

16

Motor Mounted Components - Dimensions

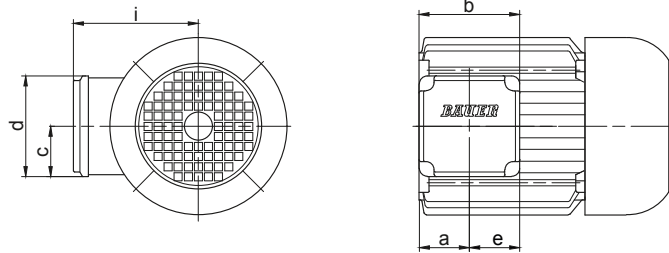
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Energy Efficient Geared Motors

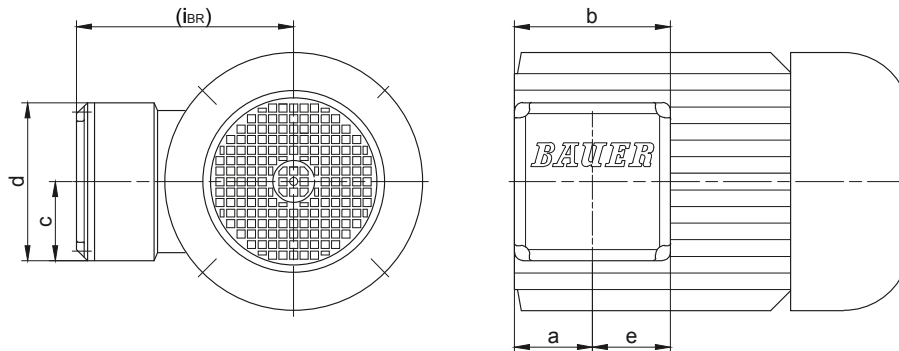
AC Line Operated

Standard terminal box

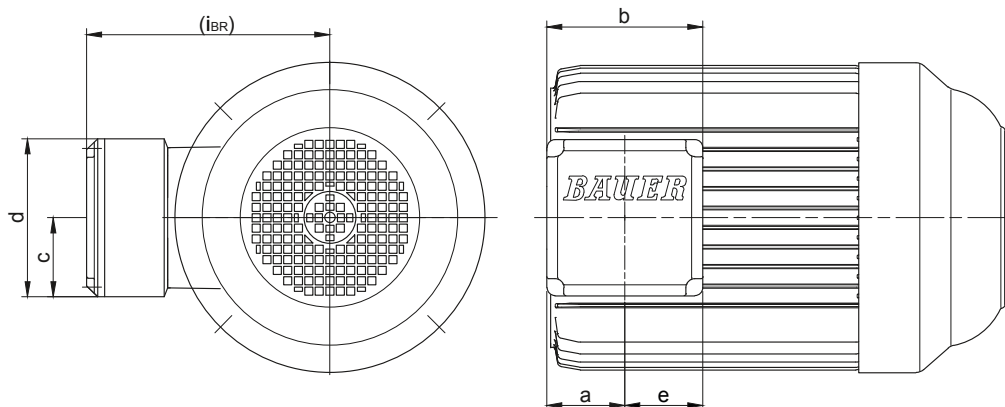
D..04.. - D..11..



D..13..



D..16..-D..22



Motor/ Motor with brake	Dimensions						Code	Cable entry		max. spanner width for cable entry gland
	a	b	c	d	e	i/IBR		Major (M)	Next to (N)	
D..04..	42.5	88	44	88	44	90	KAG1	M=2xM20x1.5	-	24
D..05..	50	100	50	100	50	100	KAG2	M=2xM25x1.5	-	29
D..06..	50	100	50	100	50	100	KAG2	M=2xM25x1.5	-	29
D..07..	50	100	50	100	50	100	KAG2	M=2xM25x1.5	-	29
D..08..	50	100	50	100	50	115	KAG2	M=2xM25x1.5	-	29
D..09..	50	100	50	100	50	124	KAG2	M=2xM25x1.5	-	29
D..11..	66.5	133	66.5	133	66.5	165	KAG3	M=2xM32x1.5	-	-
D..13..	78	156	78.5	158	78	217	TB322	M=2xM40x1.5	N=2xM25x1.5	-
D..16..	74	156	78.5	158	78	243	TB322	M=2xM40x1.5	N=2xM25x1.5	-
D..18..	94	200	100.5	201	100	288	TB422	M=2xM50x1.5	N=2xM25x1.5	-
D..20L	100	200	100.5	201	100	303.5	TB422	M=2xM50x1.5	N=2xM25x1.5	-
D..22S	100	200	100.5	201	100	303.5	TB422	M=2xM50x1.5	N=2xM25x1.5	-
D..22M	100	200	100.5	201	100	303.5	TB422	M=2xM50x1.5	N=2xM25x1.5	-

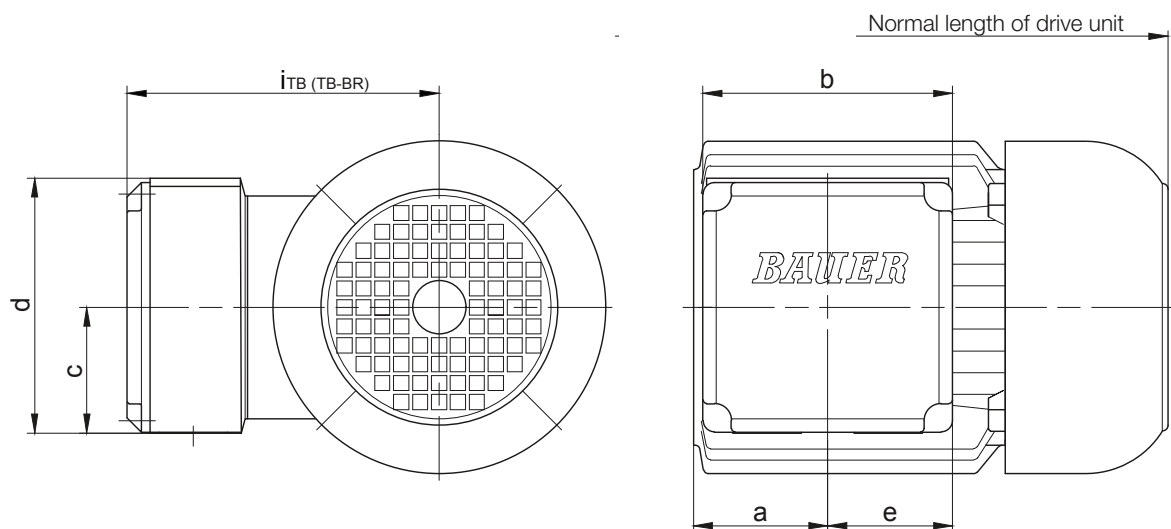
Dimensions in millimetres (mm)

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under www.BauerCat.com.

Motor-mounted components

Dimensions

Terminal box screwed on

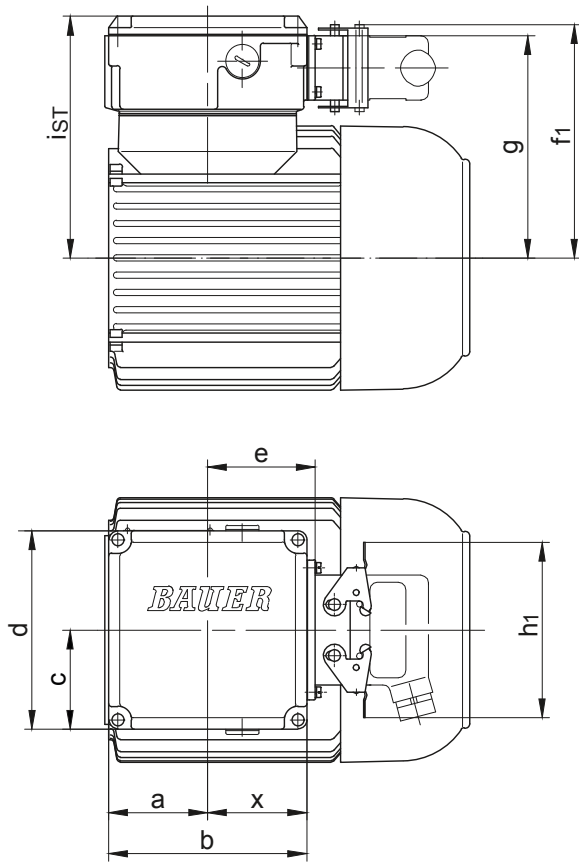


Motor	Dimensions						Code	Cableentry	
	a	b	c	d	e	i _{TB(TB-BR)}		Major (M)	Minor (N)
D04..	30	90	47.5	95	45	112	TB122..	M=2xM25x1.5	N=2xM20x1.5
D..05..	57	90	47.5	95	45	117	TB122..	M=2xM25x1.5	N=2xM20x1.5
D..06..	45	90	47.5	95	45	118	TB122..	M=2xM25x1.5	N=2xM20x1.5
D..07..	45	90	47.5	95	45	118	TB122..	M=2xM25x1.5	N=2xM20x1.5
D..08..	41	90	47.5	95	45	135	TB122..	M=2xM25x1.5	N=2xM20x1.5
D..09..	62	132	66	135	71.5	164	TB222..	M=2xM32x1.5	N=2xM25x1.5
D..11..	62	132	66	135	71.5	181	TB222..	M=2xM32x1.5	N=2xM25x1.5
D..13..	78	156	78	158	83.5	216	TB322..	M=2xM40x1.5	N=2xM25x1.5
D..16..	74	156	78	158	83.5	242	TB322..	M=2xM40x1.5	N=2xM25x1.5
D..18..	94	200	100	201	105.5	287	TB422..	M=2xM50x1.5	N=2xM25x1.5
Motor with Brake	Dimensions						Code	Cableentry	
	a	b	c	d	e	i _{TB(TB-BR)}		Major (M)	Minor (N)
D04..	30	90	47.5	95	68	131.5	TBR122..	M=2xM25x1.5	N=1xM16x1.5
from D..05..	see standard motor								
Dimensions in millimetres (mm)									

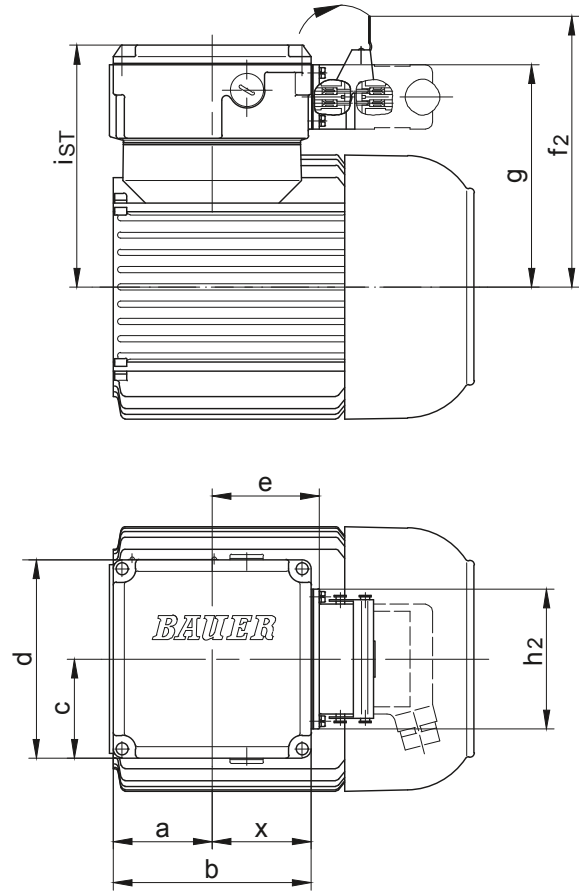
The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under www.BauerCat.com.

Terminal box for plug-connector

Standard design (two brackets)



Optional for DESINA (one bracket)



Fan cover geometry for D..16 and D..18, see dimensional drawing: terminal box as standard version

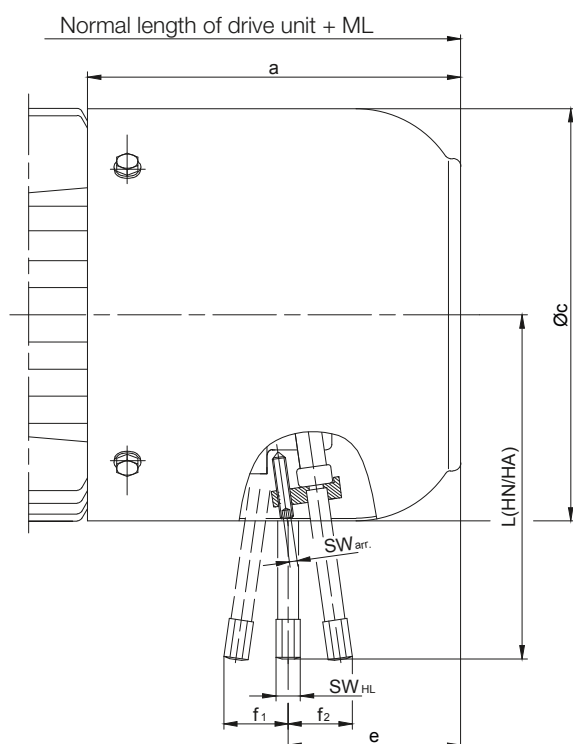
Motor	Size Terminal box	a	b	c	d	e	f ₁	f ₂	g	h ₁	h ₂	i _{ST}	x
D..04..	TBS1	30	90	52.5	106	49	118.5	147	111	117	93	124.5	46
D..05	TBS1	57	90	52.5	106	49	123.5	152	116	117	93	129.5	46
D..06	TBS1	45	90	52.5	106	49	125.5	154	118	117	93	131.5	46
D..07	TBS1	45	90	52.5	106	49	125.5	154	118	117	93	131.5	46
D..08	TBS1	45	90	52.5	106	49	143.5	172	136	117	93	149.5	46
D..09	TBS2	62	132	66	135	71.5	158.5	187	158	117	93	164	68.5
D..11	TBS2	62	132	66	135	71.5	175.5	191	166	117	93	181	68.5
D..13	TBS3	78	156	78	158	83.5	199	227.5	191.5	117	93	216	79.5
D..16	TBS3	74	156	78	158	83.5	225	253.5	225	117	93	242	79.5
D..18	TBS4	94	200	100	201	105.5	257	299	257	117	93	287	100.5
D..20L	TBS4	94	200	100	201	105.5	274	299	266.5	117	93	303.5	100.5
D..22S	TBS4	94	200	100	201	105.5	274	299	266.5	117	93	303.5	100.5
D..22M													

Dimensions in millimetres (mm)

Motor-mounted components

Dimensions

Standard brake

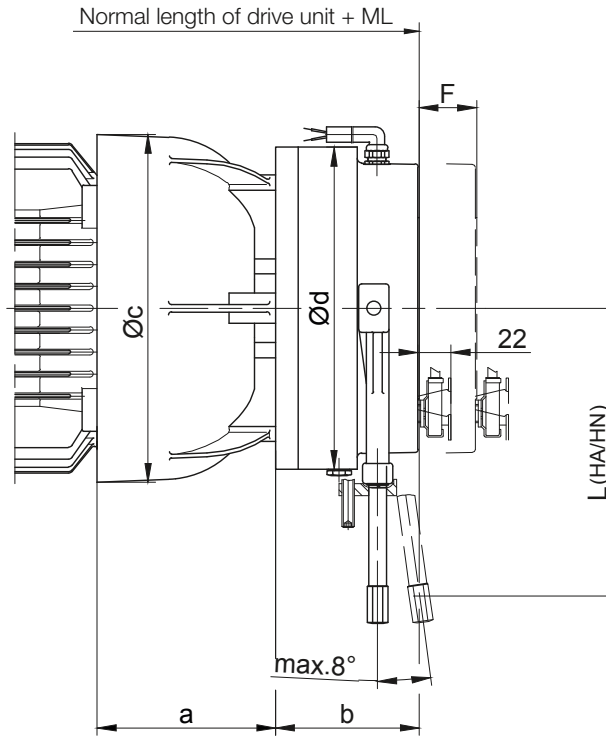


Motor	Brake	ML (mm) Additional length with brake	Dimensions (mm)								Additional weight kg
			a	Øc	e	f ₁	f ₂	L(HA/HN)	SW _{HL}	SW _{arr.}	
D..04..	E003	43.5	97	110.5	58.5	20.5	24	96/102	11	11	1.0
D..05..		42	102	123	60						
D..06..					58.5						
D..07..	E003/E004	66	141	156	58.5	-	29	132	8	2.5	2.6
D..08..	ES(X)010				68						
D..09..	ES(X)010				99						
D..11..	ES(X)027	93	173	176	91	-	35.5	162	8	2.5	2.7
	ES(X)027				103						4.2
	ES(X)040				100						4.5
D..13..	ES(X)070	98	195	218	96	-	34.5	190	12	4	6.3
	ES(X)040				125						8.5
	ES(X)125				121						6.5
D..16..	ES(X)200	111	225	258	116	-	45	223	12	4	8.5
	ES(X)300				148						12.5
	ES(X)125				141						13.5
D..18..	ES(X)250	144	290	310	112	-	50	256	12	4	19
	ZS(X)500				123						22
	ES(X)250				153						28
D..20L	ZS(X)500	150	339	348	123	-	58.5	286	12	4	30
	ES(X)250				183						27.5
	ZS(X)800				152.5						27.5
D..22S	ES(X)250	127.5	399	363	149	49	-	286	19	5	277.7
	ZS(X)500				152.5						
	ZS(X)800				149						
D..22M	ES(X)250	127.5	399	363	183	49	-	286	19	5	61.5
	ZS(X)500				152.5						
	ZS(X)800				149						

HA = manual release lockable

HN = manual release not lockable

“Heavy-Duty” - brake



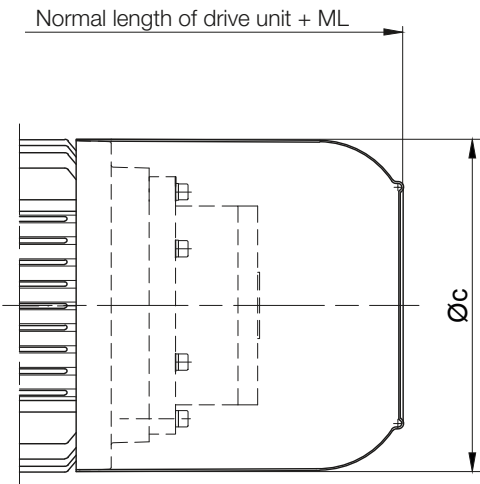
Motor	Brake	Additional length with brake (mm)		Dimensions (mm)					Additional weight kg
		ML Standard	ML Microswitch	a	b	c	Ød	L (HA/HN)	
D..08..	EH(X)010	74	96	83,5	62,5	166	120	132	4,2
D..08..	EH(X)027	79	101	83.5	66.5	166	145	162	5.5
D..09..	EH(X)027	82,5	104,5	102	70,5	191	145		7,6
D..09..	EH(X)040	90	112	102	73	191	168	172	8.3
D..11..	EH(X)070	104	126	120	85	231	188	189,5	15,2
D..11..	EH(X)125	114	136	120	95	231	213	208.5	19.5
D..13..	EH(X)200	128	150	140	106	274.5	245	221	29.3
D..16..	EH(X)400	141	163	155	124	326	324	313	55.8
D..18..		152	174	183		366			61

HA = manual release lockable
HN = manual release not lockable

Motor-mounted components

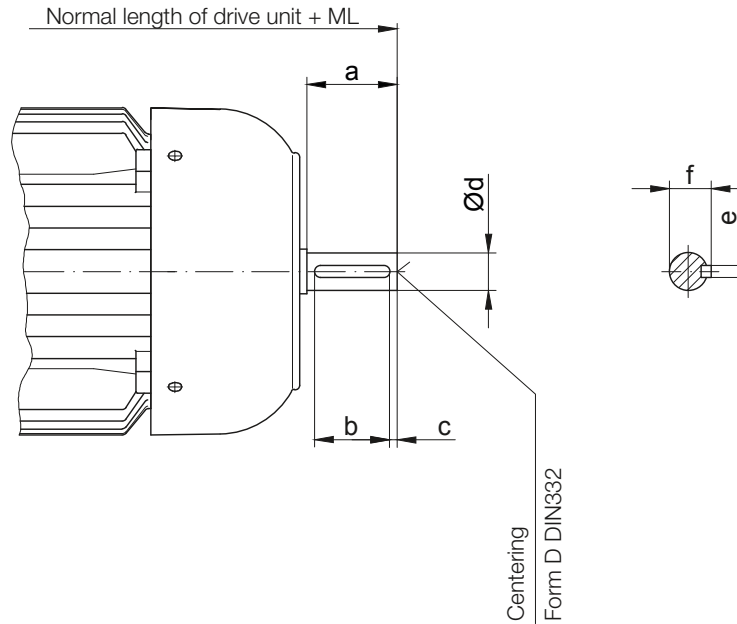
Dimensions

Motor with back stop



Motor	ML (mm) Additional length with backstop	Dimensions (mm) c	Additional weight kg
D..08..	66	156	6.5
D..09..	93	181	6.5
D..11..	98	228	8
D..13..	111	258	13.5
D..16..	144	310	16
D..18..	150	348	17
D..20L	-	363	9.5
D..22S			
D..22M			

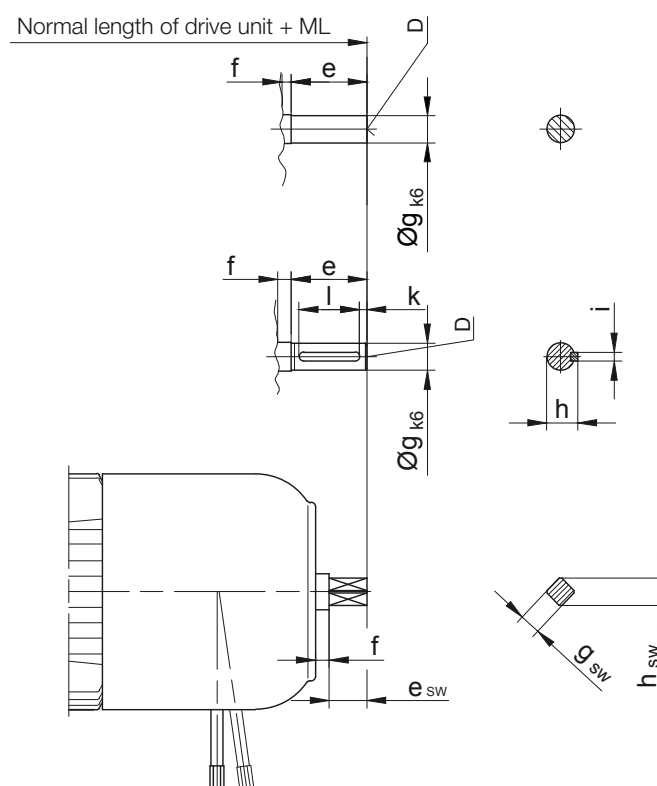
Motor with second shaft end



Motor	ML (mm) Additional length with second shaft end	Dimensions (mm)						Centering DIN 332
		a	b	c	d	e	f	
D..04..	20	15	-	-	8 _{g6}	-	-	-
D..05..	25	20	-	-	10 _{k6}	-	-	-
D..06..	25	20	-	-	10 _{k6}	-	-	-
D..07..	25.5	20	-	-	10 _{k6}	-	-	-
D..08..	45	40	30	5	16 _{k6}	5	18	D5
D..09..	55	50	40	5	20 _{k6}	6	22.5	D5
D..11..	65	60	50	5	25 _{k6}	8	28	D8
D..13..	85	80	60	10	35 _{k6}	10	38	D12
D..16..	115	110	90	10	40 _{k6}	12	43	D16
D..18..	115	110	90	10	45 _{k6}	14	48.5	D16
D..20L	115	110	90	10	45 _{k6}	14	48.5	D16
D..22S	115	110	90	10	45 _{k6}	14	48.5	D16
D..22M								

Dimensions

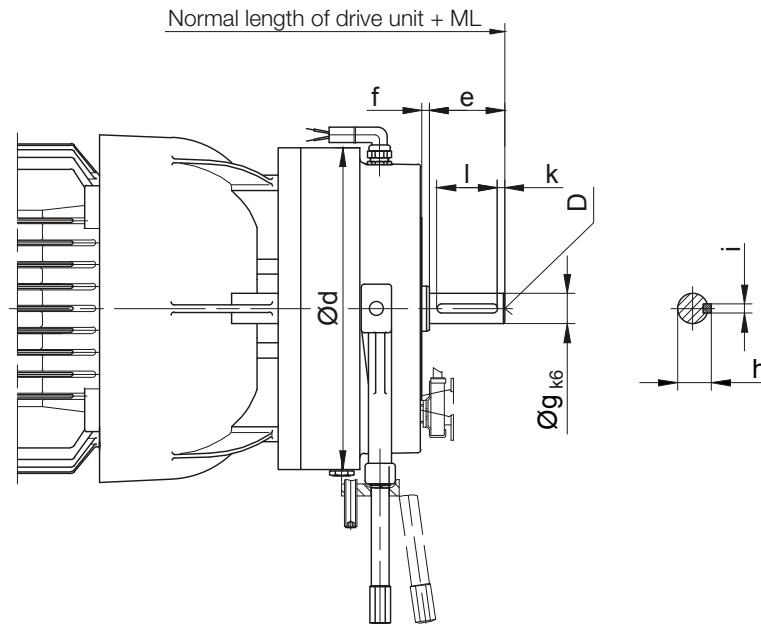
Motors with brake and second shaft end



Motor	Brake	Additional length (mm)		Dimensions (mm)										Centering	SW
		ML	ML _{SW}	e	e _{SW}	f	g	g _{SW}	h	h _{SW}	i	k	l	DIN 332	
D..04..	E003	63	-	15	-	5	8	-	-	-	-	-	-	-	-
D..05..				10											
D..06..															
D..07..	E003/E004			20											
D..08..	ES(X)..	121	96*	50	25*	5	18	SW14*	20.5	18*	6	5	40	D6	D4*
D..09..		98	123*				20*	SW14	22.5*	18	6*	5*	40*	D6*	D4
D..11..		153.5*	128	50*	25		28*	SW22	31*	28	8*		50*	D10*	D10
D..13..		176*	156	60*	40							5			
D..16..	ES(X)../ZS(X)..	208.5*	188.5	60*	40	4.5	28*	SW22	31*	28	8*	5*	50*	D10*	D10
D..18..		359*	194.5			5									
D..20L	ES(X)../ZS(X)..	127.5*	172.5	60*	40	5	28*	SW22	31*	28	8*	5*	50*	D10*	D10
D..22S															
D..22M															

* special design with manual release

Motor with “heavy duty” brake and second shaft end

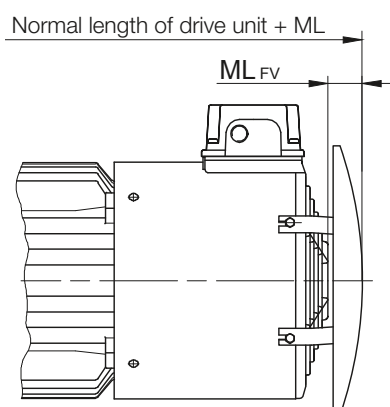
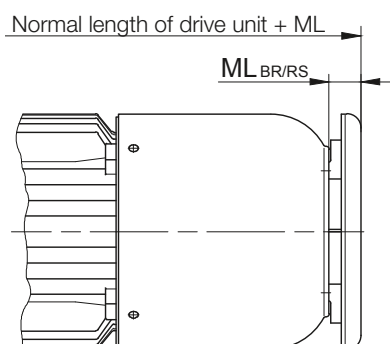
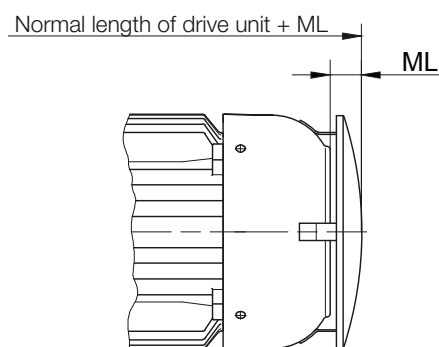


Motor	Brake	ML (mm) Additional length with encoder and brake	Dimensions (mm)								Centering D 332	Additional weight kg			
			Ød	e	f	Øg	h	i	k	k					
D..08..	EH(X)027	132	145	50	4	18	20.5	6	5	6	D6	6			
D..09..	EH(X)040	144	168		5	20	22.5					8	8	D10	9
D..11..	EH(X)125	169	213				28								31
D..13..	EH(X)200	192	245	60	5	30	33	8	8	D10	29.5				
D..16..	EH(X)400	205.5	324			30	33				61				
D..18..		216.5													

Motor-mounted components

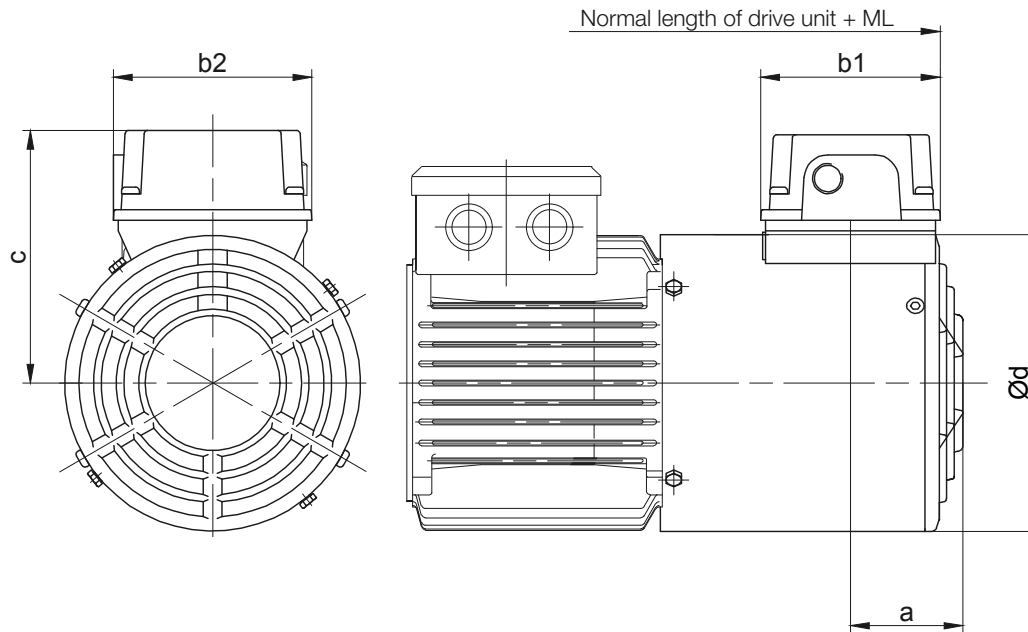
Dimensions

Motor with protective hood



Motor	ML (mm)				Additional weight
	Additional length with attached protective cover				
	ML	ML _{BR}	ML _{RS}	ML _{FV}	kg
D..04..	16	-	-	-	0.15
D..05..	18	-	-	-	0.15
D..06..	18	-	-	-	0.15
D..07..	18	-	-	-	0.15
D..08..	14.5	24.5	24.5	40	0.20
D..09..	22	24.5	24.5	30	0.30
D..11..	29	29.5	29.5	33	0.40
D..13..	30	29.5	29.5	25	0.6
D..16..	30.5	34.5	34.5	32	1.8
D..18..	30.5	34.5	34.5	32	5.5
D..20L	31	31	31	31	6.4
D..22S	31	31	31	31	6.4
D..22M	31	31	31	31	6.4

Motor with independent fan

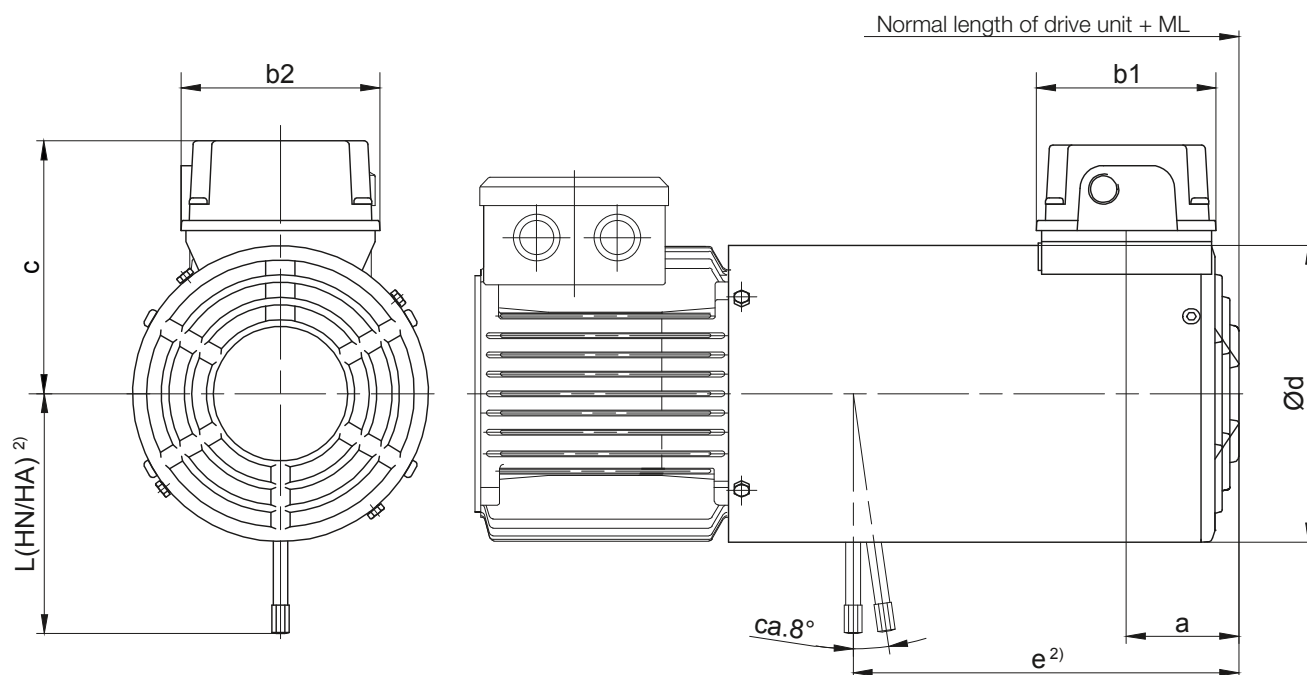


Drive Motor	Fan Motor			400 V	ML (mm)	Dimensions (mm)					Additional weight
		kW	r/min	A	Additional length with forced cooling fan	a	b1	b2	c	d	~kg
D..08..	FV D08	0.019	2670	0.029	92	69.5	107	105	134	157	2.2
D..09..	FV D09	0.046	2820	0.106	97	69.5	107	105	143	177	2.7
D..11..	FV D11	0.051	2660	0.110	97	79.5	107	105	162.5	219	3.2
D..13..	FV D13	0.073	2820	0.169	119	78.8	107	105	164	258	4.6
D..16*	FV D16	0.154	2760	0.347	144	78.8	107	105	185	311	6.4
D..18*	FV D18	0.154	2760	0.347	303	78.8	107	105	211	348	8.4
* with bayonet joint											

Motor-mounted components

Dimensions

Motor with brake and independent fan



Motor	Brake	ML (mm) ¹⁾ Additional length with brake and forced ventilation	Dimensions (mm)							Additional weight ~kg
			a	b1	b2	c	Ød	e ²⁾	L(HA/HN) ²⁾	
D..08..	ES(X)010	202	59	107	105	134	157	204	132	5.0
D..09..	ES(X)010	214	69.5	107	105	143	177	220	132	5.5
	ES(X)027							212	162	7.5
D..11*	ES(X)027	221	69.5	107	105	162.5	219	226	162	8.0
	ES(X)040							223	172	10
	ES(X)070							218	184	12
D..13*	ES(X)040	237	79.5	107	105	164	164	254	202	11.5
	ES(X)070							250	225	13.5
	ES(X)125							245	223	17.5
D..16*	ES(X)125	294	78.8	107	105	185	311	298	244	19.5
	ES(X)200							291	256	25
	ES(X)300							262		27
D..18*	ES(X)250	303	78.8	107	105	211	348	307	286	37
	ES(X)500							277		38.5

* with bayonet joint

¹⁾The additional length is for normal motor unit without brake.

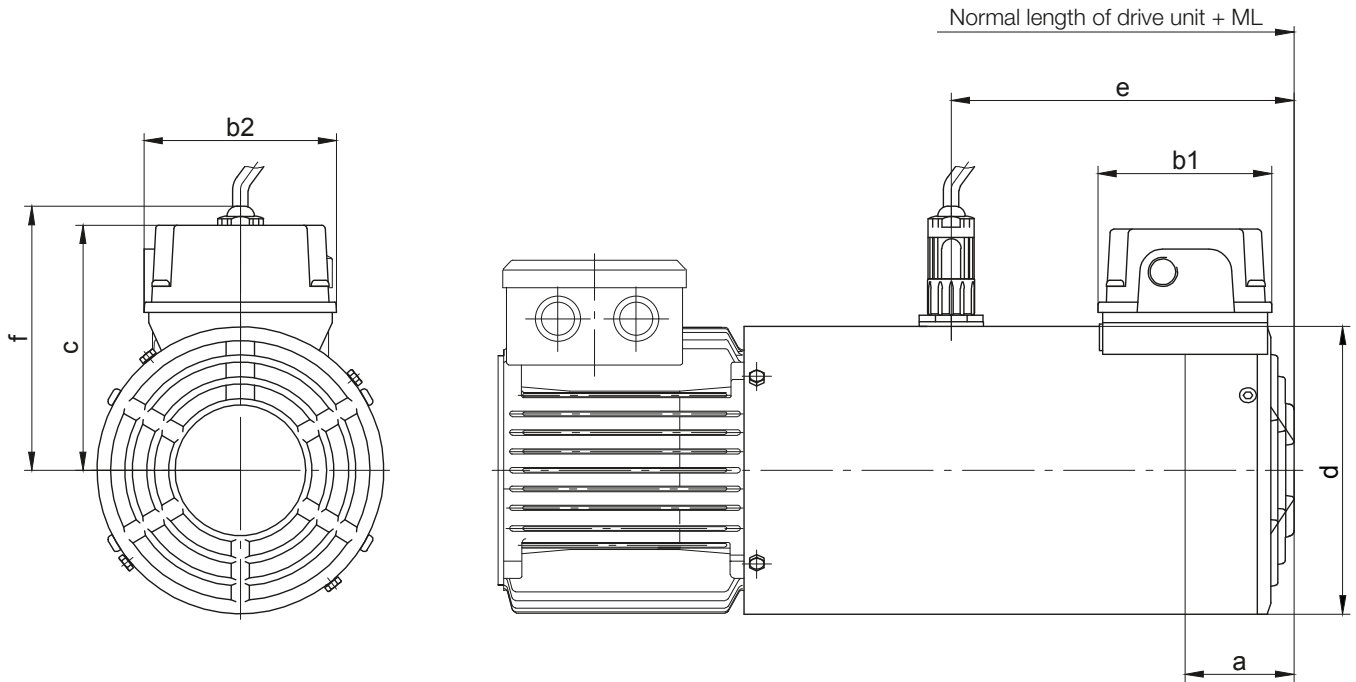
Other dimensions see the appropriate normal dimensioned sketch.

²⁾Brake release on request

HA = manual release lockable

HN = manual release not lockable

Motor with encoder with built-on independent fan



Motor	ML (mm) ¹⁾ Additional length with encoder and forced ventilation	Dimensions (mm)							Additional weight ~kg
		a	b1	b2	c	d	e	f	
D..08..	202	59	107	105	134	157	187	144	2.6
D..09..	214	69.5	107	105	143	177	192	153.5	3.3
D..11*	221	69.5	107	105	162.5	218	192	-	4.0
D..13*	240	79.5	107	105	164	258	217	-	5.7
D..16*	294	78.8	107	105	185	311	252	-	7.9
D..18*	303	78.8	107	105	211	348	267	-	10.9

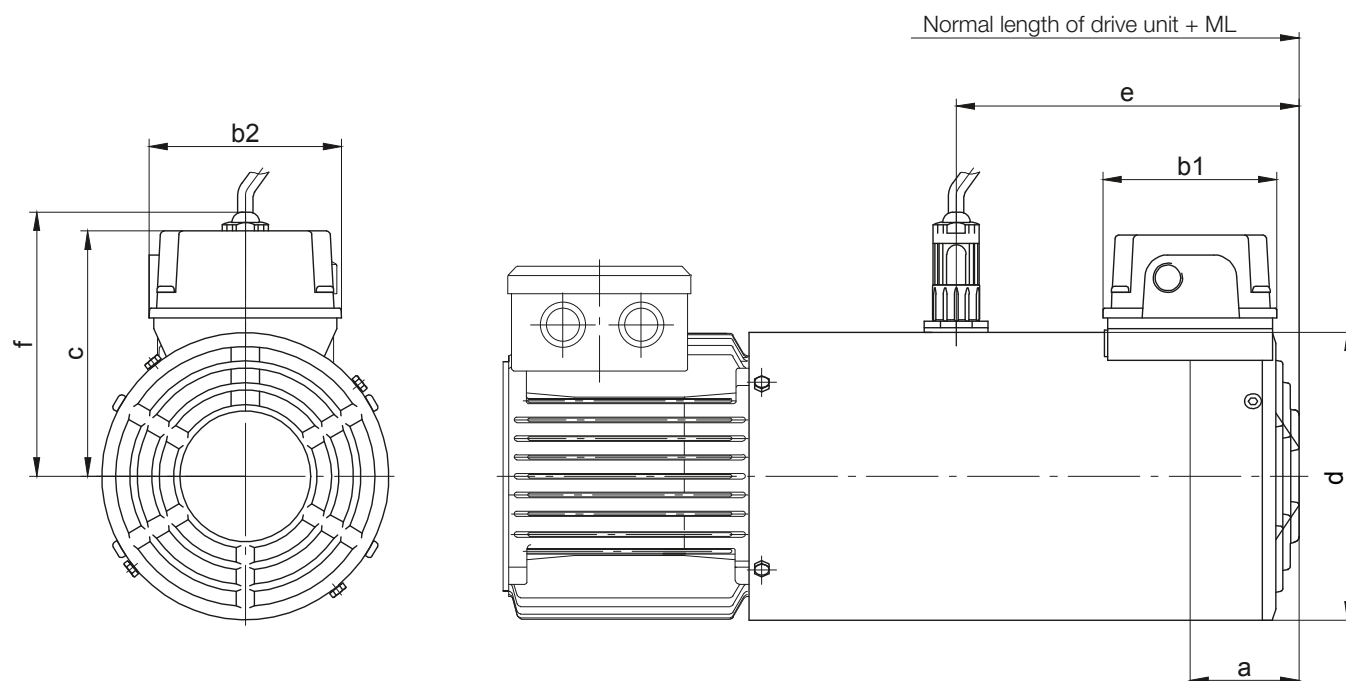
* with bayonet joint

¹⁾ The additional length is for normal motor unit without brake.
Other dimensions see the appropriate normal dimensioned sketch.

Motor-mounted components

Dimensions

Motor with brake and encoder with built-on independent fan



Motor	Brake	ML (mm) ¹⁾ Additional length with brake, encoder and forced ventilation	Dimensions (mm)									Additional weight ~kg
			a	b1	b2	c	Ød	e ²⁾	g	h	L(HA/HN) ²⁾	
D..08..	ES(X)010	202	59	107	105	134	157	204	150	150	132	6.0
D..09..	ES(X)010	214	69.5	107	105	143	177	220	160	160	132	6.5
	ES(X)027							212	160		162	8.5
D..11*	ES(X)027	221	69.5	107	105	162.5	219	226	155	175	162	9.0
	ES(X)040							223	155		172	11.5
	ES(X)070							218	155		184	13.5
D..13*	ES(X)040	240	79.5	107	105	164	258	254	175	194.5	202	13
	ES(X)070							250	175		225	15
	ES(X)125							245	175		223	19
D..16*	ES(X)125	294	78.8	107	105	185	311	298	195	221	244	21
	ES(X)200							291	195		256	27
	ES(X)300							262	195			29
D..18*	ES(X)250	303	78.8	107	105	211	348	207	212	239.5	286	39
	ES(X)500							277	212			40.5

* with bayonet joint

¹⁾ The additional length is for normal motor unit without brake.

Other dimensions see the appropriate normal dimensioned sketch.

²⁾ Brake release on request

HA = manual release lockable

HN = manual release not lockable

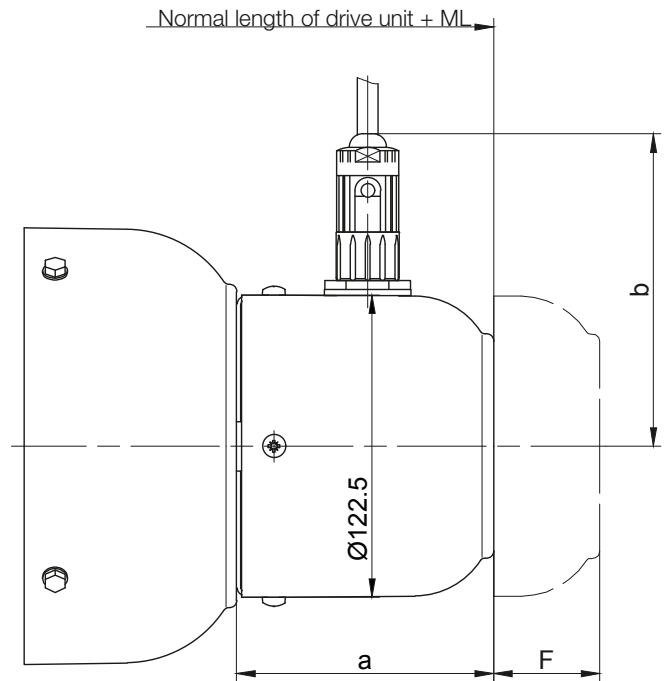
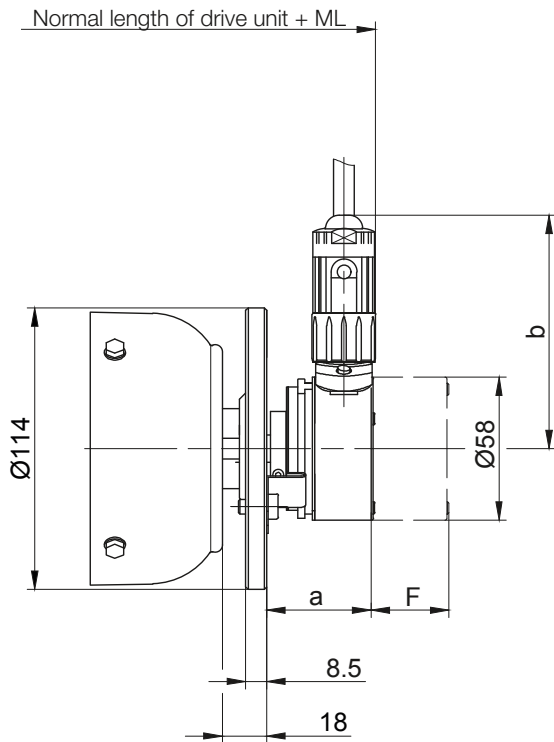
Motor-mounted components

Dimensions

Motor with encoder

D..04..

D..05.. - D ..22..

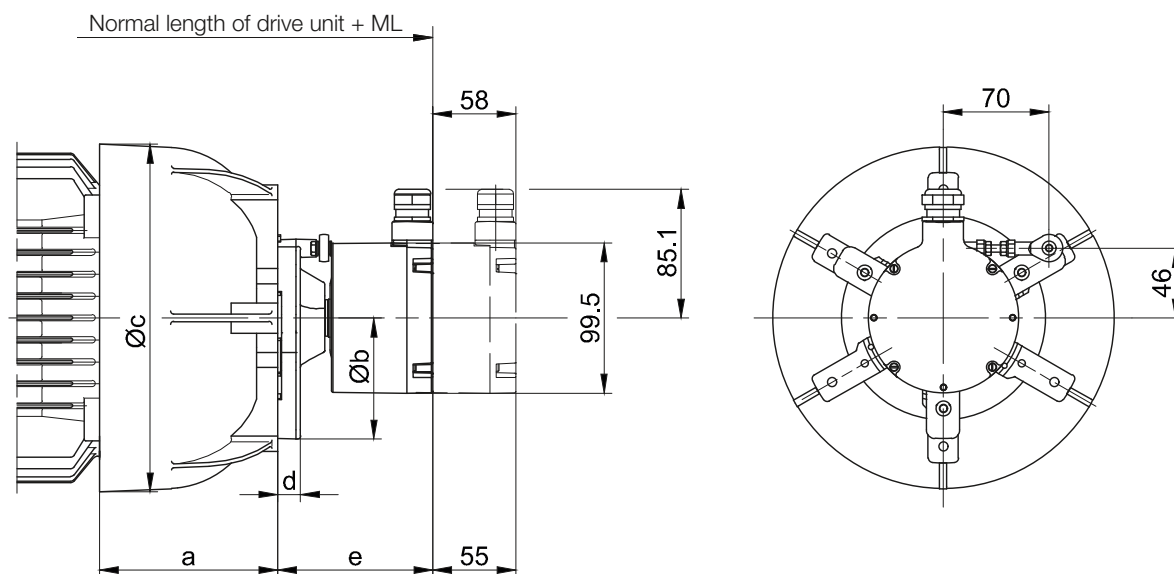


Fan cover geometry for D..16 and D..22, see dimensional drawing: terminal box as standard version

Motor	ML (mm) Additional length with encoder	Dimensions (mm)				Additional weight kg	Free space for removing encoder „F“	
		Incremental encoder		Absolute encoder			Incremental encoder	Absolute encoder
		a	c	a	b			
D..04..	62.5	43.5	95	69.5	109.5	0.7	30	55
D..05..	103	98.5	127	98.5	127	0.9	63	88
D..06..								
D..07..								
D..08..	107.5	107.5		41		66		
D..09..	107	104		104		0.8	43	68
D..11..								
D..13..								
D..16..	110	106	106	1.2				
D..18..								
D..20L								
D..22S	106	106	106	1.2				
D..22M								

Dimensions

Motor with “heavy duty” encoder

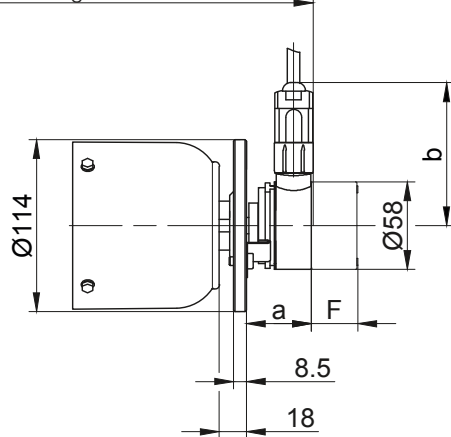


Motor	ML (mm) Additional length with encoder	Dimensions (mm)					Additional weight kg
		a	b	c	d	e	
D..08..	114	83.5	160	166	15	102.5	2
D..09..	118.5	102		191			
D..11..	121.5	120		231			
D..13..	115.5	140	185	274.5	17	94.5	8.6
D..16..	113.5	155		326			9.6
D..18..	122.5	183		366			11.5

Motor with brake and encoder

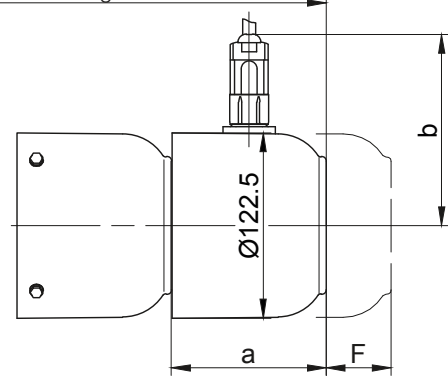
D..04..

Normal length of drive unit + ML

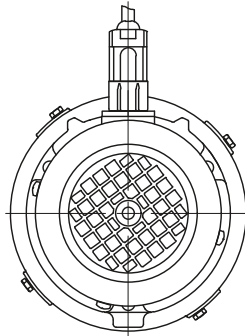


D..05.. - D..07..

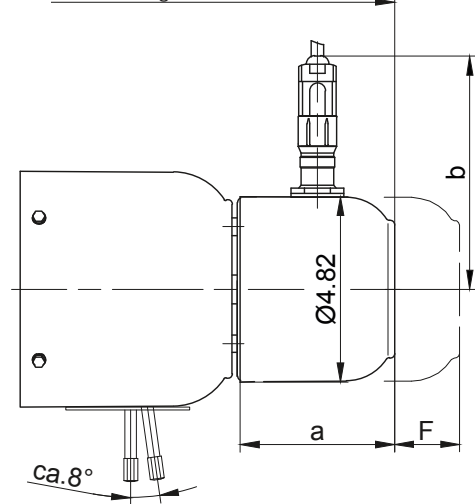
Normal length of drive unit + ML



D..08.. - D..22..



Normal length of drive unit + ML

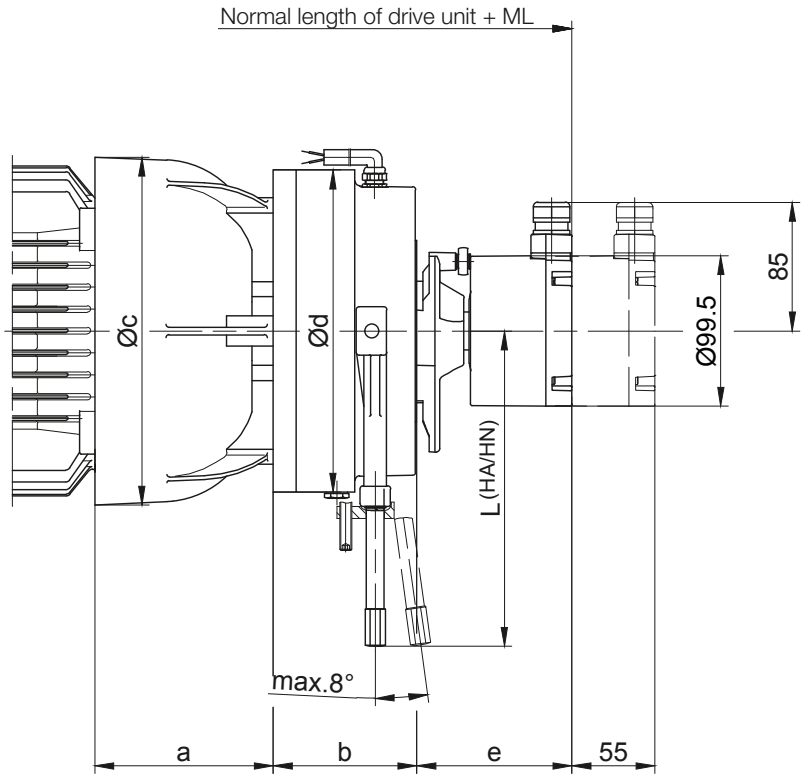


Motor	Brake	ML (mm) Additional length with brake and encoder	Dimensions (mm)				Additional weight kg	Free space for removing encoder „F“				
			Incremental encoder		Absolute encoder			Incremental encoder	Absolute encoder			
			a	c	a	b						
D..04..	E003	105.5	43.5	95	69.5	109.5	0.7	30	55			
D..05..		145	102	127	102	127	0.9	63	88			
D..06..												
D..07..	E003/E004											
D..08..	ES(X).. ES(X).. ES(X).. ES(X).. ES(X)..ZS(X) ES(X)..ZS(X)	173.5					0.8	49	74			
D..09..	197											
D..11..	200											
D..13..	212											
D..16..	248	104	1.2									
D..18..	247.5											
D..20L	ES(X)..ZS(X)	233.5	106									
D..22S	ES(X)..ZS(X)											
D..22M	ES(X)..ZS(X)											

Motor-mounted components

Dimensions

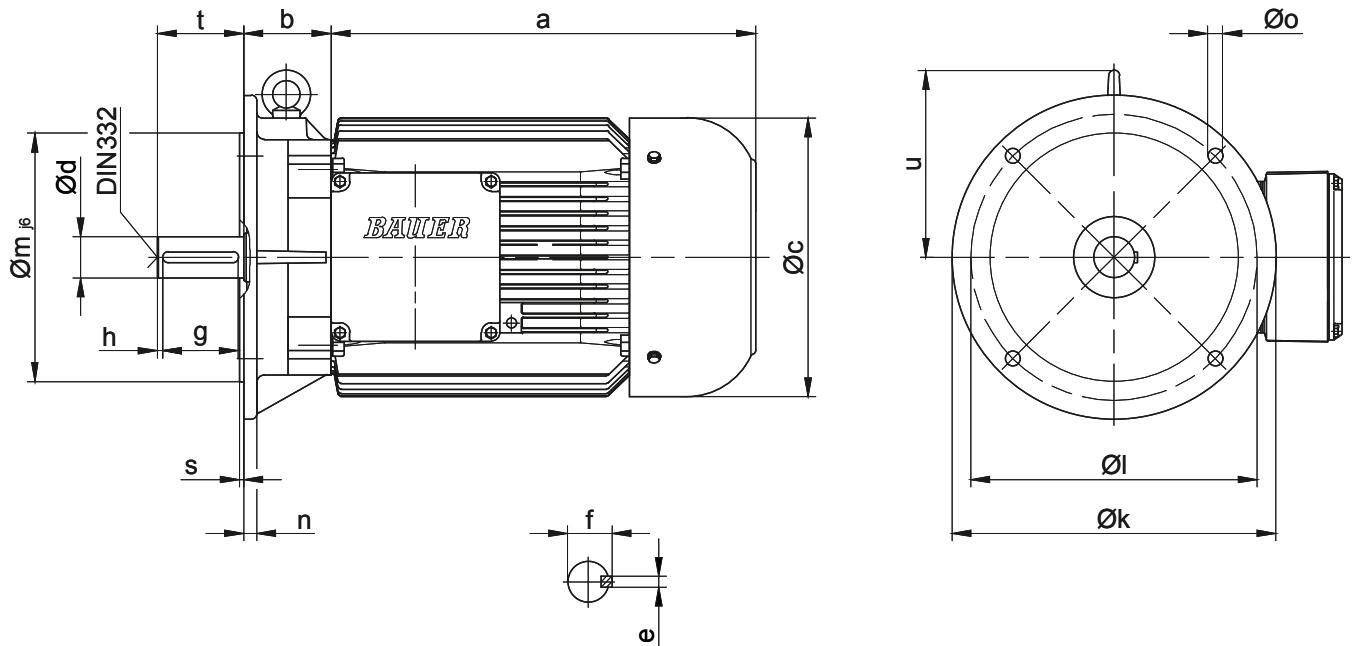
Motor with “heavy duty” brake and encoder



Motor	Brake	ML (mm) Additional length with brake and encoder	Dimensions (mm)						Additional weight kg
			a	b	c	Ød	e	L (HA/HN)	
D..08..	EH(X)027	180.5	83.5	66.5	166	145	102.5	162	7.1
D..09..	EH(X)040	191.5	102	73	191	168		172	10
D..11..	EH(X)125	216.5	120	95	231	213		208.5	21.4
D..13..	EH(X)200	259	140	106	274.5	245	94.5	221	32
D..16..	EH(X)400	243	155	124	326	324		313	58
D..18..		254	183		366				61
HA = manual release lockable HN = manual release not lockable									

Motor in IEC design

D..06 - D..18



Fan cover geometry for D..16 and D..18, see dimensional drawing: terminal box as standard version

Motor	Dimensions (mm)																Centering
	a	b	c	d	e	f	g	h	k	l	m	n	o	s	t	u	DIN 332
D..06..A	170	45	123	11 _{j6}	4	12.5	18	2.5	140	115	95	9	10	2.75	23	-	D4
D..07..A	190	45	123	11 _{j6}	4	12.5	18	2.5	140	115	95	9	10	2.75	23	-	D4
D..08..A	200	49	156	19 _{j6}	6	21.5	35	2.5	200	165	130	10	12	3.5	40	-	D4
D..08..B	230	49	156	19 _{j6}	6	21.5	35	2.5	200	165	130	10	12	3.5	40	-	D4
D..09..A	251	66	176	24 _{j6}	8	27	40	5	200	165	130	10	12	3.5	50	128.5	D6
D..09..B	309	66	176	24 _{j6}	8	27	40	5	200	165	130	10	12	3.5	50	128.5	D6
D..11..A	319	75	218	28 _{j6}	8	31	50	5	250	215	180	11	14.5	4	60	145.5	D10
D..11..B	387	75	218	28 _{j6}	8	31	50	5	250	215	180	11	14.5	4	60	145.5	D10
D..13..A	393	81	266	38 _{k6}	10	41	70	5	300	265	230	12	14	4	80	173	D12
D..16..B	454.5	98.5	310	42 _{k6}	12	45	90	10	350	300	250	13	18.5	5	110	215.5	D16
D..18..B	542	128.5	348	48 _{k6}	14	51.5	100	5	350	300	250	15	18.5	5	110	218	D16

Energy Efficient Geared Motors

AC Line Operated
