

SHELL & TUBE WATER COOLED CONDENSER



BRAND 3Q

SHELL & TUBE WATER COOLED CONDENSER

VCC 012 - 1 - 08-C

MATERIAL TUBE C = COPPER
 N30 = COPPER NICKEL (N30 = COPPER 70% / NICKEL 30%)
 S = STAINLESS 304
 T = STAINLESS 316

SIZE SHELL....INCH (SHELL 8 INCH)

NUMBER OF CIRCUIT 1 = 1 CIRCUIT , 2 = 2 CIRCUIT , 3 = 3 CIRCUIT

NOMINAL COMPRESSOR HORSE POWER (12 HP) AT : TC 42 °C , WATER IN 30 °C / OUT 35 °C

REFRIGERANT	NOMINAL HEAT CAPACITY (BTU/hr)		
R22	12 x 1 x 8,333.4	= 100,000	
R134A	12 x 0.95 x 8,333.4	= 95,000	
R404	12 x 0.91 x 8,333.4	= 91,000	
R407	12 x 0.98 x 8,333.4	= 98,000	
R507	12 x 0.93 x 8,333.4	= 93,000	

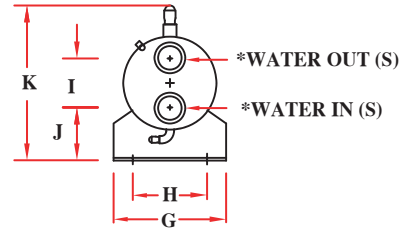
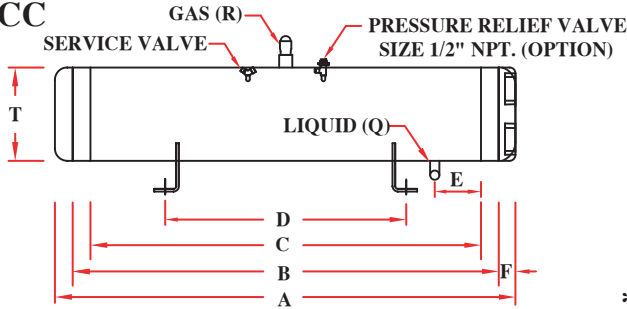
REMARK : EXCLUDE HEAT REJECT 125%

AT FOULING FACTOR :

0.0005 ft.hr ^o F/BTU (DISTILLED WATER)	114 %
0.00075 ft.hr ^o F/BTU (FRESH WATER)	103 %
0.00085 ft.hr ^o F/BTU (COOLING TOWER)	100 %
0.001 ft.hr ^o F/BTU (CLEAN RIVER WATER)	94 %
0.0015 ft.hr ^o F/BTU (RIVER WATER)	82 %

VCC = NORMAL TYPE , FVCC = MODIFIED TYPE

MODEL VCC

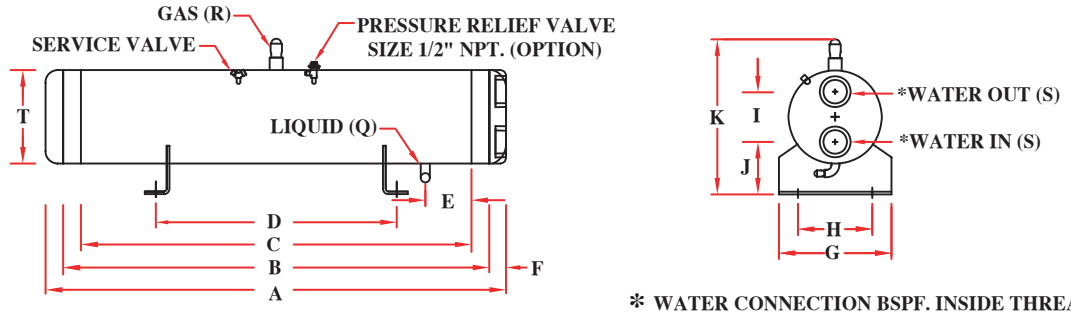


* WATER CONNECTION BSPF. INSIDE THREAD

WATER COOLED CONDENSER SHELL 4" - 8" (1 CIRCUIT)

MODEL	DIMENSION (millimetre)											DIMENSION (inch)				NO OF PASSES	APPROX WEIGHT (kg)	HEAT TRANSFER AREA (ft ²)	
	A	B	C	D	E	F	G	H	I	J	K	Q	R	S	T				
VCC 1.8-1-04	510	450	392	ADJUST SUPPORT	40	30	182	122	68	89	230	1/2"	5/8"	1"	4 1/2"	4	13.9	20.9	
VCC 2.2-1-04	590	530	472														16.0	24.9	
VCC 2.8-1-04	710	650	592														19.3	31.4	
VCC 3.5-1-04	850	790	732														23.1	39.0	
VCC 2.5-1-05	450	390	332	ADJUST SUPPORT	40	30	209	149	82	106	274	1/2"	3/4"	1"	5 1/2"	4	18.0	27.2	
VCC 3.5-1-05	590	530	472														23.6	39.1	
VCC 005-1-05	790	730	672														31.6	56.1	
VCC 006-1-05	910	850	792														36.4	66.3	
VCC 3.0-1-06	414	350	292	ADJUST SUPPORT	14	32	236	176	96	112	302	3/4"	7/8"	1 1/2"	6 1/2"	4	22.6	31.4	
VCC 3.5-1-06	484	420	362														26.5	37.9	
VCC 4.5-1-06	594	530	472														32.5	49.8	
VCC 005-1-06	654	590	532														35.8	56.3	
VCC 006-1-06	754	690	632	ADJUST SUPPORT	56	51	287	227	90	158	375	7/8"	1 1/8"	2"	8 1/2"	4	41.2	67.1	
VCC 7.5-1-06	914	850	792														50.0	84.4	
VCC 010-1-06	1154	1090	1032														740	63.1	99.6
VCC 012-1-06	1384	1320	1262														841	75.7	121.3
VCC 7.5-1-08	631	530	472	ADJUST SUPPORT	56	51	287	227	90	158	375	7/8"	1 1/8"	2"	8 1/2"	4	49.7	85.4	
VCC 010-1-08	731	630	572														57.6	107.7	
VCC 012-1-08	891	790	732														70.2	133.7	
VCC 015-1-08	1091	990	932														640	86.0	170.8
VCC 020-1-08	1291	1190	1132	ADJUST SUPPORT	56	51	310	236	90	157	374	7/8"	1 1/8"	2"	8 1/2"	2	101.8	208.0	
VCC 025-1-08	1591	1490	1432														125.4	263.7	
VCC 030-1-08	1941	1840	1782														1473	153.0	325.6

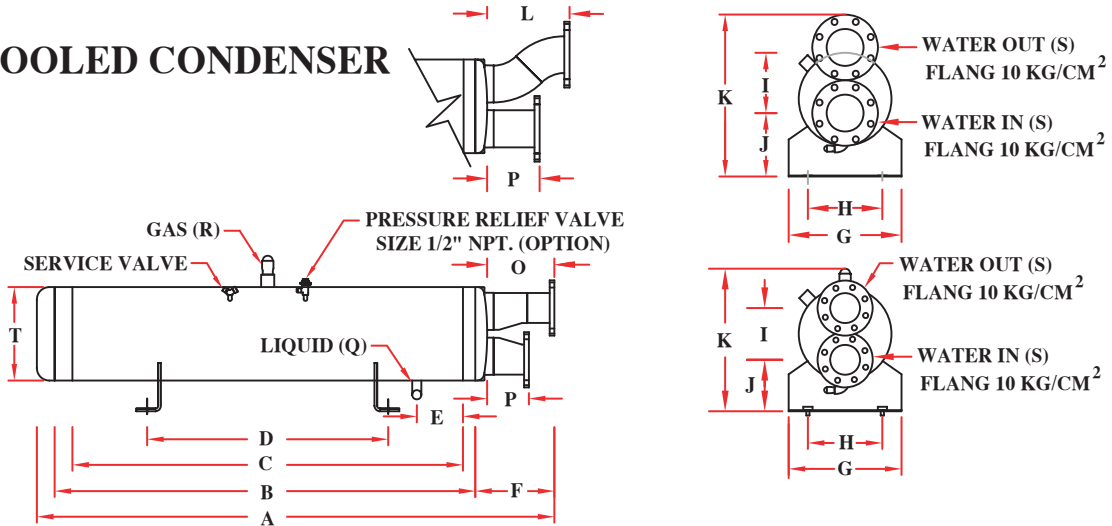
WATER COOLED CONDENSER



MODEL VCC , SHELL 10" - 12" (1 CIRCUIT)

MODEL	DIMENSION (millimetre)											DIMENSION (inch)				NO OF PASSES	APPROX WEIGHT (kg)	HAIREDTUBE HEAT TRANSFER (ft ²)
	A	B	C	D	E	F	G	H	I	J	K	Q	R	S	T			
VCC 010-1-10	540	450	392	290	40							7/8"	1 1/8"			4	62.8	110.2
VCC 012-1-10	620	530	472	290													72.1	133.4
VCC 015-1-10	740	650	592	460													86.0	168.3
VCC 020-1-10	940	850	792	460													109.2	226.3
VCC 025-1-10	1080	990	932	640	56	45	360	286	128	170	449	1 1/8"	1 5/8"	2 1/2"	10 1/2"	2	125.5	266.9
VCC 030-1-10	1280	1190	1132	640													148.8	325.0
VCC 035-1-10	1410	1320	1262	1016													163.9	362.7
VCC 040-1-10	1580	1490	1432	1016													183.6	412.0
VCC 025-1-12	815	690	628	400	56	70	360	286	164	185	512	1 1/8"	2 1/8"	3"	12 1/2"	2	116.1	268.6
VCC 030-1-12	955	830	768	490													128.4	329.3
VCC 040-1-12	1215	1090	1028	740													151.2	441.9
VCC 050-1-12	1425	1300	1238	1016													169.6	532.9
VCC 060-1-12	1615	1490	1428	1016													186.3	615.3

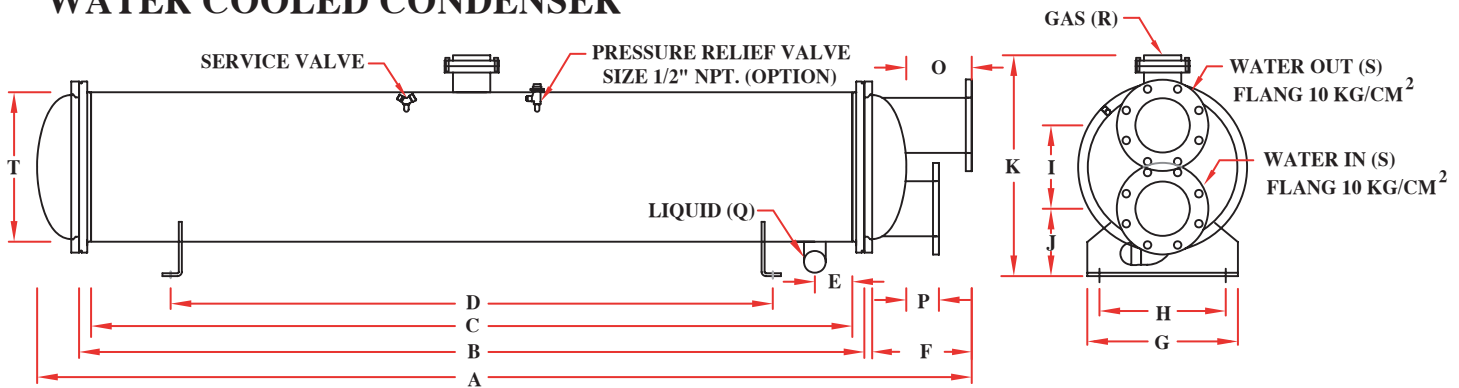
WATER COOLED CONDENSER



MODEL VCC , SHELL 12" - 32" (1 CIRCUIT)

MODEL	DIMENSION (millimetre)													DIMENSION (inch)				NO OF PASSES	APPROX WEIGHT (kg)	HAIREDTUBE HEAT TRANSFER (ft ²)	
	A	B	C	D	E	F	G	H	I	J	K	L	O	P	Q	R	S				T
VCC 070-1-12	2108	1750	1688	1016	56										1 5/8"	2 1/8"	4"	12 1/2"	2	212.7	727.9
VCC 080-1-12	2348	1990	1928	1473												234.2				831.9	
VCC 090-1-12	2558	2200	2138	1473												253.0				922.9	
VCC 100-1-12	2848	2490	2428	1473												287.1				1104.8	
VCC 060-1-14	1536	1190	1128	640	56									1 5/8"	2 1/8"	4"	14"	2	229.4	650.0	
VCC 070-1-14	1736	1390	1328	711											254.2				766.1		
VCC 080-1-14	1936	1590	1528	1016											279.0				882.1		
VCC 090-1-14	2136	1790	1728	1016											303.7				998.2		
VCC 100-1-14	2336	1990	1928	1473											328.5				1114.3		
VCC 120-1-14	2737	2390	2328	1473											378.1				1346.4		
VCC 150-1-14	3394	2990	2928	2032	355				282	198	605	314	-	200	2 1/8"	3 1/8"	5"		452.4	1694.6	

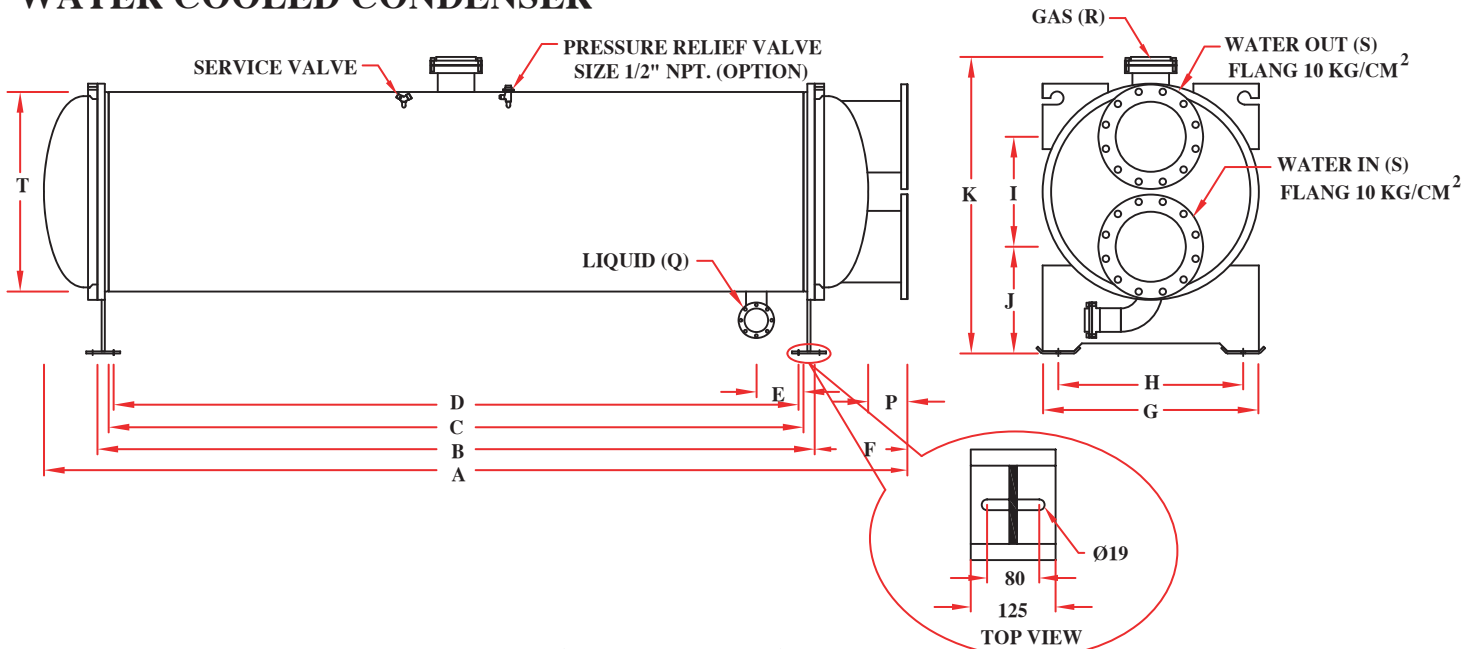
WATER COOLED CONDENSER



MODEL VCC , SHELL 16" - 20" (1 CITCUIT)

MODEL	DIMENSION (millimetre)													DIMENSION (inch)				NO OF PASSES	APPROX WEIGHT (kg)	HAIREDTUBE HEAT TRANSFER (ft ²)		
	A	B	C	D	E	F	G	H	I	J	K	O	P	Q	R	S	T					
VCC 075-1-16	1642	1190	1116	640		324										4"					271.9	823.3
VCC 095-1-16	1946	1490	1416	1016										1 5/8"	2 5/8"						361.2	1043.8
VCC 115-1-16	2236	1780	1706	1016																	359.0	1256.3
VCC 130-1-16	2446	1990	1916	1473	56	328	460	386	214	202	629	200	100			5"	16"				390.0	1411.4
VCC 150-1-16	2756	2300	2226	1473										2 1/8"	3 1/8"						435.8	1639.3
VCC 170-1-16	3056	2600	2526	1778																	480.1	1859.9
VCC 190-1-16	3514	2990	2916	1778		396			321	216	676					6"					537.7	2146.5
VCC 220-1-18	3056	2600	2526	2040	56	304	460	386	255	206	675	200	100	2 1/8"	4"	6"	18"				580.9	2388.4
VCC 255-1-18	3446	2990	2916	2440																	650.6	2756.6
VCC 255-1-20	3064	2600	2526	2040	56	332	460	386	277	219	724	200	100	2 1/8"	4"	6"	20"				781.0	2780.0
VCC 295-1-20	3454	2990	2916	2463	60					235	774			2 5/8"	4"	8"					776.1	3208.5

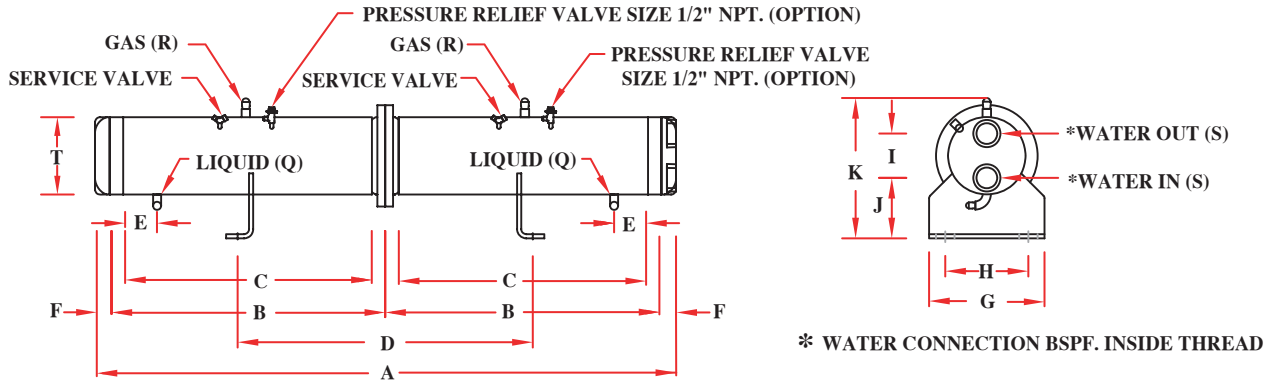
WATER COOLED CONDENSER



MODEL VCC , SHELL 24" - 30" (1 CITCUIT)

MODEL	DIMENSION (millimetre)													DIMENSION (inch)				NO OF PASSES	APPROX WEIGHT (kg)	HAIREDTUBE HEAT TRANSFER (ft ²)
	A	B	C	D	E	F	G	H	I	J	K	P	Q	R	S	T				
VCC 390-1-24	3026	2600	2526	2482	150	263	676	556	343	347	987	100	2 5/8"	4"	8"	24"	2	938.1	4287.4	
VCC 450-1-24	3416	2990	2916	2872														1095.6	4948.3	
VCC 400-1-26	2946	2490	2418	2374	150	278	724	604	394	370	1030	100	2 5/8"	4"	8"	26"	2	1197.0	4550.4	
VCC 550-1-26	3446	2990	2918	2874														1388.8	5490.6	
VCC 580-1-28	3022	2490	2418	2374	150	343	775	655	420	382	1081	150	2 5/8"	4"	8"	28"	2	1386.7	5730.1	
VCC 690-1-28	3522	2990	2918	2874														1608.9	6914.1	
VCC 660-1-30	3048	2490	2404	2366	180	354	826	706	420	408	1133	150	3 1/8"	5"	10"	30"	2	1539.4	6572.8	
VCC 720-1-30	3548	2990	2904	2866														1786.3	7930.8	

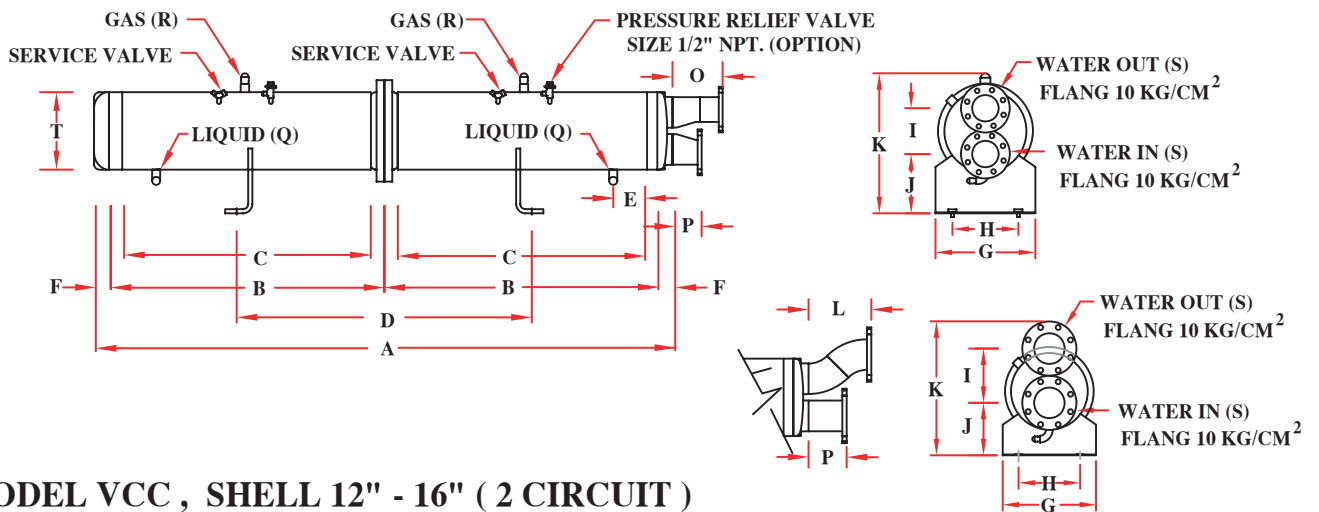
WATER COOLED CONDENSER



MODEL VCC , SHELL 6" - 10" (2 CIRCUIT)

MODEL	DIMENSION (millimetre)															DIMENSION (inch)				NO OF PASSES	APPROX WEIGHT (kg)	HEAT TRANSFER AREA (ft ²)														
	A	B	C	D	E	F	G	H	I	J	K	L	O	P	Q	R	S	T																		
VCC 007-2-06	904	420	362	510	56	32	250	180	96	131	321	-	-	-	3/4"	7/8"	1 1/4"	6 1/2"	4	63.6	83.4															
VCC 010-2-06	1244	590	532	811																76.8	120.2															
VCC 012-2-06	1444	690	632	1116																84.5	141.9															
VCC 015-2-06	1764	850	792	1136																96.9	176.6															
VCC 012-2-08	881	390	332	560	14	51	310	236	90	157	374	-	-	-	7/8"	1 1/8"	2"	8 1/2"	4	97.3	131.9															
VCC 015-2-08	1081	490	432	680																109.4	169.0															
VCC 020-2-08	1361	630	572	790																56	51	310	236	90	157	374	-	-	-	7/8"	1 1/8"	2"	8 1/2"	4	126.3	221.0
VCC 025-2-08	1681	790	732	1016																145.6	280.4															
VCC 030-2-08	2081	990	932	1473	56	45	360	286	128	170	428	-	-	-	1 1/8"	1 5/8"	2 1/2"	10 1/2"	2	169.7	354.7															
VCC 020-2-10	990	450	392	510																132.0	240.8															
VCC 025-2-10	1150	530	472	791																143.1	287.3															
VCC 030-2-10	1390	650	592	731																159.8	356.9															
VCC 040-2-10	1790	850	792	1136	2	45	360	286	128	170	428	-	-	-	1 1/8"	1 5/8"	2 1/2"	10 1/2"	2	187.6	473.0															
VCC 050-2-10	2070	990	932	1473																207.0	554.2															

WATER COOLED CONDENSER

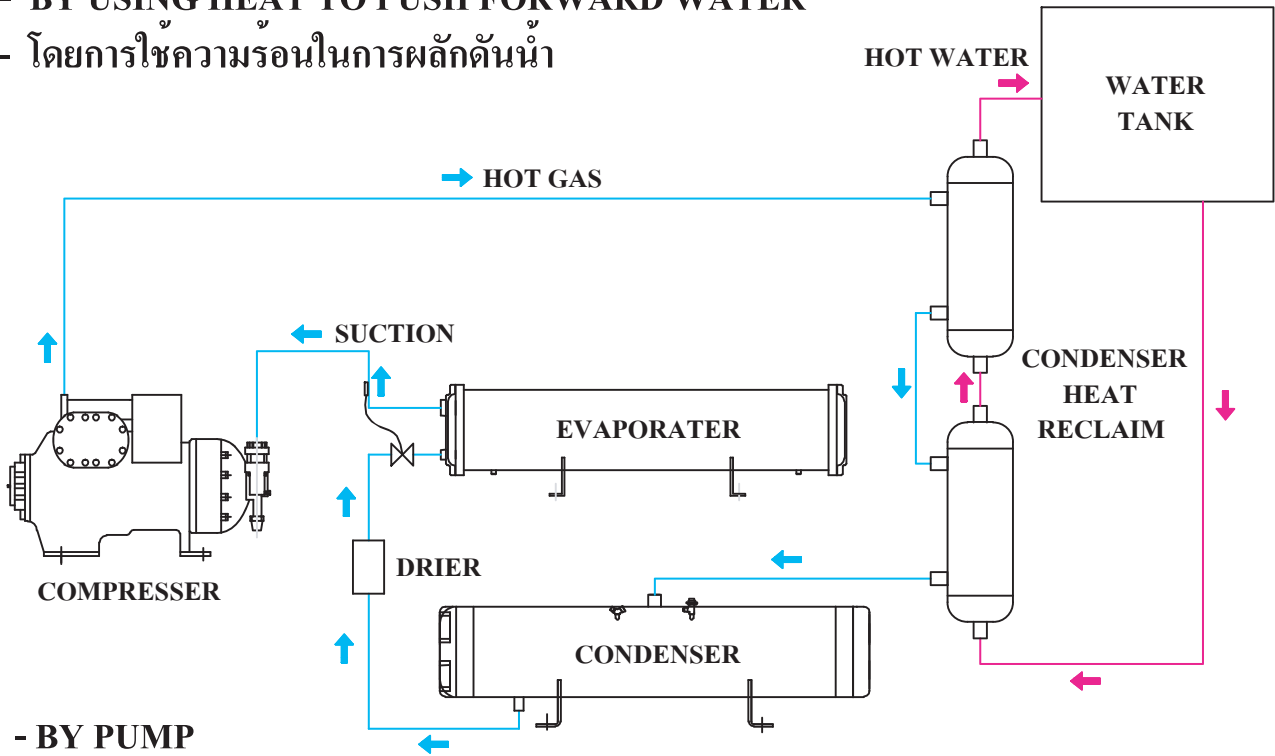


MODEL VCC , SHELL 12" - 16" (2 CIRCUIT)

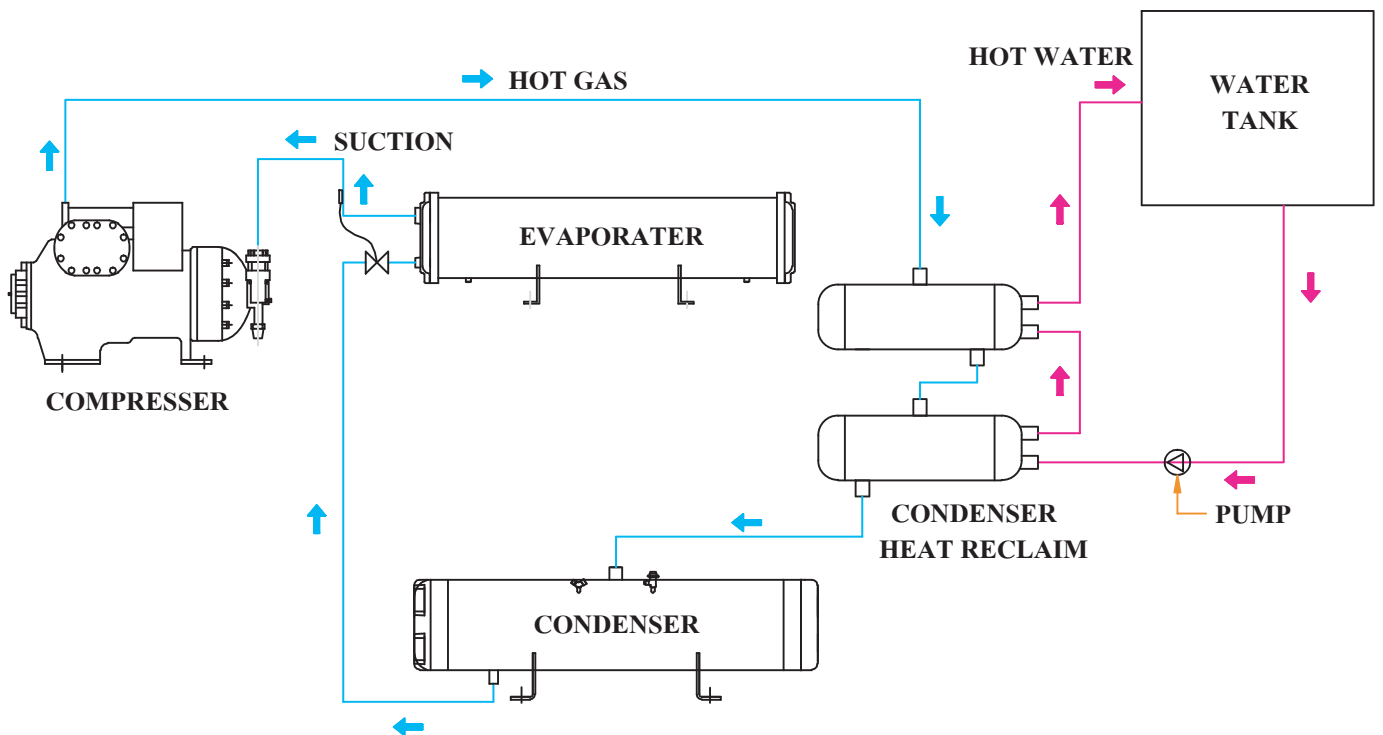
MODEL	DIMENSION (millimetre)															DIMENSION (inch)				NO OF PASSES	APPROX WEIGHT (kg)	HEAT TRANSFER AREA (ft ²)					
	A	B	C	D	E	F	G	H	I	J	K	L	O	P	Q	R	S	T									
VCC 050-2-12	1505	690	628	840	56	70	360	286	164	185	512	-	-	-	1 1/8"	2 1/8"	3"	12 1/2"	2	224.0	598.1						
VCC 060-2-12	1785	830	768	1016																250.1	725.9						
VCC 080-2-12	2538	1090	1028	1673																303	252	542	251	-	150	291.0	963.3
VCC 100-2-12	3038	1340	1278	2093																335.9	1191.6						
VCC 120-2-14	2784	1190	1128	1473	56	359	420	346	282	198	605	314	-	200	1 5/8"	2 5/8"	5"	14"	2	438.6	1340.6						
VCC 140-2-14	3184	1390	1328	1578																488.0	1572.7						
VCC 150-2-16	2836	1190	1116	1473																480.3	1823.2						
VCC 190-2-16	3437	1490	1417	1778																572.2	2296.8						

หลักการนำน้ำร้อนมาใช้ใหม่ (HEAT RECLAIM SYSTEM)

- BY USING HEAT TO PUSH FORWARD WATER
- โดยการใช้ความร้อนในการผลักดันน้ำ



- BY PUMP
- โดยการใช้ปั๊ม



SELECTION SIZE OF CONDENSOR WHICH IS USED A HEAT RECLAIMER CALCULATED AT 30% - 50% OF CONDENSOR AND CHANGES SIZE OF INLET AND OUTLET REFRIGERANT PIPES INTO EQUAL TO HOT GAS PIPE.

การเลือกขนาดของ CONDENSOR ที่นำมาใช้ HEAT RECLAIM คิด 30% - 50% ของ CAPACITY ของ CONDENSOR และเปลี่ยนท่อน้ำยาเข้าออก เท่าที่ HOT GAS