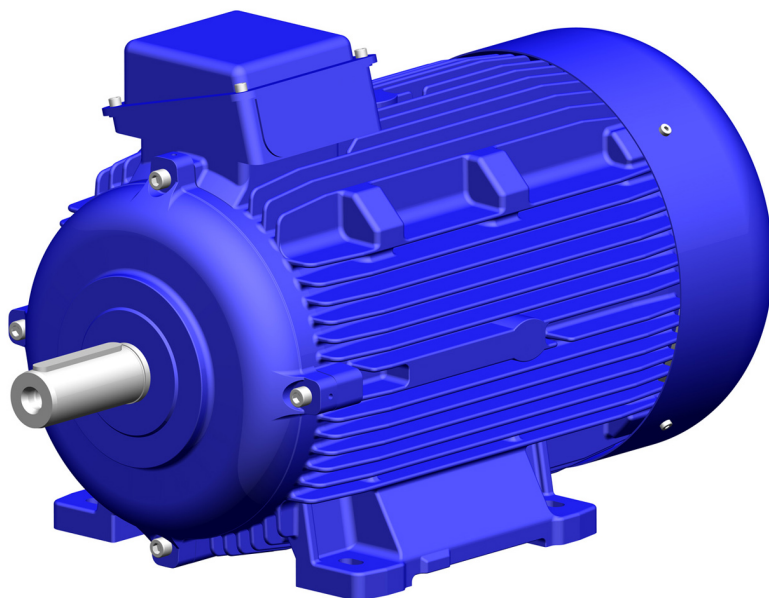




KSB IE3-Motor

Standard Electric Motor Acc. to KSB
Non-explosive Atmospheres
0.75 to 132 kW, IE3
IMB3 and IMV1/IMV15
Data Sheets 2-pole and 4-pole

Motor Catalogue



Legal information/Copyright

Motor Catalogue KSB IE3-Motor

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Overviews

Overview of B3, 2-pole

Table 1: Overview of available motors

Power [kW]		Motor size	Rated voltage				Frequency	Mat. No.	Page
50 Hz	60 Hz		50 Hz		60 Hz				
			Δ	Y	Δ	Y			
0.75	0.75	080M	230	400	-	460	50/60	01583941	(⇒ Page 6)
1.1	1.1	080M	230	400	-	460	50/60	01583942	(⇒ Page 7)
1.5	1.5	090S	230	400	-	460	50/60	01583943	(⇒ Page 8)
2.2	2.2	090L	230	400	-	460	50/60	01583944	(⇒ Page 9)
3	3	100L	400	690	460	-	50/60	01583927	(⇒ Page 10)
4	4	112M	400	690	460	-	50/60	01583928	(⇒ Page 11)
5.5	5.5	132S	400	690	460	-	50/60	01583929	(⇒ Page 12)
7.5	7.5	132S	400	690	460	-	50/60	01583930	(⇒ Page 13)
11	11	160M	400	690	460	-	50/60	01583931	(⇒ Page 14)
15	15	160M	400	690	460	-	50/60	01583932	(⇒ Page 15)
18.5	18.5	160L	400	690	460	-	50/60	01583933	(⇒ Page 16)
22	22	180M	400	690	460	-	50/60	01583896	(⇒ Page 17)
30	30	200L	400	690	460	-	50/60	01583917	(⇒ Page 18)
37	37	200L	400	690	460	-	50/60	01583918	(⇒ Page 19)
45	45	225M	400	690	460	-	50/60	01583919	(⇒ Page 20)
55	55	250M	400	690	460	-	50/60	01583920	(⇒ Page 21)
75	75	280S	400	690	460	-	50/60	01583786	(⇒ Page 22)
90	90	280M	400	690	460	-	50/60	01583855	(⇒ Page 23)
110	110	315S	400	690	460	-	50/60	01583858	(⇒ Page 24)
132	132	315M	400	690	460	-	50/60	01583859	(⇒ Page 25)

Overview of B3, 4-pole

Table 2: Overview of available motors

Power [kW]		Motor size	Rated voltage				Frequency	Mat. No.	Page
50 Hz	60 Hz		50 Hz		60 Hz				
			Δ	Y	Δ	Y			
0.75	0	080M	230	400	-	-	50	01583945	(⇒ Page 26)
1.1	0	090S	230	400	-	-	50	01583946	(⇒ Page 27)
1.5	1.5	090L	230	400	-	460	50/60	01583947	(⇒ Page 28)
2.2	0	100L	230	400	-	-	50	01583934	(⇒ Page 29)
3	3	100L	400	690	460	-	50/60	01583935	(⇒ Page 30)
4	4	112M	400	690	460	-	50/60	01583936	(⇒ Page 31)
5.5	0	132S	400	690	-	-	50	01583937	(⇒ Page 32)
7.5	0	132M	400	690	-	-	50	01583938	(⇒ Page 33)
11	11	160M	400	690	460	-	50/60	01583939	(⇒ Page 34)
15	15	160L	400	690	460	-	50/60	01583940	(⇒ Page 35)
18.5	18.5	180M	400	690	460	-	50/60	01583921	(⇒ Page 36)
22	22	180L	400	690	460	-	50/60	01583922	(⇒ Page 37)
30	30	200L	400	690	460	-	50/60	01583923	(⇒ Page 38)
37	37	225S	400	690	460	-	50/60	01583924	(⇒ Page 39)
45	45	225M	400	690	460	-	50/60	01583925	(⇒ Page 40)
55	55	250M	400	690	460	-	50/60	01583926	(⇒ Page 41)
75	75	280S	400	690	460	-	50/60	01583856	(⇒ Page 42)
90	90	280M	400	690	460	-	50/60	01583857	(⇒ Page 43)
110	110	315S	400	690	460	-	50/60	01583860	(⇒ Page 44)
132	132	315M	400	690	460	-	50/60	01583862	(⇒ Page 45)

Overview of V1, 2-pole

Table 3: Overview of available motors

Power [kW]		Motor size	Rated voltage				Frequency	Mat. No.	Page
50 Hz	60 Hz		50 Hz		60 Hz				
			Δ	Y	Δ	Y			
0.75	0.75	080M	230	400	-	460	50/60	01583975	(⇒ Page 46)
1.1	1.1	080M	230	400	-	460	50/60	01583976	(⇒ Page 47)
1.5	1.5	090S	230	400	-	460	50/60	01583977	(⇒ Page 48)
2.2	2.2	090L	230	400	-	460	50/60	01583981	(⇒ Page 49)
3	3	100L	400	690	460	-	50/60	01583961	(⇒ Page 50)
4	4	112M	400	690	460	-	50/60	01583962	(⇒ Page 51)
90	90	280M	400	690	460	-	50/60	01619779	(⇒ Page 52)
110	110	315S	400	690	460	-	50/60	01619792	(⇒ Page 53)
132	132	315M	400	690	460	-	50/60	01619793	(⇒ Page 54)

Overview of V15, 2-pole

Table 4: Overview of available motors

Power [kW]		Motor size	Rated voltage				Frequency	Mat. No.	Page
50 Hz	60 Hz		50 Hz		60 Hz				
			Δ	Y	Δ	Y			
5.5	5.5	132S	400	690	460	-	50/60	01583963	(⇒ Page 67)
7.5	7.5	132S	400	690	460	-	50/60	01583964	(⇒ Page 68)
11	11	160M	400	690	460	-	50/60	01583965	(⇒ Page 69)
15	15	160M	400	690	460	-	50/60	01583966	(⇒ Page 70)
18.5	18.5	160L	400	690	460	-	50/60	01583967	(⇒ Page 71)
22	22	180M	400	690	460	-	50/60	01583902	(⇒ Page 72)
30	30	200L	400	690	460	-	50/60	01583903	(⇒ Page 73)
37	37	200L	400	690	460	-	50/60	01583904	(⇒ Page 74)
45	45	225M	400	690	460	-	50/60	01583905	(⇒ Page 75)
55	55	250M	400	690	460	-	50/60	01583900	(⇒ Page 76)
75	75	280S	400	690	460	-	50/60	01619778	(⇒ Page 77)

Overview of V1, 4-pole

Table 5: Overview of available motors

Power [kW]		Motor size	Rated voltage				Frequency	Mat. No.	Page
50 Hz	60 Hz		50 Hz		60 Hz				
			Δ	Y	Δ	Y			
0.75	0.75	080M	230	400	-	-	50/60	01583978	(⇒ Page 58)
1.1	0	090S	230	400	-	-	50	01583979	(⇒ Page 59)
1.5	1.5	090L	230	400	-	460	50/60	01583980	(⇒ Page 60)
2.2	0	100L	230	400	-	-	50	01583968	(⇒ Page 61)
3	3	100L	400	690	460	-	50/60	01583969	(⇒ Page 62)
4	4	112M	400	690	460	-	50/60	01583970	(⇒ Page 63)
90	90	280M	400	690	460	-	50/60	01619759	(⇒ Page 64)
110	110	315S	400	690	460	-	50/60	01619795	(⇒ Page 65)
132	132	315M	400	690	460	-	50/60	01619796	(⇒ Page 66)

Overview of V15, 4-pole

Table 6: Overview of available motors

Power [kW]		Motor size	Rated voltage				Frequency	Mat. No.	Page
50 Hz	60 Hz		50 Hz		60 Hz				
			Δ	Y	Δ	Y			
5.5	0	132S	400	690	-	-	50	01583971	(⇒ Page 78)
7.5	0	132M	400	690	-	-	50	01583972	(⇒ Page 79)
11	11	160M	400	690	460	-	50/60	01583973	(⇒ Page 80)
15	15	160L	400	690	460	-	50/60	01583974	(⇒ Page 81)
18.5	18.5	180M	400	690	460	-	50/60	01583906	(⇒ Page 82)
22	22	180L	400	690	460	-	50/60	01583957	(⇒ Page 83)
30	30	200L	400	690	460	-	50/60	01583958	(⇒ Page 84)
37	37	225S	400	690	460	-	50/60	01583959	(⇒ Page 85)
45	45	225M	400	690	460	-	50/60	01583960	(⇒ Page 86)
55	55	250M	400	690	460	-	50/60	01583901	(⇒ Page 87)
75	75	280S	400	690	460	-	50/60	01619758	(⇒ Page 88)

B3 type of construction, 2-pin, 80M

Material: 2-O,75- 80M-BWH6FINTHNWWUWKWB¹⁾

Material number: 01583941

Table 7: General data [50 Hz]

General data		+/-	Values
Motor size		Max.	080M
Type of construction		Max.	B3
Starting method		-	Star a. Delta
Motor flange		-	Without
Weight without attachments	[kg]	Max.	14
Housing material ²⁾		-	4400
Enclosure		-	IP55
Nominal frequency	[Hz]		50/60
Efficiency class		-	IE3 (Premium)
Thermal class F to B		-	Yes
Temperature sensor		-	01
Operation on frequency inverter permitted		-	Yes (acc to motor manufact)
Operating mode		-	Continuous running duty (S1)
Direction of rotation		-	Bi-directional
Motor bearings insulated		-	No
Position of fixed motor bearing		-	Non drive side
Fixed motor bearing reinforced		-	Without
Radial motor bearing reinforced		-	No
Condensate drain		-	No
Bolted feet		-	Yes

Table 8: Efficiency

Electrical data		+/-	50 Hz			60 Hz		
			4/4	3/4	2/4	4/4	3/4	2/4
Efficiency	[%]	min.	80.7	77.5	73.6	77		
Power factor		min.	0.81			0.79		

Table 9: Electrical data

Electrical data		+/-	50 Hz		60 Hz	
			Δ	Y	Δ	Y
Rated voltage	[V]	-	230	400	-	460
Rated current	[A]	-10 %	2.9	1.72	-	1.7
Rated power	[kW]	-	0.75		0.75	
Rated speed	[rpm]	min.	2825		3390	
Rated torque	[Nm]	min.	2.45		2	
Starting current	[IA/IN]	+20 %	7.9		8.4	

Table 10: Mechanical data

Mechanical data		+/-	Values	
			50 Hz	60 Hz
Sound pressure level	[dB]	Max.	63	67
Moment of inertia	[kgm ²]	Max.	0	0
Motor canopy		-	No	

Table 11: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 12: Environment

Environment	+/-	Values
Ambient temperature	[°C]	Max. 40

Table 13: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	1XM25X1,5

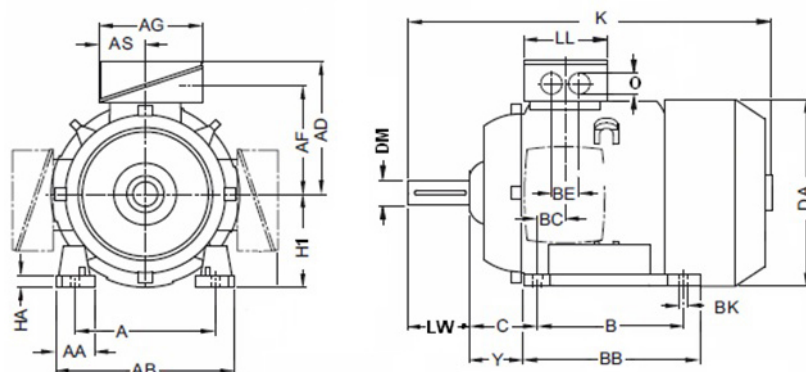


Fig. 1: Envelope dimensions

Table 14: Envelope dimensions A-DLF

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DLF
125	41	155	163	131	126	58	100	124	26.5	32	10	50	159	-

Table 15: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LW	M	N	S	T	Y	Z
19	80	8	-	292	-	-	83	40	-	-	-	-	38	-

¹ The name plate data may vary within the tolerances.

² 1800=grey cast iron, 4400=aluminium

B3 type of construction, 2-pin, 80M

Material: 2-1,10- 80M-BWH6F1NTHNWWUWKWB³⁾

Material number: 01583942

Table 16: General data [50 Hz]

General data	+/-	Values
Motor size	Max.	080M
Type of construction	Max.	B3
Starting method	-	Star a. Delta
Motor flange	-	Without
Weight without attachments [kg]	Max.	12
Housing material ⁴⁾	-	4400
Enclosure	-	IP55
Nominal frequency	[Hz]	50/60
Efficiency class	-	IE3 (Premium)
Thermal class F to B	-	Yes
Temperature sensor	-	01
Operation on frequency inverter permitted	-	Yes (acc to motor manufact)
Operating mode	-	Continuous running duty (S1)
Direction of rotation	-	Bi-directional
Motor bearings insulated	-	No
Position of fixed motor bearing	-	Non drive side
Fixed motor bearing reinforced	-	Without
Radial motor bearing reinforced	-	No
Condensate drain	-	No
Bolted feet	-	Yes

Table 17: Efficiency

Electrical data		+/-	50 Hz			60 Hz		
			4/4	3/4	2/4	4/4	3/4	2/4
Efficiency	[%]	min.	82.7	81	78	84		
Power factor		min.	0.74			0.78		

Table 18: Electrical data

Electrical data		+/-	50 Hz		60 Hz	
			Δ	Y	Δ	Y
Rated voltage	[V]	-	230	400	-	460
Rated current	[A]	-10 %	4.2	2.48	-	2.5
Rated power	[kW]	-	1.1		1.1	
Rated speed	[rpm]	min.	2830		3400	
Rated torque	[Nm]	min.	3.53		3	
Starting current	[IA/IN]	+20 %	7.8		8.4	

Table 19: Mechanical data

Mechanical data		+/-	Values	
			50 Hz	60 Hz
Sound pressure level	[dB]	Max.	63	67
Moment of inertia	[kgm²]	Max.	0	0
Motor canopy		-	No	

Table 20: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 21: Environment

Environment	+/-	Values
Ambient temperature [°C]	Max.	40

Table 22: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	1XM25X1,5

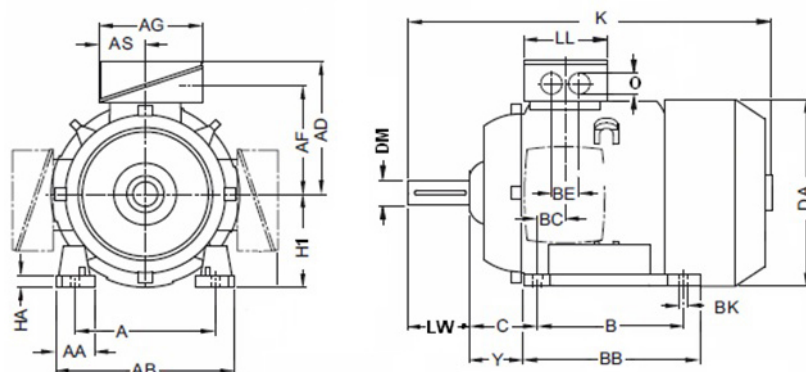


Fig. 2: Envelope dimensions

Table 23: Envelope dimensions A-DLF

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DLF
125	41	155	163	131	126	58	100	124	26.5	32	10	50	159	-

Table 24: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LW	M	N	S	T	Y	Z
19	80	8	-	327	-	-	83	40	-	-	-	-	38	-

³ The name plate data may vary within the tolerances.

⁴ 1800=grey cast iron, 4400=aluminium

B3 type of construction, 2-pin, 90S

Material: 2-1,50- 90S-BWH6FINTHNWWUWKWB⁵⁾

Material number: 01583943

Table 25: General data [50 Hz]

General data	+/-	Values
Motor size	Max.	090S
Type of construction	Max.	B3
Starting method	-	Star a. Delta
Motor flange	-	Without
Weight without attachments [kg]	Max.	18
Housing material ⁶⁾	-	4400
Enclosure	-	IP55
Nominal frequency	[Hz]	50/60
Efficiency class	-	IE3 (Premium)
Thermal class F to B	-	Yes
Temperature sensor	-	01
Operation on frequency inverter permitted	-	Yes (acc to motor manufact)
Operating mode	-	Continuous running duty (S1)
Direction of rotation	-	Bi-directional
Motor bearings insulated	-	No
Position of fixed motor bearing	-	Non drive side
Fixed motor bearing reinforced	-	Without
Radial motor bearing reinforced	-	No
Condensate drain	-	No
Bolted feet	-	Yes

Table 26: Efficiency

Electrical data		+/-	50 Hz			60 Hz		
			4/4	3/4	2/4	4/4	3/4	2/4
Efficiency	[%]	min.	84.2	83.2	80.7	85.5		
Power factor		min.	0.76			0.78		

Table 27: Electrical data

Electrical data		+/-	50 Hz		60 Hz	
			Δ	Y	Δ	Y
Rated voltage	[V]	-	230	400	-	460
Rated current	[A]	-10 %	5.6	3.3	-	3.3
Rated power	[kW]	-	1.5		1.5	
Rated speed	[rpm]	min.	2875		3430	
Rated torque	[Nm]	min.	4.8		4	
Starting current	[IA/IN]	+20 %	8.5		8.8	

Table 28: Mechanical data

Mechanical data		+/-	Values	
			50 Hz	60 Hz
Sound pressure level	[dB]	Max.	68	72
Moment of inertia	[kgm²]	Max.	0	0
Motor canopy		-	No	

Table 29: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 30: Environment

Environment	+/-	Values
Ambient temperature [°C]	Max.	40

Table 31: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	1XM25X1,5

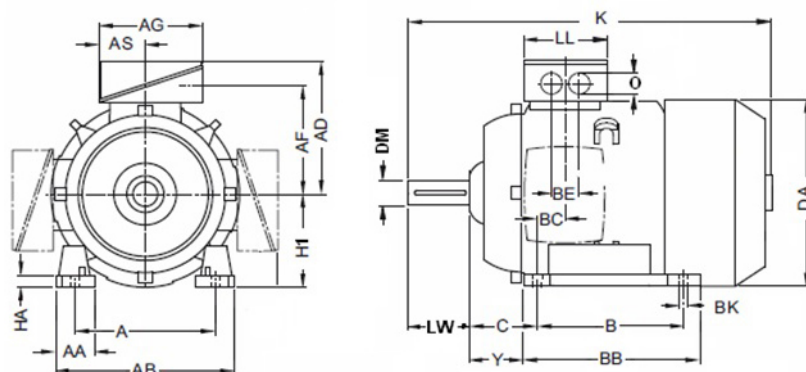


Fig. 3: Envelope dimensions

Table 32: Envelope dimensions A-DLF

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
140	35	170	170	138	126	58	100	146	18.5	40	10	56	178	-

Table 33: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LW	M	N	S	T	Y	Z
24	90	11	-	387	-	-	83	50	-	-	-	-	38	-

⁵ The name plate data may vary within the tolerances.

⁶ 1800=grey cast iron, 4400=aluminium

B3 type of construction, 2-pin, 90L

Material: 2-2,20- 90L-BWH6F1NTHNWWUWKWB⁷⁾

Material number: 01583944

Table 34: General data [50 Hz]

General data	+/-	Values
Motor size	Max.	090L
Type of construction	Max.	B3
Starting method	-	Star a. Delta
Motor flange	-	Without
Weight without attachments [kg]	Max.	20
Housing material ⁸⁾	-	4400
Enclosure	-	IP55
Nominal frequency	[Hz]	50/60
Efficiency class	-	IE3 (Premium)
Thermal class F to B	-	Yes
Temperature sensor	-	01
Operation on frequency inverter permitted	-	Yes (acc to motor manufact)
Operating mode	-	Continuous running duty (S1)
Direction of rotation	-	Bi-directional
Motor bearings insulated	-	No
Position of fixed motor bearing	-	Non drive side
Fixed motor bearing reinforced	-	Without
Radial motor bearing reinforced	-	No
Condensate drain	-	No
Bolted feet	-	Yes

Table 35: Efficiency

Electrical data	+/-	50 Hz	60 Hz
		4/4	3/4
Efficiency [%]	min.	85.9	85.4
Power factor	min.	0.78	0.8

Table 36: Electrical data

Electrical data	+/-	50 Hz	60 Hz
		Δ	Y
Rated voltage [V]	-	230	400
Rated current [A]	-10 %	8.1	4.62
Rated power [kW]	-	2.2	2.2
Rated speed [rpm]	min.	2870	3405
Rated torque [Nm]	min.	7.06	5.9
Starting current [IA/IN]	+20 %	8.7	8.8

Table 37: Mechanical data

Mechanical data	+/-	Values
		50 Hz
Sound pressure level [dB]	Max.	68
Moment of inertia [kgm²]	Max.	0
Motor canopy	-	No

Table 38: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 39: Environment

Environment	+/-	Values
Ambient temperature [°C]	Max.	40

Table 40: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	1XM25X1,5

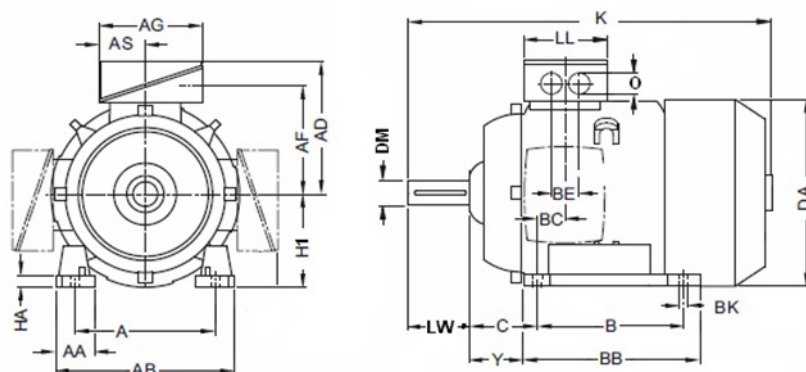

Fig. 4: Envelope dimensions

Table 41: Envelope dimensions A-DLF

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DLF
140	35	170	170	138	126	58	125	158	20.8	40	10	56	178	-

Table 42: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LW	M	N	S	T	Y	Z
24	90	11	-	387	-	-	83	50	-	-	-	-	38	-

⁷⁾ The name plate data may vary within the tolerances.

⁸⁾ 1800=grey cast iron, 4400=aluminium

B3 type of construction, 2-pin, 100L

Material: 2-3,00-100L-BWE6F3NTHNWWUWKWB⁹⁾

Material number: 01583927

Table 43: General data [50 Hz]

General data	+/-	Values
Motor size	Max.	100L
Type of construction	Max.	B3
Starting method	-	Star a. Delta
Motor flange	-	Without
Weight without attachments [kg]	Max.	28
Housing material ¹⁰⁾	-	4400
Enclosure	-	IP55
Nominal frequency	[Hz]	50/60
Efficiency class	-	IE3 (Premium)
Thermal class F to B	-	Yes
Temperature sensor	-	03
Operation on frequency inverter permitted	-	Yes (acc to motor manufact)
Operating mode	-	Continuous running duty (S1)
Direction of rotation	-	Bi-directional
Motor bearings insulated	-	No
Position of fixed motor bearing	-	Non drive side
Fixed motor bearing reinforced	-	Without
Radial motor bearing reinforced	-	No
Condensate drain	-	No
Bolted feet	-	Yes

Table 44: Efficiency

Electrical data	+/-	50 Hz	60 Hz
		4/4	3/4
Efficiency [%]	min.	87.1	86.9
Power factor	min.	0.84	0.83

Table 45: Electrical data

Electrical data	+/-	50 Hz	60 Hz
		Δ	Y
Rated voltage [V]	-	400	690
Rated current [A]	-10 %	5.9	3.63
Rated power [kW]	-	3	3
Rated speed [rpm]	min.	2910	3460
Rated torque [Nm]	min.	9.6	8
Starting current [IA/IN]	+20 %	8.9	10

Table 46: Mechanical data

Mechanical data	+/-	Values
		50 Hz
Sound pressure level [dB]	Max.	70
Moment of inertia [kgm²]	Max.	0.01
Motor canopy	-	No

Table 47: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 48: Environment

Environment	+/-	Values
Ambient temperature [°C]	Max.	40

Table 49: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (O)	-	2XM32X1,5

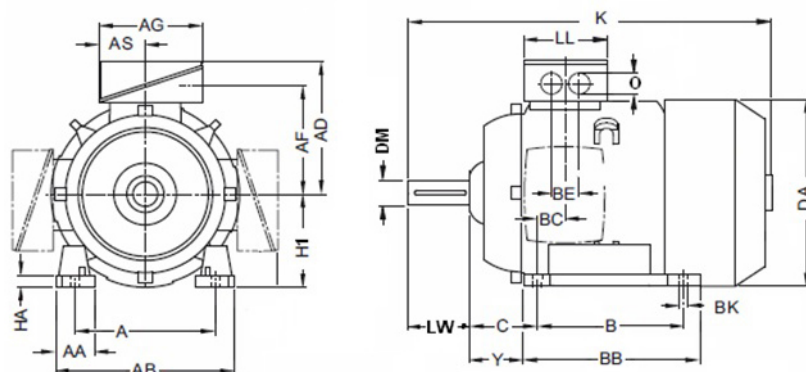


Fig. 5: Envelope dimensions

Table 50: Envelope dimensions A-DLF

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
160	42	196	216	164	176	83	140	178	24.7	45	12	63	198	-

Table 51: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LW	M	N	S	T	Y	Z
28	100	12	-	431	-	-	118	60	-	-	-	-	42	-

⁹ The name plate data may vary within the tolerances.

¹⁰ 1800=grey cast iron, 4400=aluminium

B3 type of construction, 2-pin, 112M

Material: 2-4,00-112M-BWE6F3NTHNWWUWKWB¹¹⁾

Material number: 01583928

Table 52: General data [50 Hz]

General data	+/-	Values
Motor size	Max.	112M
Type of construction	Max.	B3
Starting method	-	Star a. Delta
Motor flange	-	Without
Weight without attachments [kg]	Max.	36
Housing material ¹²⁾	-	4400
Enclosure	-	IP55
Nominal frequency	[Hz]	50/60
Efficiency class	-	IE3 (Premium)
Thermal class F to B	-	Yes
Temperature sensor	-	03
Operation on frequency inverter permitted	-	Yes (acc to motor manufact)
Operating mode	-	Continuous running duty (S1)
Direction of rotation	-	Bi-directional
Motor bearings insulated	-	No
Position of fixed motor bearing	-	Non drive side
Fixed motor bearing reinforced	-	Without
Radial motor bearing reinforced	-	No
Condensate drain	-	No
Bolted feet	-	Yes

Table 53: Efficiency

Electrical data		+/-	50 Hz			60 Hz		
			4/4	3/4	2/4	4/4	3/4	2/4
Efficiency	[%]	min.	88.1	88.1	86.4	88.5		
Power factor		min.	0.81			0.83		

Table 54: Electrical data

Electrical data		+/-	50 Hz		60 Hz	
			Δ	Y	Δ	Y
Rated voltage	[V]	-	400	690	460	-
Rated current	[A]	-10 %	8	4.68	7.6	-
Rated power	[kW]	-	4		4	
Rated speed	[rpm]	min.	2900		3465	
Rated torque	[Nm]	min.	12.64		10.7	
Starting current	[I _A /I _N]	+20 %	8.6		9	

Table 55: Mechanical data

Mechanical data		+/-	Values	
			50 Hz	60 Hz
Sound pressure level	[dB]	Max.	72	77
Moment of inertia	[kgm ²]	Max.	0.01	0.01
Motor canopy		-	No	

Table 56: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 57: Environment

Environment	+/-	Values
Ambient temperature [°C]	Max.	40

Table 58: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	2XM32X1,5

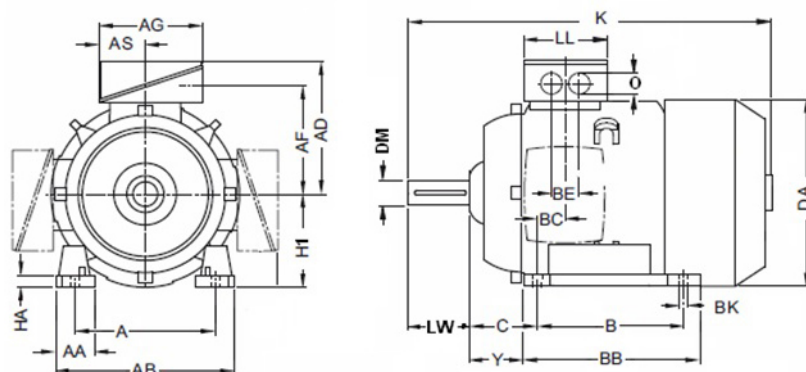


Fig. 6: Envelope dimensions

Table 59: Envelope dimensions A-DLF

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
190	52	226	230	217	176	83	140	176	16.8	45	12	70	235	-

Table 60: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LW	M	N	S	T	Y	Z
28	112	12	-	414	-	-	118	60	-	-	-	-	49	-

¹¹ The name plate data may vary within the tolerances.

¹² 1800=grey cast iron, 4400=aluminium

B3 type of construction, 2-pin, 132S

Material: 2-5,50-132S-BWE6F3NTHNWWUWKWB¹³⁾

Material number: 01583929

Table 61: General data [50 Hz]

General data	+/-	Values
Motor size	Max.	132S
Type of construction	Max.	B3
Starting method	-	Star a. Delta
Motor flange	-	Without
Weight without attachments [kg]	Max.	57
Housing material ¹⁴⁾	-	4400
Enclosure	-	IP55
Nominal frequency	[Hz]	50/60
Efficiency class	-	IE3 (Premium)
Thermal class F to B	-	Yes
Temperature sensor	-	03
Operation on frequency inverter permitted	-	Yes (acc to motor manufact)
Operating mode	-	Continuous running duty (S1)
Direction of rotation	-	Bi-directional
Motor bearings insulated	-	No
Position of fixed motor bearing	-	Non drive side
Fixed motor bearing reinforced	-	Without
Radial motor bearing reinforced	-	No
Condensate drain	-	No
Bolted feet	-	Yes

Table 62: Efficiency

Electrical data		+/-	50 Hz			60 Hz		
			4/4	3/4	2/4	4/4	3/4	2/4
Efficiency	[%]	min.	89.2	89.3	87.8	89.5		
Power factor		min.	0.82			0.84		

Table 63: Electrical data

Electrical data		+/-	50 Hz		60 Hz	
			Δ	Y	Δ	Y
Rated voltage	[V]	-	400	690	460	-
Rated current	[A]	-10 %	10.5	6.38	10	-
Rated power	[kW]	-	5.5		5.5	
Rated speed	[rpm]	min.	2930		3485	
Rated torque	[Nm]	min.	17.44		14.6	
Starting current	[IA/IN]	+20 %	8.7		9.1	

Table 64: Mechanical data

Mechanical data		+/-	Values	
			50 Hz	60 Hz
Sound pressure level	[dB]	Max.	71	77
Moment of inertia	[kgm²]	Max.	0.03	0.03
Motor canopy		-	No	

Table 65: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 66: Environment

Environment	+/-	Values
Ambient temperature [°C]	Max.	40

Table 67: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (O)	-	2XM32X1,5

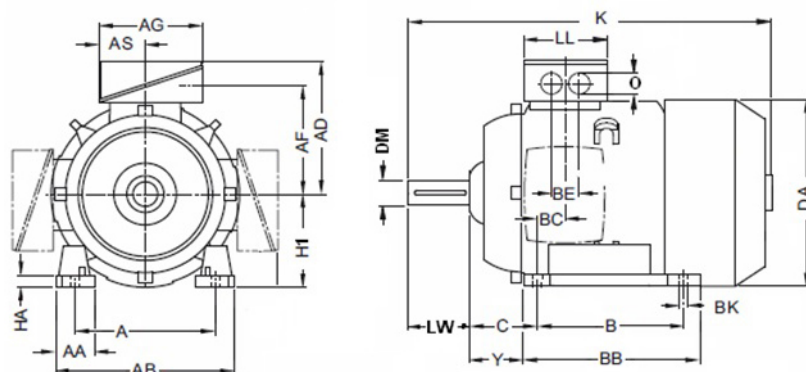


Fig. 7: Envelope dimensions

Table 68: Envelope dimensions A-DLF

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
216	53	256	222	172	171	77	140	218	21.5	55	12	89	274	-

Table 69: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LW	M	N	S	T	Y	Z
38	132	15	-	490	-	-	146	80	-	-	-	-	66	-

¹³ The name plate data may vary within the tolerances.

¹⁴ 1800=grey cast iron, 4400=aluminium

B3 type of construction, 2-pin, 132S

Material: 2-7,50-132S-BWE6F3NTHNWWUWKWB¹⁵⁾

Material number: 01583930

Table 70: General data [50 Hz]

General data	+/-	Values
Motor size	Max.	132S
Type of construction	Max.	B3
Starting method	-	Star a. Delta
Motor flange	-	Without
Weight without attachments [kg]	Max.	66
Housing material ¹⁶⁾	-	4400
Enclosure	-	IP55
Nominal frequency	[Hz]	50/60
Efficiency class	-	IE3 (Premium)
Thermal class F to B	-	Yes
Temperature sensor	-	03
Operation on frequency inverter permitted	-	Yes (acc to motor manufact)
Operating mode	-	Continuous running duty (S1)
Direction of rotation	-	Bi-directional
Motor bearings insulated	-	No
Position of fixed motor bearing	-	Non drive side
Fixed motor bearing reinforced	-	Without
Radial motor bearing reinforced	-	No
Condensate drain	-	No
Bolted feet	-	Yes

Table 71: Efficiency

Electrical data	+/-	50 Hz	60 Hz
		4/4	3/4
Efficiency [%]	min.	90.1	90.2
Power factor	min.	0.83	0.83

Table 72: Electrical data

Electrical data	+/-	50 Hz	60 Hz
		Δ	Y
Rated voltage [V]	-	400	690
Rated current [A]	-10 %	14.6	8.36
Rated power [kW]	-	7.5	7.5
Rated speed [rpm]	min.	2935	3485
Rated torque [Nm]	min.	23.81	19.9
Starting current [IA/IN]	+20 %	8.9	9.6

Table 73: Mechanical data

Mechanical data	+/-	Values
		50 Hz
Sound pressure level [dB]	Max.	71
Moment of inertia [kgm²]	Max.	0.03
Motor canopy	-	No

Table 74: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 75: Environment

Environment	+/-	Values
Ambient temperature [°C]	Max.	40

Table 76: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	2XM32X1,5

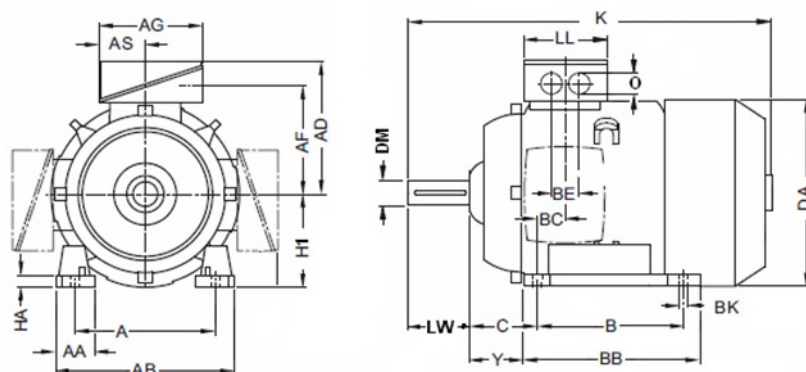


Fig. 8: Envelope dimensions

Table 77: Envelope dimensions A-DLF

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
216	53	256	222	172	171	77	140	218	21.5	55	12	89	274	-

Table 78: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LW	M	N	S	T	Y	Z
38	132	15	-	515	-	-	146	80	-	-	-	-	66	-

¹⁵⁾ The name plate data may vary within the tolerances.

¹⁶⁾ 1800=grey cast iron, 4400=aluminium

B3 type of construction, 2-pin, 160M

Material: 2-11,0-160M-BWE6F3NTHNWWUWKWB¹⁷⁾

Material number: 01583931

Table 79: General data [50 Hz]

General data	+/-	Values
Motor size	Max.	160M
Type of construction	Max.	B3
Starting method	-	Star a. Delta
Motor flange	-	Without
Weight without attachments [kg]	Max.	109
Housing material ¹⁸⁾	-	4400
Enclosure	-	IP55
Nominal frequency	[Hz]	50/60
Efficiency class	-	IE3 (Premium)
Thermal class F to B	-	Yes
Temperature sensor	-	03
Operation on frequency inverter permitted	-	Yes (acc to motor manufact)
Operating mode	-	Continuous running duty (S1)
Direction of rotation	-	Bi-directional
Motor bearings insulated	-	No
Position of fixed motor bearing	-	Non drive side
Fixed motor bearing reinforced	-	Without
Radial motor bearing reinforced	-	No
Condensate drain	-	No
Bolted feet	-	Yes

Table 80: Efficiency

Electrical data	+/-	50 Hz	60 Hz
		4/4	3/4
Efficiency [%]	min.	91.2	91.3
Power factor	min.	0.78	0.79

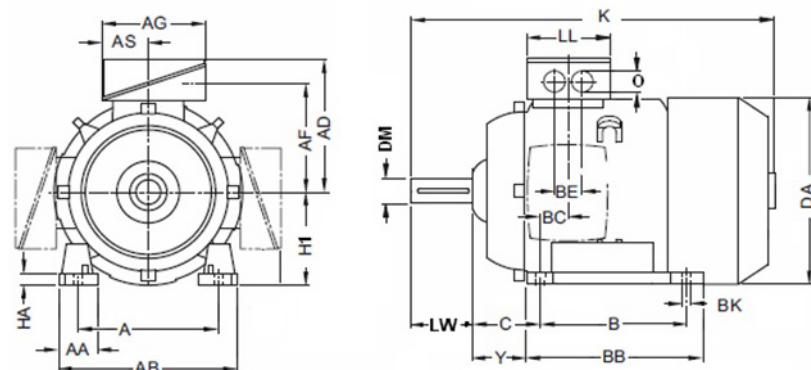


Fig. 9: Envelope dimensions

Table 86: Envelope dimensions A-DLF

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
254	66	308	261	209	193	86	210	310	28	59.5	14.5	108	314	-

Table 87: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LW	M	N	S	T	Y	Z
42	160	18	-	634	-	-	152	110	-	-	-	-	80	-

Table 81: Electrical data

Electrical data	+/-	50 Hz	60 Hz
		Δ	Y
Rated voltage [V]	-	400	690
Rated current [A]	-10 %	22	12.54
Rated power [kW]	-	11	11
Rated speed [rpm]	min.	2950	3495
Rated torque [Nm]	min.	34.79	29
Starting current [IA/IN]	+20 %	9	10

Table 82: Mechanical data

Mechanical data	+/-	Values
		50 Hz
Sound pressure level [dB]	Max.	74
Moment of inertia [kgm ²]	Max.	0.06
Motor canopy	-	No

Table 83: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 84: Environment

Environment	+/-	Values
Ambient temperature [°C]	Max.	40

Table 85: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	2XM40X1,5

¹⁷ The name plate data may vary within the tolerances.

¹⁸ 1800=grey cast iron, 4400=aluminium

B3 type of construction, 2-pin, 160M

Material: 2-15,0-160M-BWE6F3NTHNWWUWKWB¹⁹⁾

Material number: 01583932

Table 88: General data [50 Hz]

General data		+/-	Values
Motor size		Max.	160M
Type of construction		Max.	B3
Starting method		-	Star a. Delta
Motor flange		-	Without
Weight without attachments	[kg]	Max.	106
Housing material ²⁰⁾		-	4400
Enclosure		-	IP55
Nominal frequency	[Hz]		50/60
Efficiency class		-	IE3 (Premium)
Thermal class F to B		-	Yes
Temperature sensor		-	03
Operation on frequency inverter permitted		-	Yes (acc to motor manufact)
Operating mode		-	Continuous running duty (S1)
Direction of rotation		-	Bi-directional
Motor bearings insulated		-	No
Position of fixed motor bearing		-	Non drive side
Fixed motor bearing reinforced		-	Without
Radial motor bearing reinforced		-	No
Condensate drain		-	No
Bolted feet		-	Yes

Table 89: Efficiency

Electrical data		+/-	50 Hz			60 Hz		
			4/4	3/4	2/4	4/4	3/4	2/4
Efficiency	[%]	min.	91.9	92	90.8	91		
Power factor		min.	0.78			0.8		

Table 90: Electrical data

Electrical data		+/-	50 Hz		60 Hz	
			Δ	Y	Δ	Y
Rated voltage	[V]	-	400	690	460	-
Rated current	[A]	-10 %	29.4	17.27	26.3	-
Rated power	[kW]	-	15		15	
Rated speed	[rpm]	min.	2945		3500	
Rated torque	[Nm]	min.	47.43		39.7	
Starting current	[IA/IN]	+20 %	9.2		9.7	

Table 91: Mechanical data

Mechanical data		+/-	Values	
			50 Hz	60 Hz
Sound pressure level	[dB]	Max.	74	81
Moment of inertia	[kgm ²]	Max.	0.06	0.06
Motor canopy		-	No	

Table 92: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 93: Environment

Environment	+/-	Values
Ambient temperature	[°C]	Max. 40

Table 94: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	2XM40X1,5

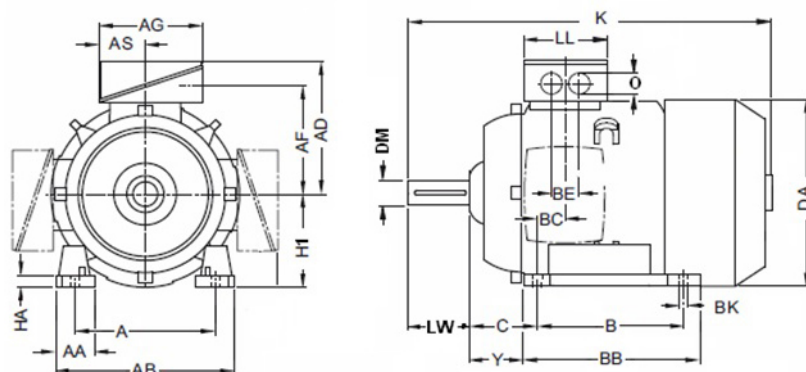


Fig. 10: Envelope dimensions

Table 95: Envelope dimensions A-DLF

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
254	66	308	261	209	193	86	210	310	28	59.5	14.5	108	314	-

Table 96: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LW	M	N	S	T	Y	Z
42	160	18	-	634	-	-	152	110	-	-	-	-	80	-

¹⁹ The name plate data may vary within the tolerances.

²⁰ 1800=grey cast iron, 4400=aluminium

B3 type of construction, 2-pin, 160L

Material: 2-18,5-160L-BWE6F3NTHNWWUWKWB²¹⁾

Material number: 01583933

Table 97: General data [50 Hz]

General data	+/-	Values
Motor size	Max.	160L
Type of construction	Max.	B3
Starting method	-	Star a. Delta
Motor flange	-	Without
Weight without attachments [kg]	Max.	118
Housing material ²²⁾	-	4400
Enclosure	-	IP55
Nominal frequency	[Hz]	50/60
Efficiency class	-	IE3 (Premium)
Thermal class F to B	-	Yes
Temperature sensor	-	03
Operation on frequency inverter permitted	-	Yes (acc to motor manufact)
Operating mode	-	Continuous running duty (S1)
Direction of rotation	-	Bi-directional
Motor bearings insulated	-	No
Position of fixed motor bearing	-	Non drive side
Fixed motor bearing reinforced	-	Without
Radial motor bearing reinforced	-	No
Condensate drain	-	No
Bolted feet	-	Yes

Table 98: Efficiency

Electrical data	+/-	50 Hz	60 Hz
		4/4	3/4
Efficiency [%]	min.	92.4	91.3
Power factor	min.	0.77	0.81

Table 99: Electrical data

Electrical data	+/-	50 Hz	60 Hz
		Δ	Y
Rated voltage [V]	-	400	460
Rated current [A]	-10 %	35.6	32.9
Rated power [kW]	-	18.5	18.5
Rated speed [rpm]	min.	2945	3505
Rated torque [Nm]	min.	58.79	48.9
Starting current [IA/IN]	+20 %	9.5	10.5

Table 100: Mechanical data

Mechanical data	+/-	Values
		50 Hz
Sound pressure level [dB]	Max.	74
Moment of inertia [kgm²]	Max.	0.07
Motor canopy	-	No

Table 101: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 102: Environment

Environment	+/-	Values
Ambient temperature [°C]	Max.	40

Table 103: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	2XM40X1,5

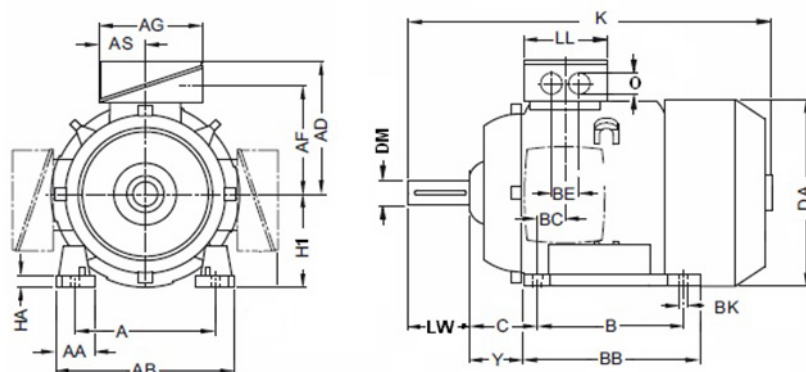

Fig. 11: Envelope dimensions

Table 104: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
254	66	308	261	209	193	86	254	310	28	59.5	14.5	108	314	-

Table 105: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LW	M	N	S	T	Y	Z
42	160	18	-	664	-	-	152	110	-	-	-	-	80	-

²¹ The name plate data may vary within the tolerances.

²² 1800=grey cast iron, 4400=aluminium

B3 type of construction, 2-pin, 180M

Material: 2-22,0-180M-BWE6F3NTHNWWUWKWB²³⁾

Material number: 01583896

Table 106: General data [50 Hz]

General data	+/-	Values
Motor size	Max.	180M
Type of construction	Max.	B3
Starting method	-	Star a. Delta
Motor flange	-	Without
Weight without attachments [kg]	Max.	152
Housing material ²⁴⁾	-	4400
Enclosure	-	IP55
Nominal frequency	[Hz]	50/60
Efficiency class	-	IE3 (Premium)
Thermal class F to B	-	Yes
Temperature sensor	-	03
Operation on frequency inverter permitted	-	Yes (acc to motor manufact)
Operating mode	-	Continuous running duty (S1)
Direction of rotation	-	Bi-directional
Motor bearings insulated	-	No
Position of fixed motor bearing	-	Non drive side
Fixed motor bearing reinforced	-	Without
Radial motor bearing reinforced	-	No
Condensate drain	-	No
Bolted feet	-	Yes

Table 107: Efficiency

Electrical data	+/-	50 Hz	60 Hz
		4/4	3/4
Efficiency [%]	min.	92.7	91.6
Power factor	min.	0.85	0.84

Table 108: Electrical data

Electrical data	+/-	50 Hz	60 Hz
		Δ	Y
Rated voltage [V]	-	400	690
Rated current [A]	-10 %	41.2	24.75
Rated power [kW]	-	22	22
Rated speed [rpm]	min.	2950	3515
Rated torque [Nm]	min.	69.58	58
Starting current [IA/IN]	+20 %	9	8.2

Table 109: Mechanical data

Mechanical data	+/-	Values
		50 Hz
Sound pressure level [dB]	Max.	77
Moment of inertia [kgm ²]	Max.	0.13
Motor canopy	-	No

Table 110: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 111: Environment

Environment	+/-	Values
Ambient temperature [°C]	Max.	40

Table 112: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	2XM40X1,5

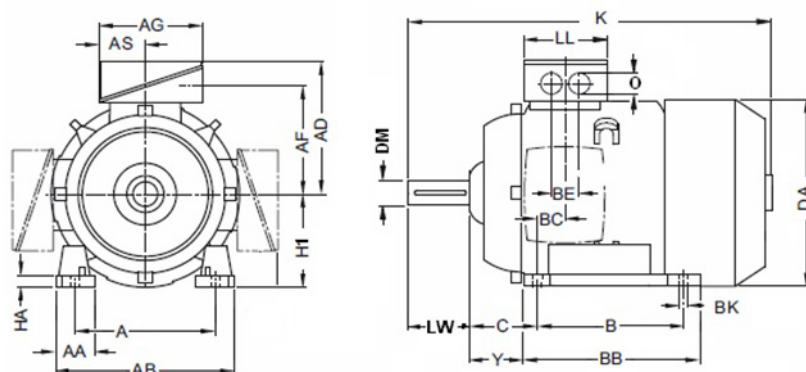

Fig. 12: Envelope dimensions

Table 113: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
279	68	350	285	234	193	86	241	343	39.3	75.5	14.5	121	356	-

Table 114: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LW	M	N	S	T	Y	Z
48	180	22	-	698	-	-	152	110	-	-	-	-	85	-

²³ The name plate data may vary within the tolerances.

²⁴ 1800=grey cast iron, 4400=aluminium

B3 type of construction, 2-pin, 200L

Material: 2-30,0-200L-BWE6F3NTHNWWUWKWB²⁵⁾

Material number: 01583917

Table 115: General data [50 Hz]

General data	+/-	Values
Motor size	Max.	200L
Type of construction	Max.	B3
Starting method	-	Star a. Delta
Motor flange	-	Without
Weight without attachments [kg]	Max.	213
Housing material ²⁶⁾	-	4400
Enclosure	-	IP55
Nominal frequency	[Hz]	50/60
Efficiency class	-	IE3 (Premium)
Thermal class F to B	-	Yes
Temperature sensor	-	03
Operation on frequency inverter permitted	-	Yes (acc to motor manufact)
Operating mode	-	Continuous running duty (S1)
Direction of rotation	-	Bi-directional
Motor bearings insulated	-	No
Position of fixed motor bearing	-	Non drive side
Fixed motor bearing reinforced	-	Without
Radial motor bearing reinforced	-	No
Condensate drain	-	No
Bolted feet	-	Yes

Table 116: Efficiency

Electrical data	+/-	50 Hz	60 Hz
		4/4	3/4
Efficiency [%]	min.	93.3	92.2
Power factor	min.	0.86	0.81

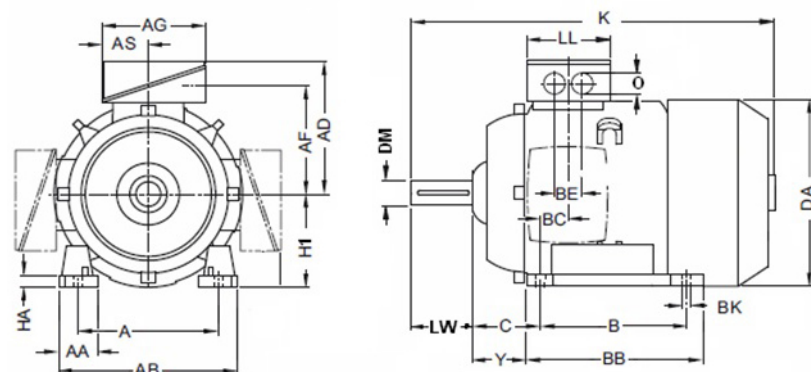


Fig. 13: Envelope dimensions

Table 122: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
318	85	388	326	262	248	113	305	375	43.5	83	18.5	133	396	-

Table 123: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LW	M	N	S	T	Y	Z
55	200	25	-	758	-	-	194	110	-	-	-	-	93	-

Table 117: Electrical data

Electrical data	+/-	50 Hz	60 Hz
		Δ	Y
Rated voltage [V]	-	400	460
Rated current [A]	-10 %	56.5	55.7
Rated power [kW]	-	30	30
Rated speed [rpm]	min.	2955	3520
Rated torque [Nm]	min.	95.01	78.8
Starting current [IA/IN]	+20 %	8	9.3

Table 118: Mechanical data

Mechanical data	+/-	Values
		50 Hz
Sound pressure level [dB]	Max.	78
Moment of inertia [kgm²]	Max.	0.22
Motor canopy	-	No

Table 119: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 120: Environment

Environment	+/-	Values
Ambient temperature [°C]	Max.	40

Table 121: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	2XM50X1,5

²⁵ The name plate data may vary within the tolerances.

²⁶ 1800=grey cast iron, 4400=aluminium

B3 type of construction, 2-pin, 200L

Material: 2-37,0-200L-BWE6F3NTHNWWUWKWB²⁷⁾

Material number: 01583918

Table 124: General data [50 Hz]

General data	+/-	Values
Motor size	Max.	200L
Type of construction	Max.	B3
Starting method	-	Star a. Delta
Motor flange	-	Without
Weight without attachments [kg]	Max.	222
Housing material ²⁸⁾	-	4400
Enclosure	-	IP55
Nominal frequency	[Hz]	50/60
Efficiency class	-	IE3 (Premium)
Thermal class F to B	-	Yes
Temperature sensor	-	03
Operation on frequency inverter permitted	-	Yes (acc to motor manufact)
Operating mode	-	Continuous running duty (S1)
Direction of rotation	-	Bi-directional
Motor bearings insulated	-	No
Position of fixed motor bearing	-	Non drive side
Fixed motor bearing reinforced	-	Without
Radial motor bearing reinforced	-	No
Condensate drain	-	No
Bolted feet	-	Yes

Table 125: Efficiency

Electrical data	+/-	50 Hz	60 Hz
		4/4	3/4
Efficiency [%]	min.	93.7	92.5
Power factor	min.	0.8	0.84

Table 126: Electrical data

Electrical data	+/-	50 Hz	60 Hz
		Δ	Y
Rated voltage [V]	-	400	690
Rated current [A]	-10 %	68.7	41.8
Rated power [kW]	-	37	37
Rated speed [rpm]	min.	2955	3515
Rated torque [Nm]	min.	116.98	97.5
Starting current [IA/IN]	+20 %	8.8	9.9

Table 127: Mechanical data

Mechanical data	+/-	Values
		50 Hz
Sound pressure level [dB]	Max.	78
Moment of inertia [kgm²]	Max.	0.22
Motor canopy	-	No

Table 128: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 129: Environment

Environment	+/-	Values
Ambient temperature [°C]	Max.	40

Table 130: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	2XM50X1,5

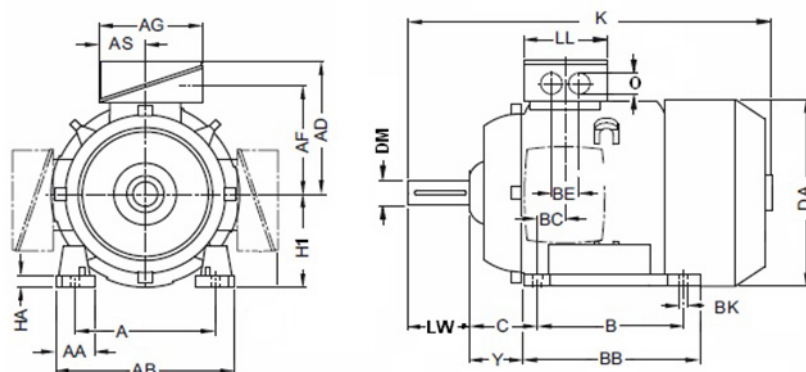

Fig. 14: Envelope dimensions

Table 131: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
318	85	388	326	262	248	113	305	375	43.5	83	18.5	133	396	-

Table 132: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LW	M	N	S	T	Y	Z
55	200	25	-	758	-	-	194	110	-	-	-	-	93	-

²⁷ The name plate data may vary within the tolerances.

²⁸ 1800=grey cast iron, 4400=aluminium

B3 type of construction, 2-pin, 225M

Material: 2-45,0-225M-BWE6F3NTHNWWUWKWB²⁹⁾

Material number: 01583919

Table 133: General data [50 Hz]

General data	+/-	Values
Motor size	Max.	225M
Type of construction	Max.	B3
Starting method	-	Star a. Delta
Motor flange	-	Without
Weight without attachments [kg]	Max.	394
Housing material ³⁰⁾	-	1800
Enclosure	-	IP55
Nominal frequency	[Hz]	50/60
Efficiency class	-	IE3 (Premium)
Thermal class F to B	-	Yes
Temperature sensor	-	03
Operation on frequency inverter permitted	-	Yes (acc to KSB)
Operating mode	-	Continuous running duty (S1)
Direction of rotation	-	Bi-directional
Motor bearings insulated	-	No
Position of fixed motor bearing	-	Non drive side
Fixed motor bearing reinforced	-	Without
Radial motor bearing reinforced	-	No
Condensate drain	-	No
Bolted feet	-	No

Table 134: Efficiency

Electrical data	+/-	50 Hz	60 Hz
		4/4	3/4
Efficiency [%]	min.	94	93.7
Power factor	min.	0.81	0.83

Table 135: Electrical data

Electrical data	+/-	50 Hz	60 Hz
		Δ	Y
Rated voltage [V]	-	400	690
Rated current [A]	-10 %	81.9	50.05
Rated power [kW]	-	45	45
Rated speed [rpm]	min.	2960	3520
Rated torque [Nm]	min.	142.1	118.1
Starting current [IA/IN]	+20 %	8.1	8.8

Table 136: Mechanical data

Mechanical data	+/-	Values
		50 Hz
Sound pressure level [dB]	Max.	78
Moment of inertia [kgm²]	Max.	0.3
Motor canopy	-	No

Table 137: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 138: Environment

Environment	+/-	Values
Ambient temperature [°C]	Max.	40

Table 139: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	2XM50X1,5

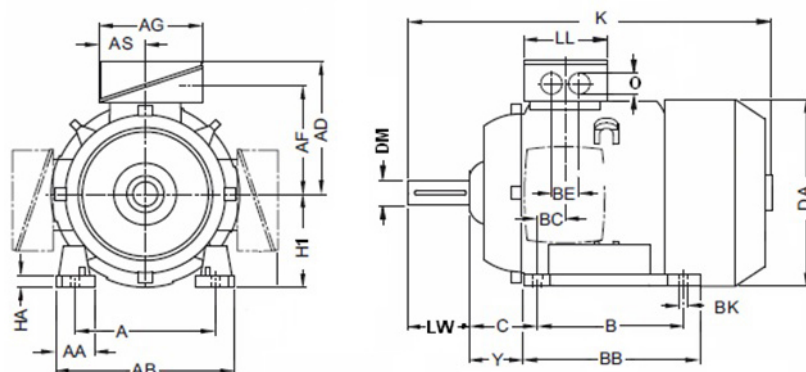


Fig. 15: Envelope dimensions

Table 140: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
356	90	442	372	310	293	123	311	412	8	88	18.5	149	453	-

Table 141: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LW	M	N	S	T	Y	Z
55	225	34	-	856	-	-	207	110	-	-	-	-	107	-

²⁹⁾ The name plate data may vary within the tolerances.

³⁰⁾ 1800=grey cast iron, 4400=aluminium

B3 type of construction, 2-pin, 250M

Material: 2-55,0-250M-BWE6F3NTHNWWUWKWB³¹⁾

Material number: 01583920

Table 142: General data [50 Hz]

General data	+/-	Values
Motor size	Max.	250M
Type of construction	Max.	B3
Starting method	-	Star a. Delta
Motor flange	-	Without
Weight without attachments [kg]	Max.	470
Housing material ³²⁾	-	1800
Enclosure	-	IP55
Nominal frequency	[Hz]	50/60
Efficiency class	-	IE3 (Premium)
Thermal class F to B	-	Yes
Temperature sensor	-	03
Operation on frequency inverter permitted	-	Yes (acc to KSB)
Operating mode	-	Continuous running duty (S1)
Direction of rotation	-	Bi-directional
Motor bearings insulated	-	No
Position of fixed motor bearing	-	Non drive side
Fixed motor bearing reinforced	-	Without
Radial motor bearing reinforced	-	No
Condensate drain	-	No
Bolted feet	-	No

Table 143: Efficiency

Electrical data	+/-	50 Hz			60 Hz		
		4/4	3/4	2/4	4/4	3/4	2/4
Efficiency [%]	min.	94.3	93.9	93	93.6		
Power factor	min.	0.8			0.86		

Table 144: Electrical data

Electrical data	+/-	50 Hz		60 Hz	
		Δ	Y	Δ	Y
Rated voltage [V]	-	400	690	460	-
Rated current [A]	-10 %	100.3	60.5	98.2	-
Rated power [kW]	-	55		55	
Rated speed [rpm]	min.	2960		3530	
Rated torque [Nm]	min.	173.46		144.4	
Starting current [IA/IN]	+20 %	8.2		9.2	

Table 145: Mechanical data

Mechanical data	+/-	Values	
		50 Hz	60 Hz
Sound pressure level [dB]	Max.	78	89
Moment of inertia [kgm²]	Max.	0.48	0.52
Motor canopy	-	No	

Table 146: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 147: Environment

Environment	+/-	Values
Ambient temperature [°C]	Max.	40

Table 148: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (O)	-	2XM63X1,5

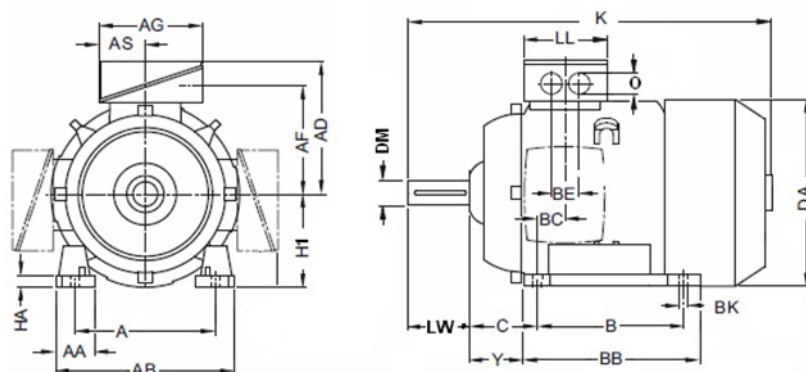

Fig. 16: Envelope dimensions

Table 149: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
406	100	506	451	354	351	160	349	467	62	100.5	24	168	497	-

Table 150: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LW	M	N	S	T	Y	Z
60	250	43	-	965	-	-	245	140	-	-	-	-	131	-

31 The name plate data may vary within the tolerances.

32 1800=grey cast iron, 4400=aluminium

B3 type of construction, 2-pin, 280S

Material: 2-75,0-280S-BWE6F3NTHNWWNWKWB³³⁾

Material number: 01583786

Table 151: General data [50 Hz]

General data	+/-	Values
Motor size	Max.	280S
Type of construction	Max.	B3
Starting method	-	Star a. Delta
Motor flange	-	Without
Weight without attachments [kg]	Max.	727
Housing material ³⁴⁾	-	1800
Enclosure	-	IP55
Nominal frequency	[Hz]	50/60
Efficiency class	-	IE3 (Premium)
Thermal class F to B	-	Yes
Temperature sensor	-	03
Operation on frequency inverter permitted	-	No
Operating mode	-	Continuous running duty (S1)
Direction of rotation	-	Bi-directional
Motor bearings insulated	-	No
Position of fixed motor bearing	-	Non drive side
Fixed motor bearing reinforced	-	Without
Radial motor bearing reinforced	-	No
Condensate drain	-	No
Bolted feet	-	No

Table 152: Efficiency

Electrical data	+/-	50 Hz	60 Hz
		4/4	3/4
Efficiency [%]	min.	94.7	94.1
Power factor	min.	0.84	0.86

Table 153: Electrical data

Electrical data	+/-	50 Hz	60 Hz
		Δ	Y
Rated voltage [V]	-	400	690
Rated current [A]	-10 %	136.1	82.5
Rated power [kW]	-	75	75
Rated speed [rpm]	min.	2975	3545
Rated torque [Nm]	min.	235.92	196.1
Starting current [IA/IN]	+20 %	7.9	8.4

Table 154: Mechanical data

Mechanical data	+/-	Values
		50 Hz
Sound pressure level [dB]	Max.	81
Moment of inertia [kgm²]	Max.	0.99
Motor canopy	-	No

Table 155: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 156: Environment

Environment	+/-	Values
Ambient temperature [°C]	Max.	40

Table 157: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (O)	-	2XM63X1,5

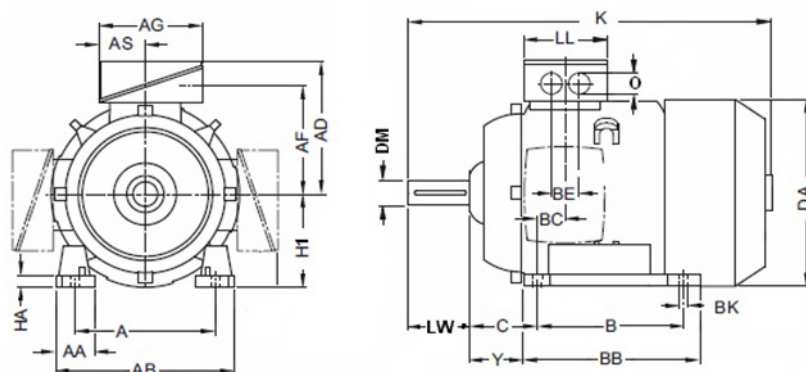


Fig. 17: Envelope dimensions

Table 158: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
457	100	557	476	380	351	160	368	517	20	110	24	190	580	-

Table 159: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LW	M	N	S	T	Y	Z
65	280	42	-	1071	-	-	245	140	-	-	-	-	152	-

³³ The name plate data may vary within the tolerances.

³⁴ 1800=grey cast iron, 4400=aluminium

B3 type of construction, 2-pin, 280M

Material: 2-90,0-280M-BWE6F3NTHNWWNWKWB³⁵⁾

Material number: 01583855

Table 160: General data [50 Hz]

General data	+/-	Values
Motor size	Max.	280M
Type of construction	Max.	B3
Starting method	-	Star a. Delta
Motor flange	-	Without
Weight without attachments [kg]	Max.	762
Housing material ³⁶⁾	-	1800
Enclosure	-	IP55
Nominal frequency	[Hz]	50/60
Efficiency class	-	IE3 (Premium)
Thermal class F to B	-	Yes
Temperature sensor	-	03
Operation on frequency inverter permitted	-	No
Operating mode	-	Continuous running duty (S1)
Direction of rotation	-	Bi-directional
Motor bearings insulated	-	No
Position of fixed motor bearing	-	Non drive side
Fixed motor bearing reinforced	-	Without
Radial motor bearing reinforced	-	No
Condensate drain	-	No
Bolted feet	-	No

Table 161: Efficiency

Electrical data	+/-	50 Hz	60 Hz
		4/4	3/4
Efficiency [%]	min.	95	94.3
Power factor	min.	0.86	0.87

Table 162: Electrical data

Electrical data	+/-	50 Hz	60 Hz
		Δ	Y
Rated voltage [V]	-	400	690
Rated current [A]	-10 %	159.6	97.9
Rated power [kW]	-	90	90
Rated speed [rpm]	min.	2975	3545
Rated torque [Nm]	min.	283.11	235.3
Starting current [IA/IN]	+20 %	8	8.6

Table 163: Mechanical data

Mechanical data	+/-	Values
		50 Hz
Sound pressure level [dB]	Max.	81
Moment of inertia [kgm²]	Max.	1.17
Motor canopy	-	No

Table 164: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 165: Environment

Environment	+/-	Values
Ambient temperature [°C]	Max.	40

Table 166: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (O)	-	2XM63X1,5

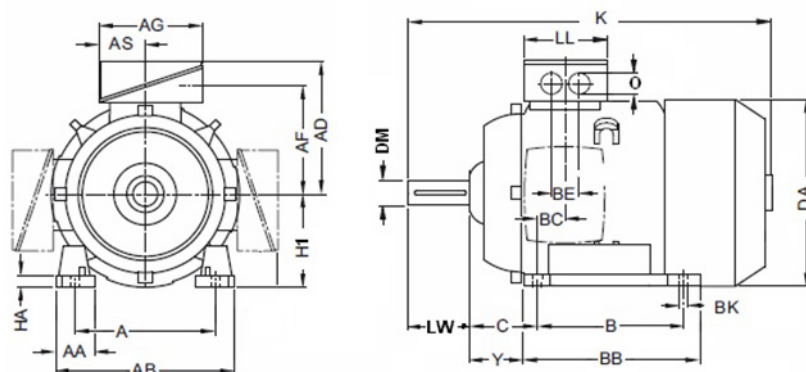


Fig. 18: Envelope dimensions

Table 167: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
457	100	557	476	380	351	160	419	517	20	110	24	190	580	-

Table 168: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LW	M	N	S	T	Y	Z
65	280	42	-	1071	-	-	245	140	-	-	-	-	152	-

35 The name plate data may vary within the tolerances.

36 1800=grey cast iron, 4400=aluminium

B3 type of construction, 2-pin, 315S

Material: 2-110 -315S-BWE6F3NTHNWWNWKWB³⁷⁾

Material number: 01583858

Table 169: General data [50 Hz]

General data	+/-	Values
Motor size	Max.	315S
Type of construction	Max.	B3
Starting method	-	Star a. Delta
Motor flange	-	Without
Weight without attachments [kg]	Max.	962
Housing material ³⁸⁾	-	1800
Enclosure	-	IP55
Nominal frequency	[Hz]	50/60
Efficiency class	-	IE3 (Premium)
Thermal class F to B	-	Yes
Temperature sensor	-	03
Operation on frequency inverter permitted	-	No
Operating mode	-	Continuous running duty (S1)
Direction of rotation	-	Bi-directional
Motor bearings insulated	-	No
Position of fixed motor bearing	-	Non drive side
Fixed motor bearing reinforced	-	Without
Radial motor bearing reinforced	-	No
Condensate drain	-	No
Bolted feet	-	No

Table 170: Efficiency

Electrical data	+/-	50 Hz	60 Hz
		4/4	3/4
Efficiency [%]	min.	95.2	94.4
Power factor	min.	0.84	0.86

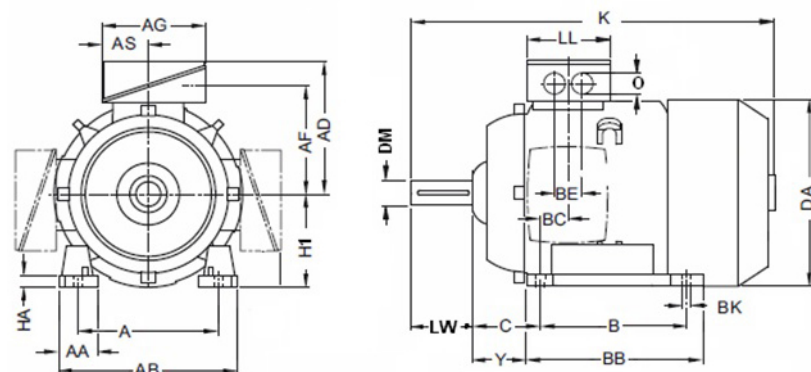


Fig. 19: Envelope dimensions

Table 176: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
508	120	630	567	444	411	180	406	621	22	110	28	216	664	-

Table 177: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LW	M	N	S	T	Y	Z
65	315	50	-	1244	-	-	314	140	-	-	-	-	172	-

Table 171: Electrical data

Electrical data	+/-	50 Hz	60 Hz
		Δ	Y
Rated voltage [V]	-	400	690
Rated current [A]	-10 %	198.6	118.8
Rated power [kW]	-	110	110
Rated speed [rpm]	min.	2980	3545
Rated torque [Nm]	min.	344.96	287.5
Starting current [IA/IN]	+20 %	7.9	8.4

Table 172: Mechanical data

Mechanical data	+/-	Values
		50 Hz
Sound pressure level [dB]	Max.	81
Moment of inertia [kgm²]	Max.	1.75
Motor canopy	-	No

Table 173: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 174: Environment

Environment	+/-	Values
Ambient temperature [°C]	Max.	40

Table 175: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (O)	-	2XM63X1,5

³⁷⁾ The name plate data may vary within the tolerances.

³⁸⁾ 1800=grey cast iron, 4400=aluminium

B3 type of construction, 2-pin, 315M

Material: 2-132 -315M-BWE6F3NTHNWWNWKWB³⁹⁾

Material number: 01583859

Table 178: General data [50 Hz]

General data	+/-	Values
Motor size	Max.	315M
Type of construction	Max.	B3
Starting method	-	Star a. Delta
Motor flange	-	Without
Weight without attachments [kg]	Max.	1048
Housing material ⁴⁰⁾	-	1800
Enclosure	-	IP55
Nominal frequency	[Hz]	50/60
Efficiency class	-	IE3 (Premium)
Thermal class F to B	-	Yes
Temperature sensor	-	03
Operation on frequency inverter permitted	-	No
Operating mode	-	Continuous running duty (S1)
Direction of rotation	-	Bi-directional
Motor bearings insulated	-	No
Position of fixed motor bearing	-	Non drive side
Fixed motor bearing reinforced	-	Without
Radial motor bearing reinforced	-	No
Condensate drain	-	No
Bolted feet	-	No

Table 179: Efficiency

Electrical data	+/-	50 Hz	60 Hz
		4/4	3/4
Efficiency [%]	min.	95.4	94.4
Power factor	min.	0.85	0.86

Table 180: Electrical data

Electrical data	+/-	50 Hz	60 Hz
		Δ	Y
Rated voltage [V]	-	400	690
Rated current [A]	-10 %	235.1	140.8
Rated power [kW]	-	132	132
Rated speed [rpm]	min.	2980	3545
Rated torque [Nm]	min.	414.53	345.1
Starting current [IA/IN]	+20 %	8	8.9

Table 181: Mechanical data

Mechanical data	+/-	Values
		50 Hz
Sound pressure level [dB]	Max.	81
Moment of inertia [kgm²]	Max.	2.05
Motor canopy	-	No

Table 182: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 183: Environment

Environment	+/-	Values
Ambient temperature [°C]	Max.	40

Table 184: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (O)	-	2XM63X1,5

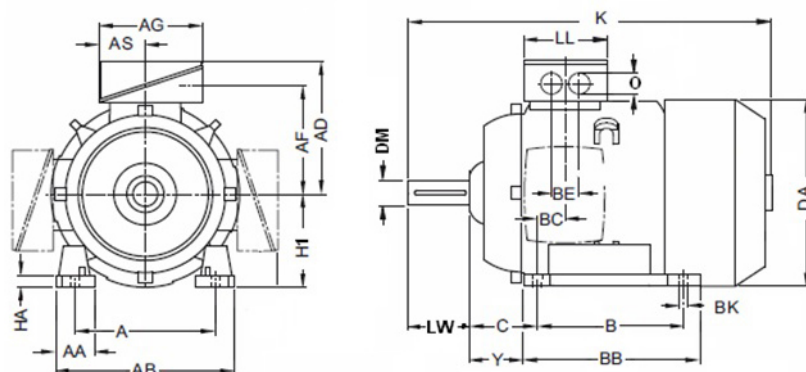

Fig. 20: Envelope dimensions

Table 185: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
508	120	630	567	444	411	180	457	621	22	110	28	216	664	-

Table 186: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LW	M	N	S	T	Y	Z
65	315	50	-	1244	-	-	314	140	-	-	-	-	172	-

³⁹⁾ The name plate data may vary within the tolerances.

⁴⁰⁾ 1800=grey cast iron, 4400=aluminium

B3 type of construction, 4-pin, 80M

Material: 4-O,75- 80M-BWA6F1NTHNWWUWKWB⁴¹⁾

Material number: 01583945

Table 187: General data [50 Hz]

General data	+/-	Values
Motor size	Max.	080M
Type of construction	Max.	B3
Starting method	-	Star a. Delta
Motor flange	-	Without
Weight without attachments [kg]	Max.	13
Housing material ⁴²⁾	-	4400
Enclosure	-	IP55
Nominal frequency	[Hz]	50
Efficiency class	-	IE3 (Premium)
Thermal class F to B	-	Yes
Temperature sensor	-	01
Operation on frequency inverter permitted	-	Yes (acc to motor manufact)
Operating mode	-	Continuous running duty (S1)
Direction of rotation	-	Bi-directional
Motor bearings insulated	-	No
Position of fixed motor bearing	-	Non drive side
Fixed motor bearing reinforced	-	Without
Radial motor bearing reinforced	-	No
Condensate drain	-	No
Bolted feet	-	Yes

Table 188: Efficiency

Electrical data		+/-	50 Hz			60 Hz		
			4/4	3/4	2/4	4/4	3/4	2/4
Efficiency	[%]	min.	82.5	80.4	77			
Power factor		min.	0.81					

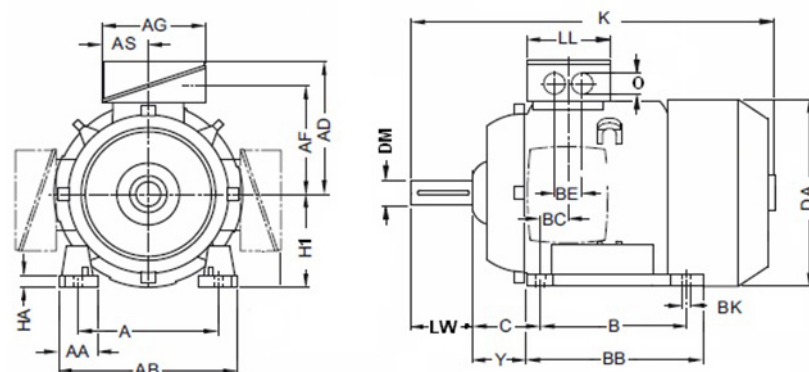


Fig. 21: Envelope dimensions

Table 194: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
125	41	155	163	131	126	58	100	124	26.5	32	10	50	159	-

Table 195: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LW	M	N	S	T	Y	Z
19	80	8	-	327	-	-	83	40	-	-	-	-	38	-

Table 189: Electrical data

Electrical data		+/-	50 Hz		60 Hz	
			Δ	Y	Δ	Y
Rated voltage	[V]	-	230	400	-	-
Rated current	[A]	-10 %	3.2	1.93	-	-
Rated power	[kW]	-	0.75		-	
Rated speed	[rpm]	min.	1420			
Rated torque	[Nm]	min.	4.8			
Starting current	[IA/IN]	+20 %	7.5			

Table 190: Mechanical data

Mechanical data		+/-	Values	
			50 Hz	60 Hz
Sound pressure level	[dB]	Max.	56	
Moment of inertia	[kgm²]	Max.	0	
Motor canopy		-	No	

Table 191: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 192: Environment

Environment	+/-	Values
Ambient temperature [°C]	Max.	40

Table 193: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (O)	-	1XM25X1,5

⁴¹ The name plate data may vary within the tolerances.

⁴² 1800=grey cast iron, 4400=aluminium

B3 type of construction, 4-pin, 90S

Material: 4-1,10- 90S-BWA6FINTHNWWUWKWB⁴³⁾

Material number: 01583946

Table 196: General data [50 Hz]

General data	+/-	Values
Motor size	Max.	090S
Type of construction	Max.	B3
Starting method	-	Star a. Delta
Motor flange	-	Without
Weight without attachments [kg]	Max.	19
Housing material ⁴⁴⁾	-	4400
Enclosure	-	IP55
Nominal frequency	[Hz]	50
Efficiency class	-	IE3 (Premium)
Thermal class F to B	-	Yes
Temperature sensor	-	01
Operation on frequency inverter permitted	-	Yes (acc to motor manufact)
Operating mode	-	Continuous running duty (S1)
Direction of rotation	-	Bi-directional
Motor bearings insulated	-	No
Position of fixed motor bearing	-	Non drive side
Fixed motor bearing reinforced	-	Without
Radial motor bearing reinforced	-	No
Condensate drain	-	No
Bolted feet	-	Yes

Table 197: Efficiency

Electrical data	+/-	50 Hz	60 Hz
		4/4	3/4
Efficiency [%]	min.	84.1	83.3
Power factor	min.	0.8	80.7

Table 198: Electrical data

Electrical data	+/-	50 Hz	60 Hz
		Δ	Y
Rated voltage [V]	-	230	400
Rated current [A]	-10 %	4.5	2.64
Rated power [kW]	-	1.1	-
Rated speed [rpm]	min.	1440	-
Rated torque [Nm]	min.	7.08	-
Starting current [IA/IN]	+20 %	8	-

Table 199: Mechanical data

Mechanical data	+/-	Values
		50 Hz
Sound pressure level [dB]	Max.	59
Moment of inertia [kgm²]	Max.	0.01
Motor canopy	-	No

Table 200: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 201: Environment

Environment	+/-	Values
Ambient temperature [°C]	Max.	40

Table 202: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	1XM25X1,5

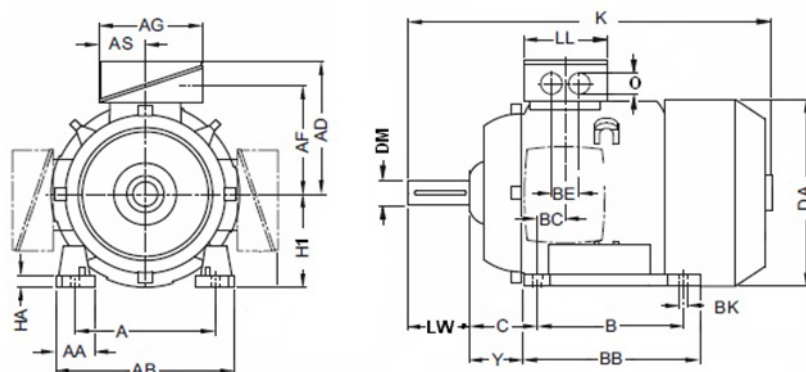


Fig. 22: Envelope dimensions

Table 203: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
140	35	170	170	138	126	58	100	146	18.5	40	10	56	178	-

Table 204: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LW	M	N	S	T	Y	Z
24	90	11	-	387	-	-	83	50	-	-	-	-	38	-

⁴³ The name plate data may vary within the tolerances.

⁴⁴ 1800=grey cast iron, 4400=aluminium

B3 type of construction, 4-pin, 90L

Material: 4-1,50- 90L-BWH6FINTHNWWUWKWB⁴⁵⁾

Material number: 01583947

Table 205: General data [50 Hz]

General data	+/-	Values
Motor size	Max.	090L
Type of construction	Max.	B3
Starting method	-	Star a. Delta
Motor flange	-	Without
Weight without attachments [kg]	Max.	20
Housing material ⁴⁶⁾	-	4400
Enclosure	-	IP55
Nominal frequency	[Hz]	50/60
Efficiency class	-	IE3 (Premium)
Thermal class F to B	-	Yes
Temperature sensor	-	01
Operation on frequency inverter permitted	-	Yes (acc to motor manufact)
Operating mode	-	Continuous running duty (S1)
Direction of rotation	-	Bi-directional
Motor bearings insulated	-	No
Position of fixed motor bearing	-	Non drive side
Fixed motor bearing reinforced	-	Without
Radial motor bearing reinforced	-	No
Condensate drain	-	No
Bolted feet	-	Yes

Table 206: Efficiency

Electrical data	+/-	50 Hz	60 Hz
		4/4	3/4
Efficiency [%]	min.	85.3	85.1
Power factor	min.	0.83	0.7

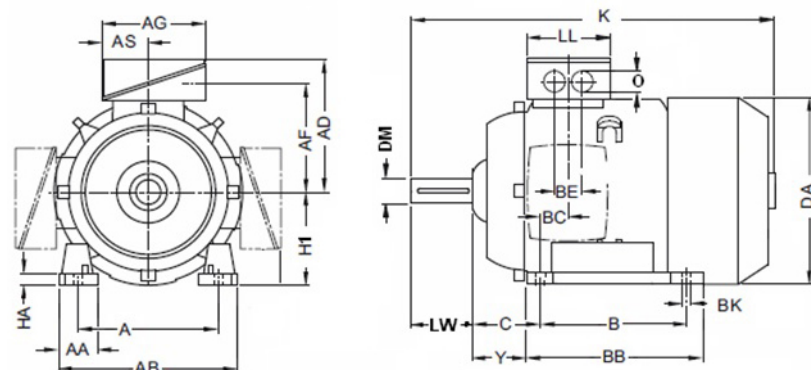


Fig. 23: Envelope dimensions

Table 212: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
140	35	170	170	138	126	58	125	158	20.8	40	10	56	178	-

Table 213: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LW	M	N	S	T	Y	Z
24	90	11	-	387	-	-	83	50	-	-	-	-	38	-

Table 207: Electrical data

Electrical data	+/-	50 Hz	60 Hz
		Δ	Y
Rated voltage [V]	-	230	400
Rated current [A]	-10 %	5.9	3.47
Rated power [kW]	-	1.5	1.5
Rated speed [rpm]	min.	1445	1700
Rated torque [Nm]	min.	9.68	8
Starting current [IA/IN]	+20 %	7.8	8.7

Table 208: Mechanical data

Mechanical data	+/-	Values
		50 Hz
Sound pressure level [dB]	Max.	59
Moment of inertia [kgm²]	Max.	0.01
Motor canopy	-	No

Table 209: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 210: Environment

Environment	+/-	Values
Ambient temperature [°C]	Max.	40

Table 211: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (O)	-	1XM25X1,5

⁴⁵⁾ The name plate data may vary within the tolerances.

⁴⁶⁾ 1800=grey cast iron, 4400=aluminium

B3 type of construction, 4-pin, 100L

Material: 4-2,20-100L-BWA6F3NTHNWWUWKWB⁴⁷⁾

Material number: 01583934

Table 214: General data [50 Hz]

General data	+/-	Values
Motor size	Max.	100L
Type of construction	Max.	B3
Starting method	-	Star a. Delta
Motor flange	-	Without
Weight without attachments [kg]	Max.	28
Housing material ⁴⁸⁾	-	4400
Enclosure	-	IP55
Nominal frequency	[Hz]	50
Efficiency class	-	IE3 (Premium)
Thermal class F to B	-	Yes
Temperature sensor	-	03
Operation on frequency inverter permitted	-	Yes (acc to motor manufact)
Operating mode	-	Continuous running duty (S1)
Direction of rotation	-	Bi-directional
Motor bearings insulated	-	No
Position of fixed motor bearing	-	Non drive side
Fixed motor bearing reinforced	-	Without
Radial motor bearing reinforced	-	No
Condensate drain	-	No
Bolted feet	-	Yes

Table 215: Efficiency

Electrical data	+/-	50 Hz	60 Hz
		4/4	3/4
Efficiency [%]	min.	86.7	86.9
Power factor	min.	0.82	

Table 216: Electrical data

Electrical data	+/-	50 Hz	60 Hz
		Δ	Y
Rated voltage [V]	-	230	400
Rated current [A]	-10 %	8.1	4.84
Rated power [kW]	-	2.2	-
Rated speed [rpm]	min.	1435	
Rated torque [Nm]	min.	14.01	
Starting current [IA/IN]	+20 %	8	

Table 217: Mechanical data

Mechanical data	+/-	Values
		50 Hz
Sound pressure level [dB]	Max.	63
Moment of inertia [kgm²]	Max.	0.01
Motor canopy	-	No

Table 218: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 219: Environment

Environment	+/-	Values
Ambient temperature [°C]	Max.	40

Table 220: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	2XM32X1,5

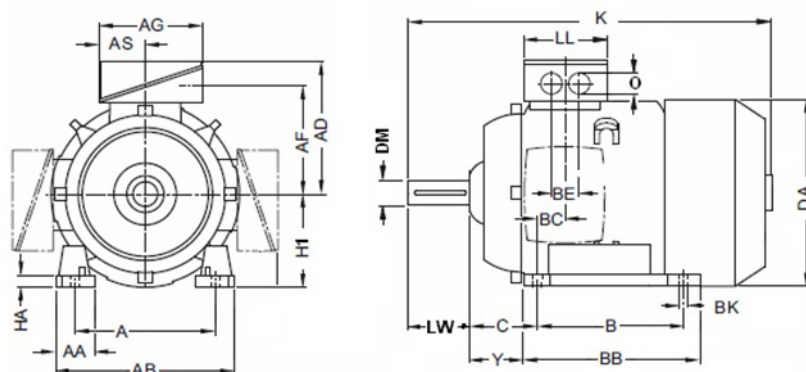


Fig. 24: Envelope dimensions

Table 221: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
160	42	196	216	164	176	83	140	178	24.7	45	12	63	198	-

Table 222: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LW	M	N	S	T	Y	Z
28	100	12	-	431	-	-	118	60	-	-	-	-	42	-

⁴⁷ The name plate data may vary within the tolerances.

⁴⁸ 1800=grey cast iron, 4400=aluminium

B3 type of construction, 4-pin, 100L

Material: 4-3,00-100L-BWE6F3NTHNWWUWKWB⁴⁹⁾

Material number: 01583935

Table 223: General data [50 Hz]

General data	+/-	Values
Motor size	Max.	100L
Type of construction	Max.	B3
Starting method	-	Star a. Delta
Motor flange	-	Without
Weight without attachments [kg]	Max.	35
Housing material ⁵⁰⁾	-	4400
Enclosure	-	IP55
Nominal frequency	[Hz]	50/60
Efficiency class	-	IE3 (Premium)
Thermal class F to B	-	Yes
Temperature sensor	-	03
Operation on frequency inverter permitted	-	Yes (acc to motor manufact)
Operating mode	-	Continuous running duty (S1)
Direction of rotation	-	Bi-directional
Motor bearings insulated	-	No
Position of fixed motor bearing	-	Non drive side
Fixed motor bearing reinforced	-	Without
Radial motor bearing reinforced	-	No
Condensate drain	-	No
Bolted feet	-	Yes

Table 224: Efficiency

Electrical data	+/-	50 Hz	60 Hz
		4/4	3/4
Efficiency [%]	min.	87.7	88.2
Power factor	min.	0.82	0.74

Table 225: Electrical data

Electrical data	+/-	50 Hz	60 Hz
		Δ	Y
Rated voltage [V]	-	400	690
Rated current [A]	-10 %	6.2	3.8
Rated power [kW]	-	3	3
Rated speed [rpm]	min.	1440	1720
Rated torque [Nm]	min.	19.21	9.6
Starting current [IA/IN]	+20 %	8.2	9

Table 226: Mechanical data

Mechanical data	+/-	Values
		50 Hz
Sound pressure level [dB]	Max.	63
Moment of inertia [kgm²]	Max.	0.01
Motor canopy	-	No

Table 227: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 228: Environment

Environment	+/-	Values
Ambient temperature [°C]	Max.	40

Table 229: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	2XM32X1,5

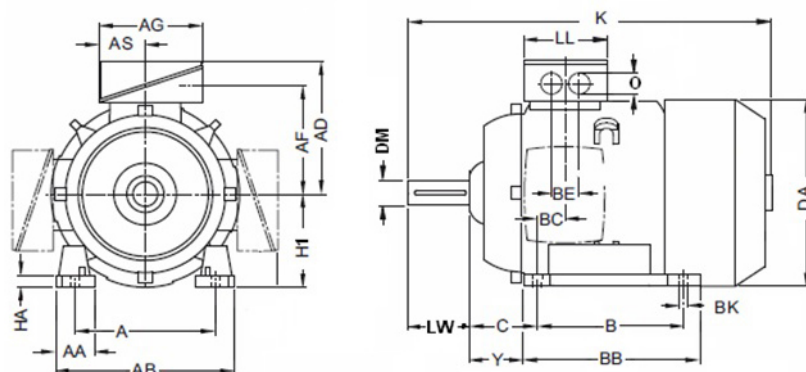

Fig. 25: Envelope dimensions

Table 230: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
160	42	196	216	164	176	83	140	178	24.7	45	12	63	198	-

Table 231: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LW	M	N	S	T	Y	Z
28	100	12	-	431	-	-	118	60	-	-	-	-	42	-

⁴⁹ The name plate data may vary within the tolerances.

⁵⁰ 1800=grey cast iron, 4400=aluminium

B3 type of construction, 4-pin, 112M

Material: 4-4,00-112M-BWE6F3NTHNWWUWKWB⁵¹⁾

Material number: 01583936

Table 232: General data [50 Hz]

General data		+/-	Values
Motor size		Max.	112M
Type of construction		Max.	B3
Starting method		-	Star a. Delta
Motor flange		-	Without
Weight without attachments	[kg]	Max.	40
Housing material ⁵²⁾		-	4400
Enclosure		-	IP55
Nominal frequency	[Hz]		50/60
Efficiency class		-	IE3 (Premium)
Thermal class F to B		-	Yes
Temperature sensor		-	03
Operation on frequency inverter permitted		-	Yes (acc to motor manufact)
Operating mode		-	Continuous running duty (S1)
Direction of rotation		-	Bi-directional
Motor bearings insulated		-	No
Position of fixed motor bearing		-	Non drive side
Fixed motor bearing reinforced		-	Without
Radial motor bearing reinforced		-	No
Condensate drain		-	No
Bolted feet		-	Yes

Table 233: Efficiency

Electrical data		+/-	50 Hz			60 Hz		
			4/4	3/4	2/4	4/4	3/4	2/4
Efficiency	[%]	min.	88.6	89.2	87.7	89.5		
Power factor		min.	0.78			0.75		

Table 234: Electrical data

Electrical data		+/-	50 Hz		60 Hz	
			Δ	Y	Δ	Y
Rated voltage	[V]	-	400	690	460	-
Rated current	[A]	-10 %	8.6	5.12	8.5	-
Rated power	[kW]	-	4		4	
Rated speed	[rpm]	min.	1450		1725	
Rated torque	[Nm]	min.	25.48		21.3	
Starting current	[IA/IN]	+20 %	7.5		9.2	

Table 235: Mechanical data

Mechanical data		+/-	Values	
			50 Hz	60 Hz
Sound pressure level	[dB]	Max.	61	74
Moment of inertia	[kgm²]	Max.	0.02	0.02
Motor canopy		-	No	

Table 236: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 237: Environment

Environment	+/-	Values
Ambient temperature	[°C]	Max. 40

Table 238: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	2XM32X1,5

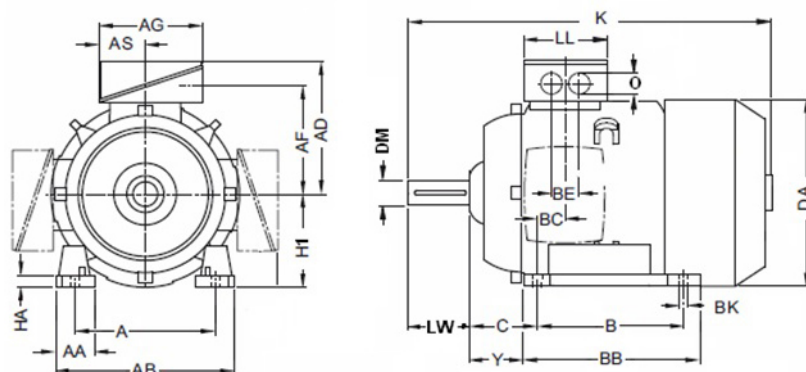

Fig. 26: Envelope dimensions

Table 239: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
190	52	226	230	217	176	83	140	176	16.8	45	12	70	235	-

Table 240: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LW	M	N	S	T	Y	Z
28	112	12	-	414	-	-	118	60	-	-	-	-	49	-

51 The name plate data may vary within the tolerances.

52 1800=grey cast iron, 4400=aluminium

B3 type of construction, 4-pin, 132S

Material: 4-5,50-132S-BWB6F3NTHNWWUWKWB⁵³⁾

Material number: 01583937

Table 241: General data [50 Hz]

General data	+/-	Values
Motor size	Max.	132S
Type of construction	Max.	B3
Starting method	-	Star a. Delta
Motor flange	-	Without
Weight without attachments [kg]	Max.	59
Housing material ⁵⁴⁾	-	4400
Enclosure	-	IP55
Nominal frequency	[Hz]	50
Efficiency class	-	IE3 (Premium)
Thermal class F to B	-	Yes
Temperature sensor	-	03
Operation on frequency inverter permitted	-	Yes (acc to motor manufact)
Operating mode	-	Continuous running duty (S1)
Direction of rotation	-	Bi-directional
Motor bearings insulated	-	No
Position of fixed motor bearing	-	Non drive side
Fixed motor bearing reinforced	-	Without
Radial motor bearing reinforced	-	No
Condensate drain	-	No
Bolted feet	-	Yes

Table 242: Efficiency

Electrical data	+/-	50 Hz	60 Hz
		4/4	3/4
Efficiency [%]	min.	89.6	90.3
Power factor	min.	0.8	

Table 243: Electrical data

Electrical data	+/-	50 Hz	60 Hz
		Δ	Y
Rated voltage [V]	-	400	690
Rated current [A]	-10 %	11	6.82
Rated power [kW]	-	5.5	-
Rated speed [rpm]	min.	1465	
Rated torque [Nm]	min.	34.99	
Starting current [IA/IN]	+20 %	8.9	

Table 244: Mechanical data

Mechanical data	+/-	Values
		50 Hz
Sound pressure level [dB]	Max.	67
Moment of inertia [kgm²]	Max.	0.06
Motor canopy	-	No

Table 245: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 246: Environment

Environment	+/-	Values
Ambient temperature [°C]	Max.	40

Table 247: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	2XM32X1,5

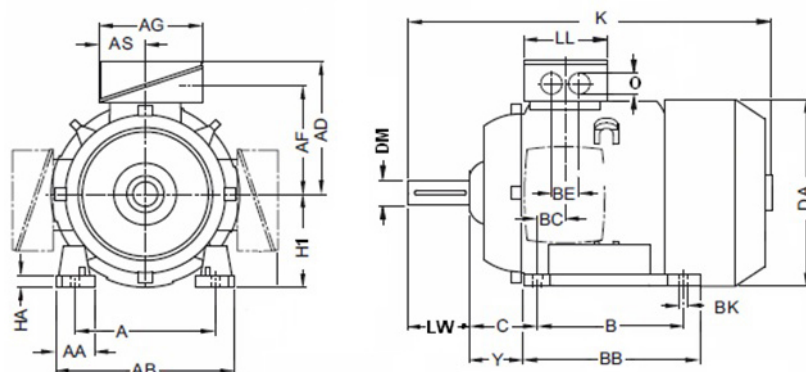

Fig. 27: Envelope dimensions

Table 248: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
216	53	256	222	172	171	77	140	218	21.5	55	12	89	274	-

Table 249: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LW	M	N	S	T	Y	Z
38	132	15	-	515	-	-	146	80	-	-	-	-	66	-

⁵³ The name plate data may vary within the tolerances.

⁵⁴ 1800=grey cast iron, 4400=aluminium

B3 type of construction, 4-pin, 132M

Material: 4-7,50-132M-BWB6F3NTHNWWUWKWB⁵⁵⁾

Material number: 01583938

Table 250: General data [50 Hz]

General data	+/-	Values
Motor size	Max.	132M
Type of construction	Max.	B3
Starting method	-	Star a. Delta
Motor flange	-	Without
Weight without attachments [kg]	Max.	68
Housing material ⁵⁶⁾	-	4400
Enclosure	-	IP55
Nominal frequency	[Hz]	50
Efficiency class	-	IE3 (Premium)
Thermal class F to B	-	Yes
Temperature sensor	-	03
Operation on frequency inverter permitted	-	Yes (acc to motor manufact)
Operating mode	-	Continuous running duty (S1)
Direction of rotation	-	Bi-directional
Motor bearings insulated	-	No
Position of fixed motor bearing	-	Non drive side
Fixed motor bearing reinforced	-	Without
Radial motor bearing reinforced	-	No
Condensate drain	-	No
Bolted feet	-	Yes

Table 251: Efficiency

Electrical data	+/-	50 Hz	60 Hz
		4/4	3/4
Efficiency [%]	min.	90.4	91.1
Power factor	min.	0.8	89.9

Table 252: Electrical data

Electrical data	+/-	50 Hz	60 Hz
		Δ	Y
Rated voltage [V]	-	400	690
Rated current [A]	-10 %	15	9.13
Rated power [kW]	-	7.5	-
Rated speed [rpm]	min.	1465	-
Rated torque [Nm]	min.	47.73	-
Starting current [IA/IN]	+20 %	8.9	-

Table 253: Mechanical data

Mechanical data	+/-	Values
		50 Hz
Sound pressure level [dB]	Max.	67
Moment of inertia [kgm²]	Max.	0.07
Motor canopy	-	No

Table 254: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 255: Environment

Environment	+/-	Values
Ambient temperature [°C]	Max.	40

Table 256: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	2XM32X1,5

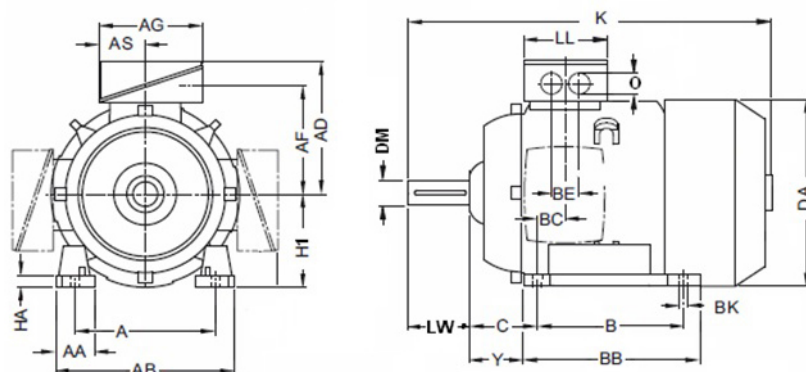

Fig. 28: Envelope dimensions

Table 257: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
216	53	256	222	172	171	77	178	218	21.5	55	12	89	274	-

Table 258: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LW	M	N	S	T	Y	Z
38	132	15	-	515	-	-	146	80	-	-	-	-	66	-

⁵⁵ The name plate data may vary within the tolerances.

⁵⁶ 1800=grey cast iron, 4400=aluminium

B3 type of construction, 4-pin, 160M

Material: 4-11,0-160M-BWE6F3NTHNWWUWKWB⁵⁷⁾

Material number: 01583939

Table 259: General data [50 Hz]

General data	+/-	Values
Motor size	Max.	160M
Type of construction	Max.	B3
Starting method	-	Star a. Delta
Motor flange	-	Without
Weight without attachments [kg]	Max.	106
Housing material ⁵⁸⁾	-	4400
Enclosure	-	IP55
Nominal frequency	[Hz]	50/60
Efficiency class	-	IE3 (Premium)
Thermal class F to B	-	Yes
Temperature sensor	-	03
Operation on frequency inverter permitted	-	Yes (acc to motor manufact)
Operating mode	-	Continuous running duty (S1)
Direction of rotation	-	Bi-directional
Motor bearings insulated	-	No
Position of fixed motor bearing	-	Non drive side
Fixed motor bearing reinforced	-	Without
Radial motor bearing reinforced	-	No
Condensate drain	-	No
Bolted feet	-	Yes

Table 260: Efficiency

Electrical data	+/-	50 Hz	60 Hz
		4/4	3/4
Efficiency [%]	min.	91.4	92.1
Power factor	min.	0.8	0.75

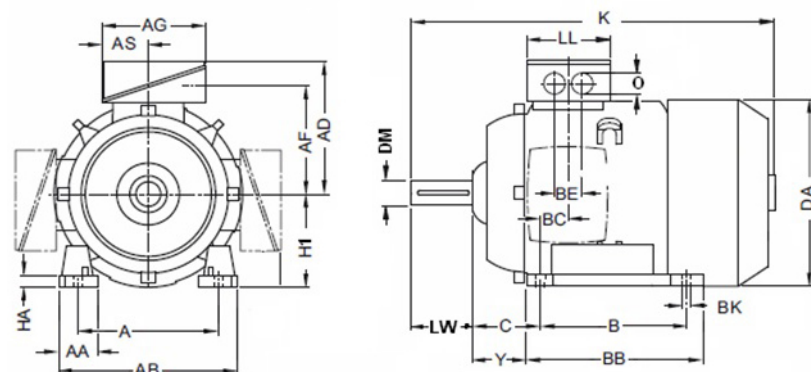

Fig. 29: Envelope dimensions

Table 266: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
254	66	308	261	209	193	86	210	310	28	59.5	14.5	108	314	-

Table 267: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LW	M	N	S	T	Y	Z
42	160	18	-	634	-	-	152	110	-	-	-	-	80	-

Table 261: Electrical data

Electrical data	+/-	50 Hz	60 Hz
		Δ	Y
Rated voltage [V]	-	400	690
Rated current [A]	-10 %	22.8	13.2
Rated power [kW]	-	11	11
Rated speed [rpm]	min.	1470	1740
Rated torque [Nm]	min.	69.58	58
Starting current [IA/IN]	+20 %	7.9	8.6

Table 262: Mechanical data

Mechanical data	+/-	Values
		50 Hz
Sound pressure level [dB]	Max.	68
Moment of inertia [kgm²]	Max.	0.11
Motor canopy	-	No

Table 263: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 264: Environment

Environment	+/-	Values
Ambient temperature [°C]	Max.	40

Table 265: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	2XM40X1,5

⁵⁷ The name plate data may vary within the tolerances.

⁵⁸ 1800=grey cast iron, 4400=aluminium

B3 type of construction, 4-pin, 160L

Material: 4-15,0-160L-BWE6F3NTHNWWUWKWB⁵⁹⁾

Material number: 01583940

Table 268: General data [50 Hz]

General data	+/-	Values
Motor size	Max.	160L
Type of construction	Max.	B3
Starting method	-	Star a. Delta
Motor flange	-	Without
Weight without attachments [kg]	Max.	114
Housing material ⁶⁰⁾	-	4400
Enclosure	-	IP55
Nominal frequency	[Hz]	50/60
Efficiency class	-	IE3 (Premium)
Thermal class F to B	-	Yes
Temperature sensor	-	03
Operation on frequency inverter permitted	-	Yes (acc to motor manufact)
Operating mode	-	Continuous running duty (S1)
Direction of rotation	-	Bi-directional
Motor bearings insulated	-	No
Position of fixed motor bearing	-	Non drive side
Fixed motor bearing reinforced	-	Without
Radial motor bearing reinforced	-	No
Condensate drain	-	No
Bolted feet	-	Yes

Table 269: Efficiency

Electrical data	+/-	50 Hz	60 Hz
		4/4	3/4
Efficiency [%]	min.	92.1	91.7
Power factor	min.	0.81	0.78

Table 270: Electrical data

Electrical data	+/-	50 Hz	60 Hz
		Δ	Y
Rated voltage [V]	-	400	690
Rated current [A]	-10 %	30.1	18.37
Rated power [kW]	-	15	15
Rated speed [rpm]	min.	1465	1740
Rated torque [Nm]	min.	95.06	79.8
Starting current [IA/IN]	+20 %	8.9	8.4

Table 271: Mechanical data

Mechanical data	+/-	Values
		50 Hz
Sound pressure level [dB]	Max.	68
Moment of inertia [kgm²]	Max.	0.13
Motor canopy	-	No

Table 272: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 273: Environment

Environment	+/-	Values
Ambient temperature [°C]	Max.	40

Table 274: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	2XM40X1,5

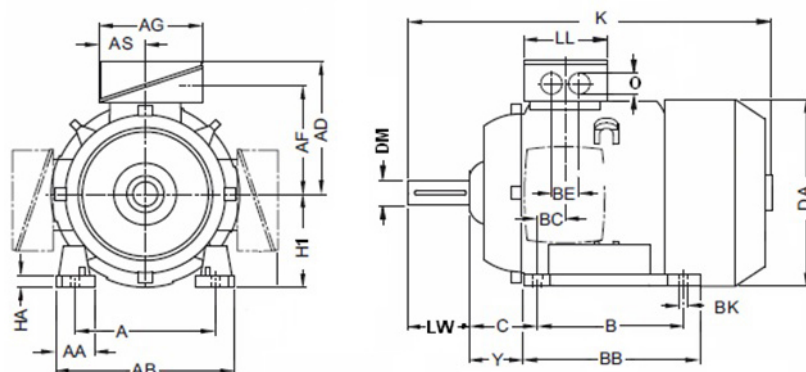

Fig. 30: Envelope dimensions

Table 275: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
254	66	308	261	209	193	86	254	310	28	59.5	14.5	108	314	-

Table 276: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LW	M	N	S	T	Y	Z
42	160	18	-	664	-	-	152	110	-	-	-	-	80	-

⁵⁹ The name plate data may vary within the tolerances.

⁶⁰ 1800=grey cast iron, 4400=aluminium

B3 type of construction, 4-pin, 180M

Material: 4-18,5-180M-BWE6F3NTHNWWUWKWB⁶¹⁾

Material number: 01583921

Table 277: General data [50 Hz]

General data	+/-	Values
Motor size	Max.	180M
Type of construction	Max.	B3
Starting method	-	Star a. Delta
Motor flange	-	Without
Weight without attachments [kg]	Max.	157
Housing material ⁶²⁾	-	4400
Enclosure	-	IP55
Nominal frequency	[Hz]	50/60
Efficiency class	-	IE3 (Premium)
Thermal class F to B	-	Yes
Temperature sensor	-	03
Operation on frequency inverter permitted	-	Yes (acc to motor manufact)
Operating mode	-	Continuous running duty (S1)
Direction of rotation	-	Bi-directional
Motor bearings insulated	-	No
Position of fixed motor bearing	-	Non drive side
Fixed motor bearing reinforced	-	Without
Radial motor bearing reinforced	-	No
Condensate drain	-	No
Bolted feet	-	Yes

Table 278: Efficiency

Electrical data	+/-	50 Hz	60 Hz
		4/4	3/4
Efficiency [%]	min.	92.6	93.2
Power factor	min.	0.83	0.82

Table 279: Electrical data

Electrical data	+/-	50 Hz	60 Hz
		Δ	Y
Rated voltage [V]	-	400	690
Rated current [A]	-10 %	36.8	22.55
Rated power [kW]	-	18.5	18.5
Rated speed [rpm]	min.	1470	1735
Rated torque [Nm]	min.	117.6	98.9
Starting current [IA/IN]	+20 %	8.7	9.7

Table 280: Mechanical data

Mechanical data	+/-	Values
		50 Hz
Sound pressure level [dB]	Max.	69
Moment of inertia [kgm²]	Max.	0.22
Motor canopy	-	No

Table 281: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 282: Environment

Environment	+/-	Values
Ambient temperature [°C]	Max.	40

Table 283: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	2XM40X1,5

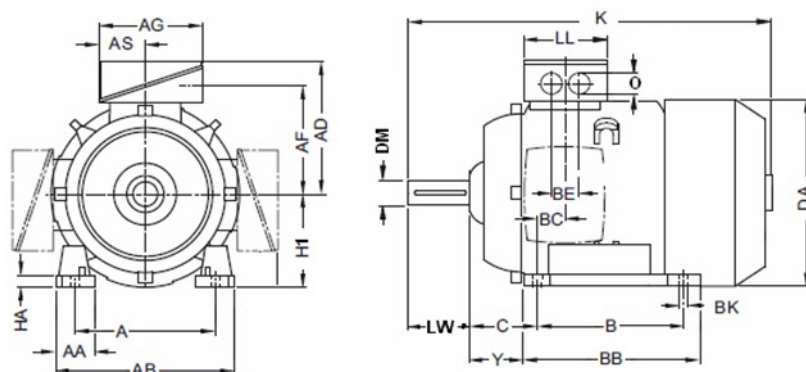


Fig. 31: Envelope dimensions

Table 284: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
279	68	350	285	234	193	86	241	343	39.3	75.5	14.5	121	356	-

Table 285: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LW	M	N	S	T	Y	Z
48	180	22	-	698	-	-	152	110	-	-	-	-	85	-

⁶¹ The name plate data may vary within the tolerances.

⁶² 1800=grey cast iron, 4400=aluminium

B3 type of construction, 4-pin, 180L

Material: 4-22,0-180L-BWE6F3NTHNWWUWKWB⁶³⁾

Material number: 01583922

Table 286: General data [50 Hz]

General data	+/-	Values
Motor size	Max.	180L
Type of construction	Max.	B3
Starting method	-	Star a. Delta
Motor flange	-	Without
Weight without attachments [kg]	Max.	160
Housing material ⁶⁴⁾	-	4400
Enclosure	-	IP55
Nominal frequency	[Hz]	50/60
Efficiency class	-	IE3 (Premium)
Thermal class F to B	-	Yes
Temperature sensor	-	03
Operation on frequency inverter permitted	-	Yes (acc to motor manufact)
Operating mode	-	Continuous running duty (S1)
Direction of rotation	-	Bi-directional
Motor bearings insulated	-	No
Position of fixed motor bearing	-	Non drive side
Fixed motor bearing reinforced	-	Without
Radial motor bearing reinforced	-	No
Condensate drain	-	No
Bolted feet	-	Yes

Table 287: Efficiency

Electrical data	+/-	50 Hz	60 Hz
		4/4	3/4
Efficiency [%]	min.	93	93.6
Power factor	min.	0.83	0.8

Table 288: Electrical data

Electrical data	+/-	50 Hz	60 Hz
		Δ	Y
Rated voltage [V]	-	400	460
Rated current [A]	-10 %	43.1	41.3
Rated power [kW]	-	22	22
Rated speed [rpm]	min.	1470	1735
Rated torque [Nm]	min.	140.06	117.6
Starting current [IA/IN]	+20 %	9	10.1

Table 289: Mechanical data

Mechanical data	+/-	Values
		50 Hz
Sound pressure level [dB]	Max.	71
Moment of inertia [kgm²]	Max.	0.25
Motor canopy	-	No

Table 290: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 291: Environment

Environment	+/-	Values
Ambient temperature [°C]	Max.	40

Table 292: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	2XM40X1,5

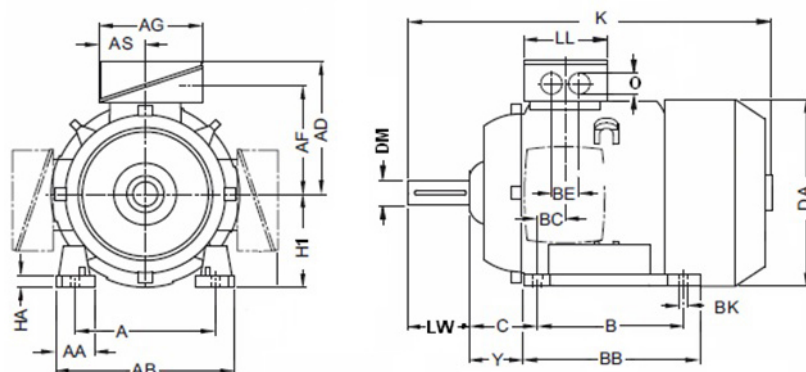


Fig. 32: Envelope dimensions

Table 293: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
279	68	350	285	234	193	86	279	355	39.3	75.5	14.5	121	356	-

Table 294: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LW	M	N	S	T	Y	Z
48	180	22	-	698	-	-	152	110	-	-	-	-	85	-

⁶³ The name plate data may vary within the tolerances.

⁶⁴ 1800=grey cast iron, 4400=aluminium

B3 type of construction, 4-pin, 200L

Material: 4-30,0-200L-BWE6F3NTHNWWUWKWB⁶⁵⁾

Material number: 01583923

Table 295: General data [50 Hz]

General data	+/-	Values
Motor size	Max.	200L
Type of construction	Max.	B3
Starting method	-	Star a. Delta
Motor flange	-	Without
Weight without attachments [kg]	Max.	207
Housing material ⁶⁶⁾	-	4400
Enclosure	-	IP55
Nominal frequency	[Hz]	50/60
Efficiency class	-	IE3 (Premium)
Thermal class F to B	-	Yes
Temperature sensor	-	03
Operation on frequency inverter permitted	-	Yes (acc to motor manufact)
Operating mode	-	Continuous running duty (S1)
Direction of rotation	-	Bi-directional
Motor bearings insulated	-	No
Position of fixed motor bearing	-	Non drive side
Fixed motor bearing reinforced	-	Without
Radial motor bearing reinforced	-	No
Condensate drain	-	No
Bolted feet	-	Yes

Table 296: Efficiency

Electrical data	+/-	50 Hz	60 Hz
		4/4	3/4
Efficiency [%]	min.	93.6	94
Power factor	min.	0.83	0.76

Table 297: Electrical data

Electrical data	+/-	50 Hz	60 Hz
		Δ	Y
Rated voltage [V]	-	400	690
Rated current [A]	-10 %	59.2	35.2
Rated power [kW]	-	30	30
Rated speed [rpm]	min.	1470	1730
Rated torque [Nm]	min.	189.7	159.5
Starting current [IA/IN]	+20 %	7.7	8.8

Table 298: Mechanical data

Mechanical data	+/-	Values
		50 Hz
Sound pressure level [dB]	Max.	70
Moment of inertia [kgm ²]	Max.	0.39
Motor canopy	-	No

Table 299: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 300: Environment

Environment	+/-	Values
Ambient temperature [°C]	Max.	40

Table 301: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	2XM50X1,5

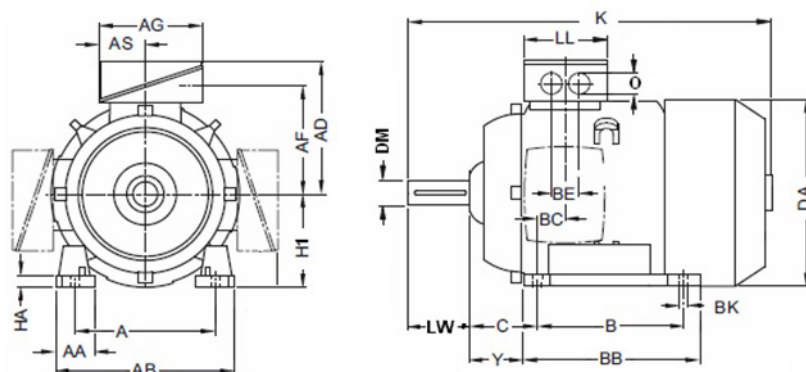


Fig. 33: Envelope dimensions

Table 302: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
318	85	388	326	262	248	113	305	375	43.5	83	18.5	133	396	-

Table 303: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LW	M	N	S	T	Y	Z
55	200	25	-	758	-	-	194	110	-	-	-	-	93	-

⁶⁵⁾ The name plate data may vary within the tolerances.

⁶⁶⁾ 1800=grey cast iron, 4400=aluminium

B3 type of construction, 4-pin, 225S

Material: 4-37,0-225S-BWE6F3NTHNWWUWKWB⁶⁷⁾

Material number: 01583924

Table 304: General data [50 Hz]

General data	+/-	Values
Motor size	Max.	225S
Type of construction	Max.	B3
Starting method	-	Star a. Delta
Motor flange	-	Without
Weight without attachments [kg]	Max.	387
Housing material ⁶⁸⁾	-	1800
Enclosure	-	IP55
Nominal frequency	[Hz]	50/60
Efficiency class	-	IE3 (Premium)
Thermal class F to B	-	Yes
Temperature sensor	-	03
Operation on frequency inverter permitted	-	Yes (acc to KSB)
Operating mode	-	Continuous running duty (S1)
Direction of rotation	-	Bi-directional
Motor bearings insulated	-	No
Position of fixed motor bearing	-	Non drive side
Fixed motor bearing reinforced	-	Without
Radial motor bearing reinforced	-	No
Condensate drain	-	No
Bolted feet	-	No

Table 305: Efficiency

Electrical data	+/-	50 Hz	60 Hz
		4/4	3/4
Efficiency [%]	min.	93.9	94.2
Power factor	min.	0.84	0.81

Table 306: Electrical data

Electrical data	+/-	50 Hz	60 Hz
		Δ	Y
Rated voltage [V]	-	400	690
Rated current [A]	-10 %	70.1	42.35
Rated power [kW]	-	37	37
Rated speed [rpm]	min.	1478	1760
Rated torque [Nm]	min.	233.96	194.5
Starting current [IA/IN]	+20 %	8.1	9

Table 307: Mechanical data

Mechanical data	+/-	Values
		50 Hz
Sound pressure level [dB]	Max.	68
Moment of inertia [kgm²]	Max.	0.54
Motor canopy	-	No

Table 308: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 309: Environment

Environment	+/-	Values
Ambient temperature [°C]	Max.	40

Table 310: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	2XM50X1,5

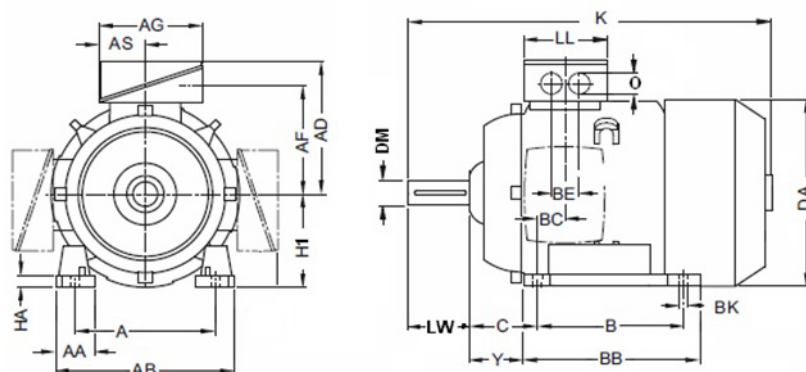


Fig. 34: Envelope dimensions

Table 311: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
356	90	442	372	310	293	123	286	412	8	88	18.5	149	453	-

Table 312: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LW	M	N	S	T	Y	Z
60	225	34	-	886	-	-	207	140	-	-	-	-	107	-

⁶⁷ The name plate data may vary within the tolerances.

⁶⁸ 1800=grey cast iron, 4400=aluminium

B3 type of construction, 4-pin, 225M

Material: 4-45,0-225M-BWE6F3NTHNWWUWKWB⁶⁹⁾

Material number: 01583925

Table 313: General data [50 Hz]

General data	+/-	Values
Motor size	Max.	225M
Type of construction	Max.	B3
Starting method	-	Star a. Delta
Motor flange	-	Without
Weight without attachments [kg]	Max.	376
Housing material ⁷⁰⁾	-	1800
Enclosure	-	IP55
Nominal frequency	[Hz]	50/60
Efficiency class	-	IE3 (Premium)
Thermal class F to B	-	Yes
Temperature sensor	-	03
Operation on frequency inverter permitted	-	Yes (acc to KSB)
Operating mode	-	Continuous running duty (S1)
Direction of rotation	-	Bi-directional
Motor bearings insulated	-	No
Position of fixed motor bearing	-	Non drive side
Fixed motor bearing reinforced	-	Without
Radial motor bearing reinforced	-	No
Condensate drain	-	No
Bolted feet	-	No

Table 314: Efficiency

Electrical data		+/-	50 Hz			60 Hz		
			4/4	3/4	2/4	4/4	3/4	2/4
Efficiency	[%]	min.	94.2	94.4	93.6	95		
Power factor		min.	0.84			0.82		

Table 315: Electrical data

Electrical data		+/-	50 Hz		60 Hz	
			Δ	Y	Δ	Y
Rated voltage	[V]	-	400	690	460	-
Rated current	[A]	-10 %	85	51.15	86.9	-
Rated power	[kW]	-	45		45	
Rated speed	[rpm]	min.	1475		1750	
Rated torque	[Nm]	min.	285.18		236.6	
Starting current	[I _A /I _N]	+20 %	7.9		9	

Table 316: Mechanical data

Mechanical data		+/-	Values	
			50 Hz	60 Hz
Sound pressure level	[dB]	Max.	68	78
Moment of inertia	[kgm²]	Max.	0.71	0.71
Motor canopy		-	No	

Table 317: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 318: Environment

Environment	+/-	Values
Ambient temperature [°C]	Max.	40

Table 319: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	2XM50X1,5

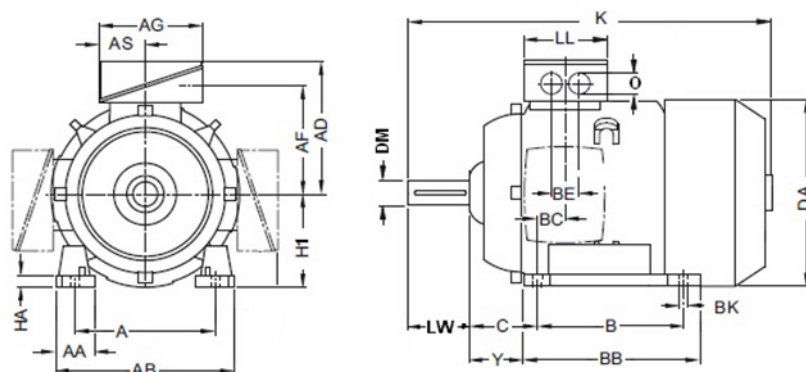


Fig. 35: Envelope dimensions

Table 320: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
356	90	442	372	310	293	123	311	412	8	88	18.5	149	453	-

Table 321: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LW	M	N	S	T	Y	Z
60	225	34	-	886	-	-	207	140	-	-	-	-	107	-

⁶⁹⁾ The name plate data may vary within the tolerances.

⁷⁰⁾ 1800=grey cast iron, 4400=aluminium

B3 type of construction, 4-pin, 250M

Material: 4-55,0-250M-BWE6F3NTHNWWUWKWB⁷¹⁾

Material number: 01583926

Table 322: General data [50 Hz]

General data	+/-	Values
Motor size	Max.	250M
Type of construction	Max.	B3
Starting method	-	Star a. Delta
Motor flange	-	Without
Weight without attachments [kg]	Max.	469
Housing material ⁷²⁾	-	1800
Enclosure	-	IP55
Nominal frequency	[Hz]	50/60
Efficiency class	-	IE3 (Premium)
Thermal class F to B	-	Yes
Temperature sensor	-	03
Operation on frequency inverter permitted	-	Yes (acc to KSB)
Operating mode	-	Continuous running duty (S1)
Direction of rotation	-	Bi-directional
Motor bearings insulated	-	No
Position of fixed motor bearing	-	Non drive side
Fixed motor bearing reinforced	-	Without
Radial motor bearing reinforced	-	No
Condensate drain	-	No
Bolted feet	-	No

Table 323: Efficiency

Electrical data	+/-	50 Hz	60 Hz
		4/4	3/4
Efficiency [%]	min.	94.6	94.7
Power factor	min.	0.86	0.81

Table 324: Electrical data

Electrical data	+/-	50 Hz	60 Hz
		Δ	Y
Rated voltage [V]	-	400	690
Rated current [A]	-10 %	103.6	61.6
Rated power [kW]	-	55	55
Rated speed [rpm]	min.	1480	1766
Rated torque [Nm]	min.	346.92	288.4
Starting current [IA/IN]	+20 %	7.9	8.7

Table 325: Mechanical data

Mechanical data	+/-	Values
		50 Hz
Sound pressure level [dB]	Max.	69
Moment of inertia [kgm ²]	Max.	1.1
Motor canopy	-	No

Table 326: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 327: Environment

Environment	+/-	Values
Ambient temperature [°C]	Max.	40

Table 328: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (O)	-	2XM63X1,5

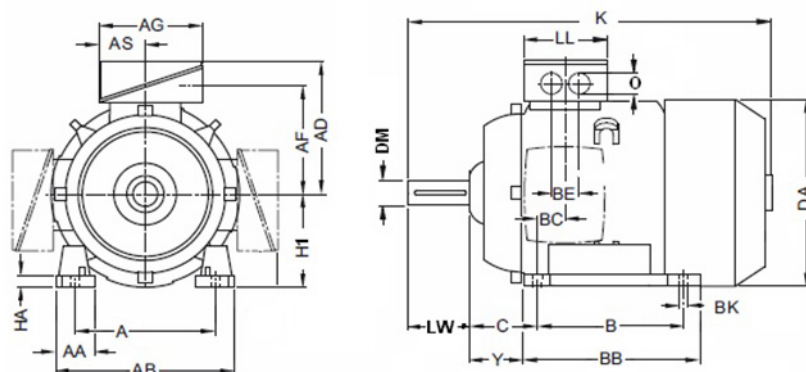

Fig. 36: Envelope dimensions

Table 329: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
406	100	506	451	354	351	160	349	467	62	100.5	24	168	497	-

Table 330: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LW	M	N	S	T	Y	Z
65	250	43	-	965	-	-	245	140	-	-	-	-	131	-

⁷¹ The name plate data may vary within the tolerances.

⁷² 1800=grey cast iron, 4400=aluminium

B3 type of construction, 4-pin, 280S

Material: 4-75,0-280S-BWE6F3NTHNWWNWKWB⁷³⁾

Material number: 01583856

Table 331: General data [50 Hz]

General data	+/-	Values
Motor size	Max.	280S
Type of construction	Max.	B3
Starting method	-	Star a. Delta
Motor flange	-	Without
Weight without attachments [kg]	Max.	729
Housing material ⁷⁴⁾	-	1800
Enclosure	-	IP55
Nominal frequency	[Hz]	50/60
Efficiency class	-	IE3 (Premium)
Thermal class F to B	-	Yes
Temperature sensor	-	03
Operation on frequency inverter permitted	-	No
Operating mode	-	Continuous running duty (S1)
Direction of rotation	-	Bi-directional
Motor bearings insulated	-	No
Position of fixed motor bearing	-	Non drive side
Fixed motor bearing reinforced	-	Without
Radial motor bearing reinforced	-	No
Condensate drain	-	No
Bolted feet	-	No

Table 332: Efficiency

Electrical data	+/-	50 Hz	60 Hz
		4/4	3/4
Efficiency [%]	min.	95	94.9
Power factor	min.	0.87	0.82

Table 333: Electrical data

Electrical data	+/-	50 Hz	60 Hz
		Δ	Y
Rated voltage [V]	-	400	690
Rated current [A]	-10 %	140.5	84.7
Rated power [kW]	-	75	75
Rated speed [rpm]	min.	1485	1770
Rated torque [Nm]	min.	472.36	392.1
Starting current [IA/IN]	+20 %	7.9	7.8

Table 334: Mechanical data

Mechanical data	+/-	Values
		50 Hz
Sound pressure level [dB]	Max.	72
Moment of inertia [kgm²]	Max.	2.19
Motor canopy	-	No

Table 335: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 336: Environment

Environment	+/-	Values
Ambient temperature [°C]	Max.	40

Table 337: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	2XM63X1,5

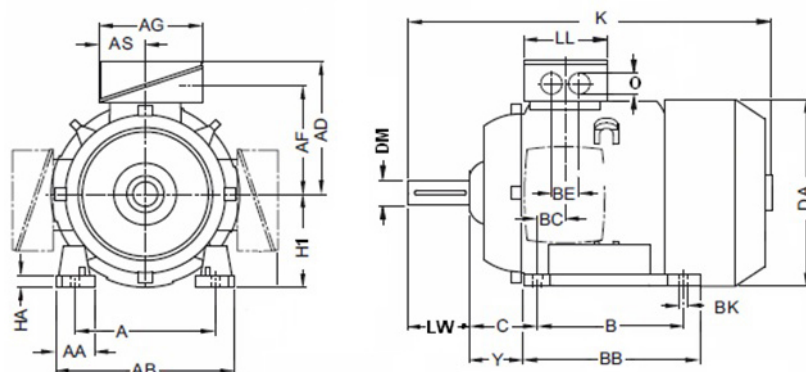


Fig. 37: Envelope dimensions

Table 338: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
457	100	540	433	345	319	145	368	479	20	110	24	190	551	-

Table 339: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LW	M	N	S	T	Y	Z
75	280	40	-	960	-	-	233	140	-	-	-	-	160	-

⁷³ The name plate data may vary within the tolerances.

⁷⁴ 1800=grey cast iron, 4400=aluminium

B3 type of construction, 4-pin, 280M

Material: 4-90,0-280M-BWE6F3NTHNWWNWKWB⁷⁵⁾

Material number: 01583857

Table 340: General data [50 Hz]

General data	+/-	Values
Motor size	Max.	280M
Type of construction	Max.	B3
Starting method	-	Star a. Delta
Motor flange	-	Without
Weight without attachments [kg]	Max.	777
Housing material ⁷⁶⁾	-	1800
Enclosure	-	IP55
Nominal frequency	[Hz]	50/60
Efficiency class	-	IE3 (Premium)
Thermal class F to B	-	Yes
Temperature sensor	-	03
Operation on frequency inverter permitted	-	No
Operating mode	-	Continuous running duty (S1)
Direction of rotation	-	Bi-directional
Motor bearings insulated	-	No
Position of fixed motor bearing	-	Non drive side
Fixed motor bearing reinforced	-	Without
Radial motor bearing reinforced	-	No
Condensate drain	-	No
Bolted feet	-	No

Table 341: Efficiency

Electrical data	+/-	50 Hz	60 Hz
		4/4	3/4
Efficiency [%]	min.	95.2	95
Power factor	min.	0.84	0.83

Table 342: Electrical data

Electrical data	+/-	50 Hz	60 Hz
		Δ	Y
Rated voltage [V]	-	400	690
Rated current [A]	-10 %	166.3	100.1
Rated power [kW]	-	90	90
Rated speed [rpm]	min.	1485	1765
Rated torque [Nm]	min.	567.17	471.8
Starting current [IA/IN]	+20 %	7.6	7.8

Table 343: Mechanical data

Mechanical data	+/-	Values
		50 Hz
Sound pressure level [dB]	Max.	74
Moment of inertia [kgm²]	Max.	2.27
Motor canopy	-	No

Table 344: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 345: Environment

Environment	+/-	Values
Ambient temperature [°C]	Max.	40

Table 346: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (O)	-	2XM63X1,5

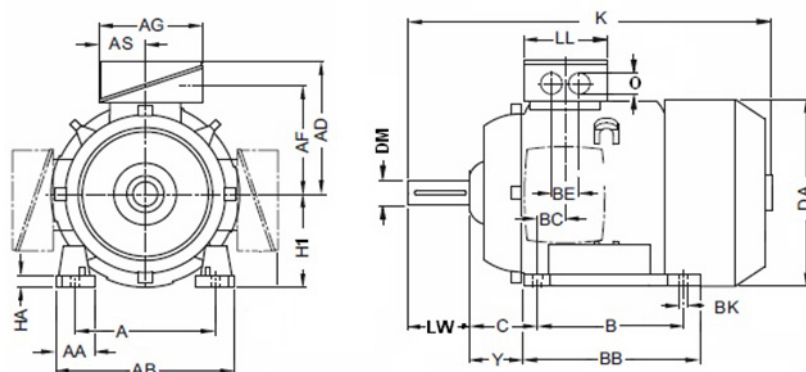


Fig. 38: Envelope dimensions

Table 347: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
457	100	557	476	380	351	160	419	517	20	110	24	190	580	-

Table 348: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LW	M	N	S	T	Y	Z
75	280	42	-	1071	-	-	245	140	-	-	-	-	152	-

⁷⁵ The name plate data may vary within the tolerances.

⁷⁶ 1800=grey cast iron, 4400=aluminium

B3 type of construction, 4-pin, 315S

Material: 4-110 -315S-BWE6F3NTHNWWNWKWB⁷⁷⁾

Material number: 01583860

Table 349: General data [50 Hz]

General data	+/-	Values
Motor size	Max.	315S
Type of construction	Max.	B3
Starting method	-	Star a. Delta
Motor flange	-	Without
Weight without attachments [kg]	Max.	1010
Housing material ⁷⁸⁾	-	1800
Enclosure	-	IP55
Nominal frequency	[Hz]	50/60
Efficiency class	-	IE3 (Premium)
Thermal class F to B	-	Yes
Temperature sensor	-	03
Operation on frequency inverter permitted	-	No
Operating mode	-	Continuous running duty (S1)
Direction of rotation	-	Bi-directional
Motor bearings insulated	-	No
Position of fixed motor bearing	-	Non drive side
Fixed motor bearing reinforced	-	Without
Radial motor bearing reinforced	-	No
Condensate drain	-	No
Bolted feet	-	No

Table 350: Efficiency

Electrical data	+/-	50 Hz	60 Hz
		4/4	3/4
Efficiency [%]	min.	95.4	95.1
Power factor	min.	0.86	0.83

Table 351: Electrical data

Electrical data	+/-	50 Hz	60 Hz
		Δ	Y
Rated voltage [V]	-	400	690
Rated current [A]	-10 %	202.8	123.2
Rated power [kW]	-	110	110
Rated speed [rpm]	min.	1488	1775
Rated torque [Nm]	min.	690.88	573.5
Starting current [IA/IN]	+20 %	7.8	8.2

Table 352: Mechanical data

Mechanical data	+/-	Values
		50 Hz
Sound pressure level [dB]	Max.	75
Moment of inertia [kgm ²]	Max.	3.04
Motor canopy	-	No

Table 353: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 354: Environment

Environment	+/-	Values
Ambient temperature [°C]	Max.	40

Table 355: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (O)	-	2XM63X1,5

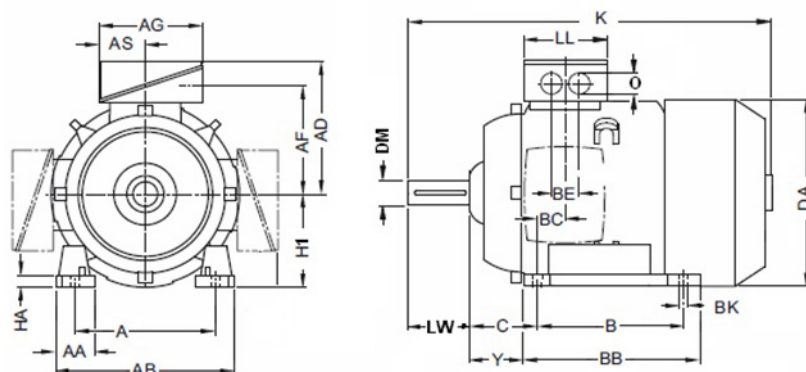

Fig. 39: Envelope dimensions

Table 356: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
508	120	610	515	404	374	164	406	527	22	110	28	216	616	-

Table 357: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LW	M	N	S	T	Y	Z
80	315	50	-	1082	-	-	299	170	-	-	-	-	181	-

⁷⁷ The name plate data may vary within the tolerances.

⁷⁸ 1800=grey cast iron, 4400=aluminium

B3 type of construction, 4-pin, 315M

Material: 4-132 -315M-BWE6F3NTHNWWNWKWB⁷⁹⁾

Material number: 01583862

Table 358: General data [50 Hz]

General data		+/-	Values
Motor size		Max.	315M
Type of construction		Max.	B3
Starting method		-	Star a. Delta
Motor flange		-	Without
Weight without attachments	[kg]	Max.	1095
Housing material ⁸⁰⁾		-	1800
Enclosure		-	IP55
Nominal frequency	[Hz]		50/60
Efficiency class		-	IE3 (Premium)
Thermal class F to B		-	Yes
Temperature sensor		-	03
Operation on frequency inverter permitted		-	No
Operating mode		-	Continuous running duty (S1)
Direction of rotation		-	Bi-directional
Motor bearings insulated		-	No
Position of fixed motor bearing		-	Non drive side
Fixed motor bearing reinforced		-	Without
Radial motor bearing reinforced		-	No
Condensate drain		-	No
Bolted feet		-	No

Table 359: Efficiency

Electrical data		+/-	50 Hz			60 Hz		
			4/4	3/4	2/4	4/4	3/4	2/4
Efficiency	[%]	min.	95.6	95.2	94.4	96.2		
Power factor		min.	0.83			0.83		

Table 360: Electrical data

Electrical data		+/-	50 Hz		60 Hz	
			Δ	Y	Δ	Y
Rated voltage	[V]	-	400	690	460	-
Rated current	[A]	-10 %	242.8	147.4	212.7	-
Rated power	[kW]	-	132		132	
Rated speed	[rpm]	min.	1490		1770	
Rated torque	[Nm]	min.	829.06		690.1	
Starting current	[IA/IN]	+20 %	7.9		8.4	

Table 361: Mechanical data

Mechanical data		+/-	Values	
			50 Hz	60 Hz
Sound pressure level	[dB]	Max.	77	82
Moment of inertia	[kgm²]	Max.	3.98	3.98
Motor canopy		-	No	

Table 362: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 363: Environment

Environment	+/-	Values
Ambient temperature	[°C]	Max. 40

Table 364: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	2XM63X1,5

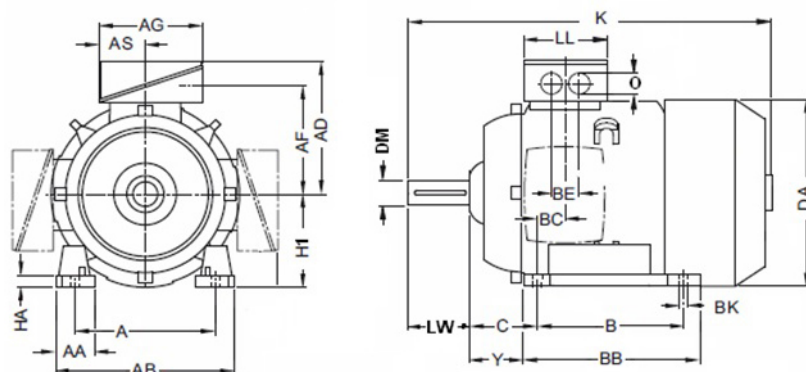

Fig. 40: Envelope dimensions

Table 365: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
508	120	630	567	444	411	180	457	621	22	110	28	216	664	-

Table 366: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LW	M	N	S	T	Y	Z
80	315	50	-	1274	-	-	314	170	-	-	-	-	172	-

⁷⁹ The name plate data may vary within the tolerances.

⁸⁰ 1800=grey cast iron, 4400=aluminium

V1 type of construction, 2-pin, 80M

Material: 2-O,75- 80M-BWH6FINNWDWFUWKWB⁸¹⁾

Material number: 01583975

Table 367: General data [50 Hz]

General data	+/-	Values
Motor size	Max.	080M
Type of construction	Max.	V1
Starting method	-	Star a. Delta
Motor flange	-	EN 50347 Type FF
Weight without attachments [kg]	Max.	12
Housing material ⁸²⁾	-	4400
Enclosure	-	IP55
Nominal frequency	[Hz]	50/60
Efficiency class	-	IE3 (Premium)
Thermal class F to B	-	Yes
Temperature sensor	-	01
Operation on frequency inverter permitted	-	Yes (acc to motor manufact)
Operating mode	-	Continuous running duty (S1)
Direction of rotation	-	Bi-directional
Motor bearings insulated	-	No
Position of fixed motor bearing	-	Drive end
Fixed motor bearing reinforced	-	Without
Radial motor bearing reinforced	-	No
Condensate drain	-	Yes
Bolted feet	-	No

Table 368: Efficiency

Electrical data	+/-	50 Hz	60 Hz
		4/4	3/4
Efficiency [%]	min.	80.7	77.5
Power factor	min.	0.74	0.79

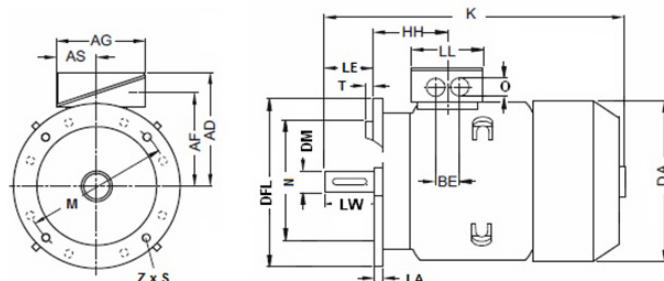


Fig. 41: Envelope dimensions

Table 374: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
-	-	-	163	131	126	58	-	-	-	32	-	-	159	200

Table 375: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LE	M	N	S	T	Y	Z
19	-	-	74	292	10	252	83	40	165	130	12	3.5	-	4

Table 369: Electrical data

Electrical data	+/-	50 Hz	60 Hz
		Δ	Y
Rated voltage [V]	-	230	400
Rated current [A]	-10 %	2.9	1.72
Rated power [kW]	-	0.75	0.75
Rated speed [rpm]	min.	2825	3390
Rated torque [Nm]	min.	2.45	2
Starting current [IA/IN]	+20 %	7.9	8.4

Table 370: Mechanical data

Mechanical data	+/-	50 Hz	60 Hz
		Δ	Y
Sound pressure level [dB]	Max.	63	67
Moment of inertia [kgm²]	Max.	0	0
Motor canopy	-	No	No

Table 371: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 372: Environment

Environment	+/-	Values
Ambient temperature [°C]	Max.	40

Table 373: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	1XM25X1,5

⁸¹ The name plate data may vary within the tolerances.

⁸² 1800=grey cast iron, 4400=aluminium

V1 type of construction, 2-pin, 80M

Material: 2-1,10- 80M-BWH6F1NNGDWFUWKWB⁸³⁾

Material number: 01583976

Table 376: General data [50 Hz]

General data		+/-	Values
Motor size		Max.	080M
Type of construction		Max.	V1
Starting method		-	Star a. Delta
Motor flange		-	IEC 60072 Type FF
Weight without attachments	[kg]	Max.	12.94
Housing material ⁸⁴⁾		-	4400
Enclosure		-	IP55
Nominal frequency	[Hz]		50/60
Efficiency class		-	IE3 (Premium)
Thermal class F to B		-	Yes
Temperature sensor		-	01
Operation on frequency inverter permitted		-	Yes (acc to motor manufact)
Operating mode		-	Continuous running duty (S1)
Direction of rotation		-	Bi-directional
Motor bearings insulated		-	No
Position of fixed motor bearing		-	Drive end
Fixed motor bearing reinforced		-	Without
Radial motor bearing reinforced		-	No
Condensate drain		-	Yes
Bolted feet		-	No

Table 377: Efficiency

Electrical data		+/-	50 Hz			60 Hz		
			4/4	3/4	2/4	4/4	3/4	2/4
Efficiency	[%]	min.	82.7	83.9	82	84	81.5	78.5
Power factor		min.	0.82	0.76	0.63	0.8	0.74	0.62

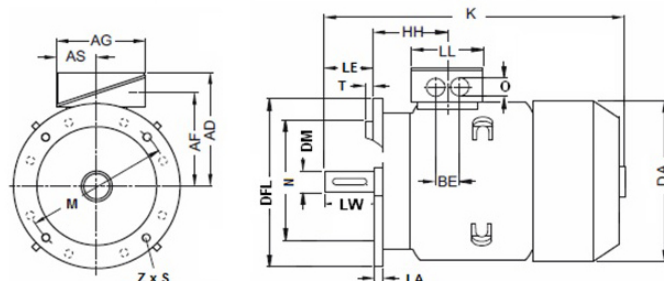

Fig. 42: Envelope dimensions

Table 383: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
-	-	-	135.5	109	93	43	-	-	-	42	-	-	159	200

Table 384: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LE	M	N	S	T	Y	Z
19	-	-	79	327	10	287	100	40	165	130	12	3.5	-	4

Table 378: Electrical data

Electrical data		+/-	50 Hz		60 Hz	
			Δ	Y	Δ	Y
Rated voltage	[V]	-	230	400	-	460
Rated current	[A]	-10 %	3.95	2.25	-	2.05
Rated power	[kW]	-	1.1		1.1	
Rated speed	[rpm]	min.	2810		3450	
Rated torque	[Nm]	min.	3.65		3	
Starting current	[IA/IN]	+20 %	7.4		8.4	

Table 379: Mechanical data

Mechanical data		+/-	Values	
			50 Hz	60 Hz
Sound pressure level	[dB]	Max.	63	64
Moment of inertia	[kgm²]	Max.	0	0
Motor canopy		-	No	

Table 380: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 381: Environment

Environment	+/-	Values
Ambient temperature	[°C]	Max. 40

Table 382: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	1XM25X1,5

⁸³ The name plate data may vary within the tolerances.

⁸⁴ 1800=grey cast iron, 4400=aluminium

V1 type of construction, 2-pin, 90S

Material: 2-1,50- 90S-BWH6F1NNGDWFUWKWB⁸⁵⁾

Material number: 01583977

Table 385: General data [50 Hz]

General data	+/-	Values
Motor size	Max.	090S
Type of construction	Max.	V1
Starting method	-	Star a. Delta
Motor flange	-	IEC 60072 Type FF
Weight without attachments [kg]	Max.	20.56
Housing material ⁸⁶⁾	-	4400
Enclosure	-	IP55
Nominal frequency	[Hz]	50/60
Efficiency class	-	IE3 (Premium)
Thermal class F to B	-	Yes
Temperature sensor	-	01
Operation on frequency inverter permitted	-	Yes (acc to motor manufact)
Operating mode	-	Continuous running duty (S1)
Direction of rotation	-	Bi-directional
Motor bearings insulated	-	No
Position of fixed motor bearing	-	Drive end
Fixed motor bearing reinforced	-	Without
Radial motor bearing reinforced	-	No
Condensate drain	-	No
Bolted feet	-	No

Table 386: Efficiency

Electrical data		+/-	50 Hz			60 Hz		
			4/4	3/4	2/4	4/4	3/4	2/4
Efficiency	[%]	min.	84	84.6	83.2	85.5	82.5	80
Power factor		min.	0.83	0.76	0.64	0.84	0.77	0.66

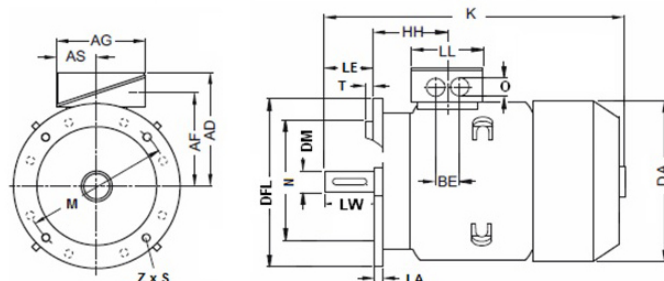

Fig. 43: Envelope dimensions

Table 392: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
-	-	-	155	122.5	93	46	-	-	-	42	-	-	178	200

Table 393: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LE	M	N	S	T	Y	Z
24	-	-	80.5	347	10	297	108	50	165	130	12	3.5	-	4

Table 387: Electrical data

Electrical data		+/-	50 Hz		60 Hz	
			Δ	Y	Δ	Y
Rated voltage	[V]	-	230	400	-	460
Rated current	[A]	-10 %	5.25	3.02	-	2.69
Rated power	[kW]	-	1.5		1.5	
Rated speed	[rpm]	min.	2860		3485	
Rated torque	[Nm]	min.	4.9		4.05	
Starting current	[IA/IN]	+20 %	0.83		9.8	

Table 388: Mechanical data

Mechanical data		+/-	Values	
			50 Hz	60 Hz
Sound pressure level	[dB]	Max.	65	69
Moment of inertia	[kgm²]	Max.	0	0
Motor canopy		-	No	

Table 389: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 390: Environment

Environment	+/-	Values
Ambient temperature [°C]	Max.	40

Table 391: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (O)	-	1XM25X1,5

⁸⁵⁾ The name plate data may vary within the tolerances.

⁸⁶⁾ 1800=grey cast iron, 4400=aluminium

V1 type of construction, 2-pin, 90L

Material: 2-2,20- 90L-BWH6F1NNGDWFUWKWB⁸⁷⁾

Material number: 01583981

Table 394: General data [50 Hz]

General data		+/-	Values
Motor size		Max.	090L
Type of construction		Max.	V1
Starting method		-	Star a. Delta
Motor flange		-	IEC 60072 Type FF
Weight without attachments	[kg]	Max.	32.39
Housing material ⁸⁸⁾		-	4400
Enclosure		-	IP55
Nominal frequency	[Hz]		50/60
Efficiency class		-	IE3 (Premium)
Thermal class F to B		-	Yes
Temperature sensor		-	01
Operation on frequency inverter permitted		-	Yes (acc to motor manufact)
Operating mode		-	Continuous running duty (S1)
Direction of rotation		-	Bi-directional
Motor bearings insulated		-	No
Position of fixed motor bearing		-	Drive end
Fixed motor bearing reinforced		-	Without
Radial motor bearing reinforced		-	No
Condensate drain		-	No
Bolted feet		-	No

Table 395: Efficiency

Electrical data		+/-	50 Hz			60 Hz		
			4/4	3/4	2/4	4/4	3/4	2/4
Efficiency	[%]	min.	85.9	86	86.1	86.5	85.5	84
Power factor		min.	0.86	0.81	0.7	0.87	0.82	0.71

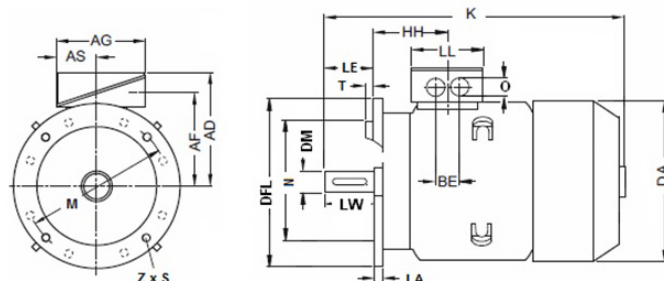

Fig. 44: Envelope dimensions

Table 401: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
-	-	-	166	132.5	135	63.5	-	-	-	50	-	-	198	200

Table 402: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LE	M	N	S	T	Y	Z
28	-	-	96.5	430.5	11	370.5	112	50	165	130	12	3.5	-	4

Table 396: Electrical data

Electrical data		+/-	50 Hz		60 Hz	
			Δ	Y	Δ	Y
Rated voltage	[V]	-	230	400	-	460
Rated current	[A]	-10 %	7.48	4.3	-	3.85
Rated power	[kW]	-	2.2		2.2	
Rated speed	[rpm]	min.	2855		3480	
Rated torque	[Nm]	min.	7.2		6	
Starting current	[IA/IN]	+20 %	8.3		9.6	

Table 397: Mechanical data

Mechanical data		+/-	Values	
			50 Hz	60 Hz
Sound pressure level	[dB]	Max.	65	69
Moment of inertia	[kgm²]	Max.	0	0
Motor canopy		-	No	

Table 398: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 399: Environment

Environment	+/-	Values
Ambient temperature	[°C]	Max. 40

Table 400: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (O)	-	2XM32X1,5

⁸⁷ The name plate data may vary within the tolerances.

⁸⁸ 1800=grey cast iron, 4400=aluminium

V1 type of construction, 2-pin, 100L

Material: 2-3,00-100L-BWE6F3NNWDFUWKWB⁸⁹⁾

Material number: 01583961

Table 403: General data [50 Hz]

General data	+/-	Values
Motor size	Max.	100L
Type of construction	Max.	V1
Starting method	-	Star a. Delta
Motor flange	-	EN 50347 Type FF
Weight without attachments [kg]	Max.	28
Housing material ⁹⁰⁾	-	4400
Enclosure	-	IP55
Nominal frequency	[Hz]	50/60
Efficiency class	-	IE3 (Premium)
Thermal class F to B	-	Yes
Temperature sensor	-	03
Operation on frequency inverter permitted	-	Yes (acc to motor manufact)
Operating mode	-	Continuous running duty (S1)
Direction of rotation	-	Bi-directional
Motor bearings insulated	-	No
Position of fixed motor bearing	-	Drive end
Fixed motor bearing reinforced	-	Without
Radial motor bearing reinforced	-	No
Condensate drain	-	Yes
Bolted feet	-	No

Table 404: Efficiency

Electrical data	+/-	50 Hz	60 Hz
		4/4	3/4
Efficiency [%]	min.	87.1	86.9
Power factor	min.	0.84	0.83

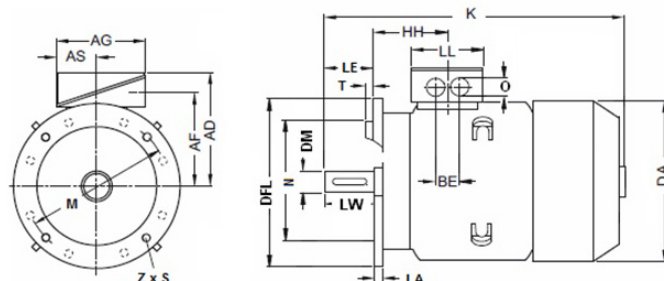

Fig. 45: Envelope dimensions

Table 410: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
-	-	-	216	164	176	83	-	-	-	45	-	-	198	250

Table 411: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LE	M	N	S	T	Y	Z
28	-	-	97	431	11	371	118	60	215	180	14.5	4	-	4

Table 405: Electrical data

Electrical data	+/-	50 Hz	60 Hz
		Δ	Y
Rated voltage [V]	-	400	690
Rated current [A]	-10 %	5.9	3.63
Rated power [kW]	-	3	3
Rated speed [rpm]	min.	2910	3460
Rated torque [Nm]	min.	9.6	8
Starting current [IA/IN]	+20 %	8.9	9.7

Table 406: Mechanical data

Mechanical data	+/-	50 Hz	60 Hz
		Δ	Y
Sound pressure level [dB]	Max.	70	75
Moment of inertia [kgm²]	Max.	0.01	0.01
Motor canopy	-	No	No

Table 407: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 408: Environment

Environment	+/-	Values
Ambient temperature [°C]	Max.	40

Table 409: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	2XM32X1,5

⁸⁹⁾ The name plate data may vary within the tolerances.

⁹⁰⁾ 1800=grey cast iron, 4400=aluminium

V1 type of construction, 2-pin, 112M

Material: 2-4,00-112M-BWE6F3NNWDFUWKWB⁹¹⁾

Material number: 01583962

Table 412: General data [50 Hz]

General data	+/-	Values
Motor size	Max.	112M
Type of construction	Max.	V1
Starting method	-	Star a. Delta
Motor flange	-	EN 50347 Type FF
Weight without attachments [kg]	Max.	40
Housing material ⁹²⁾	-	4400
Enclosure	-	IP55
Nominal frequency	[Hz]	50/60
Efficiency class	-	IE3 (Premium)
Thermal class F to B	-	Yes
Temperature sensor	-	03
Operation on frequency inverter permitted	-	Yes (acc to motor manufact)
Operating mode	-	Continuous running duty (S1)
Direction of rotation	-	Bi-directional
Motor bearings insulated	-	No
Position of fixed motor bearing	-	Drive end
Fixed motor bearing reinforced	-	Without
Radial motor bearing reinforced	-	No
Condensate drain	-	Yes
Bolted feet	-	No

Table 413: Efficiency

Electrical data	+/-	50 Hz	60 Hz
		4/4	3/4
Efficiency [%]	min.	88.1	88.5
Power factor	min.	0.81	0.83

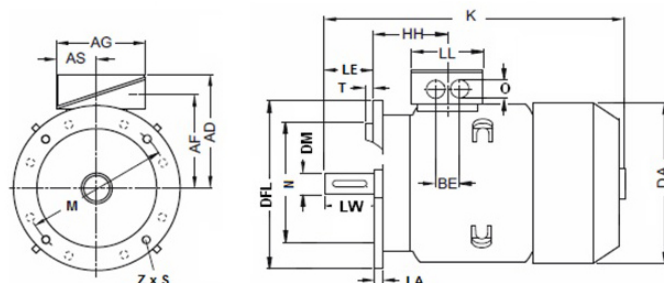


Fig. 46: Envelope dimensions

Table 419: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
-	-	-	230	217	176	83	-	-	-	45	-	-	235	250

Table 420: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LE	M	N	S	T	Y	Z
28	-	-	96	414	12	354	118	60	215	180	14.5	4	-	4

Table 414: Electrical data

Electrical data	+/-	50 Hz	60 Hz
		Δ	Y
Rated voltage [V]	-	400	460
Rated current [A]	-10 %	8	7.6
Rated power [kW]	-	4	4
Rated speed [rpm]	min.	2900	3465
Rated torque [Nm]	min.	12.64	10.7
Starting current [IA/IN]	+20 %	8.6	9

Table 415: Mechanical data

Mechanical data	+/-	50 Hz	60 Hz
		Δ	Y
Sound pressure level [dB]	Max.	72	77
Moment of inertia [kgm²]	Max.	0.01	0.01
Motor canopy	-	No	No

Table 416: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 417: Environment

Environment	+/-	Values
Ambient temperature [°C]	Max.	40

Table 418: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (O)	-	2XM32X1,5

⁹¹ The name plate data may vary within the tolerances.

⁹² 1800=grey cast iron, 4400=aluminium

V1 type of construction, 2-pin, 280M

Material: 2-90,0-280M-BWE6F3NNWDWFNWKWB⁹³⁾

Material number: 01619779

Table 421: General data [50 Hz]

General data		+/-	Values
Motor size		Max.	280M
Type of construction		Max.	V1
Starting method		-	Star a. Delta
Motor flange		-	EN 50347 Type FF
Weight without attachments	[kg]	Max.	762
Housing material ⁹⁴⁾		-	1800
Enclosure		-	IP55
Nominal frequency	[Hz]		50/60
Efficiency class		-	IE3 (Premium)
Thermal class F to B		-	Yes
Temperature sensor		-	03
Operation on frequency inverter permitted		-	No
Operating mode		-	Continuous running duty (S1)
Direction of rotation		-	Bi-directional
Motor bearings insulated		-	No
Position of fixed motor bearing		-	Drive end
Fixed motor bearing reinforced		-	Without
Radial motor bearing reinforced		-	No
Condensate drain		-	Yes
Bolted feet		-	No

Table 422: Efficiency

Electrical data		+/-	50 Hz			60 Hz		
			4/4	3/4	2/4	4/4	3/4	2/4
Efficiency	[%]	min.	95	94.3	93.4	95		
Power factor		min.	0.84			0.87		

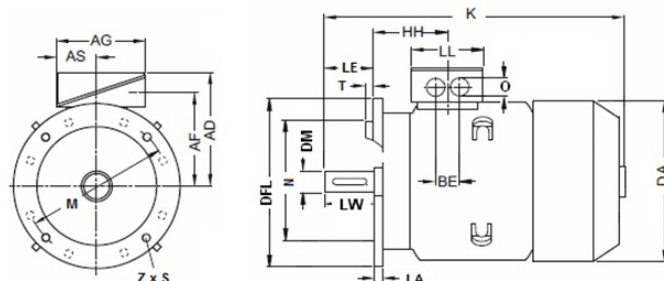

Fig. 47: Envelope dimensions

Table 428: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
-	-	-	476	380	351	160	-	-	-	110	-	-	580	550

Table 429: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LE	M	N	S	T	Y	Z
65	-	-	210	1071	18	931	245	140	500	450	18.5	5	-	8

Table 423: Electrical data

Electrical data		+/-	50 Hz		60 Hz	
			Δ	Y	Δ	Y
Rated voltage	[V]	-	400	690	460	-
Rated current	[A]	-10 %	159.6	97.9	140.3	-
Rated power	[kW]	-	90		90	
Rated speed	[rpm]	min.	2975		3545	
Rated torque	[Nm]	min.	283.11		235.3	
Starting current	[IA/IN]	+20 %	8		8.6	

Table 424: Mechanical data

Mechanical data		+/-	Values	
			50 Hz	60 Hz
Sound pressure level	[dB]	Max.	81	85
Moment of inertia	[kgm²]	Max.	1.17	1.17
Motor canopy		-	No	

Table 425: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 426: Environment

Environment	+/-	Values
Ambient temperature	[°C]	Max. 40

Table 427: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	2XM63X1,5

⁹³ The name plate data may vary within the tolerances.

⁹⁴ 1800=grey cast iron, 4400=aluminium

V1 type of construction, 2-pin, 315S

Material: 2-110 -315S-BWE6F3NNWDWFWNWKWB⁹⁵⁾

Material number: 01619792

Table 430: General data [50 Hz]

General data	+/-	Values
Motor size	Max.	315S
Type of construction	Max.	V1
Starting method	-	Star a. Delta
Motor flange	-	EN 50347 Type FF
Weight without attachments [kg]	Max.	962
Housing material ⁹⁶⁾	-	1800
Enclosure	-	IP55
Nominal frequency	[Hz]	50/60
Efficiency class	-	IE3 (Premium)
Thermal class F to B	-	Yes
Temperature sensor	-	03
Operation on frequency inverter permitted	-	No
Operating mode	-	Continuous running duty (S1)
Direction of rotation	-	Bi-directional
Motor bearings insulated	-	No
Position of fixed motor bearing	-	Drive end
Fixed motor bearing reinforced	-	Without
Radial motor bearing reinforced	-	No
Condensate drain	-	Yes
Bolted feet	-	No

Table 431: Efficiency

Electrical data	+/-	50 Hz	60 Hz
		4/4	3/4
Efficiency [%]	min.	95.2	94.4
Power factor	min.	0.84	0.86

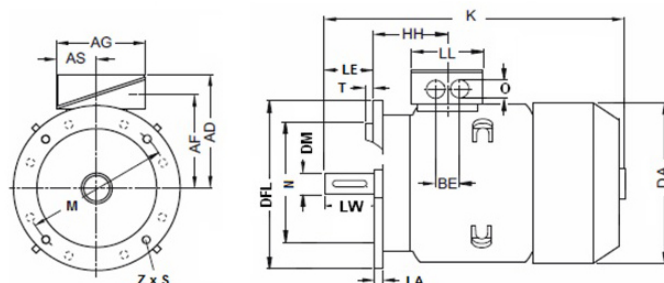

Fig. 48: Envelope dimensions

Table 437: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
-	-	-	567	444	411	180	-	-	-	110	-	-	664	660

Table 438: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LE	M	N	S	T	Y	Z
65	-	-	238	1244	22	1104	314	140	600	550	24	6	-	8

Table 432: Electrical data

Electrical data	+/-	50 Hz	60 Hz
		Δ	Y
Rated voltage [V]	-	400	690
Rated current [A]	-10 %	198.6	118.8
Rated power [kW]	-	110	110
Rated speed [rpm]	min.	2980	3545
Rated torque [Nm]	min.	344.96	287.5
Starting current [IA/IN]	+20 %	7.9	8.4

Table 433: Mechanical data

Mechanical data	+/-	50 Hz	60 Hz
Sound pressure level [dB]	Max.	81	85
Moment of inertia [kgm ²]	Max.	1.75	1.75
Motor canopy	-	No	No

Table 434: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 435: Environment

Environment	+/-	Values
Ambient temperature [°C]	Max.	40

Table 436: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (O)	-	2XM63X1,5

⁹⁵⁾ The name plate data may vary within the tolerances.

⁹⁶⁾ 1800=grey cast iron, 4400=aluminium

V1 type of construction, 2-pin, 315M

Material: 2-132 -315M-BWE6F3NNWDWFWNWKWB⁹⁷⁾

Material number: 01619793

Table 439: General data [50 Hz]

General data		+/-	Values
Motor size		Max.	315M
Type of construction		Max.	V1
Starting method		-	Star a. Delta
Motor flange		-	EN 50347 Type FF
Weight without attachments	[kg]	Max.	1048
Housing material ⁹⁸⁾		-	1800
Enclosure		-	IP55
Nominal frequency	[Hz]		50/60
Efficiency class		-	IE3 (Premium)
Thermal class F to B		-	Yes
Temperature sensor		-	03
Operation on frequency inverter permitted		-	No
Operating mode		-	Continuous running duty (S1)
Direction of rotation		-	Bi-directional
Motor bearings insulated		-	No
Position of fixed motor bearing		-	Drive end
Fixed motor bearing reinforced		-	Without
Radial motor bearing reinforced		-	No
Condensate drain		-	Yes
Bolted feet		-	No

Table 440: Efficiency

Electrical data		+/-	50 Hz			60 Hz		
			4/4	3/4	2/4	4/4	3/4	2/4
Efficiency	[%]	min.	95.4	94.4	93.6	95.4		
Power factor		min.	0.91			0.86		

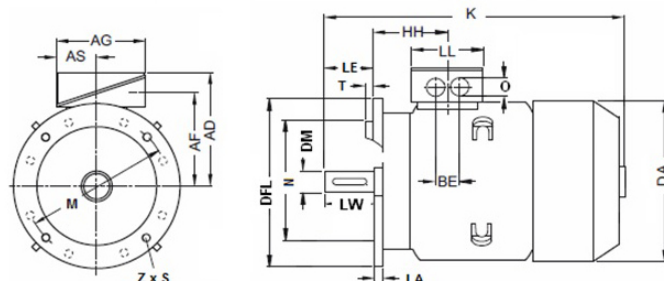

Fig. 49: Envelope dimensions

Table 446: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
-	-	-	567	444	411	180	-	-	-	110	-	-	664	660

Table 447: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LE	M	N	S	T	Y	Z
65	-	-	238	1244	22	1104	314	140	600	550	24	6	-	8

Table 441: Electrical data

Electrical data		+/-	50 Hz		60 Hz	
			Δ	Y	Δ	Y
Rated voltage	[V]	-	400	690	460	-
Rated current	[A]	-10 %	235.1	140.8	207.2	-
Rated power	[kW]	-	132		132	
Rated speed	[rpm]	min.	2980		3545	
Rated torque	[Nm]	min.	414.53		345.1	
Starting current	[IA/IN]	+20 %	8		8.9	

Table 442: Mechanical data

Mechanical data		+/-	Values	
			50 Hz	60 Hz
Sound pressure level	[dB]	Max.	81	85
Moment of inertia	[kgm²]	Max.	2.05	2.05
Motor canopy		-	No	

Table 443: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 444: Environment

Environment	+/-	Values
Ambient temperature	[°C]	Max. 40

Table 445: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (O)	-	2XM63X1,5

⁹⁷ The name plate data may vary within the tolerances.

⁹⁸ 1800=grey cast iron, 4400=aluminium

V1 type of construction, 4-pin, 71M

Material: 4-O,25- 71M-BWH4F1NNWDFUWKWE⁹⁹⁾

Material number: 01831210

Table 448: General data [50 Hz]

General data		+/-	Values
Motor size		Max.	071M
Type of construction		Max.	V1
Starting method		-	Star a. Delta
Motor flange		-	EN 50347 Type FF
Weight without attachments	[kg]	Max.	5
Housing material ¹⁰⁰⁾		-	4400
Enclosure		-	IP55
Nominal frequency	[Hz]		50/60
Efficiency class		-	IE1 (Standard)
Thermal class F to B		-	Yes
Temperature sensor		-	01
Operation on frequency inverter permitted		-	Yes (acc to motor manufact)
Operating mode		-	Continuous running duty (S1)
Direction of rotation		-	Bi-directional
Motor bearings insulated		-	No
Position of fixed motor bearing		-	Drive end
Fixed motor bearing reinforced		-	Without
Radial motor bearing reinforced		-	No
Condensate drain		-	Yes
Bolted feet		-	No

Table 449: Efficiency

Electrical data		+/-	50 Hz			60 Hz		
			4/4	3/4	2/4	4/4	3/4	2/4
Efficiency	[%]	min.	61.5	61.4	56.1	68	67.8	62.6
Power factor		min.	0.73	0.63	0.49	0.71	0.61	0.48

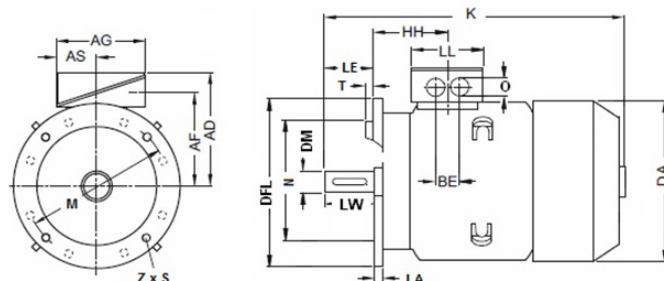

Fig. 50: Envelope dimensions

Table 455: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
-	-	-	111	88	75	37.5	-	-	-	18	-	-	145	160

Table 456: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LE	M	N	S	T	Y	Z
14	-	-	63.5	240	9	210	75	30	130	110	10	3.5	-	4

Table 450: Electrical data

Electrical data		+/-	50 Hz		60 Hz	
			Δ	Y	Δ	Y
Rated voltage	[V]	-	230	400	-	460
Rated current	[A]	-10 %	1.4	0.8	-	0.75
Rated power	[kW]	-	0.25		0.29	
Rated speed	[rpm]	min.	1365		1665	
Rated torque	[Nm]	min.	1.75		1.66	
Starting current	[IA/IN]	+20 %	3		3.4	

Table 451: Mechanical data

Mechanical data		+/-	Values	
			50 Hz	60 Hz
Sound pressure level	[dB]	Max.	51	51
Moment of inertia	[kgm²]	Max.	0	0
Motor canopy		-	No	

Table 452: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 453: Environment

Environment	+/-	Values
Ambient temperature	[°C]	Max. 40

Table 454: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	1XM16X1,5 X1,5

⁹⁹⁾ The name plate data may vary within the tolerances.

¹⁰⁰⁾ 1800=grey cast iron, 4400=aluminium

V1 type of construction, 4-pin, 71M

Material: 4-O,37- 71M-BWH4F1NNWDFUWKWE¹⁰¹⁾

Material number: 01676413

Table 457: General data [50 Hz]

General data	+/-	Values
Motor size	Max.	071M
Type of construction	Max.	V1
Starting method	-	Star a. Delta
Motor flange	-	EN 50347 Type FF
Weight without attachments [kg]	Max.	6
Housing material ¹⁰²⁾	-	4400
Enclosure	-	IP55
Nominal frequency	[Hz]	50/60
Efficiency class	-	IE1 (Standard)
Thermal class F to B	-	Yes
Temperature sensor	-	01
Operation on frequency inverter permitted	-	Yes (acc to motor manufact)
Operating mode	-	Continuous running duty (S1)
Direction of rotation	-	Bi-directional
Motor bearings insulated	-	No
Position of fixed motor bearing	-	Drive end
Fixed motor bearing reinforced	-	Without
Radial motor bearing reinforced	-	No
Condensate drain	-	Yes
Bolted feet	-	No

Table 458: Efficiency

Electrical data		+/-	50 Hz			60 Hz		
			4/4	3/4	2/4	4/4	3/4	2/4
Efficiency	[%]	min.	66	67.7	65	70	71.3	68.9
Power factor		min.	0.75	0.66	0.52	0.75	0.66	0.53

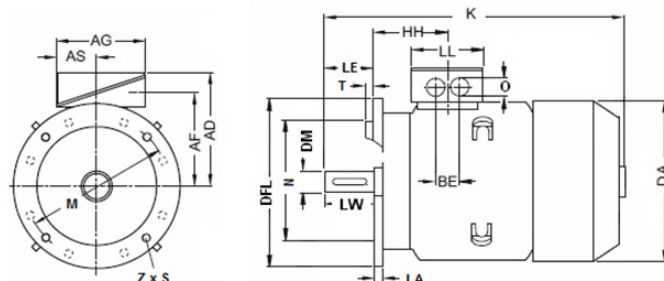


Fig. 51: Envelope dimensions

Table 464: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
-	-	-	111	88	75	37.5	-	-	-	18	-	-	145	160

Table 465: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LE	M	N	S	T	Y	Z
14	-	-	63.5	240	9	210	75	30	130	110	10	3.5	-	4

Table 459: Electrical data

Electrical data		+/-	50 Hz		60 Hz	
			Δ	Y	Δ	Y
Rated voltage	[V]	-	230	400	-	460
Rated current	[A]	-10 %	1.88	1.08	-	1.03
Rated power	[kW]	-	0.37		0.43	
Rated speed	[rpm]	min.	1350		1650	
Rated torque	[Nm]	min.	2.65		2.5	
Starting current	[IA/IN]	+20 %	3.2		3.6	

Table 460: Mechanical data

Mechanical data		+/-	Values	
			50 Hz	60 Hz
Sound pressure level	[dB]	Max.	50	50
Moment of inertia	[kgm ²]	Max.	0	0
Motor canopy		-	No	

Table 461: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 462: Environment

Environment	+/-	Values
Ambient temperature [°C]	Max.	40

Table 463: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	1XM16X1,5 X1,5

101 The name plate data may vary within the tolerances.

102 1800=grey cast iron, 4400=aluminium

V1 type of construction, 4-pin, 80M

Material: 4-O,55- 80M-BWH4F1NNWDFUWKWE¹⁰³⁾

Material number: 01676414

Table 466: General data [50 Hz]

General data		+/-	Values
Motor size		Max.	080M
Type of construction		Max.	V1
Starting method		-	Star a. Delta
Motor flange		-	EN 50347 Type FF
Weight without attachments	[kg]	Max.	9
Housing material ¹⁰⁴⁾		-	4400
Enclosure		-	IP55
Nominal frequency	[Hz]		50/60
Efficiency class		-	IE3 (Premium)
Thermal class F to B		-	Yes
Temperature sensor		-	01
Operation on frequency inverter permitted		-	Yes (acc to motor manufact)
Operating mode		-	Continuous running duty (S1)
Direction of rotation		-	Bi-directional
Motor bearings insulated		-	No
Position of fixed motor bearing		-	Drive end
Fixed motor bearing reinforced		-	Without
Radial motor bearing reinforced		-	No
Condensate drain		-	Yes
Bolted feet		-	No

Table 467: Efficiency

Electrical data		+/-	50 Hz			60 Hz		
			4/4	3/4	2/4	4/4	3/4	2/4
Efficiency	[%]	min.	70	70.7	67.7	74	74.2	71.4
Power factor		min.	0.79	0.69	0.55	0.78	0.69	0.56

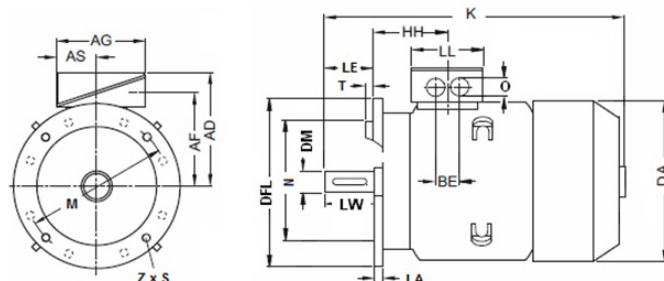

Fig. 52: Envelope dimensions

Table 473: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
-	-	-	121.5	96.5	93	43	-	-	-	18	-	-	159	200

Table 474: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LE	M	N	S	T	Y	Z
19	-	-	73	327	10	287	79	40	165	130	12	3.5	-	4

Table 468: Electrical data

Electrical data		+/-	50 Hz		60 Hz	
			Δ	Y	Δ	Y
Rated voltage	[V]	-	230	400	-	460
Rated current	[A]	-10 %	2.5	1.44	-	1.37
Rated power	[kW]	-	0.55		0.63	
Rated speed	[rpm]	min.	1385		1685	
Rated torque	[Nm]	min.	3.8		3.6	
Starting current	[IA/IN]	+20 %	3.7		4.3	

Table 469: Mechanical data

Mechanical data		+/-	Values	
			50 Hz	60 Hz
Sound pressure level	[dB]	Max.	55	55
Moment of inertia	[kgm²]	Max.	0	0
Motor canopy		-	No	

Table 470: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 471: Environment

Environment	+/-	Values
Ambient temperature	[°C]	Max. 40

Table 472: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	1XM16X1,5 X1,5

¹⁰³ The name plate data may vary within the tolerances.

¹⁰⁴ 1800=grey cast iron, 4400=aluminium

V1 type of construction, 4-pin, 80M

Material: 4-O,75- 80M-BWH6FINNGDWFUWKWB¹⁰⁵

Material number: 01583978

Table 475: General data [50 Hz]

General data		+/-	Values
Motor size		Max.	080M
Type of construction		Max.	V1
Starting method		-	Star a. Delta
Motor flange		-	IEC 60072 Type FF
Weight without attachments	[kg]	Max.	13.95
Housing material ¹⁰⁶		-	4400
Enclosure		-	IP55
Nominal frequency	[Hz]		50/60
Efficiency class		-	IE3 (Premium)
Thermal class F to B		-	Yes
Temperature sensor		-	01
Operation on frequency inverter permitted		-	Yes (acc to motor manufact)
Operating mode		-	Continuous running duty (S1)
Direction of rotation		-	Bi-directional
Motor bearings insulated		-	No
Position of fixed motor bearing		-	Drive end
Fixed motor bearing reinforced		-	Without
Radial motor bearing reinforced		-	No
Condensate drain		-	No
Bolted feet		-	No

Table 476: Efficiency

Electrical data		+/-	50 Hz			60 Hz		
			4/4	3/4	2/4	4/4	3/4	2/4
Efficiency	[%]	min.	82.5	82	80.1	83.5	80	78.5
Power factor		min.	0.75	0.67	0.55	0.71	0.63	0.5

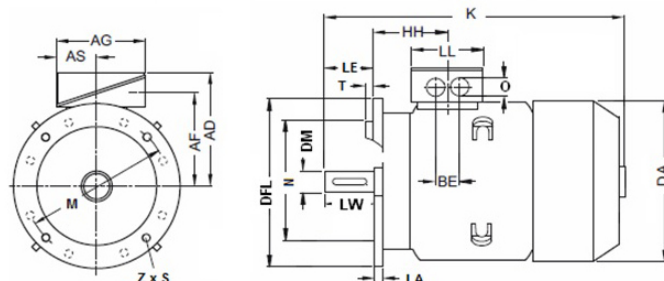


Fig. 53: Envelope dimensions

Table 482: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
-	-	-	135.5	109	93	43	-	-	-	42	-	-	159	200

Table 483: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LE	M	N	S	T	Y	Z
19	-	-	79	327	10	287	100	40	165	130	12	3.5	-	4

Table 477: Electrical data

Electrical data		+/-	50 Hz		60 Hz	
			Δ	Y	Δ	Y
Rated voltage	[V]	-	230	400	-	-
Rated current	[A]	-10 %	3.05	1.75	-	-
Rated power	[kW]	-	0.75		-	
Rated speed	[rpm]	min.	1410		-	
Rated torque	[Nm]	min.	4.95		4.05	
Starting current	[IA/IN]	+20 %	7.1		8.3	

Table 478: Mechanical data

Mechanical data		+/-	Values	
			50 Hz	60 Hz
Sound pressure level	[dB]	Max.	56	58
Moment of inertia	[kgm²]	Max.	0	0
Motor canopy		-	No	

Table 479: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 480: Environment

Environment	+/-	Values
Ambient temperature	[°C]	Max. 40

Table 481: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (O)	-	1XM25X1,5

¹⁰⁵ The name plate data may vary within the tolerances.

¹⁰⁶ 1800=grey cast iron, 4400=aluminium

V1 type of construction, 4-pin, 90S

Material: 4-1,10- 90S-BWA6F1NNWDFUWKWB¹⁰⁷⁾

Material number: 01583979

Table 484: General data [50 Hz]

General data	+/-	Values
Motor size	Max.	090S
Type of construction	Max.	V1
Starting method	-	Star a. Delta
Motor flange	-	EN 50347 Type FF
Weight without attachments [kg]	Max.	20
Housing material ¹⁰⁸⁾	-	4400
Enclosure	-	IP55
Nominal frequency	[Hz]	50
Efficiency class	-	IE3 (Premium)
Thermal class F to B	-	Yes
Temperature sensor	-	01
Operation on frequency inverter permitted	-	Yes (acc to motor manufact)
Operating mode	-	Continuous running duty (S1)
Direction of rotation	-	Bi-directional
Motor bearings insulated	-	No
Position of fixed motor bearing	-	Drive end
Fixed motor bearing reinforced	-	Without
Radial motor bearing reinforced	-	No
Condensate drain	-	Yes
Bolted feet	-	No

Table 485: Efficiency

Electrical data		+/-	50 Hz			60 Hz		
			4/4	3/4	2/4	4/4	3/4	2/4
Efficiency	[%]	min.	84.1	83.3	80.7			
Power factor		min.	0.83					

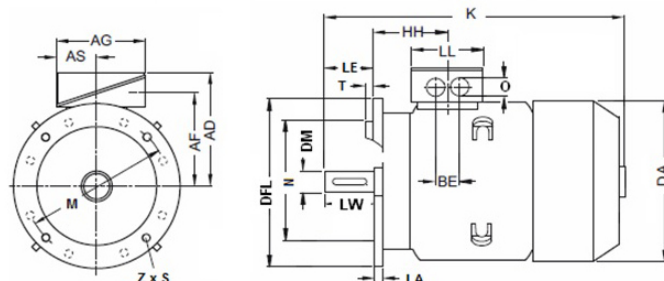


Fig. 54: Envelope dimensions

Table 491: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
-	-	-	170	138	126	58	-	-	-	40	-	-	178	200

Table 492: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LE	M	N	S	T	Y	Z
24	-	-	79	387	10	337	83	50	165	130	12	3.5	-	4

Table 486: Electrical data

Electrical data		+/-	50 Hz		60 Hz	
			Δ	Y	Δ	Y
Rated voltage	[V]	-	230	400	-	-
Rated current	[A]	-10 %	4.5	2.64	-	-
Rated power	[kW]	-	1.1		-	
Rated speed	[rpm]	min.	1440			
Rated torque	[Nm]	min.	7.08			
Starting current	[IA/IN]	+20 %	8			

Table 487: Mechanical data

Mechanical data		+/-	Values	
			50 Hz	60 Hz
Sound pressure level	[dB]	Max.	59	
Moment of inertia	[kgm²]	Max.	0.01	
Motor canopy		-	No	

Table 488: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 489: Environment

Environment	+/-	Values
Ambient temperature [°C]	Max.	40

Table 490: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (O)	-	1XM25X1,5

¹⁰⁷ The name plate data may vary within the tolerances.

¹⁰⁸ 1800=grey cast iron, 4400=aluminium

V1 type of construction, 4-pin, 90L

Material: 4-1,50- 90L-BWH6F1NNWDWFUWKWB¹⁰⁹⁾

Material number: 01583980

Table 493: General data [50 Hz]

General data		+/-	Values
Motor size		Max.	090L
Type of construction		Max.	V1
Starting method		-	Star a. Delta
Motor flange		-	EN 50347 Type FF
Weight without attachments	[kg]	Max.	22
Housing material ¹¹⁰⁾		-	4400
Enclosure		-	IP55
Nominal frequency	[Hz]		50/60
Efficiency class		-	IE3 (Premium)
Thermal class F to B		-	Yes
Temperature sensor		-	01
Operation on frequency inverter permitted		-	Yes (acc to motor manufact)
Operating mode		-	Continuous running duty (S1)
Direction of rotation		-	Bi-directional
Motor bearings insulated		-	No
Position of fixed motor bearing		-	Drive end
Fixed motor bearing reinforced		-	Without
Radial motor bearing reinforced		-	No
Condensate drain		-	Yes
Bolted feet		-	No

Table 494: Efficiency

Electrical data		+/-	50 Hz			60 Hz		
			4/4	3/4	2/4	4/4	3/4	2/4
Efficiency	[%]	min.	85.3	85.1	82.9	86.5		
Power factor		min.	0.84			0.7		

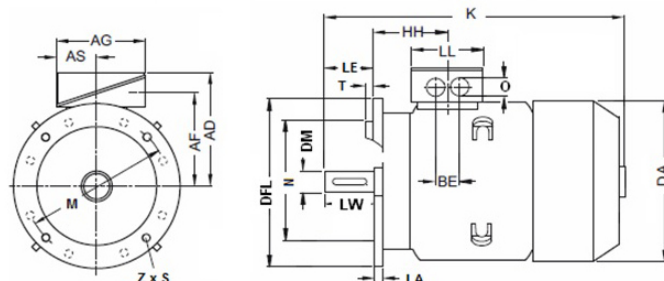

Fig. 55: Envelope dimensions

Table 500: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
-	-	-	170	138	126	58	-	-	-	40	-	-	178	200

Table 501: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LE	M	N	S	T	Y	Z
24	-	-	79	387	10	337	83	50	165	130	12	3.5	-	4

Table 495: Electrical data

Electrical data		+/-	50 Hz		60 Hz	
			Δ	Y	Δ	Y
Rated voltage	[V]	-	230	400	-	460
Rated current	[A]	-10 %	5.9	3.47	-	3.5
Rated power	[kW]	-	1.5		1.5	
Rated speed	[rpm]	min.	1445		1700	
Rated torque	[Nm]	min.	9.68		8	
Starting current	[IA/IN]	+20 %	7.8		8.7	

Table 496: Mechanical data

Mechanical data		+/-	Values	
			50 Hz	60 Hz
Sound pressure level	[dB]	Max.	59	61
Moment of inertia	[kgm²]	Max.	0.01	0.01
Motor canopy		-	No	

Table 497: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 498: Environment

Environment	+/-	Values
Ambient temperature	[°C]	Max. 40

Table 499: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	1XM25X1,5

¹⁰⁹ The name plate data may vary within the tolerances.

¹¹⁰ 1800=grey cast iron, 4400=aluminium

V1 type of construction, 4-pin, 100L

Material: 4-2,20-100L-BWA6F3NNWDFUWKWB¹¹¹⁾

Material number: 01583968

Table 502: General data [50 Hz]

General data		+/-	Values
Motor size		Max.	100L
Type of construction		Max.	V1
Starting method		-	Star a. Delta
Motor flange		-	EN 50347 Type FF
Weight without attachments	[kg]	Max.	33
Housing material ¹¹²⁾		-	4400
Enclosure		-	IP55
Nominal frequency	[Hz]		50
Efficiency class		-	IE3 (Premium)
Thermal class F to B		-	Yes
Temperature sensor		-	03
Operation on frequency inverter permitted		-	Yes (acc to motor manufact)
Operating mode		-	Continuous running duty (S1)
Direction of rotation		-	Bi-directional
Motor bearings insulated		-	No
Position of fixed motor bearing		-	Drive end
Fixed motor bearing reinforced		-	Without
Radial motor bearing reinforced		-	No
Condensate drain		-	Yes
Bolted feet		-	No

Table 503: Efficiency

Electrical data		+/-	50 Hz			60 Hz		
			4/4	3/4	2/4	4/4	3/4	2/4
Efficiency	[%]	min.	86.7	86.9	85.1			
Power factor		min.	0.82					

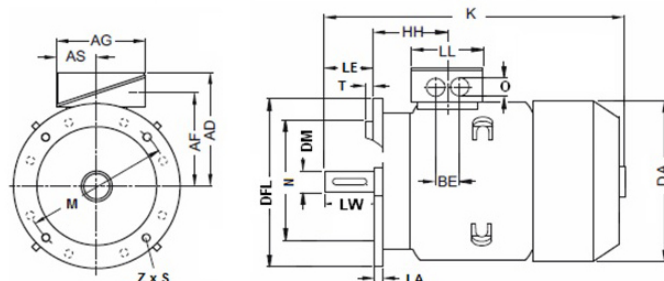

Fig. 56: Envelope dimensions

Table 509: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
-	-	-	216	164	176	83	-	-	-	45	-	-	198	250

Table 510: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LE	M	N	S	T	Y	Z
28	-	-	97	431	11	371	118	60	215	180	14.5	4	-	4

Table 504: Electrical data

Electrical data		+/-	50 Hz		60 Hz	
			Δ	Y	Δ	Y
Rated voltage	[V]	-	230	400	-	-
Rated current	[A]	-10 %	8.1	4.84	-	-
Rated power	[kW]	-	2.2		-	
Rated speed	[rpm]	min.	1435			
Rated torque	[Nm]	min.	14.01			
Starting current	[IA/IN]	+20 %	8			

Table 505: Mechanical data

Mechanical data		+/-	Values	
			50 Hz	60 Hz
Sound pressure level	[dB]	Max.	63	
Moment of inertia	[kgm ²]	Max.	0.01	
Motor canopy		-	No	

Table 506: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 507: Environment

Environment	+/-	Values
Ambient temperature	[°C]	Max. 40

Table 508: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	2XM32X1,5

¹¹¹ The name plate data may vary within the tolerances.

¹¹² 1800=grey cast iron, 4400=aluminium

V1 type of construction, 4-pin, 100L

Material: 4-3,00-100L-BWE6F3NNWDFUWKWB¹¹³⁾

Material number: 01583969

Table 511: General data [50 Hz]

General data		+/-	Values
Motor size		Max.	100L
Type of construction		Max.	V1
Starting method		-	Star a. Delta
Motor flange		-	EN 50347 Type FF
Weight without attachments	[kg]	Max.	38
Housing material ¹¹⁴⁾		-	4400
Enclosure		-	IP55
Nominal frequency	[Hz]		50/60
Efficiency class		-	IE3 (Premium)
Thermal class F to B		-	Yes
Temperature sensor		-	03
Operation on frequency inverter permitted		-	Yes (acc to motor manufact)
Operating mode		-	Continuous running duty (S1)
Direction of rotation		-	Bi-directional
Motor bearings insulated		-	No
Position of fixed motor bearing		-	Drive end
Fixed motor bearing reinforced		-	Without
Radial motor bearing reinforced		-	No
Condensate drain		-	Yes
Bolted feet		-	No

Table 512: Efficiency

Electrical data		+/-	50 Hz			60 Hz		
			4/4	3/4	2/4	4/4	3/4	2/4
Efficiency	[%]	min.	87.7	88.2	86.6	89.5		
Power factor		min.	0.82			0.74		

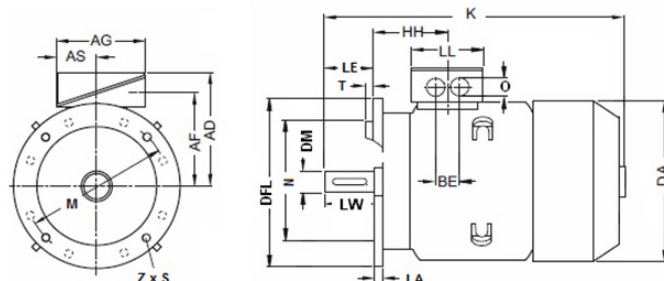

Fig. 57: Envelope dimensions

Table 518: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
-	-	-	216	164	176	83	-	-	-	45	-	-	198	250

Table 519: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LE	M	N	S	T	Y	Z
28	-	-	97	431	11	371	118	60	215	180	14.5	4	-	4

Table 513: Electrical data

Electrical data		+/-	50 Hz		60 Hz	
			Δ	Y	Δ	Y
Rated voltage	[V]	-	400	690	460	-
Rated current	[A]	-10 %	6.2	3.8	9.7	-
Rated power	[kW]	-	3		3	
Rated speed	[rpm]	min.	1440		1720	
Rated torque	[Nm]	min.	19.21		9.6	
Starting current	[IA/IN]	+20 %	8.2		9	

Table 514: Mechanical data

Mechanical data		+/-	Values	
			50 Hz	60 Hz
Sound pressure level	[dB]	Max.	63	65
Moment of inertia	[kgm²]	Max.	0.01	0.01
Motor canopy		-	No	

Table 515: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 516: Environment

Environment	+/-	Values
Ambient temperature	[°C]	Max. 40

Table 517: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	2XM32X1,5

¹¹³ The name plate data may vary within the tolerances.

¹¹⁴ 1800=grey cast iron, 4400=aluminium

V1 type of construction, 4-pin, 112M

Material: 4-4,00-112M-BWE6F3NNWDWFUWKWB¹¹⁵⁾

Material number: 01583970

Table 520: General data [50 Hz]

General data		+/-	Values
Motor size		Max.	112M
Type of construction		Max.	V1
Starting method		-	Star a. Delta
Motor flange		-	EN 50347 Type FF
Weight without attachments	[kg]	Max.	43
Housing material ¹¹⁶⁾		-	4400
Enclosure		-	IP55
Nominal frequency	[Hz]		50/60
Efficiency class		-	IE3 (Premium)
Thermal class F to B		-	Yes
Temperature sensor		-	03
Operation on frequency inverter permitted		-	Yes (acc to motor manufact)
Operating mode		-	Continuous running duty (S1)
Direction of rotation		-	Bi-directional
Motor bearings insulated		-	No
Position of fixed motor bearing		-	Drive end
Fixed motor bearing reinforced		-	Without
Radial motor bearing reinforced		-	No
Condensate drain		-	Yes
Bolted feet		-	No

Table 521: Efficiency

Electrical data		+/-	50 Hz			60 Hz		
			4/4	3/4	2/4	4/4	3/4	2/4
Efficiency	[%]	min.	88.6	89.2	87.7	89.5		
Power factor		min.	0.78			0.75		

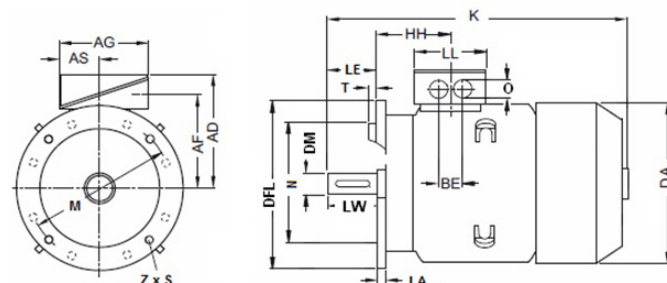


Fig. 58: Envelope dimensions

Table 527: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
-	-	-	230	217	176	83	-	-	-	45	-	-	235	250

Table 528: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LE	M	N	S	T	Y	Z
28	-	-	96	414	12	354	118	60	215	180	14.5	4	-	4

Table 522: Electrical data

Electrical data		+/-	50 Hz		60 Hz	
			Δ	Y	Δ	Y
Rated voltage	[V]	-	400	690	460	-
Rated current	[A]	-10 %	8.6	5.12	8.5	-
Rated power	[kW]	-	4		4	
Rated speed	[rpm]	min.	1450		1725	
Rated torque	[Nm]	min.	25.48		21.3	
Starting current	[IA/IN]	+20 %	7.5		9.1	

Table 523: Mechanical data

Mechanical data		+/-	Values	
			50 Hz	60 Hz
Sound pressure level	[dB]	Max.	61	74
Moment of inertia	[kgm²]	Max.	0.02	0.02
Motor canopy		-	No	

Table 524: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 525: Environment

Environment	+/-	Values
Ambient temperature	[°C]	Max. 40

Table 526: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	2XM32X1,5

115 The name plate data may vary within the tolerances.

116 1800=grey cast iron, 4400=aluminium

V1 type of construction, 4-pin, 280M

Material: 4-90,0-280M-BWE6F3NNWDWFNWKWB¹¹⁷⁾

Material number: 01619759

Table 529: General data [50 Hz]

General data	+/-	Values
Motor size	Max.	280M
Type of construction	Max.	V1
Starting method	-	Star a. Delta
Motor flange	-	EN 50347 Type FF
Weight without attachments [kg]	Max.	777
Housing material ¹¹⁸⁾	-	1800
Enclosure	-	IP55
Nominal frequency	[Hz]	50/60
Efficiency class	-	IE3 (Premium)
Thermal class F to B	-	Yes
Temperature sensor	-	03
Operation on frequency inverter permitted	-	No
Operating mode	-	Continuous running duty (S1)
Direction of rotation	-	Bi-directional
Motor bearings insulated	-	No
Position of fixed motor bearing	-	Drive end
Fixed motor bearing reinforced	-	Without
Radial motor bearing reinforced	-	No
Condensate drain	-	Yes
Bolted feet	-	No

Table 530: Efficiency

Electrical data	+/-	50 Hz	60 Hz
		4/4	3/4
Efficiency [%]	min.	95.2	95
Power factor	min.	0.86	0.83

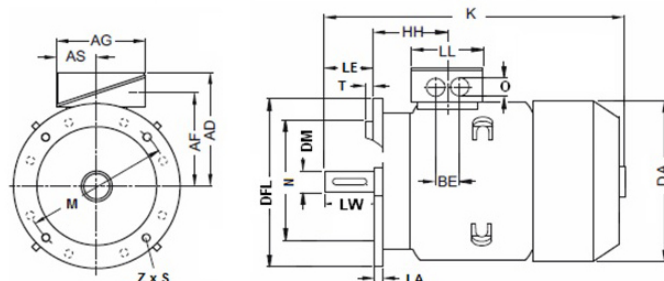


Fig. 59: Envelope dimensions

Table 536: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
-	-	-	476	380	351	160	-	-	-	110	-	-	580	550

Table 537: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LE	M	N	S	T	Y	Z
75	-	-	210	1071	18	931	245	140	500	450	18.5	5	-	8

Table 531: Electrical data

Electrical data	+/-	50 Hz	60 Hz
		Δ	Y
Rated voltage [V]	-	400	690
Rated current [A]	-10 %	166.3	100.1
Rated power [kW]	-	90	90
Rated speed [rpm]	min.	1485	1765
Rated torque [Nm]	min.	567.17	471.8
Starting current [IA/IN]	+20 %	7.6	7.8

Table 532: Mechanical data

Mechanical data	+/-	Values
		50 Hz
Sound pressure level [dB]	Max.	74
Moment of inertia [kgm²]	Max.	2.27
Motor canopy	-	No

Table 533: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 534: Environment

Environment	+/-	Values
Ambient temperature [°C]	Max.	40

Table 535: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (O)	-	2XM63X1,5

¹¹⁷ The name plate data may vary within the tolerances.

¹¹⁸ 1800=grey cast iron, 4400=aluminium

V1 type of construction, 4-pin, 315S

Material: 4-110 -315S-BWE6F3NNWDWFWNWKWB¹¹⁹⁾

Material number: 01619795

Table 538: General data [50 Hz]

General data		+/-	Values
Motor size		Max.	315S
Type of construction		Max.	V1
Starting method		-	Star a. Delta
Motor flange		-	EN 50347 Type FF
Weight without attachments	[kg]	Max.	1010
Housing material ¹²⁰⁾		-	1800
Enclosure		-	IP55
Nominal frequency	[Hz]		50/60
Efficiency class		-	IE3 (Premium)
Thermal class F to B		-	Yes
Temperature sensor		-	03
Operation on frequency inverter permitted		-	No
Operating mode		-	Continuous running duty (S1)
Direction of rotation		-	Bi-directional
Motor bearings insulated		-	No
Position of fixed motor bearing		-	Drive end
Fixed motor bearing reinforced		-	Without
Radial motor bearing reinforced		-	No
Condensate drain		-	Yes
Bolted feet		-	No

Table 539: Efficiency

Electrical data		+/-	50 Hz			60 Hz		
			4/4	3/4	2/4	4/4	3/4	2/4
Efficiency	[%]	min.	95.4	95.1	94.3	95.8		
Power factor		min.	0.87			0.83		

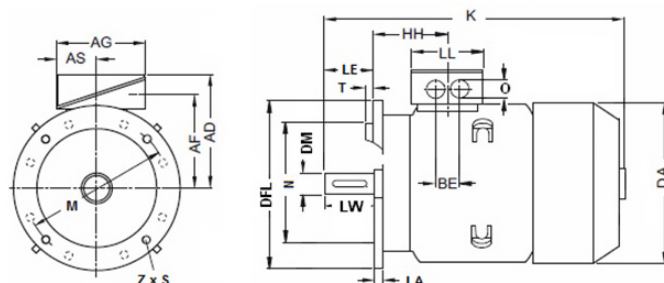

Fig. 60: Envelope dimensions

Table 545: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
-	-	-	567	444	411	180	-	-	-	110	-	-	664	660

Table 546: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LE	M	N	S	T	Y	Z
80	-	-	238	1274	22	1104	314	170	600	550	24	6	-	8

Table 540: Electrical data

Electrical data		+/-	50 Hz		60 Hz	
			Δ	Y	Δ	Y
Rated voltage	[V]	-	400	690	460	-
Rated current	[A]	-10 %	202.8	123.2	178	-
Rated power	[kW]	-	110		110	
Rated speed	[rpm]	min.	1488		1775	
Rated torque	[Nm]	min.	690.88		573.5	
Starting current	[IA/IN]	+20 %	7.8		8.2	

Table 541: Mechanical data

Mechanical data		+/-	Values	
			50 Hz	60 Hz
Sound pressure level	[dB]	Max.	75	79
Moment of inertia	[kgm ²]	Max.	3.04	3.04
Motor canopy		-	No	

Table 542: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 543: Environment

Environment	+/-	Values
Ambient temperature	[°C]	Max. 40

Table 544: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	2XM63X1,5

119 The name plate data may vary within the tolerances.

120 1800=grey cast iron, 4400=aluminium

V1 type of construction, 4-pin, 315M

Material: 4-132 -315M-BWE6F3NNWDWFWNWKWB¹²¹⁾

Material number: 01619796

Table 547: General data [50 Hz]

General data		+/-	Values
Motor size		Max.	315M
Type of construction		Max.	V1
Starting method		-	Star a. Delta
Motor flange		-	EN 50347 Type FF
Weight without attachments	[kg]	Max.	1095
Housing material ¹²²⁾		-	1800
Enclosure		-	IP55
Nominal frequency	[Hz]		50/60
Efficiency class		-	IE3 (Premium)
Thermal class F to B		-	Yes
Temperature sensor		-	03
Operation on frequency inverter permitted		-	No
Operating mode		-	Continuous running duty (S1)
Direction of rotation		-	Bi-directional
Motor bearings insulated		-	No
Position of fixed motor bearing		-	Drive end
Fixed motor bearing reinforced		-	Without
Radial motor bearing reinforced		-	No
Condensate drain		-	Yes
Bolted feet		-	No

Table 548: Efficiency

Electrical data		+/-	50 Hz			60 Hz		
			4/4	3/4	2/4	4/4	3/4	2/4
Efficiency	[%]	min.	95.6	95.2	94.4	96.2		
Power factor		min.	0.87			0.83		

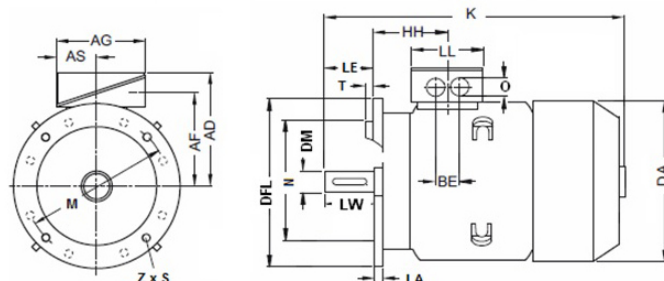

Fig. 61: Envelope dimensions

Table 554: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
-	-	-	567	444	411	180	-	-	-	110	-	-	664	660

Table 555: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LE	M	N	S	T	Y	Z
80	-	-	238	1274	22	1104	314	170	600	550	24	6	-	8

Table 549: Electrical data

Electrical data		+/-	50 Hz		60 Hz	
			Δ	Y	Δ	Y
Rated voltage	[V]	-	400	690	460	-
Rated current	[A]	-10 %	242.8	147.4	212.7	-
Rated power	[kW]	-	132		132	
Rated speed	[rpm]	min.	1490		1770	
Rated torque	[Nm]	min.	829.06		690.1	
Starting current	[IA/IN]	+20 %	7.9		8.4	

Table 550: Mechanical data

Mechanical data		+/-	Values	
			50 Hz	60 Hz
Sound pressure level	[dB]	Max.	77	82
Moment of inertia	[kgm²]	Max.	3.98	3.98
Motor canopy		-	No	

Table 551: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 552: Environment

Environment	+/-	Values
Ambient temperature	[°C]	Max. 40

Table 553: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	2XM63X1,5

¹²¹ The name plate data may vary within the tolerances.

¹²² 1800=grey cast iron, 4400=aluminium

V15 type of construction, 2-pin, 132S

Material: 2-5,50-132S-BWE6F3NTSDWFUWKWB¹²³⁾

Material number: 01583963

Table 556: General data [50 Hz]

General data		+/-	Values
Motor size		Max.	132S
Type of construction		Max.	V15
Starting method		-	Star a. Delta
Motor flange		-	EN 50347 Type FF
Weight without attachments	[kg]	Max.	57
Housing material ¹²⁴⁾		-	4400
Enclosure		-	IP55
Nominal frequency		[Hz]	50/60
Efficiency class		-	IE3 (Premium)
Thermal class F to B		-	Yes
Temperature sensor		-	03
Operation on frequency inverter permitted		-	Yes (acc to motor manufact)
Operating mode		-	Continuous running duty (S1)
Direction of rotation		-	Bi-directional
Motor bearings insulated		-	No
Position of fixed motor bearing		-	Drive end
Fixed motor bearing reinforced		-	Without
Radial motor bearing reinforced		-	No
Condensate drain		-	Yes
Bolted feet		-	Yes

Table 557: Efficiency

Electrical data		+/-	50 Hz			60 Hz		
			4/4	3/4	2/4	4/4	3/4	2/4
Efficiency	[%]	min.	89.2	89.3	87.8	89.5		
Power factor		min.	0.82			0.84		

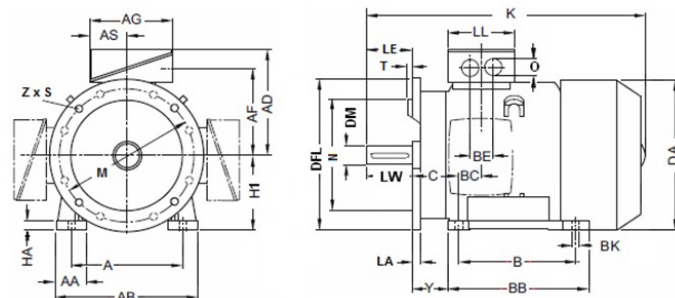

Fig. 62: Envelope dimensions

Table 563: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
216	53	269	222	172	171	77	140	218	21.5	55	12	89	274	300

Table 564: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LE	M	N	S	T	Y	Z
38	132	15	116	490	12	410	146	80	265	230	14.5	4	66	4

Table 558: Electrical data

Electrical data		+/-	50 Hz		60 Hz	
			Δ	Y	Δ	Y
Rated voltage	[V]	-	400	690	460	-
Rated current	[A]	-10 %	10.5	6.38	10	-
Rated power	[kW]	-	5.5		5.5	
Rated speed	[rpm]	min.	2930		3485	
Rated torque	[Nm]	min.	17.44		14.6	
Starting current	[IA/IN]	+20 %	8.7		9.2	

Table 559: Mechanical data

Mechanical data		+/-	Values	
			50 Hz	60 Hz
Sound pressure level	[dB]	Max.	71	77
Moment of inertia	[kgm ²]	Max.	0.03	0.03
Motor canopy		-	No	

Table 560: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 561: Environment

Environment	+/-	Values
Ambient temperature	[°C]	Max. 40

Table 562: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	2XM32X1,5

¹²³ The name plate data may vary within the tolerances.

¹²⁴ 1800=grey cast iron, 4400=aluminium

V15 type of construction, 2-pin, 132S

Material: 2-7,50-132S-BWE6F3NTSDWFUWKWB¹²⁵⁾

Material number: 01583964

Table 565: General data [50 Hz]

General data		+/-	Values
Motor size		Max.	132S
Type of construction		Max.	V15
Starting method		-	Star a. Delta
Motor flange		-	EN 50347 Type FF
Weight without attachments	[kg]	Max.	71
Housing material ¹²⁶⁾		-	4400
Enclosure		-	IP55
Nominal frequency	[Hz]		50/60
Efficiency class		-	IE3 (Premium)
Thermal class F to B		-	Yes
Temperature sensor		-	03
Operation on frequency inverter permitted		-	Yes (acc to motor manufact)
Operating mode		-	Continuous running duty (S1)
Direction of rotation		-	Bi-directional
Motor bearings insulated		-	No
Position of fixed motor bearing		-	Drive end
Fixed motor bearing reinforced		-	Without
Radial motor bearing reinforced		-	No
Condensate drain		-	Yes
Bolted feet		-	Yes

Table 566: Efficiency

Electrical data		+/-	50 Hz			60 Hz		
			4/4	3/4	2/4	4/4	3/4	2/4
Efficiency	[%]	min.	90.1	90.2	88.9	90.2		
Power factor		min.	0.83			0.83		

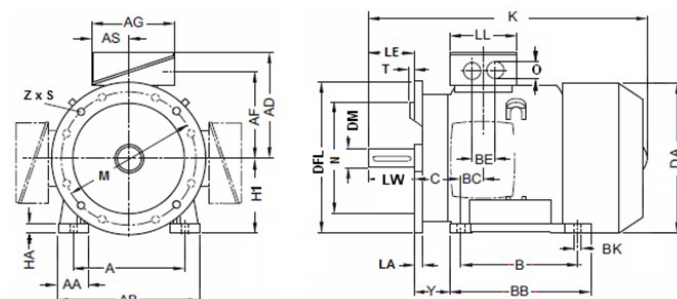

Fig. 63: Envelope dimensions

Table 572: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
216	53	269	222	172	171	77	140	218	21.5	55	12	89	274	300

Table 573: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LE	M	N	S	T	Y	Z
38	132	15	116	515	12	435	146	80	265	230	14.5	4	66	4

Table 567: Electrical data

Electrical data		+/-	50 Hz		60 Hz	
			Δ	Y	Δ	Y
Rated voltage	[V]	-	400	690	460	-
Rated current	[A]	-10 %	14.6	8.36	13.8	-
Rated power	[kW]	-	7.5		7.5	
Rated speed	[rpm]	min.	2935		3485	
Rated torque	[Nm]	min.	23.81		19.9	
Starting current	[IA/IN]	+20 %	8.9		9.6	

Table 568: Mechanical data

Mechanical data		+/-	Values	
			50 Hz	60 Hz
Sound pressure level	[dB]	Max.	71	77
Moment of inertia	[kgm²]	Max.	0.03	0.03
Motor canopy		-	No	

Table 569: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 570: Environment

Environment	+/-	Values
Ambient temperature	[°C]	Max. 40

Table 571: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	2XM32X1,5

¹²⁵ The name plate data may vary within the tolerances.

¹²⁶ 1800=grey cast iron, 4400=aluminium

V15 type of construction, 2-pin, 160M

Material: 2-11,0-160M-BWE6F3NTSDWFUWKWB¹²⁷⁾

Material number: 01583965

Table 574: General data [50 Hz]

General data		+/-	Values
Motor size		Max.	160M
Type of construction		Max.	V15
Starting method		-	Star a. Delta
Motor flange		-	EN 50347 Type FF
Weight without attachments	[kg]	Max.	117
Housing material ¹²⁸⁾		-	4400
Enclosure		-	IP55
Nominal frequency	[Hz]		50/60
Efficiency class		-	IE3 (Premium)
Thermal class F to B		-	Yes
Temperature sensor		-	03
Operation on frequency inverter permitted		-	Yes (acc to motor manufact)
Operating mode		-	Continuous running duty (S1)
Direction of rotation		-	Bi-directional
Motor bearings insulated		-	No
Position of fixed motor bearing		-	Drive end
Fixed motor bearing reinforced		-	Without
Radial motor bearing reinforced		-	No
Condensate drain		-	Yes
Bolted feet		-	Yes

Table 575: Efficiency

Electrical data		+/-	50 Hz			60 Hz		
			4/4	3/4	2/4	4/4	3/4	2/4
Efficiency	[%]	min.	91.2	91.3	90.1	91		
Power factor		min.	0.78			0.79		

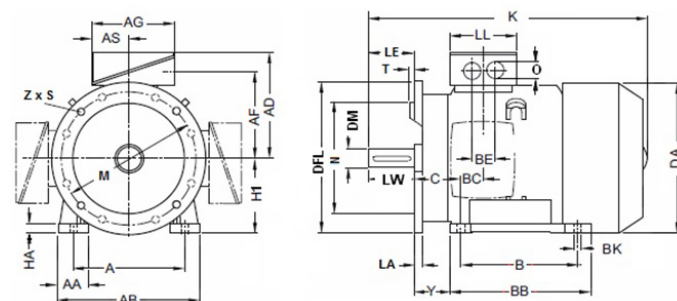

Fig. 64: Envelope dimensions

Table 581: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
254	66	323	261	209	193	86	210	310	28	59.5	14.5	108	314	350

Table 582: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LE	M	N	S	T	Y	Z
42	160	18	155	634	18	524	152	110	300	250	18.5	5	80	4

Table 576: Electrical data

Electrical data		+/-	50 Hz		60 Hz	
			Δ	Y	Δ	Y
Rated voltage	[V]	-	400	690	460	-
Rated current	[A]	-10 %	22	12.54	19.5	-
Rated power	[kW]	-	11		11	
Rated speed	[rpm]	min.	2950		3495	
Rated torque	[Nm]	min.	34.79		29	
Starting current	[IA/IN]	+20 %	9		10	

Table 577: Mechanical data

Mechanical data		+/-	Values	
			50 Hz	60 Hz
Sound pressure level	[dB]	Max.	74	81
Moment of inertia	[kgm²]	Max.	0.06	0.06
Motor canopy		-	No	

Table 578: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 579: Environment

Environment	+/-	Values
Ambient temperature	[°C]	Max. 40

Table 580: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	2XM40X1,5

¹²⁷ The name plate data may vary within the tolerances.

¹²⁸ 1800=grey cast iron, 4400=aluminium

V15 type of construction, 2-pin, 160M

Material: 2-15,0-160M-BWE6F3NTSDWFUWKWB¹²⁹⁾

Material number: 01583966

Table 583: General data [50 Hz]

General data	+/-	Values
Motor size	Max.	160M
Type of construction	Max.	V15
Starting method	-	Star a. Delta
Motor flange	-	EN 50347 Type FF
Weight without attachments [kg]	Max.	114
Housing material ¹³⁰⁾	-	4400
Enclosure	-	IP55
Nominal frequency	[Hz]	50/60
Efficiency class	-	IE3 (Premium)
Thermal class F to B	-	Yes
Temperature sensor	-	03
Operation on frequency inverter permitted	-	Yes (acc to motor manufact)
Operating mode	-	Continuous running duty (S1)
Direction of rotation	-	Bi-directional
Motor bearings insulated	-	No
Position of fixed motor bearing	-	Drive end
Fixed motor bearing reinforced	-	Without
Radial motor bearing reinforced	-	No
Condensate drain	-	Yes
Bolted feet	-	Yes

Table 584: Efficiency

Electrical data	+/-	50 Hz	60 Hz
		4/4	3/4
Efficiency [%]	min.	91.9	92
Power factor	min.	0.78	0.8

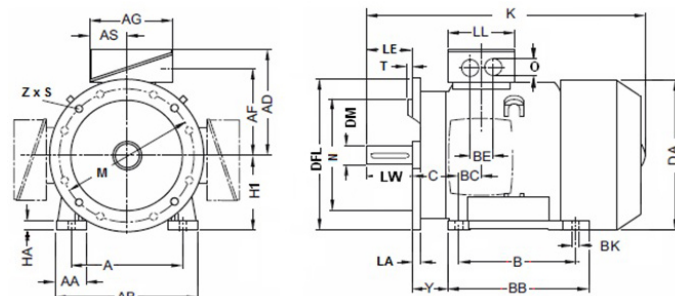

Fig. 65: Envelope dimensions

Table 590: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
254	66	323	261	209	193	86	210	310	28	59.5	14.5	108	314	350

Table 591: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LE	M	N	S	T	Y	Z
42	160	18	155	634	18	524	152	110	300	250	18.5	5	80	4

Table 585: Electrical data

Electrical data	+/-	50 Hz	60 Hz
		Δ	Y
Rated voltage [V]	-	400	690
Rated current [A]	-10 %	29.4	17.27
Rated power [kW]	-	15	15
Rated speed [rpm]	min.	2945	3500
Rated torque [Nm]	min.	47.43	39.7
Starting current [IA/IN]	+20 %	9.2	9.7

Table 586: Mechanical data

Mechanical data	+/-	50 Hz	60 Hz
		Δ	Y
Sound pressure level [dB]	Max.	74	81
Moment of inertia [kgm²]	Max.	0.06	0.06
Motor canopy	-	No	No

Table 587: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 588: Environment

Environment	+/-	Values
Ambient temperature [°C]	Max.	40

Table 589: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	2XM40X1,5

¹²⁹ The name plate data may vary within the tolerances.

¹³⁰ 1800=grey cast iron, 4400=aluminium

V15 type of construction, 2-pin, 160L

Material: 2-18,5-160L-BWE6F3NTSDWFUWKWB¹³¹⁾

Material number: 01583967

Table 592: General data [50 Hz]

General data		+/-	Values
Motor size		Max.	160L
Type of construction		Max.	V15
Starting method		-	Star a. Delta
Motor flange		-	EN 50347 Type FF
Weight without attachments	[kg]	Max.	127
Housing material ¹³²⁾		-	4400
Enclosure		-	IP55
Nominal frequency	[Hz]		50/60
Efficiency class		-	IE3 (Premium)
Thermal class F to B		-	Yes
Temperature sensor		-	03
Operation on frequency inverter permitted		-	Yes (acc to motor manufact)
Operating mode		-	Continuous running duty (S1)
Direction of rotation		-	Bi-directional
Motor bearings insulated		-	No
Position of fixed motor bearing		-	Drive end
Fixed motor bearing reinforced		-	Without
Radial motor bearing reinforced		-	No
Condensate drain		-	Yes
Bolted feet		-	Yes

Table 593: Efficiency

Electrical data		+/-	50 Hz			60 Hz		
			4/4	3/4	2/4	4/4	3/4	2/4
Efficiency	[%]	min.	92.4	92.4	91.3	91.7		
Power factor		min.	0.77			0.81		

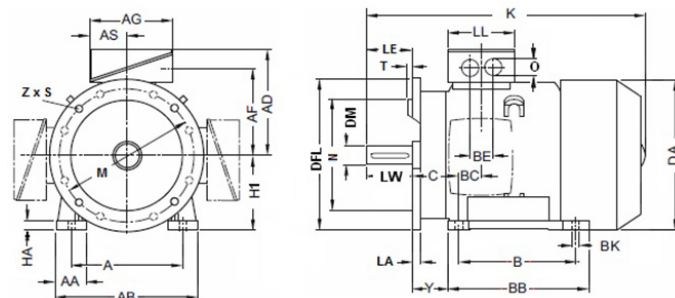

Fig. 66: Envelope dimensions

Table 599: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
254	66	323	261	209	193	86	254	310	28	59.5	14.5	108	314	350

Table 600: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LE	M	N	S	T	Y	Z
42	160	18	155	664	18	554	152	110	300	250	18.5	5	80	4

Table 594: Electrical data

Electrical data		+/-	50 Hz		60 Hz	
			Δ	Y	Δ	Y
Rated voltage	[V]	-	400	690	460	-
Rated current	[A]	-10 %	35.6	20.57	32.9	-
Rated power	[kW]	-	18.5		18.5	
Rated speed	[rpm]	min.	2945		3505	
Rated torque	[Nm]	min.	58.79		48.9	
Starting current	[IA/IN]	+20 %	9.5		10.5	

Table 595: Mechanical data

Mechanical data		+/-	Values	
			50 Hz	60 Hz
Sound pressure level	[dB]	Max.	74	81
Moment of inertia	[kgm²]	Max.	0.07	0.07
Motor canopy		-	No	

Table 596: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 597: Environment

Environment	+/-	Values
Ambient temperature	[°C]	Max. 40

Table 598: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	2XM40X1,5

¹³¹ The name plate data may vary within the tolerances.

¹³² 1800=grey cast iron, 4400=aluminium

V15 type of construction, 2-pin, 180M

Material: 2-22,0-180M-BWE6F3NTSDWFUWKWB¹³³⁾

Material number: 01583902

Table 601: General data [50 Hz]

General data	+/-	Values
Motor size	Max.	180M
Type of construction	Max.	V15
Starting method	-	Star a. Delta
Motor flange	-	EN 50347 Type FF
Weight without attachments [kg]	Max.	158
Housing material ¹³⁴⁾	-	4400
Enclosure	-	IP55
Nominal frequency	[Hz]	50/60
Efficiency class	-	IE3 (Premium)
Thermal class F to B	-	Yes
Temperature sensor	-	03
Operation on frequency inverter permitted	-	Yes (acc to motor manufact)
Operating mode	-	Continuous running duty (S1)
Direction of rotation	-	Bi-directional
Motor bearings insulated	-	No
Position of fixed motor bearing	-	Drive end
Fixed motor bearing reinforced	-	Without
Radial motor bearing reinforced	-	No
Condensate drain	-	Yes
Bolted feet	-	Yes

Table 602: Efficiency

Electrical data	+/-	50 Hz	60 Hz
		4/4	3/4
Efficiency [%]	min.	92.7	91.6
Power factor	min.	0.87	0.84

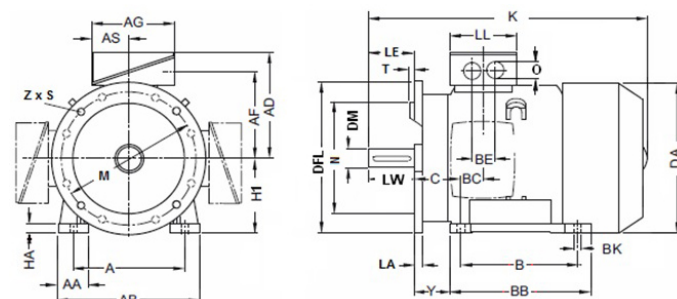

Fig. 67: Envelope dimensions

Table 608: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
279	68	368	285	234	193	86	241	343	39.3	75.5	14.5	121	356	350

Table 609: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LE	M	N	S	T	Y	Z
48	180	22	155	698	18	588	152	110	300	250	18.5	5	85	4

Table 603: Electrical data

Electrical data	+/-	50 Hz	60 Hz
		Δ	Y
Rated voltage [V]	-	400	460
Rated current [A]	-10 %	41.2	38
Rated power [kW]	-	22	22
Rated speed [rpm]	min.	2950	3515
Rated torque [Nm]	min.	69.58	58
Starting current [IA/IN]	+20 %	9	8.2

Table 604: Mechanical data

Mechanical data	+/-	50 Hz	60 Hz
Sound pressure level [dB]	Max.	77	84
Moment of inertia [kgm²]	Max.	0.13	0.13
Motor canopy	-	No	No

Table 605: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 606: Environment

Environment	+/-	Values
Ambient temperature [°C]	Max.	40

Table 607: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	2XM40X1,5

¹³³ The name plate data may vary within the tolerances.

¹³⁴ 1800=grey cast iron, 4400=aluminium

V15 type of construction, 2-pin, 200L

Material: 2-30,0-200L-BWE6F3NTSDWFUWKWB¹³⁵⁾

Material number: 01583903

Table 610: General data [50 Hz]

General data		+/-	Values
Motor size		Max.	200L
Type of construction		Max.	V15
Starting method		-	Star a. Delta
Motor flange		-	EN 50347 Type FF
Weight without attachments	[kg]	Max.	222
Housing material ¹³⁶⁾		-	4400
Enclosure		-	IP55
Nominal frequency		[Hz]	50/60
Efficiency class		-	IE3 (Premium)
Thermal class F to B		-	Yes
Temperature sensor		-	03
Operation on frequency inverter permitted		-	Yes (acc to motor manufact)
Operating mode		-	Continuous running duty (S1)
Direction of rotation		-	Bi-directional
Motor bearings insulated		-	No
Position of fixed motor bearing		-	Drive end
Fixed motor bearing reinforced		-	Without
Radial motor bearing reinforced		-	No
Condensate drain		-	Yes
Bolted feet		-	Yes

Table 611: Efficiency

Electrical data		+/-	50 Hz			60 Hz		
			4/4	3/4	2/4	4/4	3/4	2/4
Efficiency	[%]	min.	93.3	93.2	92.2	92.4		
Power factor		min.	0.8			0.81		

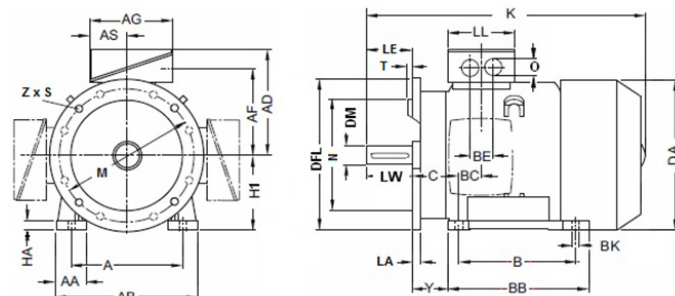

Fig. 68: Envelope dimensions

Table 617: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
318	85	404	326	262	248	113	305	375	43.5	83	18.5	133	396	400

Table 618: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LE	M	N	S	T	Y	Z
55	200	25	164	758	18	648	194	110	350	300	18.5	5	93	4

Table 612: Electrical data

Electrical data		+/-	50 Hz		60 Hz	
			Δ	Y	Δ	Y
Rated voltage	[V]	-	400	690	460	-
Rated current	[A]	-10 %	56.5	34.1	55.7	-
Rated power	[kW]	-	30		30	
Rated speed	[rpm]	min.	2955		3520	
Rated torque	[Nm]	min.	95.01		78.8	
Starting current	[IA/IN]	+20 %	8		9.3	

Table 613: Mechanical data

Mechanical data		+/-	Values	
			50 Hz	60 Hz
Sound pressure level	[dB]	Max.	78	87
Moment of inertia	[kgm²]	Max.	0.22	0.22
Motor canopy		-	No	

Table 614: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 615: Environment

Environment	+/-	Values
Ambient temperature	[°C]	Max. 40

Table 616: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	2XM50X1,5

¹³⁵ The name plate data may vary within the tolerances.

¹³⁶ 1800=grey cast iron, 4400=aluminium

V15 type of construction, 2-pin, 200L

Material: 2-37,0-200L-BWE6F3NTSDWFUWKWB¹³⁷⁾

Material number: 01583904

Table 619: General data [50 Hz]

General data	+/-	Values
Motor size	Max.	200L
Type of construction	Max.	V15
Starting method	-	Star a. Delta
Motor flange	-	EN 50347 Type FF
Weight without attachments [kg]	Max.	232
Housing material ¹³⁸⁾	-	4400
Enclosure	-	IP55
Nominal frequency	[Hz]	50/60
Efficiency class	-	IE3 (Premium)
Thermal class F to B	-	Yes
Temperature sensor	-	03
Operation on frequency inverter permitted	-	Yes (acc to motor manufact)
Operating mode	-	Continuous running duty (S1)
Direction of rotation	-	Bi-directional
Motor bearings insulated	-	No
Position of fixed motor bearing	-	Drive end
Fixed motor bearing reinforced	-	Without
Radial motor bearing reinforced	-	No
Condensate drain	-	Yes
Bolted feet	-	Yes

Table 620: Efficiency

Electrical data	+/-	50 Hz	60 Hz
		4/4	3/4
Efficiency [%]	min.	93.7	93.5
Power factor	min.	0.84	0.84

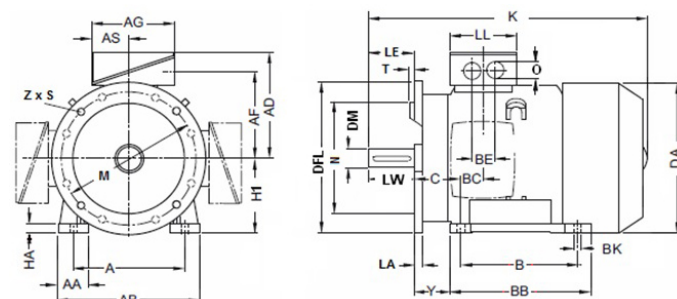

Fig. 69: Envelope dimensions

Table 626: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
318	85	404	326	262	248	113	305	375	43.5	83	18.5	133	396	400

Table 627: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LE	M	N	S	T	Y	Z
55	200	25	164	758	18	648	194	110	350	300	18.5	5	93	4

Table 621: Electrical data

Electrical data	+/-	50 Hz	60 Hz
		Δ	Y
Rated voltage [V]	-	400	690
Rated current [A]	-10 %	68.7	41.8
Rated power [kW]	-	37	37
Rated speed [rpm]	min.	2955	3515
Rated torque [Nm]	min.	116.98	97.5
Starting current [IA/IN]	+20 %	8.8	9.9

Table 622: Mechanical data

Mechanical data	+/-	50 Hz	60 Hz
Sound pressure level [dB]	Max.	78	87
Moment of inertia [kgm²]	Max.	0.22	0.22
Motor canopy	-	No	No

Table 623: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 624: Environment

Environment	+/-	Values
Ambient temperature [°C]	Max.	40

Table 625: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (O)	-	2XM50X1,5

¹³⁷ The name plate data may vary within the tolerances.

¹³⁸ 1800=grey cast iron, 4400=aluminium

V15 type of construction, 2-pin, 225M

Material: 2-45,0-225M-BWE6F3NTSDWFUWKWB¹³⁹⁾

Material number: 01583905

Table 628: General data [50 Hz]

General data		+/-	Values
Motor size		Max.	225M
Type of construction		Max.	V15
Starting method		-	Star a. Delta
Motor flange		-	EN 50347 Type FF
Weight without attachments	[kg]	Max.	420
Housing material ¹⁴⁰⁾		-	1800
Enclosure		-	IP55
Nominal frequency		[Hz]	50/60
Efficiency class		-	IE3 (Premium)
Thermal class F to B		-	Yes
Temperature sensor		-	03
Operation on frequency inverter permitted		-	Yes (acc to KSB)
Operating mode		-	Continuous running duty (S1)
Direction of rotation		-	Bi-directional
Motor bearings insulated		-	No
Position of fixed motor bearing		-	Drive end
Fixed motor bearing reinforced		-	Without
Radial motor bearing reinforced		-	No
Condensate drain		-	Yes
Bolted feet		-	Yes

Table 629: Efficiency

Electrical data		+/-	50 Hz			60 Hz		
			4/4	3/4	2/4	4/4	3/4	2/4
Efficiency	[%]	min.	94	93.7	92.8	93.6		
Power factor		min.	0.85			0.83		

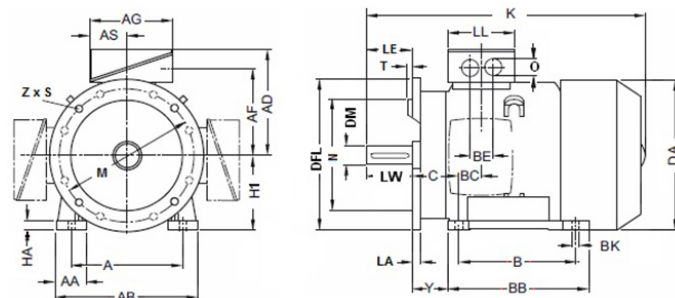

Fig. 70: Envelope dimensions

Table 635: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
356	90	458	372	310	293	123	311	412	8	88	18.5	149	453	450

Table 636: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LE	M	N	S	T	Y	Z
55	225	34	164	856	18	746	207	110	400	350	18.5	5	107	8

Table 630: Electrical data

Electrical data		+/-	50 Hz		60 Hz	
			Δ	Y	Δ	Y
Rated voltage	[V]	-	400	690	460	-
Rated current	[A]	-10 %	81.9	50.05	80.6	-
Rated power	[kW]	-	45		45	
Rated speed	[rpm]	min.	2960		3520	
Rated torque	[Nm]	min.	142.1		118.1	
Starting current	[IA/IN]	+20 %	8.1		8.8	

Table 631: Mechanical data

Mechanical data		+/-	Values	
			50 Hz	60 Hz
Sound pressure level	[dB]	Max.	78	88
Moment of inertia	[kgm²]	Max.	0.3	0.3
Motor canopy		-	No	

Table 632: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 633: Environment

Environment	+/-	Values
Ambient temperature	[°C]	Max. 40

Table 634: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	2XM50X1,5

¹³⁹⁾ The name plate data may vary within the tolerances.

¹⁴⁰⁾ 1800=grey cast iron, 4400=aluminium

V15 type of construction, 2-pin, 250M

Material: 2-55,0-250M-BWE6F3NTSDWFUWKWB¹⁴¹⁾

Material number: 01583900

Table 637: General data [50 Hz]

General data	+/-	Values
Motor size	Max.	250M
Type of construction	Max.	V15
Starting method	-	Star a. Delta
Motor flange	-	EN 50347 Type FF
Weight without attachments [kg]	Max.	517
Housing material ¹⁴²⁾	-	1800
Enclosure	-	IP55
Nominal frequency	[Hz]	50/60
Efficiency class	-	IE3 (Premium)
Thermal class F to B	-	Yes
Temperature sensor	-	03
Operation on frequency inverter permitted	-	Yes (acc to KSB)
Operating mode	-	Continuous running duty (S1)
Direction of rotation	-	Bi-directional
Motor bearings insulated	-	No
Position of fixed motor bearing	-	Drive end
Fixed motor bearing reinforced	-	Without
Radial motor bearing reinforced	-	No
Condensate drain	-	Yes
Bolted feet	-	No

Table 638: Efficiency

Electrical data		+/-	50 Hz			60 Hz		
			4/4	3/4	2/4	4/4	3/4	2/4
Efficiency	[%]	min.	94.3	93.9	93	93.6		
Power factor		min.	0.84			0.86		

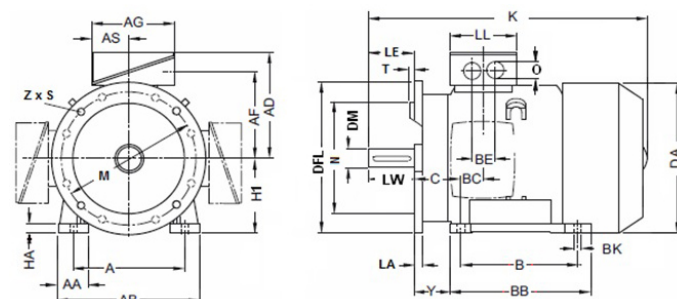

Fig. 71: Envelope dimensions

Table 644: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
406	100	531	451	354	351	160	349	467	62	100.5	24	168	497	550

Table 645: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LE	M	N	S	T	Y	Z
60	250	43	192	965	18	825	245	140	500	450	18.5	5	131	8

Table 639: Electrical data

Electrical data		+/-	50 Hz		60 Hz	
			Δ	Y	Δ	Y
Rated voltage	[V]	-	400	690	460	-
Rated current	[A]	-10 %	100.3	60.5	98.2	-
Rated power	[kW]	-	55		55	
Rated speed	[rpm]	min.	2960		3530	
Rated torque	[Nm]	min.	173.46		144.4	
Starting current	[IA/IN]	+20 %	8.2		9.2	

Table 640: Mechanical data

Mechanical data		+/-	Values	
			50 Hz	60 Hz
Sound pressure level	[dB]	Max.	78	89
Moment of inertia	[kgm²]	Max.	0.48	0.52
Motor canopy		-	No	

Table 641: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 642: Environment

Environment	+/-	Values
Ambient temperature [°C]	Max.	40

Table 643: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (O)	-	2XM63X1,5

¹⁴¹ The name plate data may vary within the tolerances.

¹⁴² 1800=grey cast iron, 4400=aluminium

V15 type of construction, 2-pin, 280S

Material: 2-75,0-280S-BWE6F3NTSDWFWNWKWB¹⁴³⁾

Material number: 01619778

Table 646: General data [50 Hz]

General data		+/-	Values
Motor size		Max.	280S
Type of construction		Max.	V15
Starting method		-	Star a. Delta
Motor flange		-	EN 50347 Type FF
Weight without attachments	[kg]	Max.	727
Housing material ¹⁴⁴⁾		-	1800
Enclosure		-	IP55
Nominal frequency	[Hz]		50/60
Efficiency class		-	IE3 (Premium)
Thermal class F to B		-	Yes
Temperature sensor		-	03
Operation on frequency inverter permitted		-	No
Operating mode		-	Continuous running duty (S1)
Direction of rotation		-	Bi-directional
Motor bearings insulated		-	No
Position of fixed motor bearing		-	Drive end
Fixed motor bearing reinforced		-	Without
Radial motor bearing reinforced		-	No
Condensate drain		-	Yes
Bolted feet		-	Yes

Table 647: Efficiency

Electrical data		+/-	50 Hz			60 Hz		
			4/4	3/4	2/4	4/4	3/4	2/4
Efficiency	[%]	min.	94.7	94.1	93.2	94.1		
Power factor		min.	0.87			0.86		

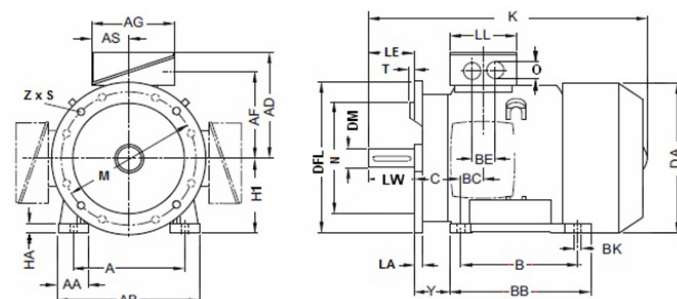

Fig. 72: Envelope dimensions

Table 653: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
457	100	585	476	380	351	160	368	517	20	110	24	190	580	550

Table 654: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LE	M	N	S	T	Y	Z
65	280	42	210	1071	18	931	245	140	500	450	18.5	5	103	8

Table 648: Electrical data

Electrical data		+/-	50 Hz		60 Hz	
			Δ	Y	Δ	Y
Rated voltage	[V]	-	400	690	460	-
Rated current	[A]	-10 %	136.1	82.5	119.4	-
Rated power	[kW]	-	75		75	
Rated speed	[rpm]	min.	2975		3545	
Rated torque	[Nm]	min.	235.92		196.1	
Starting current	[IA/IN]	+20 %	7.9		8.4	

Table 649: Mechanical data

Mechanical data		+/-	Values	
			50 Hz	60 Hz
Sound pressure level	[dB]	Max.	81	85
Moment of inertia	[kgm²]	Max.	0.99	0.99
Motor canopy		-	No	

Table 650: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 651: Environment

Environment	+/-	Values
Ambient temperature	[°C]	Max. 40

Table 652: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	2XM63X1,5

¹⁴³ The name plate data may vary within the tolerances.

¹⁴⁴ 1800=grey cast iron, 4400=aluminium

V15 type of construction, 4-pin, 132S

Material: 4-5,50-132S-BWB6F3NTSDWFUWKWB¹⁴⁵⁾

Material number: 01583971

Table 655: General data [50 Hz]

General data		+/-	Values
Motor size		Max.	132S
Type of construction		Max.	V15
Starting method		-	Star a. Delta
Motor flange		-	EN 50347 Type FF
Weight without attachments	[kg]	Max.	64
Housing material ¹⁴⁶⁾		-	4400
Enclosure		-	IP55
Nominal frequency	[Hz]		50
Efficiency class		-	IE3 (Premium)
Thermal class F to B		-	Yes
Temperature sensor		-	03
Operation on frequency inverter permitted		-	Yes (acc to motor manufact)
Operating mode		-	Continuous running duty (S1)
Direction of rotation		-	Bi-directional
Motor bearings insulated		-	No
Position of fixed motor bearing		-	Drive end
Fixed motor bearing reinforced		-	Without
Radial motor bearing reinforced		-	No
Condensate drain		-	Yes
Bolted feet		-	Yes

Table 656: Efficiency

Electrical data		+/-	50 Hz			60 Hz		
			4/4	3/4	2/4	4/4	3/4	2/4
Efficiency	[%]	min.	89.6	90.3	89			
Power factor		min.	0.8					

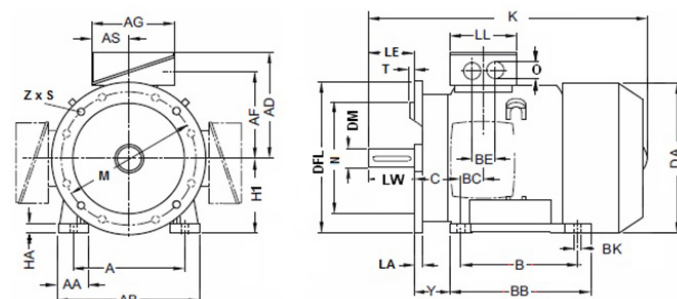

Fig. 73: Envelope dimensions

Table 662: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
216	53	269	222	172	171	77	140	218	21.5	55	12	89	274	300

Table 663: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LE	M	N	S	T	Y	Z
38	132	15	116	515	12	435	146	80	265	230	14.5	4	66	4

Table 657: Electrical data

Electrical data		+/-	50 Hz		60 Hz	
			Δ	Y	Δ	Y
Rated voltage	[V]	-	400	690	-	-
Rated current	[A]	-10 %	11	6.82	-	-
Rated power	[kW]	-	5.5		-	
Rated speed	[rpm]	min.	1465			
Rated torque	[Nm]	min.	34.99			
Starting current	[IA/IN]	+20 %	8.9			

Table 658: Mechanical data

Mechanical data		+/-	Values	
			50 Hz	60 Hz
Sound pressure level	[dB]	Max.	67	
Moment of inertia	[kgm²]	Max.	0.06	
Motor canopy		-	No	

Table 659: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 660: Environment

Environment	+/-	Values
Ambient temperature	[°C]	Max. 40

Table 661: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	2XM32X1,5

¹⁴⁵ The name plate data may vary within the tolerances.

¹⁴⁶ 1800=grey cast iron, 4400=aluminium

V15 type of construction, 4-pin, 132M

Material: 4-7,50-132M-BWB6F3NTSDWFUWKWB¹⁴⁷⁾

Material number: 01583972

Table 664: General data [50 Hz]

General data		+/-	Values
Motor size		Max.	132M
Type of construction		Max.	V15
Starting method		-	Star a. Delta
Motor flange		-	EN 50347 Type FF
Weight without attachments	[kg]	Max.	74
Housing material ¹⁴⁸⁾		-	4400
Enclosure		-	IP55
Nominal frequency		[Hz]	50
Efficiency class		-	IE3 (Premium)
Thermal class F to B		-	Yes
Temperature sensor		-	03
Operation on frequency inverter permitted		-	Yes (acc to motor manufact)
Operating mode		-	Continuous running duty (S1)
Direction of rotation		-	Bi-directional
Motor bearings insulated		-	No
Position of fixed motor bearing		-	Drive end
Fixed motor bearing reinforced		-	Without
Radial motor bearing reinforced		-	No
Condensate drain		-	Yes
Bolted feet		-	Yes

Table 665: Efficiency

Electrical data		+/-	50 Hz			60 Hz		
			4/4	3/4	2/4	4/4	3/4	2/4
Efficiency	[%]	min.	90.4	91.1	89.9			
Power factor		min.	0.8					

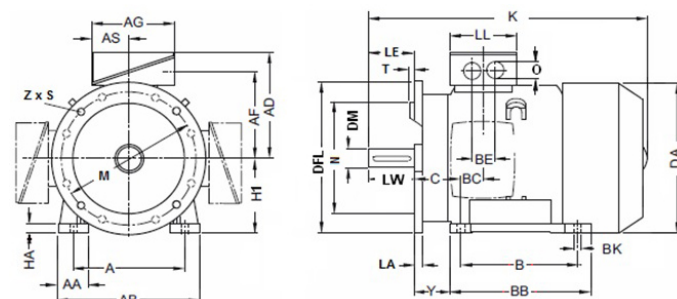

Fig. 74: Envelope dimensions

Table 671: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
216	53	269	222	172	171	77	178	218	21.5	55	12	89	274	300

Table 672: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LE	M	N	S	T	Y	Z
38	132	15	116	515	12	435	146	80	265	230	14.5	4	66	4

Table 666: Electrical data

Electrical data		+/-	50 Hz		60 Hz	
			Δ	Y	Δ	Y
Rated voltage	[V]	-	400	690	-	-
Rated current	[A]	-10 %	15	9.13	-	-
Rated power	[kW]	-	7.5		-	
Rated speed	[rpm]	min.	1465			
Rated torque	[Nm]	min.	47.73			
Starting current	[IA/IN]	+20 %	8.9			

Table 667: Mechanical data

Mechanical data		+/-	Values	
			50 Hz	60 Hz
Sound pressure level	[dB]	Max.	67	
Moment of inertia	[kgm²]	Max.	0.07	
Motor canopy		-	No	

Table 668: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 669: Environment

Environment	+/-	Values
Ambient temperature	[°C]	Max. 40

Table 670: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	2XM32X1,5

¹⁴⁷ The name plate data may vary within the tolerances.

¹⁴⁸ 1800=grey cast iron, 4400=aluminium

V15 type of construction, 4-pin, 160M

Material: 4-11,0-160M-BWE6F3NTSDWFUWKWB¹⁴⁹⁾

Material number: 01583973

Table 673: General data [50 Hz]

General data	+/-	Values
Motor size	Max.	160M
Type of construction	Max.	V15
Starting method	-	Star a. Delta
Motor flange	-	EN 50347 Type FF
Weight without attachments [kg]	Max.	112
Housing material ¹⁵⁰⁾	-	4400
Enclosure	-	IP55
Nominal frequency	[Hz]	50/60
Efficiency class	-	IE3 (Premium)
Thermal class F to B	-	Yes
Temperature sensor	-	03
Operation on frequency inverter permitted	-	Yes (acc to motor manufact)
Operating mode	-	Continuous running duty (S1)
Direction of rotation	-	Bi-directional
Motor bearings insulated	-	No
Position of fixed motor bearing	-	Drive end
Fixed motor bearing reinforced	-	Without
Radial motor bearing reinforced	-	No
Condensate drain	-	Yes
Bolted feet	-	Yes

Table 674: Efficiency

Electrical data		+/-	50 Hz			60 Hz		
			4/4	3/4	2/4	4/4	3/4	2/4
Efficiency	[%]	min.	91.4	92.1	91	92.4		
Power factor		min.	0.8			0.75		

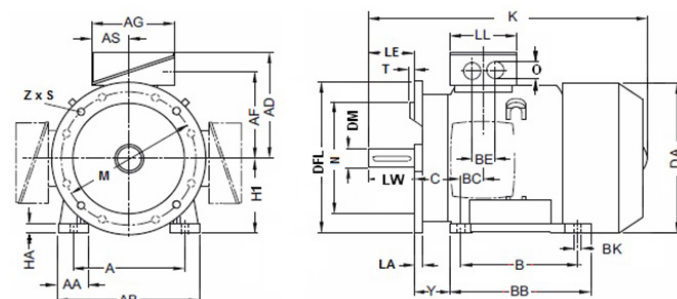

Fig. 75: Envelope dimensions

Table 680: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
254	66	323	261	209	193	86	210	310	28	59.5	14.5	108	314	350

Table 681: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LE	M	N	S	T	Y	Z
42	160	18	155	634	18	524	152	110	300	250	18.5	5	80	4

Table 675: Electrical data

Electrical data		+/-	50 Hz		60 Hz	
			Δ	Y	Δ	Y
Rated voltage	[V]	-	400	690	460	-
Rated current	[A]	-10 %	22.8	13.2	22.6	-
Rated power	[kW]	-	11		11	
Rated speed	[rpm]	min.	1470		1740	
Rated torque	[Nm]	min.	69.58		58	
Starting current	[IA/IN]	+20 %	7.9		8.6	

Table 676: Mechanical data

Mechanical data		+/-	Values	
			50 Hz	60 Hz
Sound pressure level	[dB]	Max.	68	72
Moment of inertia	[kgm²]	Max.	0.11	0.11
Motor canopy		-	No	

Table 677: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 678: Environment

Environment	+/-	Values
Ambient temperature [°C]	Max.	40

Table 679: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	2XM40X1,5

¹⁴⁹⁾ The name plate data may vary within the tolerances.

¹⁵⁰⁾ 1800=grey cast iron, 4400=aluminium

V15 type of construction, 4-pin, 160L

Material: 4-15,0-160L-BWE6F3NTSDWFUWKWB¹⁵¹⁾

Material number: 01583974

Table 682: General data [50 Hz]

General data	+/-	Values
Motor size	Max.	160L
Type of construction	Max.	V15
Starting method	-	Star a. Delta
Motor flange	-	EN 50347 Type FF
Weight without attachments [kg]	Max.	121
Housing material ¹⁵²⁾	-	4400
Enclosure	-	IP55
Nominal frequency	[Hz]	50/60
Efficiency class	-	IE3 (Premium)
Thermal class F to B	-	Yes
Temperature sensor	-	03
Operation on frequency inverter permitted	-	Yes (acc to motor manufact)
Operating mode	-	Continuous running duty (S1)
Direction of rotation	-	Bi-directional
Motor bearings insulated	-	No
Position of fixed motor bearing	-	Drive end
Fixed motor bearing reinforced	-	Without
Radial motor bearing reinforced	-	No
Condensate drain	-	Yes
Bolted feet	-	Yes

Table 683: Efficiency

Electrical data		+/-	50 Hz			60 Hz		
			4/4	3/4	2/4	4/4	3/4	2/4
Efficiency	[%]	min.	92.1	92.7	91.7	93		
Power factor		min.	0.81			0.78	0	0

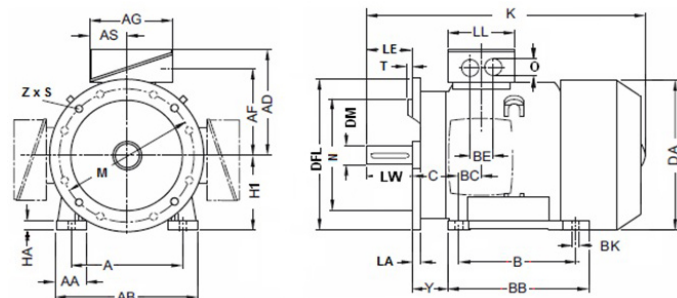

Fig. 76: Envelope dimensions

Table 689: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
254	66	323	261	209	193	86	254	310	28	59.5	14.5	108	314	350

Table 690: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LE	M	N	S	T	Y	Z
42	160	18	155	664	18	554	152	110	300	250	18.5	5	80	4

Table 684: Electrical data

Electrical data		+/-	50 Hz		60 Hz	
			Δ	Y	Δ	Y
Rated voltage	[V]	-	400	690	460	-
Rated current	[A]	-10 %	30.1	18.37	30.8	-
Rated power	[kW]	-	15		15	
Rated speed	[rpm]	min.	1465		1740	
Rated torque	[Nm]	min.	95.06		79.8	
Starting current	[IA/IN]	+20 %	8.9		0	

Table 685: Mechanical data

Mechanical data		+/-	Values	
			50 Hz	60 Hz
Sound pressure level	[dB]	Max.	68	72
Moment of inertia	[kgm²]	Max.	0.13	0.13
Motor canopy		-	No	

Table 686: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 687: Environment

Environment	+/-	Values
Ambient temperature [°C]	Max.	40

Table 688: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	2XM40X1,5

151 The name plate data may vary within the tolerances.

152 1800=grey cast iron, 4400=aluminium

V15 type of construction, 4-pin, 180M

Material: 4-18,5-180M-BWE6F3NTSDWFUWKWB¹⁵³⁾

Material number: 01583906

Table 691: General data [50 Hz]

General data	+/-	Values
Motor size	Max.	180M
Type of construction	Max.	V15
Starting method	-	Star a. Delta
Motor flange	-	EN 50347 Type FF
Weight without attachments [kg]	Max.	164
Housing material ¹⁵⁴⁾	-	4400
Enclosure	-	IP55
Nominal frequency	[Hz]	50/60
Efficiency class	-	IE3 (Premium)
Thermal class F to B	-	Yes
Temperature sensor	-	03
Operation on frequency inverter permitted	-	Yes (acc to motor manufact)
Operating mode	-	Continuous running duty (S1)
Direction of rotation	-	Bi-directional
Motor bearings insulated	-	No
Position of fixed motor bearing	-	Drive end
Fixed motor bearing reinforced	-	Without
Radial motor bearing reinforced	-	No
Condensate drain	-	Yes
Bolted feet	-	Yes

Table 692: Efficiency

Electrical data	+/-	50 Hz	60 Hz
		4/4	3/4
Efficiency [%]	min.	92.6	93.2
Power factor	min.	0.87	0.82

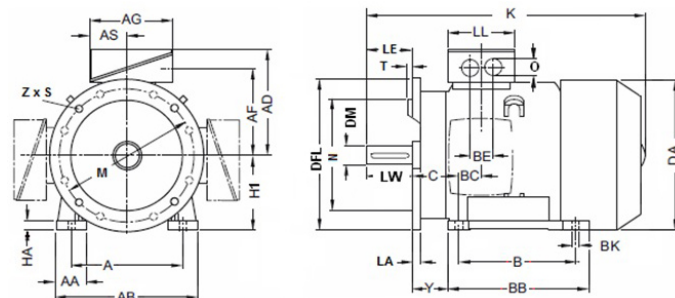


Fig. 77: Envelope dimensions

Table 698: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
279	68	368	285	234	193	86	241	343	39.3	75.5	14.5	121	356	350

Table 699: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LE	M	N	S	T	Y	Z
48	180	22	155	698	18	588	152	110	300	250	18.5	5	85	4

Table 693: Electrical data

Electrical data	+/-	50 Hz	60 Hz
		Δ	Y
Rated voltage [V]	-	400	690
Rated current [A]	-10 %	36.8	22.55
Rated power [kW]	-	18.5	18.5
Rated speed [rpm]	min.	1470	1735
Rated torque [Nm]	min.	117.6	98.9
Starting current [IA/IN]	+20 %	8.7	9.7

Table 694: Mechanical data

Mechanical data	+/-	Values
		50 Hz
Sound pressure level [dB]	Max.	69
Moment of inertia [kgm²]	Max.	0.22
Motor canopy	-	No

Table 695: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 696: Environment

Environment	+/-	Values
Ambient temperature [°C]	Max.	40

Table 697: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	2XM40X1,5

¹⁵³ The name plate data may vary within the tolerances.

¹⁵⁴ 1800=grey cast iron, 4400=aluminium

V15 type of construction, 4-pin, 180L

Material: 4-22,0-180L-BWE6F3NTSDWFUWKWB¹⁵⁵⁾

Material number: 01583957

Table 700: General data [50 Hz]

General data		+/-	Values
Motor size		Max.	180L
Type of construction		Max.	V15
Starting method		-	Star a. Delta
Motor flange		-	EN 50347 Type FF
Weight without attachments	[kg]	Max.	171
Housing material ¹⁵⁶⁾		-	4400
Enclosure		-	IP55
Nominal frequency		[Hz]	50/60
Efficiency class		-	IE3 (Premium)
Thermal class F to B		-	Yes
Temperature sensor		-	03
Operation on frequency inverter permitted		-	Yes (acc to motor manufact)
Operating mode		-	Continuous running duty (S1)
Direction of rotation		-	Bi-directional
Motor bearings insulated		-	No
Position of fixed motor bearing		-	Drive end
Fixed motor bearing reinforced		-	Without
Radial motor bearing reinforced		-	No
Condensate drain		-	Yes
Bolted feet		-	Yes

Table 701: Efficiency

Electrical data		+/-	50 Hz			60 Hz		
			4/4	3/4	2/4	4/4	3/4	2/4
Efficiency	[%]	min.	93	93.5	92.6	93.6		
Power factor		min.	0.83			0.8		

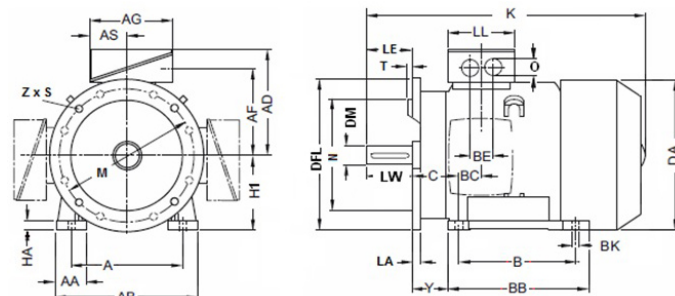

Fig. 78: Envelope dimensions

Table 707: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
279	68	368	285	234	193	86	279	355	39.3	75.5	14.5	121	356	350

Table 708: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LE	M	N	S	T	Y	Z
48	180	22	155	698	18	588	152	110	300	250	18.5	5	85	4

Table 702: Electrical data

Electrical data		+/-	50 Hz		60 Hz	
			Δ	Y	Δ	Y
Rated voltage	[V]	-	400	690	460	-
Rated current	[A]	-10 %	43.1	26.4	41.3	-
Rated power	[kW]	-	22		22	
Rated speed	[rpm]	min.	1470		1735	
Rated torque	[Nm]	min.	140.06		117.6	
Starting current	[IA/IN]	+20 %	9		10.1	

Table 703: Mechanical data

Mechanical data		+/-	Values	
			50 Hz	60 Hz
Sound pressure level	[dB]	Max.	68	70
Moment of inertia	[kgm ²]	Max.	0.25	0.28
Motor canopy		-	No	

Table 704: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 705: Environment

Environment	+/-	Values
Ambient temperature	[°C]	Max. 40

Table 706: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	2XM40X1,5

155 The name plate data may vary within the tolerances.

156 1800=grey cast iron, 4400=aluminium

V15 type of construction, 4-pin, 200L

Material: 4-30,0-200L-BWE6F3NTSDWFUWKWB¹⁵⁷⁾

Material number: 01583958

Table 709: General data [50 Hz]

General data	+/-	Values
Motor size	Max.	200L
Type of construction	Max.	V15
Starting method	-	Star a. Delta
Motor flange	-	EN 50347 Type FF
Weight without attachments [kg]	Max.	215
Housing material ¹⁵⁸⁾	-	4400
Enclosure	-	IP55
Nominal frequency	[Hz]	50/60
Efficiency class	-	IE3 (Premium)
Thermal class F to B	-	Yes
Temperature sensor	-	03
Operation on frequency inverter permitted	-	Yes (acc to motor manufact)
Operating mode	-	Continuous running duty (S1)
Direction of rotation	-	Bi-directional
Motor bearings insulated	-	No
Position of fixed motor bearing	-	Drive end
Fixed motor bearing reinforced	-	Without
Radial motor bearing reinforced	-	No
Condensate drain	-	Yes
Bolted feet	-	Yes

Table 710: Efficiency

Electrical data		+/-	50 Hz			60 Hz		
			4/4	3/4	2/4	4/4	3/4	2/4
Efficiency	[%]	min.	93.6	94	93.1	94.1		
Power factor		min.	0.84			0.76		

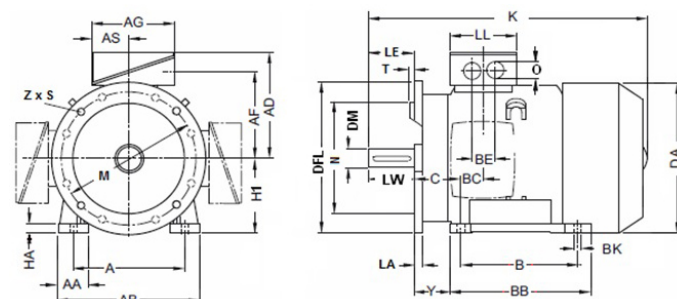


Fig. 79: Envelope dimensions

Table 716: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
318	85	404	326	262	248	113	305	375	43.5	83	18.5	133	396	400

Table 717: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LE	M	N	S	T	Y	Z
55	200	25	164	758	18	648	194	110	350	300	18.5	5	93	4

Table 711: Electrical data

Electrical data		+/-	50 Hz		60 Hz	
			Δ	Y	Δ	Y
Rated voltage	[V]	-	400	690	460	-
Rated current	[A]	-10 %	59.2	35.2	55.8	-
Rated power	[kW]	-	30		30	
Rated speed	[rpm]	min.	1470		1730	
Rated torque	[Nm]	min.	189.7		159.5	
Starting current	[IA/IN]	+20 %	7.7		8.8	

Table 712: Mechanical data

Mechanical data		+/-	Values	
			50 Hz	60 Hz
Sound pressure level	[dB]	Max.	70	75
Moment of inertia	[kgm²]	Max.	0.39	0.39
Motor canopy		-	No	

Table 713: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 714: Environment

Environment	+/-	Values
Ambient temperature [°C]	Max.	40

Table 715: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	2XM50X1,5

¹⁵⁷ The name plate data may vary within the tolerances.

¹⁵⁸ 1800=grey cast iron, 4400=aluminium

V15 type of construction, 4-pin, 225S

Material: 4-37,0-225S-BWE6F3NTSDWFUWKWB¹⁵⁹⁾

Material number: 01583959

Table 718: General data [50 Hz]

General data	+/-	Values
Motor size	Max.	225S
Type of construction	Max.	V15
Starting method	-	Star a. Delta
Motor flange	-	EN 50347 Type FF
Weight without attachments [kg]	Max.	413
Housing material ¹⁶⁰⁾	-	1800
Enclosure	-	IP55
Nominal frequency	[Hz]	50/60
Efficiency class	-	IE3 (Premium)
Thermal class F to B	-	Yes
Temperature sensor	-	03
Operation on frequency inverter permitted	-	Yes (acc to KSB)
Operating mode	-	Continuous running duty (S1)
Direction of rotation	-	Bi-directional
Motor bearings insulated	-	No
Position of fixed motor bearing	-	Drive end
Fixed motor bearing reinforced	-	Without
Radial motor bearing reinforced	-	No
Condensate drain	-	Yes
Bolted feet	-	Yes

Table 719: Efficiency

Electrical data	+/-	50 Hz	60 Hz
		4/4	3/4
Efficiency [%]	min.	93.9	94.2
Power factor	min.	0.84	0.81

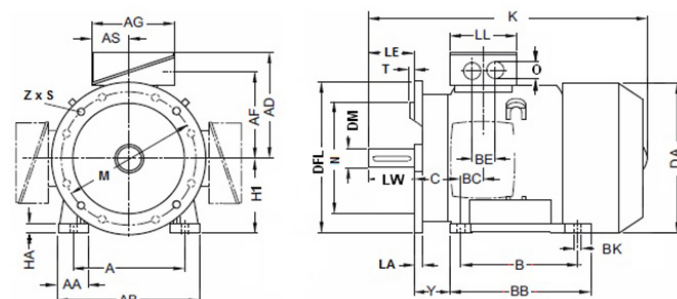


Fig. 80: Envelope dimensions

Table 725: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
356	90	458	372	310	293	123	286	412	8	88	18.5	149	453	450

Table 726: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LE	M	N	S	T	Y	Z
60	225	34	164	886	18	746	207	140	400	350	18.5	5	107	8

Table 720: Electrical data

Electrical data	+/-	50 Hz	60 Hz
		Δ	Y
Rated voltage [V]	-	400	690
Rated current [A]	-10 %	70.1	42.35
Rated power [kW]	-	37	37
Rated speed [rpm]	min.	1478	1760
Rated torque [Nm]	min.	233.96	194.5
Starting current [IA/IN]	+20 %	8.1	9

Table 721: Mechanical data

Mechanical data	+/-	50 Hz	60 Hz
Sound pressure level [dB]	Max.	68	78
Moment of inertia [kgm²]	Max.	0.54	0.54
Motor canopy	-	No	No

Table 722: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 723: Environment

Environment	+/-	Values
Ambient temperature [°C]	Max.	40

Table 724: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	2XM50X1,5

¹⁵⁹ The name plate data may vary within the tolerances.

¹⁶⁰ 1800=grey cast iron, 4400=aluminium

V15 type of construction, 4-pin, 225M

Material: 4-45,0-225M-BWE6F3NTSDWFUWKWB¹⁶¹⁾

Material number: 01583960

Table 727: General data [50 Hz]

General data		+/-	Values
Motor size		Max.	225M
Type of construction		Max.	V15
Starting method		-	Star a. Delta
Motor flange		-	EN 50347 Type FF
Weight without attachments	[kg]	Max.	402
Housing material ¹⁶²⁾		-	1800
Enclosure		-	IP55
Nominal frequency	[Hz]		50/60
Efficiency class		-	IE3 (Premium)
Thermal class F to B		-	Yes
Temperature sensor		-	03
Operation on frequency inverter permitted		-	Yes (acc to KSB)
Operating mode		-	Continuous running duty (S1)
Direction of rotation		-	Bi-directional
Motor bearings insulated		-	No
Position of fixed motor bearing		-	Drive end
Fixed motor bearing reinforced		-	Without
Radial motor bearing reinforced		-	No
Condensate drain		-	Yes
Bolted feet		-	No

Table 728: Efficiency

Electrical data		+/-	50 Hz			60 Hz		
			4/4	3/4	2/4	4/4	3/4	2/4
Efficiency	[%]	min.	94.2	94.4	93.6	95		
Power factor		min.	0.81			0.82		

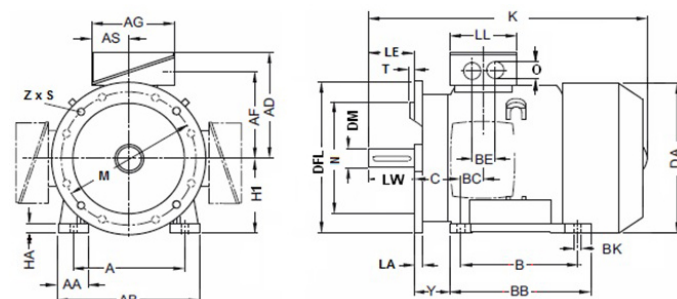

Fig. 81: Envelope dimensions

Table 734: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
356	90	458	372	310	293	123	311	412	8	88	18.5	149	453	450

Table 735: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LE	M	N	S	T	Y	Z
60	225	34	164	886	18	746	207	140	400	350	18.5	5	107	8

Table 729: Electrical data

Electrical data		+/-	50 Hz		60 Hz	
			Δ	Y	Δ	Y
Rated voltage	[V]	-	400	690	460	-
Rated current	[A]	-10 %	85	51.15	86.9	-
Rated power	[kW]	-	45		45	
Rated speed	[rpm]	min.	1475		1750	
Rated torque	[Nm]	min.	285.18		236.6	
Starting current	[IA/IN]	+20 %	7.9		9	

Table 730: Mechanical data

Mechanical data		+/-	Values	
			50 Hz	60 Hz
Sound pressure level	[dB]	Max.	68	78
Moment of inertia	[kgm²]	Max.	0.71	0.71
Motor canopy		-	No	

Table 731: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 732: Environment

Environment	+/-	Values
Ambient temperature	[°C]	Max. 40

Table 733: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	2XM50X1,5

¹⁶¹ The name plate data may vary within the tolerances.

¹⁶² 1800=grey cast iron, 4400=aluminium

V15 type of construction, 4-pin, 250M

Material: 4-55,0-250M-BWE6F3NTSDWFUWKWB¹⁶³⁾

Material number: 01583901

Table 736: General data [50 Hz]

General data		+/-	Values
Motor size		Max.	250M
Type of construction		Max.	V15
Starting method		-	Star a. Delta
Motor flange		-	EN 50347 Type FF
Weight without attachments	[kg]	Max.	516
Housing material ¹⁶⁴⁾		-	1800
Enclosure		-	IP55
Nominal frequency		[Hz]	50/60
Efficiency class		-	IE3 (Premium)
Thermal class F to B		-	Yes
Temperature sensor		-	03
Operation on frequency inverter permitted		-	Yes (acc to KSB)
Operating mode		-	Continuous running duty (S1)
Direction of rotation		-	Bi-directional
Motor bearings insulated		-	No
Position of fixed motor bearing		-	Drive end
Fixed motor bearing reinforced		-	Without
Radial motor bearing reinforced		-	No
Condensate drain		-	Yes
Bolted feet		-	No

Table 737: Efficiency

Electrical data		+/-	50 Hz			60 Hz		
			4/4	3/4	2/4	4/4	3/4	2/4
Efficiency	[%]	min.	94.6	94.7	93.9	95.4		
Power factor		min.	0.85			0.81		

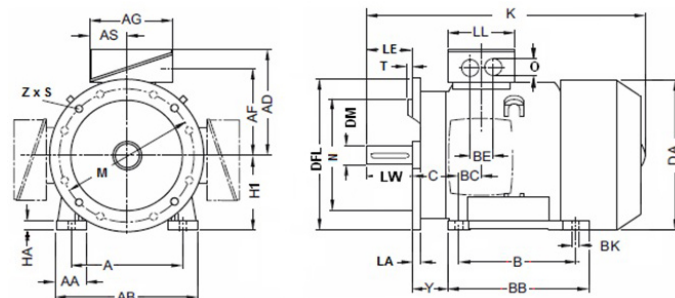

Fig. 82: Envelope dimensions

Table 743: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
406	100	531	451	354	351	160	349	467	62	100.5	24	168	497	550

Table 744: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LE	M	N	S	T	Y	Z
65	250	43	192	965	18	825	245	140	500	450	18.5	5	131	8

Table 738: Electrical data

Electrical data		+/-	50 Hz		60 Hz	
			Δ	Y	Δ	Y
Rated voltage	[V]	-	400	690	460	-
Rated current	[A]	-10 %	103.6	61.6	102	-
Rated power	[kW]	-	55		55	
Rated speed	[rpm]	min.	1480		1730	
Rated torque	[Nm]	min.	346.92		288.4	
Starting current	[IA/IN]	+20 %	7.9		8.7	

Table 739: Mechanical data

Mechanical data		+/-	Values	
			50 Hz	60 Hz
Sound pressure level	[dB]	Max.	69	79
Moment of inertia	[kgm²]	Max.	1.1	1.1
Motor canopy		-	No	

Table 740: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 741: Environment

Environment	+/-	Values
Ambient temperature	[°C]	Max. 40

Table 742: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	2XM63X1,5

163 The name plate data may vary within the tolerances.

164 1800=grey cast iron, 4400=aluminium

V15 type of construction, 4-pin, 280S

Material: 4-75,0-280S-BWE6F3NTSDWFWNWKWB¹⁶⁵⁾

Material number: 01619758

Table 745: General data [50 Hz]

General data		+/-	Values
Motor size		Max.	280S
Type of construction		Max.	V15
Starting method		-	Star a. Delta
Motor flange		-	EN 50347 Type FF
Weight without attachments	[kg]	Max.	729
Housing material ¹⁶⁶⁾		-	1800
Enclosure		-	IP55
Nominal frequency	[Hz]		50/60
Efficiency class		-	IE3 (Premium)
Thermal class F to B		-	Yes
Temperature sensor		-	03
Operation on frequency inverter permitted		-	No
Operating mode		-	Continuous running duty (S1)
Direction of rotation		-	Bi-directional
Motor bearings insulated		-	No
Position of fixed motor bearing		-	Drive end
Fixed motor bearing reinforced		-	Without
Radial motor bearing reinforced		-	No
Condensate drain		-	Yes
Bolted feet		-	Yes

Table 746: Efficiency

Electrical data		+/-	50 Hz			60 Hz		
			4/4	3/4	2/4	4/4	3/4	2/4
Efficiency	[%]	min.	95	94.9	94.1	95.4		
Power factor		min.	0.88			0.82		

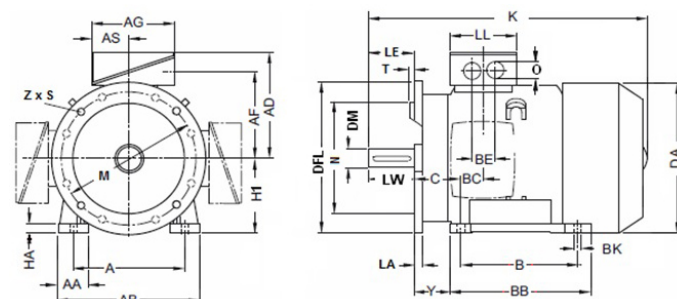

Fig. 83: Envelope dimensions

Table 752: Envelope dimensions A-DFL

A	AA	AB	AD	AF	AG	AS	B	BB	BC	BE	BK	C	DA	DFL
457	100	585	476	380	351	160	368	517	20	110	24	190	580	550

Table 753: Envelope dimensions DM-Z

DM	H1	HA	HH	K	LA	LB	LL	LE	M	N	S	T	Y	Z
75	280	42	210	1071	18	931	245	140	500	450	18.5	5	103	8

Table 747: Electrical data

Electrical data		+/-	50 Hz		60 Hz	
			Δ	Y	Δ	Y
Rated voltage	[V]	-	400	690	460	-
Rated current	[A]	-10 %	140.5	84.7	123.3	-
Rated power	[kW]	-	75		75	
Rated speed	[rpm]	min.	1485		1770	
Rated torque	[Nm]	min.	472.36		392.1	
Starting current	[IA/IN]	+20 %	7.9		7.8	

Table 748: Mechanical data

Mechanical data		+/-	Values	
			50 Hz	60 Hz
Sound pressure level	[dB]	Max.	72	81
Moment of inertia	[kgm²]	Max.	2.19	2.19
Motor canopy		-	No	

Table 749: Explosion protection

Explosion protection	+/-	Values
Type of protection	-	Without

Table 750: Environment

Environment	+/-	Values
Ambient temperature	[°C]	Max. 40

Table 751: Terminal box

Explosion protection	+/-	Values
Enclosure of terminal box	-	IP55 (TEFC)
Cable entry (Ø)	-	2XM63X1,5

¹⁶⁵ The name plate data may vary within the tolerances.

¹⁶⁶ 1800=grey cast iron, 4400=aluminium

Product information as per Regulation (EU) 2019/1781

Table 754: Efficiency

Model ID						Efficiency				
Factory-dependent motor material number						KSB material number		η_N [%]	$\eta_{75\%}^{167}$ [%]	$\eta_{50\%}^{167}$ [%]
1619657	1619641	1470730	1550184	1629109	1716577	1583941	1583975	1716569	80,7	82,0
1619633	1619722	1470733	1550248	1629129	1716553	1583945	1583978	1716535	82,5	82,0
1619658	1619642	1470731	1550185	1629110	1716578	1583942	1583976	1716570	82,7	83,7
1619634	1619723	1470734	1550249	1629130	1716554	1583946	1583979	1716536	84,1	84,7
1619659	1619643	1470732	1550186	1629111	1716579	1583943	1583977	1716571	84,2	84,6
1619635	1619724	1470735	1550250	1629131	1716555	1583947	1583980	1716547	85,3	86,0
1619660	1619644	1470770	1550187	1629112	1716580	1583944	1583981	1716572	85,9	86,4
1619636	1619645	1374507	1607772	1629132	1716556	1583934	1583968	1716548	86,7	87,0
1619661	1619688	1374500	1550188	1629113	1716581	1583927	1583961	1716573	87,1	86,0
1619697	1619646	1374508	1607773	1629133	1716557	1583935	1583969	1716549	87,7	88,0
1619662	1619689	1374501	1550189	1629114	1716582	1583928	1583962	1716574	88,1	88,0
1619698	1619727	1374509	1607791	1629134	1716558	1583936	1583970	1716550	88,6	89,0
1619663	1619690	1550190	1629115	-	-	1583929	1583963	-	89,2	88,0
1619699	1619728	1607792	1629135	-	-	1583937	1583971	-	89,6	90,0
1619664	1619691	1550191	1629116	-	-	1583930	1583964	-	90,1	90,6
1619700	1619729	1607809	1629136	-	-	1583938	1583972	-	90,4	90,0
1619665	1619692	1550192	1629117	-	-	1583931	1583965	-	91,2	91,0
1619701	1619730	1607810	1629137	-	-	1583939	1583973	-	91,4	91,0
1619666	1619693	1550193	1629118	-	-	1583932	1583966	-	91,9	91,9
1619702	1619731	1607811	1629138	-	-	1583940	1583974	-	92,1	91,2
1619667	1619694	1550194	1629119	-	-	1583933	1583967	-	92,4	92,6
1619703	1619732	1607914	1629139	-	-	1583921	1583906	-	92,6	92,2
1619668	1619695	1550195	1629120	-	-	1583896	1583902	-	92,7	92,7
1619704	1619733	1607915	1629140	-	-	1583902	1583957	-	93,0	93,0
1619669	1619696	1550196	1629121	-	-	1583917	1583903	-	93,3	93,0
1619705	1619734	1607933	1629141	-	-	1583923	1583958	-	93,6	93,5
1619670	1619717	1550197	1629122	-	-	1583918	1583904	-	93,7	93,3
1619706	1619735	1607934	1629142	-	-	1583924	1583959	-	93,9	93,9
1619671	1619718	1550198	1629123	-	-	1583919	1583905	-	94,0	94,0
1619707	1619736	1607951	1629143	-	-	1583925	1583960	-	94,2	94,0
1619672	1619719	1550199	1629124	-	-	1583920	1583900	-	94,3	94,0

Model ID						Efficiency					
Factory-dependent motor material number						KSB material number			η_N [%]	$\eta_{75\%}^{167)}$ [%]	$\eta_{50\%}^{167)}$ [%]
1619708	1619737	1607952	1629144	-	-	1583900	1583901	-	94,6	94,6	94,5
1619673	1619720	1619720	1550200	-	-	1583786	1619778	5045963	94,7	94,7	93,9
1619709	1619738	1619738	1607953	-	-	1583856	1619758	5045983	95,0	94,9	94,7
1619674	1619721	1550201	1629126	-	-	1583855	1619779	-	95,0	95,0	94,5
1619710	1619739	1629106	1629146	-	-	1583857	1619759	-	95,2	95,4	95,2
1619675	1619797	1550202	1629127	-	-	1583858	1619792	-	95,2	95,4	94,6
1619711	1619807	1629107	1629147	-	-	1583860	1619795	-	95,4	95,5	95,0
1619676	1619798	1550225	1629128	-	-	1583859	1619793	-	95,4	95,5	94,7
1619712	1619808	1629108	1629148	-	-	1583862	1619796	-	95,6	95,6	95,3

Efficiency class: IE3
 Manufacturer: KSB SE & Co. KGaA
 Johann-Klein-Straße 9
 67227 Frankenthal
 HRB 65657 Ludwigshafen

Table 755: Model-dependent electrical data

Model ID						Number of poles	Rated output power	Rated input frequency	Nominal voltage	Nominal speed
							P _N	f ₁	U ₁	
Factory-dependent motor material number							[kW]	[Hz]	[V]	[rpm]
1619657	1619641	1470730	1550184	1629109	1716577	2	0,75	50	400	2850
1619633	1619722	1470733	1550248	1629129	1716553	4		50	400	1410
1619658	1619642	1470731	1550185	1629110	1716578	2	1,1	50	400	2810
1619634	1619723	1470734	1550249	1629130	1716554	4		50	400	1440
1619659	1619643	1470732	1550186	1629111	1716579	2	1,5	50	400	2860
1619635	1619724	1470735	1550250	1629131	1716555	4		50	400	1445
1619660	1619644	1470770	1550187	1629112	1716580	2	2,2	50	400	2855
1619636	1619645	1374507	1607772	1629132	1716556	4		50	400	1430
1619661	1619688	1374500	1550188	1629113	1716581	2	3	50	400	2900
1619697	1619646	1374508	1607773	1629133	1716557	4		50	400	1430
1619662	1619689	1374501	1550189	1629114	1716582	2	4	50	400	2890
1619698	1619727	1374509	1607791	1629134	1716558	4		50	400	1445
1619663	1619690	1550190	1629115	-	-	2	5,5	50	400	2935
1619699	1619728	1607792	1629135	-	-	4		50	400	1460
1619664	1619691	1550191	1629116	-	-	2	7,5	50	400	2925

Model ID						Number of poles	Rated output power	Rated input frequency	Nominal voltage	Nominal speed
							P _N	f ₁	U ₁	
Factory-dependent motor material number							[kW]	[Hz]	[V]	[rpm]
1619700	1619729	1607809	1629136	-	-	4	7,5	50	400	1460
1619665	1619692	1550192	1629117	-	-	2	11	50	400	2945
1619701	1619730	1607810	1629137	-	-	4		50	400	1465
1619666	1619693	1550193	1629118	-	-	2	15	50	400	2940
1619702	1619731	1607811	1629138	-	-	4		50	400	1460
1619667	1619694	1550194	1629119	-	-	2	18,5	50	400	2940
1619703	1619732	1607914	1629139	-	-	4		50	400	1465
1619668	1619695	1550195	1629120	-	-	2	22	50	400	2945
1619704	1619733	1607915	1629140	-	-	4		50	400	1465
1619669	1619696	1550196	1629121	-	-	2	30	50	400	2955
1619705	1619734	1607933	1629141	-	-	4		50	400	1470
1619670	1619717	1550197	1629122	-	-	2	37	50	400	2955
1619706	1619735	1607934	1629142	-	-	4		50	400	1478
1619671	1619718	1550198	1629123	-	-	2	45	50	400	2955
1619707	1619736	1607951	1629143	-	-	4		50	400	1478
1619672	1619719	1550199	1629124	-	-	2	55	50	400	2960
1619708	1619737	1607952	1629144	-	-	4		50	400	1478
1619673	1619720	1619720	1550200	-	-	2	75	50	400	2975
1619709	1619738	1619738	1607953	-	-	4		50	400	1480
1619674	1619721	1550201	1629126	-	-	2	90	50	400	2973
1619710	1619739	1629106	1629146	-	-	4		50	400	1480
1619675	1619797	1550202	1629127	-	-	2	110	50	400	2975
1619711	1619807	1629107	1629147	-	-	4		50	400	1488
1619676	1619798	1550225	1629128	-	-	2	132	50	400	2977
1619712	1619808	1629108	1629148	-	-	4		50	400	1490

Number of phases: 3
 Installation altitude [m]: 1000
 Ambient air temperature range [°C]: -20 to +40
 Maximum in-service temperature [°C]: 130

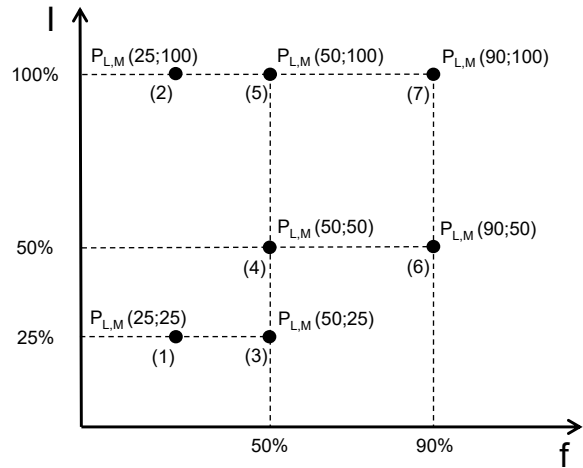


Fig. 84: Power losses (%) of rated output power (speed versus torque)

Table 756: Power losses

Model ID									Power losses						
									P1 (25;25)	P2 (25;100)	P3 (50;25)	P4 (50;50)	P5 (50;100)	P6 (90;50)	P7 (90;100)
Factory-dependent motor material number						KSB material number			[%]	[%]	[%]	[%]	[%]	[%]	[%]
1619657	1619641	1470730	1550184	1629109	1716577	1583941	1583975	1716569	3,6%	17,1%	5,4%	7,5%	18,4%	11,5%	21,9%
1619633	1619722	1470733	1550248	1629129	1716553	1583945	1583978	1716535	6,0%	17,0%	7,3%	9,5%	18,0%	11,9%	20,9%
1619658	1619642	1470731	1550185	1629110	1716578	1583942	1583976	1716570	3,5%	15,8%	5,2%	6,9%	15,9%	10,5%	19,0%
1619634	1619723	1470734	1550249	1629130	1716554	1583946	1583979	1716536	4,6%	15,1%	5,6%	7,9%	16,6%	10,0%	19,3%
1619659	1619643	1470732	1550186	1629111	1716579	1583943	1583977	1716571	3,3%	13,4%	4,5%	6,5%	14,0%	9,1%	17,3%
1619635	1619724	1470735	1550250	1629131	1716555	1583947	1583980	1716547	3,6%	14,1%	4,8%	6,3%	15,5%	8,4%	17,7%
1619660	1619644	1470770	1550187	1629112	1716580	1583944	1583981	1716572	3,1%	12,6%	4,1%	6,1%	14,1%	8,3%	16,9%
1619636	1619645	1374507	1607772	1629132	1716556	1583934	1583968	1716548	2,1%	12,6%	2,9%	4,7%	14,0%	6,3%	15,3%
1619661	1619688	1374500	1550188	1629113	1716581	1583927	1583961	1716573	2,1%	10,8%	3,2%	4,7%	11,5%	7,3%	14,0%
1619697	1619646	1374508	1607773	1629133	1716557	1583935	1583969	1716549	2,6%	11,4%	3,5%	4,9%	12,1%	6,7%	13,9%
1619662	1619689	1374501	1550189	1629114	1716582	1583928	1583962	1716574	2,1%	11,0%	3,0%	4,5%	11,2%	6,4%	12,8%
1619698	1619727	1374509	1607791	1629134	1716558	1583936	1583970	1716550	2,7%	11,1%	3,4%	4,9%	11,1%	6,4%	13,1%
1619663	1619690	1550190	1629115	-	-	1583929	1583963	-	1,9%	8,9%	2,8%	4,0%	9,7%	6,1%	11,7%
1619699	1619728	1607792	1629135	-	-	1583937	1583971	-	1,9%	8,2%	2,7%	3,8%	8,9%	5,4%	10,5%
1619664	1619691	1550191	1629116	-	-	1583930	1583964	-	1,7%	8,1%	2,5%	3,6%	8,8%	5,3%	10,7%
1619700	1619729	1607809	1629136	-	-	1583938	1583972	-	2,0%	8,4%	2,7%	3,8%	8,9%	5,2%	10,3%
1619665	1619692	1550192	1629117	-	-	1583931	1583965	-	1,6%	6,5%	2,5%	3,3%	7,3%	5,3%	9,5%
1619701	1619730	1607810	1629137	-	-	1583939	1583973	-	1,8%	7,2%	2,6%	3,6%	7,6%	4,9%	9,4%
1619666	1619693	1550193	1629118	-	-	1583932	1583966	-	1,4%	5,9%	2,1%	3,0%	6,7%	4,6%	8,8%

Model ID									Power losses						
									P1 (25;25)	P2 (25;100)	P3 (50;25)	P4 (50;50)	P5 (50;100)	P6 (90;50)	P7 (90;100)
Factory-dependent motor material number						KSB material number			[%]	[%]	[%]	[%]	[%]	[%]	[%]
1619702	1619731	1607811	1629138	-	-	1583940	1583974	-	1,7%	6,8%	2,4%	3,2%	7,3%	4,5%	8,8%
1619667	1619694	1550194	1629119	-	-	1583933	1583967	-	1,1%	5,7%	1,7%	2,5%	6,0%	3,9%	7,7%
1619703	1619732	1607914	1629139	-	-	1583921	1583906	-	1,5%	6,5%	2,1%	3,0%	6,6%	4,0%	8,0%
1619668	1619695	1550195	1629120	-	-	1583896	1583902	-	1,3%	5,9%	1,9%	2,7%	6,1%	4,1%	7,6%
1619704	1619733	1607915	1629140	-	-	1583922	1583957	-	1,3%	5,9%	1,7%	2,7%	6,6%	3,5%	7,9%
1619669	1619696	1550196	1629121	-	-	1583917	1583903	-	1,0%	4,6%	1,6%	2,3%	5,3%	3,9%	7,3%
1619705	1619734	1607933	1629141	-	-	1583923	1583958	-	1,2%	5,0%	1,7%	2,5%	5,8%	3,5%	7,3%
1619670	1619717	1550197	1629122	-	-	1583918	1583904	-	0,9%	4,4%	1,6%	2,1%	5,2%	3,7%	6,7%
1619706	1619735	1607934	1629142	-	-	1583924	1583959	-	1,0%	5,1%	1,4%	2,2%	5,6%	3,2%	7,0%
1619671	1619718	1550198	1629123	-	-	1583919	1583905	-	0,9%	4,2%	1,4%	2,0%	4,6%	3,3%	6,0%
1619707	1619736	1607951	1629143	-	-	1583925	1583960	-	1,0%	4,6%	1,4%	2,1%	5,2%	3,1%	6,3%
1619672	1619719	1550199	1629124	-	-	1583920	1583900	-	0,7%	4,6%	1,2%	1,8%	4,7%	3,0%	5,8%
1619708	1619737	1607952	1629144	-	-	1583926	1583901	-	0,8%	4,6%	1,2%	1,8%	4,6%	2,7%	5,7%

