RS SERIES APPLICATIONS

	Existing System Type		
Application	R-12	R-22	R-502
Air Conditioning			
Automotive	RS-24	RS-44	
Chillers Recip/Screw/DX	RS-24	RS-44, RS-45	
Shell & Tube chiller		RS-44, RS-45	
Co-axial chiller		RS-44	
Flat plate chiller		RS-44	
Flooded systems		RS-45	
Commercial	RS-24	RS-44	
Dehumidifiers	RS-24	RS-44	
Heat Pump		RS-44	
Industrial process cooling	RS-24	RS-44, RS-45	
Split System		RS-44	
Spot Coolers		RS-44	
Roof Top		RS-44	
Window/Wall		RS-44	
Refrigeration			
Beverage Coolers	RS-24	RS-44	
Cold Storage	RS-24	RS-45	RS-52
Display Cases	RS-24	RS-45	RS-52
Domestic Refrigerators/Freezers	RS-24		
Frozen Drink Machines	RS-24	RS-45	RS-52
Ice Cream Dipping Cabinets	RS-24		RS-52
Ice Machines	RS-24	RS-44, RS-45	RS-52
Ice Rinks	RS-24	RS-45	RS-52
Mobile Refrigeration	RS-24	RS-44	RS-52
Flooded systems		RS-45	RS-52
Process Cooling	RS-24	RS-44, RS-45	RS-52
Water Coolers	RS-24	RS-44	
Walk-In Coolers	RS-24	RS-44	
WalkinFreezers		RS-45	RS-52

RS-24 (R426A)
RS-44 (R424A)
RS-45 (R434A)
RS-52 (R428A)

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R22 RETROFIT REPLACEMENTS APPLICATIONS SUMMARY

AIR CONDITIONING FIXED ORIFICE SYSTEMS	RS-44
AIR CONDITIONING TXV SYSTEMS	RS-44/RS-45
CHILLERS WITH FIXED ORIFICES	RS-44
CHILLERS WITH TXVs	RS-44/RS-45
SHELL & TUBE EVAPORATORS	RS-44/RS-45
REFRIGERATION EVAPORATING DOWN TO -10^{0}C	RS-44
REFRIGERATION EVAPORATING DOWN TO -35^{0}C	RS-45
REFRIGERATION EVAPORATING DOWN TO -40^{0}C	RS-52

Notes

(1) Do not use RS-45 or RS-52 in existing systems with a capillary tube
(2) RS-45 & RS-52 are recommended for use with R404A TXVs
(3) Extra capacity of RS-52 may require condenser to be replaced in systems designed for R22
(4) When using RS-52 to replace R22, check the system can accommodate the higher pressures

PRESSURE/TEMPERATURE TABLES OF R22 REPLACEMENTS

	RS-44 (R424A)		RS-45 (R434A)		RS-52 (R428A)	
TEMPERATURE Deg C	BUBBLE PRESSURE (LIQUID) (barg)	DEW PRESSURE (VAPOUR) (barg)	BUBBLE PRESSURE (LIQUID) (barg)	DEW PRESSURE (VAPOUR) (barg)	BUBBLE PRESSURE (LIQUID) (barg)	DEW PRESSURE (VAPOUR) (barg)
-60	-0.66	-0.80	-0.55	-0.61	-0.45	-0.48
-58	-0.62	-0.77	-0.49	-0.57	-0.39	-0.42
-56	-0.58	-0.74	-0.44	-0.51	-0.32	-0.35
-54	-0.53	-0.70	-0.37	-0.46	-0.24	-0.28
-52	-0.48	-0.66	-0.30	-0.40	-0.16	-0.20
-50	-0.42	-0.62	-0.23	-0.33	-0.07	-0.12
-48	-0.36	-0.58	-0.15	-0.25	0.02	-0.03
-46	-0.29	-0.53	-0.06	-0.17	0.12	0.07
-44	-0.21	-0.47	0.04	-0.09	0.23	0.18
-42	-0.13	-0.41	0.14	0.01	0.35	0.29
-40	-0.05	-0.34	0.25	0.11	0.47	0.41
-38	0.05	-0.27	0.37	0.22	0.61	0.54
-36	0.15	-0.19	0.50	0.33	0.75	0.68
-34	0.25	-0.11	0.63	0.46	0.91	0.83
-32	0.37	-0.02	0.78	0.59	1.07	1.00
-30	0.49	0.08	0.93	0.74	1.25	1.17
-28	0.62	0.18	1.10	0.89	1.44	1.35
-26	0.76	0.30	1.27	1.05	1.64	1.54
-24	0.91	0.42	1.46	1.23	1.85	1.75
-22	1.07	0.55	1.66	1.41	2.07	1.97
-20	1.24	0.69	1.87	1.61	2.31	2.20
-18	1.42	0.84	2.09	1.82	2.56	2.45
-16	1.61	1.00	2.33	2.04	2.82	2.71
-14	1.81	1.17	2.57	2.28	3.10	2.98
-12	2.03	1.35	2.84	2.53	3.40	3.27
-10	2.25	1.54	3.11	2.79	3.71	3.57
-8	2.49	1.74	3.40	3.07	4.04	3.89
-6	2.74	1.96	3.71	3.36	4.38	4.23
-4	3.01	2.19	4.03	3.67	4.74	4.59
-2	3.29	2.43	4.33	3.99	5.12	4.96
0	3.58	2.69	4.73	4.33	5.52	5.35
2	3.89	2.96	5.10	4.69	5.93	5.76
4	4.21	3.24	5.49	5.06	6.37	6.19
6	4.55	3.55	5.90	5.46	6.82	6.64
8	4.91	3.86	6.33	5.87	7.30	7.11
10	5.28	4.20	6.77	6.30	7.80	7.60
12	5.67	4.55	7.24	6.76	8.32	8.11
14	6.08	4.91	7.73	7.23	8.86	8.65
16	6.51	5.30	8.24	7.72	9.43	9.21
18	6.95	5.71	8.77	8.24	10.02	9.79
20	7.42	6.13	9.33	8.78	10.63	10.40
22	7.90	6.58	9.90	9.34	11.27	11.03
24	8.41	7.04	10.50	9.93	11.93	11.69
26	8.93	7.53	11.13	10.54	12.63	12.37
28	9.48	8.04	11.78	11.17	13.34	13.09
30	10.05	8.57	13.45	11.83	14.09	13.83
32	10.64	9.12	13.15	12.52	14.87	14.60
34	11.26	9.70	13.88	13.24	15.67	15.40
36	11.90	10.30	14.64	13.98	16.51	16.23
38	12.56	10.93	15.42	14.75	17.37	17.09
40	13.25	11.58	16.23	15.56	18.27	17.98
42	13.96	12.26	17.08	16.39	19.20	18.91
44	14.71	12.97	17.95	17.25	20.17	19.87
46	15.47	13.71	18.86	18.15	21.17	20.87
48	16.27	14.48	19.79	19.08	22.20	21.91
50	17.09	15.27	20.76	20.05	23.28	22.98
52	17.94	16.10	21.77	21.05	24.39	24.09
54	18.83	16.96	22.81	22.09	25.54	25.25
56	19.74	17.85	23.88	23.17	26.73	26.45
58	20.68	18.78	25.00	24.29	27.97	27.69
60	21.66	19.74	26.15	25.45	29.25	28.98
62	22.66	20.74	27.34	26.65	30.58	30.32
64	23.70	21.78	28.57	27.90	31.96	31.72
66	24.78	22.86	29.85	29.20	33.39	33.18
68	25.89	23.98	31.17	30.55		
70	27.03	25.14	32.53	31.97		
72	28.22	26.35	33.94	33.45		
74	29.44	27.61	35.67	35.02		
76	30.69	28.91				
78	31.99	30.28				
80	33.32	31.71				
Temperature Glide	Approximately 3 Deg C		Approximately 1.5 Deg C		Approximately 0.5 Deg C	