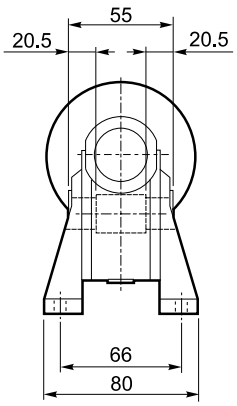
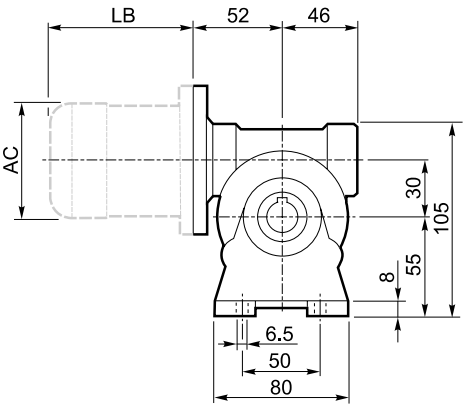
VF 30□...P(IEC)

A





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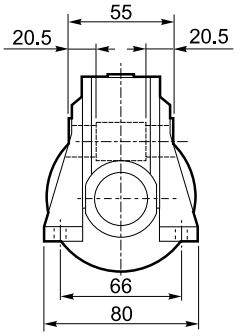

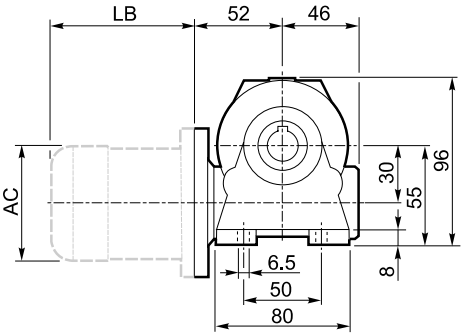

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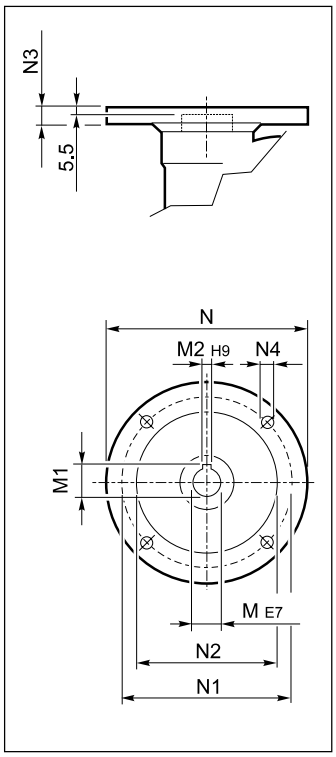

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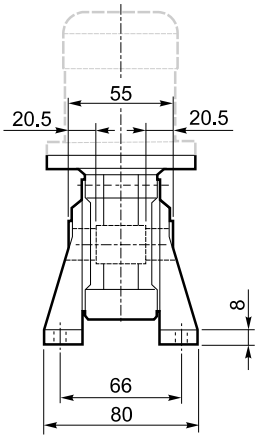

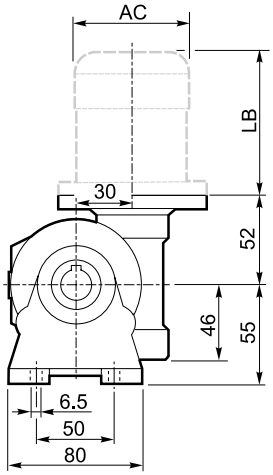

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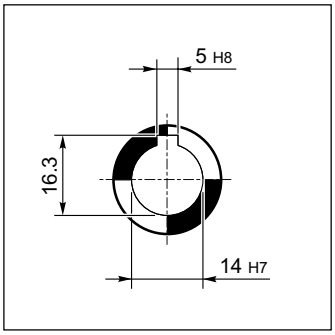

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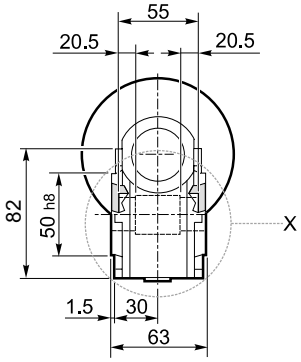

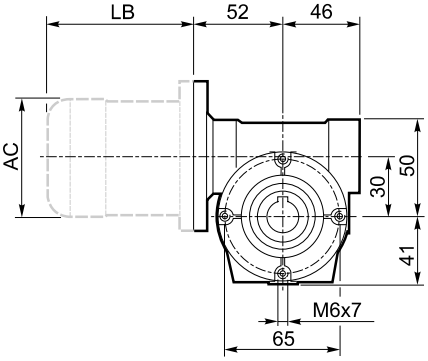

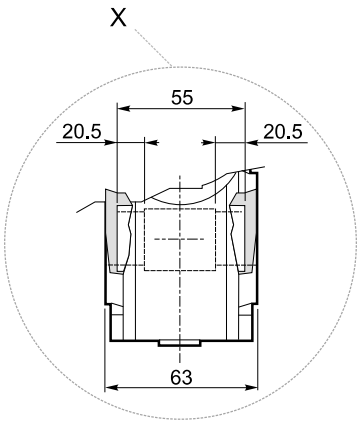

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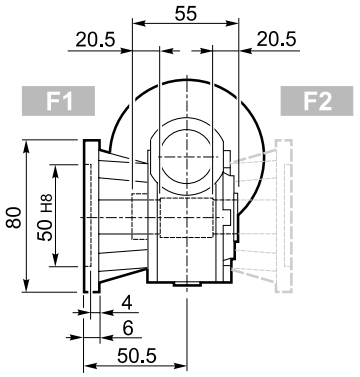
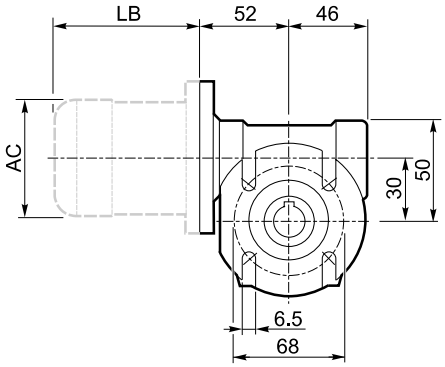
VF 30□...P(IEC)

F_





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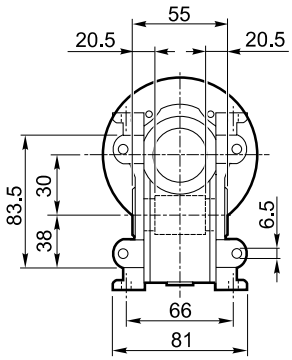

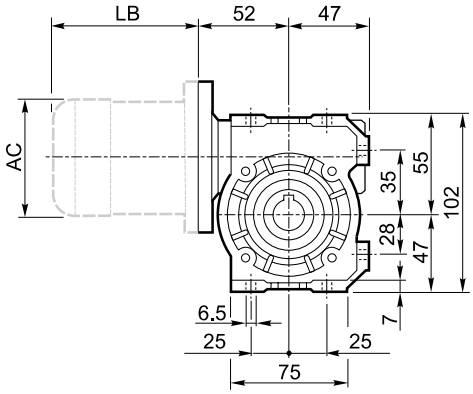

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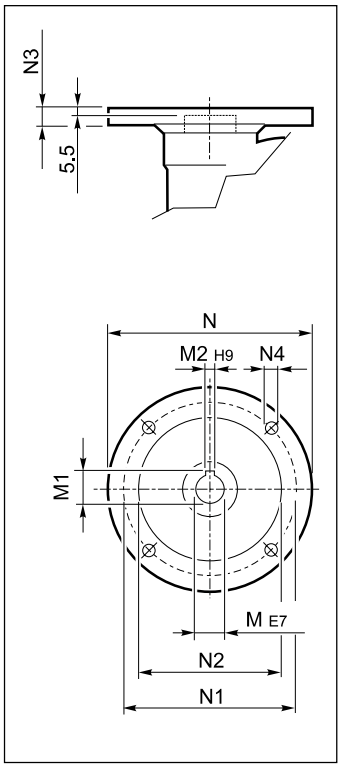
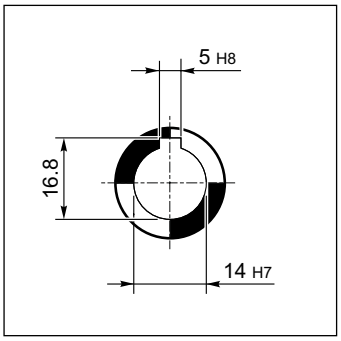


OUTPUT



VF 30_												BN		BN...FD BN...FA		K		K...FC	
		M	M1	M2	N	N1	N2	N3	N4	kg	IEC	LB	AC	LB	AC	LB	AC	LB	AC
VF 30	**P56 B5**	9	10.4	3	120	100	80	7	7	1.1	56	165	110	—	—	—	—	—	—
VF 30	**P56 B14**	9	10.4	3	80	65	50	7	5.5		56	165	110	—	—	—	—	—	—
VF 30	**P63 B5**	11	12.8	4	140	115	95	8	9.5		63	184	121	249	121	165	122	214	122
VF 30	**P63 B14**	11	12.8	4	90	75	60	6	5.5		63	184	121	249	121	—	—	—	—

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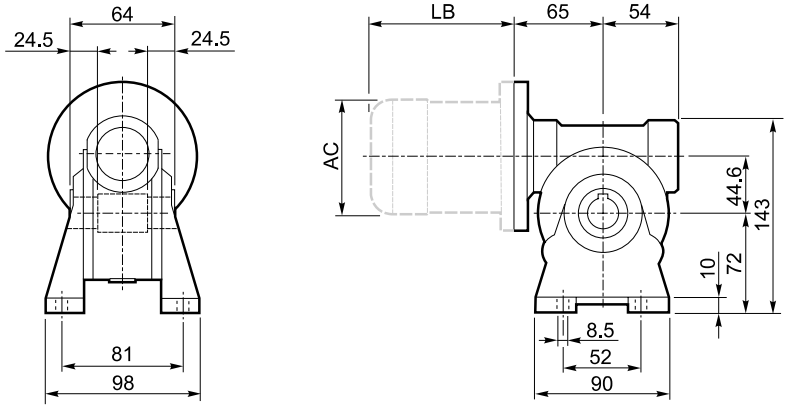
VF 44□...P(IEC)

A



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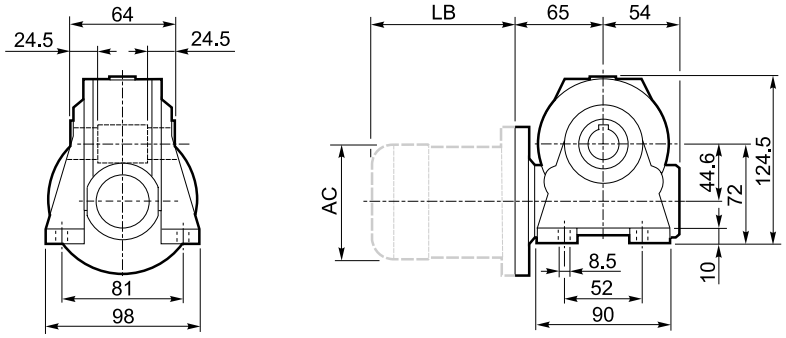
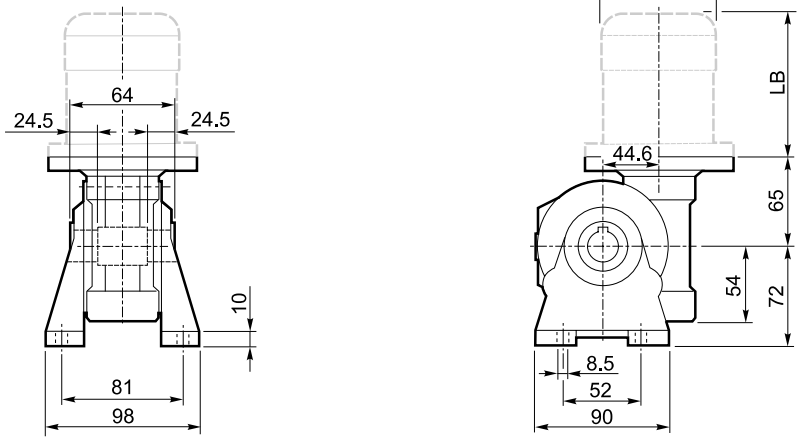


V



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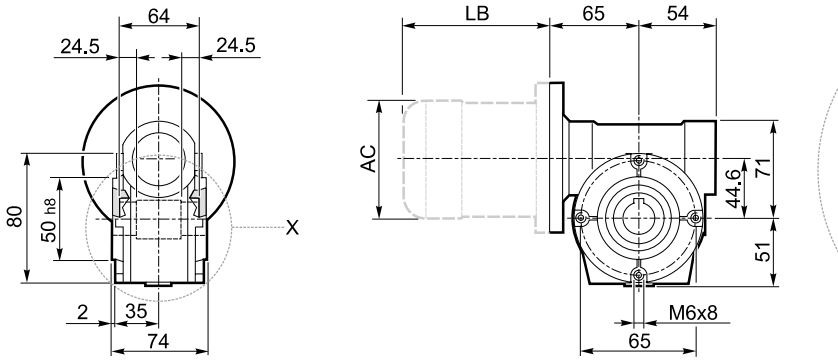
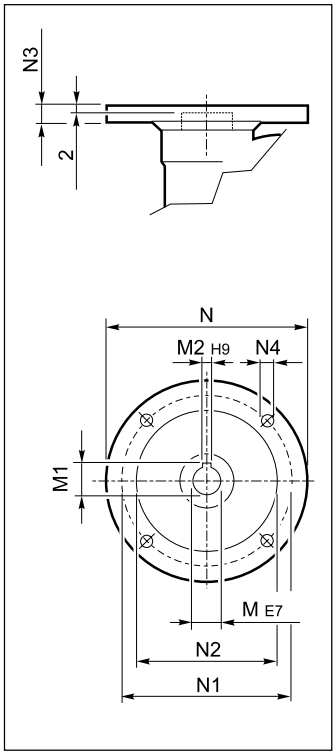


INPUT



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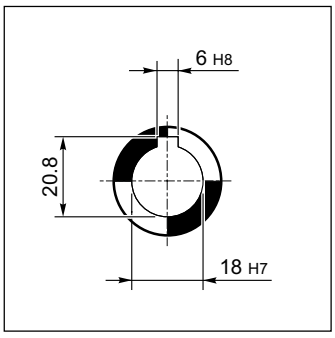

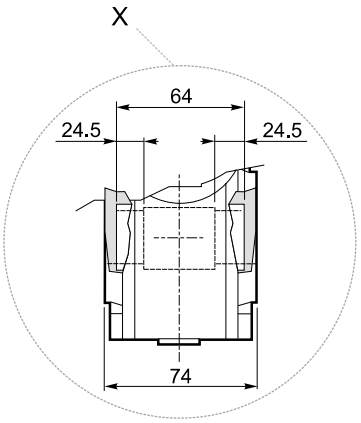

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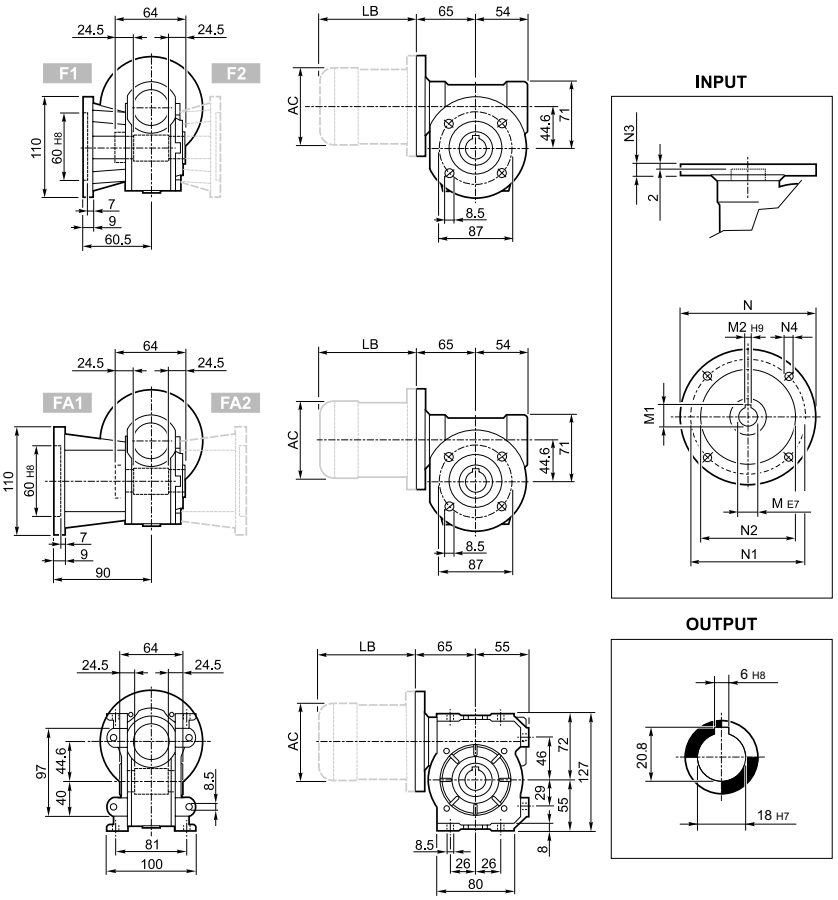
VF 44□...P(IEC)

F_



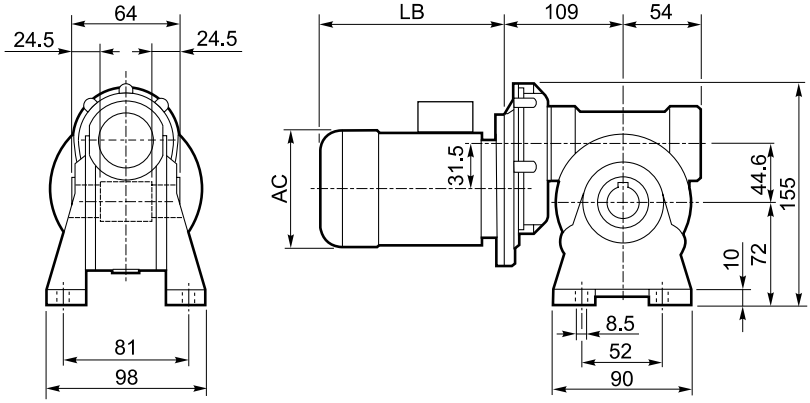
FA_

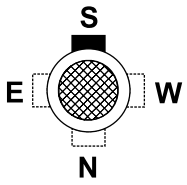
U

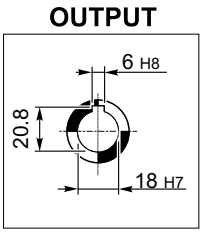
VF 44_												BN		BN...FD BN...FA		K		K...FC	
		M	M1	M2	N	N1	N2	N3	N4	kg	IEC	LB	AC	LB	AC	LB	AC	LB	AC
VF 44	**P63 B5**	11	12.8	4	140	115	95	10	9.5	2.0	63	184	121	249	121	165	122	214	122
VF 44	**P71 B5**	14	16.3	5	160	130	110	10	9.5		71	219	138	280	138	186	139	219	139
VF 44	**P63 B14**	11	12.8	4	90	75	60	8	5.5		63	184	121	249	121	—	—	—	—
VF 44	**P71 B14**	14	16.3	5	105	85	70	10	7		71	219	138	280	138	—	—	—	—

VFR 44□...BN 44□

A







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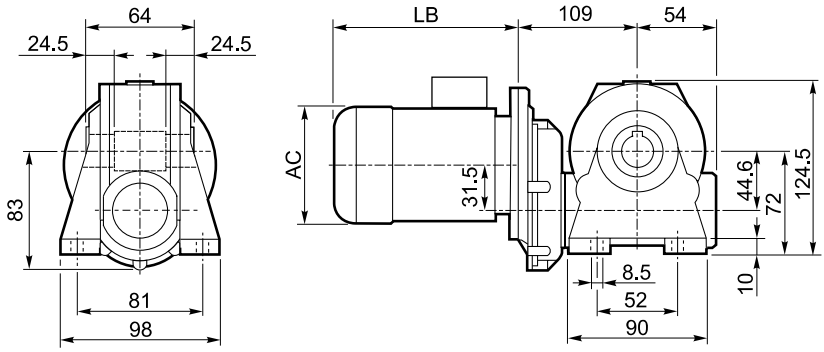
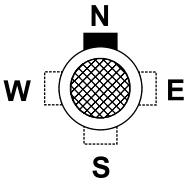
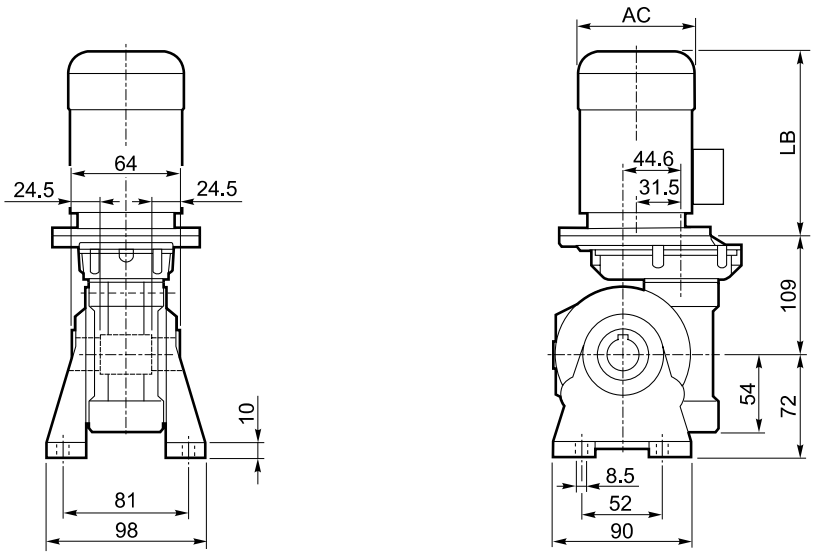
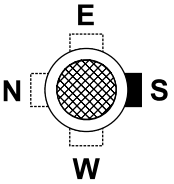


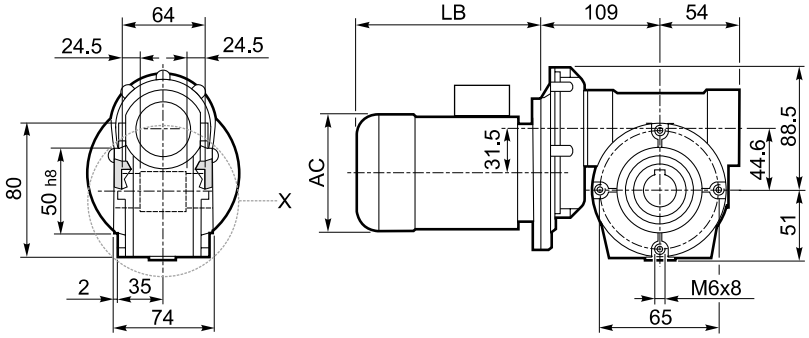


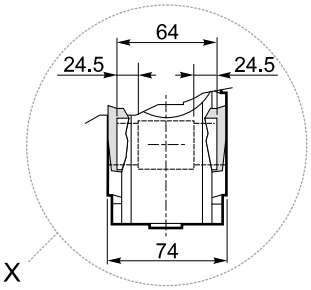
V

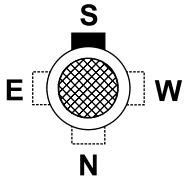




P







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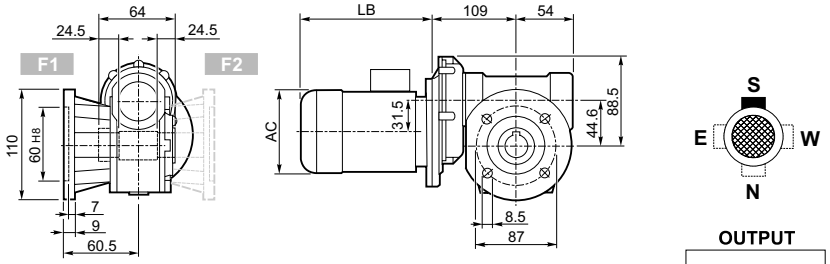
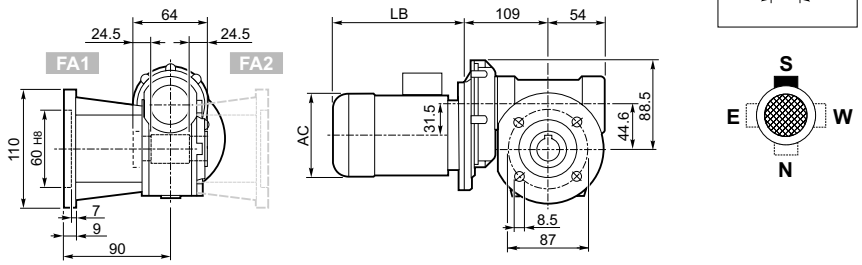
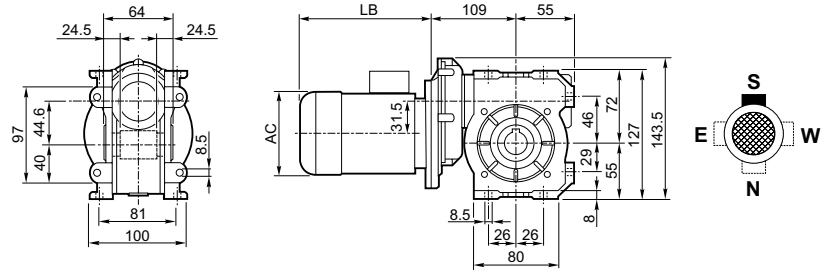
VFR 44□...BN 44□

F_



FA_





U

	VFR 44_													
	P_n kW	n min^{-1}	M_n Nm	η %	cosφ	In A (400V)	Is / In	Ms / Mn	Ma / Mn	Jm (• 10^{-4}) kgm^2	kg	LB	AC	AD
BN 44B4	0.06	1380	0.42	40	0.58	0.38	2.4	2.3	1.9	1.22	4.7	168	112	94
BN 44C4	0.09	1380	0.63	46	0.65	0.43	2.8	2.3	2	1.49	4.6	168	112	94

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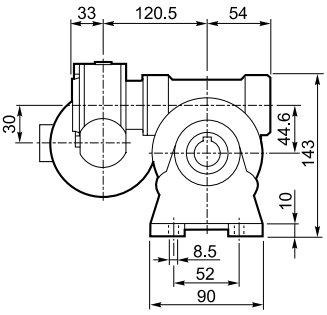
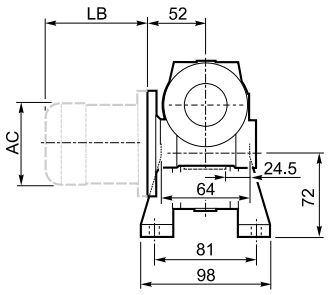
VF/VF 30/44□...P(IEC)

A





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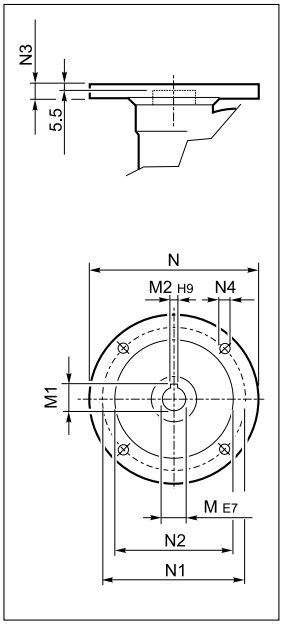

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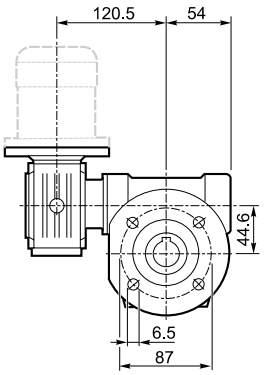
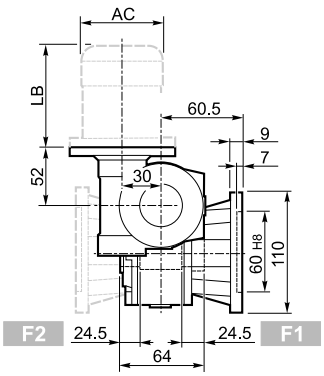
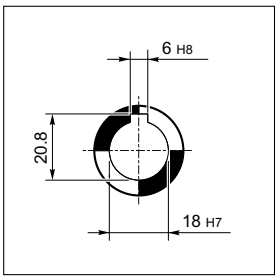
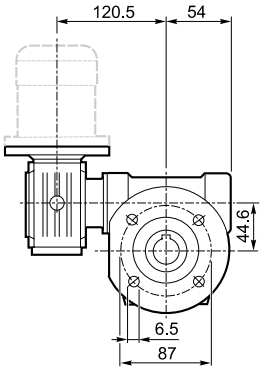


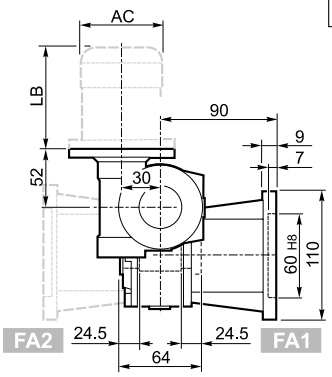


OUTPUT



FA_





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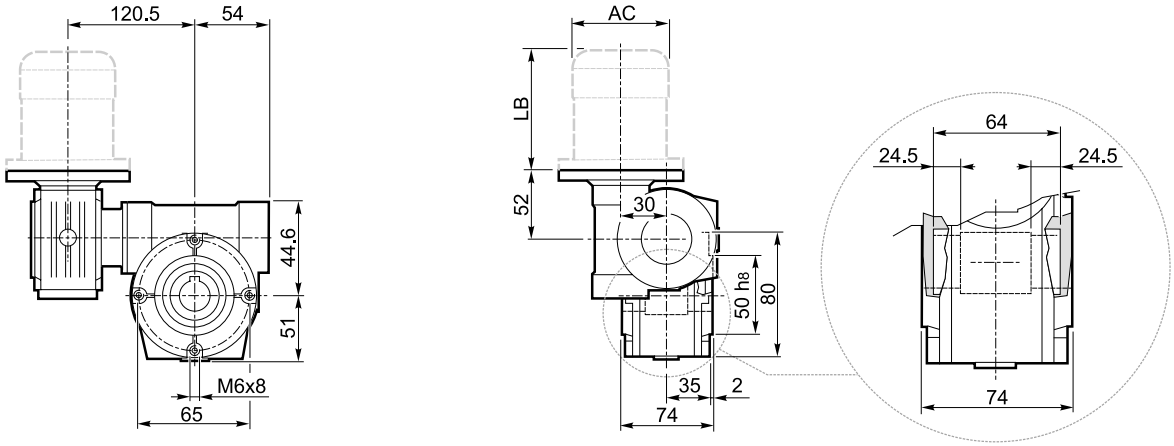
VF/VF 30/44□...P(IEC)

P



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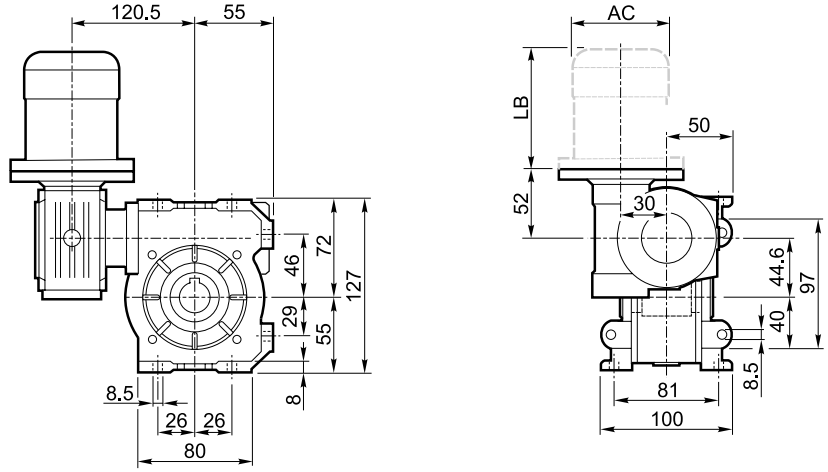

VF/VF 30/44_											BN		BN...FD BN...FA	
		M	M1	M2	N	N1	N2	N3	N4	Kg	IEC	LB	AC	LB	AC
VF/VF 30/44	**P56 B14**	9	10.4	3	80	65	50	7	5.5	3.5	**BN 56**	165	110	—	—
VF/VF 30/44	**P63 B14**	11	12.8	4	90	75	60	6	5.5		**BN 63**	184	121	249	121

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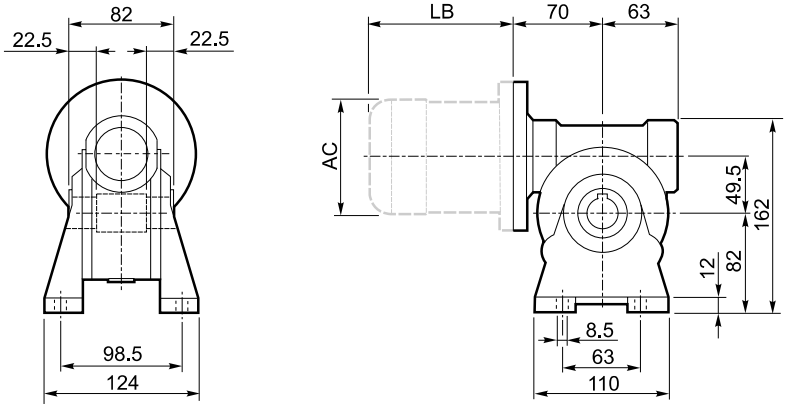
VF 49□...P(IEC)

A



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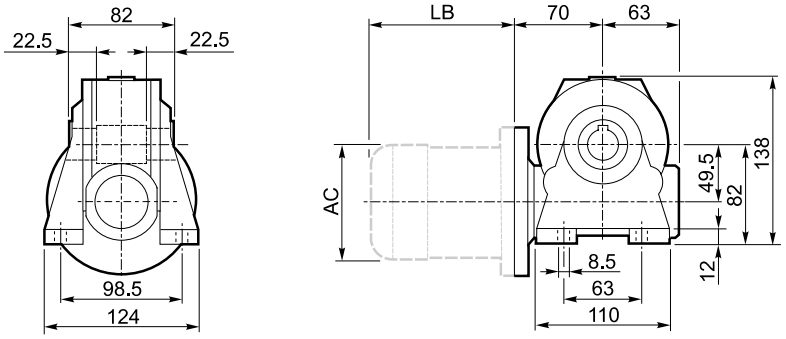
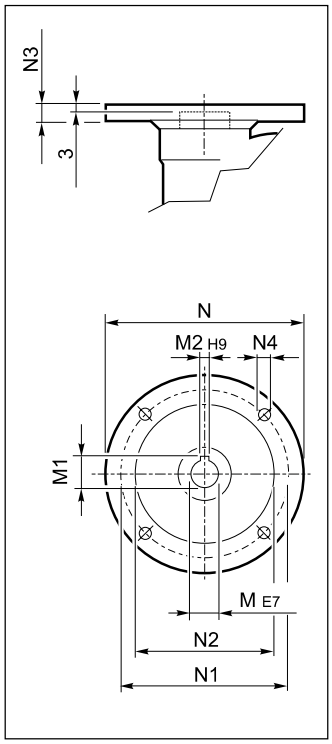
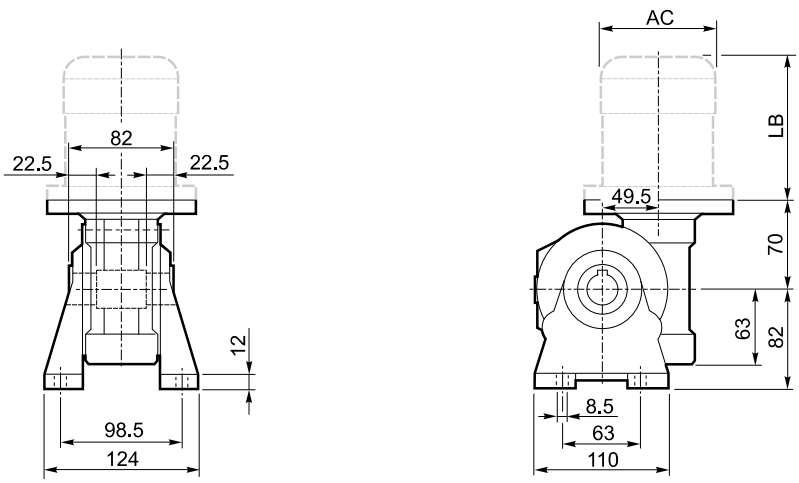


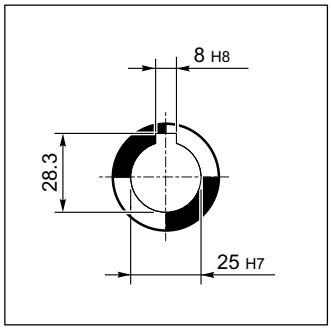
INPUT



V



OUTPUT



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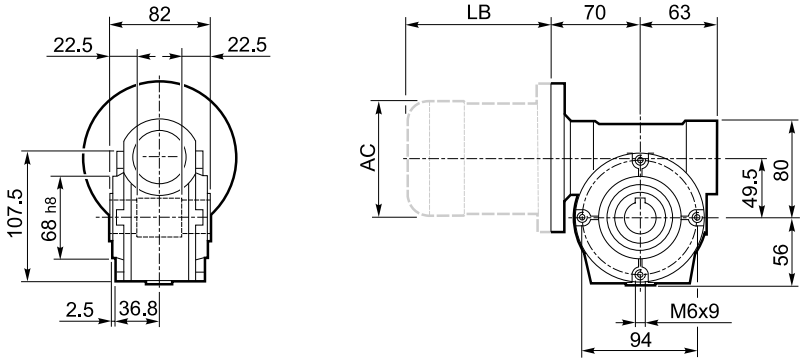

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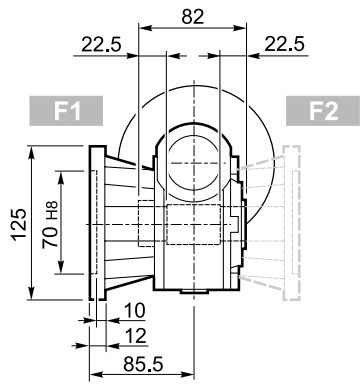
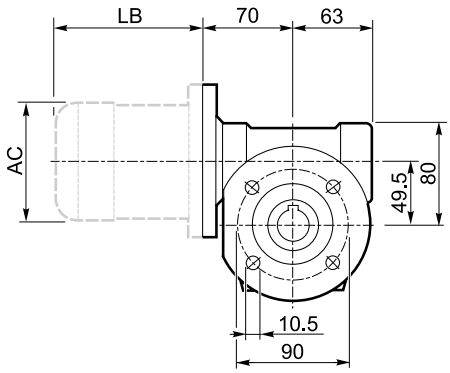
VF 49□...P(IEC)

F_





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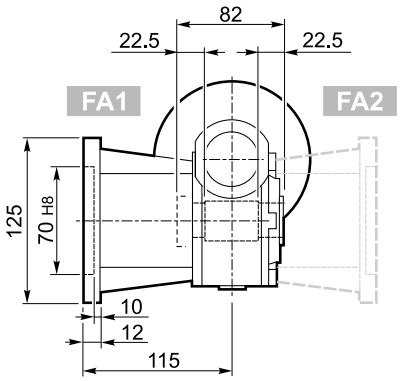

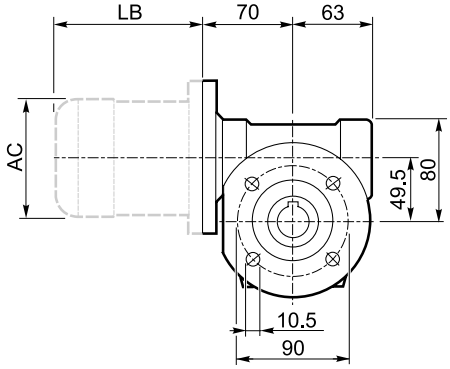

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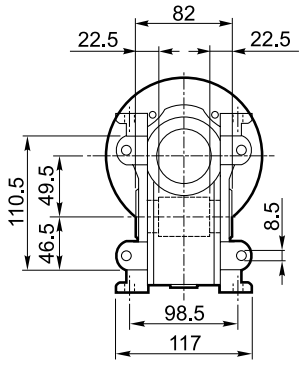

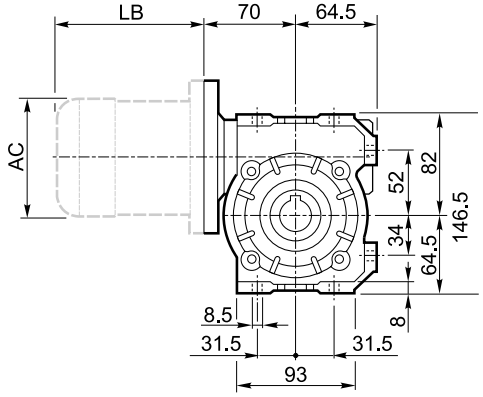

VF 49_												BN		BN...FD BN...FA		K		K...FC	
		M	M1	M2	N	N1	N2	N3	N4	kg	IEC	LB	AC	LB	AC	LB	AC	LB	AC
VF 49	**P63 B5**	11	12.8	4	140	115	95	10.5	9.5	3.0	63	184	121	249	121	165	122	214	122
VF 49	**P71 B5**	14	16.3	5	160	130	110	10.5	9.5		71	219	138	280	138	186	139	219	139
VF 49	**P80 B5**	19	21.8	6	200	165	130	10	11.5		80	234	156	306	156	—	—	—	—
VF 49	**P63 B14**	11	12.8	4	90	75	60	7	6		63	184	121	249	121	—	—	—	—
VF 49	**P71 B14**	14	16.3	5	105	85	70	10.5	6.5		71	219	138	280	138	—	—	—	—
VF 49	**P80 B14**	19	21.8	6	120	100	80	10	7		80	234	156	306	156	—	—	—	—

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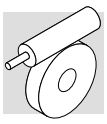
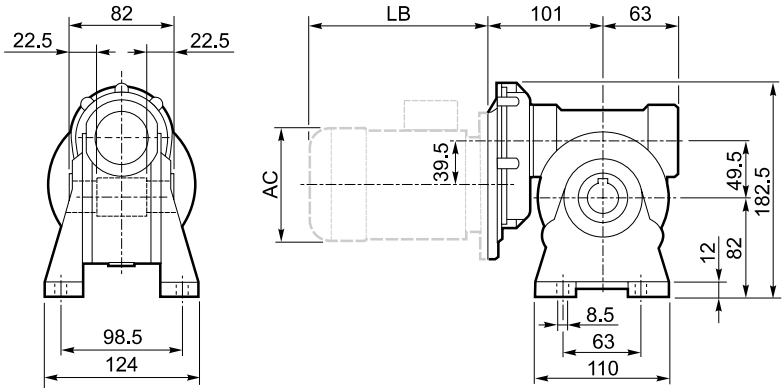


VFR 49□...P(IEC)

A



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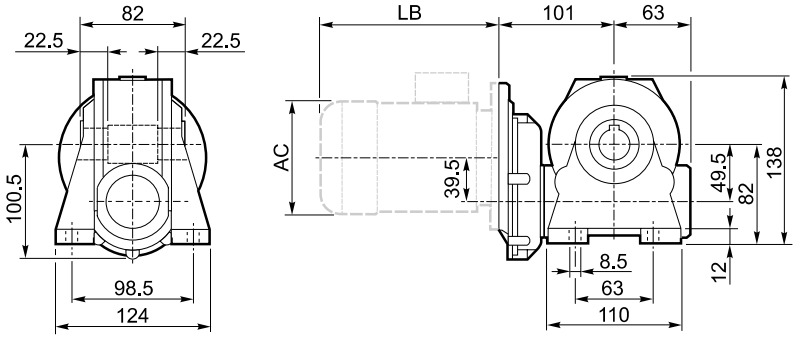

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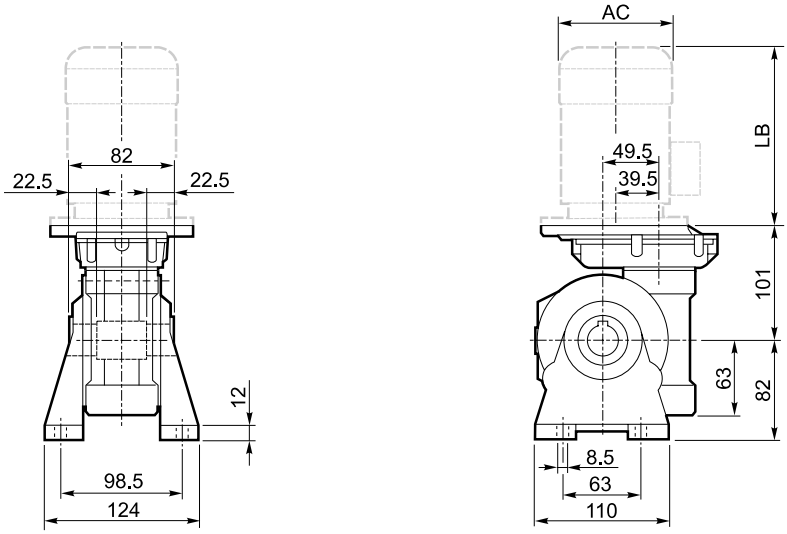

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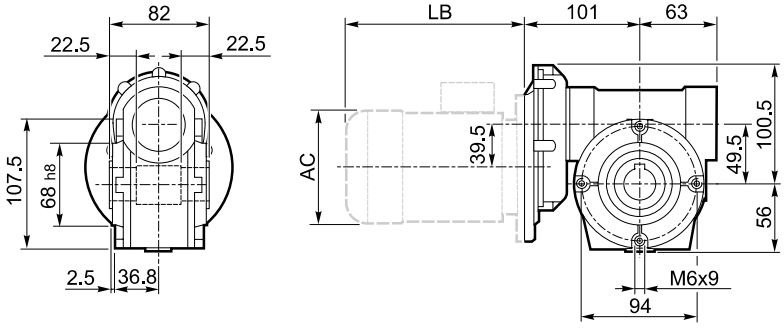

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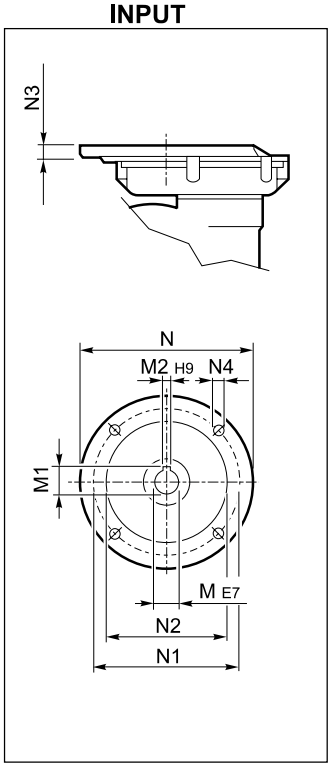
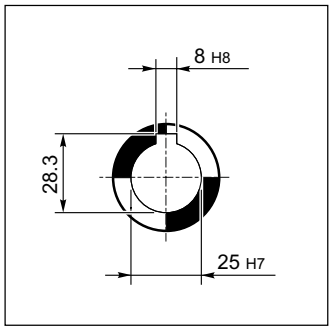


OUTPUT



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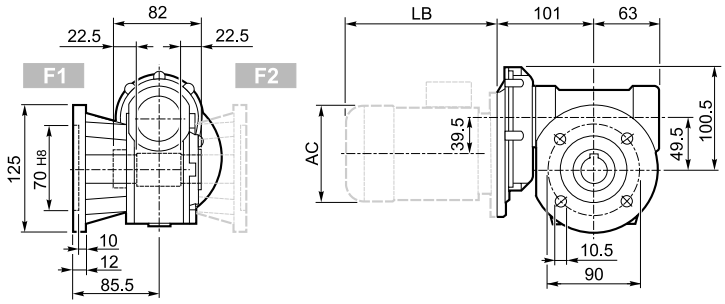
VFR 49□...P(IEC)

F_



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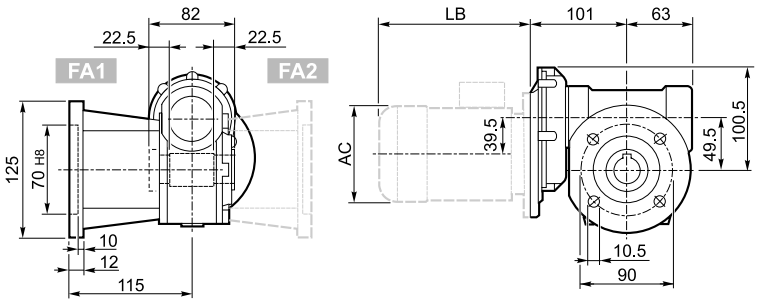

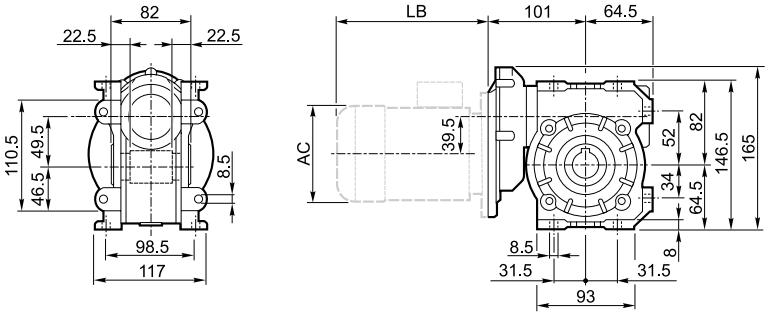

U

VFR 49_												BN		BN...FD BN...FA	
		M	M1	M2	N	N1	N2	N3	N4	kg	IEC	LB	AC	LB	AC
VFR 49	P63 B5	11	12.8	4	140	115	95	11	M8 x 19	5.0	BN 63	184	121	249	121

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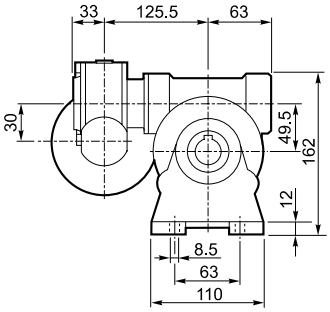
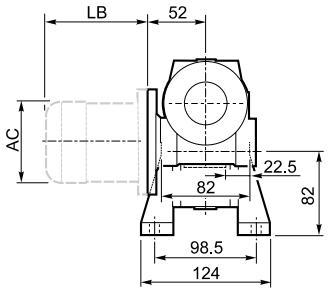
VF/VF 30/49□...P(IEC)

A





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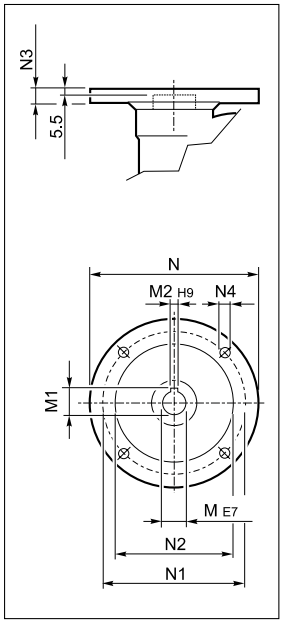

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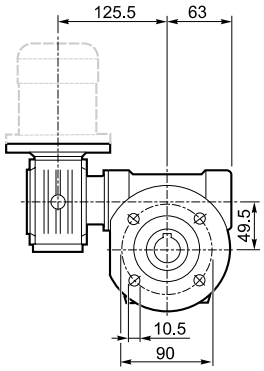

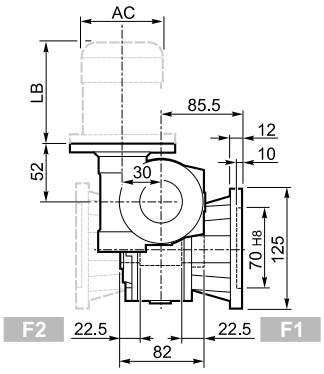

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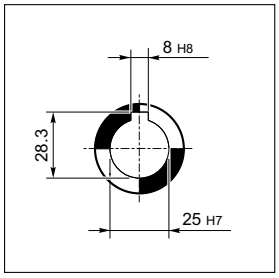

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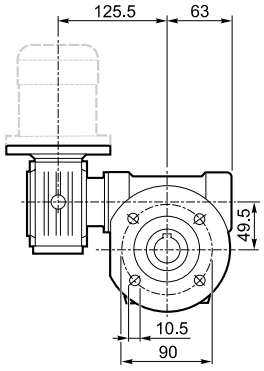

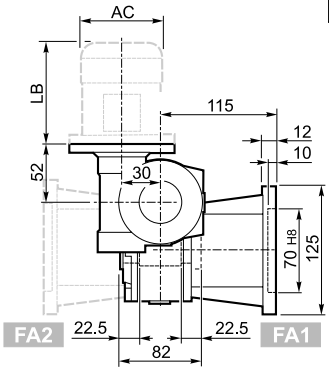

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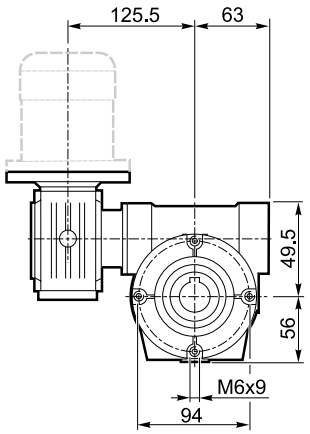
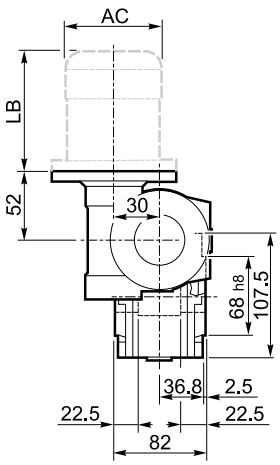
VF/VF 30/49□...P(IEC)

P





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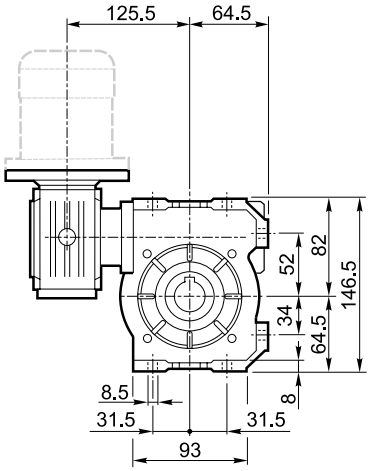

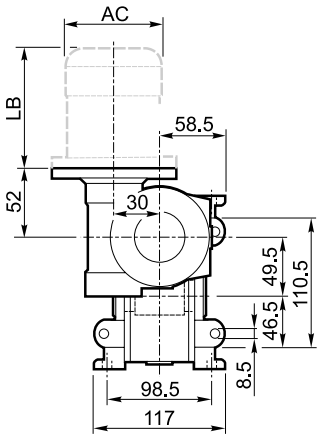

VF/VF 30/49_												BN		BN...FD BN...FA	
		M	M1	M2	N	N1	N2	N3	N4	Kg	IEC	LB	AC	LB	AC
VF/VF 30/49	P56 B14	9	10.4	3	80	65	50	7	5.5	4.5	BN 56	165	110	—	—
VF/VF 30/49	P63 B14	11	12.8	4	90	75	60	6	5.5		BN 63	184	121	249	121

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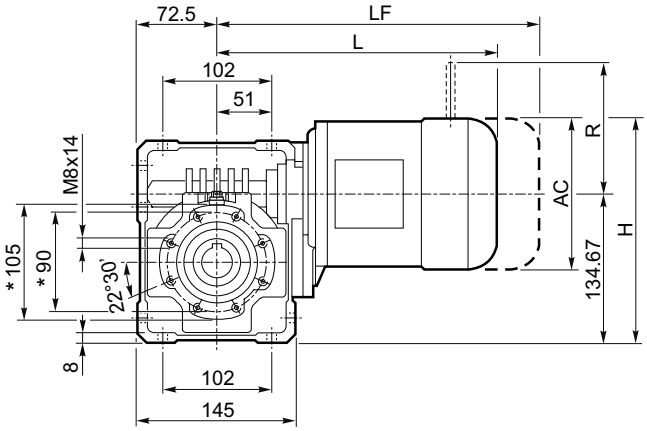
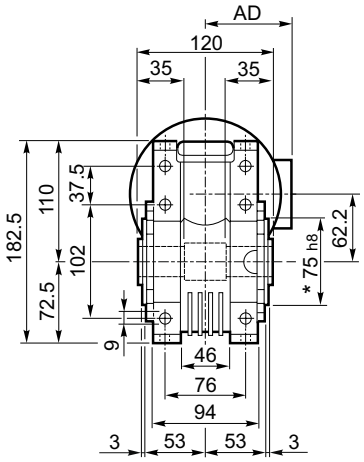
W 63□...S□

U





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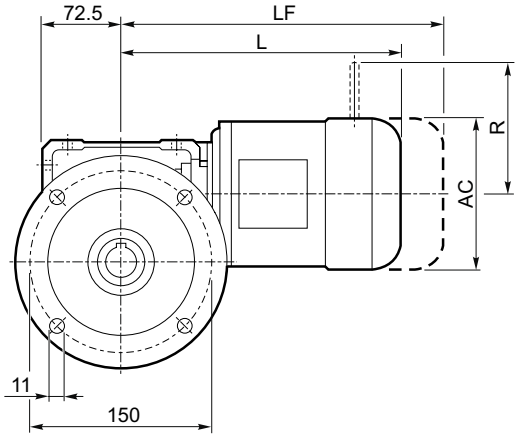

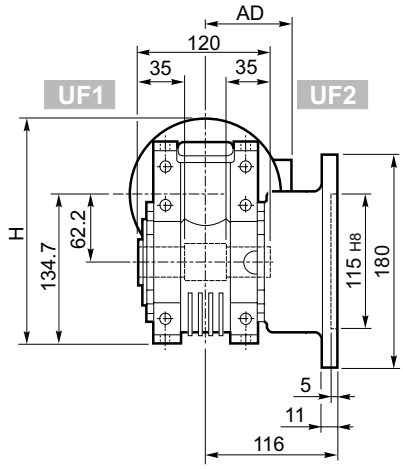

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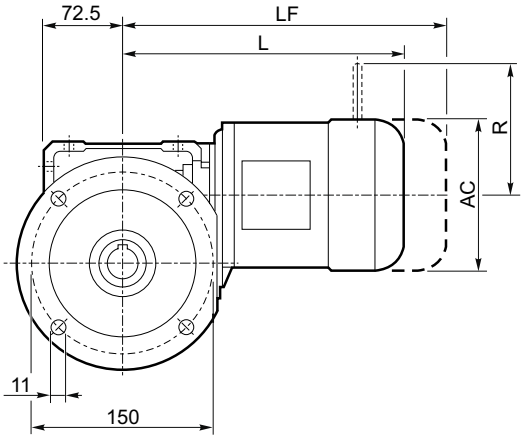
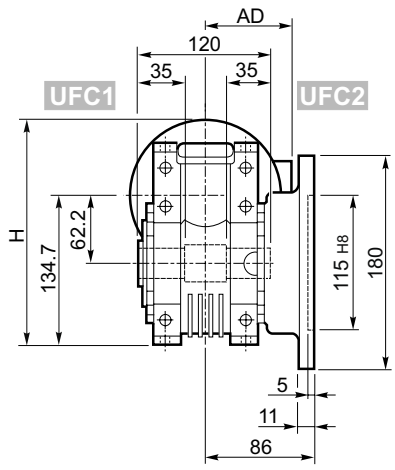
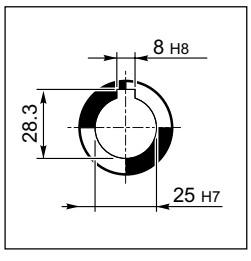




W 63													
					M_			M...FD M...FA		M...FD		M...FA	
			AC	H	L	AD	Kg	LF	Kg	R	AD	R	AD
W 63	**S1**	**M1S**	138	204	265	108	11	328	13	103	132	124	108
W 63	**S1**	**M1L**	138	204	289	108	13	350	15	103	132	124	108
W 63	**S2**	**M2S**	156	213	317	119	17	393	20	129	143	134	119

OUTPUT



* De ambos lados / *On both sides* /Auf beiden seiten / *Tous le deux cotés*

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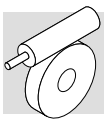
W 63□...P(IEC)



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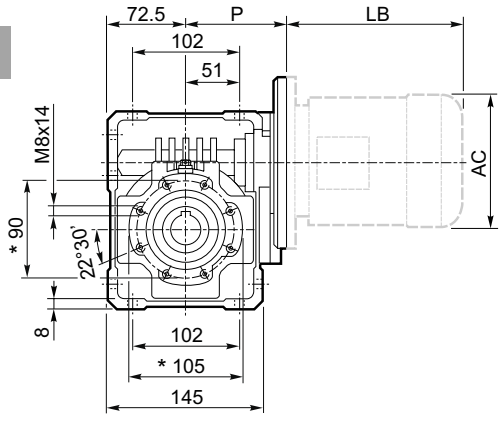

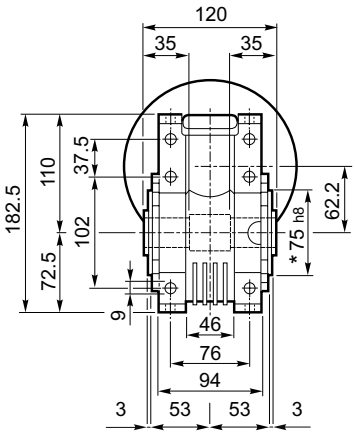

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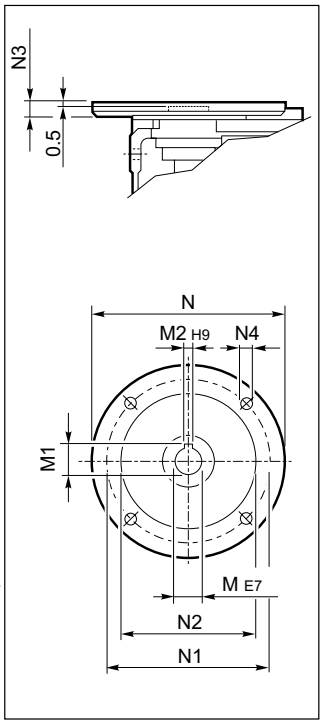

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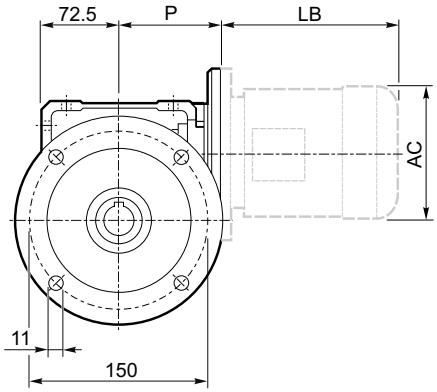
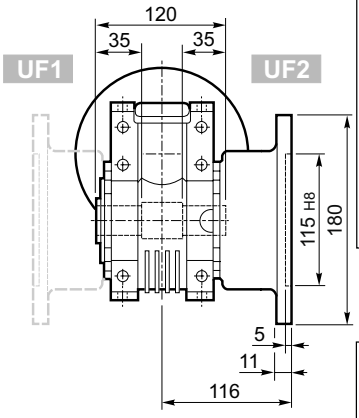
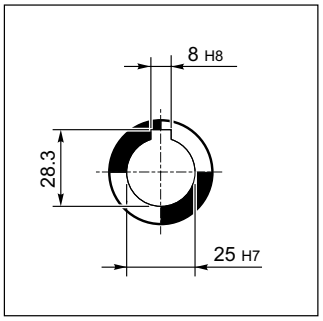
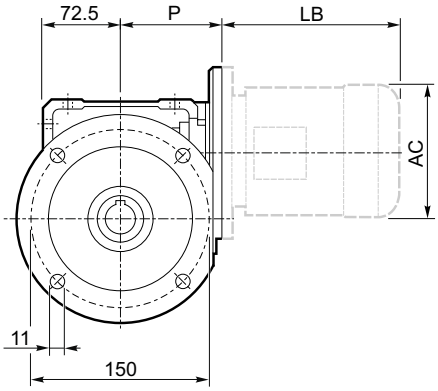


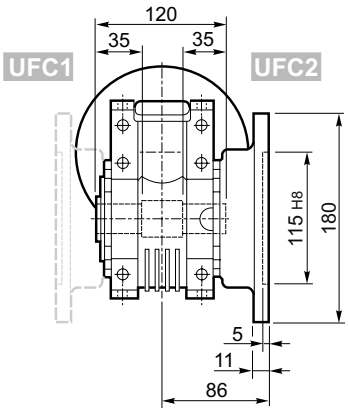


OUTPUT



UFC_

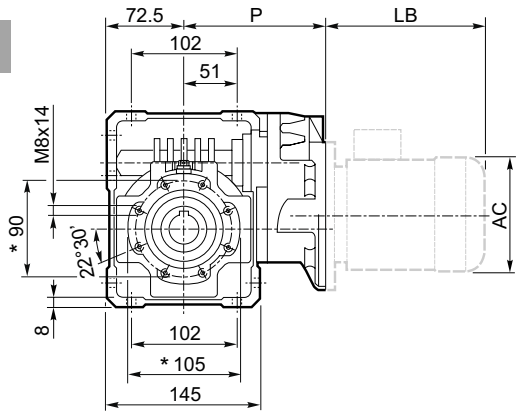


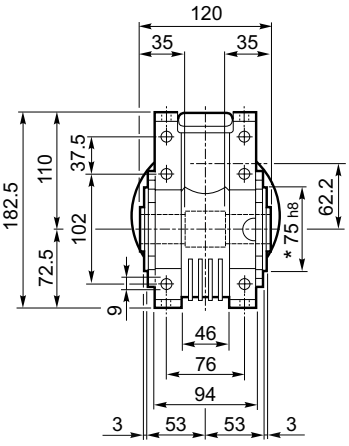


W 63												BN		BN...FD BN...FA	
		M	M1	M2	N	N1	N2	N3	N4	P	kg	IEC	LB	AC	LB	AC
W 63	**P71 B5**	14	16.3	5	160	130	110	11	9	95	6.3	**BN 71**	219	138	280	138
W 63	**P80 B5**	19	21.8	6	200	165	130	12	11.5	102	6.5	**BN 80**	234	156	306	156
W 63	**P90 B5**	24	27.3	8	200	165	130	12	11.5	102	6.4	**BN 90**	276	176	359	176
W 63	**P71 B14**	14	16.3	5	105	85	70	11	6.5	95	6.1	**BN 71**	219	138	280	138
W 63	**P80 B14**	19	21.8	6	120	100	80	11	6.5	102	6.3	**BN 80**	234	156	306	156
W 63	**P90 B14**	24	27.3	8	140	115	95	11	8.5	102	6.3	**BN 90**	276	176	359	176

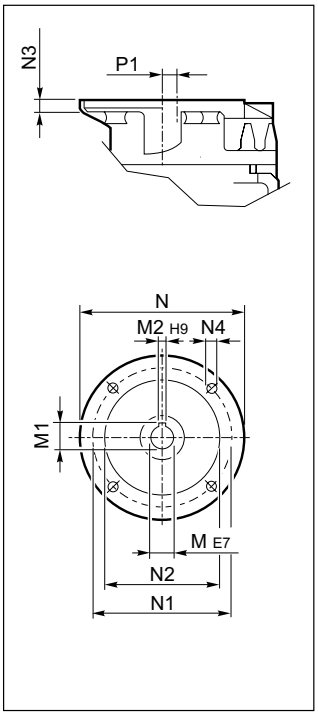
WR 63□...P(IEC)

U

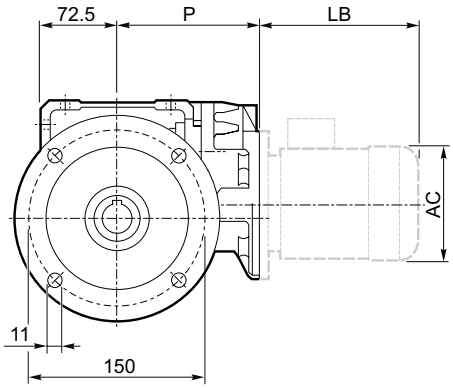


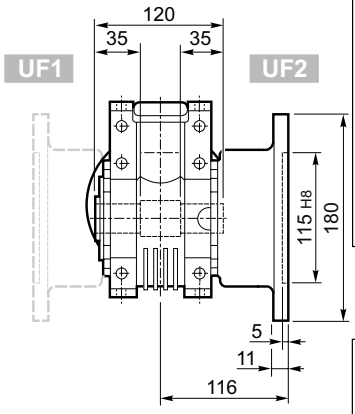


INPUT

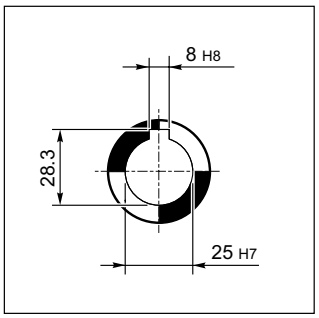


UF_





OUTPUT



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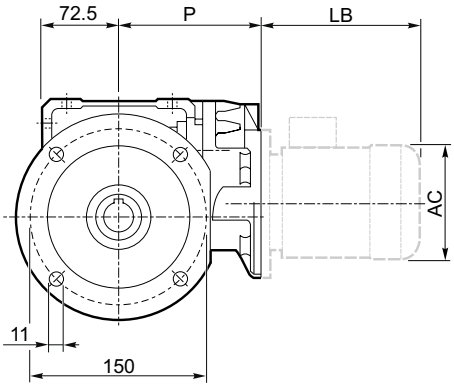

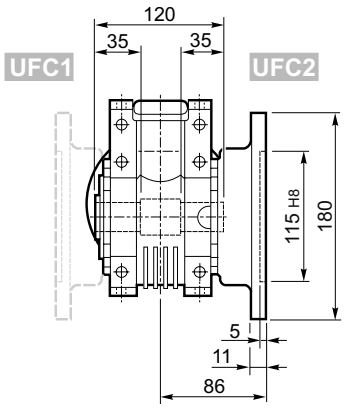

WR 63_														BN		BN...FD BN...FA	
		M	M_1	M_2	N	N_1	N_2	N_3	N_4	P	P_1	Kg	IEC	LB	AC	LB	AC
WR 63	**P63 B5**	11	12.8	4	140	115	95	10	M8x10	133.5	11.42	7.1	**BN 63**	184	121	249	121
WR 63	**P71 B5**	14	16.3	5	160	130	110	10	M8x10	133.5	11.42		**BN 71**	219	138	280	138

***** De ambos lados / *On both sides* /Auf beiden seiten / *Tous le deux cotés*

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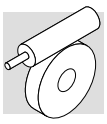
VF/W 30/63□...P(IEC)



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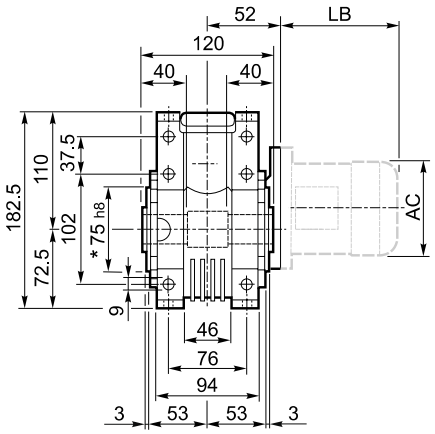

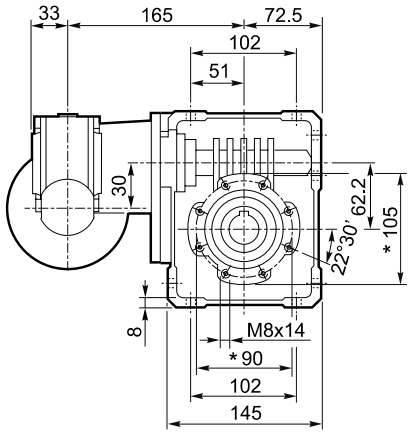

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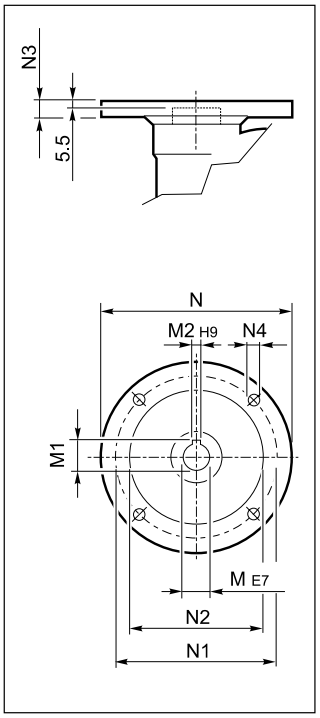

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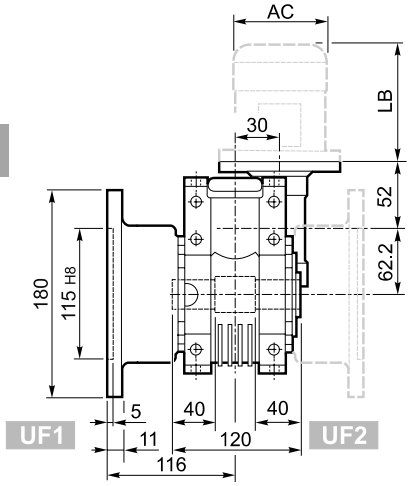
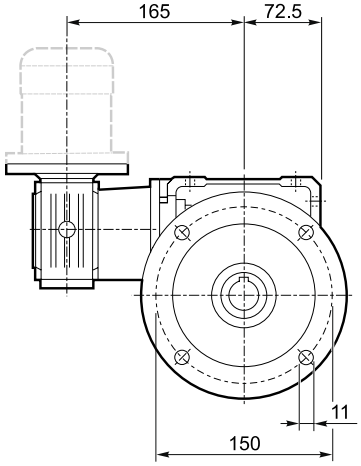
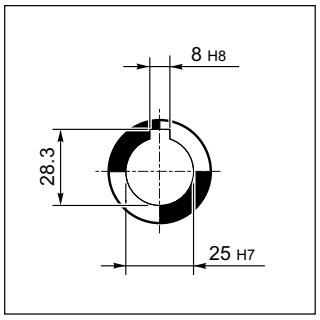




OUTPUT



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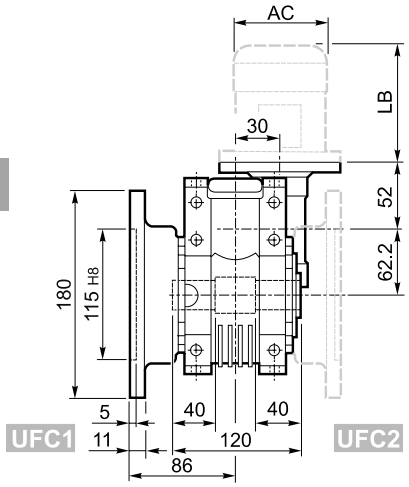

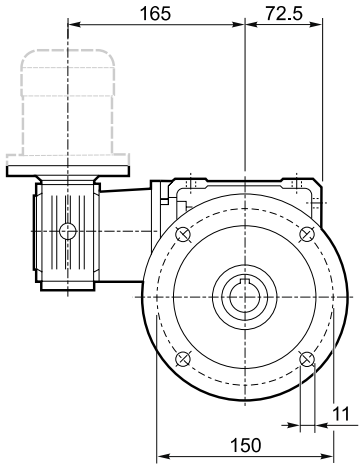

VF/W 30/63_												BN		BN...FD BN...FA		K		K...FC	
		M	M1	M2	N	N1	N2	N3	N4	Kg	IEC	LB	AC	LB	AC	LB	AC	LB	AC
VF/W 30/63	P56 B5	9	10.4	3	120	100	80	7	7	8.0	56	165	110	—	—	—	—	—	—
VF/W 30/63	P63 B5	11	12.8	4	140	115	95	8	9.5		63	184	121	249	121	165	122	214	122
VF/W 30/63	P63 B14	9	10.4	3	80	65	50	7	5.5		63	184	121	249	121	165	122	214	122
VF/W 30/63	P63 B14	11	12.8	4	90	75	60	6	5.5		63	184	121	249	121	—	—	—	—

* De ambos lados / *On both sides* /Auf beiden seiten / *Tous le deux cotés*

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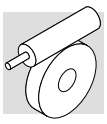
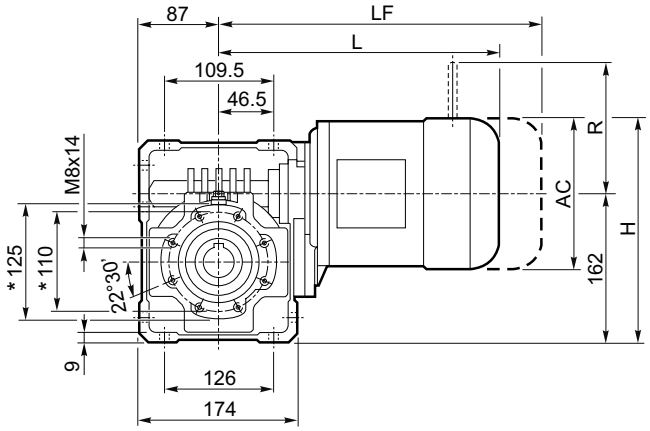
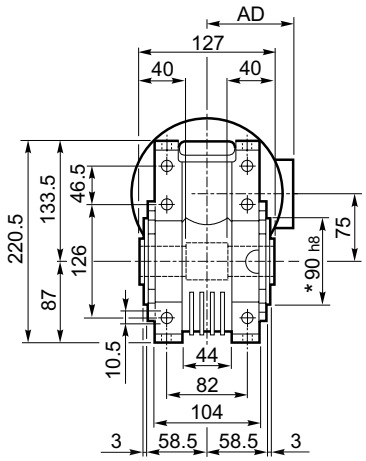


W 75□...S□

U





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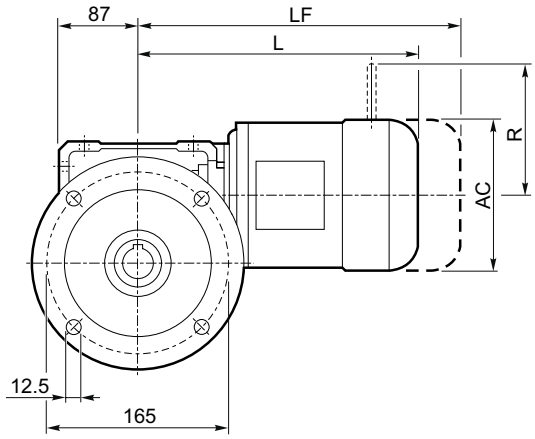
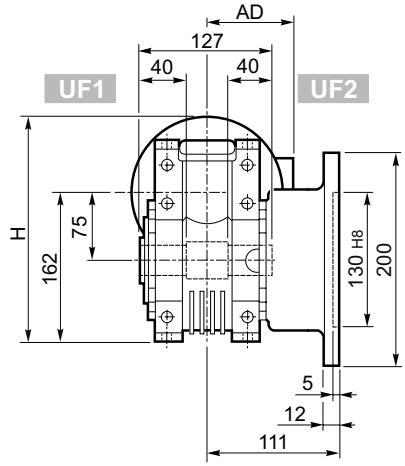
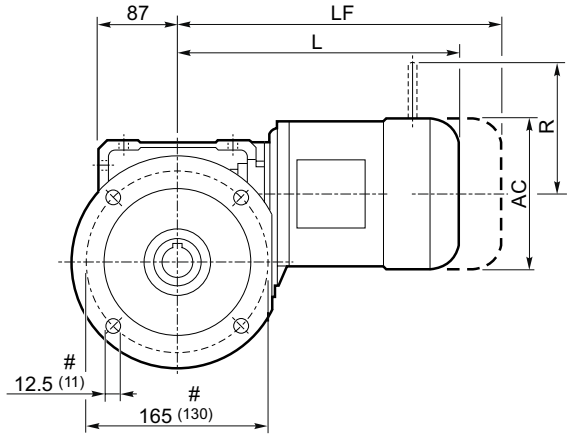
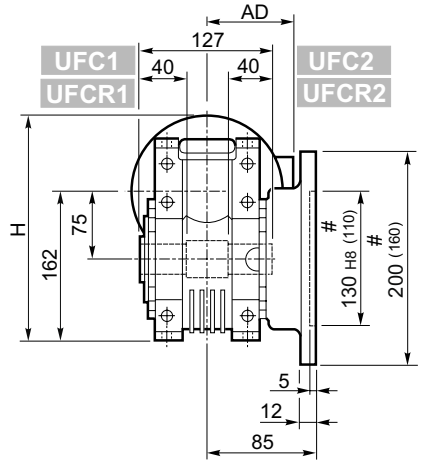




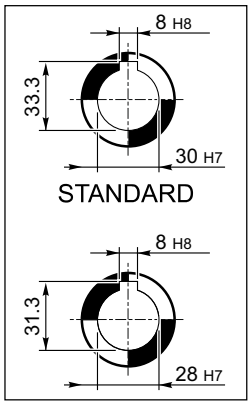
UFC_

UFCR_#





OUTPUT



W 75													
					M_			M...FD M...FA		M...FD		M...FA	
			AC	H	L	AD	Kg	LF	Kg	R	AD	R	AD
W 75	**S1**	**M1S**	138	231	284	108	14.0	347	16.2	103	132	124	108
W 75	**S1**	**M1L**	138	231	308	108	16.0	369	18.2	103	132	124	108
W 75	**S2**	**M2S**	153	240	333	119	18.5	409	21.6	129	143	134	119
W 75	**S3**	**M3S**	193	258.5	376	142	25.6	472	31	160	155	160	142
W 75	**S3**	**M3L**	193	258.5	408	142	28.6	499	34	160	155	160	142

***** De ambos lados / *On both sides* /Auf beiden seiten / *Tous le deux cotés*
# Brida reducida / *Reduced flange* / Verkürzte Flansch / *Bride reduit*

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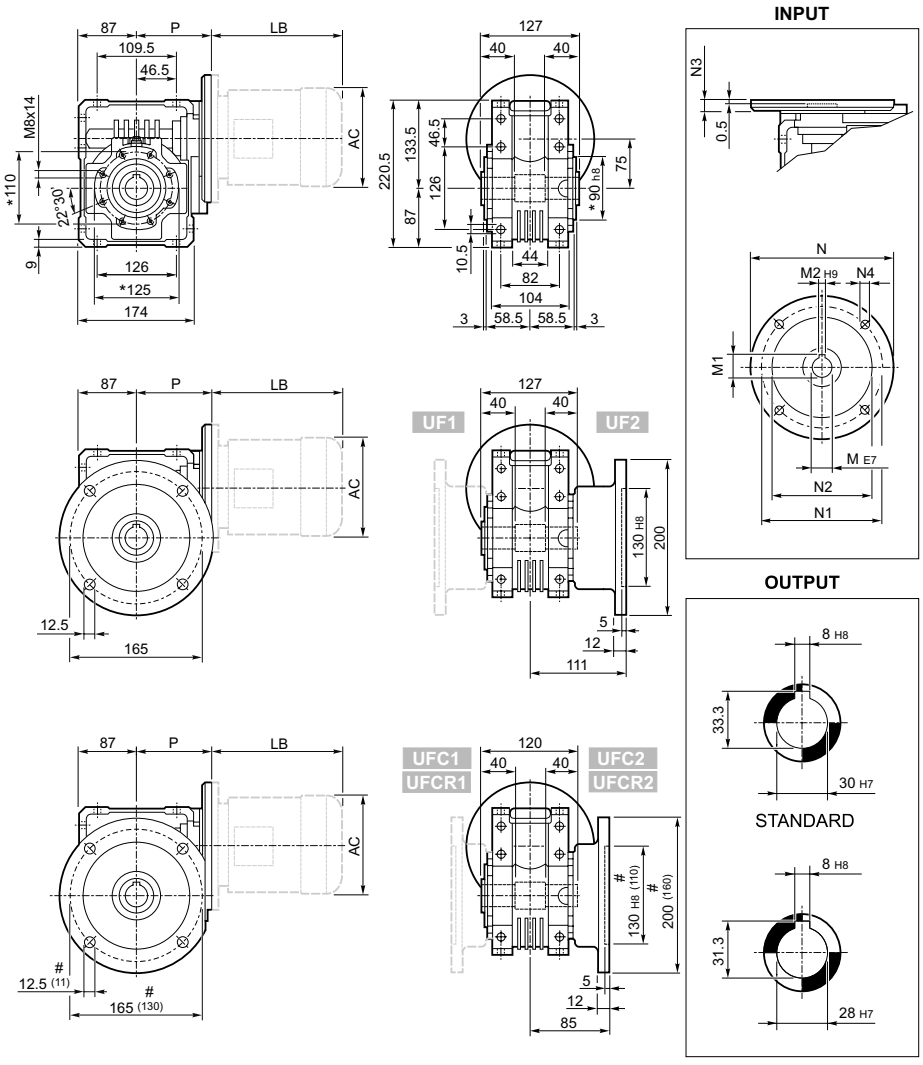
BONFIGLIOLI RIDUTTORI

abina@abina.com

W 75□...P(IEC)

U



UF_

UFC_

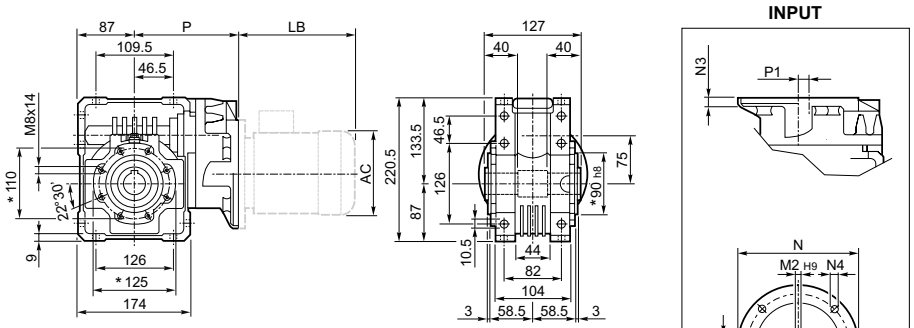
UFCR_#

W 75_													BN		BN...FD BN...FA	
		M	M1	M2	N	N1	N2	N3	N4	P	Kg	IEC	LB	AC	LB	AC
W 75	**P71 B5**	14	16.3	5	160	130	110	11	9	112	9.5	**BN 71**	219	138	280	138
W 75	**P80 B5**	19	21.8	6	200	165	130	12	11.5	112	9.7	**BN 80**	234	156	306	156
W 75	**P90 B5**	24	27.3	8	200	165	130	12	11.5	112	9.6	**BN 90**	276	176	359	176
W 75	**P100 B5**	28	31.3	8	250	215	180	13	12.5	120	9.7	**BN 100**	307	195	398	195
W 75	**P112 B5**	28	31.3	8	250	215	180	13	12.5	120	9.7	**BN 112**	325	219	424	219
W 75	**P80 B14**	19	21.8	6	120	100	80	7.5	6.5	112	9.4	**BN 80**	234	156	306	156
W 75	**P90 B14**	24	27.3	8	140	115	95	7.5	8.5	112	9.4	**BN 90**	276	176	359	176
W 75	**P100 B14**	28	31.3	8	160	130	110	10	8.5	120	9.5	**BN 100**	307	195	398	195
W 75	**P112 B14**	28	31.3	8	160	130	110	10	8.5	120	9.5	**BN 112**	325	219	424	219

***** De ambos lados / *On both sides* /Auf beiden seiten / *Tous le deux cotés*
# Brida reducida / *Reduced flange* / Verkürzte Flansch / *Bride reduit*

WR 75□...P(IEC)

U



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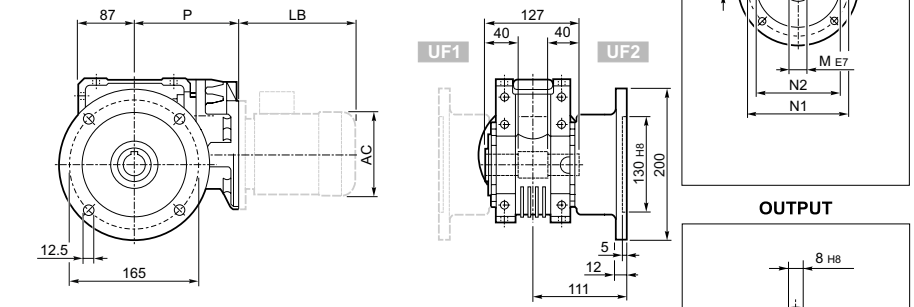

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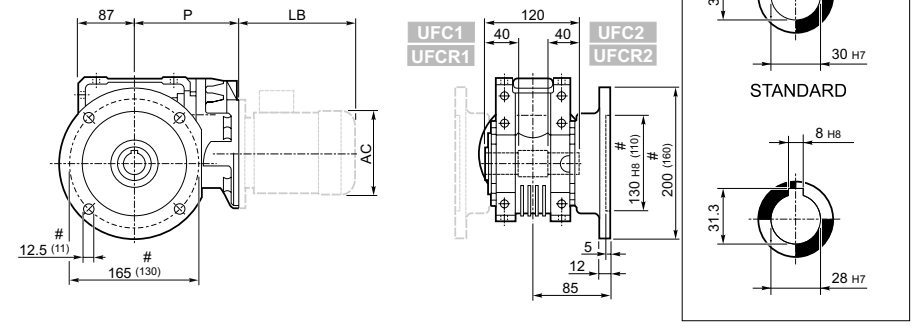
UFCR_#



WR 75_													BN		BN...FD BN...FA	
		M	M1	M2	N	N1	N2	N3	N4	P	P1	Kg	IEC	LB	AC	LB	AC
WR 75	**P63 B5**	11	12.8	4	140	115	95	10	M8x10	152	23.53	10.6	**BN 63**	184	121	249	121
WR 75	**P71 B5**	14	16.3	5	160	130	110	10	M8x10	152	23.53	10.7	**BN 71**	219	138	280	138
WR 75	**P80 B5**	19	21.8	6	200	165	130	12	M10x13	163.5	11	11.5	**BN 80**	234	156	306	156
WR 75	**P90 B5**	24	27.3	8	200	165	130	12	M10x13	163.5	11	11.6	**BN 90**	276	176	359	176

***** De ambos lados / *On both sides* /Auf beiden seiten / *Tous le deux cotés*
# Brida reducida / *Reduced flange* / Verkürzte Flansch / *Bride reduit*

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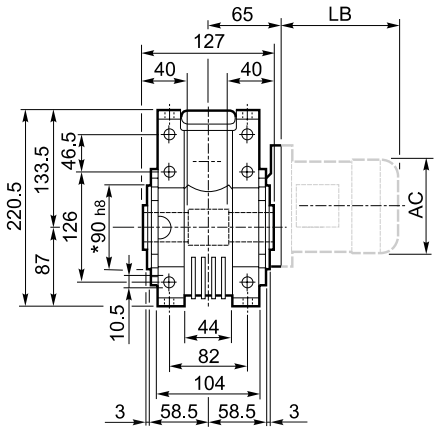
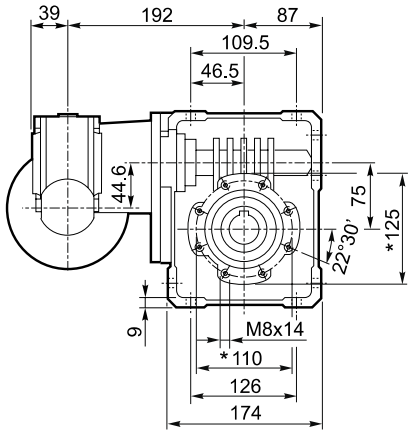
VF/W 44/75□...P(IEC)

U





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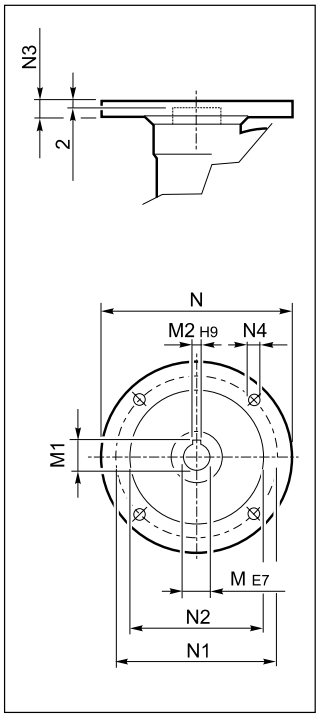

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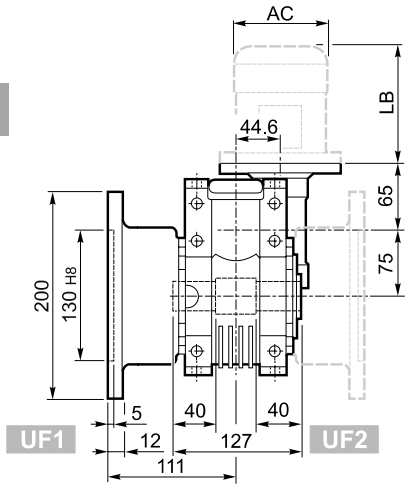

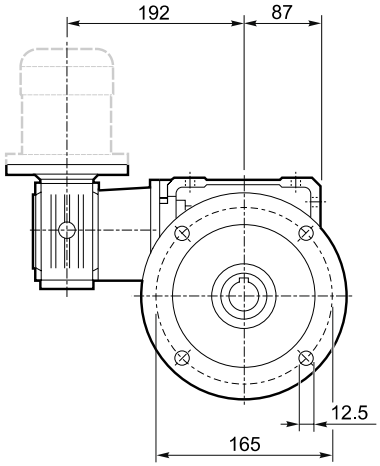

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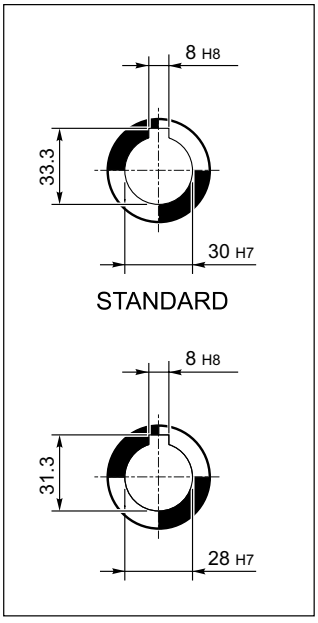

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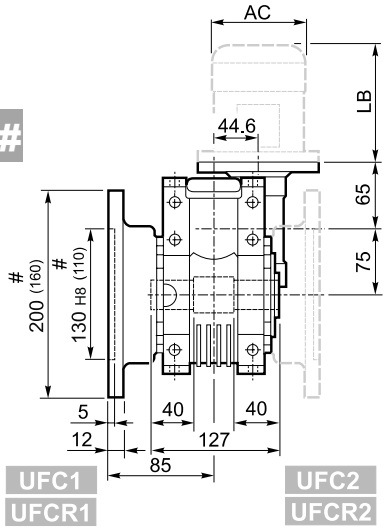
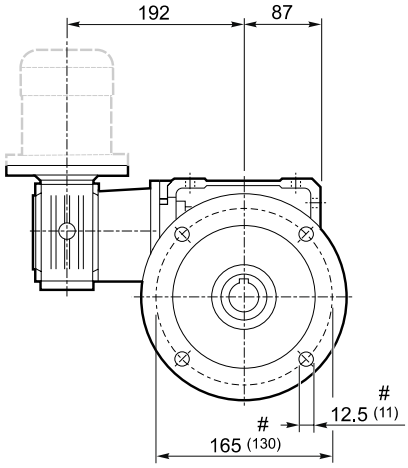
UFCR_#





VF/W 44/75_		M	M1	M2	N	N1	N2	N3	N4	Kg	IEC	BN LB	BN AC	BN...FD BN...FA LB	BN...FD BN...FA AC	K LB	K AC	K...FC LB	K...FC AC
VF/W 44/75	**P63 B5**	11	12.8	4	140	115	95	10	9.5	12.5	63	184	121	249	121	165	122	214	122
VF/W 44/75	**P71 B5**	14	16.3	5	160	130	110	10	9.5		71	219	138	280	138	186	139	219	139
VF/W 44/75	**P63 B14**	11	12.8	4	90	75	60	8	5.5		63	184	121	249	121	—	—	—	—
VF/W 44/75	**P71 B14**	14	16.3	5	105	85	70	10	7		71	219	138	280	138	—	—	—	—

* De ambos lados / *On both sides* /Auf beiden seiten / *Tous le deux cotés*
\# Brida reducida / *Reduced flange* / Verkürzte Flansch / *Bride reduit*

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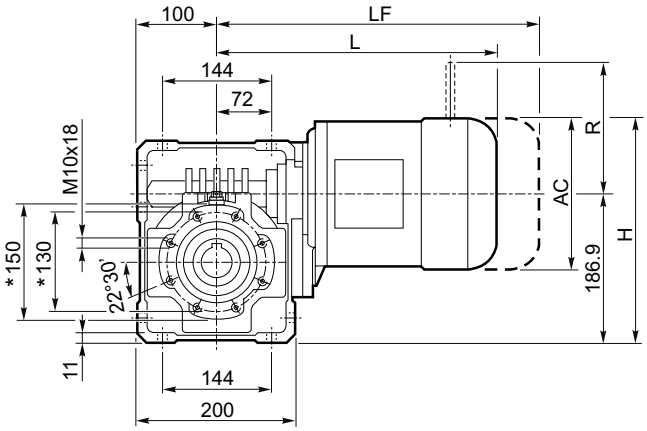
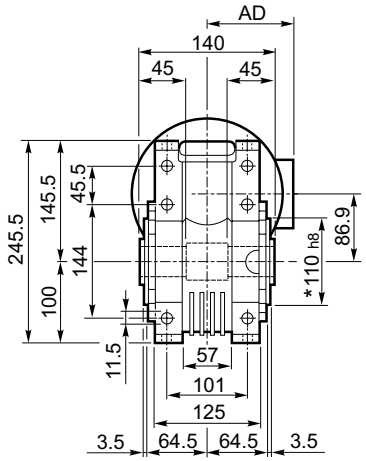
W 86□...S□

U





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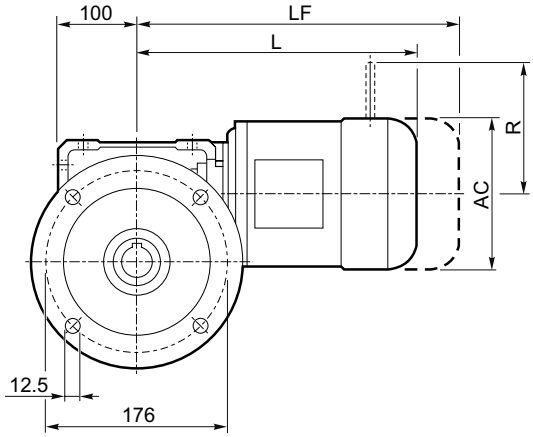

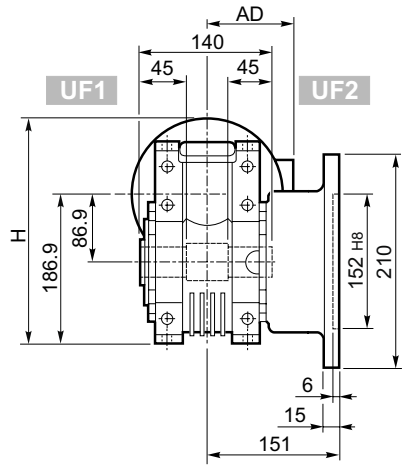

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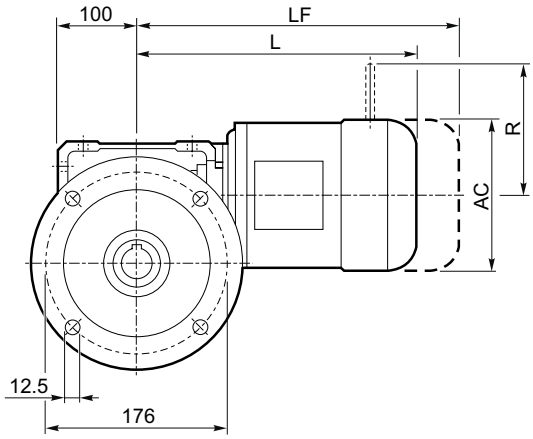
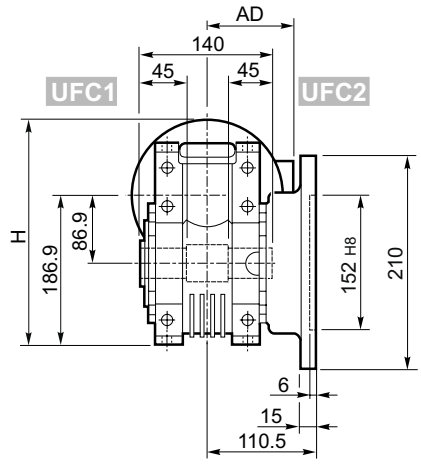
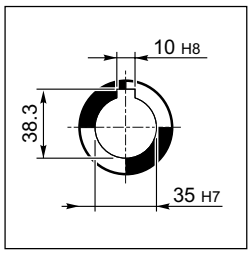




W 86													
					M_			M...FD M...FA		M...FD		M...FA	
			AC	H	L	AD	Kg	LF	Kg	R	AD	R	AD
W 86	**S1**	**M1S**	138	256	300	108	18.1	363	20.3	103	132	124	108
W 86	**S1**	**M1L**	138	256	324	108	20.1	385	22.3	103	132	124	108
W 86	**S2**	**M2S**	156	265	349	119	22.6	425	25.7	129	143	134	119
W 86	**S3**	**M3S**	193	283.5	392	142	29.7	488	35	160	155	160	142
W 86	**S3**	**M3L**	193	283.5	424	142	33	515	36	160	155	160	142

OUTPUT



* De ambos lados / *On both sides* / Auf beiden seiten / *Tous le deux cotés*

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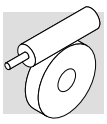
W 86□...P(IEC)



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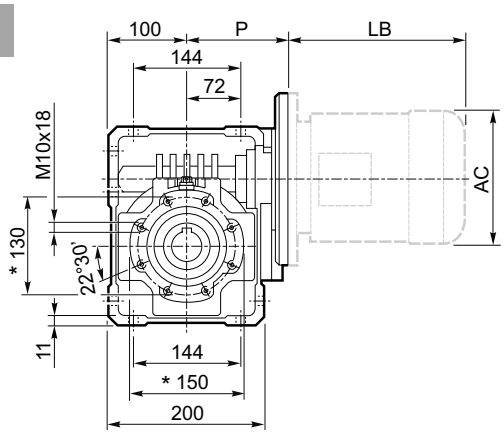
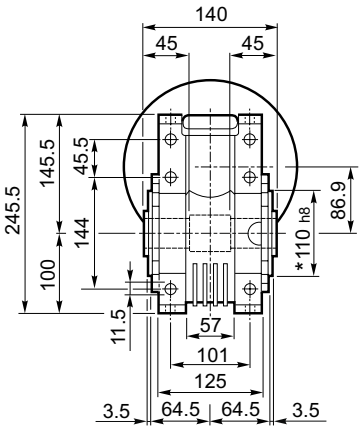
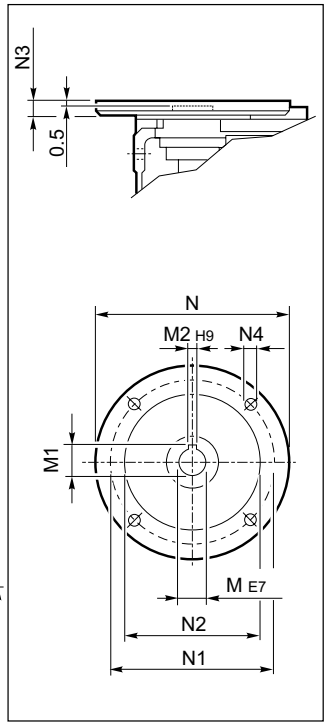




INPUT



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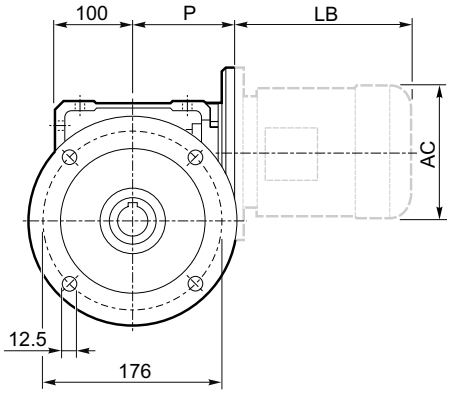
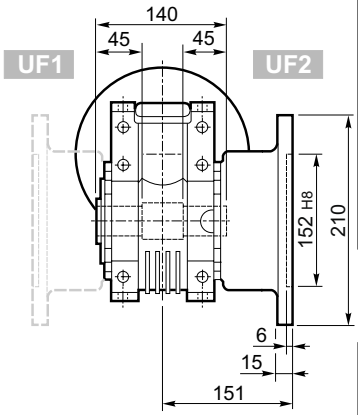
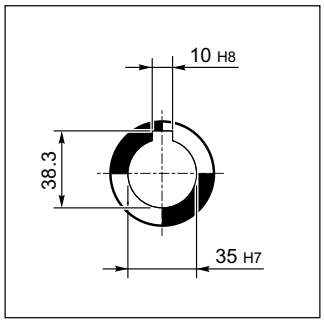




OUTPUT



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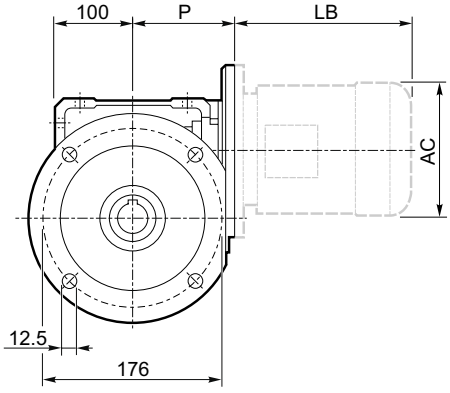

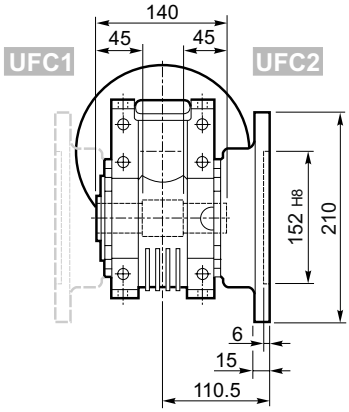

W 86_													BN		BN...FD BN...FA	
		M	M1	M2	N	N1	N2	N3	N4	P	Kg	IEC	LB	AC	LB	AC
W 86	**P71 B5**	14	16.3	5	160	13 0	110	11	9	128	13.6	**BN 71**	219	138	280	138
W 86	**P80 B5**	19	21.8	6	200	165	130	12	11.5	128	13.8	**BN 80**	234	156	306	156
W 86	**P90 B5**	24	27.3	8	200	165	130	12	11.5	128	13.7	**BN 90**	276	176	359	176
W 86	**P100 B5**	28	31.3	8	250	215	180	13	12.5	136	13.8	**BN 100**	307	195	398	195
W 86	**P112 B5**	28	31.3	8	250	215	180	13	12.5	136	13.8	**BN 112**	325	219	424	219
W 86	**P80 B14**	19	21.8	6	120	100	80	7.5	6.5	128	13.5	**BN 80**	234	156	306	156
W 86	**P90 B14**	24	27.3	8	140	115	95	7.5	8.5	128	13.5	**BN 90**	276	176	359	176
W 86	**P100 B14**	28	31.3	8	160	130	110	10	8.5	136	13.6	**BN 100**	307	195	398	195
W 86	**P112 B14**	28	31.3	8	160	130	110	10	8.5	136	13.6	**BN 112**	325	219	424	219

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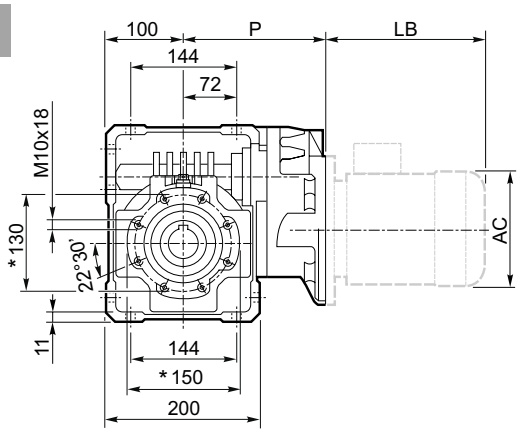
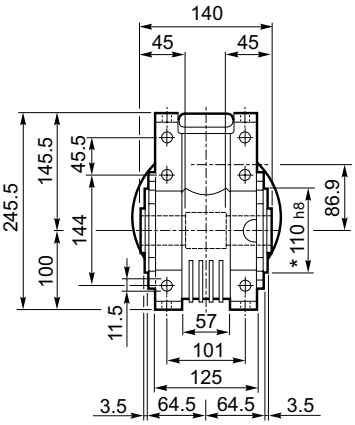
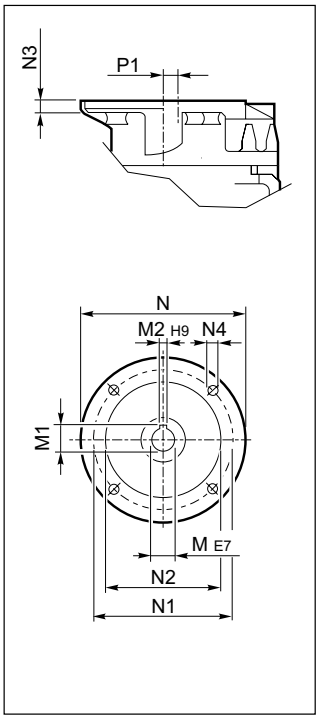
WR 86□...P(IEC)

U







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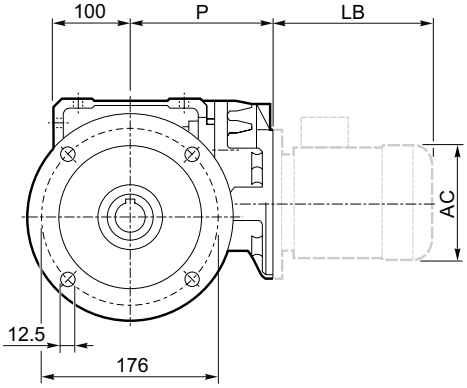

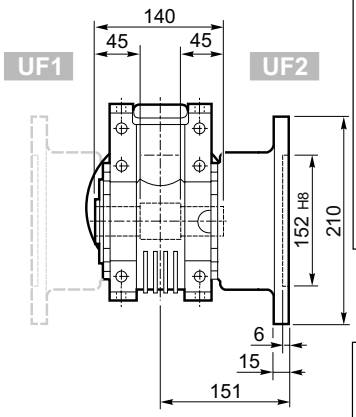

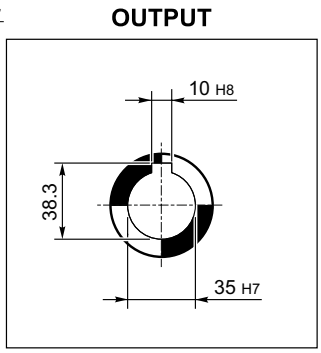

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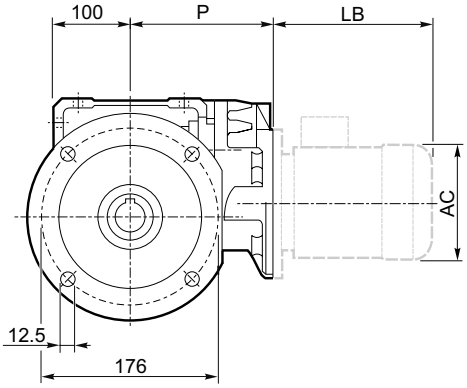

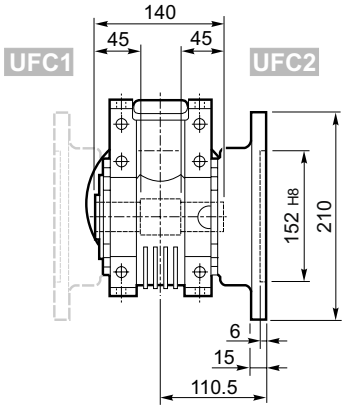

WR 86_													IEC	BN		BN...FD BN...FA	
		M	M1	M2	N	N1	N2	N3	N4	P	P1	Kg		LB	AC	LB	AC
WR 86	**P63 B5**	11	12.8	4	140	115	95	10	M8x10	168	35.4	14.3	BN 63	184	121	249	121
WR 86	**P71 B5**	14	16.3	5	160	130	110	10	M8x10	168	35.4	14.4	BN 71	219	138	280	138
WR 86	**P80 B5**	19	21.8	6	200	165	130	12	M10x13	179.5	22.9	15.2	BN 80	234	156	306	156
WR 86	**P90 B5**	24	27.3	8	200	165	130	12	M10x13	179.5	22.9	15.3	BN 90	276	176	359	176

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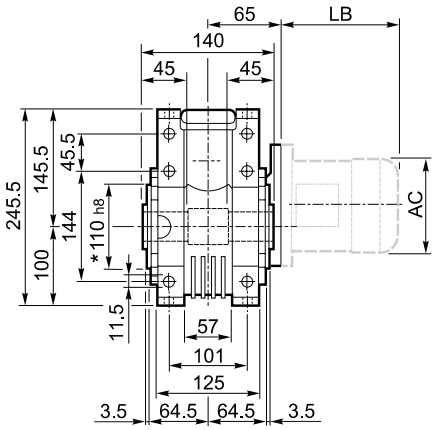
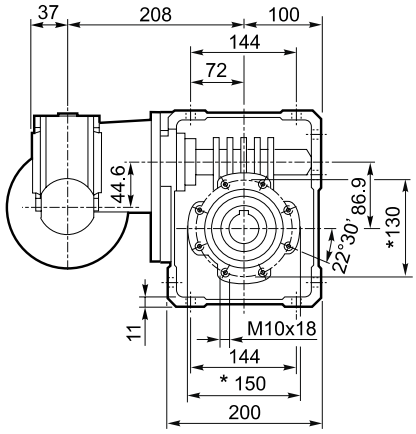
VF/W 44/86□...P(IEC)

U





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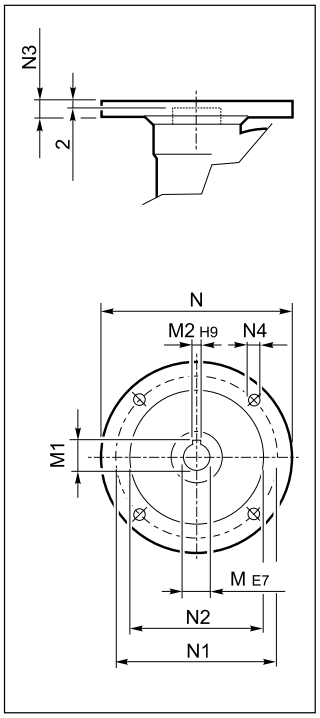

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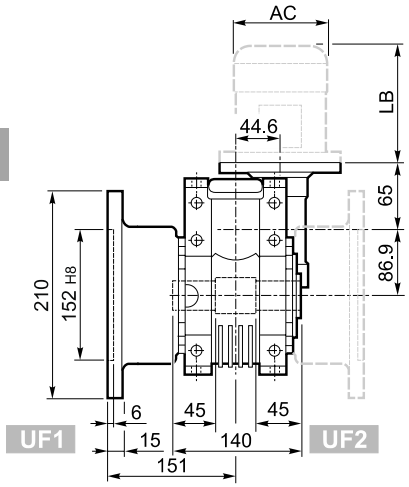
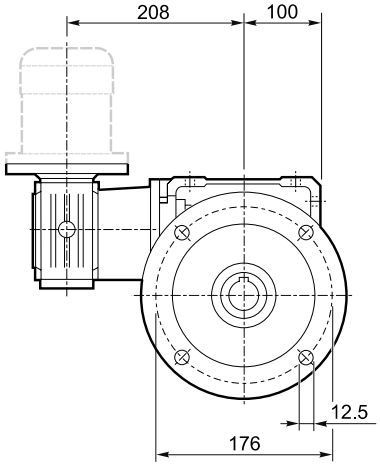
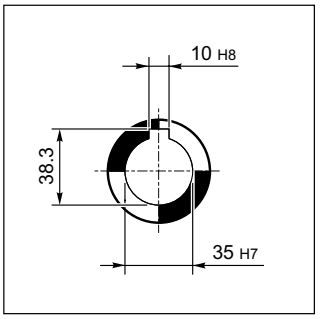




OUTPUT



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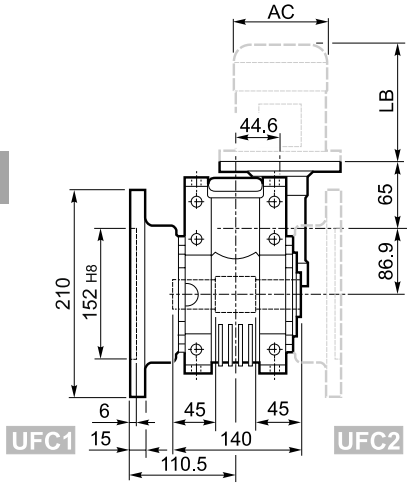

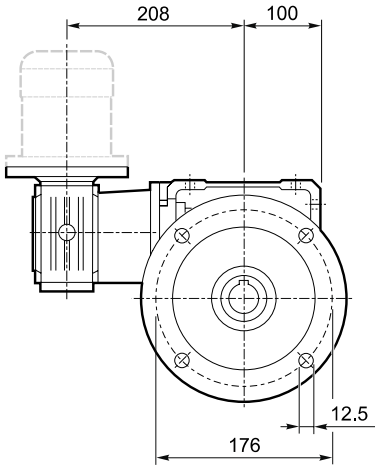

VF/W 44/86_												BN		BN...FD BN...FA		K		K...FC	
		M	M1	M2	N	N1	N2	N3	N4	Kg	IEC	LB	AC	LB	AC	LB	AC	LB	AC
VF/W 44/86	P63 B5	11	12.8	4	140	115	95	10	9.5	16.6	63	184	121	249	121	165	122	214	122
VF/W 44/86	P71 B5	14	16.3	5	160	130	110	10	9.5		71	219	138	280	138	186	139	219	139
VF/W 44/86	P63 B14	11	12.8	4	90	75	60	8	5.5		63	184	121	249	121	—	—	—	—
VF/W 44/86	P71 B14	14	16.3	5	105	85	70	10	7		71	219	138	280	138	—	—	—	—

* De ambos lados / *On both sides* / Auf beiden seiten / *Tous le deux cotés*

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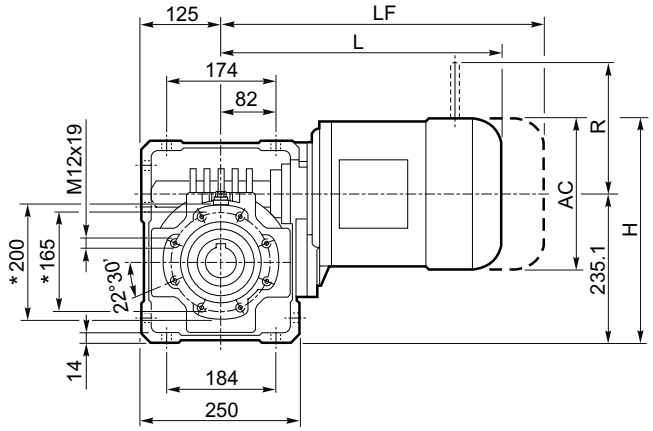
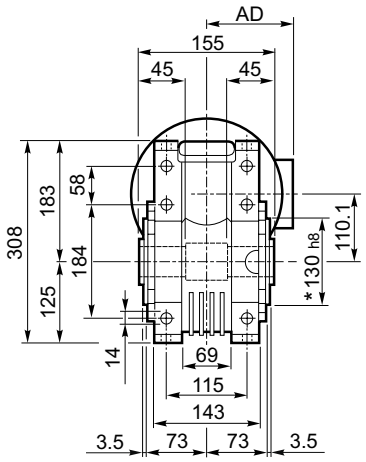
W 110□...S□

U





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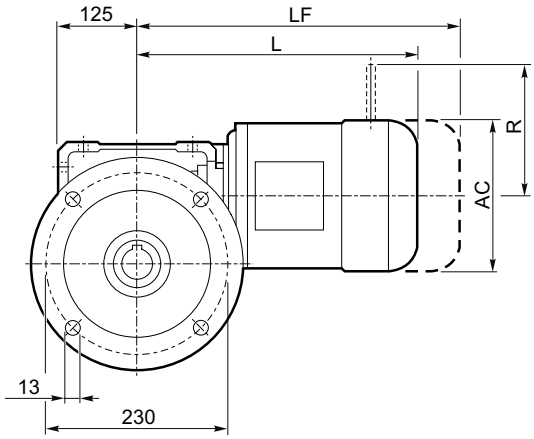

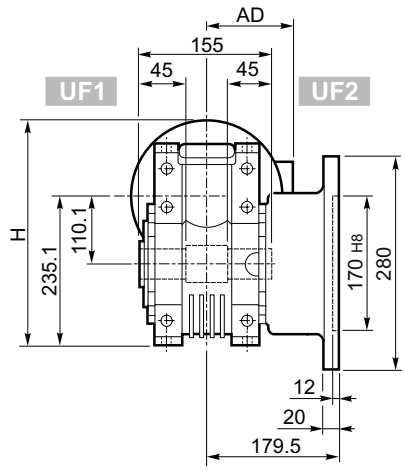

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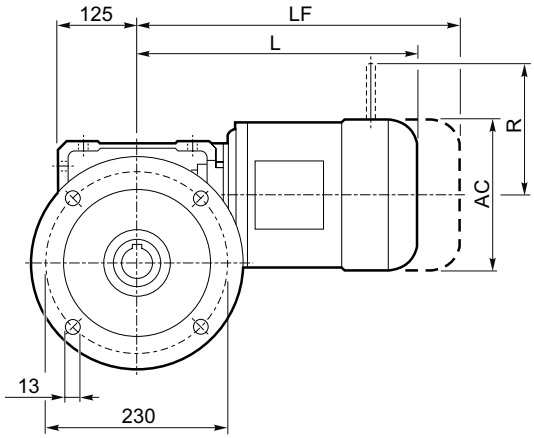
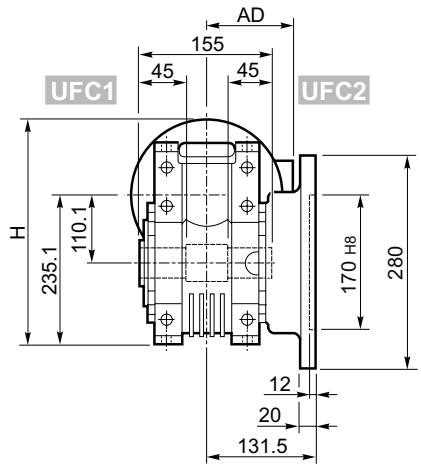
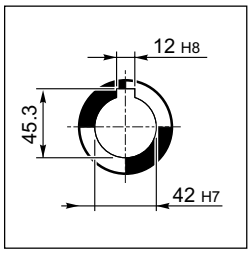




W 110													
					M_			M...FD M...FA		M...FD		M...FA	
			AC	H	L	AD	Kg	LF	Kg	R	AD	R	AD
W 110	**S2**	**M2S**	156	313	364	119	47	440	51	129	143	134	119
W 110	**S3**	**M3S**	193	332	407	142	55	503	60	160	155	160	142
W 110	**S3**	**M3L**	193	332	439	142	58	530	63	160	155	160	142

OUTPUT



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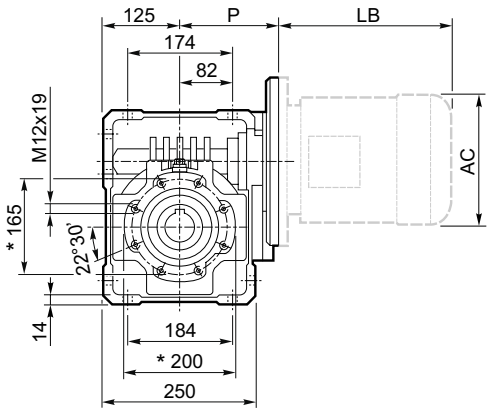
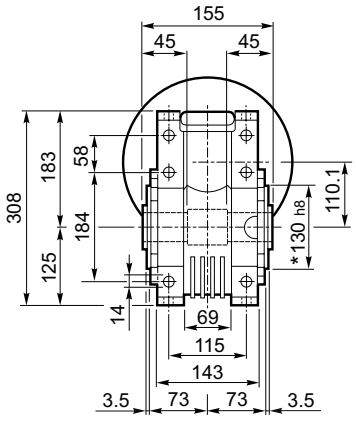
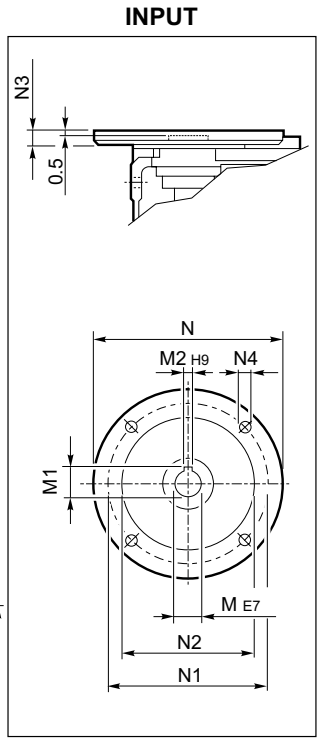
W 110□...P(IEC)

U







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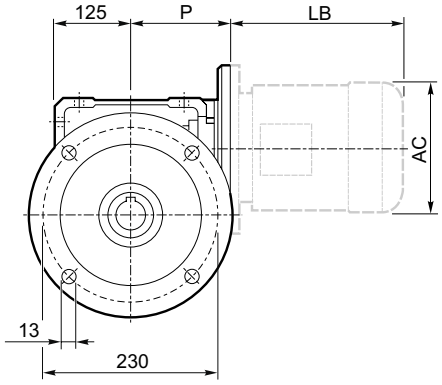

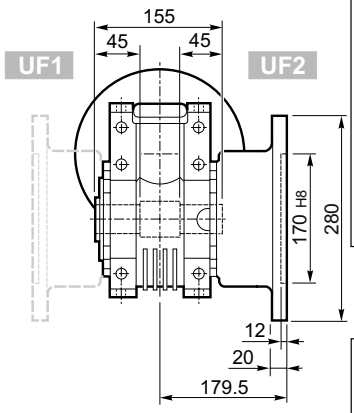

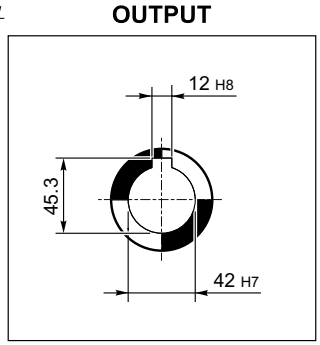

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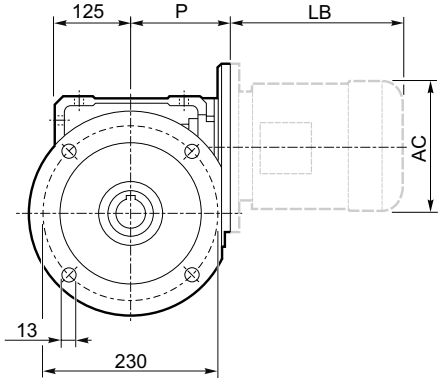

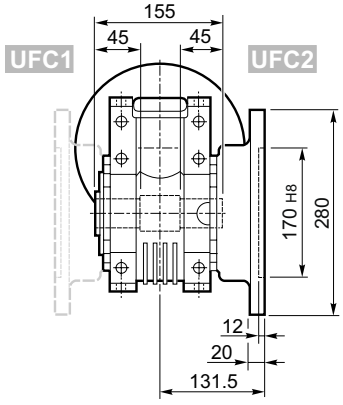

W 110_													BN		BN...FD BN...FA	
		M	M1	M2	N	N1	N2	N3	N4	P	Kg	IEC	LB	AC	LB	AC
W 110	**P80 B5**	19	21.8	6	200	165	130	—	M10x12	143	38	**BN 80**	234	156	306	156
W 110	**P90 B5**	24	27.3	8	200	165	130	—	M10x12	143	38	**BN 90**	276	176	359	176
W 110	**P100 B5**	28	31.3	8	250	215	180	13	13	151	39	**BN 100**	307	195	398	195
W 110	**P112 B5**	28	31.3	8	250	215	180	13	13	151	39	**BN 112**	325	219	424	219
W 110	**P132 B5**	38	41.3	10	300	265	230	16	13	226	41	**BN 132**	413	258	523	258
W 110	**P80 B14**	19	21.8	6	120	100	80	7.5	7	143	38	**BN 80**	234	156	306	156
W 110	**P90 B14**	24	27.3	8	140	115	95	6.5	9	143	38	**BN 90**	276	176	359	176
W 110	**P100 B14**	28	31.3	8	160	130	110	13	9	151	38	**BN 100**	307	195	398	195
W 110	**P112 B14**	28	31.3	8	160	130	110	13	9	151	38	**BN 112**	325	219	424	219

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WR 110□...P(IEC)

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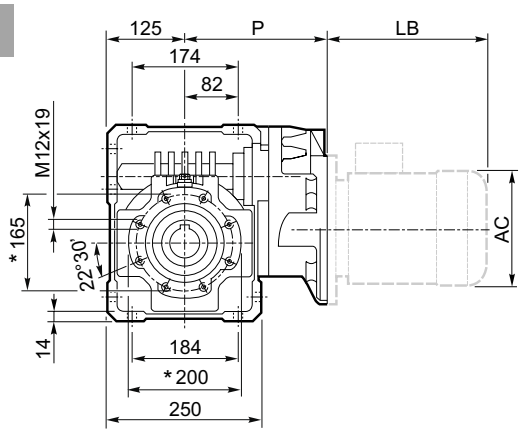

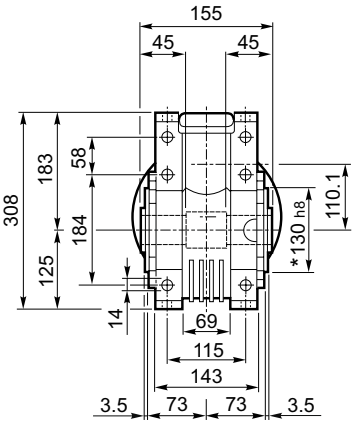

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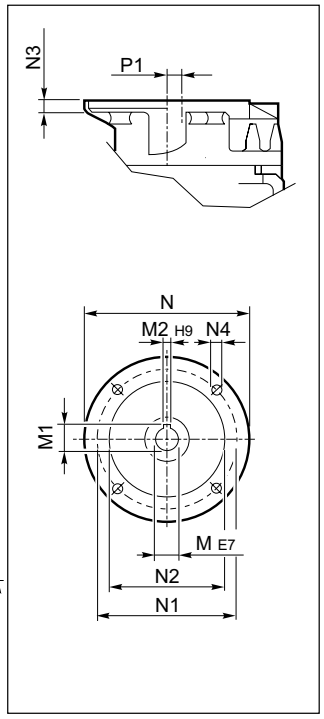

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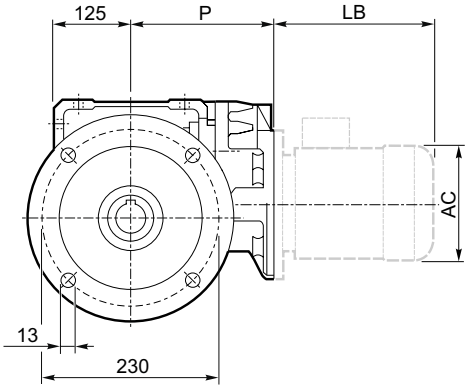
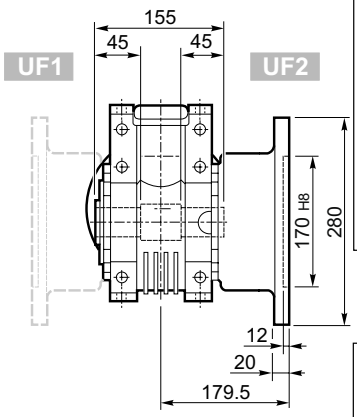
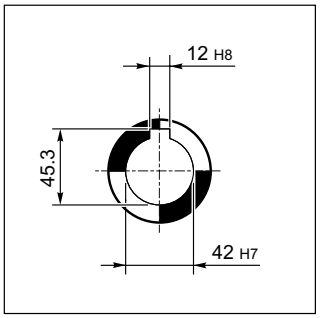




OUTPUT



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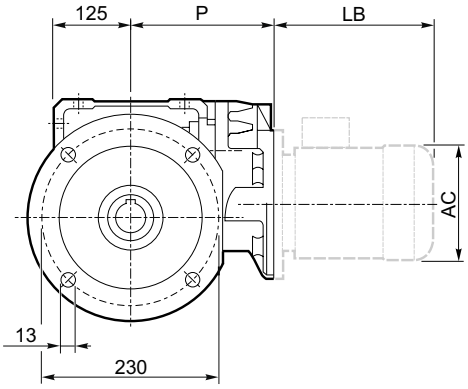

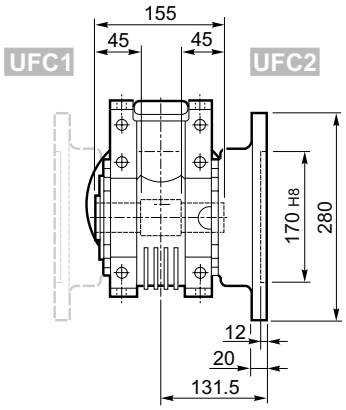

WR 110_													BN		BN...FD BN...FA	
		M	M1	M2	N	N1	N2	N3	N4	P	P1	Kg	IEC	LB	AC	LB	AC
WR 110	**P71 B5**	14	16.3	5	160	130	110	10	M8x14	185	58.6	44	BN 71	219	138	280	138
WR 110	**P80 B5**	19	21.8	6	200	165	130	14	M10x15	204	21.1	46	BN 80	234	156	306	156
WR 110	**P90 B5**	24	27.3	8	200	165	130	14	M10x15	204	21.1	46	BN 90	276	176	359	176
WR 110	**P100 B5**	28	31.3	8	250	215	180	14	M12x13	213	21.1	46	BN 100	307	195	398	195
WR 110	**P112 B5**	28	31.3	8	250	215	180	14	M12x13	213	21.1	48	BN 112	325	219	424	219

* De ambos lados / *On both sides* / Auf beiden seiten / *Tous le deux cotés*

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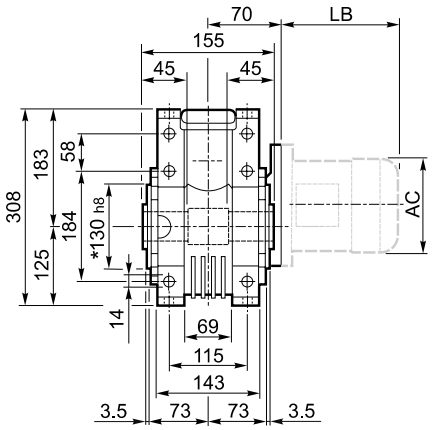
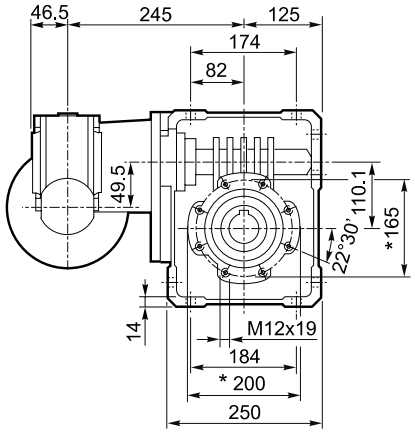
VF/W 49/110□...P(IEC)

U





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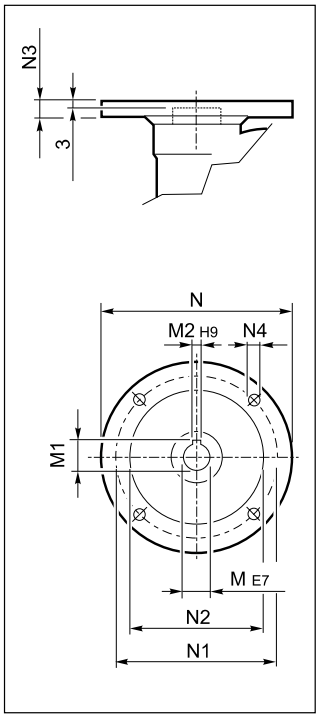

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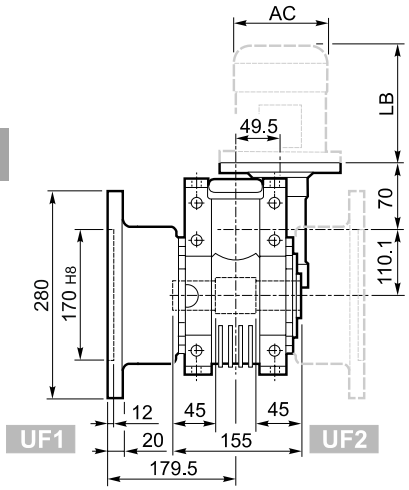

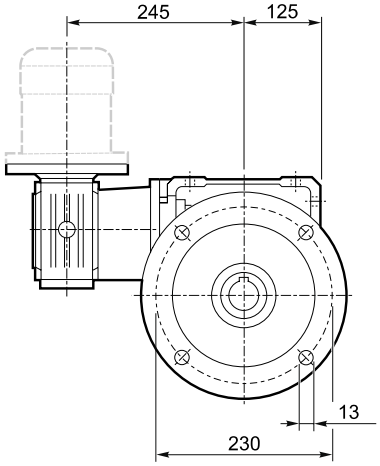

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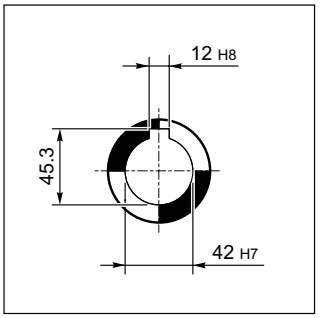

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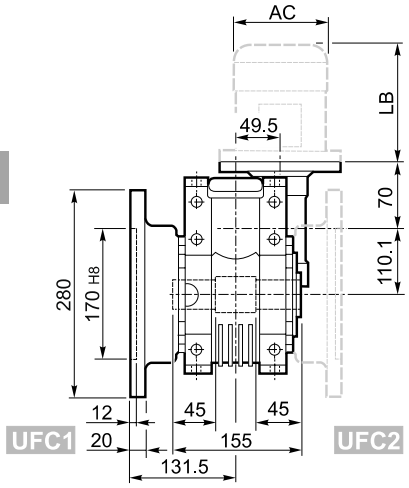

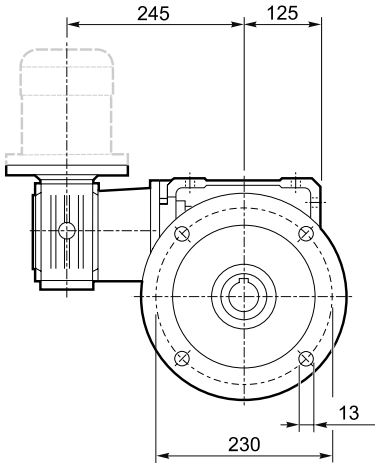

VF/W 49/110_												BN		BN...FD BN...FA		K		K...FC	
		M	M1	M2	N	N1	N2	N3	N4	Kg	IEC	LB	AC	LB	AC	LB	AC	LB	AC
VF/W 49/110	**P63 B5**	11	12.8	4	140	115	95	10.5	9.5	43	63	184	121	249	121	165	122	214	122
VF/W 49/110	**P71 B5**	14	16.3	5	160	130	110	10.5	9.5		71	219	138	280	138	186	139	219	139
VF/W 49/110	**P80 B5**	19	21.8	6	200	165	130	10	11.5		80	234	156	306	156	—	—	—	—
VF/W 49/110	**P63 B14**	11	12.8	4	90	75	60	7	6		63	184	121	249	121	—	—	—	—
VF/W 49/110	**P71 B14**	14	16.3	5	105	85	70	10.5	6.5		71	219	138	280	138	—	—	—	—
VF/W 49/110	**P80 B14**	19	21.8	6	120	100	80	10	7		80	234	156	306	156	—	—	—	—

* De ambos lados / *On both sides* / Auf beiden seiten / *Tous le deux cotés*

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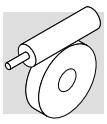
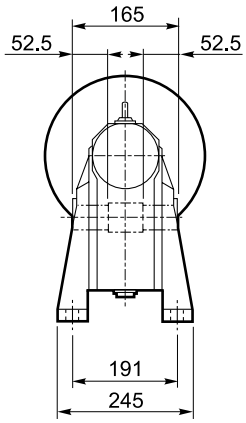
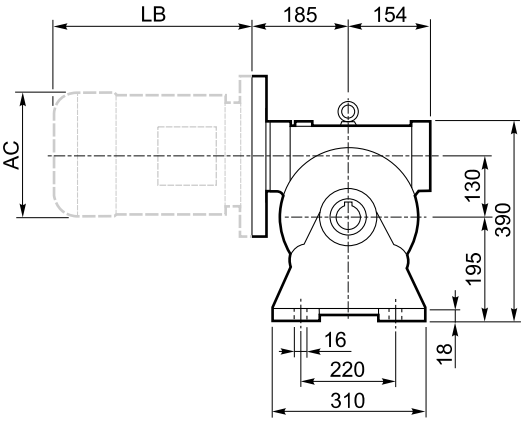


VF 130□...P(IEC)

A





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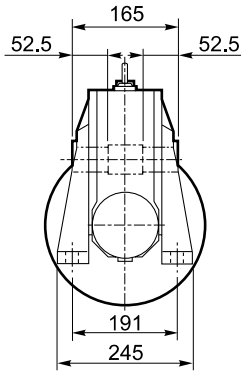

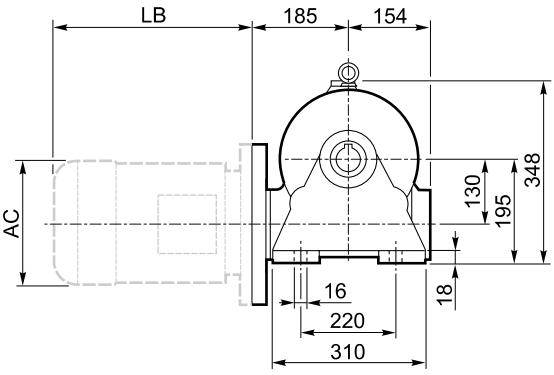

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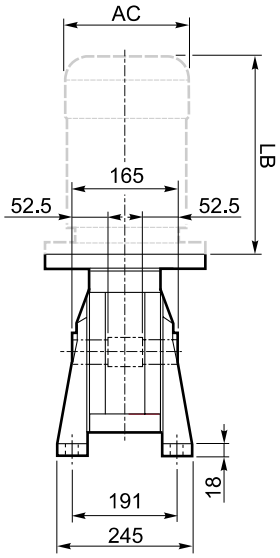

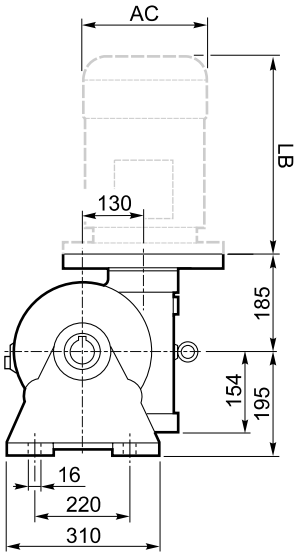

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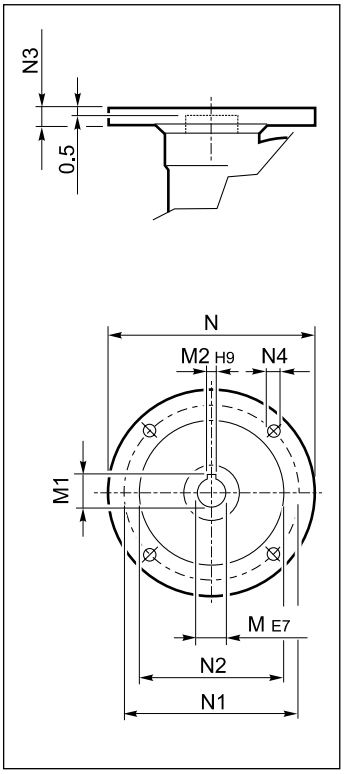

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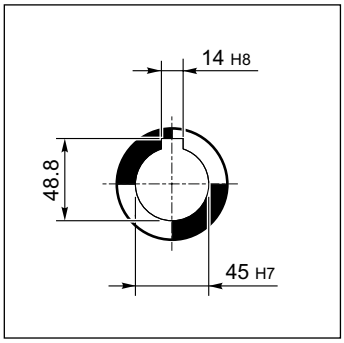

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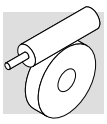
VF 130□...P(IEC)



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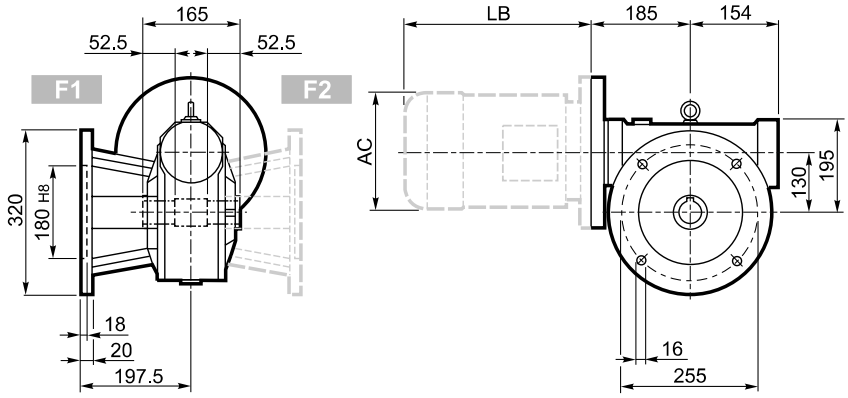
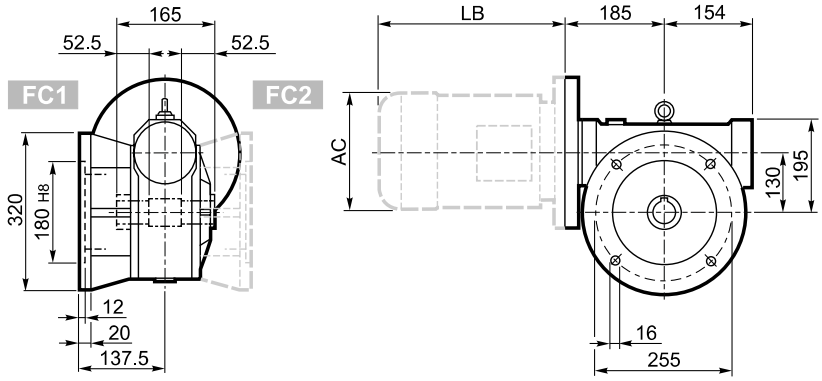


FC_

FR_



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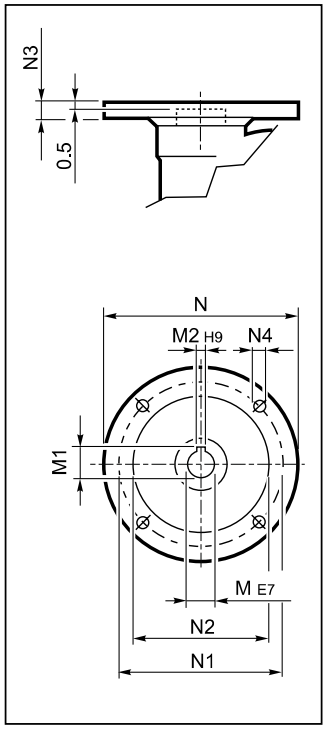

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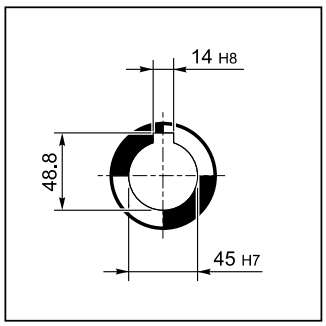

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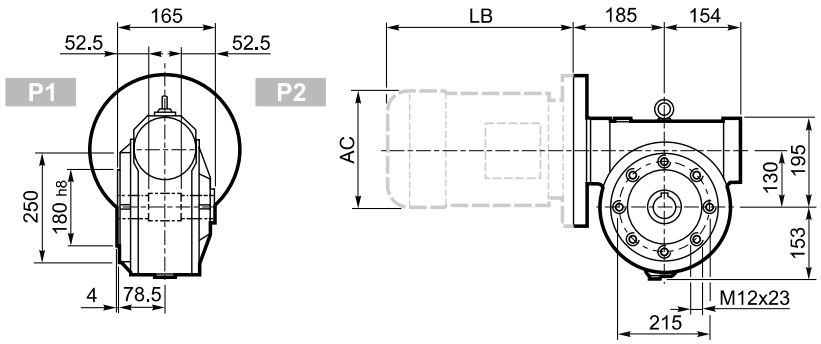

VF 130_												BN		BN...FD BN...FA	
		M	M1	M2	N	N1	N2	N3	N4	Kg	IEC	LB	AC	LB	AC
VF130	P90 B5	24	27.3	8	200	165	130	17	11	49	BN 90	276	176	359	176
VF130	P100 B5	28	31.3	8	250	215	180	17	13		BN 100	307	195	398	195
VF130	P112 B5	28	31.3	8	250	215	180	17	13		BN 112	325	219	424	219
VF130	P132 B5	38	40.1#	10	300	265	230	17	13		BN 132	413	258	523	258

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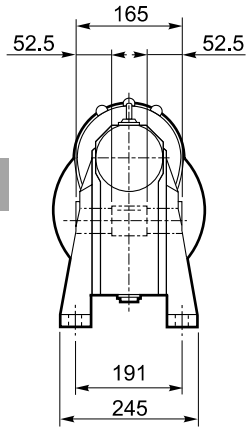
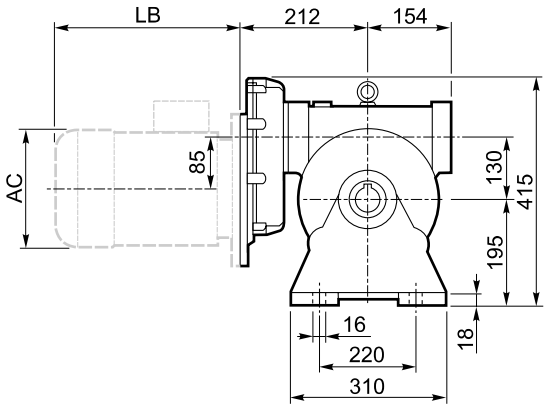
VFR 130□...P(IEC)

A





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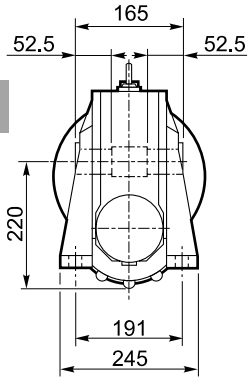

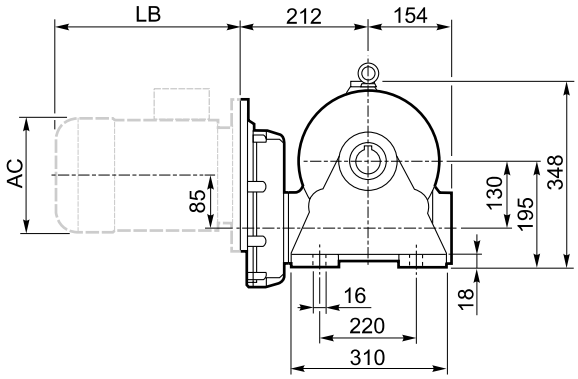

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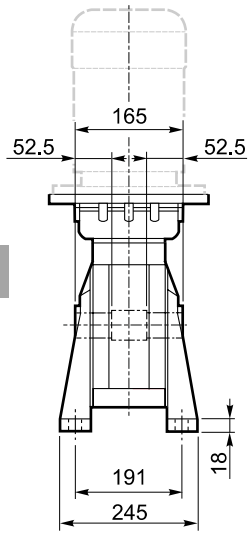

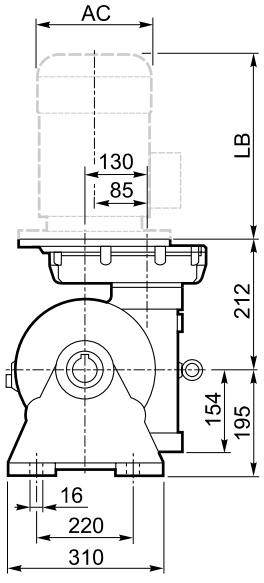

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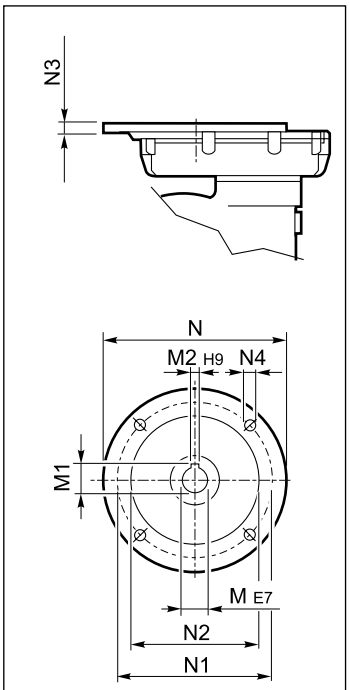

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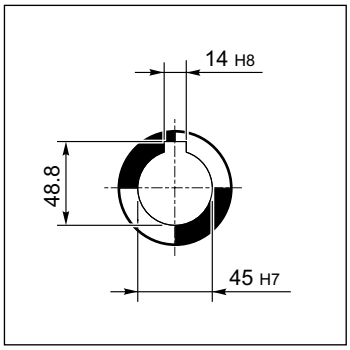

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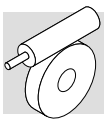
VFR 130□...P(IEC)



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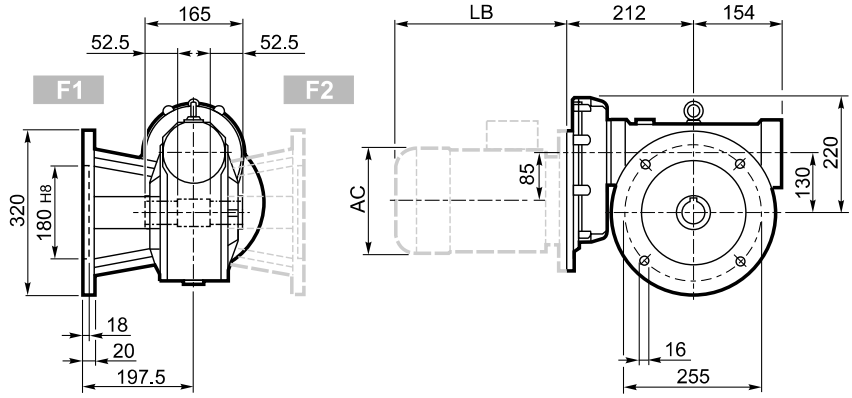
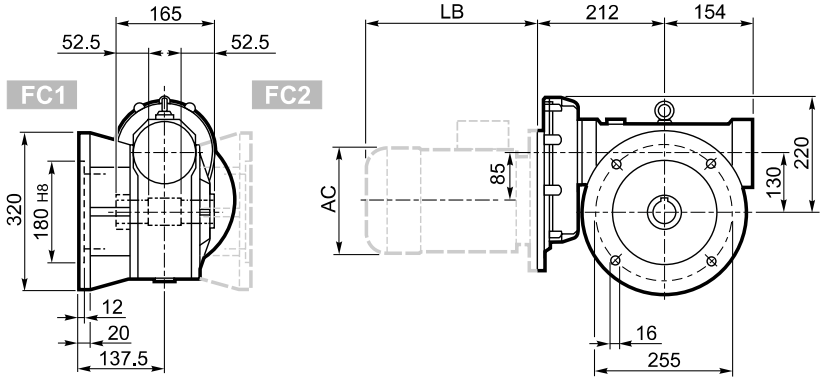
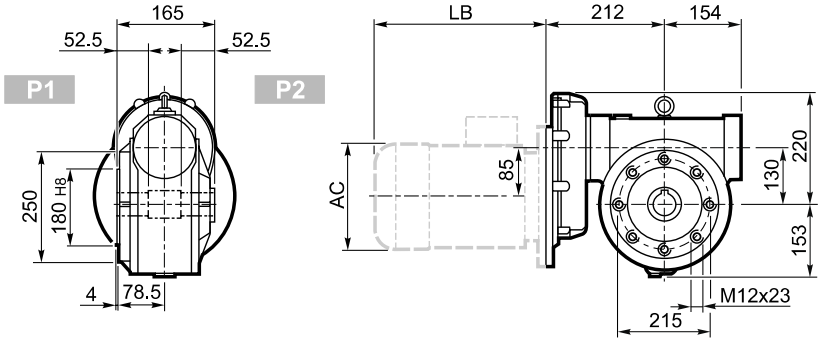


FC_
FR_



P_



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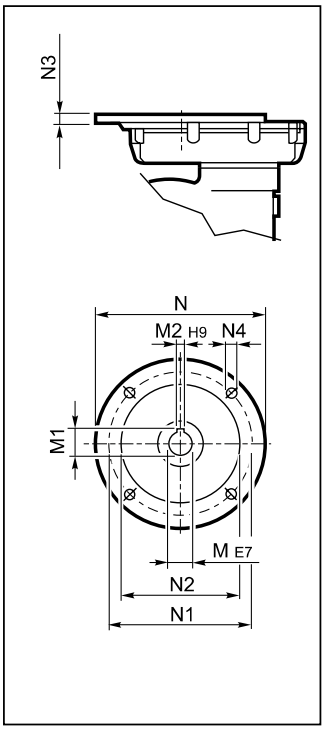

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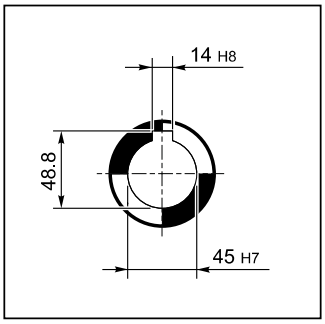

VFR 130_												BN		BN...FD BN...FA	
		M	M1	M2	N	N1	N2	N3	N4	Kg	IEC	LB	AC	LB	AC
VFR 130	**P80 B5**	19 K6	21.8	6	200	165	130	12	M10x25	57	BN 80	234	156	306	156
VFR 130	**P90 B5**	24 K6	27.3	8	200	165	130	12	M10x25		BN 90	276	176	359	176
VRF 130	**P100 B5**	28 J6	29.1#	8	250	215	180	13	M12x35		BN 100	307	195	398	195
VRF 130	**P112 B5**	28 J6	29.1#	8	250	215	180	13	M12x35		BN 112	325	219	424	219

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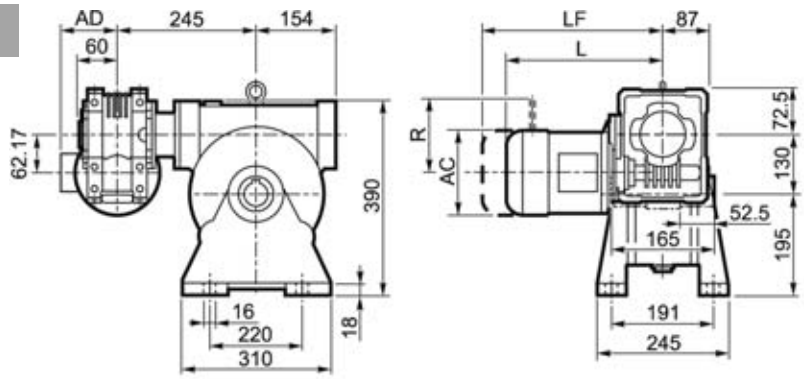
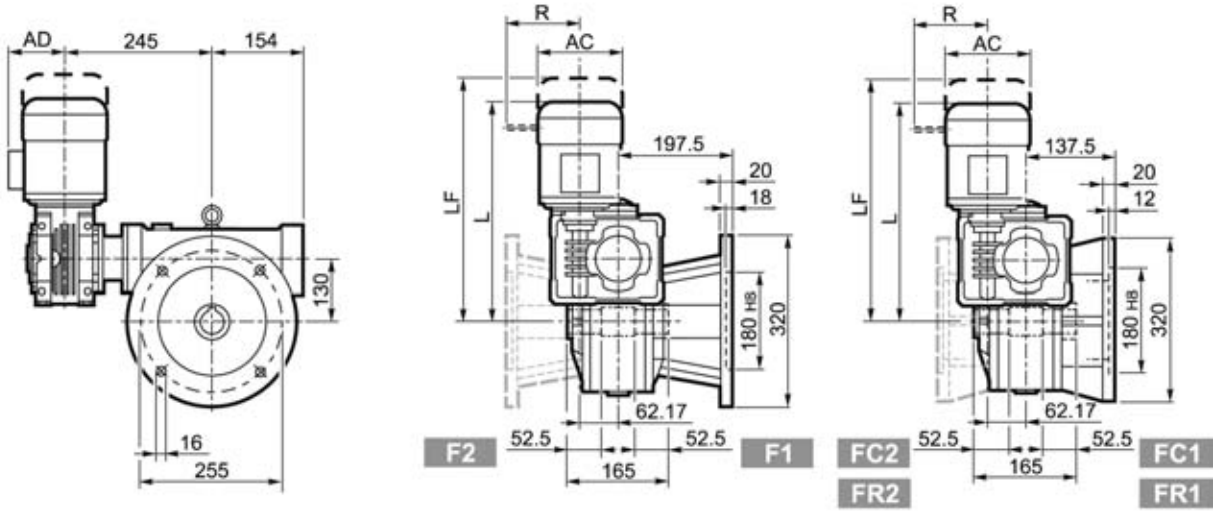
W/VF 63/130□...S□

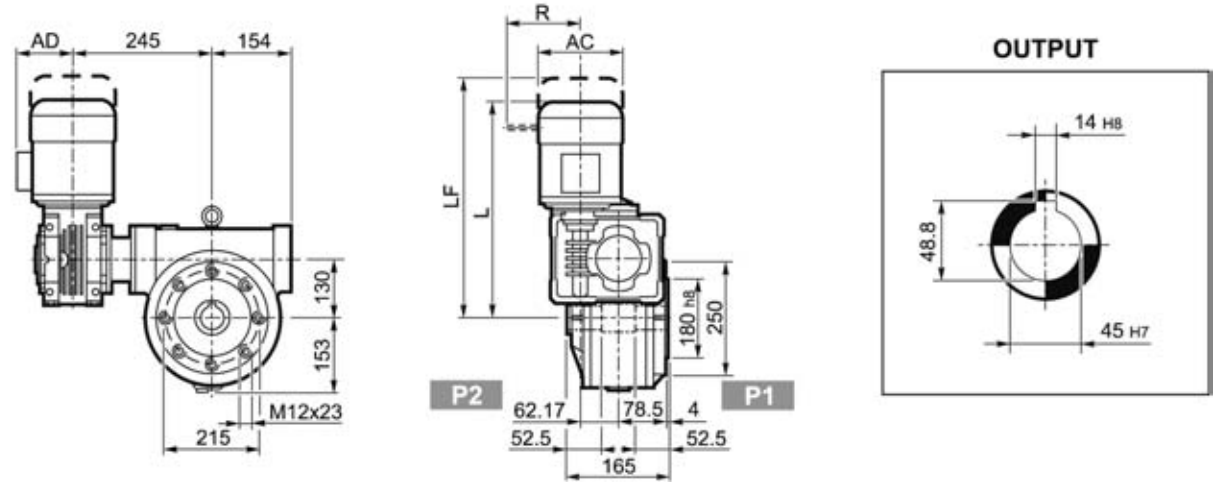
A



F_
FC_
FR_



P_



W/VF 63/130_												
				M_			M...FD M...FA		M...FD		M...FA	
			AC	L	AD	Kg	LF	Kg	R	AD	R	AD
W/VF 63/130	**S1**	**M1S**	138	395	108	62	458	64	103	132	124	108
W/VF 63/130	**S1**	**M1L**	138	419	108	63	480	65	103	132	124	108
W/VF 63/130	**S2**	**M2S**	156	447	119	68	523	71	129	143	134	119

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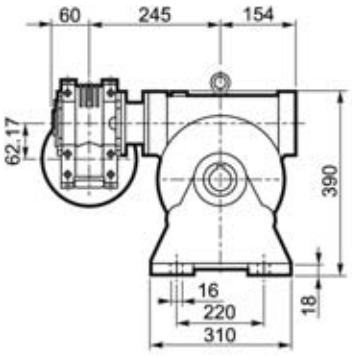
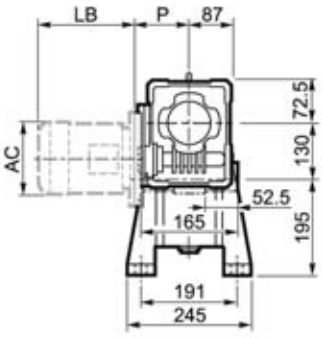
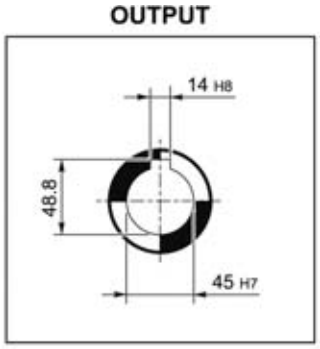
W/VF 63/130□...P(IEC)

A

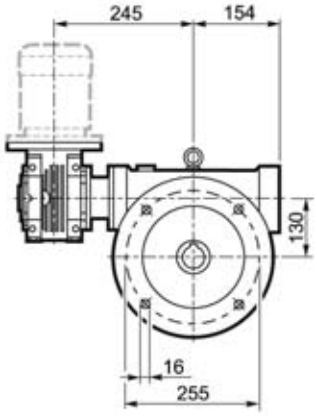


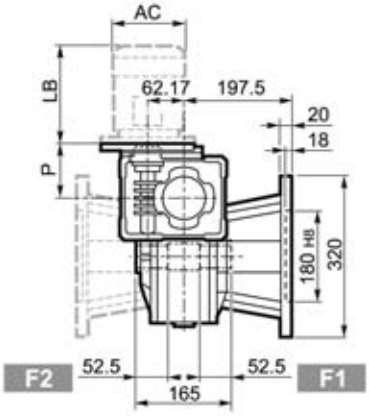


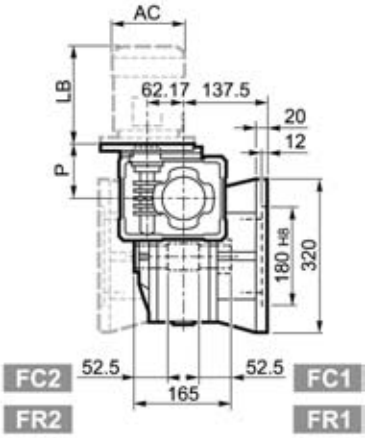


F_

FC_







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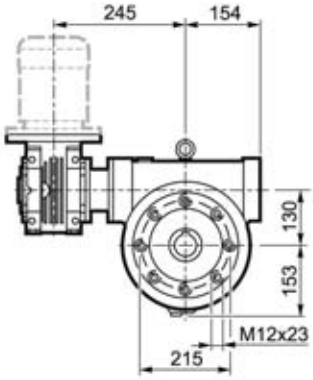
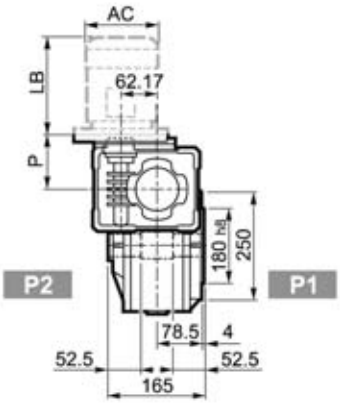
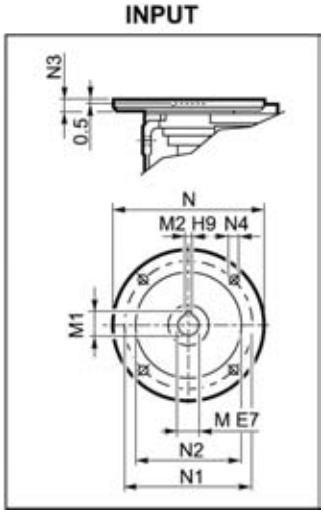


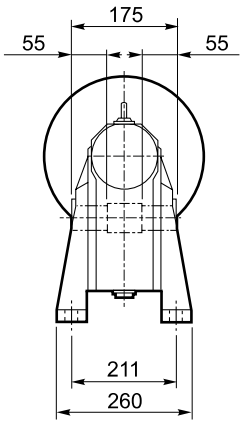


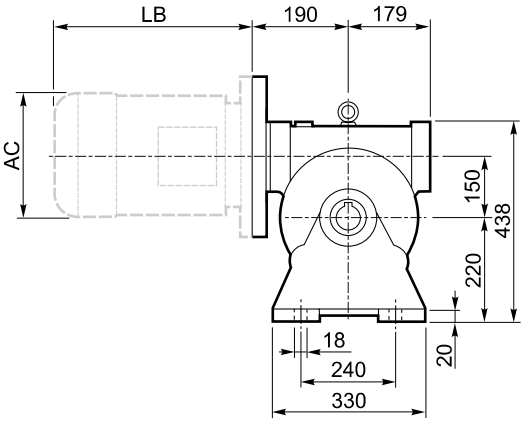


W/VF 63/130_													BN		BN...FD BN...FA	
		M	M1	M2	N	N1	N2	N3	N4	P	Kg	IEC	LB	AC	LB	AC
W/VF 63/130	**P71 B5**	14	16.3	5	160	130	110	11	9	95	57	BN 71	219	138	280	138
W/VF 63/130	**P80 B5**	19	21.8	6	200	165	130	12	11.5	102		BN 80	234	156	306	156
W/VF 63/130	**P90 B5**	24	27.3	8	200	165	130	12	11.5	102		BN 90	276	176	359	176
W/VF 63/130	**P71 B14**	14	16.3	5	105	85	70	11	6.5	95		BN 71	219	138	280	138
W/VF 63/130	**P80 B14**	19	21.8	6	120	100	80	11	6.5	102		BN 80	234	156	306	156
W/VF 63/130	**P90 B14**	24	27.3	8	140	115	95	11	8.5	102		BN 90	276	176	359	176

VF 150□...P(IEC)

A





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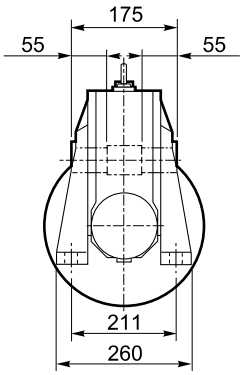
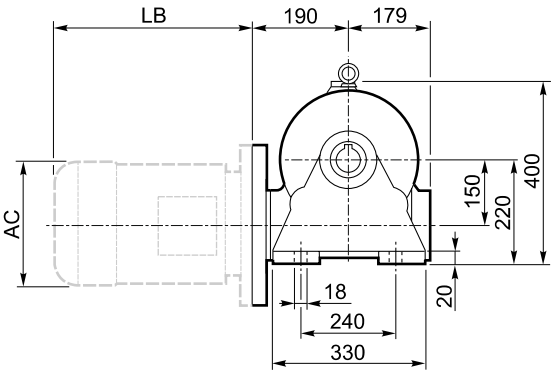
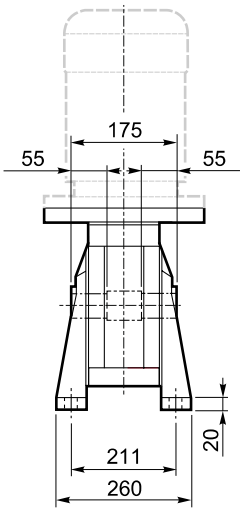
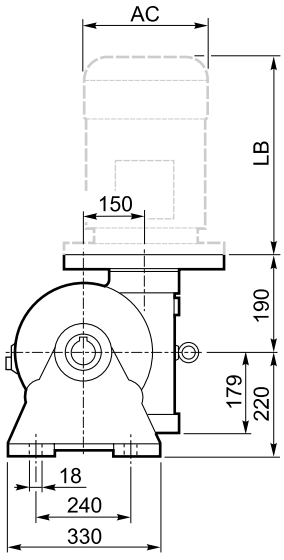


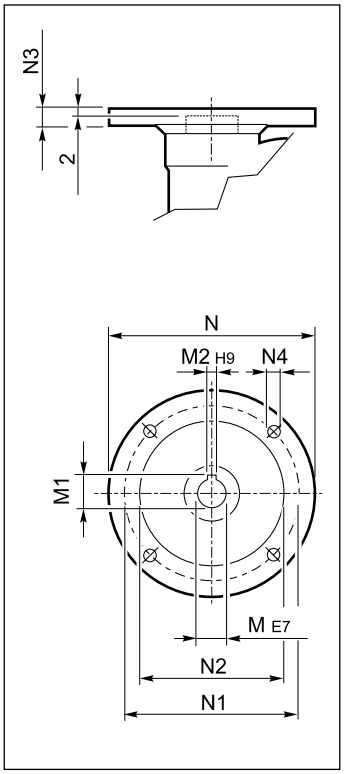


V

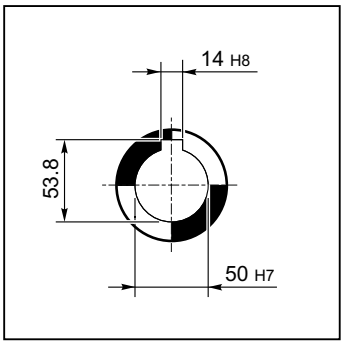




INPUT



OUTPUT



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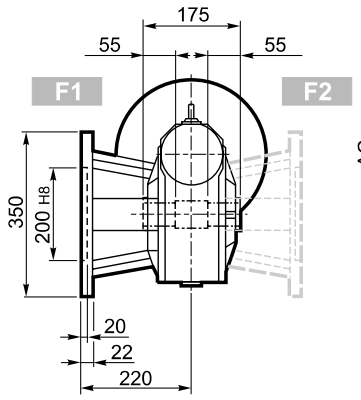
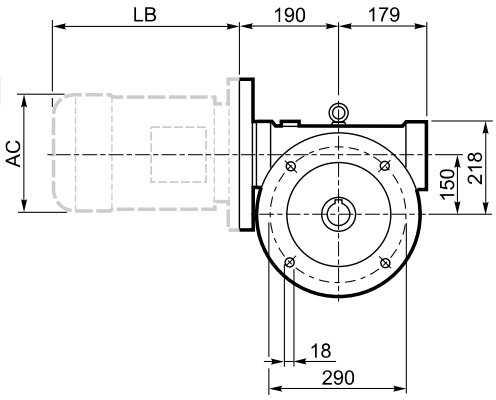
VF 150□...P(IEC)

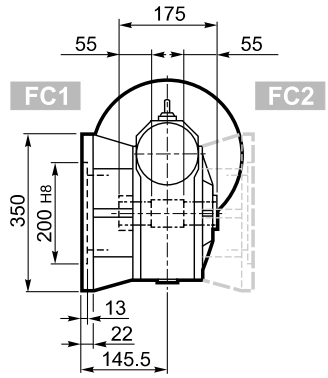
F_

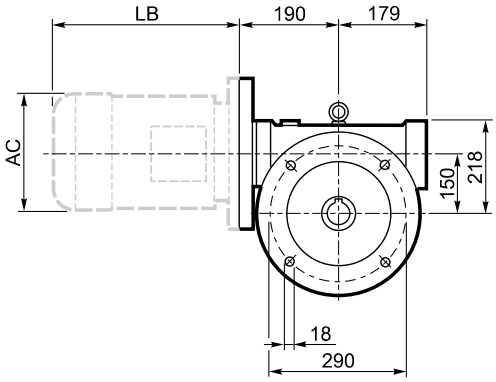




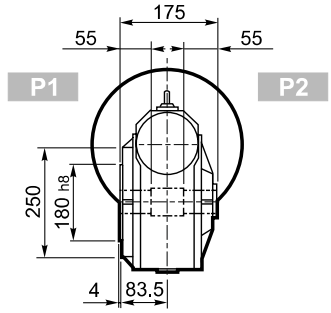
FC_

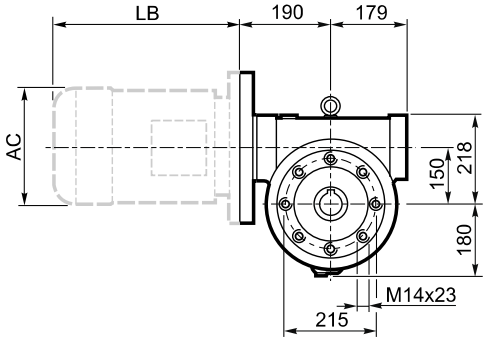
FR_



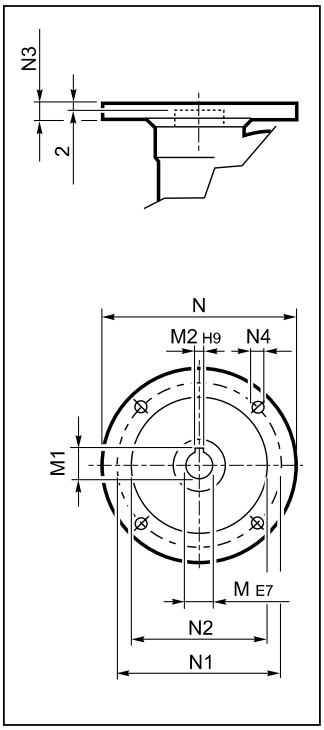


P_

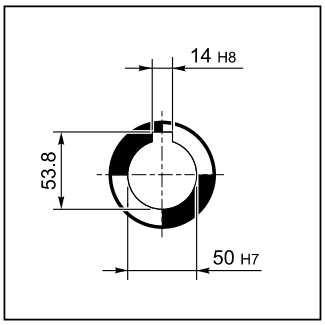




INPUT



OUTPUT



VF 150_												BN		BN...FD BN...FA	
		M	M1	M2	N	N1	N2	N3	N4	kg	IEC	LB	AC	LB	AC
VF 150	**P100 B5**	28	31.3	8	250	215	180	11	13	60	BN 100	307	195	398	195
VF 150	**P112 B5**	28	31.3	8	250	215	180	11	13		BN 112	325	219	424	219
VF 150	**P132 B5**	38	41.3	10	300	265	230	16	13		BN 132	413	258	523	258
VF 150	**P160 B5**	42	44.6#	12	350	300	250	18	18		BN 160MR	452	258	562	258
											BN 160M/R	486	310	626	310

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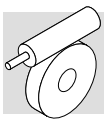
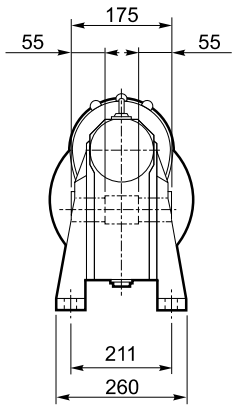
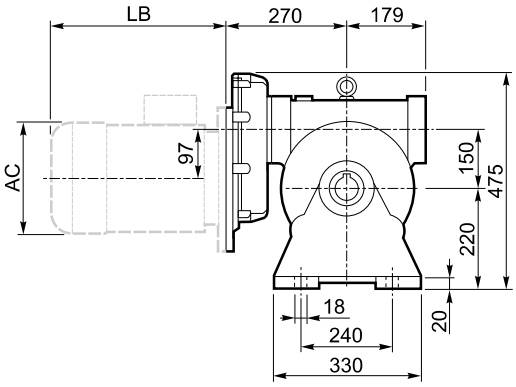


VFR 150□...P(IEC)

A





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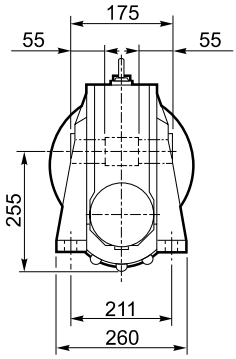
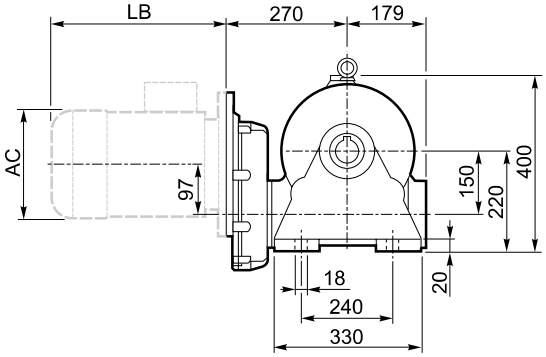
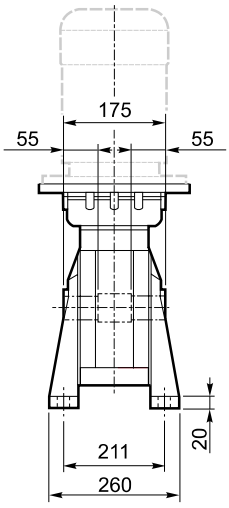
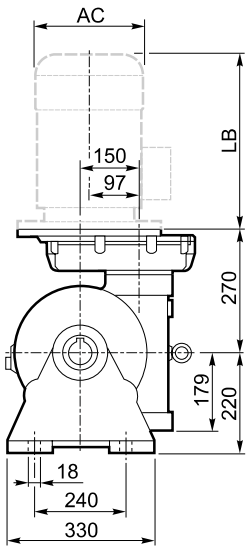




V





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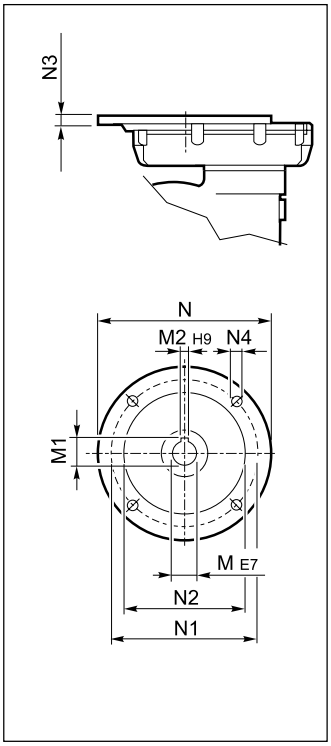
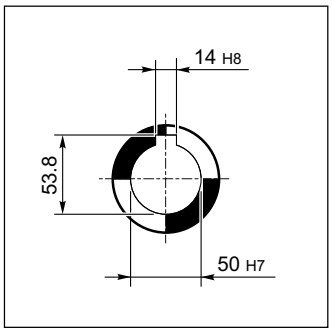


OUTPUT



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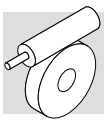
VFR 150□...P(IEC)



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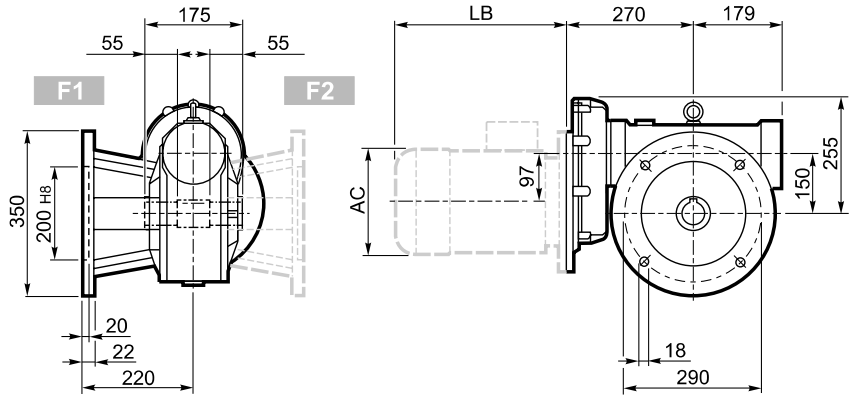
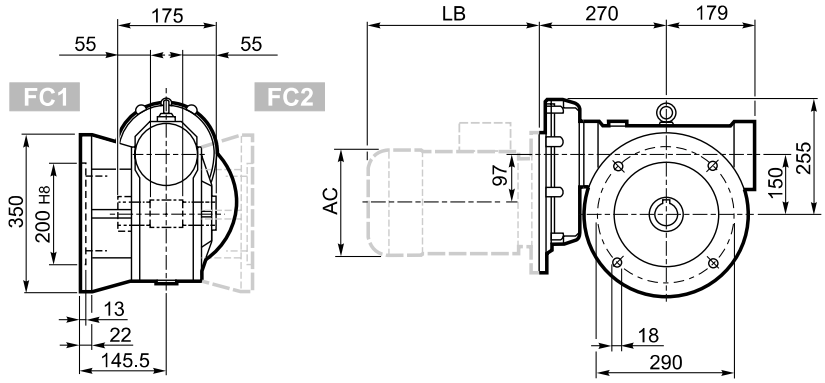


FC_

FR_



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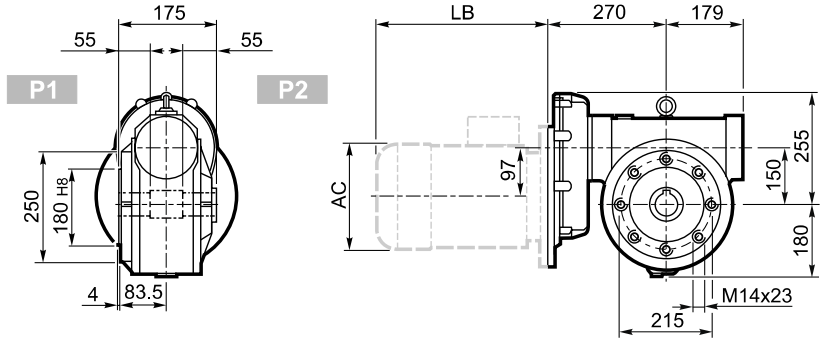

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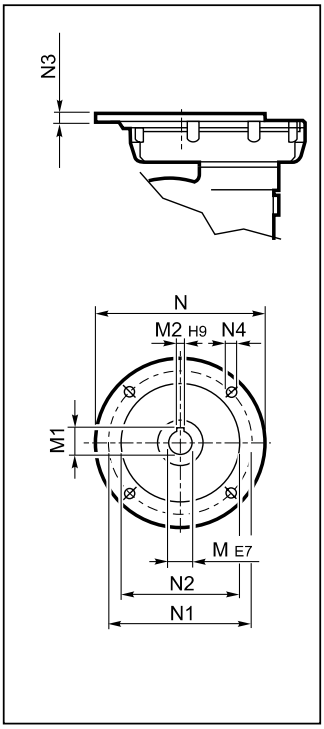
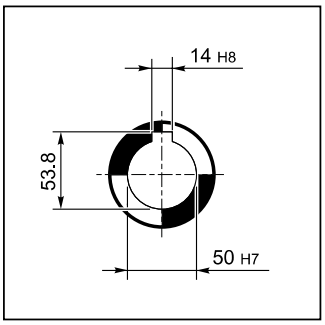


OUTPUT



VFR 150_												BN		BN...FD BN...FA	
		M	M1	M2	N	N1	N2	N3	N4	Kg	IEC	LB	AC	LB	AC
VFR 150	**P90 B5**	24 K6	27.3	8	200	165	130	13	M10x25	71	**BN 90**	276	176	359	176
VRF 150	**P100 B5**	28 K6	31.3	8	250	215	180	13	M12x35		**BN 100**	307	195	398	195
VRF 150	**P112 B5**	28 J6	31.3	8	250	215	180	13	M12x35		**BN 112**	325	219	424	219
VFR 150	**P132 B5**	38 J6	39.6#	10	300	265	230	13	M12x35		**BN 132**	413	258	523	258

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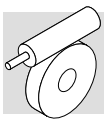
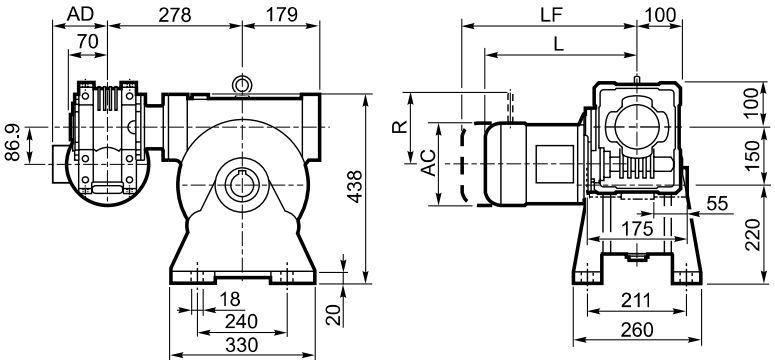
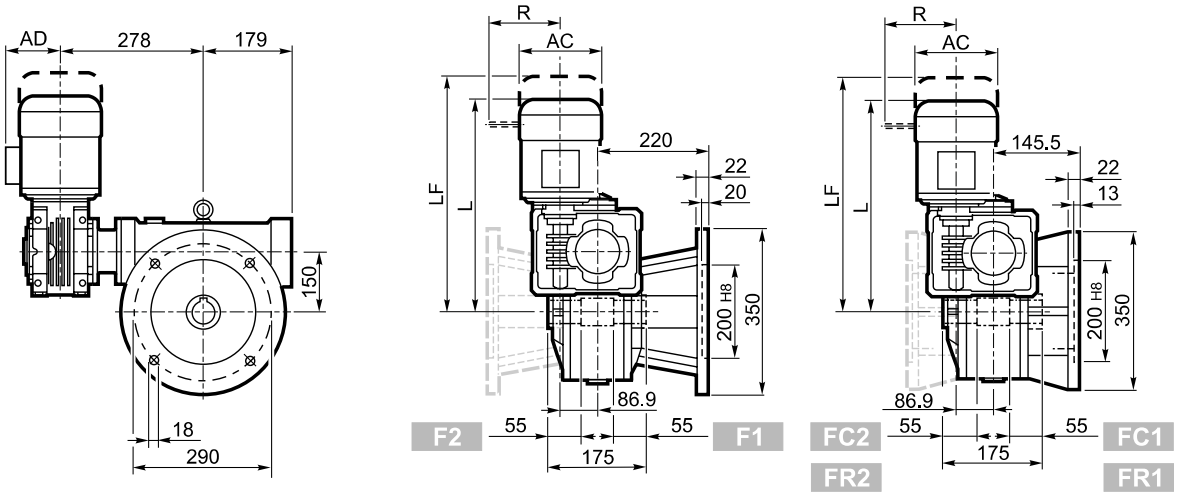


W/VF 86/150□...S□

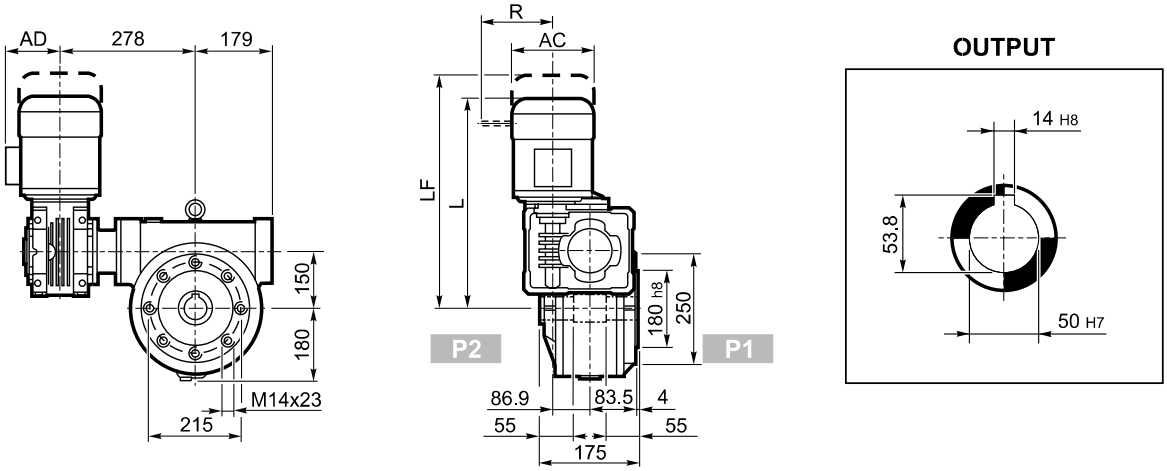
A



F_
FC_
FR_



P_



W/VF 86/150_												
				M_			M...FD M...FA		M...FD		M...FA	
			AC	L	AD	Kg	LF	Kg	R	AD	R	AD
W/VF 86/150	S1	M1S	138	450	108	80	363	82	103	132	124	108
W/VF 86/150	S1	M1L	138	474	108	82	385	84	103	132	124	108
W/VF 86/150	S2	M2S	156	499	119	86	425	89	129	143	134	119
W/VF 86/150	S3	M3S	193	542	142	91	488	97	160	155	160	142
W/VF 86/150	S3	M3L	193	574	142	99	515	104	160	155	160	142

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BONFIGLIOLI RIDUTTORI

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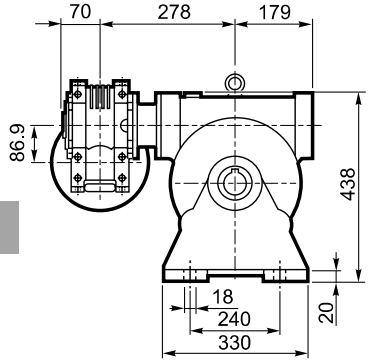
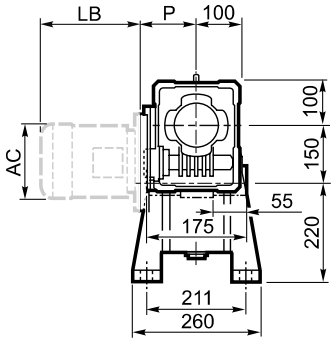
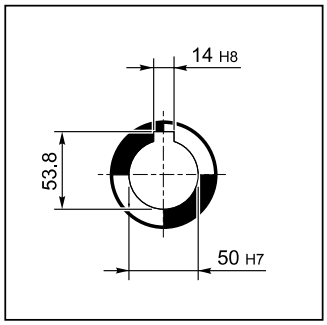
W/VF 86/150□...P(IEC)

A

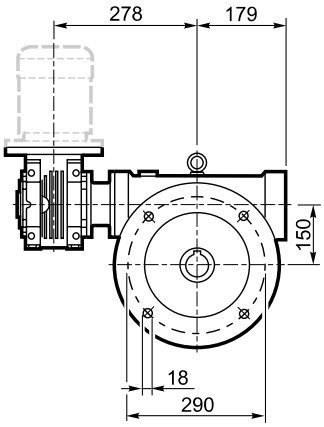


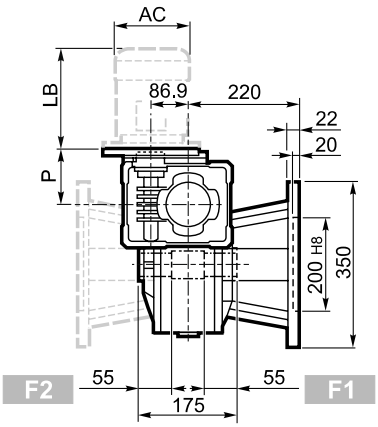


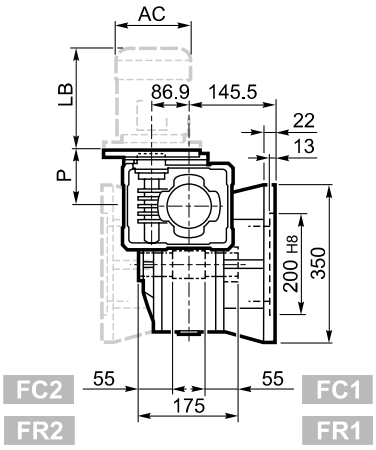
OUTPUT



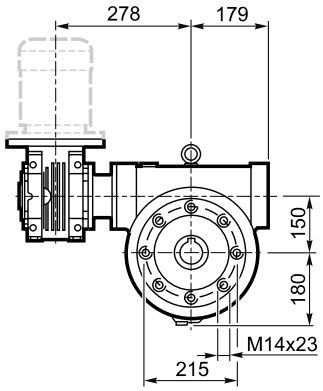
F_
FC_
FR_

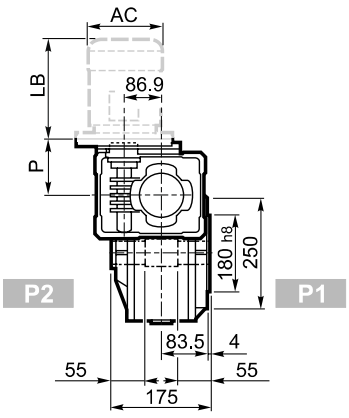






P_





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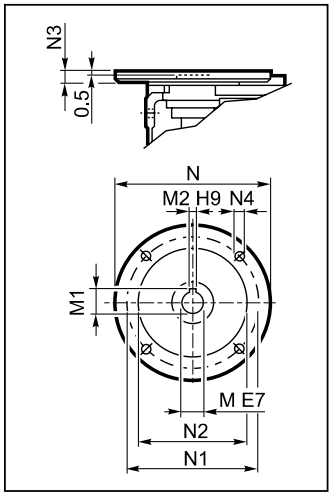

W/VF 86/150_													BN		BN...FD BN...FA	
		M	M1	M2	N	N1	N2	N3	N4	P	Kg	IEC	LB	AC	LB	AC
W/VF 86/150	**P71 B5**	14	16.3	5	160	130	110	11	9	128		BN 71	219	138	280	138
W/VF 86/150	**P80 B5**	19	21.8	6	200	165	130	12	11.5	128		BN 80	234	156	306	156
W/VF 86/150	**P90 B5**	24	27.3	8	200	165	130	12	11.5	128		BN 90	276	176	359	176
W/VF 86/150	**P100 B5**	28	31.3	8	250	215	180	13	12.5	136		BN 100	307	195	398	195
W/VF 86/150	**P112 B5**	28	31.3	8	250	215	180	13	12.5	136	75	BN 112	325	219	424	219
W/VF 86/150	**P80 B14**	19	21.8	6	120	100	80	7.5	6.5	128		BN 80	234	156	306	156
W/VF 86/150	**P90 B14**	24	27.3	8	140	115	95	7.5	8.5	128		BN 90	276	176	359	176
W/VF 86/150	**P100 B14**	28	31.3	8	160	130	110	10	8.5	136		BN 100	307	195	398	195
W/VF 86/150	**P112 B14**	28	31.3	8	160	130	110	10	8.5	136		BN 112	325	219	424	219

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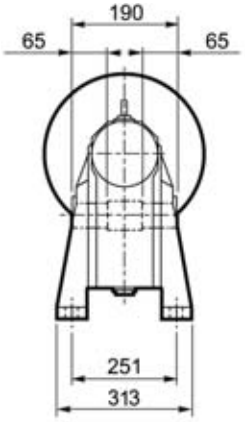
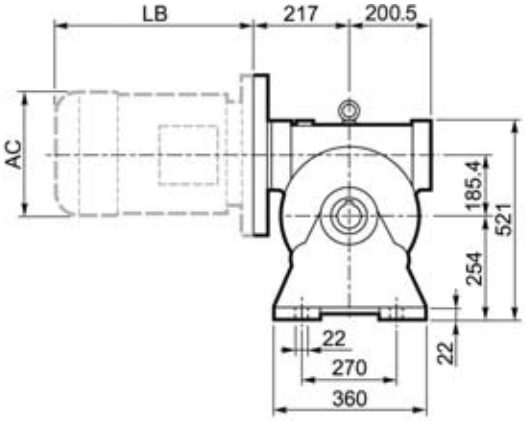
VF 185□...P(IEC)

A





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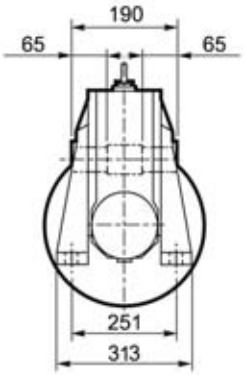

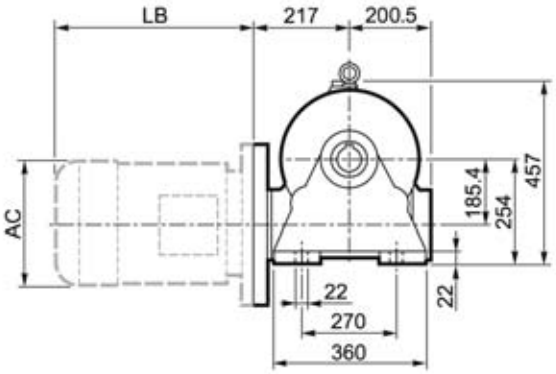

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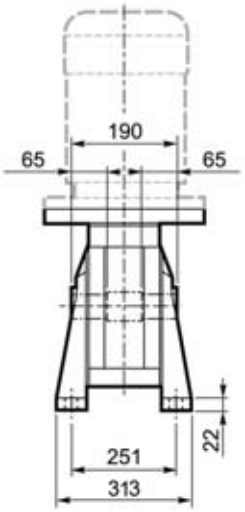

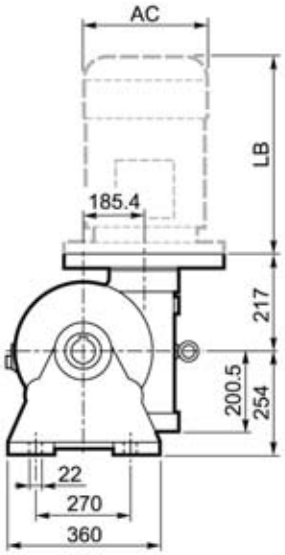

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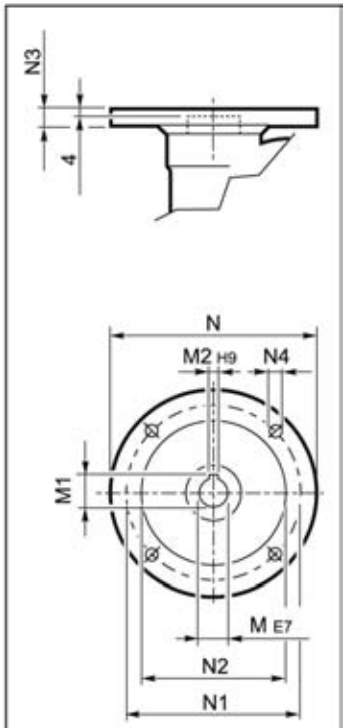

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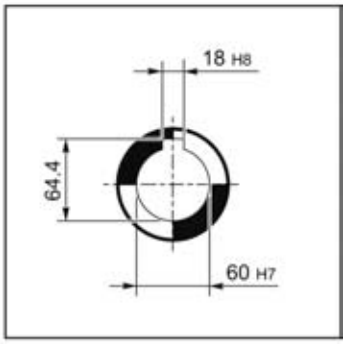

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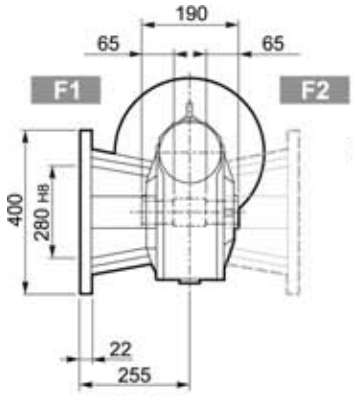
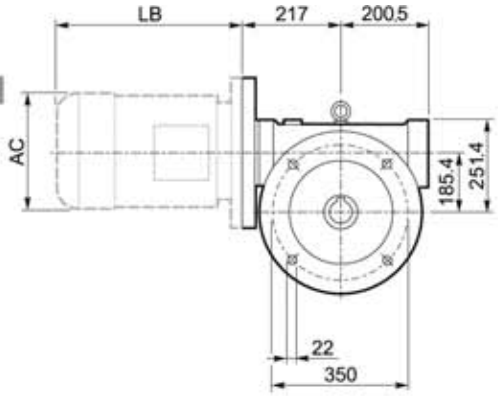
VF 185□...P(IEC)

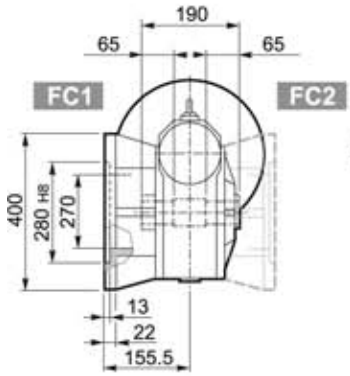
F_

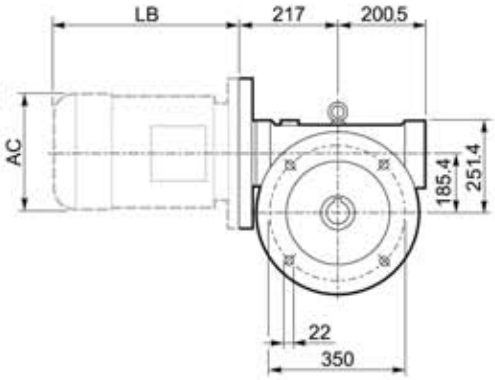




FC_

FR_





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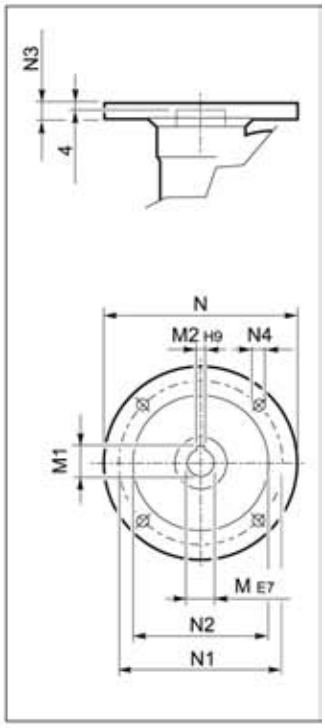

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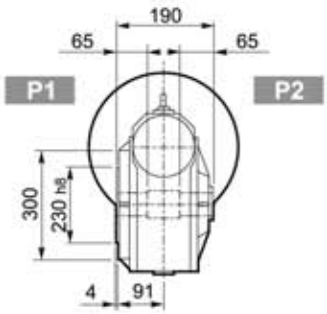
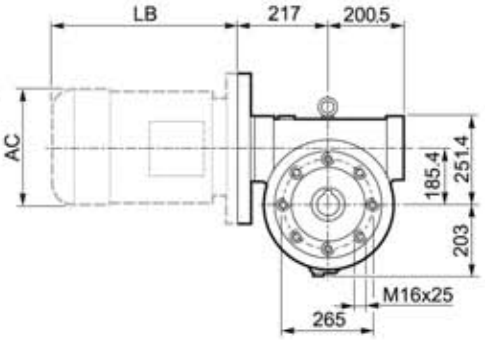
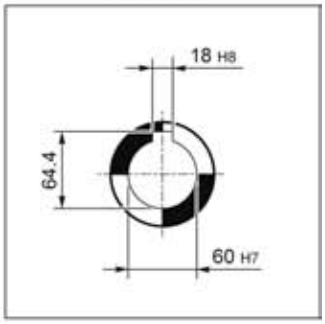




OUTPUT



VF 185_												BN		BN...FD BN...FA	
		M	M1	M2	N	N1	N2	N3	N4	Kg	IEC	LB	AC	LB	AC
VF 185	P100 B5	28	31.3	8	250	215	180	16	13	94	BN 100	307	195	398	195
VF 185	P112 B5	28	31.3	8	250	215	180	16	13		BN 112	325	219	424	219
VF 185	P132 B5	38	41.3	10	300	265	230	16	13		BN 132	413	258	523	258
VF 185	P160 B5	42	45.3	12	350	300	250	18	18		BN 160MR	452	258	562	258
											BN 160M/L	486	310	626	310
VF 185	P180 B5	48	51.2#	14	350	300	250	18	18		BN 180M	530	310	670	310
											BN 180L	598	348	756	348

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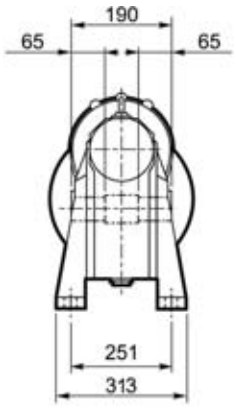
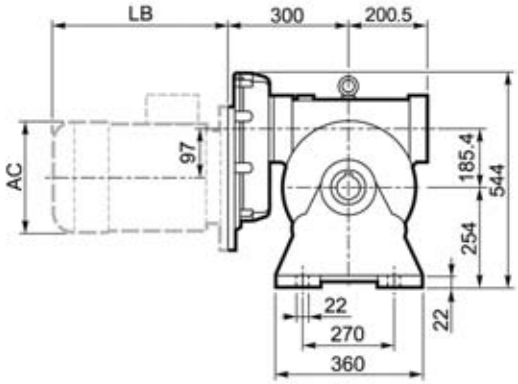
VFR 185□...P(IEC)

A





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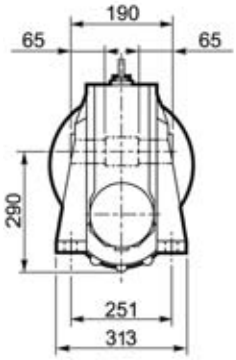
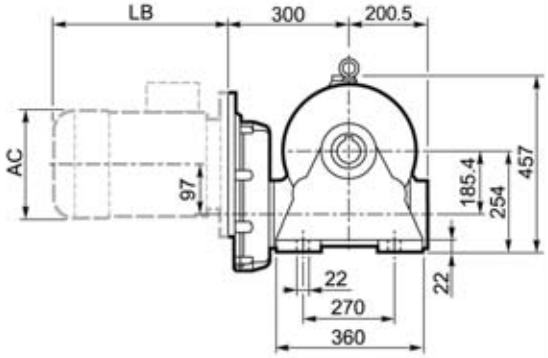
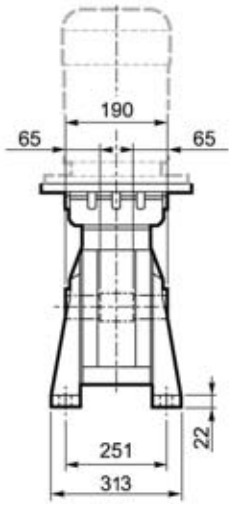
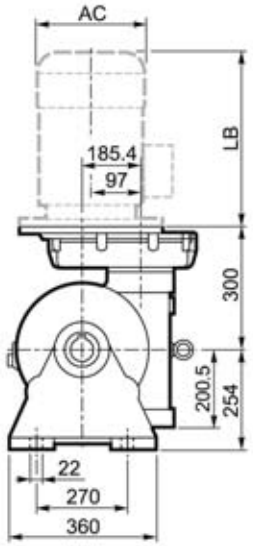




V





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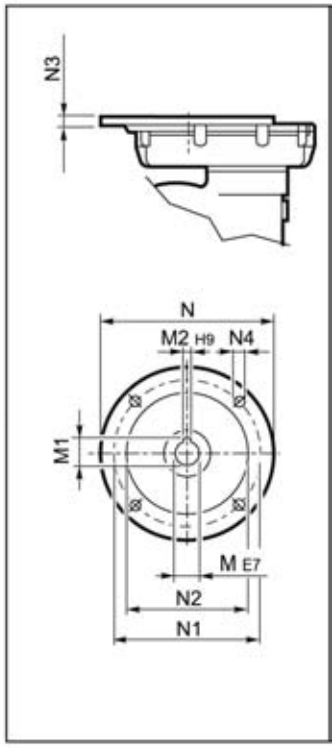

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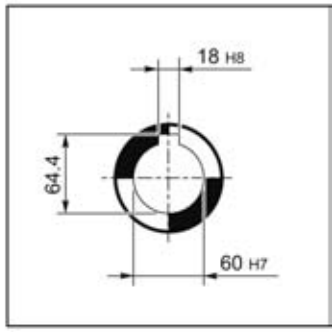

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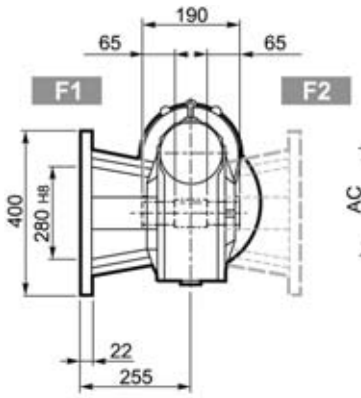
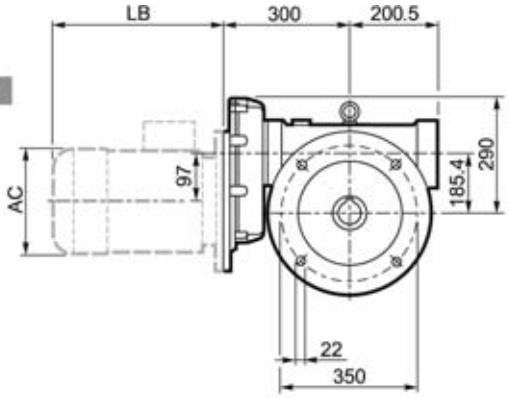
VFR 185□...P(IEC)

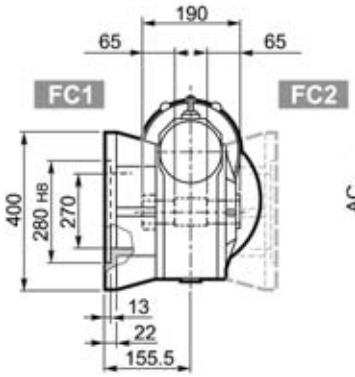
F_

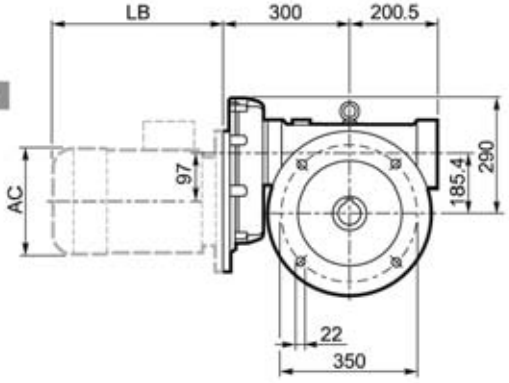




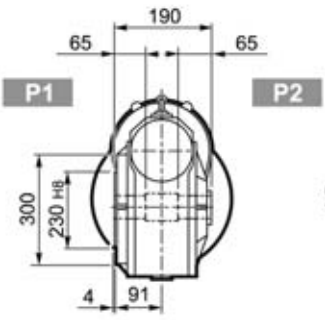
FC_

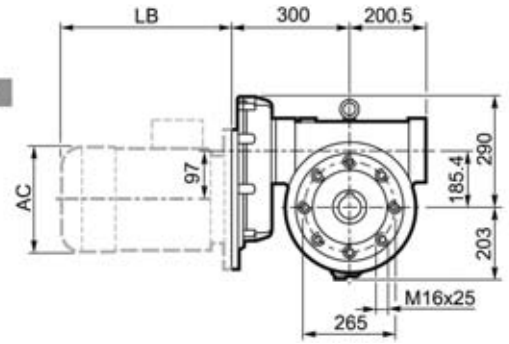
FR_





P_





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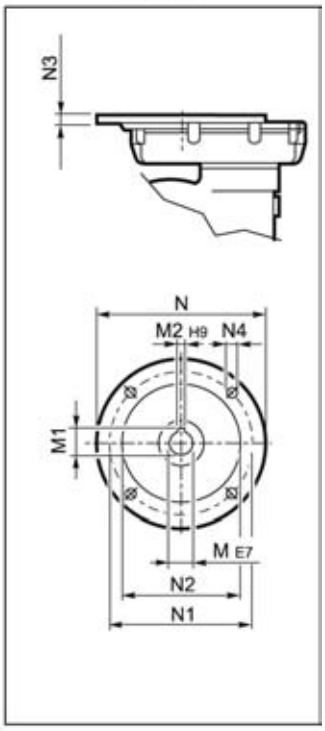

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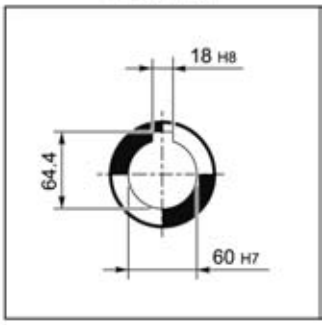

VFR 185_												BN		BN...FD BN...FA	
		M	M1	M2	N	N1	N2	N3	N4	kg	IEC	LB	AC	LB	AC
VFR 185	**P90 B5**	24 K6	27.3	8	200	165	130	13	M10x25	110	BN 90	276	176	359	176
VRF 185	**P100 B5**	28 K6	31.3	8	250	215	180	13	M12x35		BN 100	307	195	398	195
VRF 185	**P112 B5**	28 K6	31.3	8	250	215	180	13	M12x35		BN 112	325	219	424	219
VFR 185	**P132 B5**	38 J6	39.6#	10	300	265	230	13	M12x35		BN 132	413	258	523	258

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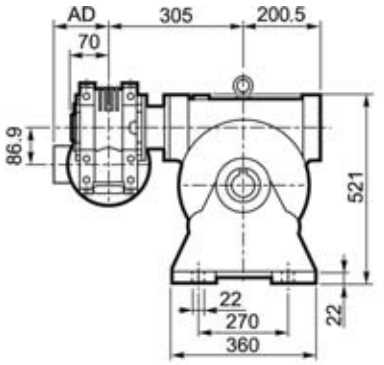
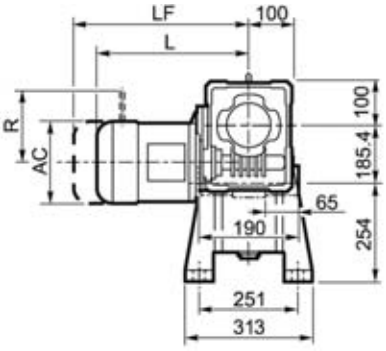
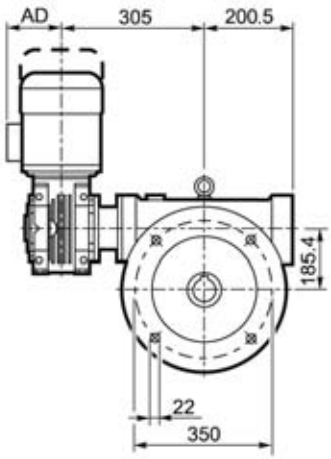
W/VF 86/185□...S□

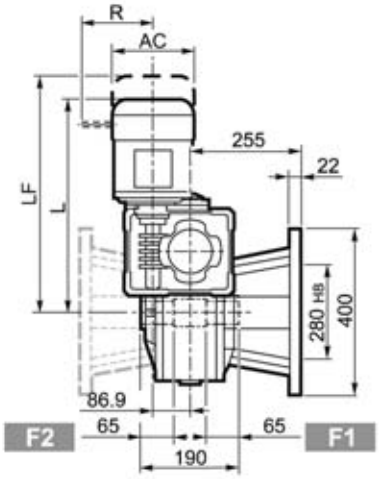
A

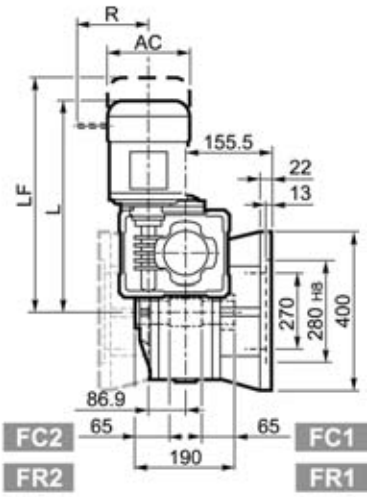




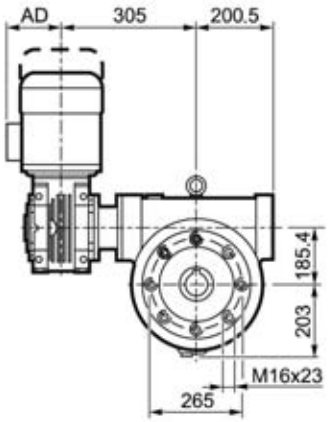
F_
FC_
FR_

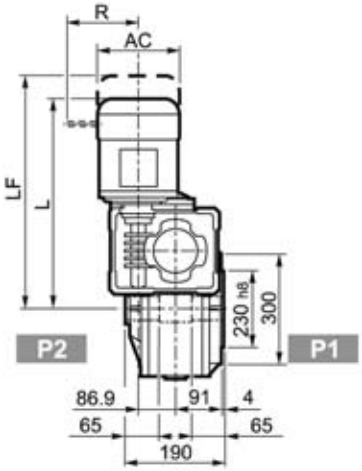


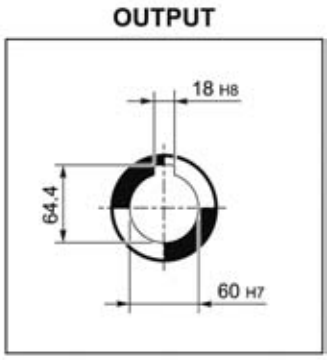




P_







W/VF 86/150_

			AC	M_ L	M_ AD	M_ Kg	M...FD M...FA LF	M...FD M...FA Kg	M...FD R	M...FD AD	M...FA R	M...FA AD
W/VF 86/185	**S1**	**M1S**	138	485	108	114	548	116	103	132	124	108
W/VF 86/185	**S1**	**M1L**	138	509	108	116	570	118	103	132	124	108
W/VF 86/185	**S2**	**M2S**	156	534	119	120	610	123	129	143	134	119
W/VF 86/185	**S3**	**M3S**	193	577	142	125	673	131	160	155	160	142
W/VF 86/185	**S3**	**M3L**	193	609	142	133	700	138	160	155	160	142

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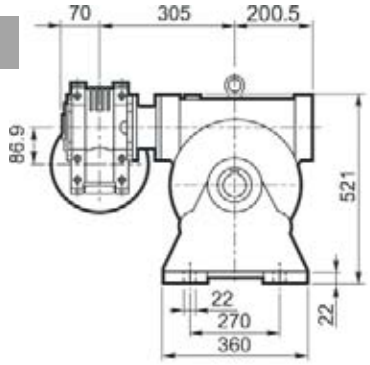
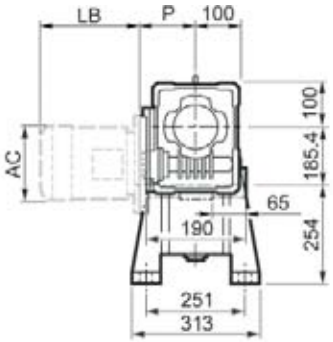
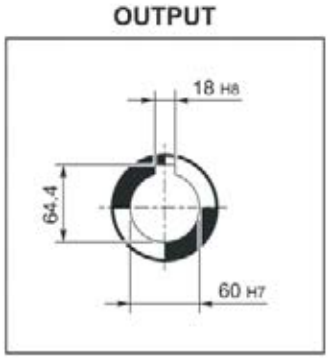
W/VF 86/185□...P(IEC)

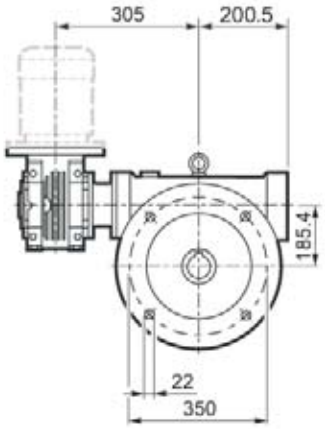
A

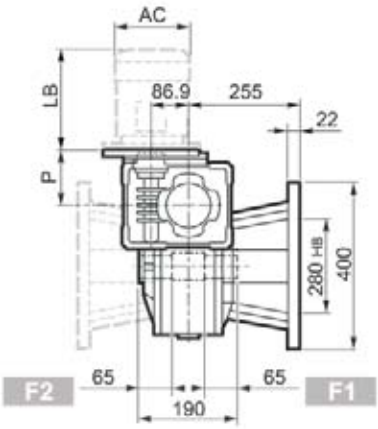


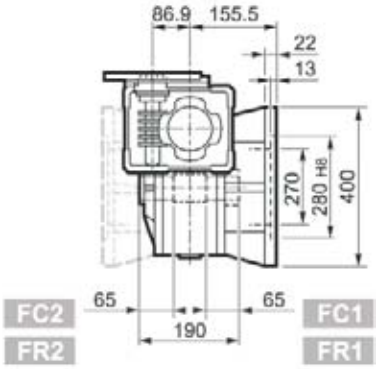




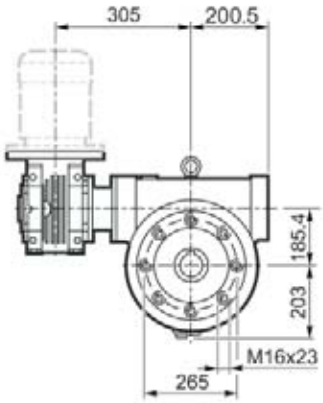
F_
FC_
FR_

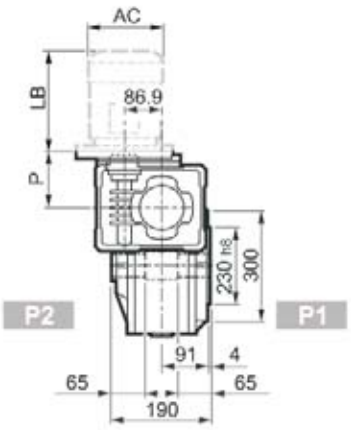


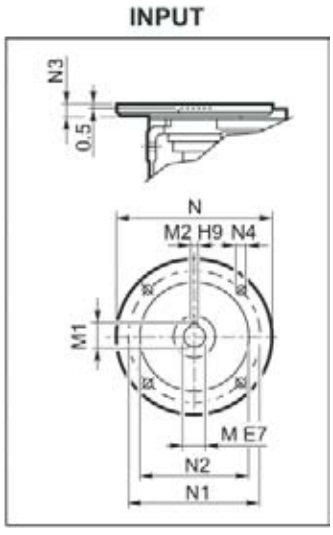




P_







W/VF 86/185_												BN		BN...FD BN...FA	
		M	M1	M2	N	N1	N2	N3	N4	P	kg	IEC	LB	AC	LB	AC
W/VF 86/185	P71 B5	14	16.3	5	160	130	110	11	9	128		BN 71	219	138	280	138
W/VF 86/185	P80 B5	19	21.8	6	200	165	130	12	11.5	128		BN 80	234	156	306	156
W/VF 86/185	P90 B5	24	27.3	8	200	165	130	12	11.5	128		BN 90	276	176	359	176
W/VF 86/185	P100 B5	28	31.3	8	250	215	180	13	12.5	136		BN 100	307	195	398	195
W/VF 86/185	P112 B5	28	31.3	8	250	215	180	13	12.5	136	109	BN 112	325	219	424	219
W/VF 86/185	P80 B14	19	21.8	6	120	100	80	7.5	6.5	128		BN 80	234	156	306	156
W/VF 86/185	P90 B14	24	27.3	8	140	115	95	7.5	8.5	128		BN 90	276	176	359	176
W/VF 86/185	P100 B14	28	31.3	8	160	130	110	10	8.5	136		BN 100	307	195	398	195
W/VF 86/185	P112 B14	28	31.3	8	160	130	110	10	8.5	136		BN 112	325	219	424	219

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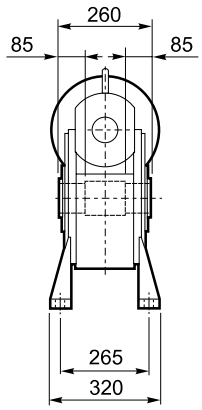
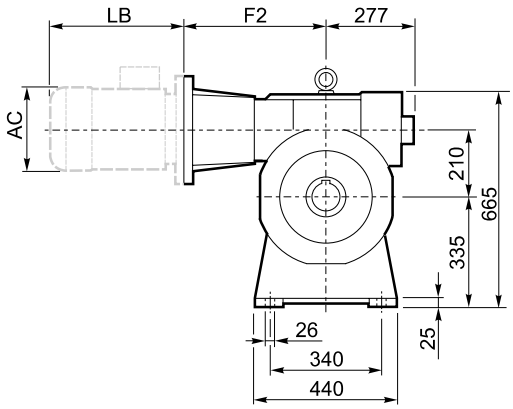
VF 210□...P(IEC)

A





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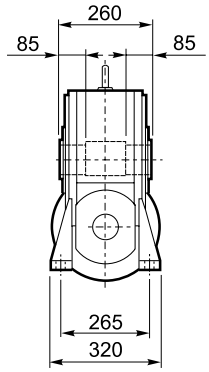

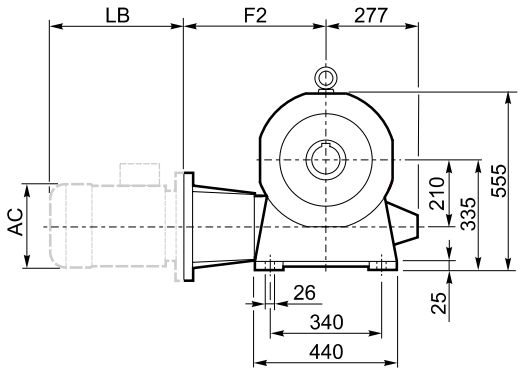

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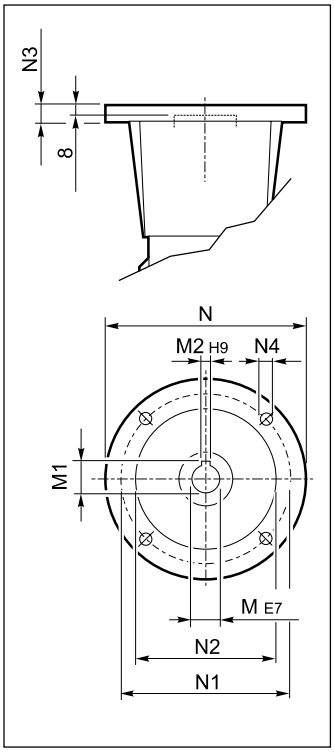

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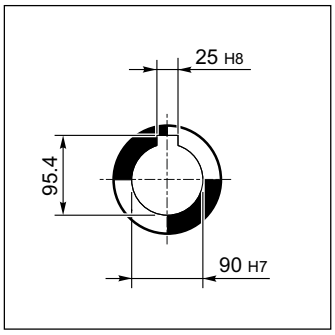

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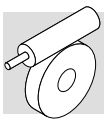
VF 210□...P(IEC)



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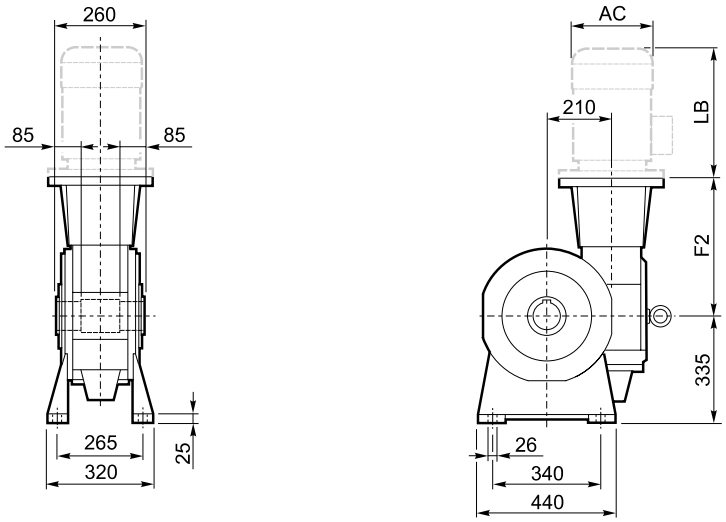
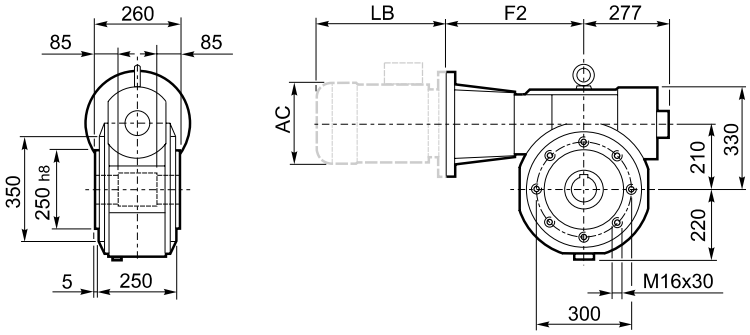


P



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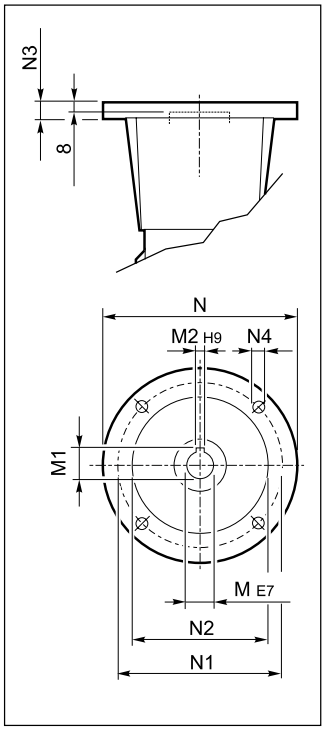

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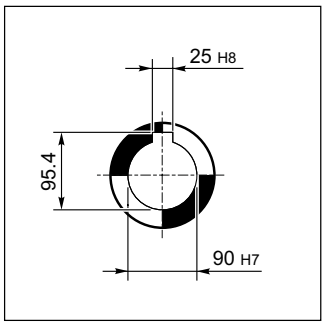

Las formas constructivas A y P llevan incorporado un ventilador de refrigeración.

En la ejecución P(IEC) en el suministro, incluye de serie, el acoplamiento completo para ataque motor.

Fan cooling as standard on versions A and P.

P(IEC) arrangements come complete with gear coupling enclosed in the bell housing.

In den Ausführungen A und P wird das Lüfterrad eingebaud.

Die Motorflansch-Ausführung wird serienmäßig mit kompletter Motorkupplung geliefert.

Dans les formes de construction A et P, il est prévu un ventilateur de refroidissement.

Dans la version P(IEC), la fourniture du joint complet d'accouplement moteur à été prévue de série.

VF 210_													BN		BN...FD BN...FA	
		F2	M	M1	M2	N	N1	N2	N3	N4	kg	IEC	LB	AC	LB	AC
VF 210	**P132 B5**	485	38	41.3	10	300	265	230	25	M12	210	**BN 132**	413	258	523	258
VF 210	**P160 B5**	460	42	45.3	12	350	300	250	22	18		**BN 160MR**	452	258	562	258
												BN 160M/L	486	310	626	310
VF 210	**P180 B5**	460	48	51.8	14	350	300	250	22	18		**BN 180M**	530	310	670	310
												BN 180L	598	348	756	348
VF 210	**P200 B5**	485	55	59.3	16	400	350	300	25	M16		**BN 200**	612	348	768	348
VF 210	**P225 B5**	490	60	64.4	18	450	400	350	22	18 #		**BN 225**				

8 taladros a 45º / *N° 8 holes at 45°* / N. 8 Bohrungen 45° / *N. 8 trous 45°*

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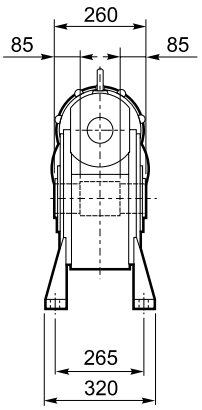
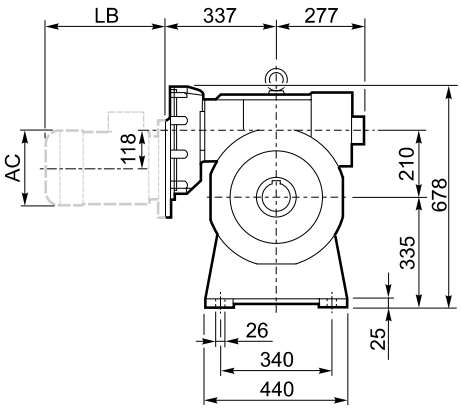
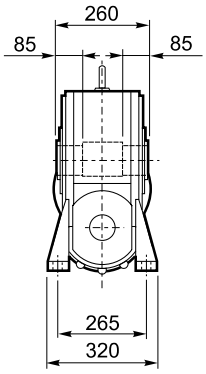
VFR 210□...P(IEC)

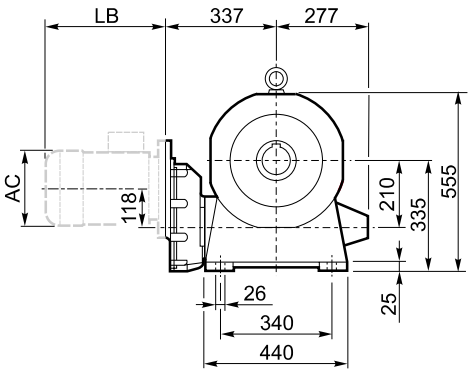
A





N





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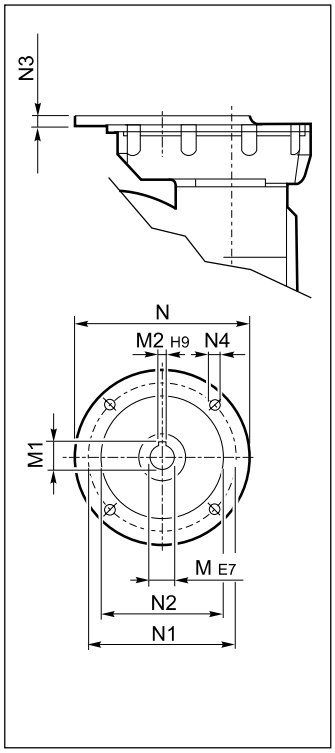

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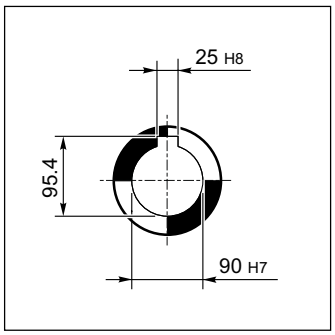

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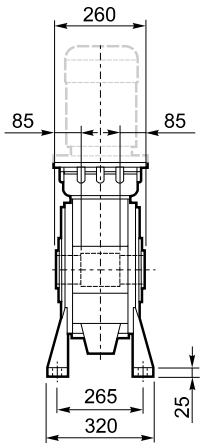
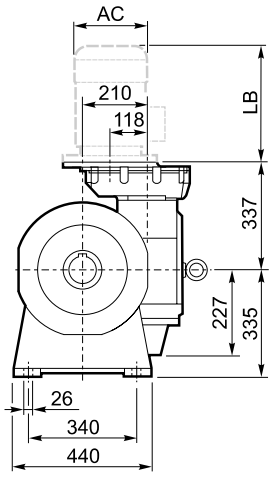
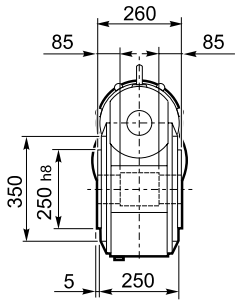
VFR 210□...P(IEC)

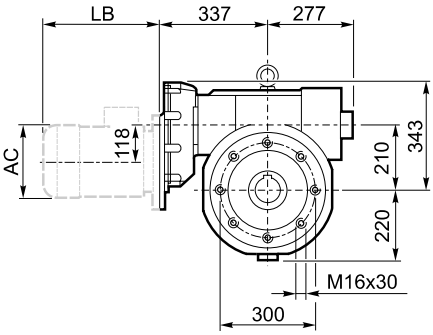
V





P





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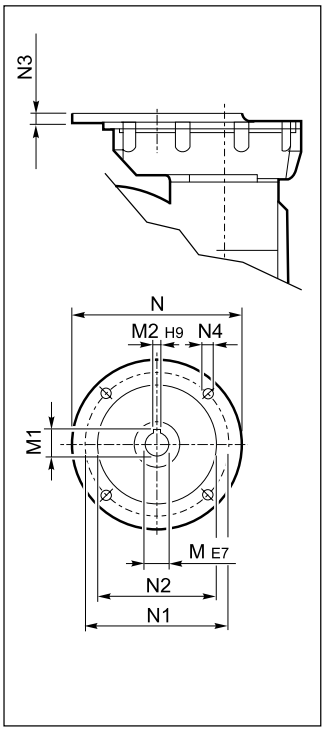

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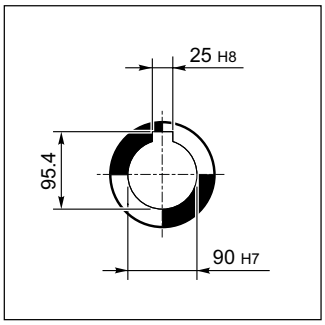

Las formas constructivas A y P llevan acoplado un ventilador de refrigeración.

Fan cooling as standard on versions A and P.

In den Ausführungen A und P wird das Lüfterrad eingebaud.

Dans les formes de construction A et P, il est prévu un ventilateur de refroidissement.

VFR 210_												BN		BN...FD BN...FA	
		M	M1	M2	N	N1	N2	N3	N4	Kg	IEC	LB	AC	LB	AC
VRF 210	**P100 B5**	28 K6	31.3	8	250	215	180	13	M12x35	185	BN 100	307	195	398	195
VRF 210	**P112 B5**	28 K6	31.3	8	250	215	180	13	M12x35		BN 112	325	219	424	219
VFR 210	**P132 B5**	38 J6	41.3	10	300	265	230	13	M12x35		BN 132	413	258	523	258
VFR 210	**P160 B5**	42 J6	44.3#	12	350	300	250	18	M16x60		BN 160MR	452	258	562	258
											BN 160M/L	486	310	626	310

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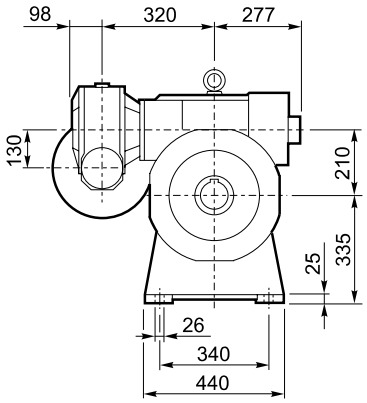
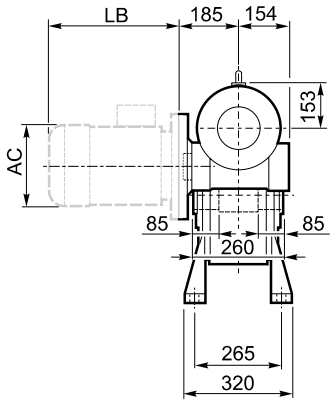
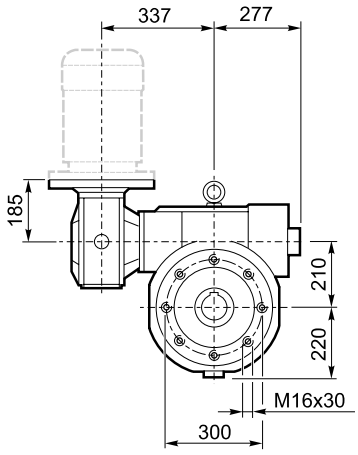
VF/VF 130/210□...P(IEC)

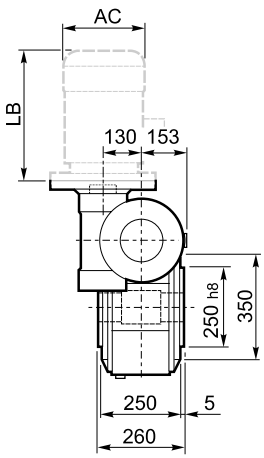
A





P





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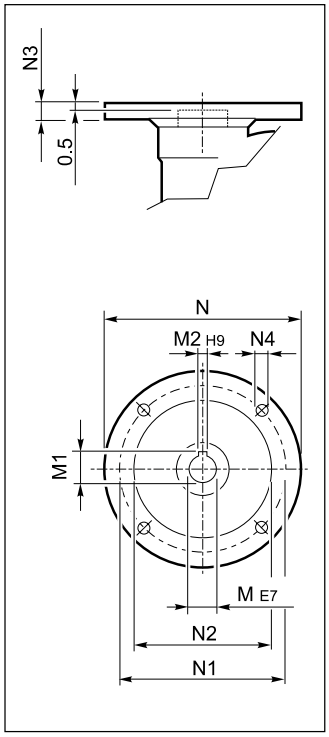

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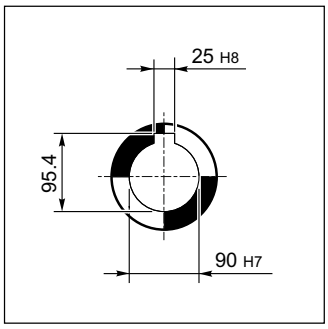

Las formas constructivas A y P llevan acoplado un ventilador de refrigeración.

Fan cooling as standard on versions A and P.

In den Ausführungen A und P wird das Lüfterrad eingebaud.

Dans les formes de construction A et P, il est prévu un ventilateur de refroidissement.

VF/VF 130/210_												BN		BN...FD BN...FA	
		M	M1	M2	N	N1	N2	N3	N4	kg	IEC	LB	AC	LB	AC
VF/VF 130/210	**P90 B5**	24	27.3	8	200	165	130	17	11	225	BN 90	276	176	359	176
VF/VF 130/210	**P100 B5**	28	31.3	8	250	215	180	17	13		BN 100	307	195	398	195
VF/VF 130/210	**P112 B5**	28	31.3	8	250	215	180	17	13		BN 112	325	219	424	219
VF/VF 130/210	**P132 B5**	38	40.1#	10	300	265	230	17	13		BN 132	413	258	523	258

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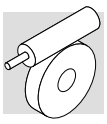

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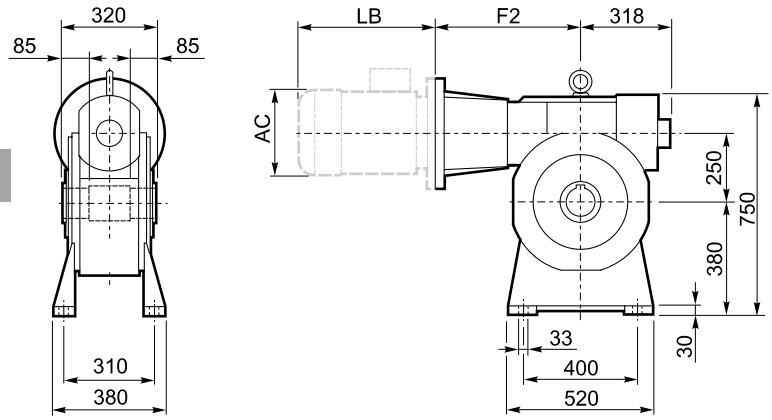
VF 250□...P(IEC)

A



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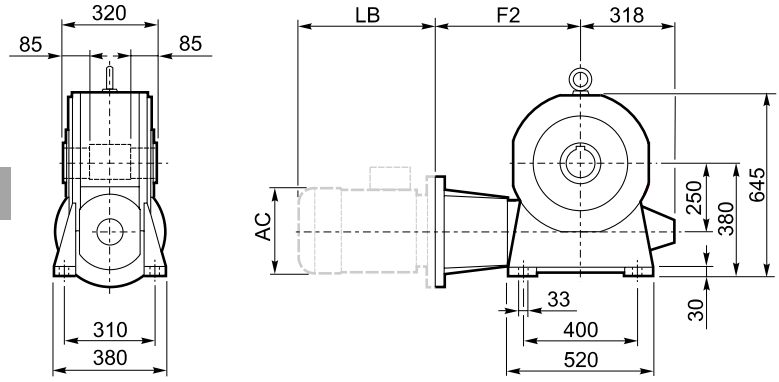

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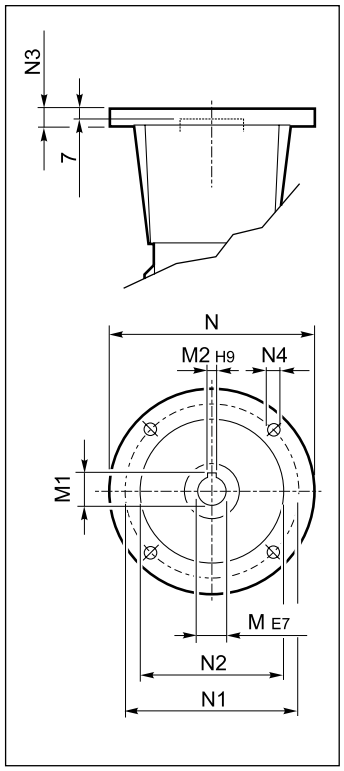

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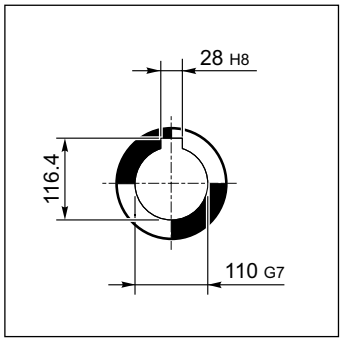

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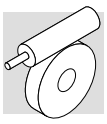
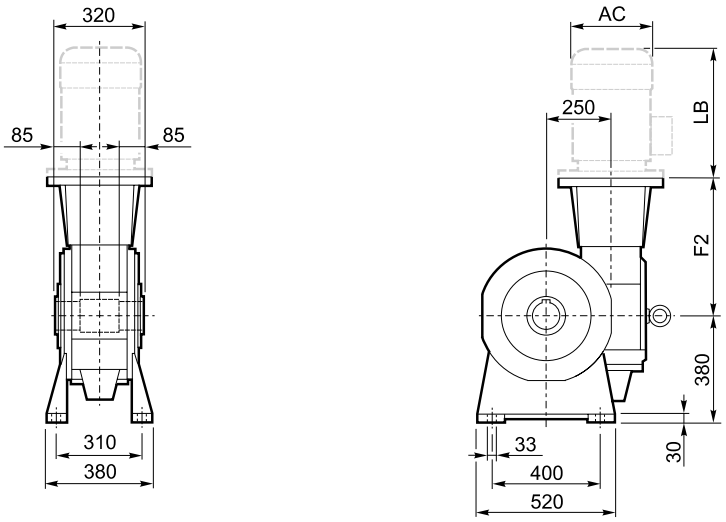
VF 250□...P(IEC)



V



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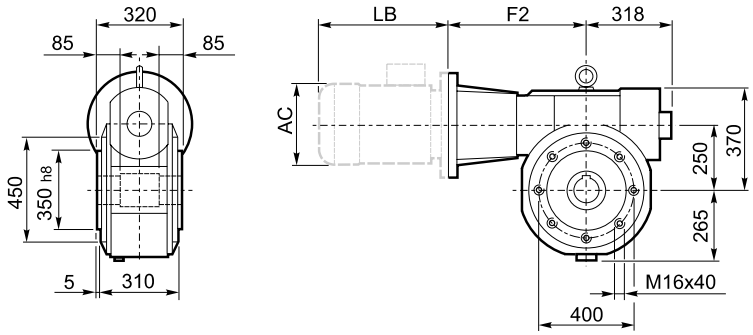

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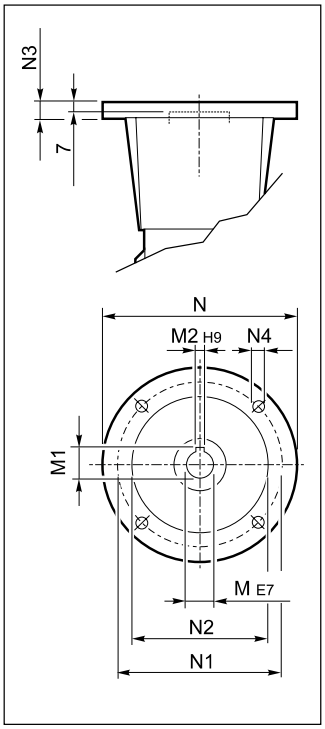

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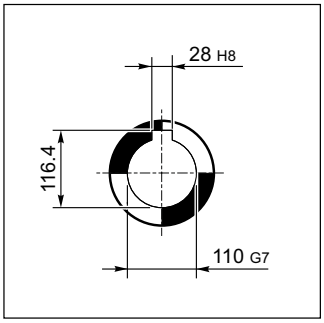


Las formas constructivas A y P llevan acoplado un ventilador de refrigeración.

En la ejecución P (IEC) en el suministro, incluye de serie, el acoplamiento completo para ataque motor.

Fan cooling as standard on versions A and P.

P(IEC) arrangements come complete with gear coupling enclosed in the bell housing.

In den Ausführungen A und P wird das Lüfterrad eingebaud.

Die Motorflansch-Ausführung wird serienmäßig mit kompletter Motorkupplung geliefert.

Dans les formes de construction A et P, il est prévu un ventilateur de refroidissement.

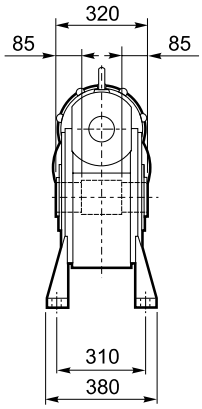
Dans la version P(IEC), la fourniture du joint complet d'accouplement moteur à été prévue de série.

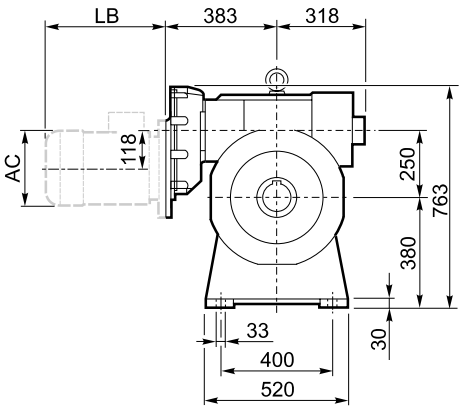
VF 250_													BN		BN...FD BN...FA	
		F2	M	M1	M2	N	N1	N2	N3	N4	Kg	IEC	LB	AC	LB	AC
VF 250	P132 B5	531	38	41.3	10	300	265	230	25	M12	310	BN 132	413	258	523	258
VF 250	P160 B5	506	42	45.3	12	350	300	250	22	18		BN 160MR	452	258	562	258
												BN 160M/L	486	310	626	310
VF 250	P180 B5	506	48	51.8	14	350	300	250	22	18		BN 180M	530	310	670	310
												BN 180L	598	348	756	348
VF 250	P200 B5	531	55	59.3	16	400	350	300	25	M16		BN 200	612	348	768	348
VF 250	P225 B5	536	60	64.4	18	450	400	350	22	18#		BN 225				

8 taladros a 45º / *N° 8 holes at 45°* / N. 8 Bohrungen 45° / *N. 8 trous 45°*

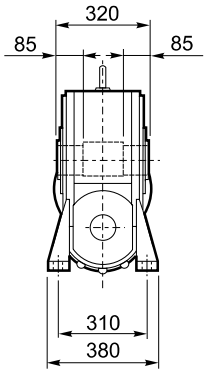
VFR 250□...P(IEC)

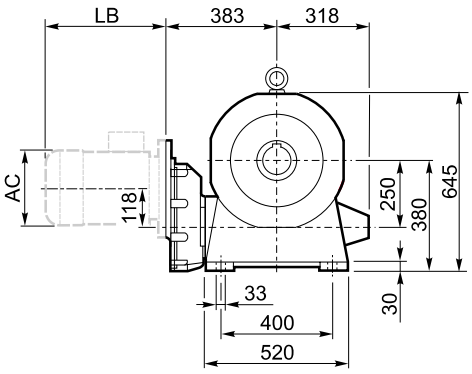
A



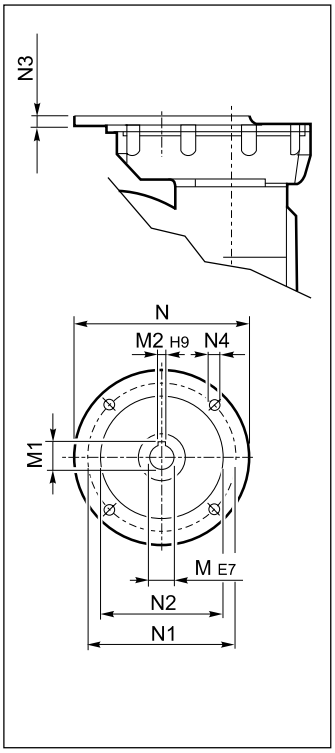


N

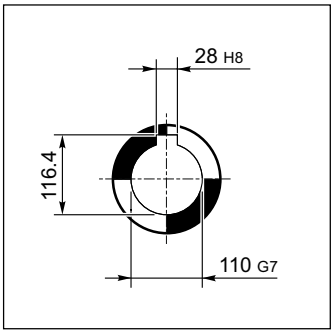




INPUT



OUTPUT



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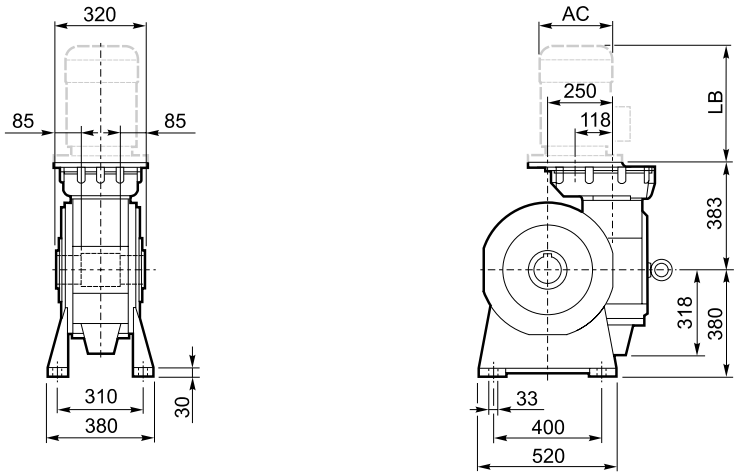
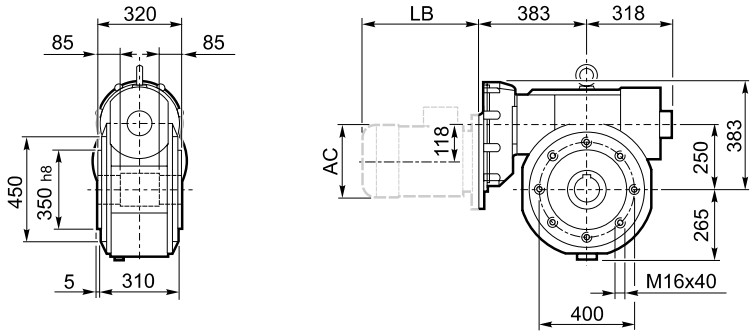
VFR 250□...P(IEC)

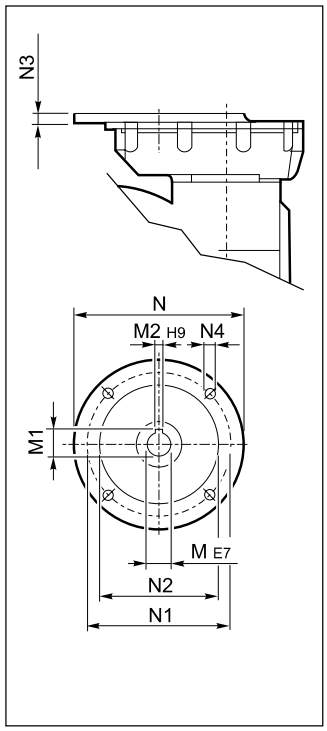
V



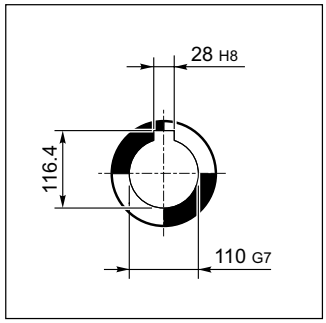
P



INPUT



OUTPUT



Las formas constructivas A y P llevan acoplado un ventilador de refrigeración.

Fan cooling as standard on versions A and P.

In den Ausführungen A und P wird das Lüfterrad eingebaud.

Dans les formes de construction A et P, il est prévu un ventilateur de refroidissement.

VFR 250_												BN		BN...FD BN...FA	
		M	M1	M2	N	N1	N2	N3	N4	Kg	IEC	LB	AC	LB	AC
VRF 250	**P100 B5**	28 K6	31.3	8	250	215	180	13	M12x35	295	**BN 100**	307	195	398	195
VRF 250	**P112 B5**	28 K6	31.3	8	250	215	180	13	M12x35		**BN 112**	325	219	424	219
VFR 250	**P132 B5**	38 J6	41.3	10	300	265	230	13	M12x35		**BN 132**	413	258	523	258
VFR 250	**P160 B5**	42 J6	44.3#	12	350	300	250	18	M16x60		**BN 160MR**	452	258	562	258
											BN 160M/L	486	310	626	310

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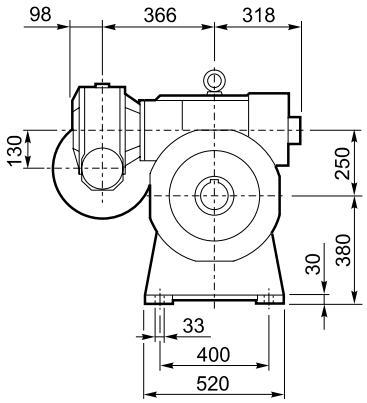
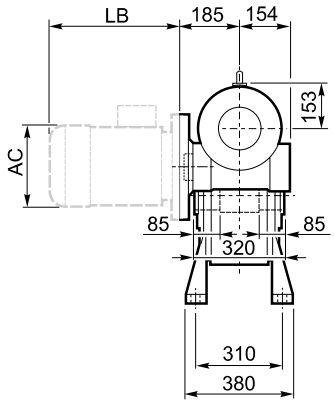
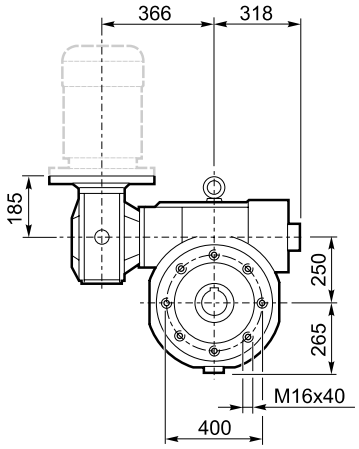
VF/VF 130/250□...P(IEC)

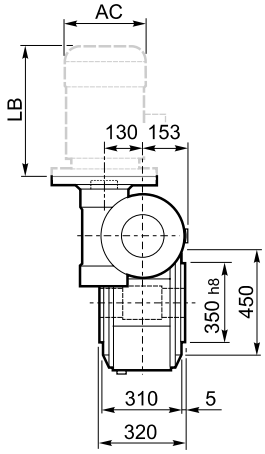
A



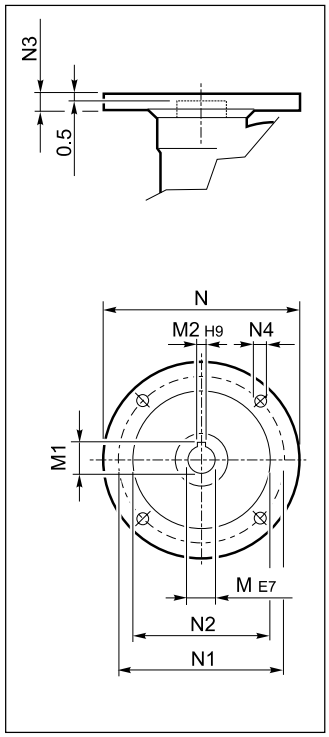


P

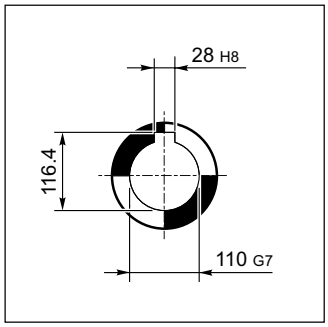




INPUT



OUTPUT



Las formas constructivas A y P llevan acoplado un ventilador de refrigeración.

Fan cooling as standard on versions A and P.

In den Ausführungen A und P wird das Lüfterrad eingebaud.

Dans les formes de construction A et P, il est prévu un ventilateur de refroidissement.

VF/VF 130/250_												BN		BN...FD BN...FA	
		M	M1	M2	N	N1	N2	N3	N4	Kg	IEC	LB	AC	LB	AC
VF/VF 130/250	**P 90 B5**	24	27.3	8	200	165	130	17	11	325	BN 90	276	176	359	176
VF/VF 130/250	**P100 B5**	28	31.3	8	250	215	180	17	13		BN 100	307	195	398	195
VF/VF 130/250	**P112 B5**	28	31.3	8	250	215	180	17	13		BN 112	325	219	424	219
VF/VF 130/250	**P132 B5**	38	40.1#	10	300	265	230	17	13		BN 132	413	258	523	258

Chaveta rebajada / *Lowered key* / Verkleinertes Paßfeder / *Clavette à hauteur réduite*

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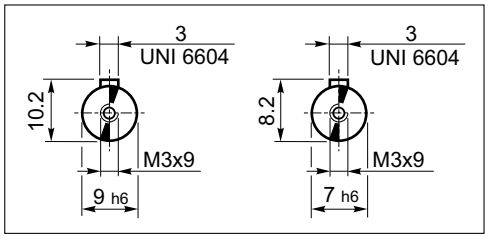
25 - DIMENSIONES REDUTOR | ***25 - SPEED REDUCER DIMENSIONS*** | **25 - GETRIEBE - ABMESSUNGEN** | ***25 - DIMENSIONS REDUCTEURS***

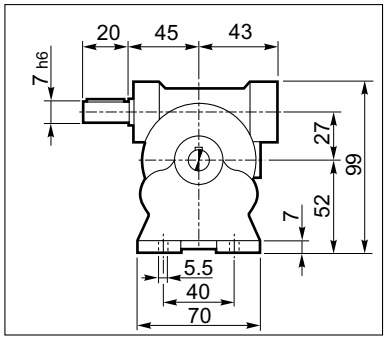
VF 27__HS

Eje de salida
Output shaft
Abtriebswelle
Arbre lent

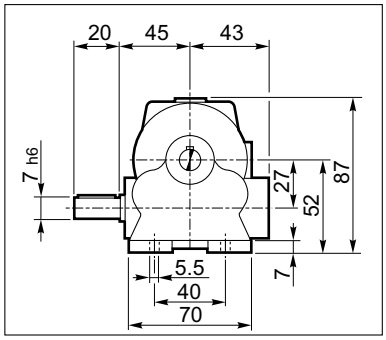
Eje de entrada
Input shaft
Antriebswelle
Arbre rapide



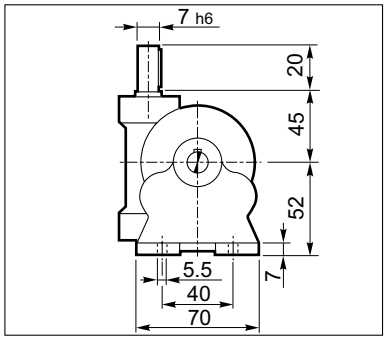
VF 27_A..HS



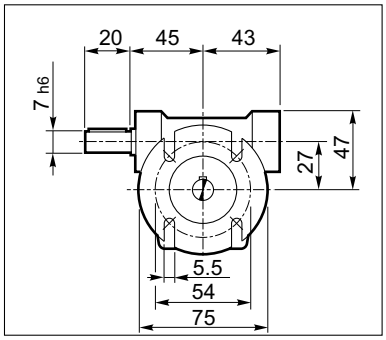
VF 27_N..HS

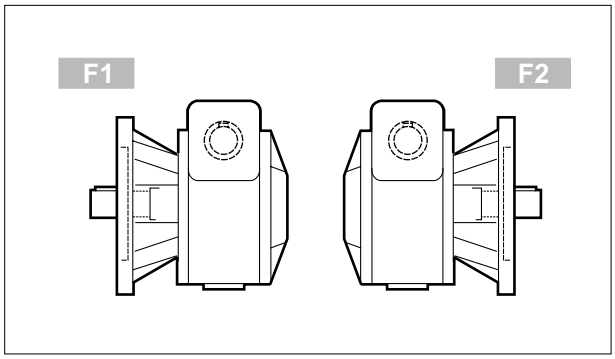


VF 27_V..HS



VF 27_F..HS





	Kg
VF 27_HS	0.73

Las dimensiones comunes con otras configuraciones están incluidas en la pág. 120.

Dimensions common to the other configurations can be found at page 120.

Die mit den anderen Konfigurationen gemeinen Abmessungen sind auf Seiten 120.

Les dimensions communes à toutes les autres configurations sont indiquées à la page 120.

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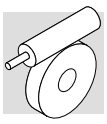
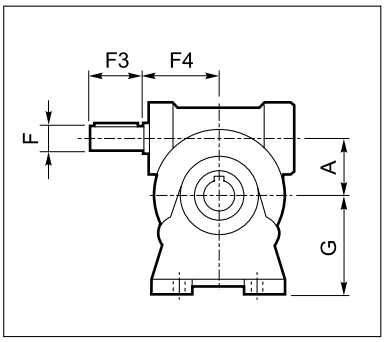
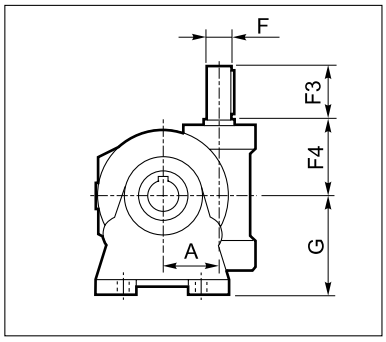


VF__HS__W__HS

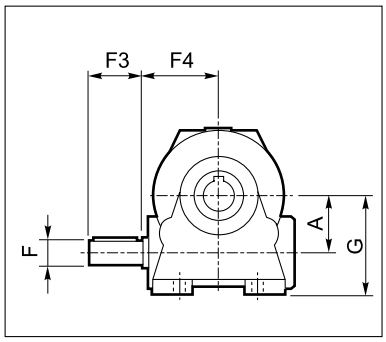
VF_A..HS



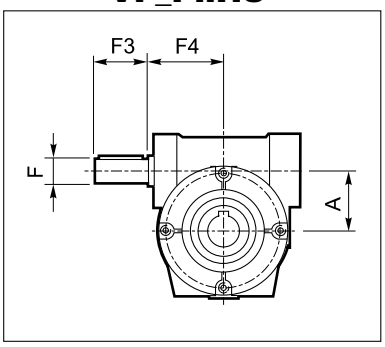
VF_V..HS



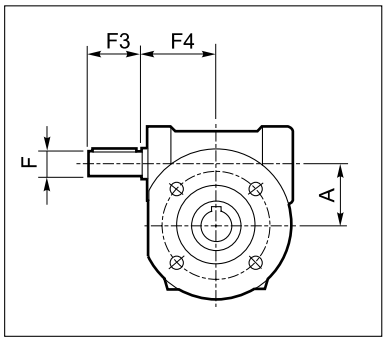
VF_N..HS



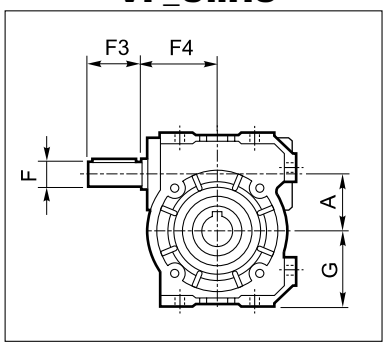
VF_P..HS



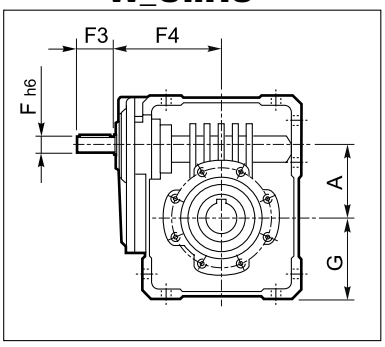
VF_FA/FC/FCR/ FR/F..HS



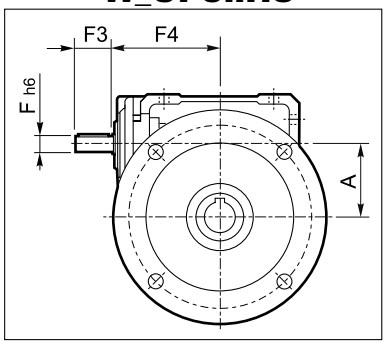
VF_U..HS



W_U..HS

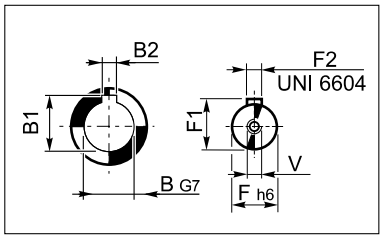


W_UF..HS W_UFC..HS



Albero uscita
Output shaft
Abtriebswelle
Arbre lent

Albero entrata
Input shaft
Antriebswelle
Arbre rapide



	A	B	B1	B2	F	F1	F2	F3	F4	G	V	Kg
VF 30__HS	30	14	16.3	5	9	10.2	3	20	50	47	—	1.1
VF 44__HS	44.6	18	20.8	6	11	12.5	4	30	54	55	—	2.0
VF 49__HS	49.5	25	28.3	8	16	18	5	40	65	64.5	M6x16	3.0
W 63__HS	62.17	25	28.3	8	18	20.5	6	40	110.5	72.5	M6x16	6.4
W 75__HS	75	30(28)	33.3(31.3)	8	19	21.5	6	40	128	87	M6x16	10.0
W 86__HS	86.9	35	38.3	10	25	28	8	50	144	100	M8x19	14.1
W 110__HS	110.1	42	45.3	12	25	28	8	60	168	125	M8x19	39
VF 130__HS	130	45	48.8	14	30	33	8	60	160	195	M8x20	49
VF 150__HS	150	50	53.8	14	35	38	10	65	185	220	M8x20	60
VF 185__HS	185.4	60	64.4	18	40	43	12	70	214.5	254	M8x20	94
VF 210__HS	210	90	95.4	25	48	51.5	14	110	230	335	M16x40	175
VF 250__HS	250	110	116.4	28	55	59	16	110	274	380	M16x40	275

Las dimensiones comunes con otras configuraciones están incluidas de la pág. 122 a pág. 177

Dimensions common to the other configurations can be found from page 122 to 177.

Die mit den anderen Konfigurationen gemeinen Abmessungen sind auf Seiten 122 - 177 angegeben.

Les dimensions communes à toutes les autres configurations sont indiquées de la page 122 jusqu'à 177.

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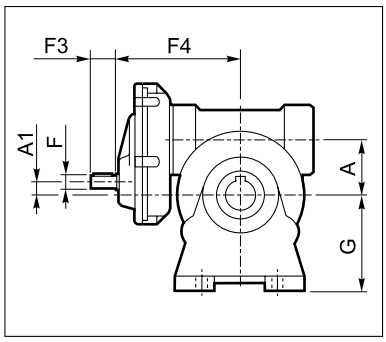
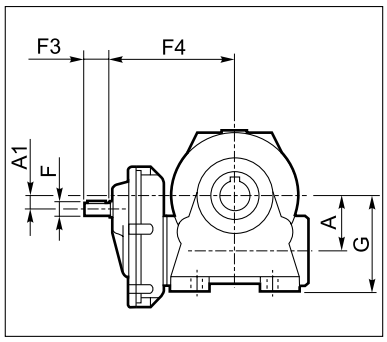
VFR__HS__WR__HS

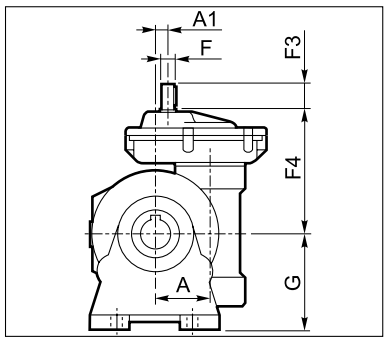
VFR_A..HS



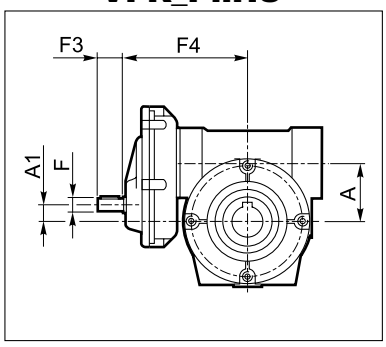
VFR_N..HS



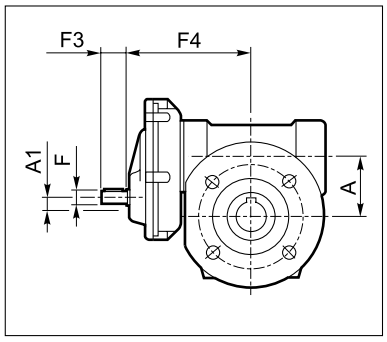
VFR_V..HS



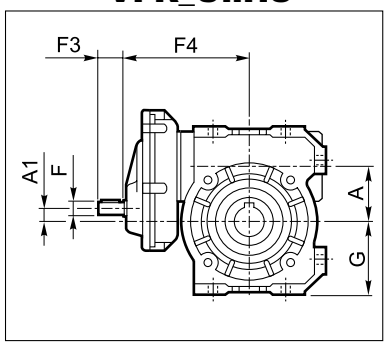
VFR_P..HS



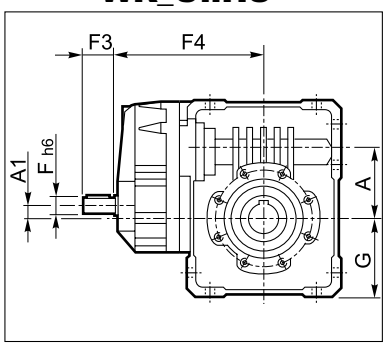
VFR_FA/FC/FCR/ FR/F..HS



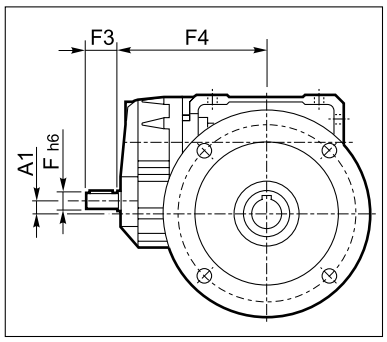
VFR_U..HS

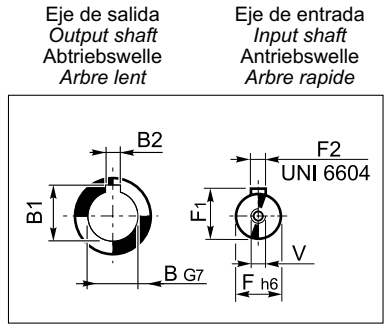


WR_U..HS



WR_UF..HS WR_UFC..HS





	A	A1	B	B1	B2	F	F1	F2	F3	F4	G	V	Kg
VFR 49__HS	49.5	10	25	28.3	8	11	12.5	4	23	110	82	M4x10	5
WR 63__HS	62.17	11.42	25	28.3	8	14	16	5	30	138	72.5	M5x12.5	7.1
WR 75__HS	75	11	30(28)	33.3(31.3)	8	19	21.5	6	40	162	87	M6x16	11.1
WR 86__HS	86.9	22.9	35	38.3	10	19	21.5	6	40	178	142	M6x16	14.7
WR 110__HS	110.1	21.1	42	45.3	12	24	27	8	50	201	125	M8x19	44
VFR 130__HS	130	45	45	48.8	14	24	27	8	50	228	195	M8x20	57
VFR 150__HS	150	53	50	53.8	14	28	31	8	60	280	220	M8x20	71
VFR 185__HS	185.4	88.4	60	64.4	18	28	31	8	60	310	254	M8x20	110
VFR 210__HS	210	92	90	95.4	25	38	41	10	80	337	335	M10x25	185
VFR 250__HS	250	132	110	116.4	28	38	41	10	80	383	380	M10x25	295

Las dimensiones comunes con otras configuraciones están incluidas de la pág. 132 a pág. 179

Dimensions common to the other configurations can be found from page 132 to 179.

Die mit den anderen Konfigurationen gemeinen Abmessungen sind auf Seiten 132 - 179 angegeben.

Les dimensions communes à toutes les autres configurations sont indiquées de la page 132 jusqu'à 179.

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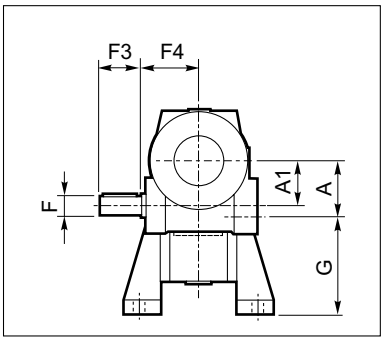
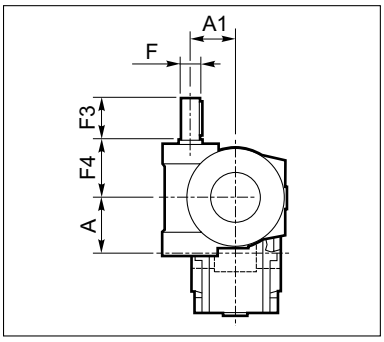
VF/VF__HS__VF/W__HS - W/VF__HS

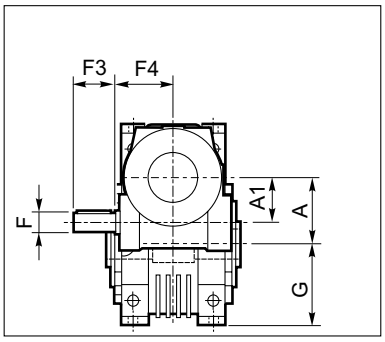
VF/VF_A..HS
W/VF_A..HS

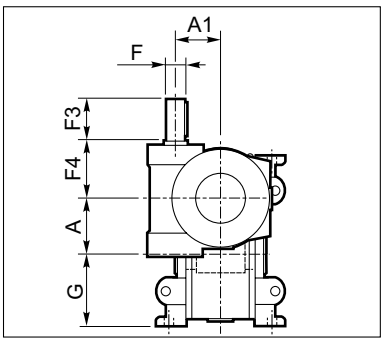


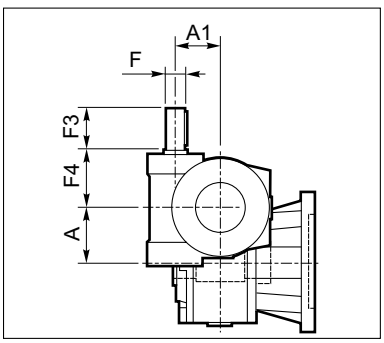
VF/VF_P..HS
W/VF_P..HS

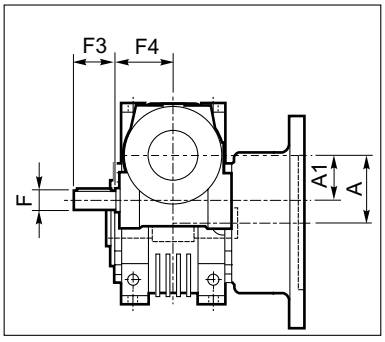


VF/VF_P..HS
W/VF_P..HS



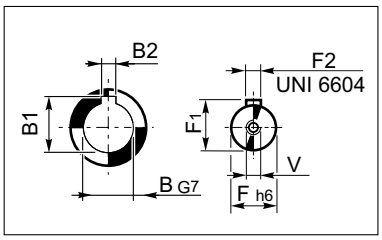






Eje de salida
Output shaft
Abtriebswelle
Arbre lent

Eje de entrada
Input shaft
Antriebswelle
Arbre rapide



	A	A1	B	B1	B2	F	F1	F2	F3	F4	G	V	kg
VF/VF 30/44__HS	44.6	30	18	20.8	6	9	10.2	3	20	50	72	—	3.5
VF/VF 30/49__HS	49.5	30	25	28.3	8	9	10.2	3	20	50	82	—	4.5
VF/W 30/63__HS	62.17	30	25	28.3	8	9	10.2	3	20	50	100	—	7.5
VF/W 44/75__HS	75	44.6	30 (28)	33.3 (31.3)	8	11	12.5	4	30	54	115	—	16.1
VF/W 44/86__HS	86.9	44.6	35	38.3	10	11	12.5	4	30	54	142	—	42
VF/W 49/110__HS	110.0	49.5	42	45.3	12	16	18	5	40	65	170	M6x16	56
W/VF 63/130__HS	130	62.17	45	48.8	14	18	20.5	6	40	110.5	72.5	M6x16	74
W/VF 86/150__HS	150	86.9	50	53.8	14	25	28	8	50	144	100	M8x19	108
W/VF 86/185__HS	185.4	86.9	60	64.4	18	25	28	8	50	144	100	M8x19	109
VF/VF 130/210__HS	210	130	90	95.4	25	30	33	8	60	160	335	M8	225
VF/VF 130/250__HS	250	130	110	116.4	28	30	33	8	60	160	380	M8	325

Las dimensiones comunes con otras configuraciones están incluidas de la pág. 128 a pág. 180

Dimensions common to the other configurations can be found from page 128 to 180.

Die mit den anderen Konfigurationen gemeinen Abmessungen sind auf Seiten 128 - 180 angegeben.

Les dimensions communes à toutes les autres configurations sont indiquées de la page 128 jusqu'à 180.

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26 - OPCIONES

RB RBO

Los reductores de tornillo sinfín (excluido el VF 27) pueden suministrarse, bajo pedido, con doble eje de entrada, especificando la opción **RB** o bien la **RBO** (solamente para los grupos en ejecución combinada).

26 - OPTION

RB RBO

*Worm gears (with the exception of VF 27) can be optionally requested with extended wormshaft at NDE by specifying the option **RB** or **RBO** (for double worm combined units) at the time of order.*

32 - OPTIONEN

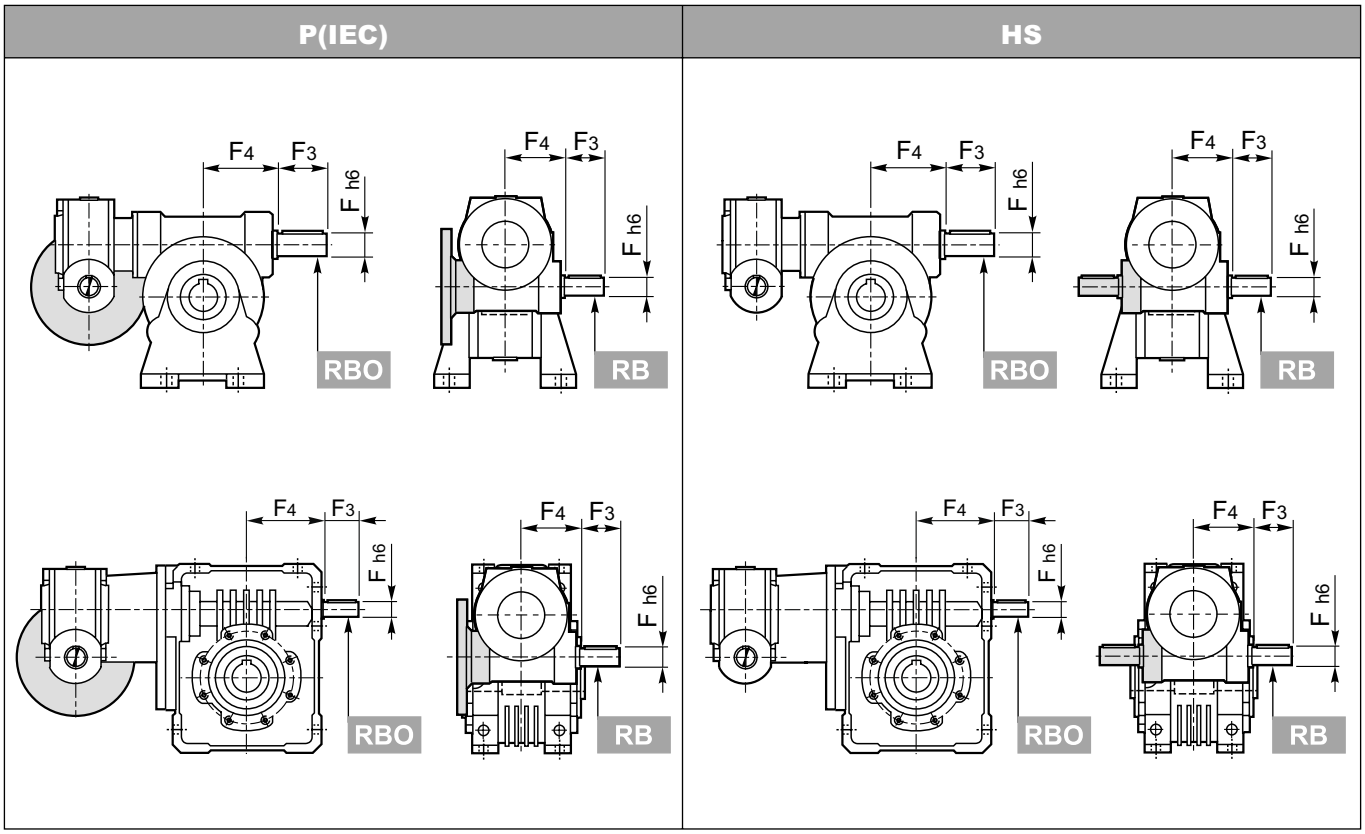
RB RBO

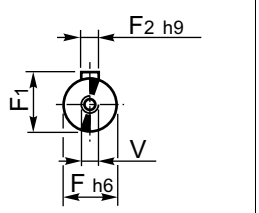
Alle Schneckengetriebe (auâer VF 27) können auf Anfrage bzw. unter Angabe des Optionswunsches **RB** oder **RBO** (nur für Doppelschneckengetriebe) mit einer frei hervorstehenden Schneckenwelle geliefert werden.

32 - OPTIONS

RB RBO

*Les réducteurs à vis sans fin (sauf VF 27) peuvent être fournis, sur demande, avec la vis sortante, en indiquant l'option **RB** ou **RBO** (réducteur combine seulement).*





Eje de entrada
Extended input shaft
Frei hervorstehende welle
Arbre sortant

		F	F1	F2	F3	F4	V
VF VFR VF/VF	**30**	9	10.2	3	20	50	-
	44	11	12.5	4	30	56	-
	49	16	18	5	40	65	M6
W WR VF/W	**63**	18	20.5	6	40	74	M6
	75	19	21.5	6	40	88.5	M6
	86	25	28	8	50	101.5	M8
	110	25	28	8	60	127.5	M8
VF VFR W/VF	**130**	30	33	8	60	160	M8
	150	35	38	10	65	185	M8
	185	40	43	12	70	214.5	M8
	210	48	51.5	14	82	185	M16x40
	250	55	59	16	82	228	M16x40

Para los reductores VF 210 y VF 250, en las formas constructivas A y P, que normalmente incorporan un ventilador de refrigeración; no es posible montarlo con la opción RB.

A and P versions of VF 210 and VF 250 feature the fan cooling as a standard, however forced ventilation is not feasible should the RB option be specified.

Für VF 210-250, in den Baumodellen A und P, wird in der Regel ein Kühlungsgebläse montiert; mit der Option RB kann dieses nicht montiert werden.

Sur les projets A et P on monte d'habitude les ventilateurs de refroidissement qui n'est pas prévue avec l'option RB.

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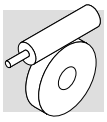
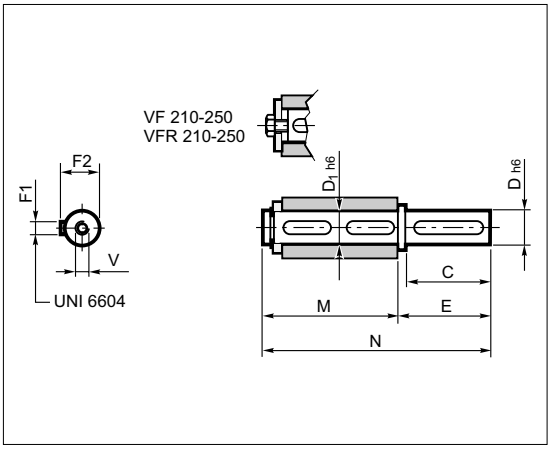
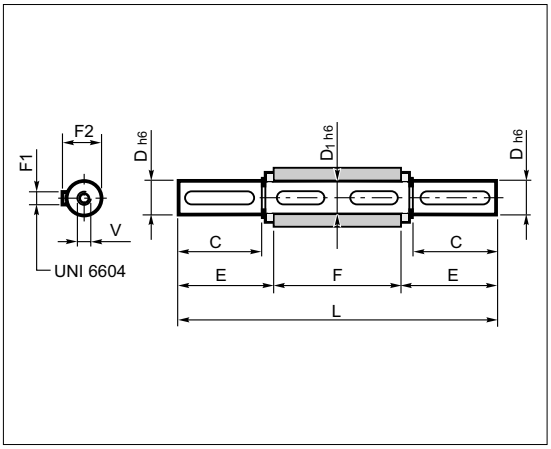


27 - ACCESORIOS *27 - ACCESSORIES* 27 - ZUBEHÖR *27 - ACCESSORIES*

27.1 Eje de salida suelto *27.1 Plug-in output shaft* 27.1 Ausgangsteckwelle *27.1 Arbre lent rapporté*

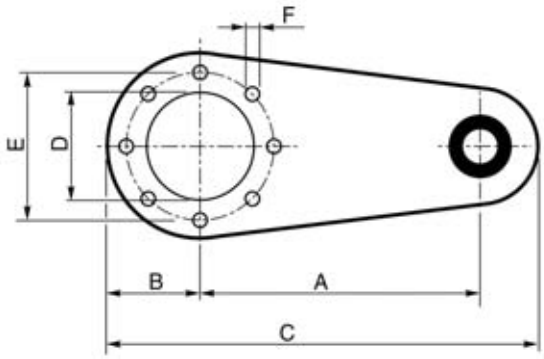


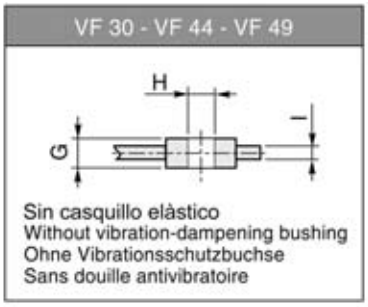
		C	D	D1	E	F1	F2	M	N	V
VF VFR VF/VF	30	30	14	14	35	5	16	61	96	M5x13
	44	40	18	18	45	6	20.5	70	115	M6x16
	49	60	25	25	65	8	28	89	154	M8x19
W WR VF/W	63	60	25	25	65	8	28	127	192	M8x19
	75_D28	60	28	30	65	8	31	134	199	M8x20
	75_D30	60	30	30	65	8	33	134	199	M10x22
	86	60	35	35	65	10	38	149	214	M12x22
	110	75	42	42	80	12	45	164	244	M12x28
VF VFR W/VF	130	80	45	45	85	14	48.5	176	261	M12x32
	150	85	50	50	93	14	53.5	185	278	M16x40
	185	100	60	60	110	18	64	200	310	M16x40
	210	130	90	90	140	25	95	255	395	M20x50
	250	165	110	110	175	28	116	315	490	M24x64

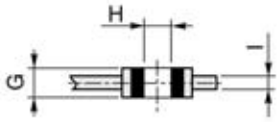


		C	D	D1	E	F	F1	F2	L	V
VF VFR VF/VF	30	30	14	14	32.5	55	5	16	120	M5x13
	44	40	18	18	42.7	64	6	20.5	149.4	M6x16
	49	60	25	25	63.2	82	8	28	208.4	M8x19
W WR VF/W	63	60	25	25	63.2	120	8	28	246.4	M8x19
	75_D28	60	28	30	64	127	8	31	255	M8x20
	75_D30	60	30	30	64	127	8	33	255	M10x22
	86	60	35	35	64	140	10	38	268	M12x22
	110	75	42	42	79.3	155	12	45	313.5	M12x28
VF VFR W/VF	130	80	45	45	84.7	165	14	48.5	334.5	M12x32
	150	85	50	50	90	175	14	53.5	355	M16x40
	185	100	60	60	105	190	18	64	400	M16x40
	210	130	90	90	140	260	25	95	540	M20x50
	250	165	110	110	175	320	28	116	670	M24x64

27.2 Brazo de reacción *27.2 Torque arm* 27.2 Drehmomentstütze *27.2 Bras de réaction*







		A	B	C	D	E	F	G	H	I
VF VFR VF/VF	30	100	40	157.5	50	65	7	14	8	4
	44	100	40	157.5	50	65	7	14	8	4
	49	100	55	172.5	68	94	7	14	8	4
W WR VF/W	63	150	55	233	75	90	9	20	10	6
	75	200	63	300	90	110	9	25	20	6
	86	200	80	318	110	130	11	25	20	6
	110	250	100	388	130	165	13	25	20	6
VF VFR W/VF	130	300	125	470	180	215	13	30	25	6
	150	300	125	470	180	215	15	30	25	6
	185	350	150	545	230	265	17	30	25	6
	210	350	175	625	250	300	19	60	50	8
	250	400	225	725	350	400	19	60	50	10

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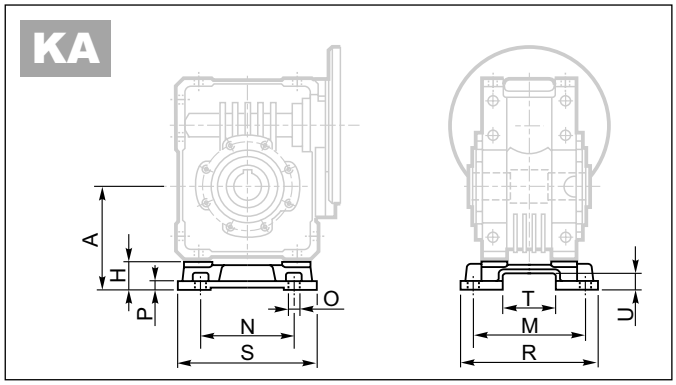
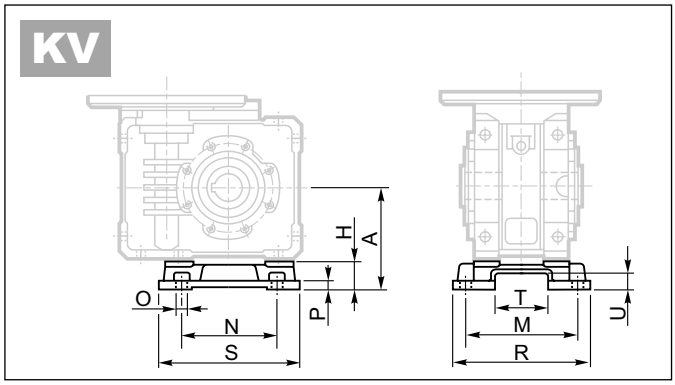
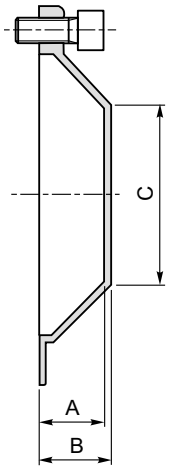
27.3 Kit de patas KA, KV — *27.3 VF-interchangeable foot kits KA, KV* — 27.3 Satz - Stützfüße — *27.3 Kit pieds KA, KV*





	A	H	M	N	O	P	R	S	T	U
W 63 - WR 63	100	27.5	111	95	11	8	135	145	56.5	15.5
W 75 - WR 75	115	28	115	120	11	9	139	174	56.5	15.5
W 86 - WR 86	142	42	146	140	11	11	170	200	69	20
W 110 - WR 110	170	45	181	200	13	14	210	250	69	20

27.4 Sombrerete de protección — *27.4 Safety cover* — 27.4 Schutzdeckel — *27.4 Capuchon de protection*



	A	B	C
W 63 - WR 63	26.5	29	Ø35
W 75 - WR 75	24.5	27	Ø54
W 86 - WR 86	26.5	29	Ø71
W 110 - WR110	27.5	30	Ø89

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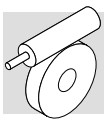


28 - EJE DEL CLIENTE

28.1 nstrucciones para la mecanización

En la construcción del eje conducido que se acoplará con el reductor, aconsejamos la utilización de acero de buena calidad y efectuar la mecanización a las dimensiones indicadas en el diseño siguiente.
Sugerimos, además, completar el montaje con un dispositivo que asegure la fijación axial del eje (no representado en el diseño).
La cantidad y dimensiones del/de los taladro(s) roscado(s) en la extremidad del eje, se determinará según las exigencias de cada aplicación.

28 - CUSTOMER'S SHAFT

28.1 Manufacturing instructions

Pivot of driven equipment should be made from high grade alloy steel.

Table below shows recommended dimensions for the Customer to consider when designing mating shaft.
A device retaining the shaft axially is also recommended (not shown).
The number and size of relative tapped holes at shaft end depend on application requirements.

28 - KUNDENSEITIGE WELLEN

28.1 Konstruktionsrichtlinien

Für die mit dem Getriebe verbundene Antriebswelle, wird empfohlen, hochwertigen Stahl zu verwenden und die im folgenden Schema enthaltenen Abmessungen zu beachten. Es wird außerdem empfohlen, die Montage mit Hilfe einer Vorrichtung, die die Welle axial blockiert (nicht abgebildet), vorzunehmen.
Die Anzahl und die Abmessung des/der Gewindebohrungen an den Wellenenden werden den Einsatzbedingungen gemäß festgelegt.

28 - ARBRE MACHINE

28.1 Instructions pour la réalisation

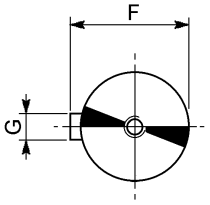
Pour la réalisation de l'arbre mené d'accouplement avec le réducteur, nous conseillons d'utiliser de l'acier de bonne qualité et de respecter les dimensions indiquées sur le schéma suivant.
Il est recommandé de compléter le montage par un dispositif de blocage axial de l'arbre (non illustré).
Le nombre et les dimensions de (s) l'orifice (s) fileté (s) correspondant(s) à l'extrémité de l'arbre sont déterminés par les différentes exigences d'application.

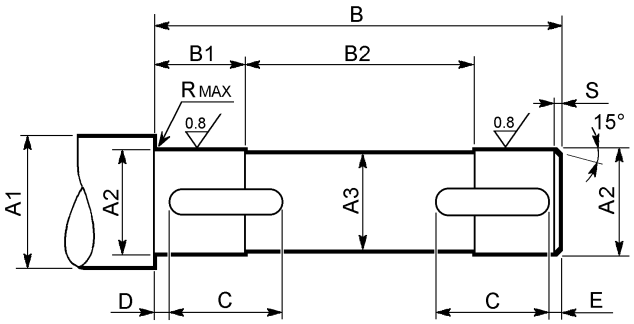
28.2 Series VF y W

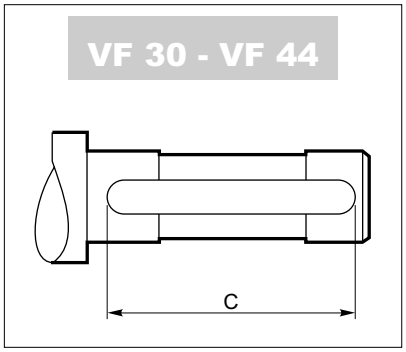
28.2 Series VF and W

28.2 Series VF und W

28.2 Série VF et W







	A1	A2	A3	B	B1	B2	C	D	E	F	G	R	S	UNI 6604
VF 30	≥ 19	14 f7	13	53	18.5	16	40	6.5	6.5	16	5 h9	0.5	1.5	5x5x40 A
VF 44	≥ 23	18 f7	17	62	22.5	17	50	6	6	20.5	6 h9	0.5	1.5	6x6x50 A
VF 49	≥ 30	25 f7	24	80	20.5	39	20	2	2	28	8 h9	1	1.5	8x7x20 A
W 63	≥ 30	25 f7	24	118	38	42	35	2	2	28	8 h9	1	1.5	8x7x35 A
W 75	≥ 35	28 f7	27	125	38	49	40	2	2	31	8 h9	1	1.5	8x7x40 A
	≥ 35	30 f7	29	125	38	49	40	2	2	33	8 h9	1	1.5	8x7x40 A
W 86	≥ 42	35 f7	34	138	43	52	40	2	2	38	10 h9	1.5	1.5	10x8x40 A
W110	≥ 48	42 f7	41	153	43	67	50	2	2	45	12 h9	1.5	2	12x8x50 A
VF 130	≥ 52	45 f7	44	163	50.5	62	60	2.5	2.5	49.5	14 h9	2.5	2	14x9x60 A
VF 150	≥ 57	50 f7	49	173	53	67	70	2.5	2.5	53.5	14 h9	2.5	2	14x9x70 A
VF 185	≥ 68	60 f7	59	188	63	62	80	2.5	2.5	64	18 h9	2.5	2	18x11x80 A
VF 210	≥ 99	90 f7	89	258	83	92	80	3	3	95	25 h9	2.5	2.5	25x14x80 A
VF 250	≥ 121	110 h7	109	318	83	152	80	3	3	116	28 h9	2.5	2.5	28x16x80 A

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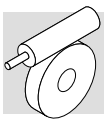

29 -LIMITADOR DE PAR

29.1 Descripción

El limitador de par por fricción, ha sido estudiado y fabricado para ser montados en los reductores de tornillo sinfín **VF44 - VF49** y **W 63….W 110**. Se trata de un dispositivo de protección apto para salvaguardar la transmisión de sobrecargas accidentales que pudieran dañar todos los elementos de la transmisión creando serios inconvenientes a la máquina operadora.
Con respecto a los limitadores de par tradicionales montados exteriormente al reductor, esta solución versátil presenta las siguientes ventajas:

- no varían las dimensiones externas de los reductores suministrados en versión estándar
- no precisa de ningún tipo de mantenimiento puesto que trabaja en baño de aceite
- el par de deslizamiento puede regularse fácilmente con una simple operación manual efectuada desde el exterior del reductor
- el deslizamiento, aunque sea de forma continua, no crea daños o desgastes anormales a la mecánica por cuanto las superficies de fricción están separadas continuamente por una película de aceite.

⚠

No es aconsejable su utilización en mecanismos de elevación.

29.2 Descripción del funcionamiento

El limitador de par funciona como un embrague bicónico con las superficies de fricción mecanizadas directamente en la corona de bronce y en el cubo de fundición esferoidal GS400/12, el eje de salida es hueco y pasante, lo que permite el acoplamiento de nuestro reductor, directamente a la máquina.
Las superficies cónicas están presionadas por la fuerza generada por un muelle de vaso.
La regulación del par de deslizamiento se efectúa de forma simple mediante el giro de una tuerca externa al reductor.

29 - TORQUE LIMITER

29.1 Description

*The friction-based torque limiter, available for wormgears type **VF44 - VF49** and **W63…W110**, is designed to protect the transmission from accidental overloads which could damage the drive elements.*
Against conventional external torque limiters, this versatile solution lends the following advantages:

- *unchanged external dimensions against standard same model standard units*
- *maintenance-free, as the system is permanently lubed*
- *slip torque can be easily adjusted by means of a simple manual operation from the outside of the gearbox*
- *slipping, even if continuous, does not create any damage or wear to the mechanical parts, since slipping parts are constantly separated by an oil film.*

⚠

We advise against installing this device to lifting equipment.

29.2 Operating principle

The torque limiter basically consists of a double tapered clutch with active surfaces machined on (bronze) worm wheel and hub of output shaft (nodular cast iron GS400/12). Bore of output shaft allows shaft mounting of gear unit onto driven machine.
Active surfaces of the torque limiter are pressed against each other by thrust generated by adequately proportioned spring washers. Transmissible torque is proportional to axial force applied by the springs and adjustment of torque setting is easily conducted manually through an external ring nut.

29 - RUTSCHKUPPLUNG

29.1 Beschreibung

Die Rutschkupplung, die für Schneckengetriebe **VF44 - VF49** und **W63…W110**, entwickelt wurde, dient dem Schutz des Getriebes vor zufälligen Überlastungen, welche die Antriebselemente zerstören könnten.
Bezüglich traditioneller Rutschkupplungen, welche extern an das Getriebe angeschlossen werden, bietet diese Lösung folgende Vorteile:

- gleiche Aussen-Abmessungen des Getriebes wie das Standard gehâuse
- wartungsfrei, da das System in Ölbad arbeitet
- das maximal übertragbare Moment kann einfach, per Hand, von aussen eigenstellt werden
- ständiges Rutschen verursacht keinen Schaden, da die mechanischen Teile im Ölbad laufen.

⚠

Von einer Montage in Hebemechanismen wird abgeraten.

29.2 Funktonsweise

Die Rutschkupplung arbeitet wie eine doppelkonische Reiblfâche, die direkt auf einen aus Sphâroguss bestehenden Innenring GS 400/12 des Bronze- schneckenrades wirkt.
Die axiale Anpresskraft, die die konischen Reibflâchen zusammendruckt, wird von Tellerfedern erzeugt.
Die Einstellung des Rutschmomentes kann in einer einfachen Weise durch Drehen einer Verstellmutter, ausserhalb des Getriebes, erreicht werden.

29 - LIMITER DE COUPLE

29.1 Description

*Le limiteur de couple à friction, étudiè et réalisé pour les réducteurs à vis sans fin, type **VF44 - VF49** et **W63…W110**, est un dispositif de sécurité qui a pour but de protéger la chaîne cinématique des surcharges accidentelles qui pourraient endommager tous les éléments de la transmission.*
Par rapport au montage du limiteur de couple traditionnel à l'extérieur du réducteur, cette solution, d'une grande souplesse d'emploi, offre les avantages suivants:

- *aucune différence des cotes d'encombrement par rapport au réducteur standard*
- *aucun entretien, car le systeme fonctionne en bain d'huile*
- *le couple maximum transmissible peut être facilement ajusté par une manoeuvre simple a l'extérieur du réducteur*
- *le glissement, même continu, ne crée aucun dommage ni usure aux parties mécaniques, du fait de la séparation des surfaces en glissement par un film d'huile d'epaisseur constante.*

⚠

Son utilization dans des mécanismes de levage est déconseillée.

29.2 Mode de fonctionnement

Le limiteur de couple fonctionne comme une friction bi-conique entre des surfaces de contact obtenues directement sur la couronne en bronze, un moyeu en fonte à graphite sphéroidal GS400/12 monolithique et un arbre de sortie creux traversant, permettant une liaison directe à la machine.
Les surfaces coniques sont maintenues en pression par un effort axial constant, généré par les rondelles élastiques.
Le réglage du couple de glissement s'effectue d'une façon simple à travers le serrage d'un écrou extérieur au réducteur.

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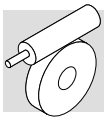


29.3 Protección de lainstalación frente a sobrecargas

El limitador, debidamente tarado al par resistente de la máquina, protege todos los órganos mecánicos de la cadena cinemática evitando desperfectos debidos a eventuales y repetidas sobrecargas.

29.3 Protection of the machine from overloads

The torque limiter, properly adjusted in function of the torque necessary for the driven equipment, protects all mechanical components of the transmission avoiding any damage due to overloads.

29.3 Schutz der Arbeitsmaschine vor Uberlastungen:

Die Rutschkupplung ist eingestellt auf das notwendige Moment der Arbeitsmaschine und schützt alle mechanischen Teile der Übertragungseinheit. Weiter vermeidet sie Beschädigungen hervorgenannten durch mögliche Überlastungen.

29.3 Protection de l'installation contre les surcharges:

Le limiteur, correctement réglé au couple nécessaire pour la machine protège tous les organes mécaniques de la chaîne cinématique, en évitant des endommagements dus à d'éventuelles et répétitives surcharges.

29.4 Desembragado en condiciones de irreversibilidad

En determinadas aplicaciones puede ser útil poder girar el eje de salida del reductor con la máquina parada. Esta situación no siempre es posible con los reductores de tornillo sinfín tradicionales. Por medio de este dispositivo, podemos ejecutar fácilmente esta operación simplemente aflojando la tuerca de regulación.

29.4 Reversing of a self-locking unit

In some applications it may be desired to rotate the output shaft while machine is not operating. Such a situation is not always possible with high-ratio self-locking worm gears. Using the torque limiter it is possible to conduct such operation untightening the ring nut.

29.4 Auskuppeln bei Selbsthemmung

In einigen Anwendungsfällen ist es nötig die Ausgangswelle des Getriebes zu drehen wâhrend die Arbeitsmaschine steht: Dies ist bei einem normalen Schneckengetriebe nicht möglich. Die Verwendung der Rutschkupplung macht es möglich, wenn vorher die Verstellmutter gelöst wird.

29.4 Décrabotage en cas d'irréversibilité

Dans certains applications, il peut être utile de faire tourner, machine arrêtée, l'arbre lent du réducteur. Cette solution n'est pas toujours possible avec les réducteurs à roue est vis sans fin traditionnels. A l'aide de ce dispositif, en desserrant l'écrou de réglage, il est possible de procéder facilement à cette opération.

29.5 VF…L, W…L

29.5 VF…L, W…L

L1

	N	A	V	U	F1 FC1 FR1 FA1	F2 FC2 FR2 FA2**	P1 P2
VF VF/VF*						 **⛔ VF 49	
	U	UF1 UFC1	UF2 UFC2	UFCR1	UFCR2		
W VF/W*			⛔		⛔		

L2

	N	A	V	U	F1 FC1 FR1 FA1**	F2 FC2 FR2 FA2	P1 P2
VF VF/VF*					 **⛔ VF 49		
	U	UF1 UFC1	UF2 UFC2	UFCR1	UFCR2		
W VF/W*		⛔		⛔			

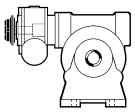
* En los reductores combinados, el limitador de par se instala sobre el 2º reductor en las ejecuciones L1 y L2, y en la ejecución LF se instala sobre el 1ª reductor.

** On double worm gear units the torque limiter is fitted on 2nd reducer (larger size) for the L1 or L2 configurations. Same is fitted on 1st reducer (smaller) when the LF configuration is specified.*

* In den Doppelschneckengetrieben Typ VF/VF ist das Drehmomentstutz auf das 2te Getriebe für die Ausführungen L1 oder L2 installiert; es ist auf das 1te Getriebe für Ausführung LF installiert.

** Dans les réducteurs combinés VF/VF, le limiteur de couple en position L1 et L2 est monté sur le 2me réducteur, en position LF il est monté sur le 1er réducteur.*

LF



VF/W	44/75	44/86	49/110
W/VF	63/130	86/150	86/185

Si no ha sido previsto en la especificación, los reductores VF _ L, se suministraran con la tuerca de regulación situada a la izquierda (L1) mirando el motor en la posición de montaje B3.

Unless otherwise specified VF…L gear units are supplied with ring nut on the left hand side (L1), viewing from the electric motor and gearbox in the B3 mounting position.

Wenn nicht anders angegeben, werden die Getriebe VF…L geliefert mit der Verstellmutter links (L1), mit Sicht auf den E-Motor.

En standard et en l'absence d'information précise, les réducteurs VF…L seront livrés avec le système de décrabotage à gauche (L1), vue se plaçant du côté du moteur électrique.

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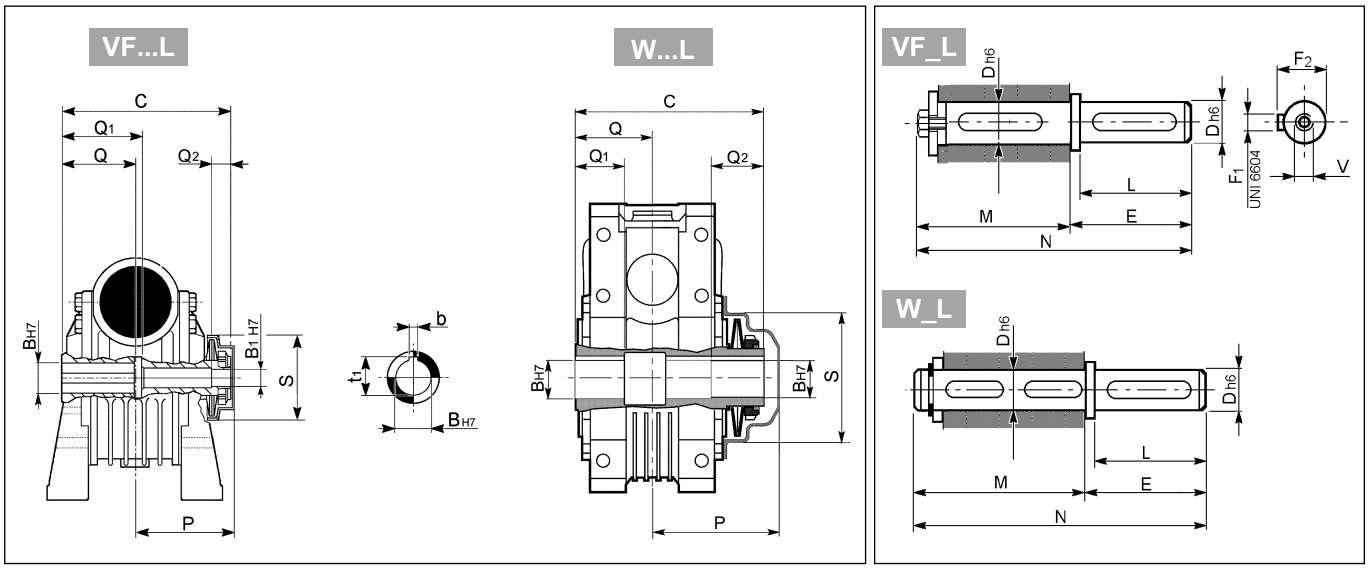
29.6 Dimensiones ***29.6 Dimensions*** **29.6 Abmessungen** ***29.6 Dimensions***



	Limitador de par / *Torque limiter* Rutschkupplung / *Limiteur de couple*										Eje de salida simple / *Single output shaft* Ein freies Wellenende / *Arbre lent unilateral*							
	C	**Q**	**Q1**	**Q2**	**P**	**S**	**B H7**	**B1 H7**	**t1**	**b**	**L**	**D h6**	**E**	**F1**	**F2**	**M**	**N**	**V**
VF 44L	79	32	32	12	48	42.5	18	11	20.8	6	40	18	45	6	20.5	86	131	M6x16
VF 49L	105	41	51	15	63.5	66.5	25	14	28.3	8	60	25	65	8	28	114.5	179.5	M8x19
W 63L	145	60	40	40	100	77	25	-	28.3	8	60	25	65	8	28	152	217	M8x19
W 75L_D30	154.5	63.5	40	40	104	100	30	-	33.3	8	60	30	65	8	33	161.5	226.5	M10x22
W 86L	170	70	50	45	113	119	35	-	38.3	10	60	35	65	8	38	179	244	M10x22
W 110L	191	77.5	55	45	133	134	42	-	45.3	12	75	42	80	10	45	200	280	M12x28

29.7 Regulación del par de deslizamiento

El pretarado del deslizamiento se realiza en fábrica sobre un momento torsor coincidente con el valor del par nominal Mn2 [n1=1400] del reductor tipo VF o W.
Seguidamente se describen las operaciones realizadas en fábrica para regular el tarado del par de deslizamiento. Las mismas operaciones, menos el paso (2), deberán realizarse cuando se desee un valor de par distinto del original.

1. Atornillar la tuerca de regulación hasta que la fuerza ejercida por el muelle de vaso ejerza la presión justa de forma que no permita el giro libre si se accionada manualmente.

29.7 Slip torque setting

A preliminary slip torque setting is conducted at the factory. Reference is made to torque rating Mn_2 [n_1=1400] of the captioned VF or W gear unit.
Here below the operations performed at the factor for the initial adjustment are listed.
Same steps, with the exception of step (2), must be followed when a different torque setting is required.

1. *Ring nut is tightened until spring washers are sufficiently loaded that manual rotation is hardly possible.*

29.7 Rutschmomenteinstellung

Eine Voreinstellung des Rutschmoments wird im werk durchgeführt.
Das voreingestellte Moment entspricht dem im Katalog angegebenen Nennmoment Mn_2 [n_1=1400] des Getriebes Typ VF oder W.
Nachfolgend werden die im Werk durchgeführten Operationen zur Einstellung des Rutschmoments beschrieben.
Die gleichen Schritte, mit Ausnahme des Schrittes Nr. 2, müssen wiederholt werden, wenn ein anderer Momentwert benötigt wird.

1. Die Verstellmutter so weit anziehen, daß sich die Tellerfedern nicht mehr von Hand drehen lassen.

29.7 Réglage du couple de glissement

Un pré-tarage du couple de glissement sur la base d'un moment de torsion coincidant avec la valeur du couple nominal Mn_2 [n_1=1400] du réducteur type VF o W est effectué en usine.
Ci-après sont décrites les operations effectuées en usine pour réaliser le tarage du couple de glissement. Les mêmes opérations, sauf l'étape 2, devront être effectuées si l'on veut obtenir un couple différent de celui prévu à l'origine.

1. *L'écrou de réglage est vissé jusqu'à ce que les rondelles élastiques soient suffisamment précontraintes et ne puissent plus tourner librment par une action manuelle.*