

Refrigerants & Lubricants





refrigerants

Part Number	Description	Price Per kg
R22 REPLACEMENTS Available 2011 - see your local Heatcraft branch for more information		
0417012	Isceon 59	P.O.A.
0438012	Isceon 99	P.O.A.



R22		
0220012	R22 12kg Cylinder UN1018	P.O.A.
0220022	R22 22kg Cylinder UN1018	P.O.A.
0220065	R22 65kg Cylinder UN1018	P.O.A.
0220450	R22 450kg Cylinder UN1018	P.O.A.



R134a		
0134012	R134a 12kg Cylinder UN3159	P.O.A.
0134022	R134a 22kg Cylinder UN3159	P.O.A.
0134065	R134a 65kg Cylinder UN3159	P.O.A.
0134450	R134a 450kg Cylinder UN3159	P.O.A.
U134012	R134a C/W DYE 12kg Cylinder UN3159	P.O.A.
U134022	R134a C/W DYE 22kg Cylinder UN3159	P.O.A.
U134065	R134a C/W DYE 65kg Cylinder UN3159	P.O.A.
U134450	R134a C/W DYE 450kg Cylinder UN3159	P.O.A.



R404A		
R404010	R404A 10kg Cylinder UN3337	P.O.A.
R404016	R404A 16kg Cylinder UN3337	P.O.A.
0404050	R404A 50kg Cylinder UN3337	P.O.A.
0404400	R404A 400kg Cylinder UN3337	P.O.A.



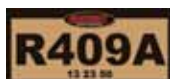
R507		
0507010	R507 10kg Cylinder UN1078	P.O.A.
0507016	R507 16kg Cylinder UN1078	P.O.A.
0507055	R507 55kg Cylinder UN1078	P.O.A.
0507400	R507 400kg Cylinder UN1078	P.O.A.



R410A		
0410010	R410A 10kg Cylinder UN1078	P.O.A.
0410018	R410A 18kg Cylinder UN1078	P.O.A.
0410060	R410A 60kg Cylinder UN1078	P.O.A.



R407C		
0407011	R407C 11kg Cylinder UN3340	P.O.A.
0407020	R407C 20kg Cylinder UN3340	P.O.A.
0407065	R407C 65kg Cylinder UN3340	P.O.A.



R409A		
0409012	R409A 12kg Cylinder UN1078	P.O.A.
0409022	R409A 22kg Cylinder UN1078	P.O.A.
0409070	R409A 70kg Cylinder UN1078	P.O.A.



When it comes to the environment A-GAS believes actions speak louder than words. Our cradle to grave philosophy, strict adherence to environmental legislation, broad product range and ISO 14001 certification says it all.



A-GAS
product
lifecycle:

Specialty
chemicals and
gases from
cradle to grave.



Available through



The logo for HEATCRAFT Worldwide Refrigeration, featuring the word 'HEATCRAFT' in a bold, red, italicized font inside a yellow oval, with 'Worldwide Refrigeration' in a smaller, black font below it.





Part Number	Description	Price Per kg
R401B		
401B012	R401B 12kg Cylinder UN3163	P.O.A.
401B022	R401B 22kg Cylinder UN3163	P.O.A.
401B070	R401B 70kg Cylinder UN3163	P.O.A.



R408A		
0408010	R408A 10kg Cylinder UN3163	P.O.A.
0408018	R408A 18kg Cylinder UN3163	P.O.A.
0408060	R408A 60kg Cylinder UN3163	P.O.A.



SP34E		
34E012	SP34E PLUS 12kg Cylinder	P.O.A.
SPAU012	SP34E + UV DYE 12kg Cylinder UN1956	P.O.A.



R123		
1230045	R123 REFRIGERANT IN 45.4kg DRUM	P.O.A.
1230100	R123 PACKED IN 100kg DRUM	P.O.A.

R406A		
0406012	R406A 12kg Cylinder UN1078	P.O.A.
0406020	R406A 20kg Cylinder UN1078	P.O.A.
0406065	R406A 65kg Cylinder UN1078	P.O.A.

R413A		
0413012	R413 PACKED IN 12kg Cylinder	P.O.A.

R23		
2300009	R23 9kg Cylinder UN1984	P.O.A.

R717		
0717034	R717 AMMONIA - ANHYDROUS 34kg	P.O.A.

CO₂ (R744)		
0744020	CO ₂ High Purity 13.3kg "E" size	P.O.A.
0744050	CO ₂ High Purity 33.3kg "G" size	P.O.A.
0744400	CO ₂ High Purity 399.6 kg man pack	P.O.A.



NITROGEN		
0728010	NITROGEN-HIGH PURITY 1.8M3 "D"	P.O.A.
0728020	NITROGEN-HIGH PURITY 3.6M3 "E"	P.O.A.
0728050	NITROGEN-H/PURITY SZ G 50L 9M3 "G"	P.O.A.

GLYCOL		
MPC0005	GLYCOL MONOPROPYLENE CONC 5kg	P.O.A.
MPC0020	GLYCOL MONOPROPYLENE CONC 20kg	P.O.A.
MPC0215	GLYCOL MONOPROPYLENE CONC 215kg	P.O.A.
G150020	GLYCOL MONOPROPYLENE-15C 20kg	P.O.A.
G150216	GLYCOL MONOPROPYLENE-15C 216kg	P.O.A.
G150005	GLYCOL MONOPROPYLENE-15C 5kg	P.O.A.

PRESSURE TEMP CHART

Temp °C	Pressure kPa															
	R12	R134A	R406A	R409A	ISCEON 49 R413A	SP34E	R22	DEW R407	BUBBLE R407	R410A	ISCEON 59 R417A	R404A	R507	R408A	R502	R717
-60	-77						-63			-36	-54		-47		-51	
-58	-75						-58			-28	-49		-41		-46	
-56	-72						-53			-20	-44		-35		-40	
-54	-68						-48			-11	-38		-28		-33	
-52	-65						-42			-1	-32		-20		-26	
-50	-61			-71	-50		-36			9	-25	-23	-12	-23	-19	41
-48	-57			-67	-45		-29			21	-18	-15	-3	-17	-10	47
-46	-52			-63	-39		-21			33	-11	-6	7	-8	-1	51
-44	-47			-59	-33		-13			46	-2	4	17	1	8	58
-42	-42			-54	-27		-5			61	7	15	28	11	19	63
-40	-36	-47	-43	-49	-20	-50	5			76	16	26	40	22	30	72
-38	-30	-41	-37	-43	-12	45	15	-5	33	93	26	39	53	34	42	81
-36	-23	-35	-30	-37	-4	-38	26	5	45	111	37	52	67	46	54	88
-34	-16	-28	-24	-31	4	-32	38	16	58	130	49	66	82	60	68	99
-32	-8	-21	-16	-23	14	-25	50	27	73	150	61	81	98	74	82	108
-30	0	-14	-9	-16	24	-17	63	39	88	172	74	97	114	89	98	120
-28	9	-5	0	-7	34	-9	78	52	104	195	88	114	132	105	114	133
-26	19	3	9	2	45	1	93	67	122	219	103	133	151	123	132	144
-24	29	14	19	11	57	10	109	82	140	245	119	152	171	141	150	160
-22	39	26	29	21	70	21	126	98	160	273	135	173	193	161	170	172
-20	51	39	40	33	84	32	145	115	181	303	153	195	216	181	191	190
-18	63	49	52	44	98	44	164	134	203	334	171	219	240	203	213	210
-16	76	59	65	57	114	56	185	153	226	367	191	243	265	227	236	225
-14	89	72	78	71	130	70	207	174	251	402	211	270	292	251	261	248
-12	104	86	92	85	147	84	230	197	277	438	233	297	320	277	287	265
-10	119	101	107	100	165	100	254	220	305	477	256	326	350	305	314	291
-8	135	118	123	117	184	116	280	245	334	518	280	357	382	334	343	318
-6	152	135	140	134	204	134	307	272	365	561	305	390	415	364	373	340
-4	170	153	158	152	226	152	336	300	398	607	332	424	450	396	405	370
-2	189	172	177	172	248	172	366	330	432	654	360	460	486	430	438	395
0	208	192	197	192	272	192	397	361	468	704	389	498	525	465	473	429
2	229	211	217	214	297	215	431	394	506	757	420	537	565	502	510	466
4	251	229	240	237	323	238	466	429	545	812	452	579	608	541	548	496
6	274	253	263	262	350	262	502	466	587	869	485	623	652	582	588	536
8	298	283	287	287	379	288	540	504	630	930	520	669	698	625	630	569
10	323	313	313	314	409	316	581	545	676	993	557	716	747	670	673	615

PRESSURE TEMP CHART

Temp °C	Pressure kPa															
	R12	R134A	R406A	R409A	ISCEON 49 R413A	SP34E	R22	DEW R407	BUBBLE R407	R410A	ISCEON 59 R417A	R404A	R507	R408A	R502	R717
12	349	342	340	342	441	344	622	588	723	1059	595	766	798	716	718	663
14	380	372	368	372	474	375	666	632	773	1128	635	819	851	765	766	402
16	406	403	397	404	508	406	712	679	825	1200	676	873	906	816	815	756
18	436	436	428	437	544	440	760	728	879	1275	719	929	964	869	866	798
20	467	469	461	471	582	470	810	780	936	1353	764	989	1024	920	920	857
22	500	507	495	507	621	508	862	834	995	1435	811	1049	1087	980	975	920
24	534	544	530	545	662	557	916	890	1056	1520	859	1119	1152	1040	1033	969
26	569	584	567	585	705	595	972	949	1120	1608	910	1179	1221	1100	1093	1038
28	606	626	605	626	750	623	1031	1010	1187	1701	962	1249	1291	1170	1155	1091
30	645	668	645	670	796	651	1092	1075	1256	1797	1016	1329	1365	1240	1219	1167
32	685	715	687	715	844	698	1155	1142	1328	1896	1073	1399	1442	1310	1286	1245
34	726	761	730	762	895	746	1221	1211	1403	2000	1131	1479	1521	1380	1355	1307
36	769	811	775	811	947	792	1289	1284	1480	2108	1192	1559	1604	1460	1426	1393
38	814	863	822	863	1001	836	1360	1360	1561	2220	1254	1639	1689	1530	1500	461
40	860	915	871	920	1057	880	1433	1439	1645	2336	1319	1729	1778	1610	1577	1554
42	908	972	922	970	1115	927	1509	1521	1731	2456	1386	1819	1870	1700	1656	1653
44	958	1029	974	1030	1176	977	1588	1607	1821	2581	1455	1909	1966	1790	1738	1729
46	1010	1090	1029	1090	1238	1026	1670	1696	1914	2710	1527	2009	2064	1880	1823	1835
48	1064	1153	1085	1150	1303	1078	1754	1788	2011	2844	1601	2109	2167	1970	1911	1918
50	1119	1217	1144	1220	1370	1130	1842	1885	2110	2983	1677	2209	2273	2060	2001	2033
52	1176	1287	1204	1290	1440	1193	1932	1985	2214	3126	1756	2319	2382	2160	2095	
54	1235	1356	1267	1360	1512	1249	2026	2088	2320	3274	1837	2429	2496	2270	2192	
56	1297	1429	1331	1430	1586	1312	2123	2196	2431	3428	1921	2549	2613	2370	2291	
58	1360	1505	1398	1500	1663	1381	2223	2308	2545	3586	2007	2659	2734	2480	2395	
60	1425	1581	1468	1580	1742	1450	2326	2424	2663	3749	2095	2789	2859	2590	2501	
62		1662					2422	2545	2785	3917		2901	2978			
64		1746					2532	2671	2910	4090		3032	3114			
66		1833					2646	2801	3040	4267			3255			
68		1923					2763	2936	3174	4448			3402			
70		2016					2884	3077	3312	4631			3554			

Heat Flow

Btu/hr x 0.252 = kcal/hr
 Btu/hr x 0.293 = watts
 watts x 0.86 = kcal/hr
 watts x 3.4129 = Btu/hr
 watts x 0.000284 = ton (refr)
 watts x 0.00133 = HP
 kcal/hr x 1.163 = watts
 kcal/hr x 3.97 = Btu/hr
 HP x 746 = watts
 ton (refr) x 3517 = watts

Volume Flow

cfm x 0.472 = l/s
 imp. gal/min x 0.0758 = l/s
 U.S. gal/min x 0.0631 = l/s

Volume

ft³ x 0.02832 = m³

Temperature

°C = (°F - 32) ÷ 1.8
 °F = (°C x 1.8) + 32

Velocity

fps x 0.3048 = m/s
 fpm x 0.00508 = m/s

Pressure

kPa ÷ 6.89 = psi
 inch Hg x 3.39 = kPa
 inch H₂O x 0.249 = kPa
 mm Hg (1 torr) x 0.133 = kPa

lubricants

Part Number	Description	List Price
SUNISO		
3GS-4L	OIL SUNISO 3GS (4 LTR.)	\$75.11
3GS-20L	OIL SUNISO 3GS (20 LTR.)	\$350.88
3GS-205L	OIL SUNISO 3GS (205 LTR.)	\$3,876.14
4GS-4L	OIL SUNISO 4GS (4 LTR.)	\$75.11
4GS-20L	OIL SUNISO 4GS (20 LTR.)	\$350.88
5GS-4L	OIL SUNISO 5GS (4 LTR.)	\$66.05
4SA-20L	OIL SUNISO 4SA (20 LTR.)	\$281.56
4SA-205L	OIL SUNISO 4SA (205 LTR.)	\$2,493.92
MANEUROP COMPRESSOR OIL		
7754001	MANEUROP MINERAL OIL 160P 2 LITRES	\$123.15
7754002	MANEUROP MIN. OIL MT/LT - 5 LITRES	\$242.25
7754020	MANEUROP POE OIL 2 LITRES	\$329.60
BITZER COMPRESSOR OIL		
B5-4	BITZER OIL B5 4 LITRES	\$297.19
106-018	BITZER BSE32 ESTER OIL 1 LITRES	\$208.50
106-015	BITZER BSE32 ESTER OIL 5 LITRES	\$727.12
106-012	BITZER BSE32 ESTER OIL 20 LITRES	\$2,387.97
106-005	BITZER OIL B5 20 LITRES	\$1,256.60
CENTRIFUGAL COMPRESSOR OIL		
CLAVIS68	OIL SHELL CLAVIS 68 18 LITRE	\$358.11
1291220	OIL CALTEX CAPELLA WF68 20 LITRE	\$628.77
TURBOT68	OIL SHELL TURBO T68 20 LITRE	\$285.35
VACUUM PUMP OIL		
VPOQ	PREMIUM VAC PUMP OIL 946ML	\$17.31
VPOG	PREMIUM VAC PUMP OIL 3.78L	\$51.92
EMKARATE		
1528245	EMKARATE OIL RL100S 5 LITRE	\$509.19
1529212	EMKARATE OIL RL32 1 LTR	\$73.73
1529245	EMKARATE OIL RL32H 5 LITRE	\$371.79
ALKYL BENZENE		
CP-4700-32	ALKYL BENZENE OIL 4L 32	\$175.79
CP4700-46	ALKYL BENZENE OIL 4L 46	\$153.88
SOLEST - POLYOLESTER (POE)		
S32-1	OIL SOLEST 32 1 LITRE DRUM	\$94.20
S32-5	OIL SOLEST 32 5 LITRE DRUM	\$354.36
S32-20	OIL SOLEST 32 20 LITRE DRUM	\$1,368.28





Part Number	Description	List Price
SOLEST - POLYOLESTER (POE) (CONT'D)		
S46-5	OIL SOLEST 46 5 LITRE DRUM	\$403.61
S68-1	OIL SOLEST 68 1 LITRE	\$105.34
S68-5	OIL SOLEST 68 5 LITRE DRUM	\$383.90
S68-19	SOLEST 68 5 US GAL (19.0L)	\$1,443.93
S68-20	OIL SOLEST 68 20 LITRE DRUM	\$1,487.82
S46-20	OIL SOLEST 46 19 LITRE DRUM	\$1,570.83

SUNISO APPLICATION GUIDE

Always use viscosity grade recommended by manufacturer. If no recommendation is available, selection can usually be based on the following:

Suniso Oil Grade	Application
3GS	All new Compressors during the run-in period of less than 3.5kW (1 Ton) capacity. All low temperature applications with suction temperature of approx. -40°C and below. For use with fluorinated refrigerants, ammonia and all other refrigerants. Also for use with screw compressors.
4GS	All fully run-in Compressors (other than ammonia) of 3.5kW (1 Ton) capacity and over, and employed on normal applications with suction temperature of -40°C and higher.
5GS	For Car Air Conditioning Compressors or when a heavy duty, higher viscosity oil is required for special purposes.
4S	All Ammonia Compressors (run-in) of 3.5kW (1 Ton) capacity and over and employed on normal applications with suction temperature of -40°C and higher and including some Screw Compressors.

SOLEST APPLICATION GUIDE

Oil Type	Refrigerants	Applications
SOLEST 31-HE	HFC	Retrofitting and new installations with R134a Medium Temperature
SOLEST 32	HFC	Copeland approved oil for new systems or retrofitting using R404A, R507 & R134a refrigerants.
SOLEST 46	HFC	Retrofitting and new installations with R404A, R507 & R134a refrigerants. Medium and Low Temperature
SOLEST 68	HFC	Retrofitting and new installations with R134a High Temperature
MANEUROP 160P	HFC	Approved for use in all Manuero MT compressors using R22
EMKARATE	HFC	New installations using all of the current new generation refrigerants, including R134a, R404A & R507.



EMKARATE[®] RL



Emkarate[®] RL leads the way in refrigeration compressor lubrication

Emkarate RL products are OEM approved for use in industrial, commercial, and appliance compressors in HFC and HCFC systems.



- Designed for factory fill and service fill requirements
- Widest range of OEM approvals
- Reduces downtime
- Decreases maintenance
- Improves efficiency
- Extends equipment life

CPI has lubricants for all of your refrigeration and air-conditioning needs. AutoChill is a newly launched product for the automotive aftermarket.

Visit our website at www.emkarateRL.com or contact one of our sales representatives for more information.



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A person wearing dark shorts and brown work boots is carrying a large, grey and orange Gas2Go R404A gas cylinder. The person is walking on a paved surface. The image is framed by a large, stylized orange circular graphic with swirling lines. The Gas2Go logo is visible in the top right corner.

Gas2Go[®]

The Smartest Gas Management System

When you need more than just gas, Heatcraft can supply all the answers

The Heatcraft Gas2Go system is linked in with our key supply partners and the industry to ensure you are kept informed and up-to-date with every new legislative change.

Being a Gas2Go customer means you are a part of a system that complies with "world's best practice". Gas2Go offers you the best way to manage your purchases and the best way to meet your compliance obligations. Gas2Go has been around for 10 years and still remains the markets' number one choice for gas management systems.

The Gas2Go advanced cylinder tracking system has been tried and tested and ensures total traceability. Plus, Heatcraft is the expert in cylinder exchange. There's no waiting around for refills. Simply pick up a full gas bottle from your local branch whenever you need one. It's that easy.

Heatcraft Gas2Go[®] - solutions to make life easy

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