



Brazed Plate Heat Exchanger Oil Cooler

Description

Baode DOC oil cooler are used to exchange heat between oil & collant. They are high performance components and provide a high level of efficiency combined with compact dimensions and low weight. Their efficiency reduces the amount of cooling water required for heat transfer which results in low operating costs.

Features

Plates and connections are manufactured from stainless steel to AISI 316, 1.4401, vacuum-brazed with copper / stainless. The special molding of the plates produces the turbulent flow necessary for effective heat transfer and provides the plate heat exchanger with a high level of mechanical strength. Nickel & Stainless brazed option available

Operating Details

Medium:

- Water glycol (coolants)
- HFC operating fluids
- Water
- Oil

Contamination:

The quantity of particles in suspension should be less than 10 mg/l.

Particle size < 0.6 mm (spherical).

Thread-like particles cause a rapid rise in pressure drops.

Temperature Range:

- 50° to 437°F (10° to 225°C)

(freezing point and boiling point must be taken into consideration!)

Pressure:

- Max Design pressure. 30bar / 45bar
- Test pressure: 45bar/60bar

Corrosion:

The following limits refer to a pH value of 7

- free chlorine, $CL_2 < 0.5$ ppm
- chloride ions $CL < 700$ ppm at 20 °C
- < 200 ppm at 50 °C

Other Limits:

- ph 7 – 10
- sulphate $SO_4^{2-} < 100$ ppm
- $[HCO_3^-] / [SO_4^{2-}] > 1$
- ammonia, $NH_3 < 10$ ppm
- free $CO < 10$ ppm

The following ions are not corrosive under normal conditions: phosphate, nitrate, nitrite, iron, manganese, sodium and potassium

Applications:



Agricultural



Automotive



Construction



Gearboxes



Industrial



Elevators



Commercial
Municipal



Power
Generation



Pulp & Paper



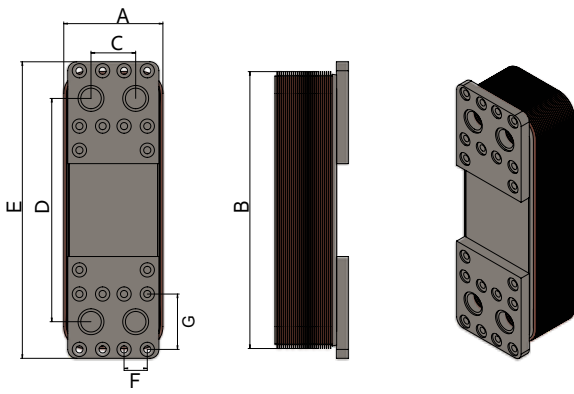
Railways



Shipbuilding



Steel / Heavy
Industry



Dimensions (MM)

Model	A	B	C	D	E	F	G
DOC30	111	310	50	250	332	28	62
DOC60	111	525	50	466	548	28	62
DOC110	191	616	92	519	635	40	90

*Other connections also available. include thread, round flange,

Oil 32 LT

Oil VG 32 65/49 °C
Water 21/32 °C

KW	HP	Model	Number of plates	Flow Prim [L/m]	Flow Sec [L/m]	Height (mm)	Width (mm)	Depth (mm)
3.7	5	DOC30	10	7.9	4.9	332	111	36
7.5	10	DOC30	10	15.9	9.5	332	111	36
11.2	15	DOC30	10	23.8	14.4	332	111	36
15.0	20	DOC30	18	31.8	19.3	332	111	53
18.7	25	DOC30	18	39.7	24.2	332	111	53
22.4	30	DOC30	18	47.3	28.8	332	111	53
26.2	35	DOC30	24	55.3	33.7	332	111	69
29.9	40	DOC30	24	63.2	38.6	332	111	69
33.7	45	DOC30	24	71.2	43.5	332	111	69
37.4	50	DOC30	24	79.1	48.1	332	111	69
44.9	60	DOC30	34	95.0	57.9	332	111	91
52.4	70	DOC30	34	110.9	67.4	332	111	91
59.9	80	DOC30	34	126.4	77.2	332	111	91
67.4	90	DOC30	44	142.3	86.7	332	111	114
74.8	100	DOC30	44	158.2	96.5	332	111	114
93.5	125	DOC30	60	198.0	120.7	332	111	150
112.2	150	DOC30	60	237.3	141.0	332	111	150
130.9	175	DOC110	40	277.1	168.8	635	191	122
149.6	200	DOC110	50	316.4	193.0	635	191	150
168.4	225	DOC110	50	356.2	216.9	635	191	150
187.1	250	DOC110	60	395.5	241.1	635	191	178
205.8	275	DOC110	60	435.3	265.3	635	191	178
224.5	300	DOC110	70	474.6	289.6	635	191	206

Oil 32 HT

Oil VG 32 65/49 °C
Water 30/40 °C

KW	HP	Model	Number of plates	Flow Prim [L/m]	Flow Sec [L/m]	Height (mm)	Width (mm)	Depth (mm)
3.7	5	DOC30	10	7.9	4.9	332	111	36
7.5	10	DOC30	10	15.9	9.8	332	111	36
11.2	15	DOC30	18	23.8	14.4	332	111	53
15.0	20	DOC30	18	31.8	19.3	332	111	53
18.7	25	DOC30	24	39.7	24.2	332	111	69
22.4	30	DOC30	24	47.3	29.1	332	111	69
26.2	35	DOC30	34	55.3	34.1	332	111	91
29.9	40	DOC30	34	63.2	38.6	332	111	91
33.7	45	DOC30	34	71.2	43.5	332	111	91
37.4	50	DOC30	50	79.1	48.4	332	111	127
44.9	60	DOC30	50	95.0	57.9	332	111	127
52.4	70	DOC30	50	110.9	67.8	332	111	127
59.9	80	DOC30	70	126.4	72.0	332	111	173
67.4	90	DOC30	70	142.3	87.1	332	111	173
74.8	100	DOC30	100	158.2	96.9	332	111	241
93.5	125	DOC30	100	198.0	121.1	332	111	241
112.2	150	DOC110	40	237.3	145.3	635	191	122
130.9	175	DOC110	40	277.1	169.6	635	191	122
149.6	200	DOC110	50	316.4	193.8	635	191	150
168.4	225	DOC110	50	356.2	218.0	635	191	150
187.1	250	DOC110	60	395.5	242.2	635	191	178
205.8	275	DOC110	60	435.3	266.5	635	191	178
224.5	300	DOC110	70	474.6	290.7	635	191	206

Oil 46 LT

Oil VG 46 65/49 °C
Water 21/32 °C

KW	HP	Model	Number of plates	Flow Prim [L/m]	Flow Sec [L/m]	Height (mm)	Width (mm)	Depth (mm)
3.7	5	DOC30	10	7.9	4.9	332	111	36
7.5	10	DOC30	10	15.9	9.5	332	111	36
11.2	15	DOC30	10	23.8	14.4	332	111	36
15.0	20	DOC30	18	31.8	19.3	332	111	53
18.7	25	DOC30	18	39.7	24.2	332	111	53
22.4	30	DOC30	18	47.3	28.8	332	111	53
26.2	35	DOC30	24	55.3	33.7	332	111	69
29.9	40	DOC30	24	63.2	38.6	332	111	69
33.7	45	DOC30	34	71.2	43.5	332	111	91
37.4	50	DOC30	34	79.1	48.1	332	111	91
44.9	60	DOC30	34	95.0	57.9	332	111	91
52.4	70	DOC30	44	110.9	67.4	332	111	114
59.9	80	DOC30	44	126.4	77.2	332	111	114
67.4	90	DOC30	50	142.3	86.7	332	111	127
74.8	100	DOC30	60	158.2	96.5	332	111	150
93.5	125	DOC30	70	198.0	120.7	332	111	173
112.2	150	DOC30	70	237.3	141.0	332	111	173
130.9	175	DOC110	40	277.1	168.8	635	191	122
149.6	200	DOC110	50	316.4	193.0	635	191	150
168.4	225	DOC110	50	356.2	216.9	635	191	150
187.1	250	DOC110	60	395.5	241.1	635	191	178
205.8	275	DOC110	70	435.3	265.3	635	191	206
224.5	300	DOC110	70	474.6	289.6	635	191	206

Oil 46 HT

Oil VG 46 65/49 °C
Water 30/40 °C

KW	HP	Model	Number of plates	Flow Prim [L/m]	Flow Sec [L/m]	Height (mm)	Width (mm)	Depth (mm)
3.7	5	DOC30	10	7.9	4.9	332	111	36
7.5	10	DOC30	18	15.9	9.8	332	111	53
11.2	15	DOC30	18	23.8	14.4	332	111	53
15.0	20	DOC30	18	31.8	19.3	332	111	53
18.7	25	DOC30	24	39.7	24.2	332	111	69
22.4	30	DOC30	34	47.3	29.1	332	111	91
26.2	35	DOC30	34	55.3	34.1	332	111	91
29.9	40	DOC30	34	63.2	38.6	332	111	91
33.7	45	DOC30	44	71.2	43.5	332	111	114
37.4	50	DOC30	44	79.1	48.4	332	111	114
44.9	60	DOC30	50	95.0	57.9	332	111	127
52.4	70	DOC30	60	110.9	67.8	332	111	150
59.9	80	DOC30	70	126.4	72.0	332	111	173
67.4	90	DOC30	70	142.3	87.1	332	111	173
74.8	100	DOC30	100	158.2	96.9	332	111	241
93.5	125	DOC30	100	198.0	121.1	332	111	241
112.2	150	DOC110	40	237.3	145.3	635	191	122
130.9	175	DOC110	40	277.1	169.6	635	191	122
149.6	200	DOC110	50	316.4	193.8	635	191	150
168.4	225	DOC110	50	356.2	218.0	635	191	150
187.1	250	DOC110	60	395.5	242.2	635	191	178
205.8	275	DOC110	60	435.3	266.5	635	191	178
224.5	300	DOC110	70	474.6	290.7	635	191	206

Oil 68 LT

Oil VG 68 65/49 °C
Water 21/32 °C

KW	HP	Model	Number of plates	Flow Prim [L/m]	Flow Sec [L/m]	Height (mm)	Width (mm)	Depth (mm)
3.7	5	DOC30	10	7.9	4.9	332	111	36
7.5	10	DOC30	10	15.9	9.5	332	111	36
11.2	15	DOC30	18	23.8	14.4	332	111	53
15.0	20	DOC30	18	31.8	19.3	332	111	53
18.7	25	DOC30	18	39.7	24.2	332	111	53
22.4	30	DOC30	24	47.3	28.8	332	111	69
26.2	35	DOC30	24	55.3	33.7	332	111	69
29.9	40	DOC30	24	63.2	38.6	332	111	69
33.7	45	DOC30	34	71.2	43.5	332	111	91
37.4	50	DOC30	34	79.1	48.1	332	111	91
44.9	60	DOC30	34	95.0	57.9	332	111	91
52.4	70	DOC30	50	110.9	67.4	332	111	127
59.9	80	DOC30	50	126.4	77.2	332	111	127
67.4	90	DOC30	50	142.3	86.7	332	111	127
74.8	100	DOC30	60	158.2	96.5	332	111	150
93.5	125	DOC30	70	198.0	120.7	332	111	173
112.2	150	DOC30	100	237.3	141.0	332	111	241
130.9	175	DOC110	50	277.1	168.8	635	191	150
149.6	200	DOC110	60	316.4	193.0	635	191	178
168.4	225	DOC110	60	356.2	216.9	635	191	178
187.1	250	DOC110	70	395.5	241.1	635	191	206
205.8	275	DOC110	80	435.3	265.3	635	191	234
224.5	300	DOC110	80	474.6	289.6	635	191	234

Oil 68 HT

Oil VG 68 65/49 °C
Water 30/40 °C

KW	HP	Model	Number of plates	Flow Prim [L/m]	Flow Sec [L/m]	Height (mm)	Width (mm)	Depth (mm)
3.7	5	DOC30	24	7.9	4.9	332	111	69
7.5	10	DOC30	24	15.9	9.8	332	111	69
11.2	15	DOC30	34	23.8	14.4	332	111	91
15.0	20	DOC30	34	31.8	19.3	332	111	91
18.7	25	DOC30	44	39.7	24.2	332	111	114
22.4	30	DOC30	44	47.3	29.1	332	111	114
26.2	35	DOC30	50	55.3	34.1	332	111	127
29.9	40	DOC30	50	63.2	38.6	332	111	127
33.7	45	DOC30	60	71.2	43.5	332	111	150
37.4	50	DOC30	70	79.1	48.4	332	111	173
44.9	60	DOC30	100	95.0	57.9	332	111	241
52.4	70	DOC30	100	110.9	67.8	332	111	241
59.9	80	DOC30	100	126.4	72.0	332	111	241
67.4	90	DOC30	100	142.3	87.1	332	111	241
74.8	100	DOC30	100	158.2	96.9	332	111	241
93.5	125	DOC110	40	198.0	121.1	635	191	122
112.2	150	DOC110	40	237.3	145.3	635	191	122
130.9	175	DOC110	50	276.7	169.6	635	191	150
149.6	200	DOC110	60	316.4	193.8	635	191	178
168.4	225	DOC110	60	355.8	218.0	635	191	178
187.1	250	DOC110	70	395.5	242.2	635	191	206
205.8	275	DOC110	70	435.3	266.5	635	191	206
224.5	300	DOC110	80	474.6	290.7	635	191	234

Oil 100 LT

Oil VG 100 65/49 °C
Water 21/32 °C

KW	HP	Model	Number of plates	Flow Prim [L/m]	Flow Sec [L/m]	Height (mm)	Width (mm)	Depth (mm)
3.7	5	DOC30	18	7.9	4.9	332	111	53
7.5	10	DOC30	18	15.9	9.5	332	111	53
11.2	15	DOC30	18	23.8	14.4	332	111	53
15.0	20	DOC30	24	31.8	19.3	332	111	69
18.7	25	DOC30	24	39.7	24.2	332	111	69
22.4	30	DOC30	34	47.3	28.8	332	111	91
26.2	35	DOC30	34	55.3	33.7	332	111	91
29.9	40	DOC30	34	63.2	38.6	332	111	91
33.7	45	DOC30	44	71.2	43.5	332	111	114
37.4	50	DOC30	44	79.1	48.1	332	111	114
44.9	60	DOC30	50	95.0	57.9	332	111	127
52.4	70	DOC30	60	110.9	67.4	332	111	150
59.9	80	DOC30	70	126.4	77.2	332	111	173
67.4	90	DOC30	100	142.3	86.7	332	111	241
74.8	100	DOC30	100	158.2	96.5	332	111	241
93.5	125	DOC30	100	198.0	120.7	332	111	241
112.2	150	DOC110	50	237.3	141.0	635	191	150
130.9	175	DOC110	60	277.1	168.8	635	191	178
149.6	200	DOC110	70	316.4	193.0	635	191	206
168.4	225	DOC110	70	356.2	216.9	635	191	206
187.1	250	DOC110	80	395.5	241.1	635	191	234
205.8	275	DOC110	90	435.3	265.3	635	191	262
224.5	300	DOC110	100	474.6	289.6	635	191	290

Oil 100 HT

Oil VG 100 65/49 °C
Water 30/40 °C

KW	HP	Model	Number of plates	Flow Prim [L/m]	Flow Sec [L/m]	Height (mm)	Width (mm)	Depth (mm)
3.7	5	DOC30	24	7.9	4.9	332	111	69
7.5	10	DOC30	34	15.9	9.8	332	111	91
11.2	15	DOC30	50	23.8	14.4	332	111	127
15.0	20	DOC30	60	31.8	19.3	332	111	150
18.7	25	DOC30	100	39.7	24.2	332	111	241
22.4	30	DOC30	100	47.3	29.1	332	111	241
26.2	35	DOC30	100	55.3	34.1	332	111	241
29.9	40	DOC60	30	63.2	38.6	548	111	81
33.7	45	DOC60	40	71.2	43.5	548	111	109
37.4	50	DOC60	40	79.1	48.4	548	111	109
44.9	60	DOC60	50	95.0	57.9	548	111	132
52.4	70	DOC60	50	110.9	67.8	548	111	132
59.9	80	DOC60	60	126.4	72.0	548	111	157
67.4	90	DOC60	80	142.3	87.1	548	111	203
74.8	100	DOC60	80	158.2	96.9	548	111	203
93.5	125	DOC60	100	198.0	121.1	548	111	251
112.2	150	DOC110	50	237.3	145.3	635	191	150
130.9	175	DOC110	60	277.1	169.6	635	191	178
149.6	200	DOC110	70	316.4	193.8	635	191	206
168.4	225	DOC110	70	356.2	218.0	635	191	206
187.1	250	DOC110	80	395.5	242.2	635	191	234
205.8	275	DOC110	90	435.3	266.5	635	191	262
224.5	300	DOC110	100	474.6	290.7	635	191	290

Oil 150 LT

Oil VG 150 65/49 °C
Water 21/32 °C

KW	HP	Model	Number of plates	Flow Prim [L/m]	Flow Sec [L/m]	Height (mm)	Width (mm)	Depth (mm)
3.7	5	DOC30	18	7.9	4.9	332	111	53
7.5	10	DOC30	24	15.5	9.5	332	111	69
11.2	15	DOC30	34	23.5	14.4	332	111	91
15.0	20	DOC30	50	31.4	19.3	332	111	127
18.7	25	DOC30	60	39.0	24.2	332	111	150
22.4	30	DOC30	70	46.9	28.8	332	111	173
26.2	35	DOC30	100	51.0	33.7	332	111	241
29.9	40	DOC30	100	62.5	38.6	332	111	241
33.7	45	DOC30	100	70.4	43.5	332	111	241
37.4	50	DOC30	100	78.0	48.1	332	111	241
44.9	60	DOC110	30	93.9	57.9	635	191	94
52.4	70	DOC110	30	109.4	67.4	635	191	94
59.9	80	DOC110	40	124.9	77.2	635	191	122
67.4	90	DOC110	40	140.8	86.7	635	191	122
74.8	100	DOC110	40	156.3	96.5	635	191	122
93.5	125	DOC110	60	195.3	120.7	635	191	178
112.2	150	DOC110	60	234.3	141.0	635	191	178
130.9	175	DOC110	80	273.7	168.8	635	191	234
149.6	200	DOC110	80	312.6	193.0	635	191	234
168.4	225	DOC110	100	351.6	216.9	635	191	290
187.1	250	DOC110	100	390.6	241.1	635	191	290
205.8	275	DOC110	120	430.0	265.3	635	191	290
224.5	300	DOC110	150	469.0	289.6	635	191	290

Oil 150 HT

Oil VG 150 65/49 °C
Water 30/40 °C

KW	HP	Model	Number of plates	Flow Prim [L/m]	Flow Sec [L/m]	Height (mm)	Width (mm)	Depth (mm)
3.7	5	DOC30	24	7.9	4.9	332	111	69
7.5	10	DOC30	34	15.5	9.8	332	111	91
11.2	15	DOC30	50	23.5	14.4	332	111	127
15.0	20	DOC30	70	31.4	19.3	332	111	173
18.7	25	DOC30	100	39.0	24.2	332	111	241
22.4	30	DOC30	100	46.9	29.1	332	111	241
26.2	35	DOC30	100	51.0	34.1	332	111	241
29.9	40	DOC60	40	62.5	38.6	548	111	104
33.7	45	DOC60	50	70.4	43.5	548	111	130
37.4	50	DOC60	50	78.0	48.4	548	111	130
44.9	60	DOC60	60	93.9	57.9	548	111	152
52.4	70	DOC60	80	109.4	67.8	548	111	201
59.9	80	DOC60	80	124.9	72.0	548	111	201
67.4	90	DOC60	80	140.8	87.1	548	111	201
74.8	100	DOC60	100	156.3	96.9	548	111	249
93.5	125	DOC110	60	195.3	121.1	635	191	178
112.2	150	DOC110	60	234.3	145.3	635	191	178
130.9	175	DOC110	80	273.7	169.6	635	191	234
149.6	200	DOC110	80	312.6	193.8	635	191	234
168.4	225	DOC110	100	351.6	218.0	635	191	290
187.1	250	DOC110	100	390.6	242.2	635	191	290
205.8	275	DOC110	120	430.0	266.5	635	191	290
224.5	300	DOC110	150	469.0	290.7	635	191	290

Oil 220 LT

Oil VG 220 65/49 °C
Water 21/32 °C

KW	HP	Model	Number of plates	Flow Prim [L/m]	Flow Sec [L/m]	Height (mm)	Width (mm)	Depth (mm)
3.7	5	DOC30	18	7.9	4.9	332	111	53
7.5	10	DOC30	24	15.5	9.5	332	111	69
11.2	15	DOC30	34	23.5	14.4	332	111	91
15.0	20	DOC30	50	31.4	19.3	332	111	127
18.7	25	DOC30	60	39.0	24.2	332	111	150
22.4	30	DOC30	70	46.9	28.8	332	111	173
26.2	35	DOC30	100	54.9	33.7	332	111	241
29.9	40	DOC30	100	62.5	38.6	332	111	241
33.7	45	DOC30	100	70.4	43.5	332	111	241
37.4	50	DOC110	30	78.3	48.1	635	191	94
44.9	60	DOC110	40	93.9	57.9	635	191	122
52.4	70	DOC110	40	109.4	67.4	635	191	122
59.9	80	DOC110	50	124.9	77.2	635	191	150
67.4	90	DOC110	50	140.8	86.7	635	191	150
74.8	100	DOC110	60	156.3	96.5	635	191	178
93.5	125	DOC110	70	195.3	120.7	635	191	206
112.2	150	DOC110	90	234.7	141.0	635	191	262
130.9	175	DOC110	100	273.7	168.8	635	191	290
149.6	200	DOC110	120	312.6	193.0	635	191	345
168.4	225	DOC110	150	351.6	216.9	635	191	429
187.1	250	DOC110	150	391.0	241.1	635	191	429
205.8	275	DOC110	190	430.0	265.3	635	191	541
224.5	300	DOC110	190	469.0	289.6	635	191	541

Oil 220 HT

Oil VG 220 65/49 °C
Water 30/40 °C

KW	HP	Model	Number of plates	Flow Prim [L/m]	Flow Sec [L/m]	Height (mm)	Width (mm)	Depth (mm)
3.7	5	DOC30	24	7.9	4.9	332	111	69
7.5	10	DOC30	34	15.5	9.8	332	111	91
11.2	15	DOC30	50	23.5	14.4	332	111	127
15.0	20	DOC30	70	31.4	19.3	332	111	173
18.7	25	DOC30	100	389.9	24.2	332	111	241
22.4	30	DOC30	100	46.9	29.1	332	111	241
26.2	35	DOC30	100	17.0	34.1	332	111	241
29.9	40	DOC60	60	62.5	38.6	548	111	152
33.7	45	DOC60	60	70.4	43.5	548	111	152
37.4	50	DOC60	80	78.3	48.4	548	111	201
44.9	60	DOC60	80	93.9	57.9	548	111	201
52.4	70	DOC60	100	109.4	67.8	548	111	249
59.9	80	DOC110	60	124.9	72.0	635	191	178
67.4	90	DOC110	60	140.8	87.1	635	191	178
74.8	100	DOC110	70	156.3	96.9	635	191	206
93.5	125	DOC110	100	195.3	121.1	635	191	290
112.2	150	DOC110	100	234.7	145.3	635	191	290
130.9	175	DOC110	120	273.7	169.6	635	191	345
149.6	200	DOC110	150	312.6	193.8	635	191	429
168.4	225	DOC110	150	351.6	218.0	635	191	429
187.1	250	DOC110	190	391.0	242.2	635	191	541
205.8	275	DOC110	190	430.0	266.5	635	191	541
224.5	300	DOC110	190	469.0	290.7	635	191	541

Oil 320 LT

Oil VG 320 65/49 °C
Water 21/32 °C

KW	HP	Model	Number of plates	Flow Prim [L/m]	Flow Sec [L/m]	Height (mm)	Width (mm)	Depth (mm)
3.7	5	DOC30	18	7.9	4.9	332	111	53
7.5	10	DOC30	24	15.5	9.5	332	111	69
11.2	15	DOC30	34	23.5	14.4	332	111	91
15.0	20	DOC30	44	31.0	19.3	332	111	114
18.7	25	DOC30	60	39.0	24.2	332	111	150
22.4	30	DOC30	70	46.6	28.8	332	111	173
26.2	35	DOC30	100	51.0	33.7	332	111	241
29.9	40	DOC30	100	62.1	38.6	332	111	241
33.7	45	DOC30	100	70.0	43.5	332	111	241
37.4	50	DOC110	40	72.0	48.1	635	191	122
44.9	60	DOC110	50	93.5	57.9	635	191	150
52.4	70	DOC110	60	109.0	67.4	635	191	178
59.9	80	DOC110	70	121.0	77.2	635	191	206
67.4	90	DOC110	70	140.0	86.7	635	191	206
74.8	100	DOC110	80	155.6	96.5	635	191	234
93.5	125	DOC110	100	192.0	120.7	635	191	290
112.2	150	DOC110	120	233.2	141.0	635	191	345
130.9	175	DOC110	150	272.1	168.8	635	191	429
149.6	200	DOC110	190	311.1	193.0	635	191	541
168.4	225	DOC110	190	350.1	216.9	635	191	541

Oil 320 HT

Oil VG 320 65/49 °C
Water 30/40 °C

KW	HP	Model	Number of plates	Flow Prim [L/m]	Flow Sec [L/m]	Height (mm)	Width (mm)	Depth (mm)
3.7	5	DOC30	24	7.9	4.9	332	111	69
7.5	10	DOC30	34	15.5	9.8	332	111	91
11.2	15	DOC30	50	23.5	14.4	332	111	127
15.0	20	DOC30	70	31.0	19.3	332	111	173
18.7	25	DOC30	100	39.0	24.2	332	111	241
22.4	30	DOC30	100	46.6	29.1	332	111	241
26.2	35	DOC30	100	51.0	34.1	332	111	241
29.9	40	DOC110	30	62.1	38.6	635	191	94
33.7	45	DOC110	40	70.0	43.5	635	191	122
37.4	50	DOC110	40	719.0	48.4	635	191	122
44.9	60	DOC110	50	93.5	57.9	635	191	150
52.4	70	DOC110	60	109.0	67.8	635	191	178
59.9	80	DOC110	70	121.1	719.0	635	191	206
67.4	90	DOC110	70	140.0	87.1	635	191	206
74.8	100	DOC110	80	155.6	96.9	635	191	234
93.5	125	DOC110	100	191.0	121.1	635	191	290
112.2	150	DOC110	120	233.2	145.3	635	191	345
130.9	175	DOC110	150	272.1	169.6	635	191	429
149.6	200	DOC110	190	311.1	193.8	635	191	541
168.4	225	DOC110	190	350.1	218.0	635	191	94