1.9 Dati tecnici — *1.9 Technical data* — 1.9 Technische daten

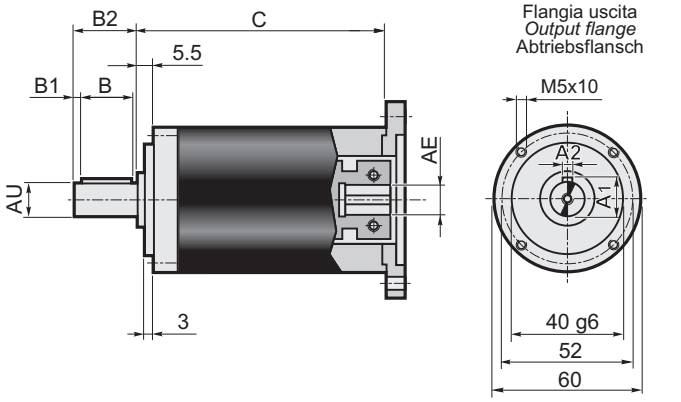
Stadi / *Steps* / Stufenzahl	1				2							3									
i	**3**	**4**	**5**	**6**	**9**	**12**	**16**	**20**	**24**	**30**	**36**	**27**	**36**	**48**	**64**	**80**	**100**	**120**	**144**	**180**	**216**
$n_{1\ nom}$	4000				4500							5000									
$n_{1\ max}$	6000																				
$T2_N$	35	45	35	30	40	50	50	50	50	40	35	40	55	55	55	55	55	55	55	40	35
$T2_A$	55	65	55	50	60	70	70	70	70	60	55	60	80	80	80	80	80	80	80	60	55
$T2_S$	110	130	110	100	120	140	140	140	140	120	110	120	150	150	150	150	150	150	150	120	110
J	Vedi pag. 9 / *See on page 9* / Siehe Seite 9																				
LpA	< 70																				
R_d	0.96				0.93							0.91									
L_h	20000																				
F_{R2}	1400																				
F_{A2}	700																				
R_t	4																				
max	4’				6’							8’									
Kg	1.3				1.6							1.9									

i	Rapporto di riduzione nominale	*Nominal ratio*	Nenn-Untersetzungsverhältnis
$n_{1\ nom}$	Velocità nominale in entrata [min^{-1}]	*Nominal input speed [min^{-1}]*	Nenn-Eingangsdrehzahl [min^{-1}]
$n_{1\ max}$	Velocità massima in entrata [min^{-1}]	*Maximum input speed [min^{-1}]*	Maximale Eingangsdrehzahl [min^{-1}]
$T2_N$	Coppia nominale intermittente in uscita [Nm]	*Rated intermittent output torque [Nm]*	Nenn-Abtriebsmoment (im Aussetzbetrieb)[Nm]
$T2_A$	Coppia massima di accelerazione in uscita [Nm]	*Maximum acceleration output torque [*Nm]	Maximales Beschleunigungsmoment am Abtrieb [Nm]
$T2_S$	Coppia massima di emergenza in uscita [Nm]	*Maximum emergency output torque [*Nm]	Maximale Überlast am Abtrieb [Nm]
LpA	Livello di rumorosità dB(A) a 3000 min^{-1}	*Noise level dB(A) at 3000 min^{-1}*	Geräuschpegel dB(A) bei 3000 min^{-1}
Rd	Rendimento dinamico	*Dynamic efficiency*	Dynamischer Wirkungsgrad
L_h	Durata cuscinetti [h]	*Bearing life [h]*	Lebensdauer der Lager [h]
F_{R2}	Carico radiale nominale in uscita [N] a 300min^{-1}	*Rated output radial load [N] at 300min^{-1}*	Nenn-Radiallast an der Abtriebswelle bei 300min^{-1}
F_{A2}	Carico assiale in uscita [N] a 300min^{-1}	*Output axial load [N] at 300min^{-1}*	Axiallast an der Abtriebswelle bei 300min^{-1}
R_t	Rigidità torsionale [Nm / arcmin]	*Torsional rigidity [Nm / arcmin]*	Drehfestigkeit [Nm / arcmin]
J^{max}	Gioco angolare massimo [arcmin]	*Maximum backlash [arcmin]*	Maximale Winkelspiel [arcmin]
	Momento d'inerzia [kg·cm^2]	*Moment of inertia [kg·cm^2]*	Traegheitsmoment [kg·cm^2]

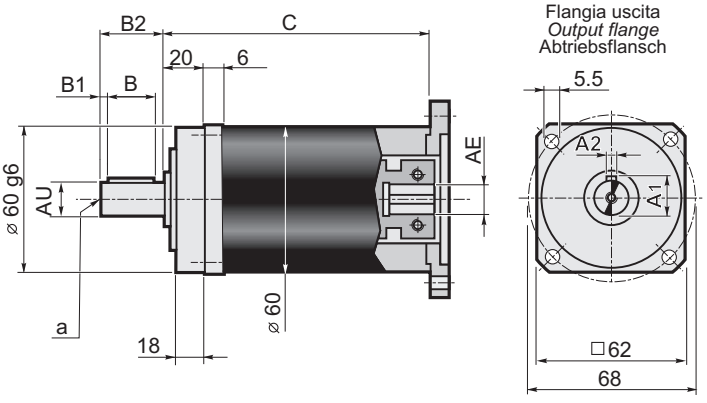
1.10 Dimensioni — *1.10 Dimensions* — 1.10 Abmessungen

Dimensioni generali e uscite / *General and output dimensions* / General-und Abtriebsabmessungen

FLT



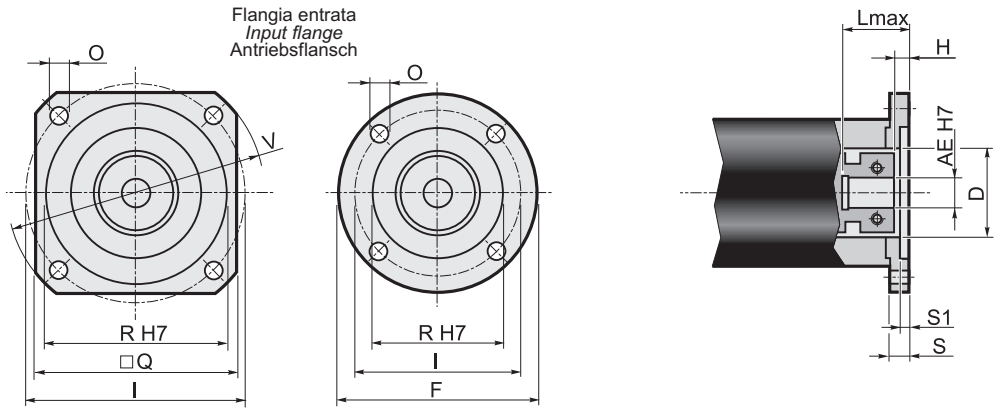
FLQ



Stadi/*Steps*/*Stufenzahl*	1	2	3	
C	83.2	100.9	118.6	AE= 6-6.35-7-8-9-9.52 11-12-12.7-14

	Albero uscita - *Output shaft* - Abtriebswelle						
	AU j6	**A1**	**A2**	**B**	**B1**	**B2**	**a**
AU12	12	13.5	4	15	3	21	M4x10
AU14	14	16	5	25	2	28	M5x13
AU16	16	18	5	25	2	28	M5x13

Dimensioni entrate / *Input dimensions* / Antriebsabmessungen



Flange entrata / *Input flange* / Antriebsflansch										Albero entrata / *Input shaft* / Antriebswelle																	
										AE																	
										6		6.35		7		8		9		9.52		11		12		12.7		14	
	F	Q	V	I	R (H7)	O	S	S1	D	L max	H	L max	H	L max	H	L max	H	L max	H	L max	H	L max	H	L max	H	L max	H	L max	H
P01*	60	=	=	43.82	22	4.5	10	3	22	34	3.5	34	3.5	34	3.5	25	5.5	25	5.5	34	5.5	25	5.5	34	5.5	34	5.5	34	5.5
P02*	=	60	80	66.67	38.1	5.5	10	3	32	34	3.5	34	3.5	34	3.5	25	5.5	25	5.5	34	5.5	25	5.5	34	5.5	34	5.5	34	5.5
P03*	=	60	80	63	40	5.5	10	3.5	32	34	3.5	34	3.5	34	3.5	25	5.5	25	5.5	34	5.5	25	5.5	34	5.5	34	5.5	34	5.5
P04	=	70	90	75	60	6.5	10.5	3.5	32	34.5	4	34.5	4	34.5	4	25.5	6	25.5	6	34.5	6	25.5	6	34.5	6	34.5	6	34.5	6
P05	105	=	=	85	70	6.5	10.5	3.5	32	34.5	4	34.5	4	34.5	4	25.5	6	25.5	6	34.5	6	25.5	6	34.5	6	34.5	6	34.5	6
P06	=	80	110	98.42	73.02	6	11	3.5	35	35	4.5	35	4.5	35	4.5	26	6.5	26	6.5	35	6.5	26	6.5	35	6.5	35	6.5	35	6.5
P07	=	95	120	100	80	6.5	11.5	4	32	35.5	5	35.5	5	35.5	5	26.5	7	26.5	7	35.5	7	26.5	7	35.5	7	35.5	7	35.5	7
P08	=	98	130	115	95	9	11.5	4	32	35.5	5	35.5	5	35.5	5	26.5	7	26.5	7	35.5	7	26.5	7	35.5	7	35.5	7	35.5	7
P09	=	116	160	130	110	9	12	4.5	32	36	5.5	36	5.5	36	5.5	27	7.5	27	7.5	36	7.5	27	7.5	36	7.5	36	7.5	36	7.5
P10*	60	=	=	39	26	4.5	10	3	26	34	3.5	34	3.5	34	3.5	25	5.5	25	5.5	34	5.5	25	5.5	34	5.5	34	5.5	34	5.5
P11*	60	=	=	42	32	4.5	10	3	32	34	3.5	34	3.5	34	3.5	25	5.5	25	5.5	34	5.5	25	5.5	34	5.5	34	5.5	34	5.5
P12*	65	=	=	46	32	4.5	10	3.5	32	34	3.5	34	3.5	34	3.5	25	5.5	25	5.5	34	5.5	25	5.5	34	5.5	34	5.5	34	5.5
P13*	80	=	=	65	50	5.5	10	3.5	32	34	3.5	34	3.5	34	3.5	25	5.5	25	5.5	34	5.5	25	5.5	34	5.5	34	5.5	34	5.5
P14*	60	=	=	39	20	4.5	10	2.5	20	34	3.5	34	3.5	34	3.5	25	5.5	25	5.5	34	5.5	25	5.5	34	5.5	34	5.5	34	5.5
P15	=	75	100	90	60	5.8	12	3.5	32	36	5.5	36	5.5	36	5.5	27	7.5	27	7.5	36	7.5	27	7.5	36	7.5	36	7.5	36	7.5
P16*	60	=	=	45	30	3.5	14	7	30	38	7.5	38	7.5	38	7.5	29	9.5	29	9.5	38	9.5	29	9.5	38	9.5	38	9.5	38	9.5
P17	=	60	82	70	50	4.5	16.5	8	32	40.5	10	40.5	10	40.5	10	31.5	12	31.5	12	40.5	12	31.5	12	40.5	12	40.5	12	40.5	12
P18	=	60	80	60	50	M4	10.5	3.5	32	34.5	4	34.5	4	34.5	4	25.5	6	25.5	6	34.5	6	25.5	6	34.5	6	34.5	6	34.5	6
P19*	60	=	=	36	25	4.5	10	3	25	34	3.5	34	3.5	34	3.5	25	5.5	25	5.5	34	5.5	25	5.5	34	5.5	34	5.5	34	5.5
P20	=	60	82	70	50	5.5	10.5	3.5	32	34.5	4	34.5	4	34.5	4	25.5	6	25.5	6	34.5	6	25.5	6	34.5	6	34.5	6	34.5	6
P21*	60	=	=	46	30	4.5	10	3	30	34	3.5	34	3.5	34	3.5	25	5.5	25	5.5	34	5.5	25	5.5	34	5.5	34	5.5	34	5.5
P22	=	60	80	70.71	36	4.5	10	2	32	34	3.5	34	3.5	34	3.5	25	5.5	25	5.5	34	5.5	25	5.5	34	5.5	34	5.5	34	5.5
P23	=	62	85	70	50	5.5	15.5	3.5	32	39.5	9	39.5	9	39.5	9	30.5	11	30.5	11	39.5	11	30.5	11	39.5	11	39.5	11	39.5	11
P24	=	75	100	90	70	5.8	12	3.5	32	36	5.5	36	5.5	36	5.5	27	7.5	27	7.5	36	7.5	27	7.5	36	7.5	36	7.5	36	7.5
P25	=	70	95	85	55	5.8	12	3.5	32	36	5.5	36	5.5	36	5.5	27	7.5	27	7.5	36	7.5	27	7.5	36	7.5	36	7.5	36	7.5
P26*	=	60	80	65.5	34	5.5	10	3.5	33	34	3.5	34	3.5	34	3.5	25	5.5	25	5.5	34	5.5	25	5.5	34	5.5	34	5.5	34	5.5
P27	=	80	110	95	50	6.5	12	3.5	32	36	5.5	36	5.5	36	5.5	27	7.5	27	7.5	36	7.5	27	7.5	36	7.5	36	7.5	36	7.5
P28	=	60	80	66.67	38.1	M4	9	2.5	32	33	2.5	33	2.5	33	2.5	24	4.5	24	4.5	33	4.5	24	4.5	33	4.5	33	4.5	33	4.5
P29	60	=	=	45	30	M3	11	4	32	35	4.5	35	4.5	35	4.5	26	6.5	26	6.5	35	6.5	26	6.5	35	6.5	35	6.5	35	6.5
P30	=	70	95	85	60	5.8	12	3.5	32	36	5.5	36	5.5	36	5.5	27	7.5	27	7.5	36	7.5	27	7.5	36	7.5	36	7.5	36	7.5
P31	=	62	85	70	50	M4	11	3.5	32	35	4.5	35	4.5	35	4.5	26	6.5	26	6.5	35	6.5	26	6.5	35	6.5	35	6.5	35	6.5
P32	=	60	80	65	40	M5	10	3.5	32	34	3.5	34	3.5	34	3.5	25	5.5	25	5.5	34	5.5	25	5.5	34	5.5	34	5.5	34	5.5
P33	=	85	115	99	60	5.5	11	3.5	32	35	4.5	35	4.5	35	4.5	26	6.5	26	6.5	35	6.5	26	6.5	35	6.5	35	6.5	35	6.5
P34	=	65	87	73.54	40	M4	10	3.5	32	34	3.5	34	3.5	34	3.5	25	5.5	25	5.5	34	5.5	25	5.5	34	5.5	34	5.5	34	5.5
P35	=	60	80	70.71	36	M4	14	2	32	38	7.5	38	7.5	38	7.5	29	9.5	29	9.5	38	9.5	29	9.5	38	9.5	38	9.5	38	9.5
P36	=	85	115	98.42	73.02	6	15	3.5	35	39	8.5	39	8.5	39	8.5	30	10.5	30	10.5	39	10.5	30	10.5	39	10.5	39	10.5	39	10.5

* Per assemblare il motore è necessario smontare la flangia dal riduttore (vedere **schema di montaggio 2** a pag. 25).

** To mount the motor it is necessary to remove the gearbox flange (see **assembly drawing 2** on page 25).*

* Vor dem Einbauen des Motors soll die Getriebeflansch abmontiert werden (siehe **Bauanleitung 2** auf Seite 25).

1.9 Dati tecnici — *1.9 Technical data* — 1.9 Technische daten

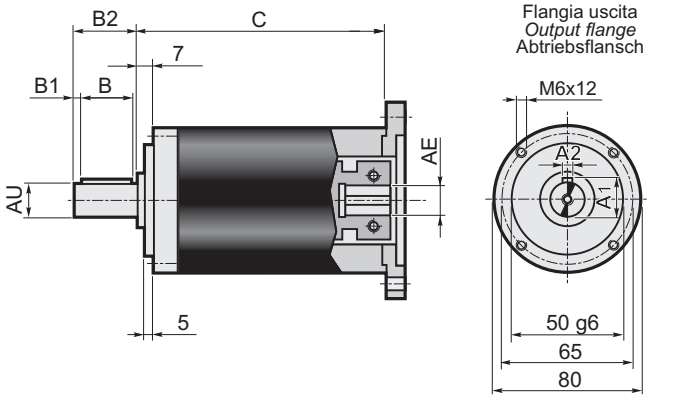
Stadi / *Steps* / Stufenzahl	1				2							3									
i	**3**	**4**	**5**	**6**	**9**	**12**	**16**	**20**	**24**	**30**	**36**	**27**	**36**	**48**	**64**	**80**	**100**	**120**	**144**	**180**	**216**
$n_{1\ nom}$	4000				4500							5000									
$n_{1\ max}$	6000																				
$T2_N$	90	110	90	75	100	115	115	115	115	85	75	100	120	120	120	120	120	120	120	95	80
$T2_A$	145	170	130	120	160	180	180	180	180	140	130	160	190	190	190	190	190	190	190	150	130
$T2_S$	290	340	260	240	320	360	360	360	360	280	260	320	380	380	380	380	380	380	380	300	260
J	Vedi pag. 9 / *See on page 9* / Siehe Seite 9																				
LpA	< 70																				
R_d	0.96				0.93							0.91									
L_h	20000																				
F_{R2}	2100																				
F_{A2}	1050																				
R_t	11																				
$_{max}$	4’				6’							8’									
Kg	2.7				3.5							4.3									

i	Rapporto di riduzione nominale	*Nominal ratio*	Nenn-Untersetzungsverhältnis
$n_{1\ nom}$	Velocità nominale in entrata [min^{-1}]	*Nominal input speed [min^{-1}]*	Nenn-Eingangsdrehzahl [min^{-1}]
$n_{1\ max}$	Velocità massima in entrata [min^{-1}]	*Maximum input speed [min^{-1}]*	Maximale Eingangsdrehzahl [min^{-1}]
$T2_N$	Coppia nominale intermittente in uscita [Nm]	*Rated intermittent output torque [Nm]*	Nenn-Abtriebsmoment (im Aussetzbetrieb)[Nm]
$T2_A$	Coppia massima di accelerazione in uscita [Nm]	*Maximum acceleration output torque [*Nm]	Maximales Beschleunigungsmoment am Abtrieb [Nm]
$T2_S$	Coppia massima di emergenza in uscita [Nm]	*Maximum emergency output torque [*Nm]	Maximale Überlast am Abtrieb [Nm]
LpA	Livello di rumorosità dB(A) a 3000 min^{-1}	*Noise level dB(A) at 3000 min^{-1}*	Geräuschpegel dB(A) bei 3000 min^{-1}
Rd	Rendimento dinamico	*Dynamic efficiency*	Dynamischer Wirkungsgrad
L_h	Durata cuscinetti [h]	*Bearing life [h]*	Lebensdauer der Lager [h]
F_{R2}	Carico radiale nominale in uscita [N] a 300min^{-1}	*Rated output radial load [N] at 300min^{-1}*	Nenn-Radiallast an der Abtriebswelle bei 300min^{-1}
F_{A2}	Carico assiale in uscita [N] a 300min^{-1}	*Output axial load [N] at 300min^{-1}*	Axiallast an der Abtriebswelle bei 300min^{-1}
R_t	Rigidità torsionale [Nm / arcmin]	*Torsional rigidity [Nm / arcmin]*	Drehfestigkeit [Nm / arcmin]
J^{max}	Gioco angolare massimo [arcmin]	*Maximum backlash [arcmin]*	Maximale Winkelspiel [arcmin]
	Momento d'inerzia [kg·cm^2]	*Moment of inertia [kg·cm^2]*	Traegheitsmoment [kg·cm^2]

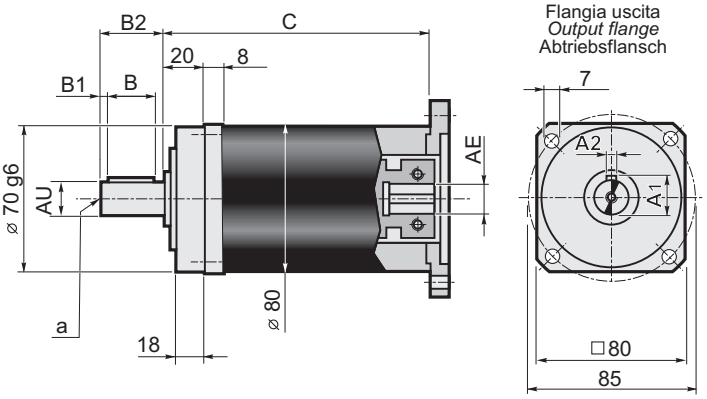
1.10 Dimensioni — 1.10 Dimensions — 1.10 Abmessungen

Dimensioni generali e uscite / *General and output dimensions* / General-und Abtriebsabmessungen

FLT



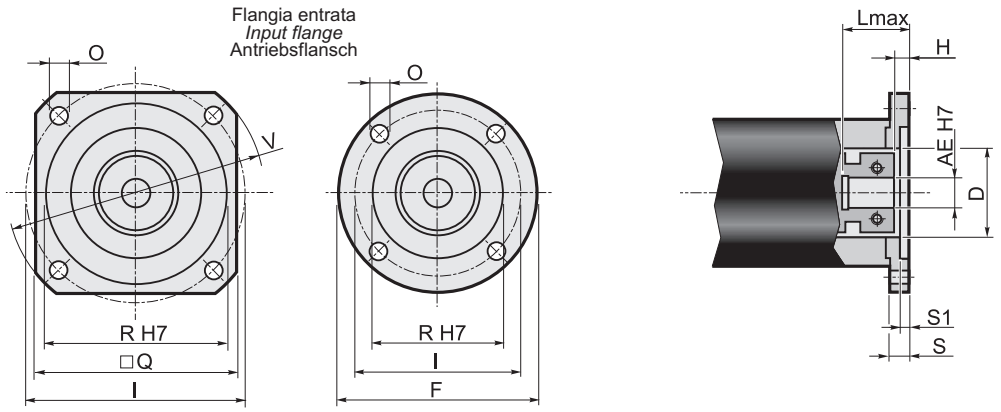
FLQ



Stadi/*Steps*/*Stufenzahl*	1	2	3	
C	102	127	152.5	AE= 9-9.52-11-12.7 14-15.87-16-19

	Albero uscita - *Output shaft* - Abtriebswelle						
	AU j6	**A1**	**A2**	**B**	**B1**	**B2**	**a**
AU19	19	21.5	6	30	3	36	M6x16
AU22	22	24.5	6	30	3	36	M6x16

Dimensioni entrate / *Input dimensions* / Antriebsabmessungen



Flange entrata / *Input flange* / Antriebsflansch										Albero entrata - *Input shaft* - Antriebswelle															
										AE															
										9		9.525		11		12		12.7		14		15.87		16		19	
	F	Q	V	I	R (H7)	O	S	S1	D	L max	H	L max	H	L max	H	L max	H	L max	H	L max	H	L max	H	L max	H	L max	H
P01*	80	=	=	66.67	38.1	5.5	12	3	38.1	41	3.5	41	6	26	6	41	6	41	6	41	6	41	6	41	6	41	6
P02	=	106.5	140	125.72	55.52	7	11	3	45	40	2.5	40	5	25	5	40	5	40	5	40	5	40	5	40	5	40	5
P03*	=	80	90	75	60	5.5	12	3.5	45	41	3.5	41	6	26	6	41	6	41	6	41	6	41	6	41	6	41	6
P04*	105	=	=	85	70	6.5	12	3.5	45	41	3.5	41	6	26	6	41	6	41	6	41	6	41	6	41	6	41	6
P05	=	82.5	110	98.425	73.02	6.5	12	3	45	41	3.5	41	6	26	6	41	6	41	6	41	6	41	6	41	6	41	6
P06	=	90	120	100	80	6.5	13	4	45	42	4.5	42	7	27	7	42	7	42	7	42	7	42	7	42	7	42	7
P07	=	100	135	115	95	8.5	13	4.5	45	42	4.5	42	7	27	7	42	7	42	7	42	7	42	7	42	7	42	7
P08	=	116	160	130	110	9	13	4.5	45	42	4.5	42	7	27	7	42	7	42	7	42	7	42	7	42	7	42	7
P09*	80	=	=	39	26	4.5	12	4	26	41	3.5	41	6	26	6	41	6	41	6	41	6	41	6	41	6	41	6
P10*	80	=	=	65	50	5.5	12	3.5	45	41	3.5	41	6	26	6	41	6	41	6	41	6	41	6	41	6	41	6
P11	=	150	182	166	115	9	32	11	50x14	61	23.5	61	26	46	26	61	26	61	26	61	26	61	26	61	26	61	26
P12*	=	80	105	90	70	6.5	12	3.5	32	41	3.5	41	6	26	6	41	6	41	6	41	6	41	6	41	6	41	6
P14 *	105	=	=	90	70	6	19	9	32	48	10.5	48	13	33	13	48	13	48	13	48	13	48	13	48	13	48	13
P15 *	80	=	=	70	50	4.5	17	8	45	46	8.5	46	11	31	11	46	11	46	11	46	11	46	11	46	11	46	11
P16	=	142	190	165	130	11	13	4.5	45	42	4.5	42	7	27	7	42	7	42	7	42	7	42	7	42	7	42	7
P17*	80	=	=	63	40	5.5	12	3.5	40	41	3.5	41	6	26	6	41	6	41	6	41	6	41	6	41	6	41	6
P18	=	130	170	145	110	M8	31	7	32	60	22.5	60	25	45	25	60	25	60	25	60	25	60	25	60	25	60	25
P19*	=	80	105	90	60	6.5	12	3.5	32	41	3.5	41	6	26	6	41	6	41	6	41	6	41	6	41	6	41	6
P20*	=	80	105	85	55	5.5	12	3.5	36	41	3.5	41	6	26	6	41	6	41	6	41	6	41	6	41	6	41	6
P21	=	80	110	95	50	M6	12	3.5	45	41	3.5	41	6	26	6	41	6	41	6	41	6	41	6	41	6	41	6
P22	80	=	=	70	50	M4	12	4	45	41	3.5	41	6	26	6	41	6	41	6	41	6	41	6	41	6	41	6
P23	=	80	90	75	60	M5	12	3.5	45	41	3.5	41	6	26	6	41	6	41	6	41	6	41	6	41	6	41	6
P24	80	=	=	46	30	M4	12	4	30	41	3.5	41	6	26	6	41	6	41	6	41	6	41	6	41	6	41	6
P26	80	=	=	65	40	M5	12	3.5	40	41	3.5	41	6	26	6	41	6	41	6	41	6	41	6	41	6	41	3.5
P27	=	80	110	82.02	36.8	M6	14	10	36.8	43	5.5	43	8	28	8	43	8	43	8	43	8	43	8	43	8	43	5.5
P28	=	90	120	100	80	6.5	28	4	45	57	19.5	57	22	42	22	57	22	57	22	57	22	57	22	57	22	57	22
P29*	80	=	=	66.67	50	5.5	12	3	45	41	3.5	41	6	26	6	41	6	41	6	41	6	41	6	41	6	41	6
P30	=	115	155	130	80	9	13	4	45	42	4.5	42	7	27	7	42	7	42	7	42	7	42	7	42	7	42	7
P31*	=	80	105	56	44	M6	14	10	36.8	43	5.5	43	8	28	8	43	8	43	8	43	8	43	8	43	8	43	8
P32	=	80	105	90	70	M6	12	3.5	32	41	3.5	41	6	26	6	41	6	41	6	41	6	41	6	41	6	41	6
P33	=	130	165	145	110	9	13	4.5	45	42	4.5	42	7	27	7	42	7	42	7	42	7	42	7	42	7	42	7
P34	=	90	120	100	80	M6	19	5	45	48	10.5	48	13	33	13	48	13	48	13	48	13	48	13	48	13	48	13

* Per assemblare il motore è necessario smontare la flangia dal riduttore (vedere **schema di montaggio 2** a pag. 25).

** To mount the motor it is necessary to remove the gearbox flange (see **assembly drawing 2** on page 25).*

* Vor dem Einbauen des Motors soll die Getriebeflansch abmontiert werden (siehe **Bauanleitung 2** auf Seite 25).

1.9 Dati tecnici — *1.9 Technical data* — 1.9 Technische daten

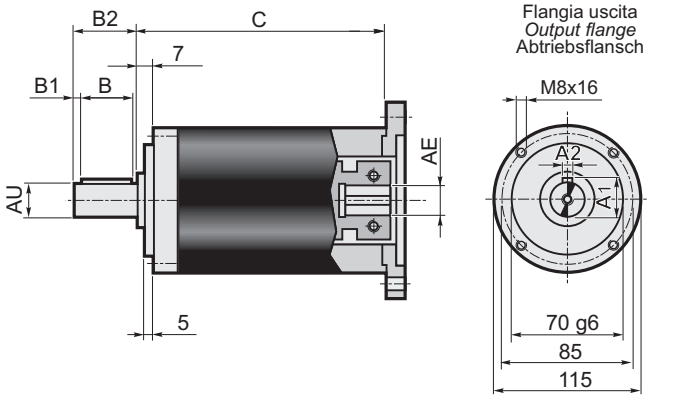
Stadi / *Steps* / Stufenzahl	1				2							3								
i	**3**	**4**	**5**	**7**	**9**	**12**	**16**	**20**	**28**	**35**	**49**	**36**	**48**	**64**	**80**	**100**	**140**	**196**	**245**	**343**
$n_{1\ nom}$	3000				3500							4000								
$n_{1\ max}$	5000																			
$T2_N$	220	230	200	160	250	260	260	260	260	230	180	280	280	280	280	280	280	280	250	200
$T2_A$	350	370	320	300	400	420	420	420	420	370	350	450	450	450	450	450	450	450	400	370
$T2_S$	700	750	650	600	800	850	850	850	850	750	700	900	900	900	900	900	900	900	800	750
J	Vedi pag. 10 / *See on page 10* / Siehe Seite 10																			
LpA	< 70																			
R_d	0.96				0.93							0.91								
L_h	20000																			
F_{R2}	3700																			
F_{A2}	1850																			
R_t	32																			
$_{max}$	4’				6’							8’								
Kg	7.2				9.3							11.4								

i	Rapporto di riduzione nominale	*Nominal ratio*	Nenn-Untersetzungsverhältnis
$n_{1\ nom}$	Velocità nominale in entrata [min^{-1}]	*Nominal input speed [min^{-1}]*	Nenn-Eingangsdrehzahl [min^{-1}]
$n_{1\ max}$	Velocità massima in entrata [min^{-1}]	*Maximum input speed [min^{-1}]*	Maximale Eingangsdrehzahl [min^{-1}]
$T2_N$	Coppia nominale intermittente in uscita [Nm]	*Rated intermittent output torque [Nm]*	Nenn-Abtriebsmoment (im Aussetzbetrieb)[Nm]
$T2_A$	Coppia massima di accelerazione in uscita [Nm]	*Maximum acceleration output torque [*Nm]	Maximales Beschleunigungsmoment am Abtrieb [Nm]
$T2_S$	Coppia massima di emergenza in uscita [Nm]	*Maximum emergency output torque [*Nm]	Maximale Überlast am Abtrieb [Nm]
LpA	Livello di rumorosità dB(A) a 3000 min^{-1}	*Noise level dB(A) at 3000 min^{-1}*	Geräuschpegel dB(A) bei 3000 min^{-1}
Rd	Rendimento dinamico	*Dynamic efficiency*	Dynamischer Wirkungsgrad
L_h	Durata cuscinetti [h]	*Bearing life [h]*	Lebensdauer der Lager [h]
F_{R2}	Carico radiale nominale in uscita [N] a 300min^{-1}	*Rated output radial load [N] at 300min^{-1}*	Nenn-Radiallast an der Abtriebswelle bei 300min^{-1}
F_{A2}	Carico assiale in uscita [N] a 300min^{-1}	*Output axial load [N] at 300min^{-1}*	Axiallast an der Abtriebswelle bei 300min^{-1}
R_t	Rigidità torsionale [Nm / arcmin]	*Torsional rigidity [Nm / arcmin]*	Drehfestigkeit [Nm / arcmin]
J^{max}	Gioco angolare massimo [arcmin]	*Maximum backlash [arcmin]*	Maximale Winkelspiel [arcmin]
	Momento d'inerzia [kg·cm^2]	*Moment of inertia [kg·cm^2]*	Traegheitsmoment [kg·cm^2]

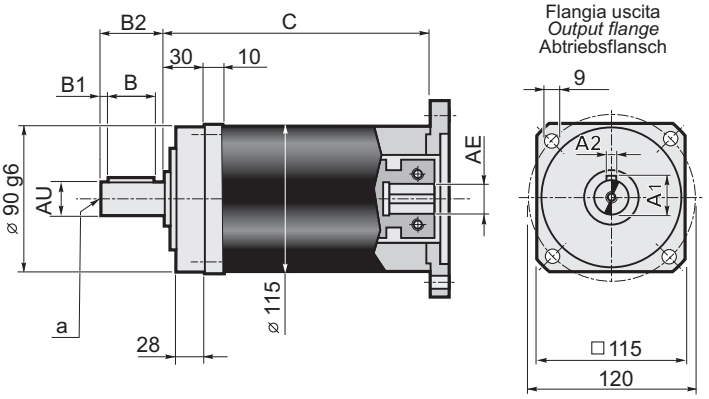
1.10 Dimensioni — 1.10 Dimensions — 1.10 Abmessungen

Dimensioni generali e uscite / *General and output dimensions* / General-und Abtriebsabmessungen

FLT



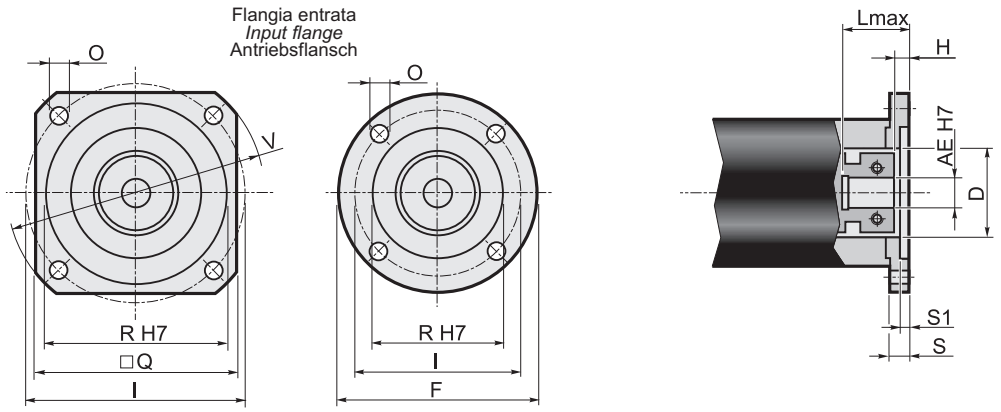
FLQ



Stadi/*Steps*/*Stufenzahl*	1	2	3	
C	126	158.4	191	AE= 12.7-14-15.87-16-19
	145	177	210	AE= 22-24-28

	Albero uscita - *Output shaft* - Abtriebswelle						
	AU j6	**A1**	**A2**	**B**	**B1**	**B2**	**a**
AU25	25	28	8	40	5	50	M8x20
AU32	32	35	10	50	4	58	M10x25

Dimensioni entrate / *Input dimensions* / Antriebsabmessungen



Flange entrata / *Input flange* / Antriebsflansch										Albero entrata - *Input shaft* - Antriebswelle																	
										AE																	
										12.7		14		15.87		16		19		22		24		25		28	
	F	Q	V	I	R (H7)	O	S	S1	D	L max	H	L max	H	L max	H	L max	H	L max	H	L max	H	L max	H	L max	H	L max	H
P01*	=	115	140	125.72	55.52	6.5	13	3	55.52	43	6	35	6	43	6	43	6	43	6	62	6	62	6	62	6	62	6
P02*	115	=	=	75	60	5.5	13	3.5	60	43	6	35	6	43	6	43	6	43	6	62	6	62	6	62	6	62	6
P03*	115	=	=	85	70	6.5	13	3.5	60	43	6	35	6	43	6	43	6	43	6	62	6	62	6	62	6	62	6
P04*	115	=	=	98.42	73.02	6.5	13	3	60	43	6	35	6	43	6	43	6	43	6	62	6	62	6	62	6	62	6
P05*	120	=	=	100	80	6.5	13	4	60	43	6	35	6	43	6	43	6	43	6	62	6	62	6	62	6	62	6
P06*	=	115	140	115	95	9	13	4.5	60	43	6	35	6	43	6	43	6	43	6	62	6	62	6	62	6	62	6
P07	=	115	160	130	110	8.5	13	4.5	60	43	6	35	6	43	6	43	6	43	6	62	6	62	6	62	6	62	6
P08	=	142	190	165	130	11	13	4.5	60	43	6	35	6	43	6	43	6	43	6	62	6	62	6	62	6	62	6
P09	=	192	250	215	180	13	14	4.5	60	44	7	36	7	44	7	44	7	44	7	63	7	63	7	63	7	63	7
P10*	115	=	=	65	50	6.5	13	3.5	50	43	6	35	6	43	6	43	6	43	6	62	6	62	6	62	6	62	6
P11	=	130	170	145	110	M 8	31	7	60	61	24	53	24	61	24	61	24	61	24	80	24	80	24	80	24	80	24
P12	=	130	170	145	110	M 8	17	7	60	47	10	39	10	47	10	47	10	47	10	66	10	66	10	66	10	66	10
P13	=	115	160	130	110	M 8	13	4.5	60	43	6	35	6	43	6	43	6	43	6	62	6	62	6	62	6	62	6
P14*	115	=	=	70	50	6.5	13	3.5	50	43	6	35	6	43	6	43	6	43	6	62	6	62	6	62	6	62	6
P15	115	=	=	90	70	M5	11	3.5	60	41	4	33	4	41	4	41	4	41	4	60	4	60	4	60	4	60	4
P17*	115	=	=	90	70	6.5	13	3.5	60	43	6	35	6	43	6	43	6	43	6	62	6	62	6	62	6	62	6
P18	=	115	155	130	95	8.5	13	4.5	60	43	6	35	6	43	6	43	6	43	6	62	6	62	6	62	6	62	6
P19*	115	=	=	95	50	6.5	13	3.5	50	43	6	35	6	43	6	43	6	43	6	62	6	62	6	62	6	62	6
P20	115	=	=	99	60	M6	13	4	60	43	6	35	6	43	6	43	6	43	6	62	6	62	6	62	6	62	6
P21*	130	=	=	106	82.5	12.5	26.5	15	60	56.5	19.5	48.5	17.5	56.5	19.5	56.5	19.5	56.5	19.5	75.5	19.5	75.5	19.5	75.5	19.5	75.5	19.5

* Per assemblare il motore è necessario smontare la flangia dal riduttore (vedere **schema di montaggio 2** a pag. 25).

** To mount the motor it is necessary to remove the gearbox flange (see **assembly drawing 2** on page 25).*

* Vor dem Einbauen des Motors soll die Getriebeflansch abmontiert werden (siehe **Bauanleitung 2** auf Seite 25).

1.9 Dati tecnici — *1.9 Technical data* — 1.9 Technische daten

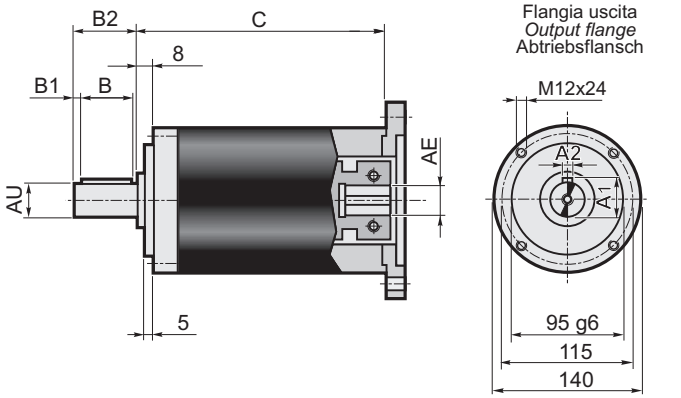
Stadi / *Steps* / Stufenzahl	1				2							3								
i	**3**	**4**	**5**	**7**	**9**	**12**	**16**	**20**	**28**	**35**	**49**	**36**	**48**	**64**	**80**	**100**	**140**	**196**	**245**	**343**
$n_{1\ nom}$	3000				3500							4000								
$n_{1\ max}$	5000																			
$T2_N$	430	470	410	340	500	560	560	560	560	470	370	600	600	600	600	600	600	600	500	450
$T2_A$	700	750	650	600	800	900	900	900	900	750	700	950	950	950	950	950	950	950	800	750
$T2_S$	1400	1500	1300	1200	1600	1800	1800	1800	1800	1500	1400	1900	1900	1900	1900	1900	1900	1900	1600	1500
J	Vedi pag. 10 / *See on page 10* / Siehe Seite 10																			
LpA	< 70																			
R_d	0.96				0.93							0.91								
L_h	20000																			
F_{R2}	6600																			
F_{A2}	3300																			
R_t	60																			
$_{max}$	4’				6’							8’								
Kg	13.0				17.0							21								

i	Rapporto di riduzione nominale	*Nominal ratio*	Nenn-Untersetzungsverhältnis
$n_{1\ nom}$	Velocità nominale in entrata [min^{-1}]	*Nominal input speed [min^{-1}]*	Nenn-Eingangsdrehzahl [min^{-1}]
$n_{1\ max}$	Velocità massima in entrata [min^{-1}]	*Maximum input speed [min^{-1}]*	Maximale Eingangsdrehzahl [min^{-1}]
$T2_N$	Coppia nominale intermittente in uscita [Nm]	*Rated intermittent output torque [Nm]*	Nenn-Abtriebsmoment (im Aussetzbetrieb)[Nm]
$T2_A$	Coppia massima di accelerazione in uscita [Nm]	*Maximum acceleration output torque [*Nm]	Maximales Beschleunigungsmoment am Abtrieb [Nm]
$T2_S$	Coppia massima di emergenza in uscita [Nm]	*Maximum emergency output torque [*Nm]	Maximale Überlast am Abtrieb [Nm]
LpA	Livello di rumorosità dB(A) a 3000 min^{-1}	*Noise level dB(A) at 3000 min^{-1}*	Geräuschpegel dB(A) bei 3000 min^{-1}
Rd	Rendimento dinamico	*Dynamic efficiency*	Dynamischer Wirkungsgrad
L_h	Durata cuscinetti [h]	*Bearing life [h]*	Lebensdauer der Lager [h]
F_{R2}	Carico radiale nominale in uscita [N] a 300min^{-1}	*Rated output radial load [N] at 300min^{-1}*	Nenn-Radiallast an der Abtriebswelle bei 300min^{-1}
F_{A2}	Carico assiale in uscita [N] a 300min^{-1}	*Output axial load [N] at 300min^{-1}*	Axiallast an der Abtriebswelle bei 300min^{-1}
R_t	Rigidità torsionale [Nm / arcmin]	*Torsional rigidity [Nm / arcmin]*	Drehfestigkeit [Nm / arcmin]
J^{max}	Gioco angolare massimo [arcmin]	*Maximum backlash [arcmin]*	Maximale Winkelspiel [arcmin]
	Momento d'inerzia [kg·cm^2]	*Moment of inertia [kg·cm^2]*	Traegheitsmoment [kg·cm^2]

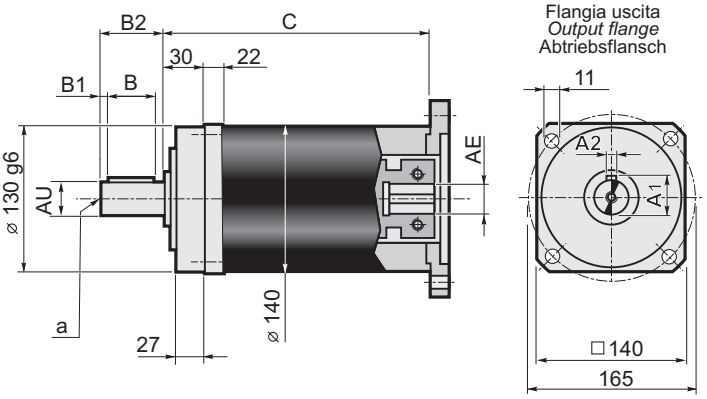
1.10 Dimensioni — *1.10 Dimensions* — 1.10 Abmessungen

Dimensioni generali e uscite / *General and output dimensions* / General-und Abtriebsabmessungen

FLT



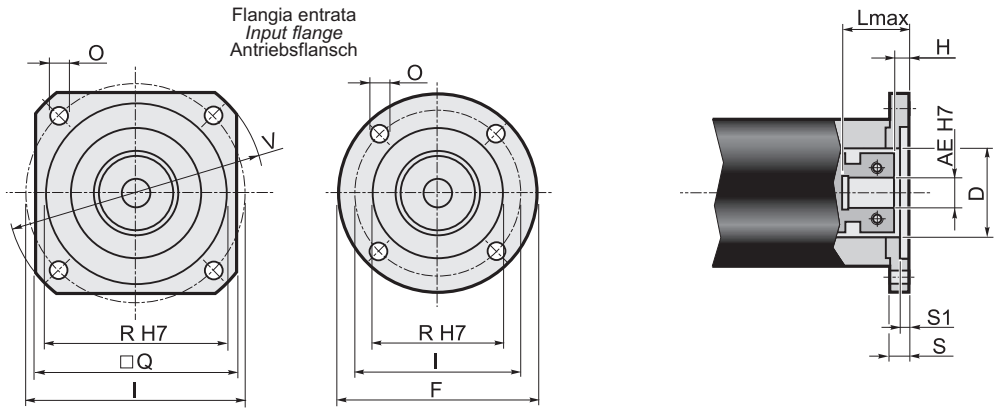
FLQ



Stadi/*Steps*/*Stufenzahl*	1	2	3	
C	160	201	242	AE= 15.87-16-19-22-24
	185	226	267	AE= 28-32-35-38

	Albero uscita - *Output shaft* - Abtriebswelle						
	AU j6	**A1**	**A2**	**B**	**B1**	**B2**	**a**
AU38	38	41	10	70	5	80	M10x25
AU40	40	43	12	70	5	80	M10x25

Dimensioni entrate / *Input dimensions* / Antriebsabmessungen



Flange entrata / *Input flange* / Antriebsflansch										Albero entrata - *Input shaft* - Antriebswelle																	
										AE																	
										15.87		16		19		22		24		28		32		35		38	
	F	Q	V	I	R (H7)	O	S	S1	D	L max	H	L max	H	L max	H	L max	H	L max	H	L max	H	L max	H	L max	H	L max	H
P01*	140	=	=	125.72	55.52	6.5	15	4	55.52	57.8	6.8	57.8	6.8	42.8	6.8	57.8	6.8	57.8	6.8	82.8	7.3	82.8	7.3	82.8	7.3	82.8	7.3
P02*	140	=	=	100	80	6.5	15	4	70	57.8	6.8	57.8	6.8	42.8	6.8	57.8	6.8	57.8	6.8	82.8	7.3	82.8	7.3	82.8	7.3	82.8	7.3
P03*	140	=	=	115	95	8.5	15	4.5	70	57.8	6.8	57.8	6.8	42.8	6.8	57.8	6.8	57.8	6.8	82.8	7.3	82.8	7.3	82.8	7.3	82.8	7.3
P04*	=	140	160	130	110	8.5	15	4.5	70	57.8	6.8	57.8	6.8	42.8	6.8	57.8	6.8	57.8	6.8	82.8	7.3	82.8	7.3	82.8	7.3	82.8	7.3
P05	=	142	190	165	130	11	15	4.5	70	57.8	6.8	57.8	6.8	42.8	6.8	57.8	6.8	57.8	6.8	82.8	7.3	82.8	7.3	82.8	7.3	82.8	7.3
P06	=	190	250	215	180	13	15	4.5	70	57.8	6.8	57.8	6.8	42.8	6.8	57.8	6.8	57.8	6.8	82.8	7.3	82.8	7.3	82.8	7.3	82.8	7.3
P07	=	250	300	265	230	13	15	4.5	70	57.8	6.8	57.8	6.8	42.8	6.8	57.8	6.8	57.8	6.8	82.8	7.3	82.8	7.3	82.8	7.3	82.8	7.3
P08	=	130	165	145	110	M 8	18	7	70	60.8	9.8	60.8	9.8	45.8	9.8	60.8	9.8	60.8	9.8	85.8	10.3	85.8	10.3	85.8	10.3	85.8	10.3
P09	=	180	230	200	114.3	13.5	22	11	70	64.8	13.8	64.8	13.8	49.8	13.8	64.8	13.8	64.8	13.8	89.8	14.3	89.8	14.3	89.8	14.3	89.8	14.3
P10	=	115	150	130	95	M 8	15	4.5	70	57.8	6.8	57.8	6.8	42.8	6.8	57.8	6.8	57.8	6.8	82.8	7.3	82.8	7.3	82.8	7.3	82.8	7.3
P11	=	180	230	198	155	13.5	22	7	120x11	64.8	13.8	64.8	13.8	49.8	13.8	64.8	13.8	64.8	13.8	89.8	14.3	89.8	14.3	89.8	14.3	89.8	14.3
P12	=	220	270	235	200	13.5	15	5	70	57.8	6.8	57.8	6.8	42.8	6.8	57.8	6.8	57.8	6.8	82.8	7.3	82.8	7.3	82.8	7.3	82.8	7.3
P13	=	190	250	215	130	13	15	4.5	70	57.8	6.8	57.8	6.8	42.8	6.8	57.8	6.8	57.8	6.8	82.8	7.3	82.8	7.3	82.8	7.3	82.8	7.3
P14	=	142	190	165	110	11	15	4.5	70	57.8	6.8	57.8	6.8	42.8	6.8	57.8	6.8	57.8	6.8	82.8	7.3	82.8	7.3	82.8	7.3	82.8	7.3
P15*	150	=	=	90	70	6.5	15	4	70	57.8	6.8	57.8	6.8	42.8	6.8	57.8	6.8	57.8	6.8	82.8	7.3	82.8	7.3	82.8	7.3	82.8	7.3

* Per assemblare il motore è necessario smontare la flangia dal riduttore (vedere **schema di montaggio 2** a pag. 25).

** To mount the motor it is necessary to remove the gearbox flange (see **assembly drawing 2** on page 25).*

* Vor dem Einbauen des Motors soll die Getriebeflansch abmontiert werden (siehe **Bauanleitung 2** auf Seite 25).