

HEATCRAFT "OS" SERIES EXTERNAL FLOAT OIL SEPARATORS - R404A CAPACITY

RATED AS THE MAXIMUM REFRIGERATION COOLING CAPACITY (KW) AT THE CONDITION OF 100°C DISCHARGE TEMPERATURE, 0K SUBCOOLING, & 0K SUPERHEAT

MODEL No.	SCT (°C)	SST (°C)								
		-35	-30	-25	-20	-15	-10	-5	0	5
OS15-1	35	12.4	12.8	13.2	13.5	13.9	14.3	14.6	14.9	15.3
	40	13.0	13.5	13.9	14.4	14.8	15.2	15.6	16.0	16.4
	45	13.6	14.1	14.6	15.1	15.6	16.0	16.5	16.9	17.4
	50	13.9	14.4	15.0	15.6	16.2	16.7	17.2	17.8	18.3
	55	13.8	14.5	15.2	15.8	16.5	17.1	17.7	18.3	18.9
OS23-1	35	19.2	19.8	20.4	21.0	21.6	22.1	22.7	23.2	23.7
	40	20.3	21.0	21.6	22.3	23.0	23.6	24.2	24.8	25.4
	45	21.1	21.9	22.6	23.4	24.2	24.9	25.6	26.3	27.0
	50	21.5	22.4	23.3	24.2	25.1	25.9	26.8	27.6	28.3
	55	21.4	22.5	23.6	24.6	25.6	26.6	27.5	28.5	29.3
OS34-1	35	28.0	28.9	29.8	30.6	31.4	32.3	33.0	33.8	34.5
	40	29.5	30.5	31.5	32.5	33.5	34.4	35.3	36.2	37.0
	45	30.7	31.9	33.0	34.1	35.2	36.3	37.3	38.4	39.3
	50	31.3	32.7	34.0	35.3	36.6	37.8	39.0	40.2	41.3
	55	31.3	32.8	34.3	35.8	37.3	38.7	40.1	41.5	42.8
OS47-1	35	38.8	40.0	41.2	42.4	43.5	44.6	45.7	46.8	47.8
	40	40.9	42.3	43.6	45.0	46.3	47.6	48.9	50.1	51.2
	45	42.5	44.1	45.7	47.2	48.7	50.2	51.7	53.1	54.4
	50	43.4	45.2	47.1	48.9	50.6	52.3	54.0	55.6	57.2
	55	43.3	45.4	47.5	49.6	51.6	53.6	55.5	57.4	59.2
OS79-1	35	64.4	66.4	68.4	70.3	72.2	74.1	75.9	77.6	79.3
	40	67.8	70.1	72.4	74.7	76.9	79.0	81.1	83.1	85.0
	45	70.5	73.2	75.8	78.4	80.9	83.4	85.8	88.1	90.3
	50	72.0	75.1	78.1	81.1	84.0	86.9	89.6	92.3	94.9
	55	71.8	75.3	78.9	82.3	85.7	89.0	92.2	95.3	98.2
OS110-1	35	89.6	92.4	95.2	97.9	100.6	103.1	105.7	108.1	110.4
	40	94.4	97.7	100.8	104.0	107.0	110.0	112.9	115.7	118.4
	45	98.1	101.9	105.5	109.1	112.7	116.1	119.4	122.7	125.8
	50	100.2	104.5	108.8	112.9	117.0	120.9	124.8	128.5	132.1
	55	100.0	104.9	109.8	114.6	119.3	123.9	128.3	132.6	136.8
OS140-1	35	114.1	117.7	121.2	124.6	128.0	131.3	134.5	137.6	140.5
	40	120.2	124.3	128.3	132.3	136.2	140.0	143.7	147.3	150.7
	45	124.9	129.6	134.3	138.9	143.4	147.8	152.0	156.1	160.1
	50	127.6	133.0	138.4	143.7	148.9	153.9	158.8	163.6	168.1
	55	127.2	133.5	139.7	145.8	151.8	157.7	163.3	168.8	174.1
OS170-1	35	138.5	142.9	147.1	151.3	155.4	159.4	163.3	167.0	170.6
	40	145.9	150.9	155.8	160.7	165.4	170.0	174.5	178.8	183.0
	45	151.7	157.4	163.1	168.7	174.1	179.4	184.6	189.6	194.4
	50	154.9	161.6	168.1	174.5	180.8	186.9	192.9	198.6	204.2
	55	154.5	162.1	169.7	177.1	184.4	191.4	198.3	205.0	211.4

HEATCRAFT "OS" SERIES EXTERNAL FLOAT OIL SEPARATORS - R22 CAPACITY

RATED AS THE MAXIMUM REFRIGERATION COOLING CAPACITY (KW) AT THE CONDITION OF 100°C DISCHARGE TEMPERATURE, 0K SUBCOOLING, & 0K SUPERHEAT

MODEL No.	SCT (°C)	SST (°C)								
		-35	-30	-25	-20	-15	-10	-5	0	5
OS15-1	35	14.0	14.2	14.4	14.6	14.8	15.0	15.2	15.3	15.5
	40	15.3	15.6	15.8	16.1	16.3	16.5	16.7	16.9	17.1
	45	16.8	17.0	17.3	17.6	17.8	18.1	18.3	18.6	18.8
	50	18.2	18.5	18.9	19.2	19.5	19.8	20.0	20.3	20.6
	55	19.7	20.1	20.4	20.8	21.1	21.5	21.8	22.1	22.4
OS23-1	35	21.7	22.0	22.3	22.6	23.0	23.3	23.5	23.8	24.1
	40	23.8	24.2	24.6	24.9	25.3	25.6	26.0	26.3	26.6
	45	26.0	26.4	26.9	27.3	27.7	28.1	28.5	28.8	29.2
	50	28.3	28.8	29.3	29.8	30.2	30.7	31.1	31.5	31.9
	55	30.6	31.2	31.7	32.3	32.8	33.4	33.9	34.3	34.8
OS34-1	35	31.6	32.1	32.5	33.0	33.5	33.9	34.3	34.7	35.1
	40	34.7	35.2	35.8	36.3	36.8	37.3	37.8	38.3	38.7
	45	37.9	38.6	39.2	39.8	40.4	41.0	41.5	42.0	42.6
	50	41.2	42.0	42.7	43.4	44.1	44.7	45.4	46.0	46.6
	55	44.6	45.5	46.3	47.1	47.9	48.6	49.3	50.0	50.7
OS47-1	35	43.7	44.4	45.0	45.7	46.3	46.9	47.5	48.0	48.6
	40	48.0	48.8	49.5	50.3	51.0	51.7	52.3	53.0	53.6
	45	52.5	53.3	54.2	55.1	55.9	56.7	57.4	58.2	58.9
	50	57.1	58.1	59.1	60.0	61.0	61.9	62.8	63.6	64.4
	55	61.7	62.9	64.0	65.1	66.2	67.3	68.3	69.3	70.2

HEATCRAFT "OS" SERIES EXTERNAL FLOAT OIL SEPARATORS - R22 CAPACITY CONT'D

RATED AS THE MAXIMUM REFRIGERATION COOLING CAPACITY (KW) AT THE CONDITION OF 100°C DISCHARGE TEMPERATURE, 0K SUBCOOLING, & 0K SUPERHEAT

MODEL	SCT	SST (°C)								
		35	40	45	50	55	60	65	70	75
OS79-1	35	72.5	73.6	74.7	75.8	76.8	77.8	78.8	79.7	80.6
	40	79.7	80.9	82.2	83.4	84.6	85.8	86.9	87.9	89.0
	45	87.1	88.5	90.0	91.4	92.7	94.1	95.3	96.6	97.7
	50	94.7	96.4	98.0	99.6	101.2	102.7	104.2	105.6	106.9
	55	102.5	104.4	106.3	108.1	109.9	111.6	113.3	114.9	116.5
OS110-1	35	101.0	102.5	104.1	105.5	107.0	108.4	109.7	111.0	112.2
	40	110.9	112.7	114.5	116.2	117.8	119.4	121.0	122.4	123.9
	45	121.2	123.3	125.3	127.2	129.1	131.0	132.7	134.4	136.1
	50	131.8	134.2	136.5	138.7	140.9	143.0	145.0	147.0	148.9
	55	142.7	145.4	148.0	150.5	153.0	155.5	157.8	160.0	162.2
OS140-1	35	128.5	130.5	132.4	134.3	136.2	137.9	139.6	141.3	142.9
	40	141.2	143.4	145.7	147.8	149.9	152.0	153.9	155.8	157.6
	45	154.3	156.9	159.4	161.9	164.3	166.7	168.9	171.1	173.2
	50	167.8	170.8	173.7	176.5	179.3	182.0	184.6	187.1	189.5
	55	181.6	185.0	188.3	191.6	194.8	197.9	200.8	203.7	206.4
OS170-1	35	156.1	158.5	160.8	163.1	165.3	167.5	169.6	171.6	173.5
	40	171.4	174.2	176.9	179.5	182.1	184.5	186.9	189.2	191.4
	45	187.4	190.5	193.6	196.6	199.6	202.4	205.1	207.8	210.3
	50	203.8	207.4	210.9	214.4	217.7	221.0	224.1	227.2	230.1
	55	220.5	224.6	228.7	232.7	236.5	240.3	243.9	247.3	250.6

HEATCRAFT "OS" SERIES EXTERNAL FLOAT OIL SEPARATORS - R134a CAPACITY

RATED AS THE MAXIMUM REFRIGERATION COOLING CAPACITY (KW) AT THE CONDITION OF 100°C DISCHARGE TEMPERATURE, 0K SUBCOOLING, & 0K SUPERHEAT

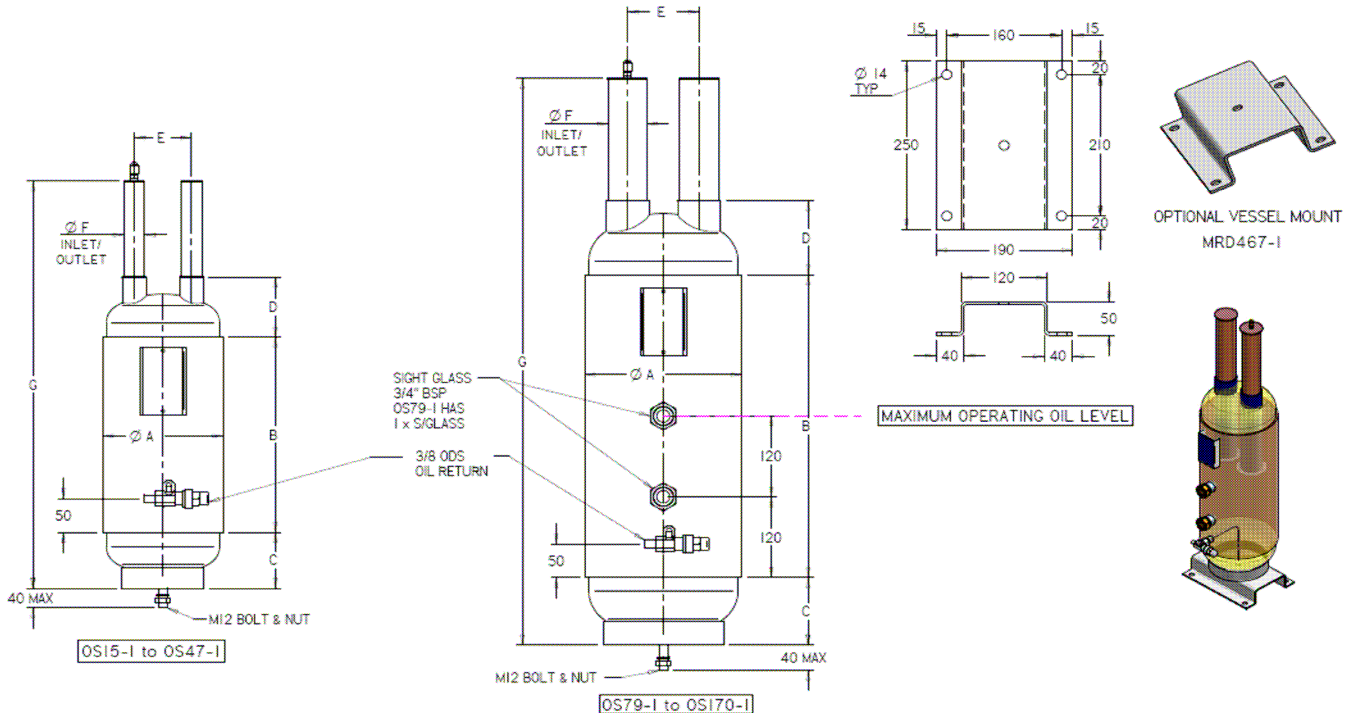
MODEL	SCT	SST (°C)								
		-35	-30	-25	-20	-15	-10	-5	0	5
OS15-1	35	9.2	9.5	9.7	9.9	10.1	10.4	10.6	10.8	11.0
	40	10.1	10.4	10.6	10.9	11.2	11.4	11.7	11.9	12.2
	45	11.0	11.3	11.6	11.9	12.2	12.5	12.8	13.1	13.4
	50	11.9	12.2	12.6	12.9	13.3	13.6	13.9	14.3	14.6
	55	12.7	13.1	13.5	13.9	14.3	14.7	15.1	15.5	15.9
OS23-1	35	14.3	14.7	15.0	15.4	15.7	16.1	16.4	16.7	17.1
	40	15.7	16.1	16.5	16.9	17.3	17.7	18.1	18.5	18.9
	45	17.1	17.6	18.0	18.5	19.0	19.4	19.9	20.3	20.7
	50	18.4	19.0	19.5	20.1	20.6	21.1	21.7	22.2	22.7
	55	19.7	20.4	21.0	21.6	22.2	22.9	23.5	24.1	24.6
OS34-1	35	20.9	21.4	21.9	22.4	22.9	23.4	23.9	24.4	24.9
	40	22.9	23.5	24.1	24.7	25.3	25.8	26.4	27.0	27.5
	45	24.9	25.6	26.3	27.0	27.6	28.3	29.0	29.6	30.2
	50	26.9	27.7	28.5	29.3	30.0	30.8	31.6	32.3	33.1
	55	28.8	29.7	30.6	31.5	32.4	33.3	34.2	35.1	35.9
OS47-1	35	28.9	29.6	30.3	31.0	31.7	32.4	33.1	33.8	34.4
	40	31.7	32.5	33.3	34.1	34.9	35.7	36.5	37.3	38.1
	45	34.4	35.4	36.4	37.3	38.2	39.2	40.1	41.0	41.8
	50	37.2	38.3	39.4	40.5	41.6	42.6	43.7	44.7	45.7
	55	39.8	41.1	42.4	43.6	44.9	46.1	47.3	48.5	49.7
OS79-1	35	48.0	49.2	50.4	51.5	52.7	53.8	54.9	56.0	57.1
	40	52.6	53.9	55.3	56.7	58.0	59.3	60.6	61.9	63.2
	45	57.2	58.8	60.3	61.9	63.5	65.0	66.5	68.0	69.5
	50	61.7	63.5	65.4	67.2	69.0	70.8	72.5	74.2	75.9
	55	66.0	68.2	70.3	72.4	74.5	76.5	78.5	80.5	82.5
OS110-1	35	66.8	68.5	70.1	71.7	73.3	74.9	76.5	78.0	79.5
	40	73.2	75.1	77.0	78.9	80.8	82.6	84.4	86.2	88.0
	45	79.6	81.8	84.0	86.2	88.4	90.5	92.6	94.7	96.7
	50	85.9	88.5	91.0	93.5	96.0	98.5	101.0	103.4	105.7
	55	92.0	94.9	97.9	100.8	103.7	106.5	109.4	112.1	114.9
OS140-1	35	85.1	87.2	89.2	91.3	93.3	95.3	97.3	99.3	101.2
	40	93.2	95.6	98.0	100.4	102.8	105.1	107.4	109.7	111.9
	45	101.3	104.1	106.9	109.7	112.5	115.2	117.9	120.5	123.1
	50	109.3	112.6	115.8	119.1	122.2	125.4	128.5	131.5	134.5
	55	117.0	120.8	124.6	128.3	132.0	135.6	139.2	142.7	146.2
OS170-1	35	103.3	105.8	108.3	110.9	113.3	115.8	118.2	120.6	122.9
	40	113.1	116.1	119.0	121.9	124.8	127.7	130.5	133.2	135.9
	45	123.0	126.4	129.8	133.2	136.6	139.9	143.1	146.3	149.5
	50	132.8	136.7	140.7	144.6	148.4	152.3	156.0	159.7	163.4
	55	142.1	146.7	151.3	155.8	160.2	164.7	169.0	173.3	177.5

TECHNICAL DATA

MODEL	DIMENSIONS (mm)							Volume (Litres)	Weight (kg)	Oil Charge (ml) #
	No.	Ø A	B	C	D	E	Ø F			
OS15-1	168	170	83	90	80	22.2	475	5.3	6.5	340
OS23-1	168	220	83	90	80	28.6	535	6.3	7.5	500
OS34-1	168	290	83	90	80	28.6	605	7.5	9.0	700
OS47-1	219	290	96	110	80	34.9	630	14.0	12.0	1000
OS79-1	219	350	96	110	80	41.3	690	16.0	15.0	1600
OS110-1	219	450	100	110	100	53.9	885	19.0	16.0	6300
OS140-1	219	650	100	110	100	53.9	1065	26.0	22.0	6300
OS170-1	219	850	100	110	100	53.9	1265	32.0	27.0	6300

Oil Charge - This is the nominal amount of oil Heatcraft recommend the oil separator be filled with prior to starting the system.

Maximum Oil Charge - On oil separators with Sight Glasses this is at the midpoint (middle) of the top sight glass. Operation above this level will have a negative impact on the oil separators performance.



IMPORTANT NOTES:

- Oil separators were designed & tested in accordance with AS/NZS 1677.2: 1998 "Refrigerating Systems" and AS 1210-1997 "Pressure Vessels".
 - Design pressure: 3000 kPa at +59°C maximum.
 - Application ambient: 0°C minimum to +50°C maximum.
 - Class of Vessel: 3.

"OS" series oil separators do not include a float or other control means. They can be used with a variety of external oil controls. At a minimum, an external reservoir with float is required, however it is recommended to use an oil level control fitted to the compressor to signal the requirement for oil return from the separator.

- One off 3/8" ID x 3/4" UNF rotolock valve fitted as standard for oil return.

3. SELECTION CRITERIA

Capacities given are MAXIMUM at each condition. It is always prudent to select the next larger size unit even where the expected capacity is only marginally higher than the rating.

The rating condition for oil separator selection is dependant on the application. Selection must account for the range of operating conditions expected.

STORAGE APPLICATIONS- Where suction temperature conditions are NOT expected to vary significantly over time:

Selection should be made at the nominal saturated suction condition for the maximum achievable capacity.

This is especially relevant for multi-compressor systems.

PULL DOWN APPLICATIONS- Where suction temperature conditions will vary significantly and/or frequently:

Selection should be made for the compressor capacity at the highest suction temperature expected.

Examples-

For a product chilling (Medium Temperature pull down) application select at +5°C SST or higher refrigeration capacity.

For a product freezing (low temperature pull down) application, select at -10°C or higher refrigeration capacity.

- When selecting an oil separator for an individual compressor, the inlet and outlet connection sizes shall not be smaller than the compressor discharge line size.
- Heatcraft Australia supplies the "OS" series oil separator(s) WITHOUT pre-charged oil.
 - 5a. The nominal amount of oil to be pre-charged is only a general guidance to ensure satisfactory operation at initial start up.
 - 5b. The actual system operating charge is to be determined by the commissioning personnel and must not exceed maximum operating levels.
 - 5c. It is customer's responsibility to ensure that the compressor(s) are operating at a satisfactory oil level.
- Heatcraft Australia reserves the rights to make changes to this specification without notice as part of our Continuous Product Improvement policy.

Engineering Manager Must Approve All Documents For Publication Using This Data - Created On 22-April-2005

Distribution - H:\ENG_R&D\CL FILES; Heatcraft Business Management System

INITIAL ISSUE 12-Nov-2007

EN 36802

Released For Publication

DRN	CKD	APPR.
AX	DJU	DJU
DATE	DATE	DATE
12-Nov-2007	15-Nov-2007	15-Nov-2007