

Page

Additional dimensional drawings for motor-mounted components

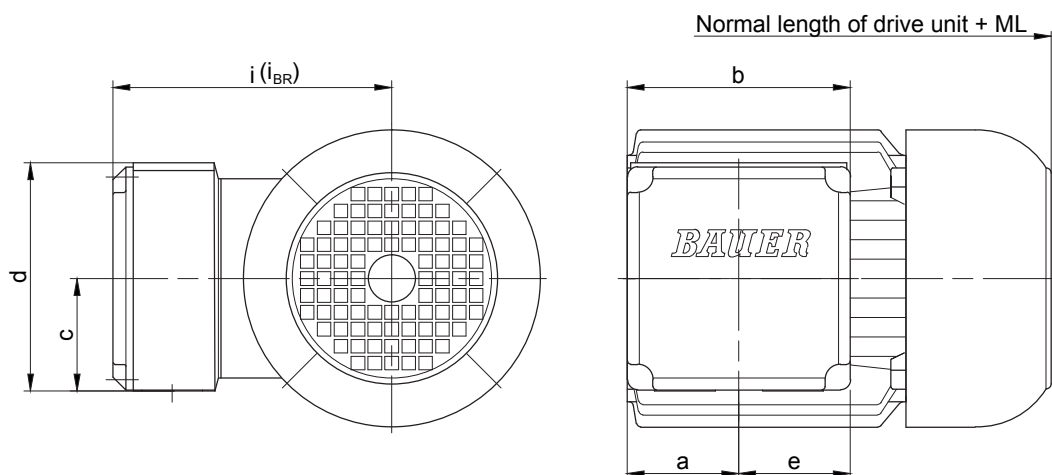
613-632

- Dimensional drawing, standard terminal box**
 - Dimensional drawing, plug-connector terminal box**
 - Dimensional drawings, standard brakes without terminal box**
 - Dimensional drawings for brakes with terminal box**
 - Dimensional drawing, motor with back stop**
 - Dimensional drawing, motor with second shaft end**
 - Dimensional drawing, motor with protective hood**
 - Dimensional drawing, motor with independent fan**
 - Dimensional drawing, motor with brake and independent fan**
 - Dimensional drawing, motor with encoder**
 - Dimensional drawing, motor with brake and encoder**
 - Dimensional drawing, motor in IEC design**
-

Motor-mounted components

Dimensions drawing

Standard terminal box

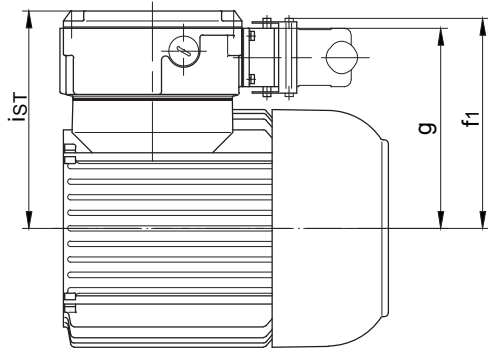


Motor/ Motor with Brake	Dimensions (mm)						Code	Cable entry Major (M) Minor (N)	max. wrench size for cable entry gland
	a	b	c	d	e	i / i _{BR}			
D04..	42.5	88	44	88	44	90	KAG1	M=2xM20x1.5	24 mm
D05..	50	100	50	100	50	100	KAG2	M=2xM25x1.5	29 mm
D06..	50	100	50	100	50	100	KAG2	M=2xM25x1.5	29 mm
D07..	50	100	50	100	50	100	KAG2	M=2xM25x1.5	29 mm
D..08..	50	100	50	100	50	115	KAG2	M=2xM25x1.5	29 mm
D..09..	50	100	50	100	50	124	KAG2	M=2xM25x1.5	29 mm
D..11..	62	132	66.5	135	66	181	TB222	M=2xM32x1.5; N=2xM25x1.5	-
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	-

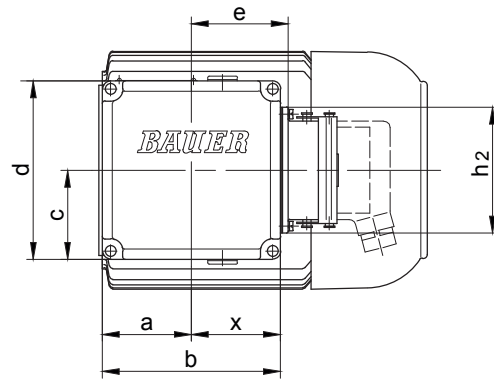
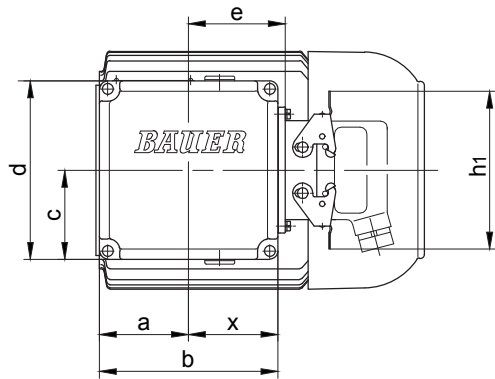
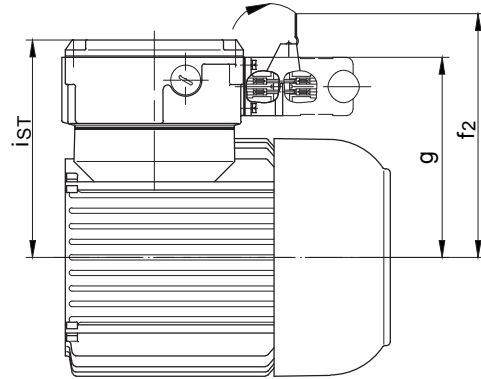
The actual gearbox design can vary from the geometry shown.

Plug-connector terminal box

Standard design (two brackets)



Optional for DESINA (one bracket)



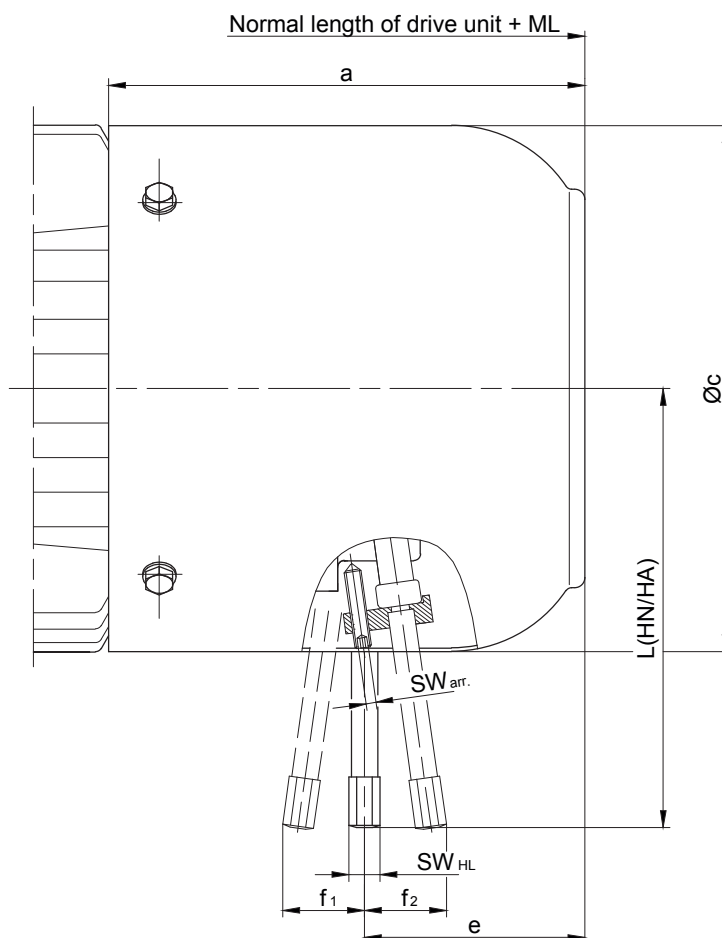
Motor	Size of Terminalbox	a	b	c	d	e	f ₁	f ₂	g	h ₁	h ₂	i _{ST}	x
D04	TBS1	30	90	52.5	106	49	118.5	147	111	117	93	124.5	46
D05	TBS1	57	90	52.5	106	49	123.5	152	116	117	93	129.5	46
D06	TBS1	45	90	52.5	106	49	125.5	154	118	117	93	131.5	46
D07	TBS1	45	90	52.5	106	49	125.5	154	118	117	93	131.5	46
D..08	TBS1	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

The actual gearbox design can vary from the geometry shown.

Motor-mounted components

Dimensions drawing

Standard brakes

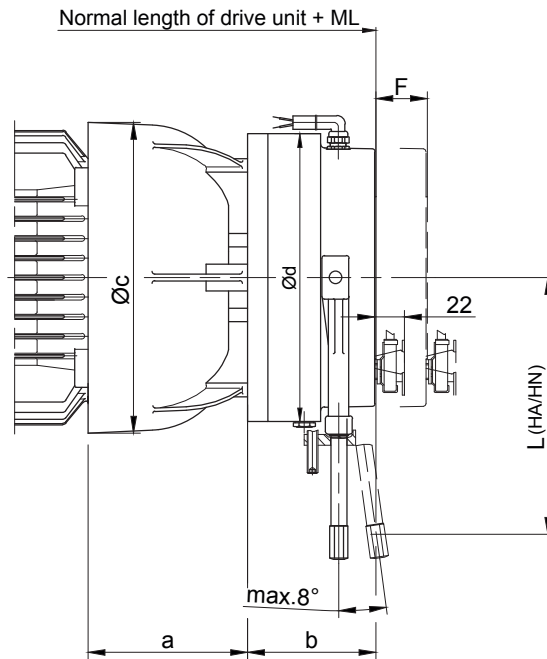


Motor Type	Brake Type	ML(mm) Additional length with brake	Dimensions (mm)								Add. weight kg			
			a	Øc	e	f ₁	f ₂	L(HN/HA)	SW _{HL}	SW _{arr.}				
D04	E003	43.5	97	110.5	58.5	20.5	24	96/102	11	11	1.0			
D05					60									
D06					42							102	123	58.5
D07														E003 / E004
D..08	ES(X)010	66	141	156	68	-	29	132	8	2.5	2.6			
D..09	ES(X)010	93	173	176	99	-	29	132	8	2.5	2.7			
	ES(X)027				91	-	35.5	162			4.2			
D..11	ES(X)027	98	195	218	103	-	35.5	162	8	2.5	4.5			
	ES(X)040				100	-	37	172			6.3			
	ES(X)070				96	-	34.5	190			12	4	8.5	
D..13	ES(X)040	111	225	258	125	-	41	202	12	4	6.5			
	ES(X)070				121	-	38	225			8.5			
	ES(X)125				116	-	45	223			12.5			
D..16	ES(X)125	144	280	310	148	-	48.5	244	12	4	13.5			
	ES(X)200				141	-	50	256			19			
	ZS(X)300				112	-					22			
D..18	ES(X)250	149	304	348	153	-	58.5	286	12	4	28			
	ZS(X)500				123	-			19	5	30			

HN = Manual release non-locking

HA = Manual release locking

The actual gearbox design can vary from the geometry shown.



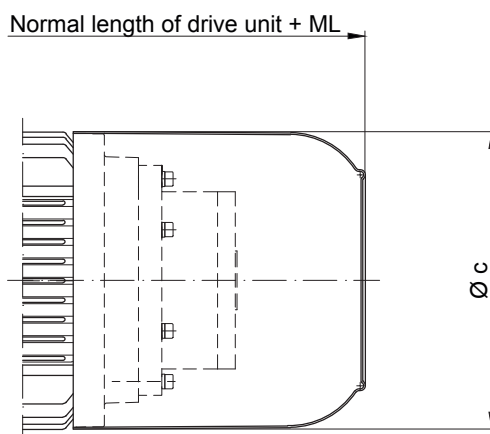
Motor	Brake	ML(mm) Additional length with brake		Dimensions (mm)					Add. weight kg
		Standard	Micro s.	a	b	c	Ød	L (HA/HN)	
D..08	EH(X)027	79	101	83.5	66.5	166	145	162	5.5
D..09	EH(X)040	90	112	102	73	191	168	172	8.3
D..11	EH(X)125	114	136	120	95	231	213	208.5	19.5
D..13	EH(X)200	128	150	140	106	274.5	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

The actual gearbox design can vary from the geometry shown.

Motor-mounted components

Dimensions drawing

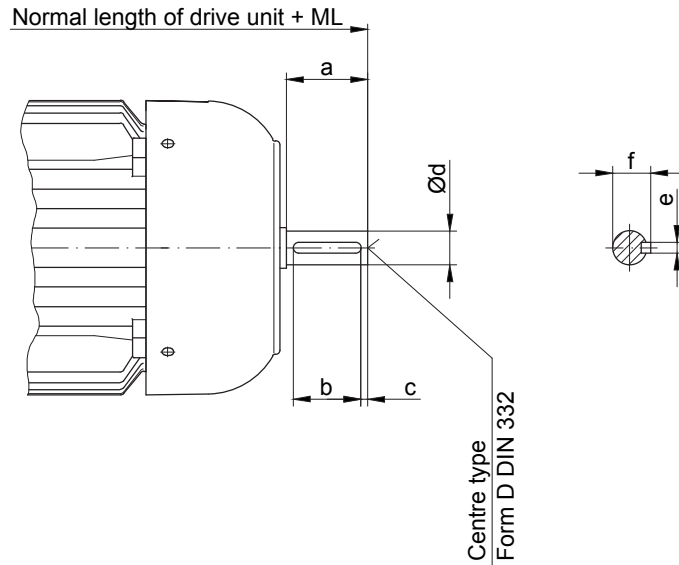
Motor with back stop



Motor	ML (mm) Add. length with backstop	Dimensions (mm)	
		c	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	322	16
D..18	149	368	17

The actual gearbox design can vary from the geometry shown.

Motor with second shaft end



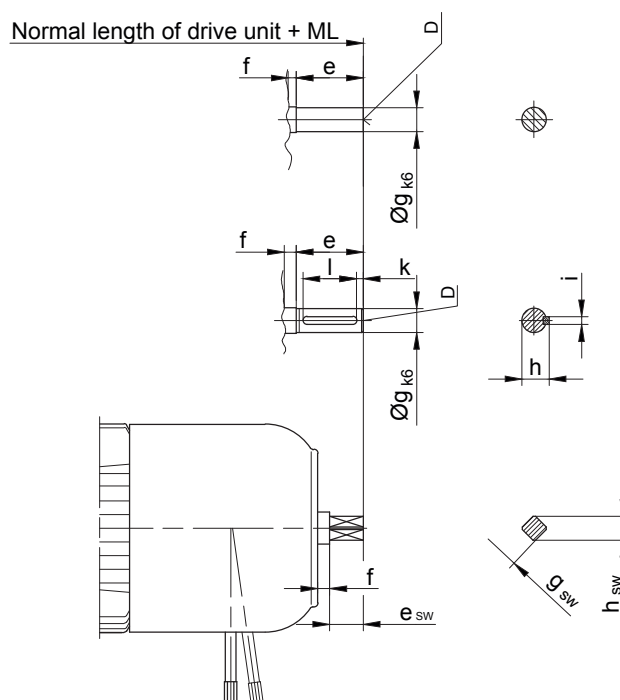
Motor	ML(mm) Add. length with second shaft extension	Dimensions (mm)						Centre DIN 332
		a	b	c	d	e	f	
D04	20	15	-	-	8g6	-	-	-
D05	25	20	-	-	10k6	-	-	-
D06	25	20	-	-	10k6	-	-	-
D07	25.5	20	-	-	10k6	-	-	-
D..08	45	40	30	5	16k6	5	18	D 5
D..09	55	50	40	5	20k6	6	22.5	D 5
D..11	65	60	50	5	25k6	8	28	D 8
D..13	85	80	60	10	35k6	10	38	D 12
D..16	115	110	90	10	40k6	12	43	D 16
D..18	115	110	90	10	45k6	14	48.5	D 16

The actual gearbox design can vary from the geometry shown.

Motor-mounted components

Dimensions drawing

Motors with brake and second shaft end



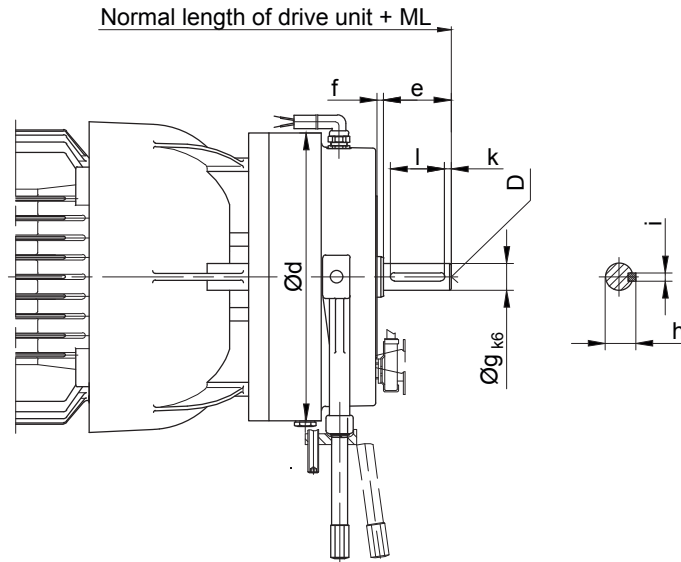
Motor	Brake	Additional length		Dimensions (mm)										Centre D DIN332		
		ML	ML _{SW}	e	e _{SW}	f	g	g _{SW}	h	h _{SW}	i	k	l	Centre D	sw	
D04	E003	63	-	15	-	5	8	-	-	-	-	-	-	-	-	-
D05				20			10									
D06				20			10									
D07				20			10									
D..08	ES(X)..	121	96 *	50	25 *	5	18	SW14 *	20.5	18 *	6	5	40	D6	D4 *	
D..09		98	123 *				20	SW14	22.5	18	6 *	40 *	D6 *	D4		
D..11		153.5 *	128	50 *	25		28 *	SW22	31 *	28	8 *	5 *	50 *	D10 *	D10	
D..13		176 *	156	60 *	40		4.5	28 *	SW22	31 *	28	8 *	5 *	50 *	D10 *	D10
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	28 *	SW22	31 *	28	8 *	5 *	50 *	D10 *	D10	

* Special design

** with manual release

The actual gearbox design can vary from the geometry shown.

Motor with "heavy duty" brake and second shaft end



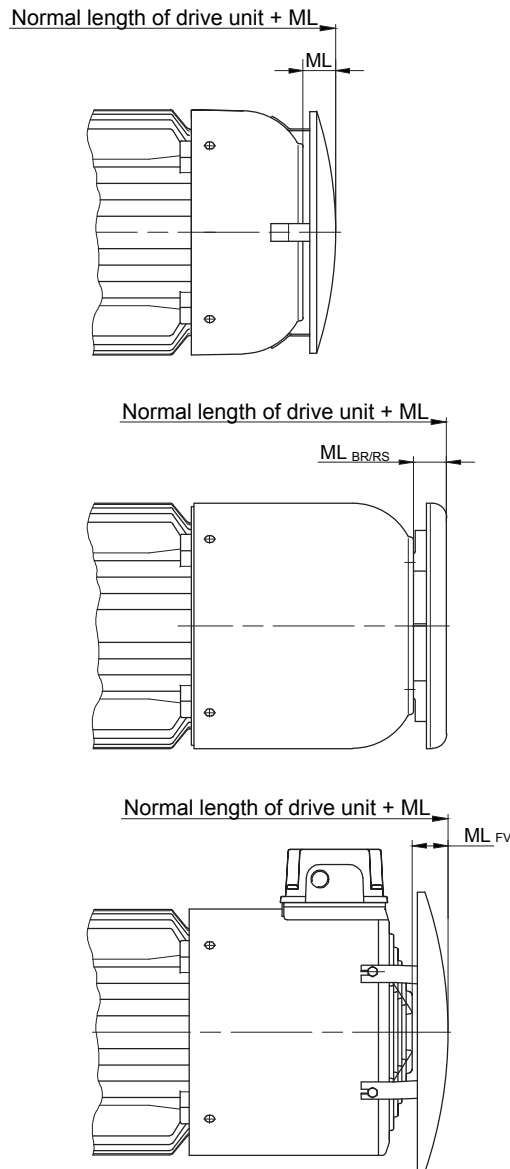
Motor	Brake	ML(mm) Additional length with brake and encoder	Dimensions (mm)								Centring D 332	Add. weight kg
			Ød	e	f	g	h	i	k	k		
D..08	EH(X)027	132	145	50	4	18	20.5	6	5	6	D06	6
D..09	EH(X)040	144	168		5							20
D..11	EH(X)125	169	213		5	28	31					20
D..13	EH(X)200	192	245	60	5	28	31	8	8	D10	29.5	
D..16	EH(X)400	205.5	324								8	56
D..18		216.5									30	33

The actual gearbox design can vary from the geometry shown.

Motor-mounted components

Dimensions drawing

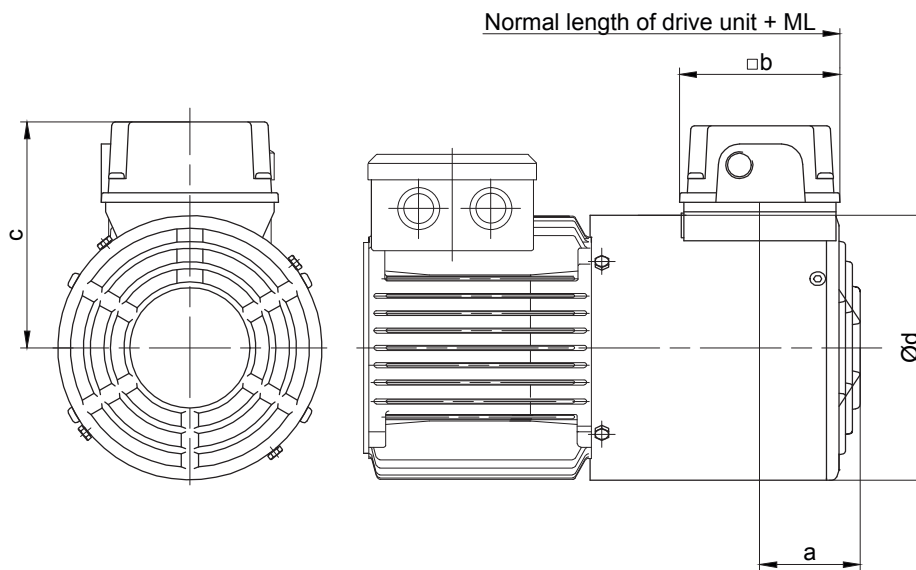
Motor with second shaft end



Motor	ML(mm) Add. length with attached protective cover				Add. weight kg
	ML	ML _{BR}	ML _{RS}	ML _{FV}	
D06	18	-	-	-	0.15
D07	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	47	34.5	34.5	32	1.8
D..18	54	34.5	34.5	32	5.5

The actual gearbox design can vary from the geometry shown.

Motor with independent fan



Drive Motor	Fan Motor			400 V	ML (mm) Additional length forced vent.	Dimensions (mm)				Add. weight
Type	Type	kW	r/min	A		a	b	c	d	~ kg
D..08	FV D08	0.019	2670	0.029	92	69.5	95	131.5	157	2.2
D..09	FV D09	0.046	2820	0.106	97	69.5	95	141.5	176	2.7
D..11	FV D11	0.051	2660	0.110	97	79.5	95	162.5	219	3.2
D..13	FV D13	0.073	2820	0.169	119	78.8	95	182	258	4.6
D..16*	FV D16	0.154	2760	0.347	144	78.8	95	208.5	311	6.4
D..18*	FV D18	0.154	2760	0.347	303	78.8	95	208.5	348	8.4

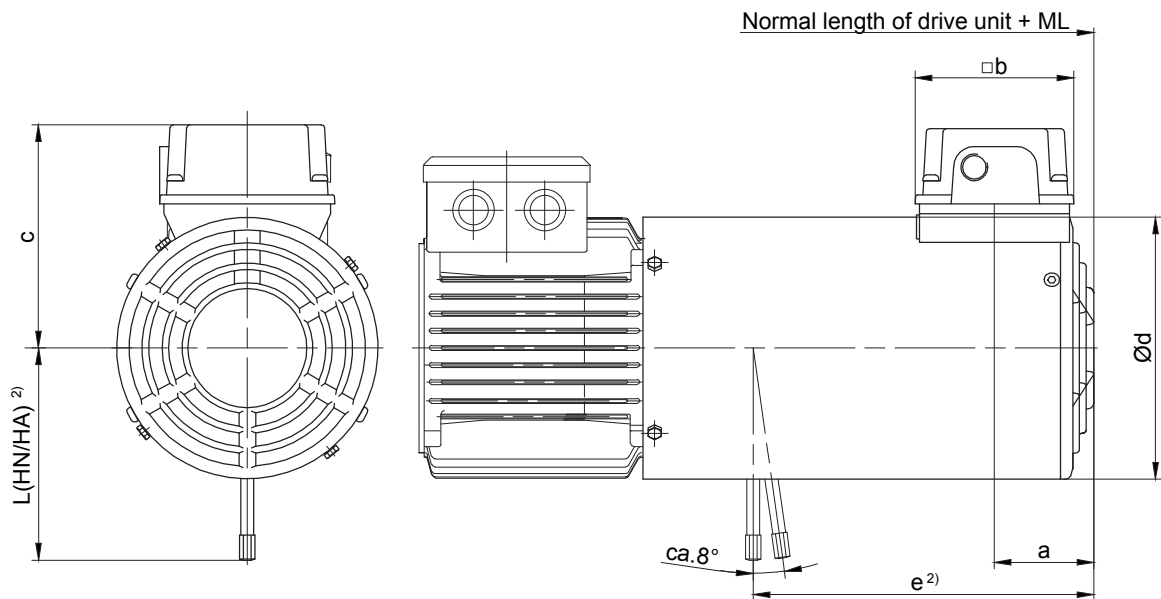
* bayonet joint

The actual gearbox design can vary from the geometry shown.

Motor-mounted components

Dimensions drawing

Motor with brake and independent fan



Motor	Brake	ML (mm) ¹⁾ Additional length with attached brake and forced ventilation	Dimensions (mm)						Add. weight ~kg
			a	b	c	Ød	e ²⁾	L(HN/HA) ²⁾	
D..08	ES(X)010	202	59	95	131.5	157	204	132	5.0
D..09	ES(X)010	214	69.5	95	141.5	176	220	132	5.5
	212						162	7.5	
D..11*	ES(X)027	221	69.5	95	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	95	182	258	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	95	208.5	311	298	244	19.5
	ES(X)200						291	256	25
	ZS(X)300						262		27
D..18*	ES(X)250	303	78.8	95	208.5	348	307	286	37
	ZS(X)500						277		38.5

* bayonet joint

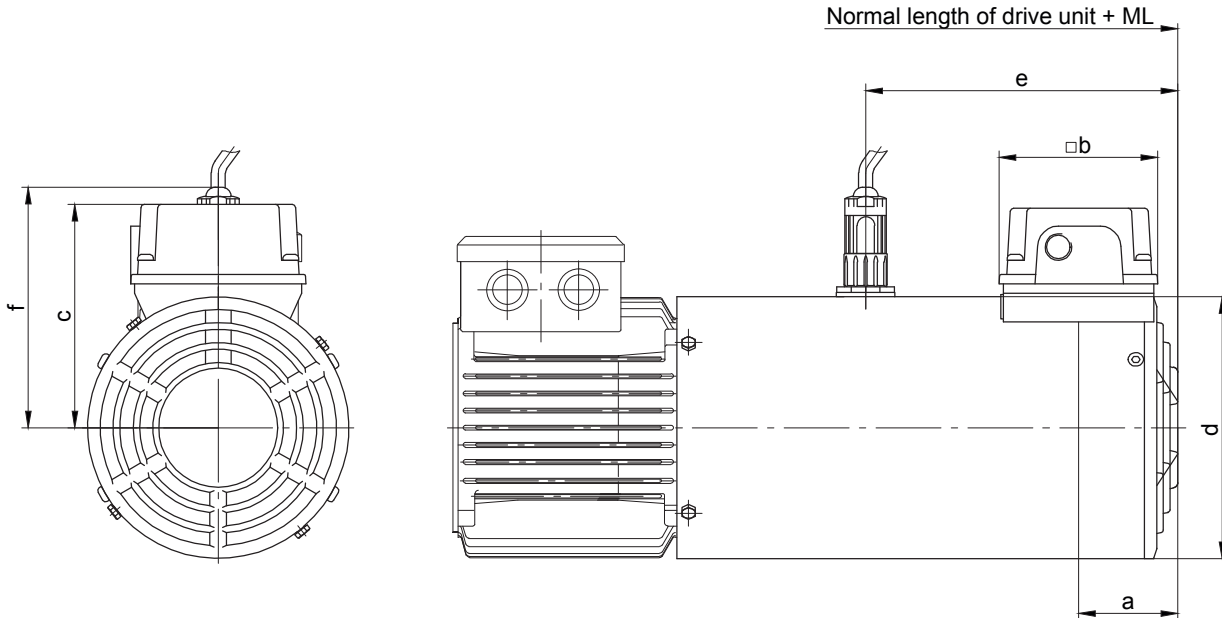
1) The additional length is for normal motor unit without brake.

Other dimensions see the appropriate normal dimensioned sketch

2) Brake release on request

The actual gearbox design can vary from the geometry shown.

Motor with encoder with built-on independent fan



Motor	ML(mm) ¹⁾ Additional length with attached encoder and forced ventilation	Dimensions (mm)						Add. weight ~ kg
		a	b	c	d	e	f	
D..08	202	59	95	131.5	157	187	144	2.6
D..09	214	69.5	95	141.5	176	192	153.5	3.3
D..11*	221	69.5	95	162.5	218	192	-	4.0
D..13*	240	79.5	95	182	258	217	-	5.7
D..16*	294	78.8	95	208.5	311	252	-	7.9
D..18*	303	78.8	95	208.5	348	267	-	10.9

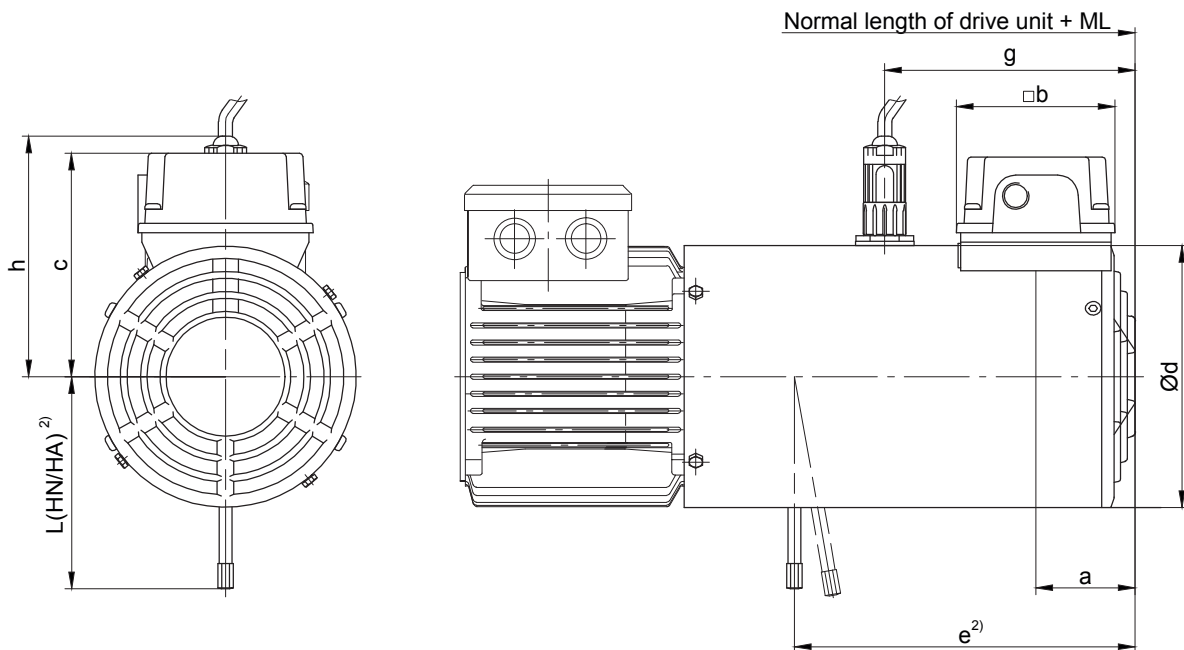
* with bayonet joint

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

Motor-mounted components

Dimensions drawing

Motor with brake and encoder with built-on independent fan



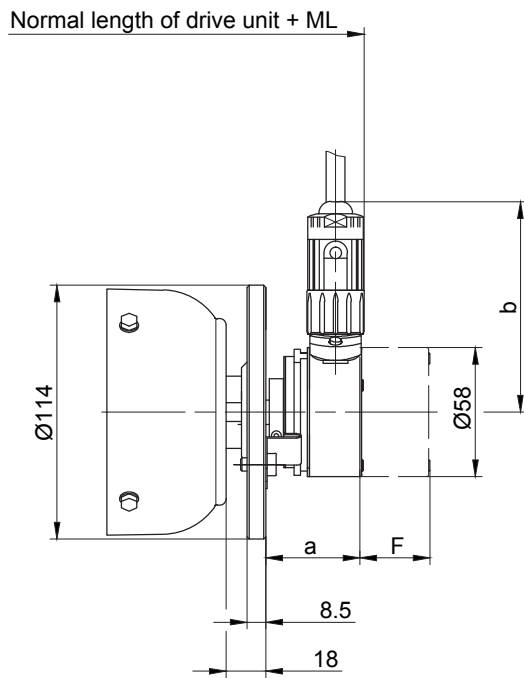
Motor	Brake	ML (mm) ¹⁾ Additional length with attached brake, encoder and forced ventilation	Dimensions (mm)								Add. weight ~ kg
			a	b	c	Ød	e ²⁾	g	h	L(HN/HA) ²⁾	
D..08	ES(X)010	202	59	95	131.5	157	204	150	150	132	6.0
D..09	ES(X)010	214	69.5	95	141.5	176	220	160	160	132	6.5
	212						160	162		8.5	
D..11*	ES(X)027	221	69.5	95	162.5	219	226	155	155	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	95	182	258	254	175	175	202	13
	ES(X)070						250	175		225	15
	ES(X)125						245	175		223	19
D..16*	ES(X)125	294	78.8	95	208.5	311	298	195	195	244	21
	ES(X)200						291	195		256	27
	ZS(X)300						262	195			29
D..18*	ES(X)250	303	78.8	95	208.5	348	207	212	212	286	39
	ZS(X)500						277	212			40.5

bayonet joint

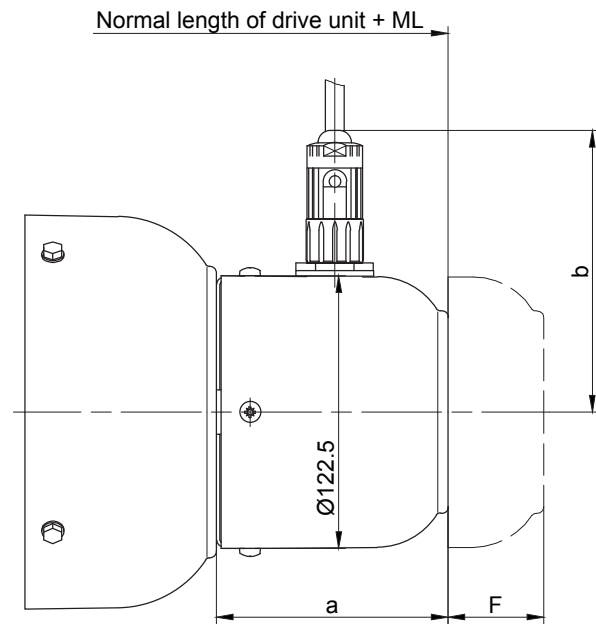
- 1) The additional length is for normal motor unit without brake.
Other dimensions see the appropriate normal dimensioned sketch
- 2) Brake release on request

The actual gearbox design can vary from the geometry shown.

Motor with encoder



D04



D05-D..18

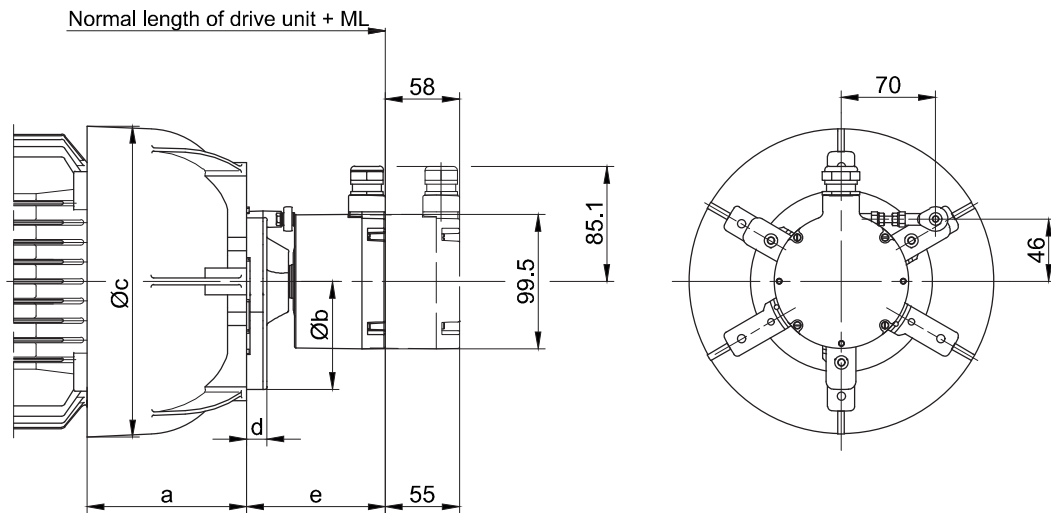
Motor	ML(mm) Additional length with encoder	Dimensions (mm)				Add. weight kg	Free space for removing encoder "F"	
		incremental encoder Fa. Kübler Typ 5820		absolute encoder Fa. TR Typ CS58-M			incremental encoder Fa. Kübler Typ 5820	absolute encoder Fa. TR Typ CS58-M
		a	b	a	b			
D04	62.5	43.5	95	69.5	109.5	0.7	30	55
D05	103	98.5	127	98.5	127	0.9	63	88
D06								
D07								
D..08	107	107.5	127	107.5	127	0.8	41	66
D..09								
D..11								
D..13								
D..16	108	104	104	104	104	0.8	43	68
D..18								

The actual gearbox design can vary from the geometry shown.

Motor-mounted components

Dimensions drawing

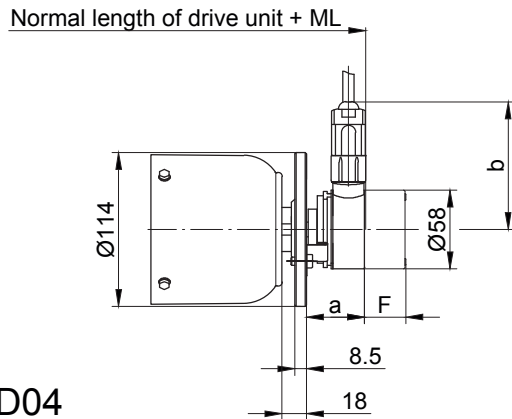
Motor with "heavy duty" encoder



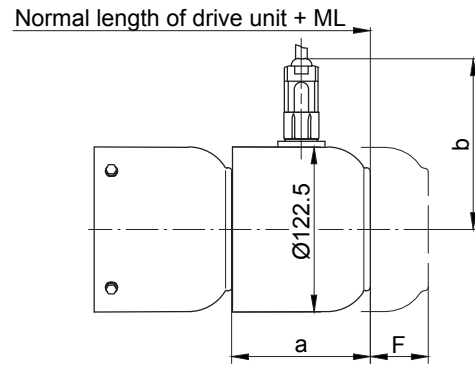
Motor	ML(mm) Additional length with encoder	Dimensions (mm)					Add. weight kg
		a	b	c	d	e	
D..08	114	83.5	160	166	15	102.5	2
D..09	118.5	102		191			
D..11	121.5	120		231			
D..13	115.5	140	185	274.5	17	94.5	8.6
D..16	113.5	155		326			
D..18	122.5	183		366			

The actual gearbox design can vary from the geometry shown.

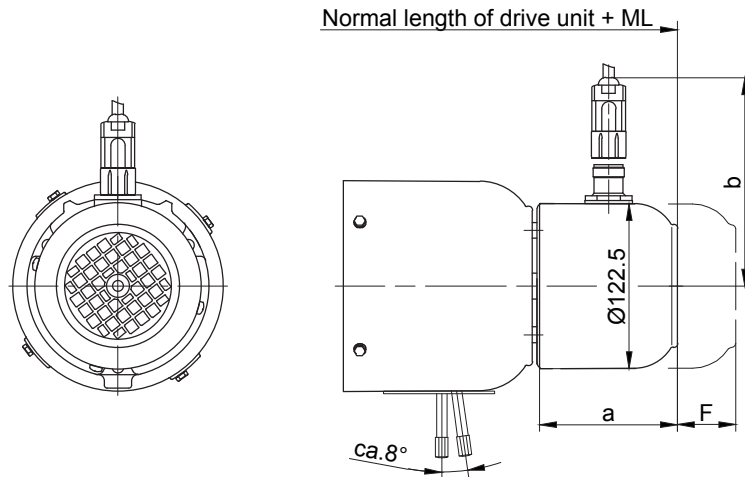
Motor with brake and encoder



D04



D05-D07



D08-D18

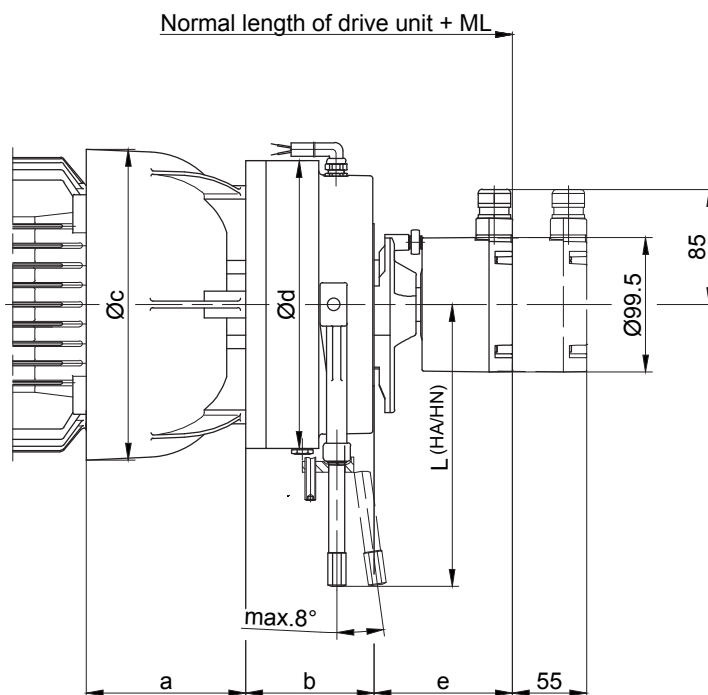
Motor	Brake	ML(mm) Additional length with encoder and brake	Dimensions (mm)				Add. weight kg	Free space for removing encoder "F"	
			incremental encoder Fa. Kübler Typ 5820		absolute encoder Fa. TR Typ CS58-M			incremental encoder Fa. Kübler Typ 5820	absolute encoder Fa. TR Typ CS58-M
			a	b	a	b			
D04	E003 E003 / E004	105.5	43.5	95	69.5	109.5	0.7	30	55
D05		145					0.9	63	88
D06									
D07									
D..08	ES(X)..	173.5	102	127	102	127	0.8	49	74
D..09	ES(X)..	197							
D..11	ES(X)..	200							
D..13	ES(X)..	212							
D..16	ES(X).. / ZS(X)..	248							
D..18	ES(X).. / ZS(X)..	253							

The actual gearbox design can vary from the geometry shown.

Motor-mounted components

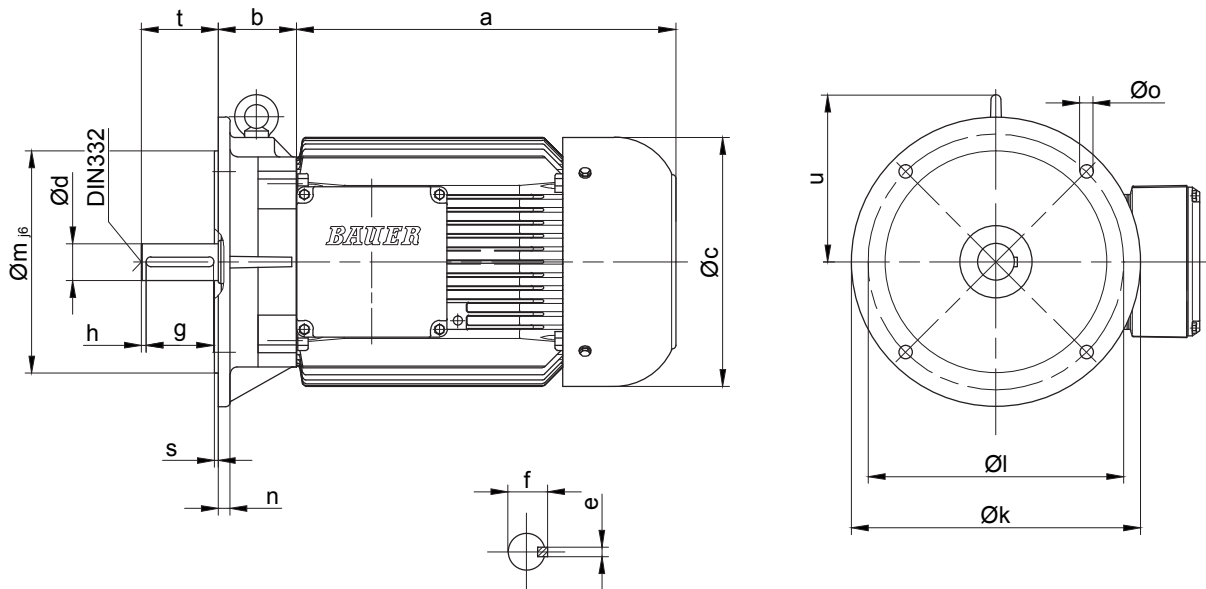
Dimensions drawing

Motor with "heavy duty" brake and encoder



Motor	Brake	ML(mm) Additional length with brake and encoder	Dimensions (mm)						Add. 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

The actual gearbox design can vary from the geometry shown.



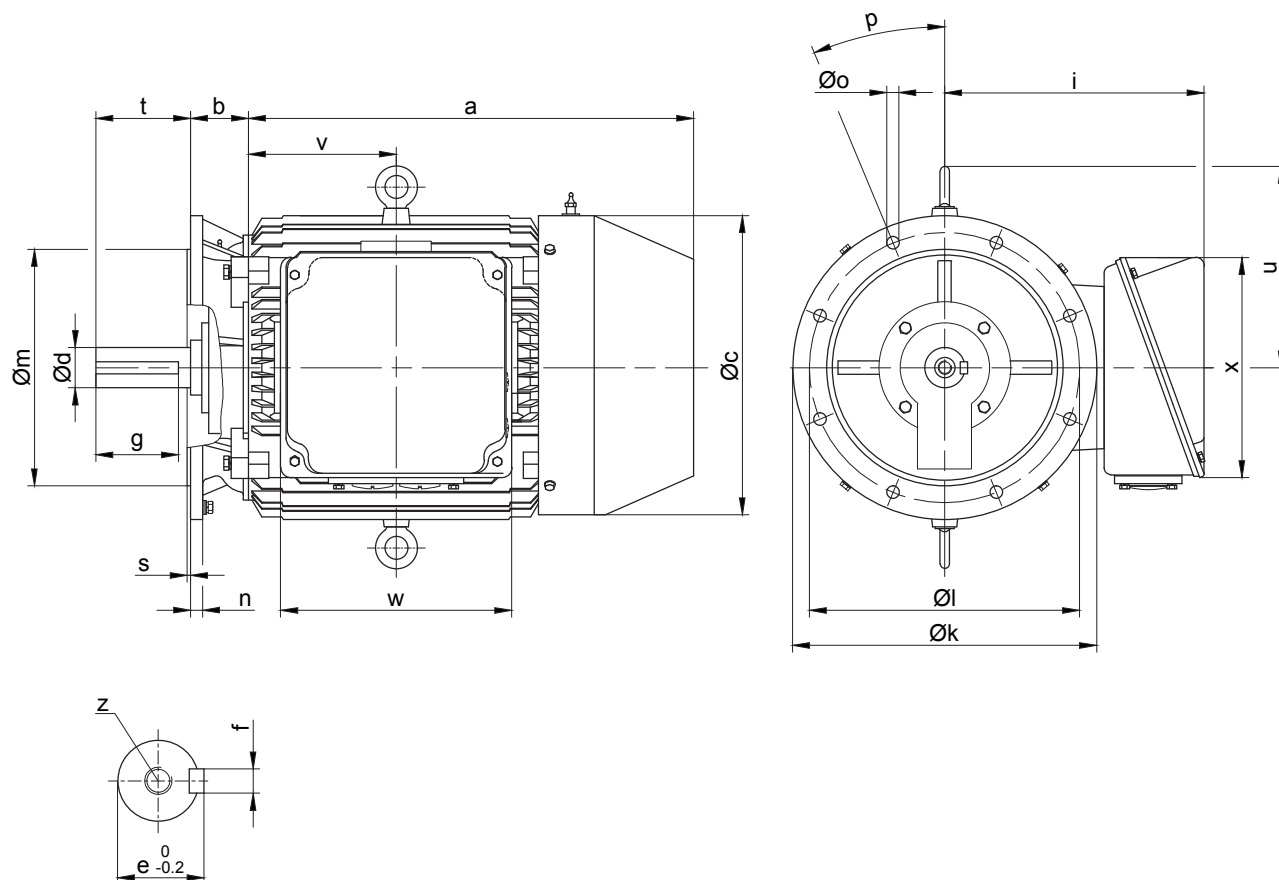
Motor	Dimensions (mm)																Centre DIN 332
	a	b	c	d	e	f	g	h	k	l	m	n	o	s	t	u	
D06	170	45	123	11 _{j6}	4	12.5	18	2.5	140	115	95	9	10	2.75	23	-	D4
D07	190	45	123	11 _{j6}	4	12.5	18	2.5	140	115	95	9	10	2.75	23	-	D4
D..08	200	49	156	19 _{j6}	6	21.5	35	2.5	200	165	130	10	12	3.5	40	-	D4
D..09	251	66	176	24 _{j6}	8	27	40	5	200	165	130	10	12	3.5	50	128.5	D6
D..11	319	75	218	28 _{j6}	8	31	50	5	250	215	180	11	14.5	4	60	145.5	D8
D..13	393	81	266	38 _{k6}	10	41	70	5	300	265	230	12	14	4	80	173	D12
D..16	429	98.5	310	42 _{k6}	12	45	90	10	350	300	250	13	18.5	5	110	215.5	D16

The actual gearbox design can vary from the geometry shown.

Motor-mounted components

Dimensions drawing

Motor in IEC-design



Motor	Dimensions (mm)																
	a	b	c	d	e	f	g	i	k	l	m	n	o	p	s	t	u
DNF18	551	79	355	$48^{+0.018}_{+0.002}$	14	51.5	80	293	350	300	250	16	$\varnothing 19$	$4 \times 45^\circ$	5	110	240
DNF20	613	82	395	$55^{+0.030}_{+0.011}$	16	59	91	313	400	350	300	16	$\varnothing 19$	$4 \times 45^\circ$	5	110	270
DNF22	659	86	442	$60^{+0.030}_{+0.011}$	18	64	122	390	450	400	350	18	$\varnothing 19$	$8 \times 22.5^\circ$	5	140	300
DNF25	730	95	485	$65^{+0.030}_{+0.011}$	18	69	126	415	550	500	450	18	$\varnothing 19$	$8 \times 22.5^\circ$	5	140	330
DNF28	797	98	544	$75^{+0.030}_{+0.011}$	20	79.5	124	445	550	500	450	18	$\varnothing 19$	$8 \times 22.5^\circ$	5	140	380

Motor				Center bore	Weight kg
	v	w	x	z	
DNF18	194	200	221	M16x2x24	215
DNF20	203.5	200	221	M20x2.5x30	293
DNF22	218.5	342	326	M20x2.5x30	395
DNF25	247.5	342	326	M20x2.5x30	487
DNF28	276	342	326	M20x2.5x30	692

The actual gearbox design can vary from the geometry shown.