$$R = \frac{203\ (T_{IN}) - 183.56\ (T_{OUT})}{96.8\ (t_{out}) - 75.59\ (t_{in})} = 0.9165$$

$$P = \frac{96.8\ (t_{out}) - 75.59\ (t_{in})}{203\ (T_{IN}) - 75.59\ (t_{in})} = 0.1665$$

Correction factor from Table 3: 0.975
LMTD (corr.) = 105.89 (LMTD) x 0.975 (corr. Factor) = 103.24 oF (LMTD)

Heat Exchanger

YL, LGH, LGS Series Lube Oil Cooler

STEP 5
Calculate the approximate area required

$$Area = \frac{437400\ (Heat\ load)}{103.24\ (LMTD) \times 400\ (U)} = 10.59\ FT^2$$

*** Factor U found in Table 2**

STEP 6
Select CHEVON model from surface area:
Model : CC620-13
Tube size : 0.375''

Intermediate Cooler for Engine 16V240ZJD

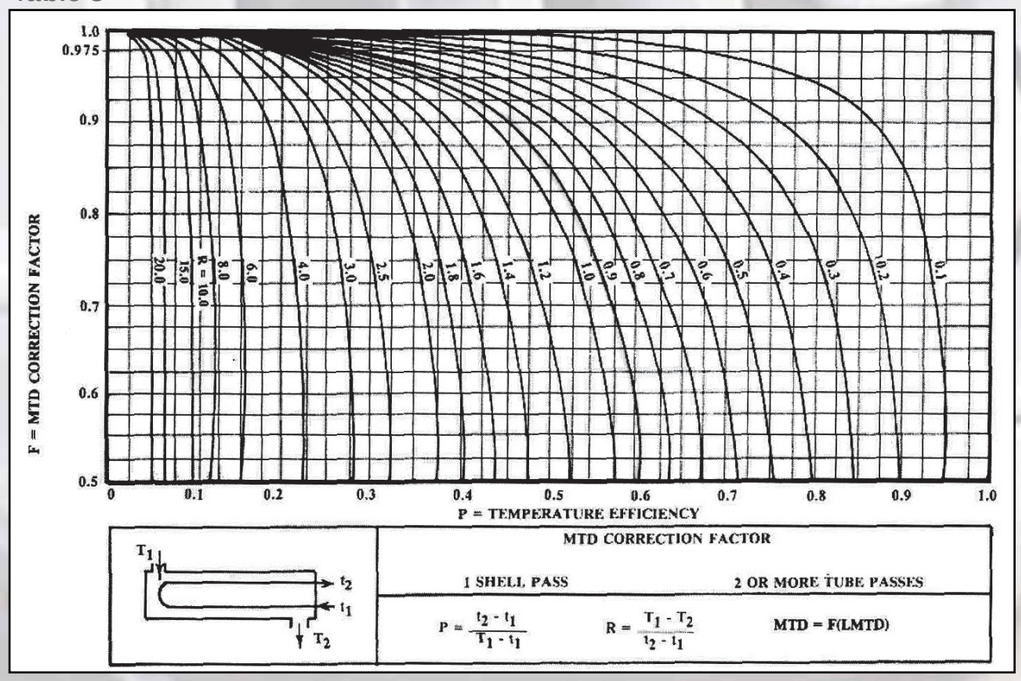
Table 1

FLUID	FC Co-L/M°F - GPM	
Water	238	500
50% E.G.	214	450
Oil	100	210

Table 2

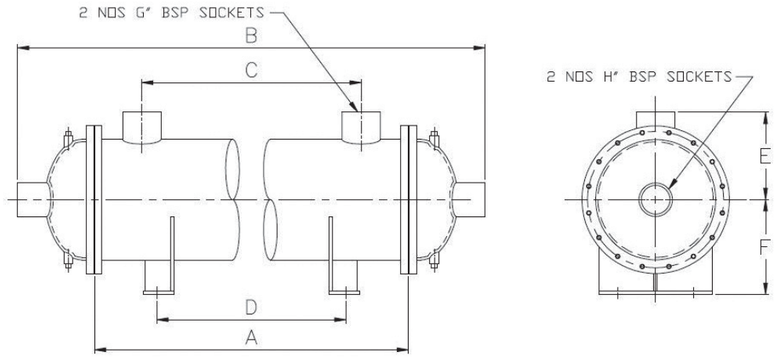
U	TUBE FLUID	SHELL FLUID
400	Water	Water 50%
350	Water	E.G.
100	Water 50%	Oil 50%
300	E.G.	E.G.
90	50% E.G.	Oil

Table 3

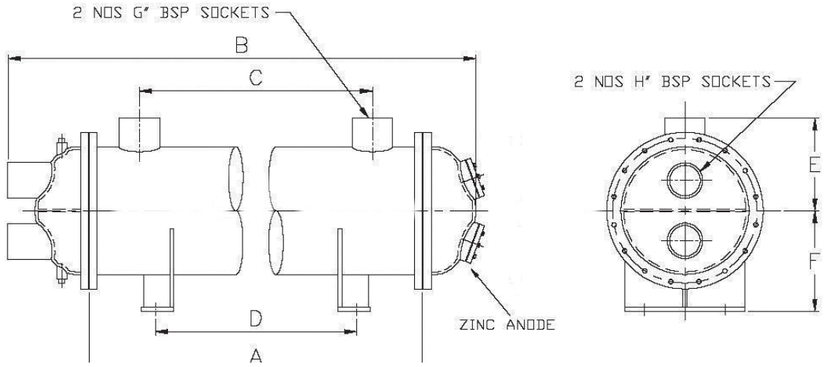


SPECIFICATIONS

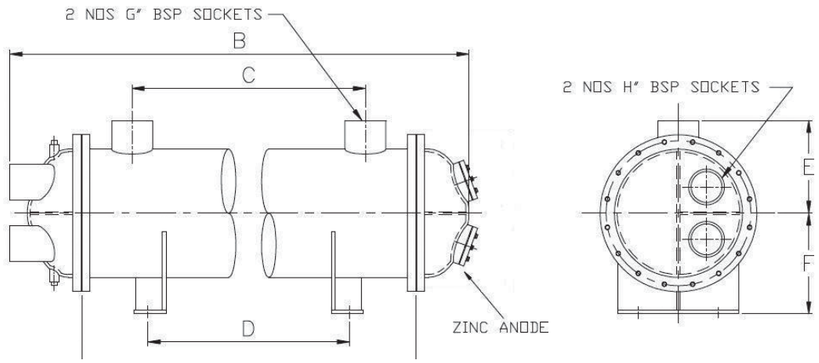
SINGLE PASS



TWO PASS



FOUR PASS



500 SERIES

MODEL	A	B	C	D	E	F	G	H	AREA (FT^2)	APPROX WT IN KG	MINIMUM RAW WATER FLOWRATE ($M^3/Hr, v = 1.5m/s$)		
											1PASS	2PASS	4PASS
CC0515	381	681	200	200	150	120	2	1.5	9.8	35	30	15	8
CC0525	635	935	430	400	150	120	2	1.5	16.36	58	30	15	8
CC0535	889	1189	680	600	150	120	2	1.5	22.93	81	30	15	8
CC0545	1143	1443	950	900	150	120	2	1.5	29.49	104	30	15	8

600 SERIES

MODEL	A	B	C	D	E	F	G	H	AREA (FT^2)	APPROX WT IN KG	MINIMUM RAW WATER FLOWRATE ($M^3/Hr, v = 1.5m/s$)		
											1PASS	2PASS	4PASS
CC0620	508	808	300	300	180	150	2.5	1.5	17.33	67	40	20	10
CC0630	762	1062	550	500	180	150	2.5	1.5	26.05	100	40	20	10
CC0640	1012	1312	800	800	180	150	2.5	1.5	34.55	133	40	20	10
CC0650	1270	1570	1050	1000	180	150	2.5	1.5	43.38	167	40	20	10
CC0660	1524	1824	1300	1300	180	150	2.5	1.5	51.99	200	40	20	10

800 SERIES

MODEL	A	B	C	D	E	F	G	H	AREA (FT^2)	APPROX WT IN KG	MINIMUM RAW WATER FLOWRATE ($M^3/Hr, v = 1.5m/s$)		
											1PASS	2PASS	4PASS
CC0820	508	808	300	300	200	180	3	2	28.09	119	69	34	17
CC0830	762	1062	550	500	200	180	3	2	42.19	178	69	34	17
CC0850	1270	1570	1050	1000	200	180	3	2	70.4	296	69	34	17
CC0860	1524	1824	1300	1300	200	180	3	2	84.39	356	69	34	17
CC0870	1778	2078	1500	1500	200	180	3	2	98.49	415	69	34	17

1000 SERIES

MODEL	A	B	C	D	E	F	G	H	AREA (FT^2)	APPROX WT IN KG	MINIMUM RAW WATER FLOWRATE ($M^3/Hr, v = 1.5m/s$)		
											1PASS	2PASS	4PASS
CC1030	762	1062	550	500	220	200	4	2.5	68.67	278	107	53	26
CC1040	1016	1316	800	800	220	200	4	2.5	91.6	370	107	53	26
CC1050	1270	1570	1050	1000	220	200	4	2.5	114.5	463	107	53	26
CC1060	1524	1824	1300	1300	220	200	4	2.5	137.5	556	107	53	26
CC1070	1778	2078	1500	1500	220	200	4	2.5	160.4	648	107	53	26

1200 SERIES

MODEL	A	B	C	D	E	F	G	H	AREA (FT^2)	APPROX WT IN KG	MINIMUM RAW WATER FLOWRATE ($M^3/Hr, v = 1.5m/s$)		
											1PASS	2PASS	4PASS
CC1230	762	1062	550	500	250	200	4	3	100.1	400	156	78	39
CC1250	1270	1570	1050	1000	250	200	4	3	167	667	156	78	39
CC1260	1524	1824	1300	1300	250	200	4	3	200.3	800	156	78	39
CC1270	1778	2078	1500	1500	250	200	4	3	233.7	933	156	78	39

CHEVON WATER COOLED CONDENSER

CHEVON offers standard and customised water-cooled shell and tube condensers.

The condensers are made of high performance low finned tubes, which reduce film resistance and increase cooling surface area.

In addition, the internal of the tubes in the condensers may be cleaned mechanically by simply opening the end covers, without opening the refrigerant side.

The compact design makes the condensers perfectly suitable for condensing units.

Both marine and industrial units are available. The tubes material can be copper, aluminium brass or copper nickel.

HOW DO YOU SELECT A SUITABLE CONDENSER?

EXAMPLE: Select a suitable condenser for 40kw heat capacity with condensing temperature at 40°C and water inlet temperature at 32°C water flow rate 34 m³/hr.

STEP 1
Determine the inlet temp diff (ITD)
ITD= Freon inlet temp (°C) - Water inlet temp (°C)
EXAMPLE: 40°C - 32°C = 8°C

STEP 2
Check the tables under column 8°C ITD and select model that has 40KW or more capacity with a flow rate 34m³/hr or less.

STEP 3
3 models of condensers meet the requirement cooling specification.
- **CCD 08830-2**
- **CCD 08110-6**
- **CCD 06670-4**

STEP 4
Check the dimension of the models to select the unit that is most suitable for your installation.

TABLE 1

* Capacity in KW							
	ITD (DEG C)						FLOWRATE
MODEL	3	4	5	6	7	8	m³/hr min
CCD-08830-6	12.43	16.53	20.63	24.86	29.08	33.18	8
CCD-08830-4	14.24	18.93	23.63	28.48	33.32	38.02	16
CCD-08830-2	15.29	20.33	25.38	30.58	35.77	40.82	32

TABLE 2

* Capacity in KW							
	ITD (DEG C)						FLOWRATE
MODEL	3	4	5	6	7	8	m³/hr min
CCD-06110-4	13.38	17.79	22.21	26.76	31.30	35.72	12
CCD-06110-2	14.65	19.48	24.31	29.30	34.28	39.11	24
CCD-08110-6	15.22	20.24	25.26	30.44	35.61	40.63	8

TABLE 3

* Capacity in KW							
	ITD (DEG C)						FLOWRATE
MODEL	3	4	5	6	7	8	m³/hr min
CCD-06670-6	13.38	17.79	22.21	26.76	31.30	35.72	12
CCD-06670-4	18.42	24.49	30.57	36.84	43.10	49.18	12

CONDENSER CAPACITY

TABLE 1

MODEL	Capacity in KW ITD (DEG C) 3	4	5	6	7	8	WATER FLOWRATE m^3/hr
CCD06830-2	9.16	12.19	15.21	18.33	21.44	24.46	24
CCD08830-4	14.24	18.94	23.64	28.48	33.32	38.02	16
CCD08830-2	15.29	20.34	25.38	30.58	35.78	40.82	32
CCD10830-6	17.72	23.57	29.42	35.44	41.46	47.31	12
CCD10830-4	20.01	26.61	33.22	40.02	46.82	53.43	23
CCD10830-2	21.44	28.52	35.59	42.88	50.17	57.24	46
CCD12830-6	29.76	39.58	49.4	59.52	69.64	79.46	19
CCD12830-4	34.14	45.41	56.67	68.28	79.89	91.15	38
CCD12830-2	36.67	48.77	60.87	73.34	85.81	97.91	76
CCD14830-6	37.3	49.61	61.92	74.6	87.28	99.59	24
CCD14830-4	42.74	56.84	70.95	85.48	100.01	114.12	48
CCD14830-2	45.87	61.01	76.14	91.74	107.34	122.47	96
CCD16830-6	55.65	74.01	92.38	111.3	130.22	148.59	44
CCD16830-4	59.69	79.39	99.09	119.38	139.67	159.37	66
CCD16830-2	64.14	85.31	106.47	128.28	150.09	171.25	132
CCD18830-6	66.41	88.33	110.24	132.82	155.4	177.31	53
CCD18830-4	71.11	94.58	118.04	142.22	166.4	189.86	79
CCD18830-2	76.39	101.6	126.81	152.78	178.75	203.96	158
CCD20830-6	76.91	102.29	127.67	153.82	179.97	205.35	61
CCD20830-4	82.41	109.61	136.8	164.82	192.84	220.03	91
CCD20830-2	88.56	117.78	147.01	177.12	207.23	236.46	182

APPLICABLE FOR THE FOLLOWING REFRIGERATOR:

- **R22**
- **R134A**
- **R404A**
- **R407C**

CONDENSER CAPACITY

TABLE 2

MODEL	Capacity in KW ITD (DEG C) 3	4	5	6	7	8	WATER FLOWRATE m^3/hr
CCD06110-2	11.98	15.94	19.90	23.97	28.05	32.01	24
CCD08110-4	18.18	24.18	30.18	36.36	42.54	48.54	16
CCD08110-2	19.96	26.55	33.13	39.92	46.71	53.29	32
CCD10110-6	21.81	29.01	36.2	43.62	51.04	58.23	12
CCD10110-4	25.58	34.02	42.46	51.16	59.86	68.3	23
CCD10110-2	28.01	37.25	46.5	56.02	65.54	74.79	46
CCD12110-6	36.40	48.41	60.42	72.80	85.18	97.19	19
CCD12110-4	43.52	57.88	72.24	87.04	101.84	116.2	38
CCD12110-2	47.82	63.6	79.38	95.64	111.9	127.68	76
CCD14110-6	45.64	60.70	75.76	91.28	106.8	121.86	24
CCD14110-4	54.51	72.5	90.49	109.02	127.55	145.54	48
CCD14110-2	59.82	79.56	99.3	119.64	139.98	159.72	96
CCD16110-6	69.42	92.33	115.24	138.84	162.44	185.35	44
CCD16110-4	76.14	101.27	126.39	152.28	178.17	203.29	66
CCD16110-2	83.72	111.35	138.98	167.44	195.9	223.53	132
CCD18110-6	82.92	110.28	137.65	165.84	194.03	221.40	53
CCD18110-4	90.71	120.64	150.58	181.42	212.26	242.20	79
CCD18110-2	99.70	132.6	165.50	199.4	233.3	266.20	158
CCD20110-6	96.01	127.69	159.38	192.02	224.66	256.35	61
CCD20110-4	104.92	139.54	174.17	209.84	245.51	280.14	91
CCD20110-2	115.52	153.64	191.76	231.04	270.32	308.44	182

APPLICABLE FOR THE FOLLOWING REFRIGERATOR:

- **R22**
- **R134A**
- **R404A**
- **R407C**

CONDENSER CAPACITY

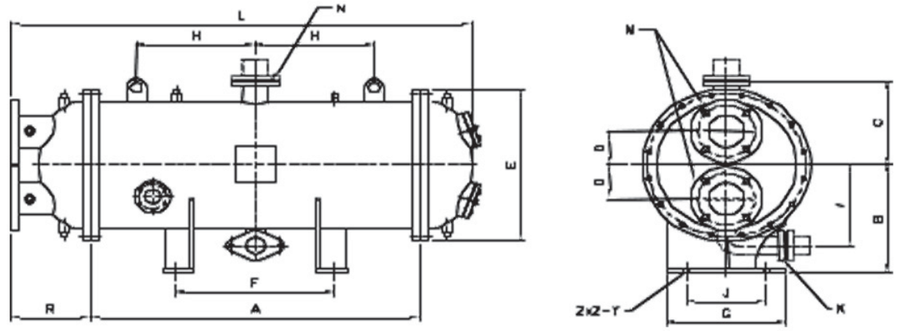
TABLE 3

Capacity in KW							
	ITD (DEG C)						WATER FLOWRATE m^3/hr
MODEL	3	4	5	6	7	8	
CCD06670-2	17.21	22.89	28.58	34.43	40.28	45.97	24
CCD08670-4	24.92	33.14	41.37	49.84	58.31	66.54	16
CCD08670-2	28.62	38.06	47.51	57.24	66.97	76.42	32
CCD10670-6	27.98	37.21	46.45	55.96	65.47	74.71	12
CCD10670-4	35.21	46.83	58.45	70.42	82.39	94.01	23
CCD10670-2	40.24	53.52	66.80	80.48	94.16	107.44	46
CCD12670-6	46.34	61.63	76.92	92.68	108.44	123.73	19
CCD12670-4	52.00	69.16	86.32	104.00	121.68	138.84	38
CCD12670-2	68.61	91.25	113.89	137.22	160.55	183.19	76
CCD14670-6	58.22	77.43	96.65	116.44	136.23	155.45	24
CCD14670-4	74.58	99.19	123.8	149.16	174.52	199.13	48
CCD14670-2	85.91	114.26	142.61	171.82	201.03	229.38	96
CCD16670-6	91.52	121.72	151.92	183.04	214.16	244.36	44
CCD16670-4	104.32	138.75	173.17	208.64	244.11	278.53	66
CCD16670-2	119.92	159.49	199.07	239.84	280.61	320.19	132
CCD18670-6	109.44	145.56	181.67	218.88	256.09	292.2	53
CCD18670-4	124.44	165.51	206.57	248.88	291.19	332.25	79
CCD18670-2	142.94	190.11	237.28	285.88	334.48	381.65	158
CCD20670-6	126.54	168.3	210.06	253.08	296.1	337.86	61
CCD20670-4	143.99	191.51	239.02	287.98	336.94	384.45	91
CCD20670-2	165.62	220.27	274.93	331.24	387.55	442.21	182

APPLICABLE FOR THE FOLLOWING REFRIGERATOR:

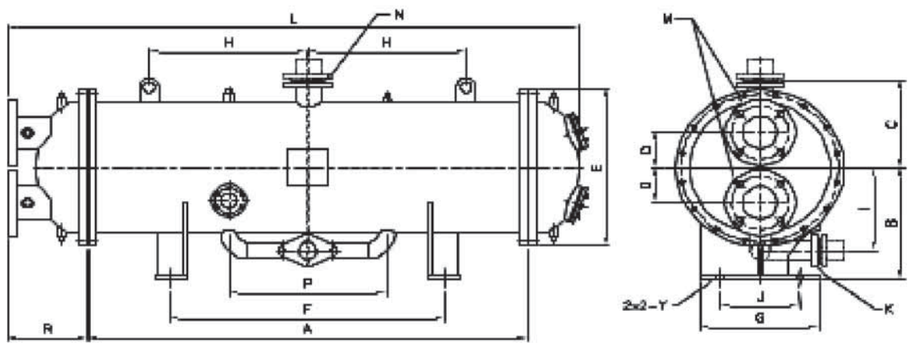
- **R22**
- **R134A**
- **R404A**
- **R407C**

MODEL: CCD 06830 ~ CCD 20830



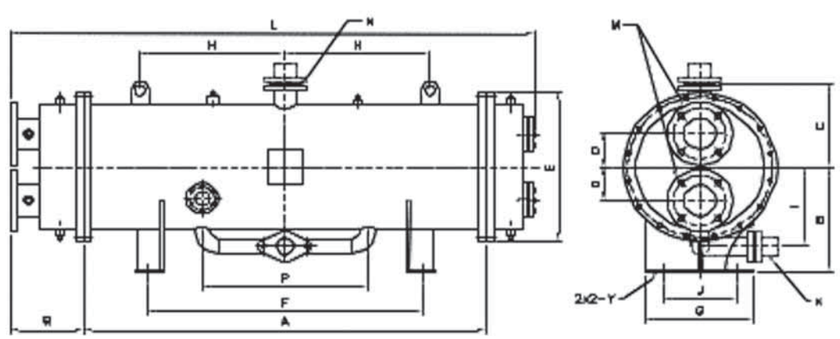
MODEL	DIMENSION (ALL IN mm)															
	A	B	C	D	E	F	G	H	I	J	K (I.D)	L	M(JIS,5K)	N(I.D)	R	Y
CCD06830-2	830	180	150	40	230	400	120	300	120	80	7/8"	1044	NB 25	1 1/8"	140	Φ14
CCD08830-4	830	200	180	65	280	400	150	300	150	100	7/8"	1084	NB 32	1 1/8"	160	Φ14
CCD08830-2	830	200	180	65	280	400	150	300	150	100	7/8"	1084	NB 32	1 1/8"	160	Φ14
CCD10830-4	830	250	200	80	340	400	200	300	200	120	1 3/8"	1104	NB 50	2 1/8"	170	Φ14
CCD10830-2	830	250	200	80	340	400	200	300	200	120	1 3/8"	1104	NB 50	2 1/8"	170	Φ14
CCD12830-6	830	280	235	95	395	400	300	300	210	200	1 3/8"	1164	NB 65	2 1/8"	200	Φ18
CCD12830-4	830	280	235	95	395	400	300	300	210	200	1 3/8"	1164	NB 65	2 1/8"	200	Φ18
CCD12830-2	830	280	235	95	395	400	300	300	210	200	1 3/8"	1164	NB 65	2 1/8"	200	Φ18
CCD14830-6	830	300	235	95	425	400	300	300	225	200	1 3/8"	1164	NB 80	2 1/8"	200	Φ18
CCD14830-4	830	300	235	95	425	400	300	300	225	200	1 3/8"	1164	NB 80	2 1/8"	200	Φ18
CCD14830-2	830	300	235	95	425	400	300	300	225	200	1 3/8"	1164	NB 80	2 1/8"	200	Φ18
CCD16830-6	830	320	245	130	485	400	360	300	250	200	2 1/8"	1224	NB 80	3 1/8"	245	Φ23
CCD16830-4	830	320	245	130	485	400	360	300	250	200	2 1/8"	1224	NB 80	3 1/8"	245	Φ23
CCD16830-2	830	320	245	130	485	400	360	300	250	200	2 1/8"	1224	NB 80	3 1/8"	245	Φ23
CCD18830-6	830	320	280	140	540	400	420	300	270	200	2 1/8"	1224	NB 100	3 1/8"	245	Φ23
CCD18830-4	830	320	280	140	540	400	420	300	270	200	2 1/8"	1224	NB 100	3 1/8"	245	Φ23
CCD18830-2	830	320	280	140	540	400	420	300	270	200	2 1/8"	1224	NB 100	3 1/8"	245	Φ23
CCD20830-6	830	350	320	170	590	400	420	300	300	200	2 1/8"	1224	NB 100	3 1/8"	245	Φ23
CCD20830-4	830	350	320	170	590	400	420	300	300	200	2 1/8"	1224	NB 100	3 1/8"	245	Φ23
CCD20830-2	830	350	320	170	590	400	420	300	300	200	2 1/8"	1224	NB 100	3 1/8"	245	Φ23

MODEL: CCD 06110 ~ CCD 14670



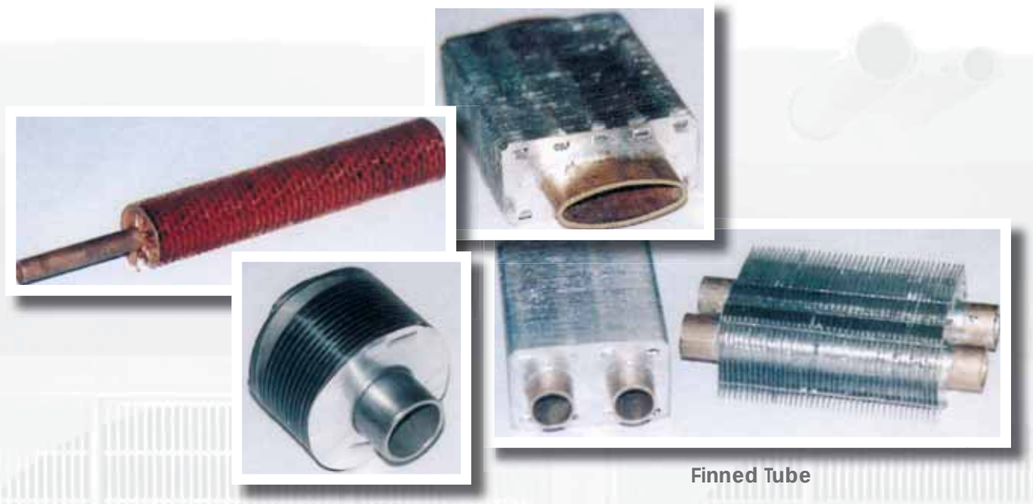
MODEL	DIMENSION (ALL IN mm)																
	A	B	C	D	E	F	G	H	I	J	K (I.D)	L	M(JIS,5K)	N(I.D)	P	R	Y
CCD06110-2	1110	180	150	40	230	700	120	400	120	80	7/8"	1324	NB 25	1 1/8"	400	140	Φ14
CCD08110-4	1110	200	180	65	280	700	150	400	150	100	7/8"	1364	NB 32	1 1/8"	400	160	Φ14
CCD08110-2	1110	200	180	65	280	700	150	400	150	100	7/8"	1364	NB 32	1 1/8"	400	160	Φ14
CCD10110-4	1110	250	200	80	340	700	200	400	200	120	1 3/8"	1384	NB 50	2 1/8"	400	170	Φ14
CCD10110-2	1110	250	200	80	340	700	200	400	200	120	1 3/8"	1384	NB 50	2 1/8"	400	170	Φ14
CCD12110-6	1110	280	235	95	395	700	300	400	210	200	1 3/8"	1444	NB 65	2 1/8"	400	200	Φ18
CCD12110-4	1110	280	235	95	395	700	300	400	210	200	1 3/8"	1444	NB 65	2 1/8"	400	200	Φ18
CCD12110-2	1110	280	235	95	395	700	300	400	210	200	1 3/8"	1444	NB 65	2 1/8"	400	200	Φ18
CCD14110-6	1110	300	235	95	425	700	300	400	225	200	1 3/8"	1444	NB 80	2 1/8"	400	200	Φ18
CCD14110-4	1110	300	235	95	425	700	300	400	225	200	1 3/8"	1444	NB 80	2 1/8"	400	200	Φ18
CCD14110-2	1110	300	235	95	425	700	300	400	225	200	1 3/8"	1444	NB 80	2 1/8"	400	200	Φ18
CCD06670-2	1670	180	150	40	230	1100	120	600	120	80	7/8"	1884	NB 25	1 1/8"	800	140	Φ14
CCD08670-4	1670	200	180	65	280	1100	150	600	150	100	7/8"	1924	NB 32	1 1/8"	800	160	Φ14
CCD08670-2	1670	200	180	65	280	1100	150	600	150	100	7/8"	1924	NB 32	1 1/8"	800	160	Φ14
CCD10670-4	1670	250	200	80	340	1100	200	600	200	120	1 3/8"	1944	NB 50	2 1/8"	800	170	Φ14
CCD10670-2	1670	250	200	80	340	1100	200	600	200	120	1 3/8"	1944	NB 50	2 1/8"	800	170	Φ14
CCD12670-6	1670	280	235	95	395	1100	300	600	210	200	1 3/8"	2004	NB 65	2 1/8"	800	200	Φ18
CCD12670-4	1670	280	235	95	395	1100	300	600	210	200	1 3/8"	2004	NB 65	2 1/8"	800	200	Φ18
CCD12670-2	1670	280	235	95	395	1100	300	600	210	200	1 3/8"	2004	NB 65	2 1/8"	800	200	Φ18
CCD14670-6	1670	300	235	95	425	1100	300	600	225	200	1 3/8"	2004	NB 80	2 1/8"	800	200	Φ18
CCD14670-4	1670	300	235	95	425	1100	300	600	225	200	1 3/8"	2004	NB 80	2 1/8"	800	200	Φ18
CCD14670-2	1670	300	235	95	425	1100	300	600	225	200	1 3/8"	2004	NB 80	2 1/8"	800	200	Φ18

MODEL: CCD 16110 ~ CCD 20670



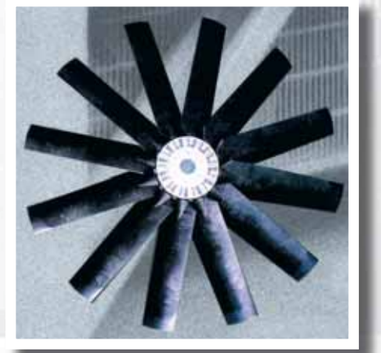
MODEL	DIMENSION (ALL IN mm)																
	A	B	C	D	E	F	G	H	I	J	K (I.D)	L	M(JIS,5K)	N(I.D)	P	R	Y
CCD16110-6	1110	320	245	130	485	700	360	400	250	200	2 1/8"	1504	NB 80	3 1/8"	400	245	Φ23
CCD16110-4	1110	320	245	130	485	700	360	400	250	200	2 1/8"	1504	NB 80	3 1/8"	400	245	Φ23
CCD16110-2	1110	320	245	130	485	700	360	400	250	200	2 1/8"	1504	NB 80	3 1/8"	400	245	Φ23
CCD18110-6	1110	320	280	140	540	700	420	400	270	200	2 1/8"	1504	NB 100	3 1/8"	400	245	Φ23
CCD18110-4	1110	320	280	140	540	700	420	400	270	200	2 1/8"	1504	NB 100	3 1/8"	400	245	Φ23
CCD18110-2	1110	320	280	140	540	700	420	400	270	200	2 1/8"	1504	NB 100	3 1/8"	400	245	Φ23
CCD20110-6	1110	350	320	170	590	700	420	400	300	200	2 1/8"	1504	NB 100	3 1/8"	400	245	Φ23
CCD20110-4	1110	350	320	170	590	700	420	400	300	200	2 1/8"	1504	NB 100	3 1/8"	400	245	Φ23
CCD20110-2	1110	350	320	170	590	700	420	400	300	200	2 1/8"	1504	NB 100	3 1/8"	400	245	Φ23
CCD16670-6	1670	320	245	130	485	1100	360	600	250	200	2 1/8"	2064	NB 80	3 1/8"	800	245	Φ23
CCD16670-4	1670	320	245	130	485	1100	360	600	250	200	2 1/8"	2064	NB 80	3 1/8"	800	245	Φ23
CCD16670-2	1670	320	245	130	485	1100	360	600	250	200	2 1/8"	2064	NB 80	3 1/8"	800	245	Φ23
CCD18670-6	1670	320	280	140	540	1100	420	600	270	200	2 1/8"	2064	NB 100	3 1/8"	800	245	Φ23
CCD18670-4	1670	320	280	140	540	1100	420	600	270	200	2 1/8"	2064	NB 100	3 1/8"	800	245	Φ23
CCD18670-2	1670	320	280	140	540	1100	420	600	270	200	2 1/8"	2064	NB 100	3 1/8"	800	245	Φ23
CCD20670-6	1670	350	320	170	590	1100	420	600	300	200	2 1/8"	2064	NB 100	3 1/8"	800	245	Φ23
CCD20670-4	1670	350	320	170	590	1100	420	600	300	200	2 1/8"	2064	NB 100	3 1/8"	800	245	Φ23
CCD20670-2	1670	350	320	170	590	1100	420	600	300	200	2 1/8"	2064	NB 100	3 1/8"	800	245	Φ23

OTHER CHEVON PRODUCTS

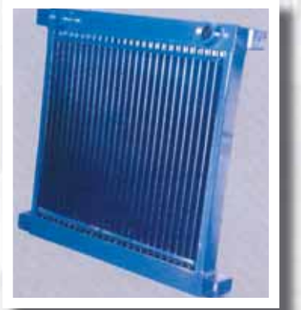


Finned Tube

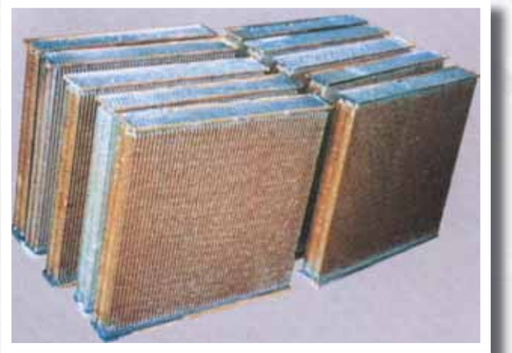
Cement Truck Cooler



Blower Fan



Oil Cooler for Trucks



Radiator Cores

OTHER CHEVON PRODUCTS

Radiator Water Hose (120˚C, 150PSI)

Charged Air Hose
with hump (with ring and without ring)

Hose Fitting (Assorted Shapes and Sizes)

Vent Hose for
engine air vent

Stainless Steel
Power Clamp
for hoses

OTHER CHEVON PRODUCTS

Air Cooler
Type Cooler

Intermediate
Cooler for
Engine 12V180ZJC

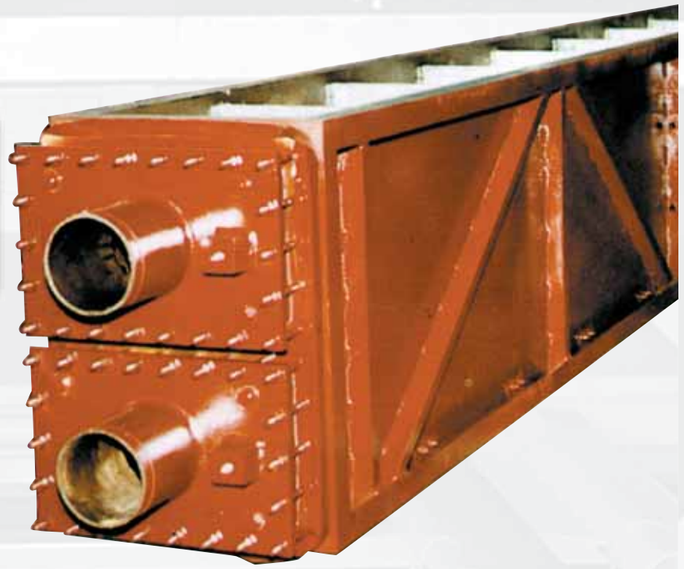
After Cooler

KL, KLZ Series Air Cooler

Oil Cooler for
Steyr Diesel Engine

Intermediate Cooler for
Engine 16V240ZJD

Oil Cooler



SOME OF CHEVON'S MACHINE FACILITIES

Turret Punching Machine

Finning Machine

Computerised Bending Machine

Tube Mill

Leakage Test

Paint Drying Oven

Wind Tunnel Test on Cooling Performance

REQUEST FOR QUOTATION

To : Chevon International (S) Pte Ltd
Attn : K. C. Lee

Fax : (65) 68611443
Email : sales@chevon.com.sg

From : _____
Company name : _____
Company address : _____

Tel : _____
Fax : _____
Email : _____

Request for quotation

Please quote us the following :

- ☐ Set mounted radiator
- ☐ Set mounted radiator with fan & pulley
- ☐ Vertical remote mounted radiator with motor & fan
- ☐ Horizontal remote mounted radiator with motor & fan
- ☐ Plate heat exchanger
- ☐ Shell and tube heat exchanger
- ☐ Charged air cooler (air cooled)
- ☐ Charged air cooler (water cooled)
- ☐ Condenser (air cooled)
- ☐ Condenser (water cooled)
- ☐ DX coil (expansion coil)
- ☐ Oil cooler (air cooled)
- ☐ Blower fans (axial)
- ☐ Finned / bare tubes
- ☐ Copper / aluminum strips
- ☐ Zinc Anode
- ☐ Radiator filler caps
- ☐ Radiator cores
- ☐ Tube bundles
- ☐ Others (please specify) _____

Cooling specification

Hot side

Medium	
Heat rejection (KW)	
Inlet temperature (deg C)	
Outlet temperature (deg C)	
Flowrate (m^3/min)	
Pressure drop limit (kPa)	
Operating pressure (kPa)	

Cold side

Medium	
Heat rejection (KW)	
Inlet temperature (deg C)	
Outlet temperature (deg C)	
Flowrate (m^3/min)	
Pressure drop limit (kPa)	
Operating pressure (kPa)	

Use on
Machine name and model _____
Machine maximum rating _____

Mode of shipment
- ☐ Land transport (CNF)
- ☐ Via sea freight (CNF)
- ☐ Via air freight (CNF)
- ☐ Ex-fty (own arrangement)

Sketch (if applicable)

Required scope of supply (please specify)

Required delivery (please specify)

Any other specification :

Signature and company stamp

Name :
Date :

WARRANTY REMEDIES

If within a period of one year upon first usage or eighteen months upon delivery, whichever occurs first, Buyer discovers defective workmanship or failure in the items supplied by Chevon, then Chevon shall promptly work out plan to repair or replace, at its option and as it deems necessary, without cost to Buyer, the items or materials in question and re-perform any defective work, and Buyer will provide at no cost to Chevon, all necessary equipments as required for such work.

The warranty shall only apply to defects that appear under normal operation and proper use, and provided that the Buyer has fully complied with Chevon's Installation, Operation and Maintainance Manual relating to installation, operation and maintenance of the Products.

Please refer to our website at ***www.chevon.com.sg*** for the detailed Terms and Conditions of our Warranty.

CHEVON INTERNATIONAL (S) PTE LTD
No. 30 Tuas Avenue 4, Singapore 639380
Tel: *(65) 6861 1812* Fax: *(65) 6861 1443*
Email: ***sales@chevon.com.sg***
Website: ***www.chevon.com.sg***