

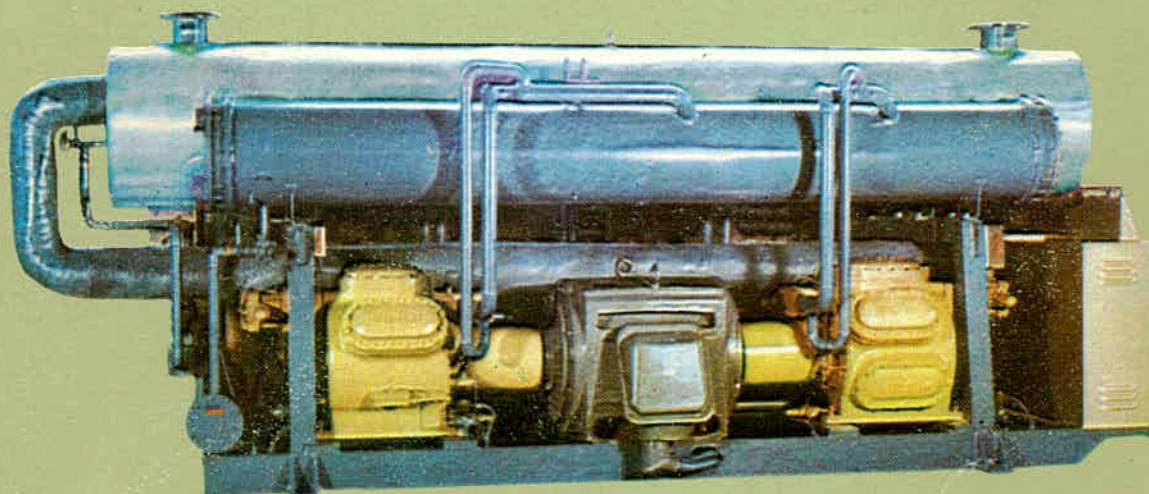
SARAVEL
 MANUFACTURING CO.
 TEHRAN



SARAVEL

PACKAGE LIQUID CHILLER FOR AIR CONDITIONING & INDUSTRIAL APPLICATIONS

152-377 TONS



Saravel packaged chiller is supplied completely assembled with all interconnecting piping completed, low temperature lines insulated, chiller insulated and controls factory wired.

Saravel packaged chiller Models 4 PLC 325 H to 4 PLC 328 H are equipped with four open type reciprocating compressor and are designed for two separate circuit. Complete with following components:

- 1 - Two double shaft 120 to 200 HP. electric motor star-delta. 380/50/3 1450 R.P.M.
- 2 - Four open type reciprocating compressors 60 to 100 HP.
- 3 - Two Condenser carbon steel pipe with integral fins copper tubes expanded into the tube sheet designed for 300 psig working pressure.

- 4 - Water chiller - direct expansion type copper tube with inner fins expanded into the tube sheet two separate circuit. Water baffles are properly spaced in the chiller to provide efficient heat transfer with low water pressure drop.
- 5 - Motor starters with thermal overload protection.
- 6 - Two Dual pressure controls.
- 7 - Four Oil Pressure controls.
- 8 - Thermostatic expansion valves with external equaliser.
- 9 - Two Liquid service shut-off valves.
- 10 - Two Liquid line solenoid valves with pump down circuits.
- 11 - Two Refrigerant charging valves.
- 12 - Two Liquid line replaceable type filter dryers.
- 13 - Two Liquid line double port sight-glasses with moisture indicator.
- 14 - Refrigerant relief valve for each condenser.
- 15 - Suction and discharge pressure gauges. Oil pressure gauges.
- 16 - Anti-freeze control.
- 17 - Four step master temperature control.

SARAVEL MANUFACTURING CO.

Villa ~~Damghan~~ No. 6 Teheran. Tel. ~~620171~~, 620172
 Cable: 1444

686255-685694
 FACTORY-88.583-5

R A T I N G S
REFRIGERANT 22, 1450 RPM, WATER COOLED OPERATION

LVG. WATER TEMP. °F	WATER TEMP. RANGE °F	CONDENSING TEMPERATURE															
		95°				105°				115°				125°			
		CAP.	BHP.	CHILLER		CAP.	BHP.	CHILLER		CAP.	BHP.	CHILLER		CAP.	BHP.	CHILLER	
				GPM	PD. FT.			GPM	PD. FT.			GPM	PD. FT.			GPM	PD. FT.

4 PLC 325

40°	6	188.4	197.2	756	22.8	178.0	214.4	798	21.7	166.4	228.4	664	21.0	152.4	237.6	608	19.1
	8	189.6	197.2	560	13.5	179.6	214.4	532	13.0	167.6	228.8	500	12.3	153.2	238.0	456	11.9
	10	190.4	197.6	448	9.7	180.0	214.8	436	9.2	168.4	228.8	404	9.1	153.6	238.4	368	8.5
	12	191.2	197.6	376	6.6	180.8	214.8	360	6.1	169.2	229.2	336	6.0	154.0	238.4	308	5.3
42°	6	196.0	198.4	776	24.9	186.4	216.0	744	25.0	174.8	231.6	700	24.2	159.2	242.4	640	22.1
	8	197.2	198.8	588	14.4	187.2	216.4	560	14.1	176.0	232.0	528	13.5	160.8	242.8	484	13.0
	10	198.0	198.8	472	11.0	188.0	216.4	448	10.3	176.8	232.4	424	10.2	161.6	243.2	388	9.9
	12	199.2	198.8	396	7.9	188.8	216.8	376	7.6	177.6	232.4	352	7.2	162.0	243.6	324	7.1
44°	6	204.4	199.6	816	27.0	194.0	218.0	776	26.3	182.8	234.0	728	25.6	167.2	246.0	668	25.2
	8	206.0	199.6	616	15.8	194.8	218.4	584	15.1	183.6	234.4	548	15.1	168.0	246.4	504	14.9
	10	206.8	199.6	492	12.0	195.6	218.4	468	11.3	184.4	234.8	440	11.2	168.8	246.8	404	10.5
	12	207.6	200.0	412	8.7	196.4	218.4	392	8.4	185.2	235.2	368	7.9	169.6	247.2	336	7.3
46°	6	212.8	200.8	856	30.8	201.6	220.0	812	30.0	190.8	236.4	768	29.5	174.8	250.0	700	29.0
	8	213.6	200.8	644	18.0	202.4	220.0	608	18.0	192.0	236.8	576	17.2	175.6	250.4	528	16.9
	10	214.8	201.2	516	13.5	203.2	220.4	488	13.2	192.8	237.2	460	12.9	176.4	250.8	424	12.3
	12	216.0	201.2	432	10.5	204.0	220.4	408	9.1	193.6	237.2	384	9.1	177.2	251.2	356	8.6
48°	6	221.6	201.6	888	34.2	210.4	220.8	848	33.0	198.4	239.2	800	31.3	182.8	254.0	728	30.0
	8	222.4	201.6	664	19.4	211.6	221.2	636	19.2	199.2	239.6	600	18.6	183.6	254.4	548	18.1
	10	223.2	202.0	532	14.5	212.0	221.2	508	14.3	200.4	240.0	480	14.1	184.0	254.8	440	13.4
	12	224.4	202.0	448	11.1	213.2	221.2	424	11.0	200.8	240.4	400	10.6	184.4	255.2	368	10.2
50°	6	230.0	202.4	920	36.9	219.6	222.0	872	35.2	206.0	242.4	828	34.0	190.0	258.0	764	33.7
	8	230.8	202.8	692	19.9	220.4	222.0	664	19.2	208.0	242.8	624	18.5	190.8	258.4	576	18.2
	10	231.6	202.8	556	15.1	221.2	222.4	528	15.0	208.8	242.8	500	14.0	191.6	258.8	460	14.1
	12	233.2	202.8	464	12.1	222.0	222.4	440	12.0	209.2	243.2	416	11.2	192.4	259.2	384	10.4

4 PLC 326

40°	6	224.0	237.2	900	22.6	213.2	256.4	852	21.8	200.0	272.8	800	20.5	181.2	286.0	728	19.2
	8	224.8	237.2	676	13.6	214.8	256.8	640	13.0	201.2	273.2	600	12.2	182.4	286.8	548	11.8
	10	226.8	237.6	544	9.8	215.6	256.8	512	9.2	202.4	273.6	484	9.0	183.2	287.2	440	8.4
	12	228.0	237.6	452	6.6	216.4	257.2	432	6.2	203.2	273.6	404	5.9	184.0	287.6	372	5.4
42°	6	234.8	238.8	936	25.0	223.6	259.2	892	24.6	210.0	276.8	844	24.0	192.0	291.2	768	22.2
	8	236.0	238.8	708	14.5	224.4	259.6	672	14.0	211.2	277.2	632	13.4	193.2	292.0	580	13.0
	10	236.8	238.8	568	10.9	225.2	259.6	536	10.2	212.4	277.6	508	10.0	194.4	292.4	464	9.8
	12	238.0	239.2	476	7.8	226.4	260.0	452	7.5	213.2	277.6	424	7.1	194.8	292.8	388	7.0
44°	6	245.2	240.0	980	27.0	233.2	261.6	936	26.2	220.0	280.4	880	25.5	200.4	295.6	800	25.0
	8	246.0	240.0	740	15.9	234.0	261.6	700	15.2	221.2	280.8	660	15.0	201.2	296.0	604	14.8
	10	247.2	240.0	592	11.9	234.4	262.0	560	11.2	222.4	281.2	532	11.0	202.4	296.8	488	10.4
	12	248.4	240.4	496	8.6	236.8	262.0	468	8.3	223.6	281.2	444	7.9	203.2	297.2	408	7.4
46°	6	256.4	241.2	1020	30.5	241.6	263.6	972	30.0	229.2	284.0	920	29.5	210.8	300.4	840	29.0
	8	257.6	241.2	768	18.1	242.8	264.0	732	18.0	230.4	284.4	688	17.2	211.6	301.2	632	16.8
	10	258.4	241.2	616	13.2	243.6	264.4	588	13.1	231.6	284.8	556	12.8	212.4	301.6	508	12.2
	12	259.6	241.6	516	9.9	245.2	264.4	492	9.2	232.4	285.2	464	9.0	213.2	302.0	424	8.5
48°	6	266.0	242.4	1064	34.0	254.4	265.2	1012	33.2	239.6	287.2	952	31.2	220.0	304.4	876	30.0
	8	267.2	242.8	800	19.5	255.6	265.6	760	19.0	240.4	287.6	720	18.5	221.2	305.2	660	18.0
	10	268.0	242.8	640	14.6	256.0	265.6	612	14.2	241.2	288.0	580	14.0	222.0	305.6	532	13.2
	12	268.8	243.2	536	11.2	256.4	266.0	512	11.0	242.4	288.4	480	10.5	222.8	306.0	444	10.0
50°	6	276.8	244.0	1104	36.9	261.6	268.0	1052	35.2	248.4	290.0	992	34.6	228.4	310.4	908	33.6
	8	278.0	244.4	824	19.9	262.4	268.0	788	19.1	249.6	290.4	752	18.7	229.2	310.8	688	18.0
	10	279.2	244.4	668	15.2	263.2	268.4	636	15.0	250.8	290.8	600	14.2	230.0	311.2	548	14.0
	12	280.0	244.8	556	12.2	264.4	268.8	532	11.9	251.6	290.8	500	11.0	230.8	311.6	460	10.3

R A T I N G S

REFRIGERANT 22, 1450 RPM, WATER COOLED OPERATION

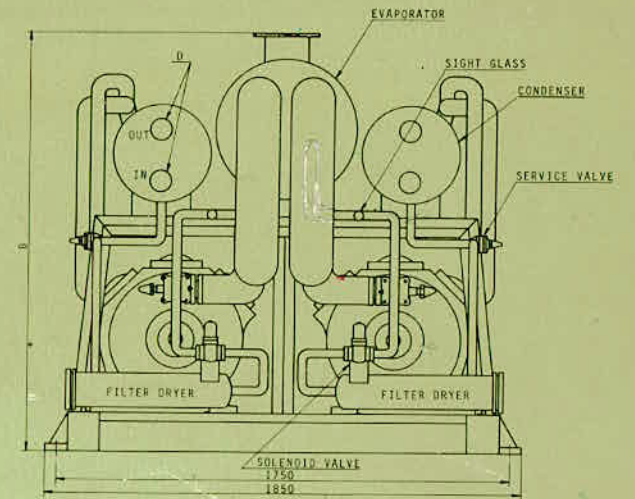
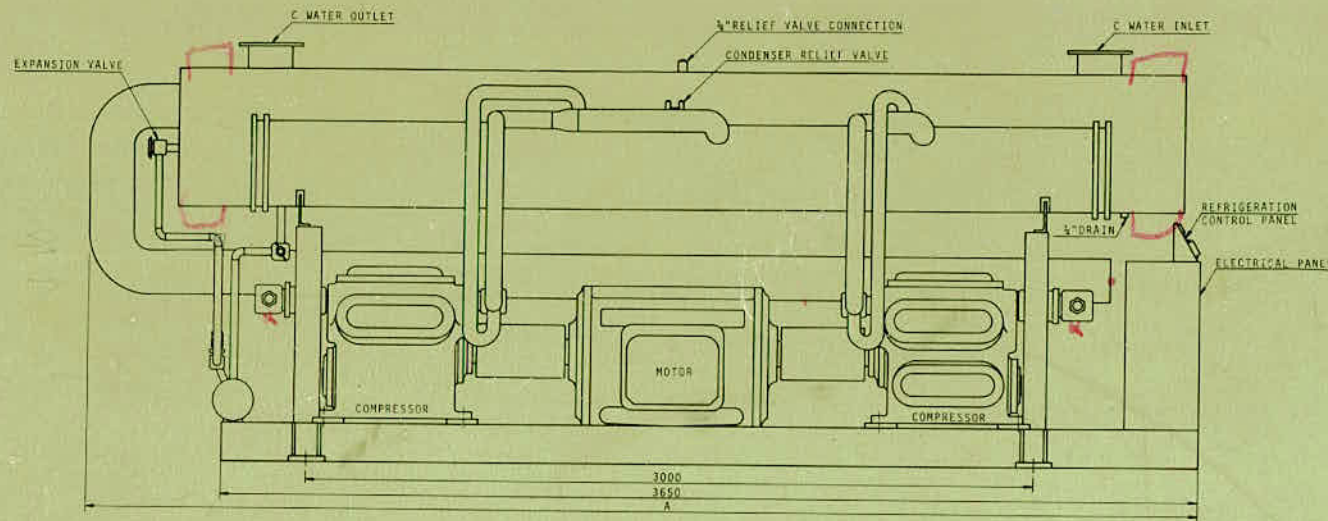
LVG. WATER TEMP. °F	WATER TEMP. RANGE °F	CONDENSING TEMPERATURE															
		95°				105°				115°				125°			
		CAP.	BHP.	CHILLER		CAP.	BHP.	CHILLER		CAP.	BHP.	CHILLER		CAP.	BHP.	CHILLER	
				GPM	PD.FT.			GPM	PD.FT.			GPM	PD.FT.			GPM	PD.FT.

4 PLC 327

40°	6	262.0	276.8	1048	22.6	248.8	300.0	992	21.8	233.6	320.0	936	20.5	213.2	332.8	852	19.2
	8	263.2	277.2	792	13.6	250.4	300.4	748	13.0	234.4	320.4	704	12.2	214.0	334.0	644	11.8
	10	264.4	277.2	636	9.8	251.2	300.4	600	9.2	235.2	320.8	564	9.0	215.2	334.4	516	8.4
	12	266.0	277.6	532	6.6	252.0	300.8	504	6.2	236.4	321.2	472	5.9	216.0	334.8	432	5.4
42°	6	273.6	278.4	1096	25.0	260.4	302.8	1044	24.6	244.4	324.0	980	24.0	223.6	339.6	892	22.2
	8	274.8	278.4	824	14.5	261.6	302.8	784	14.0	246.8	324.8	736	13.4	225.2	340.4	676	13.0
	10	276.0	278.8	660	10.9	262.4	303.2	628	10.2	248.0	325.2	596	10.0	226.0	340.8	540	9.8
	12	277.6	278.8	556	7.8	263.6	303.6	528	7.5	248.8	325.6	492	7.1	226.8	341.2	452	7.0
44°	6	286.0	280.0	1144	27.0	272.0	304.4	1088	26.2	256.8	328.0	1024	25.5	234.0	344.8	936	25.0
	8	287.2	280.0	860	15.9	273.2	304.8	820	15.2	258.0	328.4	772	15.0	235.2	345.2	704	14.8
	10	288.4	280.4	692	11.9	274.0	305.2	656	11.2	259.6	329.2	620	11.0	236.4	346.0	568	10.4
	12	290.4	280.4	576	8.6	275.6	305.2	548	8.3	260.4	329.2	516	7.9	237.2	346.4	472	7.4
46°	6	298.0	281.6	1192	30.5	283.6	307.2	1132	30.0	267.6	331.2	1068	29.5	244.8	350.8	980	29.0
	8	299.6	282.0	900	18.1	284.8	307.6	852	18.0	268.8	331.6	808	17.2	246.8	351.6	740	16.8
	10	301.2	282.0	720	13.2	285.6	308.0	684	13.1	270.0	332.0	644	12.8	247.2	352.0	592	12.2
	12	302.4	282.4	600	9.9	286.4	308.0	572	9.2	270.8	332.4	540	9.0	248.0	352.4	492	8.5
48°	6	310.8	282.8	1244	34.0	295.2	310.8	1180	33.2	279.2	335.6	1116	31.2	256.0	356.0	1020	30.0
	8	312.0	282.8	936	19.5	296.4	311.2	888	19.0	280.4	336.0	840	18.5	257.6	356.8	768	18.0
	10	313.2	283.2	752	14.6	297.2	311.2	712	14.2	281.2	336.0	672	14.0	258.8	357.2	616	13.2
	12	314.4	283.2	628	11.2	298.4	311.6	596	11.0	282.0	336.0	560	10.5	259.6	357.6	516	10.0
50°	6	320.0	284.4	1280	36.9	307.2	312.8	1228	35.2	290.0	340.0	1160	34.6	267.2	361.2	1068	33.6
	8	321.2	284.8	960	19.9	308.0	313.2	928	19.1	291.2	340.4	872	18.7	268.4	361.6	800	18.0
	10	322.8	284.8	776	15.2	308.8	313.2	740	15.0	292.4	340.8	700	14.2	269.6	362.4	648	14.0
	12	324.8	285.2	652	12.2	310.0	313.6	620	11.9	293.6	341.2	584	11.0	270.4	362.8	536	10.3

4 PLC 328

40°	6	300.4	316.0	1200	21.3	285.2	339.2	1136	19.4	267.6	364.8	1072	17.3	244.0	380.8	972	14.7
	8	301.6	316.4	904	12.8	286.0	339.6	856	11.7	268.0	365.2	808	10.2	245.2	381.6	736	8.6
	10	303.2	316.4	724	8.3	286.8	340.0	688	7.6	269.2	365.6	644	6.8	246.4	382.4	592	5.7
	12	304.0	316.8	604	5.9	288.0	340.4	576	5.4	270.4	366.0	540	4.8	247.2	382.8	492	4.0
42°	6	312.8	317.6	1252	23.4	297.6	344.8	1192	21.1	280.4	370.0	1120	18.6	256.0	387.6	1024	16.0
	8	314.4	318.4	944	13.9	298.8	345.2	896	12.7	282.0	370.4	844	11.3	257.6	388.4	768	9.1
	10	316.4	318.4	760	8.6	299.6	345.6	720	8.3	283.6	370.8	672	7.4	258.8	389.2	616	6.3
	12	317.6	318.8	636	6.5	301.2	346.0	600	5.9	284.4	371.2	564	5.3	260.0	389.6	516	4.5
44°	6	327.6	320.0	1312	25.6	310.8	348.0	1244	23.1	293.6	374.0	1172	20.4	268.0	394.0	1068	17.3
	8	328.4	320.0	984	14.9	312.0	348.4	936	13.7	294.8	374.4	884	12.3	269.6	394.8	808	10.4
	10	331.2	320.4	792	9.9	312.8	348.4	752	9.0	296.0	374.8	704	8.0	270.8	395.6	644	6.8
	12	332.0	320.4	664	7.1	317.2	348.8	628	6.4	297.2	375.2	592	5.8	271.6	396.0	540	4.8
46°	6	341.2	321.6	1364	28.4	324.4	351.2	1296	25.2	306.0	379.2	1224	22.3	280.8	400.0	1120	18.6
	8	342.8	321.6	1028	16.0	326.0	351.6	976	14.7	307.6	379.6	920	13.3	282.4	400.8	844	11.3
	10	344.8	322.0	824	11.8	326.8	352.0	784	9.9	309.2	380.0	736	8.6	283.6	401.6	676	7.3
	12	346.4	322.0	688	7.6	327.6	352.0	656	6.9	310.0	380.4	616	6.3	284.4	402.4	564	5.3
48°	6	355.2	323.6	1420	30.7	337.2	353.6	1348	27.3	319.2	384.0	1276	24.3	292.8	404.0	1172	20.4
	8	356.8	324.0	1068	17.3	338.8	354.0	1012	15.8	321.2	384.4	964	14.2	294.0	405.2	880	12.3
	10	358.4	324.0	856	11.7	339.6	354.0	812	10.6	322.8	384.8	768	9.1	295.2	406.0	704	8.0
	12	364.0	324.4	720	8.2	340.8	354.4	680	7.5	324.0	385.2	644	6.7	296.0	406.4	592	5.7
50°	6	368.8	325.2	1480	33.4	350.0	356.8	1408	29.7	328.8	388.0	1320	26.4	304.4	412.0	1224	22.2
	8	370.4	325.6	1112	18.5	350.8	357.2	1056	16.9	330.4	388.4	1000	15.3	306.0	412.8	916	13.2
	10	375.6	325.6	892	12.5	351.6	357.2	844	11.5	331.6	389.2	796	10.2	307.2	413.6	732	8.6
	12	377.2	326.0	744	9.0	352.8	357.6	708	8.0	332.4	389.6	668	7.3	308.0	414.0	616	6.2



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DIMENSIONS

MODEL	CAP. HP. NOM.	A	B	C	D	APPROX. WEIGHT
4 PLC 325	240	4350	1650	5"	4"	8800 Kg
4 PLC 326	300	4400	1700	5"	4"	10000 Kg
4 PLC 327	360	4450	1750	6"	5"	11500 Kg
4 PLC 328	400	4500	1800	6"	5"	13500 Kg

NOTE: ALL DIMENSION IN mm. EXCEPT MENTIONED. ROUGHING IN DIMENSION.

