

# R.E.S.L

## Richmonds Earl Shilton Limited

Specialist Distributors of Compressors and Refrigeration Spares

### Model: ZB15KCE-TFD

#### Data

#### Technical data

Nominal motor power [HP]:	2
Displacement [m <sup>3</sup> /h]:	5,9
Weight [kg]:	26
Oil charge [dm <sup>3</sup> ]:	0,7

#### Electrical data

Power supply [V/~/Hz]:	380-420V/3/50Hz
Locked rotor current [A]:	26
Max. operating current [A]:	4,3
Winding resistance [ $\Omega$ ]:	1,79

#### Connections

	<u>milimeters</u>	<u>inches</u>
Suction line:		1 1/4"
Discharge line:		1"

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### Model: ZB15KCE-TFD

Capacity

R22

#### Cooling capacity [kW]

$t_c \setminus t_e$	-25	-20	-15	-10	-5	0	5	10
25	2.22	2.78	3.43	4.18	5.05	6.06	7.23	-
30	2.08	2.63	3.26	3.98	4.82	5.79	6.91	8.19
35	1.94	2.47	3.08	3.78	4.58	5.51	6.58	7.80
40	1.79	2.31	2.89	3.56	4.33	5.21	6.23	7.40
45	-	2.13	2.70	3.33	4.06	4.90	5.87	6.98
50	-	-	2.48	3.09	3.78	4.58	5.49	6.54
55	-	-	-	2.82	3.47	4.22	5.08	6.07
60	-	-	-	-	3.14	3.84	4.65	5.58
65	-	-	-	-	-	3.44	4.19	5.05

#### Power input [kW]

$t_c \setminus t_e$	-25	-20	-15	-10	-5	0	5	10
25	0.94	0.93	0.93	0.93	0.97	1.04	1.18	-
30	1.09	1.09	1.09	1.08	1.09	1.14	1.23	1.38
35	1.24	1.26	1.26	1.25	1.25	1.26	1.32	1.42
40	1.40	1.44	1.45	1.44	1.43	1.42	1.45	1.51
45	-	1.62	1.64	1.64	1.62	1.61	1.61	1.64
50	-	-	1.84	1.85	1.84	1.81	1.80	1.80
55	-	-	-	2.06	2.06	2.03	2.01	1.99
60	-	-	-	-	2.28	2.26	2.23	2.20
65	-	-	-	-	-	2.50	2.47	2.43

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**Model: ZB15KCE-TFD**

Capacity

**Current [A]**

<b>t<sub>c</sub> \ t<sub>e</sub></b>	<b>-25</b>	<b>-20</b>	<b>-15</b>	<b>-10</b>	<b>-5</b>	<b>0</b>	<b>5</b>	<b>10</b>
<b>25</b>	2.27	2.28	2.27	2.27	2.30	2.37	2.51	-
<b>30</b>	2.40	2.42	2.42	2.41	2.42	2.47	2.56	2.72
<b>35</b>	2.56	2.60	2.60	2.59	2.58	2.60	2.66	2.78
<b>40</b>	2.73	2.79	2.81	2.80	2.78	2.78	2.81	2.88
<b>45</b>	-	3.00	3.03	3.03	3.01	2.99	2.99	3.03
<b>50</b>	-	-	3.28	3.29	3.27	3.24	3.22	3.22
<b>55</b>	-	-	-	3.57	3.55	3.52	3.48	3.46
<b>60</b>	-	-	-	-	3.86	3.82	3.77	3.73
<b>65</b>	-	-	-	-	-	4.15	4.09	4.03

**Mass flow [kg/s]**

<b>t<sub>c</sub> \ t<sub>e</sub></b>	<b>-25</b>	<b>-20</b>	<b>-15</b>	<b>-10</b>	<b>-5</b>	<b>0</b>	<b>5</b>	<b>10</b>
<b>25</b>	40.90	51.62	63.94	78.31	95.18	115.00	138.23	-
<b>30</b>	39.83	50.51	62.77	77.06	93.83	113.54	136.63	163.57
<b>35</b>	38.75	49.37	61.54	75.72	92.38	111.94	134.88	161.64
<b>40</b>	37.51	48.04	60.10	74.16	90.67	110.07	132.83	159.39
<b>45</b>	-	46.38	58.31	72.22	88.55	107.77	130.32	156.65
<b>50</b>	-	-	56.01	69.74	85.89	104.89	127.21	153.29
<b>55</b>	-	-	-	66.59	82.52	101.28	123.35	149.16
<b>60</b>	-	-	-	-	78.29	96.80	118.58	144.10
<b>65</b>	-	-	-	-	-	91.29	112.77	137.96

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Specialist Distributors of Compressors and Refrigeration Spares

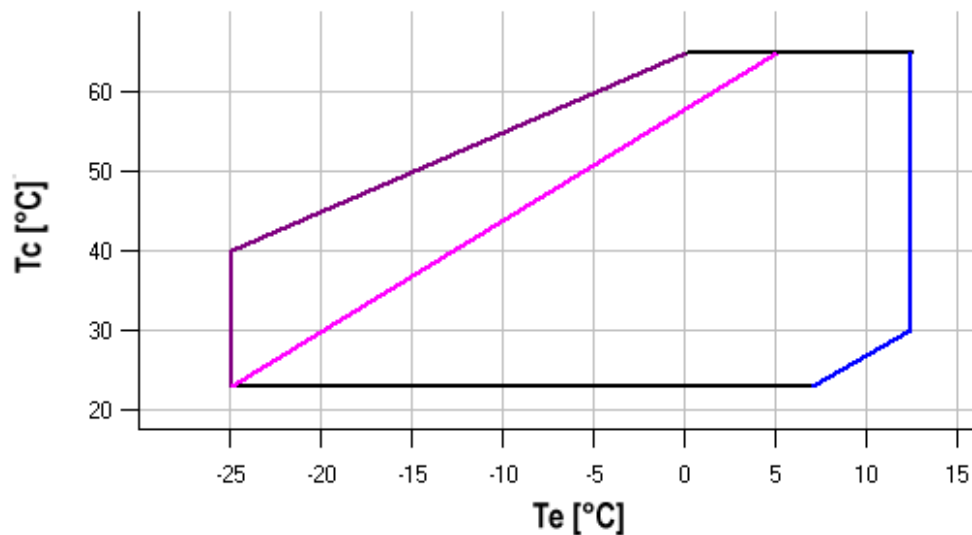
### Model: ZB15KCE-TFD

Capacity

#### C.O.P. [W/W]

$t_c \setminus t_e$	-25	-20	-15	-10	-5	0	5	10
25	2.37	2.98	3.69	4.47	5.22	5.81	6.15	-
30	1.91	2.40	3.00	3.68	4.41	5.10	5.64	5.95
35	1.56	1.95	2.44	3.02	3.67	4.36	4.99	5.49
40	1.28	1.60	2.00	2.47	3.04	3.66	4.31	4.90
45	-	1.32	1.64	2.03	2.50	3.05	3.65	4.26
50	-	-	1.35	1.67	2.06	2.52	3.06	3.64
55	-	-	-	1.37	1.69	2.08	2.53	3.06
60	-	-	-	-	1.38	1.70	2.08	2.54
65	-	-	-	-	-	1.37	1.70	2.08

#### Application range



- Maximum evaporating temperature
- 25°C suction gas temperature
- 10K gas overheat

Operating conditions: suction gas temperature 20°C, 0K subcooling

$t_c$  - Condensing temperature [°C]

$t_e$  - Evaporating temperature [°C]

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## Richmonds Earl Shilton Limited

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### Model: ZB15KCE-TFD

R134a

Capacity

#### Cooling capacity [kW]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15
35	1.45	1.87	2.36	2.93	3.59	4.37	5.28	-
40	1.32	1.74	2.21	2.75	3.38	4.12	4.98	5.97
45	-	1.60	2.05	2.57	3.17	3.87	4.67	5.61
50	-	1.46	1.90	2.39	2.95	3.60	4.36	5.24
55	-	-	1.73	2.19	2.72	3.33	4.04	4.87
60	-	-	-	2.00	2.49	3.05	3.71	4.47
65	-	-	-	1.79	2.24	2.76	3.37	4.07
70	-	-	-	-	1.98	2.45	3.00	3.65
75	-	-	-	-	1.70	2.13	2.63	3.20

#### Power input [kW]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15
35	0.74	0.74	0.73	0.71	0.70	0.71	0.74	-
40	0.86	0.88	0.88	0.86	0.84	0.83	0.84	0.88
45	-	1.03	1.04	1.02	1.00	0.98	0.97	0.99
50	-	1.18	1.20	1.20	1.18	1.15	1.13	1.12
55	-	-	1.38	1.38	1.37	1.34	1.31	1.29
60	-	-	-	1.58	1.57	1.54	1.51	1.47
65	-	-	-	1.78	1.78	1.76	1.72	1.68
70	-	-	-	-	2.00	1.99	1.95	1.91
75	-	-	-	-	2.22	2.22	2.20	2.15

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**Model: ZB15KCE-TFD**

Capacity

### Current [A]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15
35	2.09	2.10	2.10	2.09	2.08	2.09	2.11	-
40	2.19	2.22	2.22	2.21	2.19	2.19	2.19	2.23
45	-	2.35	2.37	2.36	2.34	2.32	2.31	2.32
50	-	2.51	2.54	2.53	2.51	2.48	2.46	2.46
55	-	-	2.73	2.73	2.72	2.68	2.65	2.63
60	-	-	-	2.96	2.95	2.91	2.87	2.84
65	-	-	-	3.22	3.21	3.18	3.13	3.08
70	-	-	-	-	3.49	3.46	3.42	3.36
75	-	-	-	-	3.81	3.78	3.73	3.67

### Mass flow [kg/s]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15
35	29.77	39.43	50.26	62.78	77.50	94.97	115.70	-
40	28.81	38.46	49.26	61.72	76.37	93.74	114.35	138.73
45	-	37.45	48.20	60.59	75.16	92.41	112.89	137.11
50	-	36.27	46.96	59.27	73.73	90.86	111.19	135.24
55	-	-	45.43	57.64	71.98	88.97	109.13	132.99
60	-	-	-	55.58	69.78	86.62	106.60	130.26
65	-	-	-	52.96	67.02	83.68	103.47	126.91
70	-	-	-	-	63.56	80.03	99.61	122.82
75	-	-	-	-	59.29	75.57	94.92	117.89

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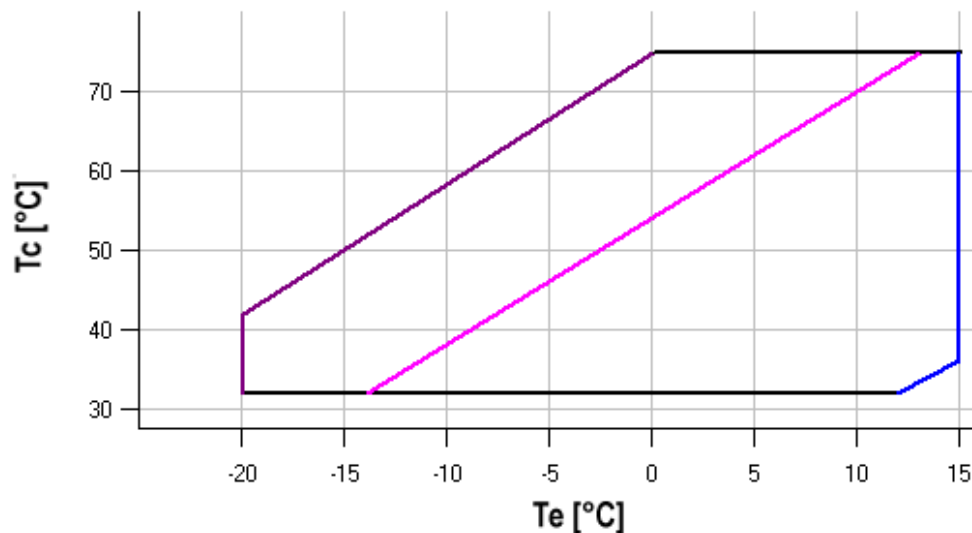
**Model: ZB15KCE-TFD**

Capacity

### C.O.P. [W/W]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15
35	1.97	2.53	3.23	4.10	5.10	6.15	7.10	-
40	1.53	1.97	2.52	3.20	4.02	4.94	5.90	6.76
45	-	1.55	1.98	2.51	3.17	3.94	4.80	5.68
50	-	1.24	1.57	1.99	2.51	3.13	3.86	4.67
55	-	-	1.26	1.59	1.99	2.49	3.09	3.78
60	-	-	-	1.26	1.58	1.98	2.46	3.04
65	-	-	-	1.00	1.26	1.57	1.95	2.42
70	-	-	-	-	0.99	1.23	1.54	1.91
75	-	-	-	-	0.77	0.96	1.20	1.49

### Application range



- Maximum evaporating temperature
- 25°C suction gas temperature
- 10K gas overheat

Operating conditions: suction gas temperature 20°C, 0K subcooling

$t_c$  - Condensing temperature [°C]

$t_e$  - Evaporating temperature [°C]

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## Richmonds Earl Shilton Limited

Specialist Distributors of Compressors and Refrigeration Spares

**Model: ZB15KCE-TFD**

R404A/R507

Capacity

### Cooling capacity [kW]

$t_c \setminus t_e$	-30	-25	-20	-15	-10	-5	0	5	10
10	2.38	2.94	3.63	4.46	-	-	-	-	-
15	2.26	2.80	3.47	4.26	5.19	-	-	-	-
20	2.12	2.65	3.29	4.04	4.93	5.95	-	-	-
25	1.97	2.49	3.10	3.81	4.64	5.60	6.71	-	-
30	1.79	2.30	2.89	3.56	4.34	5.24	6.27	7.45	8.79
35	1.60	2.10	2.66	3.29	4.02	4.86	5.81	6.91	8.14
40	1.39	1.87	2.41	3.01	3.69	4.46	5.34	6.34	7.48
45	1.15	1.63	2.14	2.70	3.33	4.04	4.84	5.76	6.80
50	-	1.36	1.84	2.37	2.95	3.60	4.33	5.16	6.09
55	-	-	1.53	2.02	2.55	3.14	3.80	4.54	5.37
60	-	-	-	1.65	2.14	2.66	3.24	3.90	4.63

### Power input [kW]

$t_c \setminus t_e$	-30	-25	-20	-15	-10	-5	0	5	10
10	0.78	0.80	0.78	0.75	-	-	-	-	-
15	0.87	0.89	0.89	0.86	0.83	-	-	-	-
20	0.97	1.00	1.00	0.98	0.95	0.92	-	-	-
25	1.10	1.12	1.12	1.11	1.08	1.05	1.02	-	-
30	1.25	1.27	1.27	1.25	1.22	1.20	1.17	1.16	1.16
35	1.45	1.46	1.45	1.42	1.39	1.36	1.33	1.31	1.32
40	1.70	1.69	1.67	1.63	1.59	1.55	1.51	1.49	1.49
45	2.01	1.98	1.93	1.88	1.82	1.77	1.72	1.69	1.68
50	-	2.32	2.26	2.18	2.10	2.03	1.97	1.92	1.90
55	-	-	2.64	2.54	2.44	2.34	2.26	2.20	2.16
60	-	-	-	2.97	2.84	2.71	2.61	2.52	2.46



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## Richmonds Earl Shilton Limited

Specialist Distributors of Compressors and Refrigeration Spares

### Model: ZB15KCE-TFD

#### Current [A]

Capacity

$t_c \setminus t_e$	-30	-25	-20	-15	-10	-5	0	5	10
10	2.17	2.19	2.17	2.14	-	-	-	-	-
15	2.23	2.26	2.26	2.23	2.19	-	-	-	-
20	2.31	2.34	2.35	2.33	2.30	2.27	-	-	-
25	2.42	2.46	2.46	2.45	2.42	2.39	2.37	-	-
30	2.58	2.61	2.61	2.59	2.56	2.53	2.51	2.51	2.54
35	2.80	2.82	2.81	2.78	2.74	2.70	2.68	2.67	2.69
40	3.09	3.09	3.06	3.02	2.96	2.91	2.88	2.86	2.87
45	3.46	3.44	3.39	3.32	3.25	3.18	3.12	3.09	3.09
50	-	3.87	3.80	3.70	3.61	3.51	3.43	3.38	3.36
55	-	-	4.30	4.18	4.05	3.93	3.82	3.73	3.68
60	-	-	-	4.75	4.59	4.43	4.29	4.17	4.09

#### Mass flow [kg/s]

$t_c \setminus t_e$	-30	-25	-20	-15	-10	-5	0	5	10
10	47.66	59.86	74.32	91.69	-	-	-	-	-
15	47.28	59.62	74.08	91.32	111.98	-	-	-	-
20	46.53	59.05	73.55	90.69	111.11	135.47	-	-	-
25	45.32	58.05	72.63	89.70	109.92	133.94	162.42	-	-
30	43.56	56.53	71.21	88.25	108.31	132.03	160.07	193.08	231.72
35	41.13	54.39	69.21	86.26	106.18	129.63	157.26	189.73	227.69
40	37.95	51.52	66.53	83.62	103.44	126.66	153.92	185.88	223.19
45	33.91	47.84	63.07	80.23	100.00	123.01	149.94	181.42	218.12
50	-	43.25	58.72	76.00	95.74	118.59	145.22	176.26	212.38
55	-	-	53.40	70.83	90.58	113.31	139.66	170.30	205.88
60	-	-	-	64.62	84.42	107.05	133.18	163.45	198.52

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## Richmonds Earl Shilton Limited

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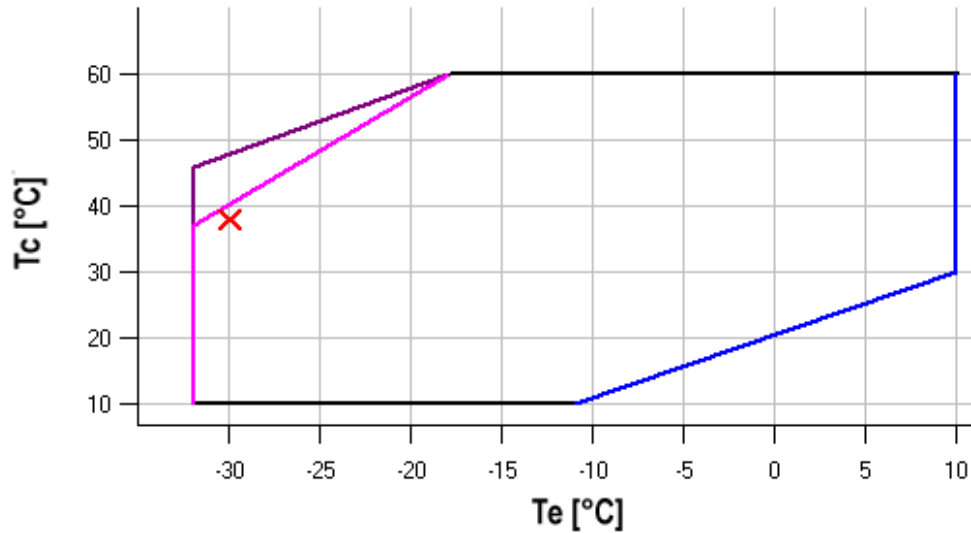
**Model: ZB15KCE-TFD**

**C.O.P. [W/W]**

**Capacity**

$t_c \setminus t_e$	-30	-25	-20	-15	-10	-5	0	5	10
<b>10</b>	3.04	3.69	4.63	5.95	-	-	-	-	-
<b>15</b>	2.60	3.15	3.91	4.93	6.29	-	-	-	-
<b>20</b>	2.19	2.67	3.30	4.13	5.18	6.50	-	-	-
<b>25</b>	1.79	2.22	2.76	3.44	4.30	5.33	6.56	-	-
<b>30</b>	1.43	1.81	2.27	2.85	3.54	4.38	5.36	6.45	7.59
<b>35</b>	1.10	1.43	1.83	2.31	2.89	3.58	4.37	5.25	6.18
<b>40</b>	0.82	1.10	1.44	1.84	2.32	2.88	3.53	4.26	5.02
<b>45</b>	0.57	0.82	1.10	1.44	1.83	2.29	2.82	3.41	4.04
<b>50</b>	-	0.58	0.82	1.09	1.40	1.77	2.20	2.68	3.21
<b>55</b>	-	-	0.58	0.80	1.05	1.34	1.68	2.07	2.49
<b>60</b>	-	-	-	0.56	0.75	0.98	1.24	1.55	1.89

### Application range



- Maximum evaporating temperature
- 25°C suction gas temperature
- 10K gas overheat

Operating conditions: suction gas temperature 20°C, 0K subcooling

$t_c$  - Condensing temperature [°C]

$t_e$  - Evaporating temperature [°C]

# R.E.S.L

## Richmonds Earl Shilton Limited

Specialist Distributors of Compressors and Refrigeration Spares

R407C

**Model: ZB15KCE-TFD**

Capacity

### Cooling capacity [kW]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15
20	2.69	3.36	4.15	5.09	6.18	-	-	-
25	2.53	3.18	3.94	4.84	5.89	7.11	-	-
30	2.37	3.00	3.73	4.58	5.58	6.74	8.09	-
35	2.20	2.81	3.51	4.32	5.27	6.37	7.65	-
40	2.03	2.61	3.27	4.04	4.94	5.98	7.18	-
45	1.84	2.39	3.02	3.74	4.59	5.56	6.70	-
50	-	2.15	2.75	3.42	4.21	5.12	6.19	-
55	-	-	2.45	3.08	3.81	4.65	5.64	-
60	-	-	-	2.70	3.37	4.15	5.06	-
65	-	-	-	-	2.89	3.60	4.44	-

### Power input [kW]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15
20	0.72	0.71	0.70	0.73	0.80	-	-	-
25	0.88	0.86	0.84	0.85	0.88	0.96	-	-
30	1.05	1.04	1.01	1.00	1.00	1.04	1.14	-
35	1.23	1.23	1.20	1.18	1.16	1.17	1.22	-
40	1.41	1.43	1.41	1.38	1.35	1.34	1.35	-
45	1.59	1.63	1.63	1.61	1.57	1.53	1.52	-
50	-	1.84	1.86	1.84	1.80	1.76	1.72	-
55	-	-	2.09	2.09	2.05	2.00	1.95	-
60	-	-	-	2.34	2.32	2.27	2.20	-
65	-	-	-	-	2.58	2.54	2.47	-

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## Richmonds Earl Shilton Limited

Specialist Distributors of Compressors and Refrigeration Spares

### Model: ZB15KCE-TFD

#### Current [A]

#### Capacity

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15
20	2.10	2.09	2.08	2.10	2.16	-	-	-
25	2.22	2.21	2.20	2.19	2.22	2.30	-	-
30	2.37	2.37	2.35	2.33	2.34	2.37	2.47	-
35	2.56	2.56	2.54	2.51	2.50	2.50	2.56	-
40	2.76	2.78	2.77	2.73	2.70	2.68	2.70	-
45	2.99	3.03	3.02	2.99	2.94	2.90	2.89	-
50	-	3.30	3.31	3.28	3.23	3.17	3.13	-
55	-	-	3.62	3.60	3.54	3.48	3.41	-
60	-	-	-	3.95	3.89	3.82	3.73	-
65	-	-	-	-	4.27	4.19	4.10	-

#### Mass flow [kg/s]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15
20	45.60	57.46	71.36	87.89	107.64	-	-	-
25	44.51	56.35	70.20	86.64	106.24	129.60	-	-
30	43.48	55.30	69.08	85.41	104.87	128.05	155.51	-
35	42.33	54.11	67.81	84.03	103.33	126.31	153.54	-
40	40.87	52.59	66.21	82.29	101.42	124.19	151.17	-
45	38.89	50.55	64.07	80.00	98.96	121.50	148.22	-
50	-	47.80	61.19	76.98	95.74	118.05	144.49	-
55	-	-	57.40	73.02	91.57	113.63	139.79	-
60	-	-	-	67.93	86.27	108.07	133.93	-
65	-	-	-	-	79.63	101.16	126.71	-

# R.E.S.L

## Richmonds Earl Shilton Limited

Specialist Distributors of Compressors and Refrigeration Spares

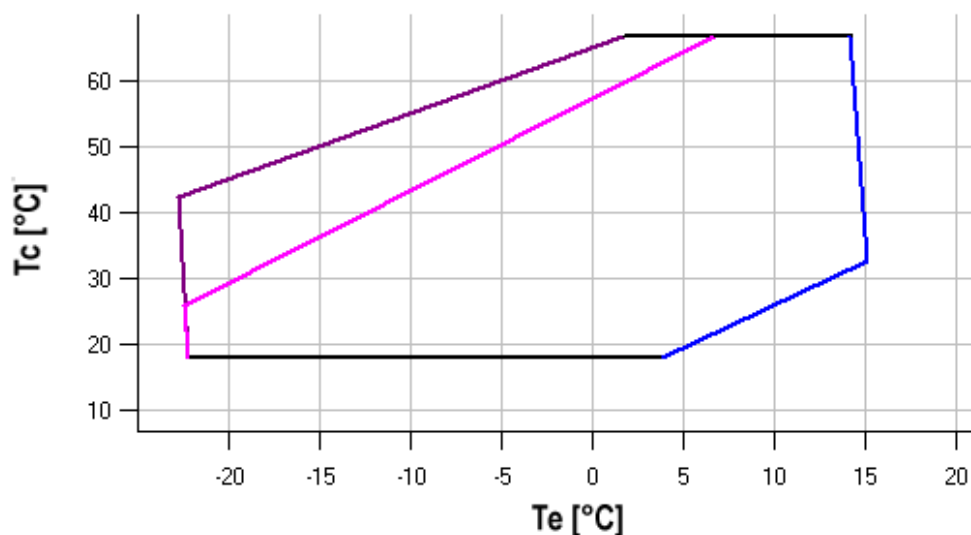
### Model: ZB15KCE-TFD

Capacity

#### C.O.P. [W/W]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15
20	3.73	4.75	5.89	6.97	7.75	-	-	-
25	2.88	3.69	4.67	5.72	6.70	7.40	-	-
30	2.26	2.89	3.68	4.60	5.57	6.46	7.11	-
35	1.79	2.29	2.91	3.67	4.54	5.44	6.26	-
40	1.43	1.83	2.32	2.92	3.65	4.48	5.32	-
45	1.15	1.46	1.85	2.33	2.93	3.63	4.41	-
50	-	1.17	1.48	1.86	2.33	2.92	3.60	-
55	-	-	1.17	1.47	1.85	2.32	2.89	-
60	-	-	-	1.15	1.45	1.83	2.30	-
65	-	-	-	-	1.12	1.42	1.79	-

#### Application range



- Maximum evaporating temperature
- 25°C suction gas temperature
- 10K gas overheat

Operating conditions: suction gas temperature 20°C, 0K subcooling

$t_c$  - Condensing temperature [°C]

$t_e$  - Evaporating temperature [°C]

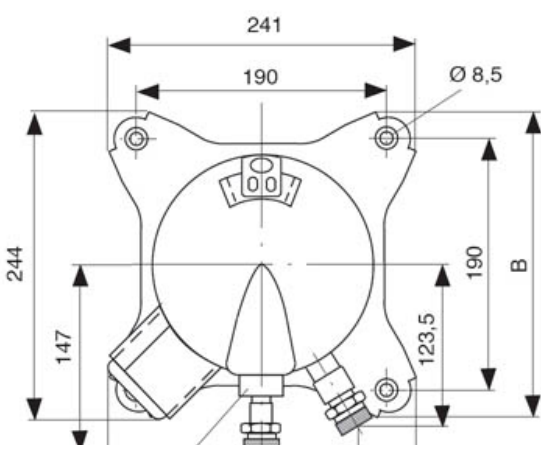
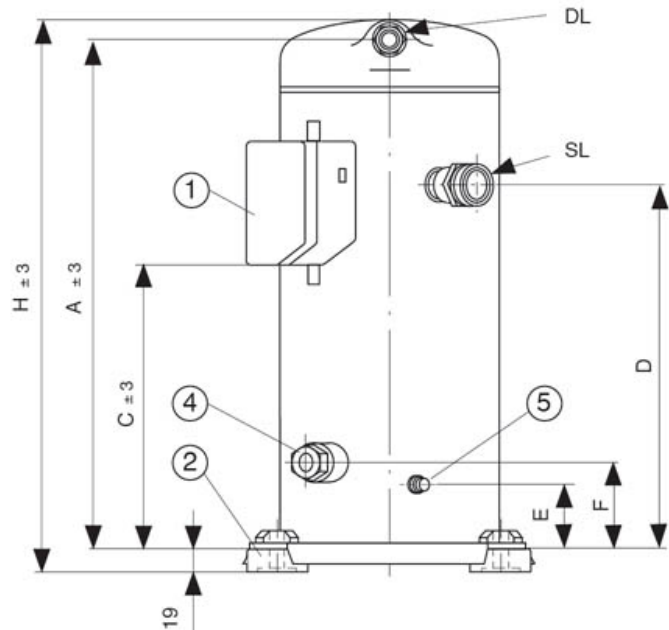
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**Richmonds Earl Shilton Limited**

Specialist Distributors of Compressors and Refrigeration Spares

## Model: ZB15KCE-TFD

### Dimensions



A	343,9 mm
C	199,4 - 205,4 mm
C1	- mm
D	244,6 mm
E	43,9 mm
F	69,4 mm
G	- mm

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**Richmonds Earl Shilton Limited**

**Specialist Distributors of Compressors and Refrigeration Spares**

**Model: ZB15KCE-TFD**

**Image**

