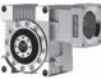




		页码 / Page	
HT高扭矩减速箱 可调背隙 <1'	HT-High-torque gear units with adjustable backlash <1'	GA2 – GA9	
中心距 50 mm	Centre distance 50 mm	GA2 – GA3	
中心距 63 mm	Centre distance 63 mm	GA4 – GA5	
中心距 80 mm	Centre distance 80 mm	GA6 – GA7	
中心距 100 mm	Centre distance 100 mm	GA8 – GA9	
联轴器 and 胀紧盘	Couplings and shrink-disc	GA10	
选型负载表格	Selection and load tables	GA11 – GA12	
简述	Short description	GA13	
安装和维护	Mounting and maintenance	GA14– GA15	
减速箱计算和选择	Gear units calculation and selection	GF1 – GF3	
减速箱附件	Gear units accessories	GG1 – GG8	
伺服电机选配表	Motor applications	GI1 – GI4	



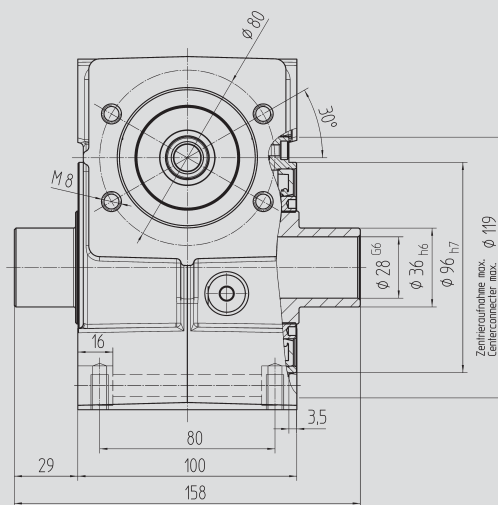
HT-High-torque gear units with adjustable backlash <1'

<1 arcmin

$$a_0 = 50 \text{ mm}$$

Fig. 1 Output shaft with interface according analog EN ISO 9409-1-A-40

Fig. 2 Output shaft for clamp connection 80 84 036



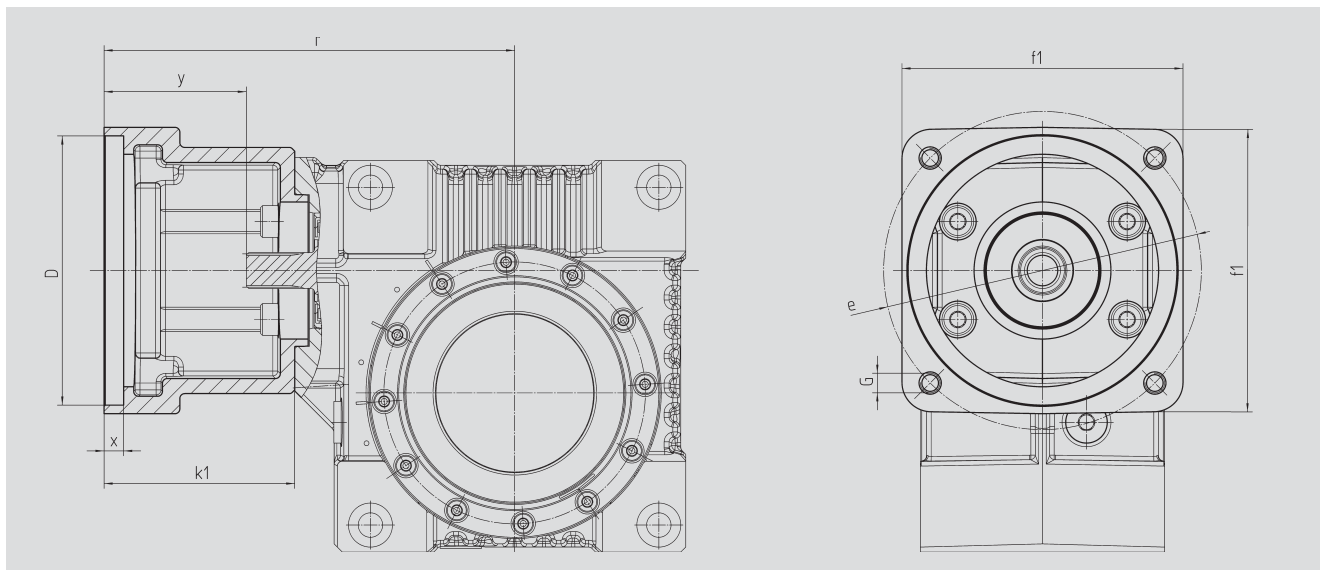
**ATLANTA**

HT 高扭矩减速机 可调背隙 <1'
HT-High-torque gear units with adjustable backlash <1'

电机法兰 / Motor flange



<1 arcmin



中心距 / Centre distance

 $a_0 = 50 \text{ mm}$

订购代码.

Order code	D ^{G7}	k ₁	r	x	y	f ₁	e	G	kg
65 59 301	95,0	62	152	12,5	42	100	115	M8	0,60
65 59 302	50,0	62	152	10,0	42	100	70; 95; 115	M4; M6; M8	0,70
65 59 303	80,0	62	152	10,0	42	100	100	M6	0,65
65 59 304	95,0	78	168	10,0	58	115	130	M8	0,80
65 59 305	95,0	72	162	8,0	52	100	115	M8	0,75
65 59 306	60,0	74	164	21,0	54	100	75; 90; 115	M5; M5; M8	0,90
65 59 307	70,0	70	160	21,0	50	100	90; 115	M6; M8	0,80
65 59 401	95,0	73	163	8,0	53	100	115	M8	0,75
65 59 402	110,0	78	168	8,0	58	115	130	M8	0,80
65 59 403	95,0	73	163	12,0	53	115	130	M8	0,75
65 59 404	110,0	73	163	12,0	53	115	130	M8	0,70
65 59 405	95,0	78	168	11,0	58	140	165	M10	1,20
65 59 406	110,0	78	168	11,0	58	140	165	M10	1,15
65 59 407	130,0	78	168	11,0	58	140	165	M10	1,00
65 59 409	130,0	98	188	14,0	78	140	165	M10	1,10
65 59 410	110,0	74	164	8,0	54	120	145	M8	1,00
65 59 411	110,0	84	174	8,0	64	120	145	M8	1,20
65 59 412	114,3	105	195	8,0	85	180	200	M12	3,70
65 59 413	114,3	139	229	8,0	119	180	200	M12	3,35
65 59 414	114,3	91	181	8,0	71	180	200	M12	2,65
65 59 415	110,0	89	179	8,0	69	120	145	M8	1,30

订购代码需包括减速机代码 98 03 0xx / 98 13 0xx 及法兰代码 65 59 3xx 或. 4xx.

The order should contain gear box 98 03 0xx / 98 13 0xx and flange 65 59 3xx or 4xx.



ATLANTA

HT 高扭矩减速机 可调背隙 <1'

HT-High-torque gear units with adjustable backlash <1'



<1 arcmin

中心距 / Centre distance

$a_o = 63 \text{ mm}$

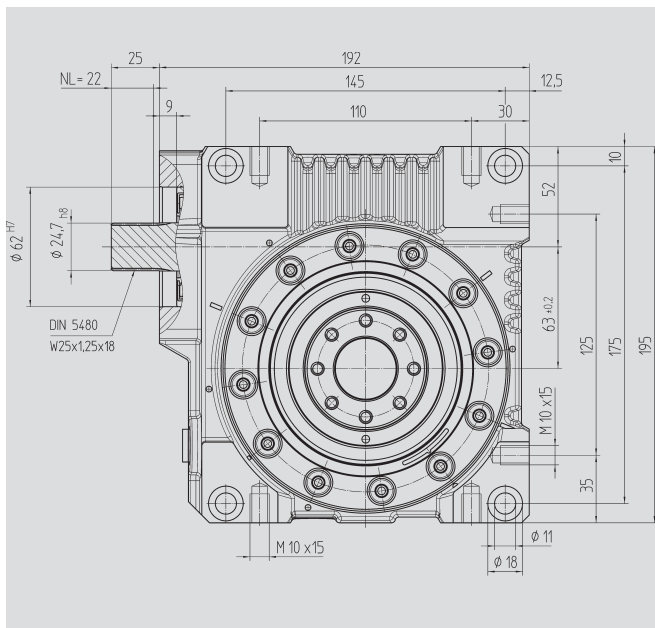


图1 符合 EN ISO 9409-1-A-50 标准法兰型输出

Fig. 1 Output shaft with interface according analog EN ISO 9409-1-A-50

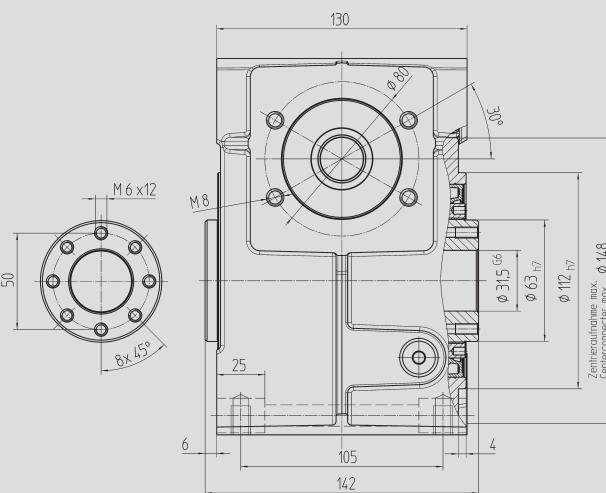
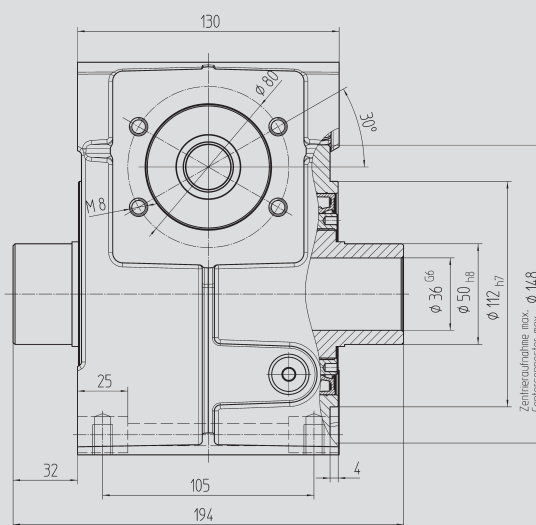


图2 空心轴输出，配合胀紧盘型号：80 85 050

Fig. 2 Output shaft for clamp connection 80 85 050



订购代码 / Order code

图 1 / Fig. 1

图 2 / Fig. 2

减速比 i

Ratio i



$J_{red} 10^{-4}$

kg m²

98 04 005	98 14 005	4,75	12	2,5350
98 04 007	98 14 007	6,75	12	1,3720
98 04 009	98 14 009	9,25	12	0,9825
98 04 015	98 14 015	14,50	12	0,9590
98 04 020	98 14 020	19,50	12	0,6940
98 04 029	98 14 029	29,00	12	0,9966
98 04 039	98 14 039	39,00	12	1,0100
98 04 052	98 14 052	52,00	12	0,5305

润滑油来自食品行业用油

订购代码. 98 04 1xx / 98 14 1xx

With suitable oil for food

Order code 98 04 1xx / 98 14 1xx

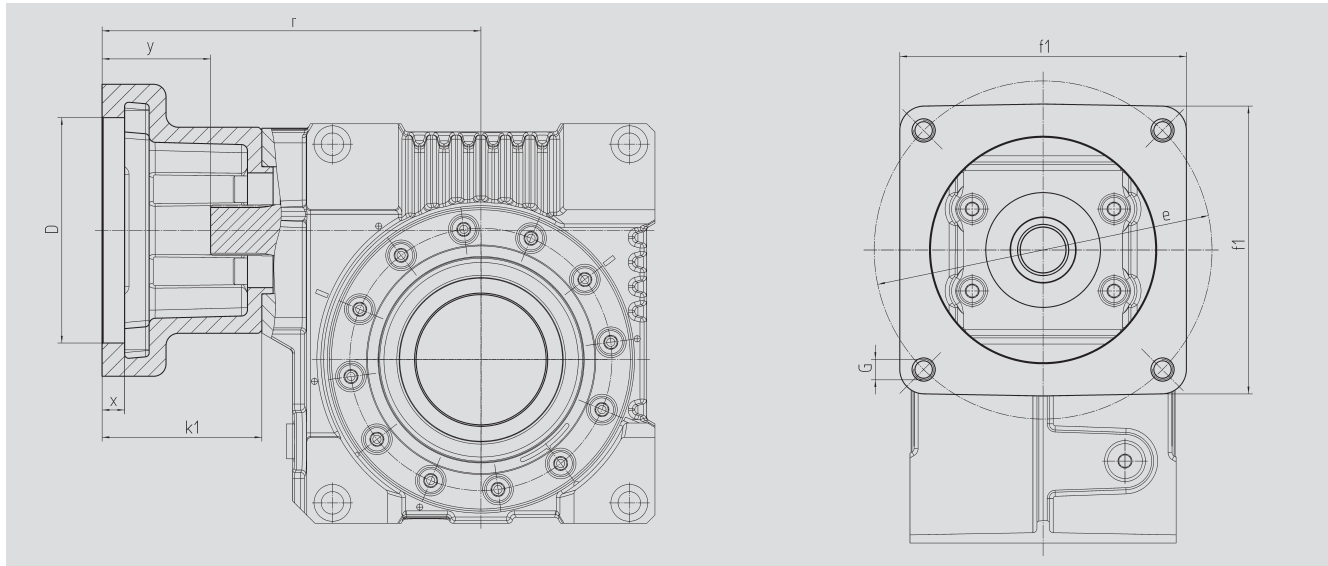
**ATLANTA**

HT 高扭矩减速机 可调背隙 <1'
HT-High-torque gear units with adjustable backlash <1'

电机法兰 / Motor flange



<1 arcmin



中心距 / Centre distance

 $a_0 = 63 \text{ mm}$

订购代码. Order code	D ^{G7}	k ₁	r	x	y	f ₁	e	G	kg
65 59 301	95,0	62	152	12,5	42	100	115	M8	0,60
65 59 302	50,0	62	152	10,0	42	100	70; 95; 115	M4; M6; M8	0,70
65 59 303	80,0	62	152	10,0	42	100	100	M6	0,65
65 59 304	95,0	78	168	10,0	58	115	130	M8	0,80
65 59 305	95,0	72	162	8,0	52	100	115	M8	0,75
65 59 306	60,0	74	164	21,0	54	100	75; 90; 115	M5; M5; M8	0,90
65 59 307	70,0	70	160	21,0	50	100	90; 115	M6; M8	0,80
65 59 401	95,0	73	163	8,0	53	100	115	M8	0,75
65 59 402	110,0	78	168	8,0	58	115	130	M8	0,80
65 59 403	95,0	73	163	12,0	53	115	130	M8	0,75
65 59 404	110,0	73	163	12,0	53	115	130	M8	0,70
65 59 405	95,0	78	168	11,0	58	140	165	M10	1,20
65 59 406	110,0	78	168	11,0	58	140	165	M10	1,15
65 59 407	130,0	78	168	11,0	58	140	165	M10	1,00
65 59 409	130,0	98	188	14,0	78	140	165	M10	1,10
65 59 410	110,0	74	164	8,0	54	120	145	M8	1,00
65 59 411	110,0	84	174	8,0	64	120	145	M8	1,20
65 59 412	114,3	105	195	8,0	85	180	200	M12	3,70
65 59 413	114,3	139	229	8,0	119	180	200	M12	3,35
65 59 414	114,3	91	181	8,0	71	180	200	M12	2,65
65 59 415	110,0	89	179	8,0	69	120	145	M8	1,30

订购代码需包括减速机代码 98 04 0xx / 98 14 0xx 及法兰代码 65 59 3xx 或. 4xx.

The order should contain gear box 98 04 0xx / 98 14 0xx and flange 65 59 3xx or 4xx.



ATLANTA

HT 高扭矩减速箱 可调背隙 <1'

HT-High-torque gear units with adjustable backlash <1'



<1 arcmin

中心距 / Centre distance

$a_0 = 80 \text{ mm}$

图1 符合 EN ISO 9409-1-A-63 标准法兰型输出

Fig. 1 Output shaft with interface according analog EN ISO 9409-1-A-63

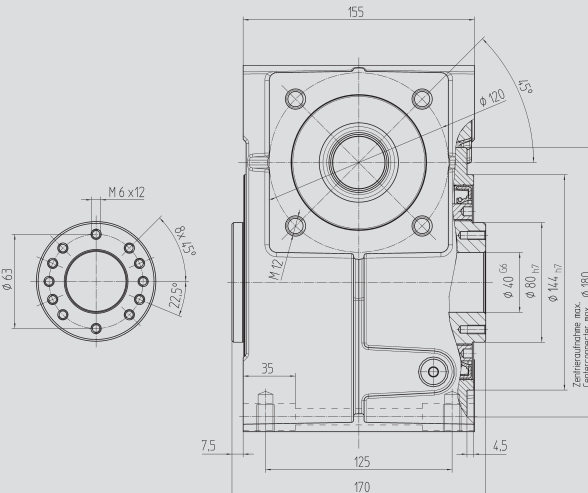
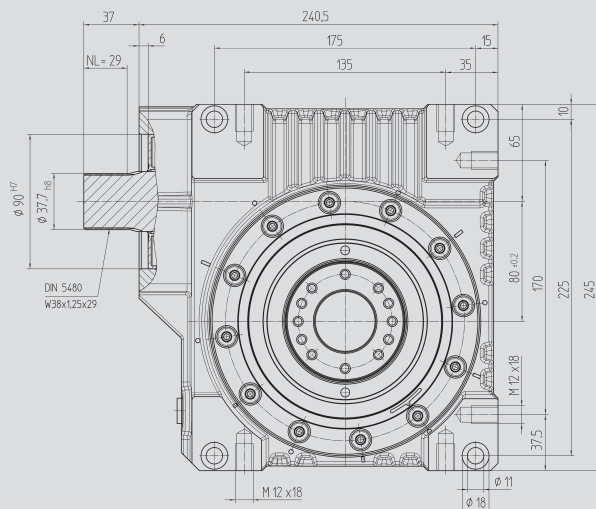
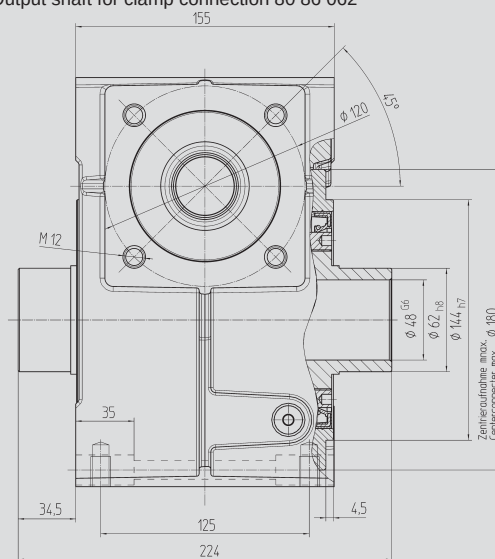
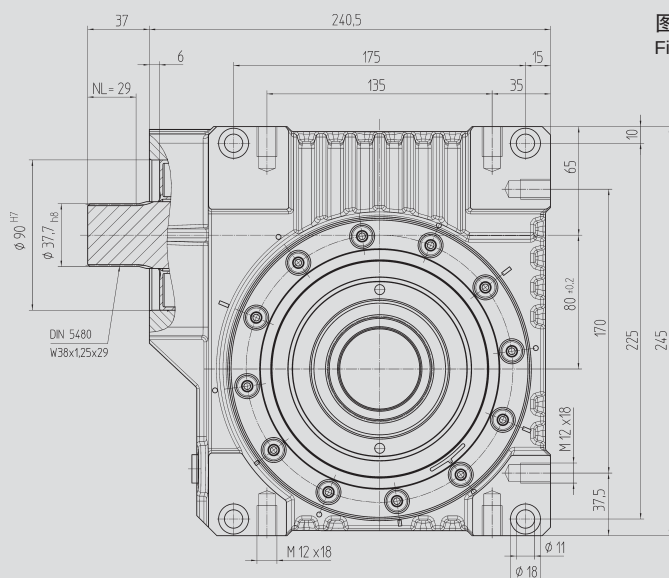


图2 空心轴输出，配合胀紧盘型号：80 86 062

Fig. 2 Output shaft for clamp connection 80 86 062



订购代码 / Order code

图 1 / Fig. 1

图 2 / Fig. 2

减速比 i

Ratio i



$J_{red} 10^{-4}$

kg m²

98 05 005	98 15 005	4,75	23	9,6180
98 05 007	98 15 007	6,75	23	6,0910
98 05 009	98 15 009	9,25	23	4,7650
98 05 015	98 15 015	14,50	23	5,3080
98 05 020	98 15 020	19,50	23	3,9350
98 05 029	98 15 029	29,00	23	4,0500
98 05 039	98 15 039	39,00	23	4,1800
98 05 052	98 15 052	52,00	23	3,7140

润滑油来自食品行业用油

订购代码. 98 05 1xx / 98 15 1xx

With suitable oil for food

Order code 98 05 1xx / 98 15 1xx



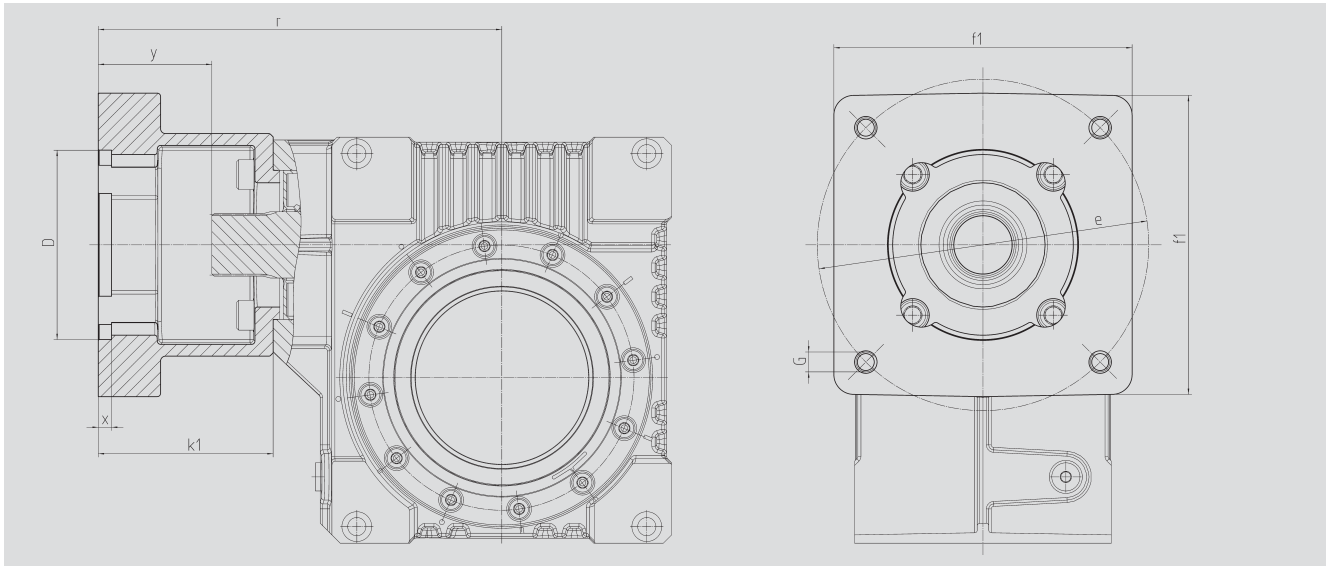
ATLANTA

HT 高扭矩减速机 可调背隙 <1'
HT-High-torque gear units with adjustable backlash <1'

电机法兰 / Motor flange



<1 arcmin



中心距 / Centre distance

$a_o = 80 \text{ mm}$

订购代码. Order code	D ^{G7}	k ₁	r	x	y	f ₁	e	G	 kg
65 59 501	110,0	92,0	230,0	8,0	55,0	140	165	M10	2,00
65 59 502	130,0	92,0	230,0	8,0	55,0	140	165	M10	1,90
65 59 503	180,0	122,0	260,0	8,0	85,0	192	215	M12	3,40
65 59 504	180,0	127,0	265,0	8,0	90,0	192	215	M12	3,80
65 59 505	180,0	112,0	250,0	10,0	75,0	192	215	M12	2,70
65 59 506	130,0	112,0	250,0	10,0	75,0	192	215	M12	3,00
65 59 507	130,0	112,0	250,0	10,0	75,0	140	165	M10	2,50
65 59 508	110,0	90,0	228,0	8,0	53,0	140	145	M8	2,00
65 59 509	110,0	108,5	246,5	8,0	71,5	140	145	M8	2,50
65 59 510	114,3	129,5	267,5	8,0	92,5	180	200	M12	5,00
65 59 511	114,3	163,5	301,5	8,0	126,5	180	200	M12	4,20
65 59 512	114,3	105,5	243,5	8,0	68,5	180	200	M12	3,50
65 59 513	110,0	113,5	251,5	8,0	76,5	140	145	M8	2,70

订购代码需包括减速机代码 98 05 0xx / 98 15 0xx 及法兰代码 65 59 5xx.

The order should contain gear box 98 05 0xx / 98 15 0xx and flange 65 59 5xx.



HT-High-torque gear units with adjustable backlash <1'

<1 arcmin

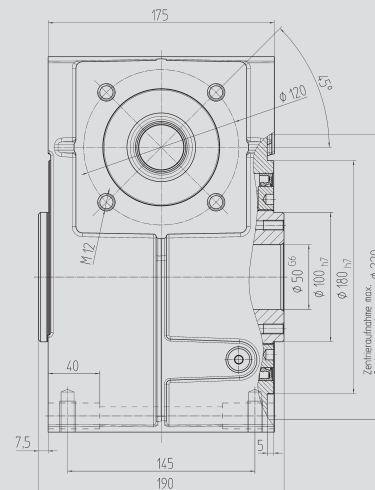
$$a_o = 100 \text{ mm}$$


Fig. 1 Output shaft with interface according analog EN ISO 9409-1-A-80

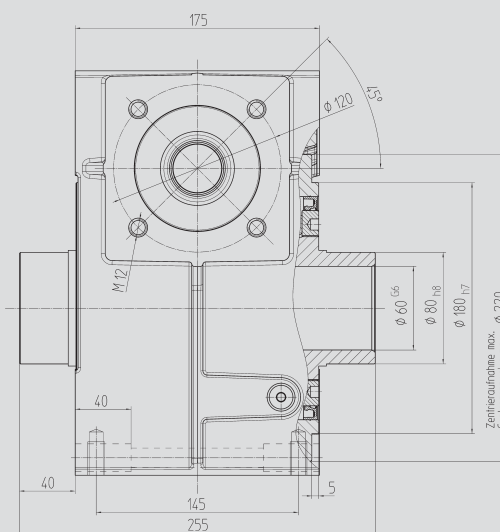


Fig. 2 Output shaft for clamp connection 80 87 080

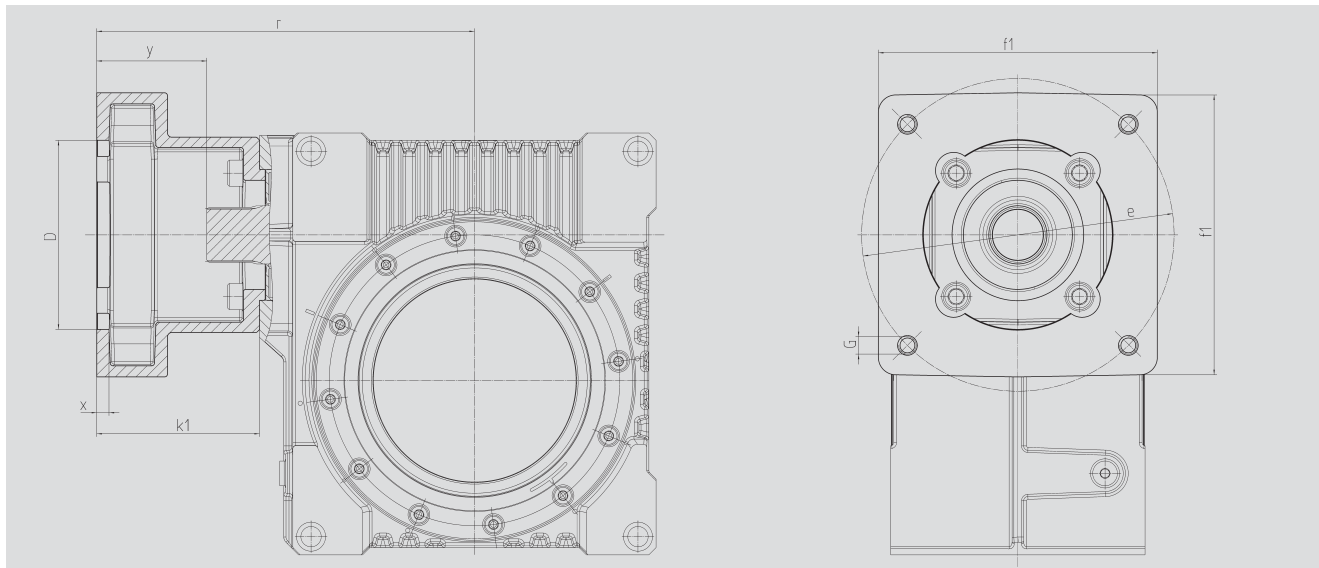
**ATLANTA**

HT 高扭矩减速机 可调背隙 <1'
HT-High-torque gear units with adjustable backlash <1'

电机法兰 / Motor flange



<1 arcmin



中心距 / Centre distance

 $a_0 = 100 \text{ mm}$

订购代码.

Order code

	D ^{G7}	k ₁	r	x	y	f ₁	e	G	 kg
65 59 501	110,0	92,0	230,0	8,0	55,0	140	165	M10	2,00
65 59 502	130,0	92,0	230,0	8,0	55,0	140	165	M10	1,90
65 59 503	180,0	122,0	260,0	8,0	85,0	192	215	M12	3,40
65 59 504	180,0	127,0	265,0	8,0	90,0	192	215	M12	3,80
65 59 505	180,0	112,0	250,0	10,0	75,0	192	215	M12	2,70
65 59 506	130,0	112,0	250,0	10,0	75,0	192	215	M12	3,00
65 59 507	130,0	112,0	250,0	10,0	75,0	140	165	M10	2,50
65 59 508	110,0	90,0	228,0	8,0	53,0	140	145	M8	2,00
65 59 509	110,0	108,5	246,5	8,0	71,5	140	145	M8	2,50
65 59 510	114,3	129,5	267,5	8,0	92,5	180	200	M12	5,00
65 59 511	114,3	163,5	301,5	8,0	126,5	180	200	M12	4,20
65 59 512	114,3	105,5	243,5	8,0	68,5	180	200	M12	3,50
65 59 513	110,0	113,5	251,5	8,0	76,5	140	145	M8	2,70

订购代码需包括减速机代码 98 06 0xx / 98 16 0xx 及法兰代码 65 59 5xx.

The order should contain gear box 98 06 0xx / 98 16 0xx and flange 65 59 5xx.



ATLANTA

联接部件 Connecting elements



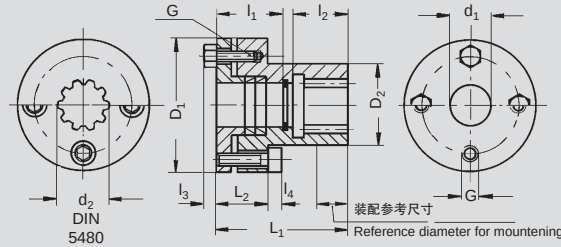
<1 arcmin

伺服电机与减速机专用特制联轴器，刚性联接，渗氮，与伺服电机安装无键槽

Special couplings for motor/gear units, rigid model, nitrided, preassembled for motor shafts without key

减速机输入轴侧采用 DIN 5480 标准的内花键结构

Bore on gear unit side low-clearance tooth-hub profile corresponding to DIN 5480 for push-fitting



电机输出轴侧采用胀紧盘结构

Bore on motor side with locking elements as clamp connection

订购代码 / Order code

联轴器

Coupling	1)	d ₁	d ₂	D ₁	D ₂	l ₁	l ₂	l ₃	l ₄	L ₁	L ₂	G	J _{red} 10 ⁻⁴ kg m ²	kg
65 43 110	9 71 80 010	10	15x1,25x10	48	29	22	17	-	5	44	18	4xM5	0,835	0,40
65 43 111	9 71 80 011	11	15x1,25x10	48	29	20,5	17	-	5	64	18	4xM5	0,976	0,50
65 43 114	9 71 80 014	14	15x1,25x10	48	29	24	19	-	5	50	18	4xM5	0,835	0,45
65 43 116	9 71 80 016	16	15x1,25x10	48	29	27	16	-	5	50	18	4xM5	0,824	0,45
65 43 119	9 71 80 019	19	15x1,25x10	48	29	24	16	-	5	40	18	4xM5	0,799	0,40
65 43 914	9 71 80 014	14	15x1,25x10	48	29	26	19	-	5	64	18	4xM5	0,985	0,50
65 43 916	9 71 80 016	16	15x1,25x10	48	29	27	15	-	5	64,3	18,3	4xM5	0,975	0,40
65 43 919	9 71 80 019	19	15x1,25x10	48	29	23	17	-	5	55	18	4xM5	0,853	0,45
65 43 924	9 71 80 024	24	15x1,25x10	50	29	34	22	-	6	56	40	4xM6	1,041	0,52
65 44 024	9 71 80 024	24	25x1,25x18	50	29	41,5	24	-	6	66,5	59,5	4xM6	2,628	0,75
65 44 114	9 71 80 014	14	25x1,25x18	55	32	24	23,5	-	6	64	21	4xM6	1,645	0,50
65 44 116	9 71 80 016	16	25x1,25x18	55	32	34	23,5	-	6	64	21	4xM6	1,622	0,50
65 44 119	9 71 80 019	19	25x1,25x18	55	32	33	26,5	-	6	63	21	4xM6	1,598	0,50
65 44 120	9 71 80 020	20	25x1,25x18	55	32	33,2	26,5	-	6	63	21	4xM6	1,550	0,50
65 44 219	9 71 80 019	19	25x1,25x18	55	32	27	26,5	-	6	74	21	4xM6	1,703	0,50
65 44 919	9 71 80 019	19	25x1,25x18	55	32	31	26,5	-	6	78	21	4xM6	1,757	0,55
65 44 928	9 71 80 028	28	25x1,25x18	70	48	48	26	-	6	83	25	5xM6	5,998	0,85
65 44 932	9 71 80 032	32	25x1,25x18	70	48	43	23	-	6	78	25	5xM6	5,921	0,80
65 44 935	9 71 81 035	35	25x1,25x18	70	48	52	26	-	6	78	25	5xM6	6,155	0,95
65 46 024	9 71 80 024	24	38x1,25x29	55	-	38,5	31	4	6	72,5	-	5xM6	4,452	0,90
65 46 834	9 71 81 035	1 3/8"	38x1,25x29	80	58	63	34	-	6	100	40	6xM6	16,320	1,95
65 46 928	9 71 80 028	28	38x1,25x29	70	48	47	34	-	6	90	25	5xM6	5,882	0,90
65 46 932	9 71 80 032	32	38x1,25x29	70	48	43	34	-	6	86	25	5xM6	5,784	0,85
65 46 935	9 71 81 035	35	38x1,25x29	80	58	65	34	-	6	100	40	6xM6	16,550	1,95
65 46 938	9 71 80 038	38	38x1,25x29	80	58	62	34	-	6	100	40	6xM6	16,240	1,88
65 47 948	9 71 80 048	48	38x1,25x29	95	66	58	31	-	8	92	42	6xM8	41,860	3,10

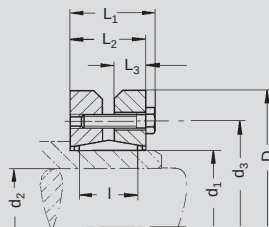
1) 胀紧环备件 / Spare part clamping element

98 1. ...系列减速机空心输出轴用胀紧盘

Shrink-disc clamping sets for output drive shafts of gear series 98 1. ...

整体供货

Supplied as complete set



$$J_{red} = \frac{J}{i^2}$$

订购代码 Order code	a ₀ mm	T _{2max} Nm	d ₁	d ₂	d ₃	D	L ₁	L ₂	L ₃	I	G	J 10 ⁻⁴ kg m ²	kg
80 84 036	50	540	36	28	52	72	27,5	23,50	10	18	5 x M6	4,029	0,4
80 85 050	63	1180	50	36	70	90	31,5	27,50	12	22	9 x M6	11,322	0,8
80 86 062	80	2300	62	48	86	110	34,5	30,50	13	23	10 x M6	27,137	1,3
80 87 080	100	3240	80	60	100	145	38,0	32,50	14	25	7 x M8	88,870	1,9



ATLANTA

HT 高扭矩减速机选型负载表格

Selection and load tables for HT-high-torque gear units

表中所列数据 基于磨损和最大侧向负载 伺服电机操作
12000小时的满负荷运行。连续的满负荷运行，必须考虑温度限制！（如有疑问，请与我们联系。）

$T_{2max.}$ = 避免齿断裂的静态扭矩,
 P_1 = 驱动功率 (kW) ,
 T_2 = 输出扭矩 (Nm)

The values in the tables are based upon wear or maximum flank load at 12,000 h full load and on servo-operation. Please see here for also our manual on the internet page www.atlantagmbh.de. With continuous full-load operation it may be necessary to consider temperature limits! (Please ask us, if in doubt.)

$T_{2max.}$ = static torque to avoid tooth fracture, P_1 = driving power in kW, T_2 = output torque in Nm.



订购代码。 Order code		a ₀ (mm)	i	T _{2 max.}	驱动速度 / Driving speed n ₁ in min ⁻¹														η bei 1500
					500		750		1000		1500		3000		4000		5000		
					P ₁ (kw)	T ₂ (Nm)	P ₁ (kw)	T ₂ (Nm)	P ₁ (kw)	T ₂ (Nm)	P ₁ (kw)	T ₂ (Nm)	P ₁ (kw)	T ₂ (Nm)	P ₁ (kw)	T ₂ (Nm)	P ₁ (kw)	T ₂ (Nm)	
98 03 003	98 13 003	50	3,00*																
98 03 005	98 13 005		4,75	820	1,21	97	1,80	97	2,55	105	3,78	105	7,50	105	9,30	97	10,90	91	0,93
98 03 007	98 13 007		6,75	600	0,75	84	1,15	88	1,65	94	2,62	103	5,25	103	6,60	97	7,80	91	0,90
98 03 009	98 13 009		9,25	410	0,48	72	0,75	76	1,05	81	1,65	87	3,82	105	5,32	105	6,15	97	0,88
98 03 015	98 13 015		14,50	520	0,39	85	0,60	90	0,85	97	1,33	105	2,73	112	3,75	112	4,72	112	0,84
98 03 020	98 13 020		19,50	370	0,24	67	0,37	72	0,51	75	0,82	82	1,80	97	2,47	97	3,15	97	0,83
98 03 029	98 13 029		29,00	450	0,21	72	0,30	78	0,43	82	0,66	90	1,39	105	1,84	105	2,11	97	0,76
98 03 039	98 13 039		39,00	300	0,18	78	0,25	84	0,36	90	0,55	97	1,15	112	1,50	112	1,87	112	0,70
98 03 050	98 13 050		50,00	220	0,12	63	0,18	66	0,24	70	0,37	75	0,76	90	1,08	90	1,35	90	0,63
98 04 003	98 14 003	63	3,00*																
98 04 005	98 14 005		4,75	1500	3,15	255	4,95	270	6,60	270	9,16	255	15,45	217	19,80	202			0,93
98 04 007	98 14 007		6,75	1120	2,25	255	3,52	270	4,65	270	6,37	255	10,80	217	13,95	202			0,90
98 04 009	98 14 009		9,25	750	1,11	172	1,77	187	2,44	195	3,78	202	7,39	202	9,52	189			0,88
98 04 015	98 14 015		14,50	900	1,11	247	1,78	270	2,31	270	3,67	270	6,27	255	7,87	240			0,84
98 04 020	98 14 020		19,50	750	0,58	172	0,91	187	1,27	195	1,92	202	4,47	247	5,74	232			0,83
98 04 029	98 14 029		29,00	970	0,72	262	1,12	285	1,56	307	2,32	330	3,85	292	4,83	277			0,76
98 04 039	98 14 039		39,00	670	0,45	210	0,66	225	0,91	240	1,45	262	2,82	285	3,82	285			0,70
98 04 052	98 14 052		52,00	450	0,24	142	0,37	157	0,52	172	0,82	187	1,80	225	2,44	240			0,63
98 05 003	98 15 003	80	3,00*																
98 05 005	98 15 005		4,75	3000	7,80	630	10,35	570	12,79	540	17,40	495	29,25	420					0,93
98 05 007	98 15 007		6,75	2100	5,40	630	7,29	570	9,21	540	12,66	495	21,01	420					0,90
98 05 009	98 15 009		9,25	1650	3,57	555	5,29	555	6,79	540	9,33	495	15,45	420					0,88
98 05 015	98 15 015		14,50	1950	2,97	675	4,35	675	5,35	630	6,90	555	10,50	442					0,84
98 05 020	98 15 020		19,50	1500	1,86	555	3,00	600	3,90	600	5,40	540	8,59	480					0,83
98 05 029	98 15 029		29,00	1800	2,07	780	3,06	825	3,78	795	4,98	735	8,13	630					0,76
98 05 039	98 15 039		39,00	1270	1,30	645	2,02	690	2,77	735	3,76	720	6,04	615					0,70
98 05 052	98 15 052		52,00	900	0,57	360	0,85	390	1,20	412	1,83	450	3,69	495					0,63
98 06 005	98 16 005	100	4,75	4950	16,15	1320	21,33	1200	26,65	1125	36,15	1027	60,55	870					0,93
98 06 007	98 16 007		6,75	3450	10,84	1245	14,40	1125	18,15	1080	25,05	990	43,50	870					0,90
98 06 009	98 16 009		9,25	2850	8,01	1245	10,65	1125	13,65	1080	18,45	990	31,80	870					0,88
98 06 015	98 16 015		14,50	3070	6,30	1395	8,70	1320	10,20	1215	13,50	1080	21,45	930					0,84
98 06 020	98 16 020		19,50	2700	4,53	1350	6,40	1305	7,80	1215	10,00	1080	16,65	930					0,83
98 06 029	98 16 029		29,00	3450	4,44	1725	6,03	1605	7,00	1515	8,95	1275	15,46	1200					0,76
98 06 039	98 16 039		39,00	2470	3,10	1620	4,32	1545	5,44	1500	6,79	1350	11,22	1170					0,70
98 06 052	98 16 052		52,00	1650	1,74	1140	2,73	1230	3,61	1275	4,62	1177	7,50	1020					0,63

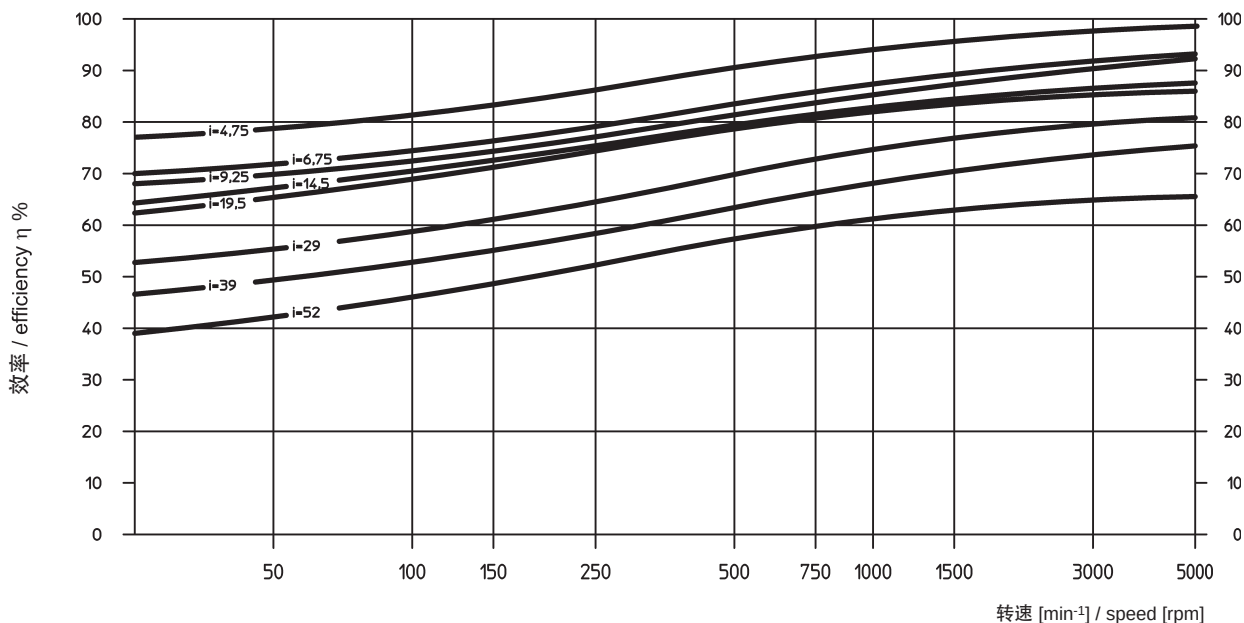
* 按照需求 / on request.



< 1 arcmin

在满负荷情况下，伺服蜗轮蜗杆减速箱的传动效率。

Gearing efficiency of servo worm gear units with driving worm and under full load.

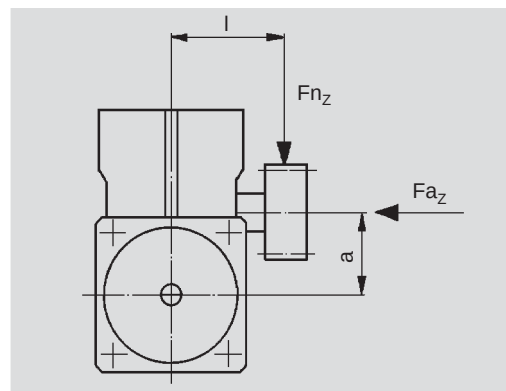


作用在输出轴上的附件载荷

给出的数据仅作参考。还应该考虑齿条系统选择时的数值。假设作用力的施力点在轴的中间位置。如有额外的轴向力，或者高侧向力的情况，请与我们联系。

Additional loads on output drive

The data given are reference values. You should consider the values arising from the choice of the tooth system. It is assumed that the point of action of the force is the centre of the shaft. In cases where additional axial forces occur, over and above high transverse forces, please ask for advice.



中心距 Centre distance	a (mm)		50		63		80		100	
减速机中心到齿轮中心的距离	EN ISO	空心轴	EN ISO	空心轴	EN ISO	空心轴	EN ISO	空心轴	EN ISO	空心轴
Dimensions centre casing/ centre teeth		胀紧盘		胀紧盘		胀紧盘		胀紧盘		胀紧盘
l (mm)	71	105	86	120	103	135	118	162		
最大附加载荷 Max. additional load										
径向 F_{n_z}	[N]	6800	4600	9600	7000	15300	11700	17800	13200	
轴向 F_{a_z}	[N]	2700	2700	3800	3800	6000	6000	7500	7500	
仅是轴向载荷 ($F_n = 0$)	F_{a_z} [N]	5000		8000		15000		35000		
Only axial load										



简述

亚特兰 HT 高扭矩蜗轮蜗杆减速箱是特殊开发用于最新的交流和直流伺服电机。同本目录中其他产品一样，都有常备库存，或者很短时间就可以发货。

HT 高扭矩减速箱的基本特征：

- 低背隙（背隙 $< 1'$ ），可调
- 高达150%负载能力
- 轻合金壳体结构具有很好的散热性能
- 坚固的滚柱轴承“O”型装配在空心输出轴上，可承受更大的附加力

中心距，减速比和齿轮系统根据DIN 3975/76标准选取。齿形进行了优化，以便能够简单地通过调整偏心法兰改变中心距的方法调整背隙。

使用经过磨削右旋的蜗杆，特制的铜合金蜗轮，并浸入特种润滑油中润滑，来保证较高的效率，平顺的运行和长寿命。加工过的壳体上留有很多安装孔和攻丝孔，方便安装。

减速箱和输出轴之间的联接要求绝对可靠，无扭转变形，对于间歇运行这点很重要。该些列减速箱使用新的符合DIN EN ISO 9409-1-A 的法兰型接口，与传统胀紧盘联接结构同样好用。

减速箱和伺服电机的连接采用了特殊的联轴器。减速箱的输入轴为外花键结构，联轴器为内花键结构，完全吻合，达到无背隙传动。联轴器与电机轴之间通过胀紧结构也是同样的目的。

对于动力的输出，有多种输出驱动轴可供选择，如不同齿数的直齿和斜齿驱动系统。除了齿轮轴外，还有很多不同的齿轮和输出轴配合使用。另外还有多种符合EN ISO 9409-1-A 标准的法兰型斜齿齿轮可以使用。

对于减速箱安全停止的最大传动扭矩（参考GA-11）和胀紧盘（GH-1）必须核对完毕。

Short description

ATLANTA HT-high-torque worm gear units have been specially developed for use with the latest three-phase and DC servomotors. Like all other components in this catalogue, they are usually available ex stock or, at least, within a very short time.

The following are typical features of our HT-high-torque gear units:

- low-clearance gearing (back lash $< 1'$), adjustable
- up to 150% higher loading values
- casing of light metal for optimal heat dissipation
- robust bevel roller bearings for the output drive hollow shaft in "O" arrangement permitting greater additional forces.

Centre distances, gear ratios and tooth systems have been chosen in accordance with DIN 3975/76. The tooth shape was optimised so as to permit the adjustment of the clearance simply by changing the centre distance by means of eccentric flanges.

The use of ground, right-hand worms, a worm gear of special worm-gear bronze and dip-feed lubrication (synthetic special oil) ensures a high degree of efficiency and also smooth running in both directions and a long service life. The fully machined casing with its many fixing bores and tapped holes permits mounting in any position.

The demand for an absolutely positive, and largely torsion-free connection between gear unit and output shaft, as it is especially important for intermittent operation, is fulfilled by our new gear-unit version with interface according to DIN EN ISO 9409-1-A as well as by our traditional version with shrink-plate coupling of the output shaft.

The drive, i.e. the connection with the driving motor, is achieved with a special clutch. Its internal gearing, together with the barrelled profile of the driving shaft of our worm gear unit ensures transmission of the power with no free play. The use of annular spring elements firmly fixed to the motor shaft serves the same purpose.

For the output drive you can choose from quite a number of output drive shafts with straight and helical tooth systems and various numbers of teeth. Apart from toothed pinion shafts there is a multitude of gearwheels with different numbers of teeth from our gearwheel program which can be combined and used together with suitable special output drive shafts. In addition there is a large choice of gearwheels with helical tooth system for gear units with interface according to EN ISO 9409-1-A.

For safety-stop is the maximum transmittable torque of the gear unit (see page GA-11) and shrink disc (see page GH-1) has to be checked.





< 1 arcmin

安装说明

蜗轮蜗杆减速箱

5个安装面都有合适尺寸的安装孔，方便任何角度安装。为了提供足够的侧向力支撑（参看GA-12），我们推荐最大接触面安装，就是带有输出轴的两个侧面。把输入轴置于输出轴的侧方或者下方，将有利于润滑。如果输入轴置于输出轴上方，将降低10%的驱动能力。

联轴器

联轴器在出厂前已经装配好。在安装之前请擦拭干净所有接触面，并涂抹一小层油膜。联轴器中的卡簧能够卡住电机轴，使联轴器不能轴向移动。加入第二个卡簧也是有可能的。

推荐安装顺序：

- 把联轴器放到电机输出轴上，向内推动，直至停止移动。（轴肩/卡簧）
- 轻轻锁紧胀紧螺栓，并检查联轴器的转动情况。
- 使用扭力扳手交叉锁紧胀紧螺栓，达到表中所列响应扭矩，确保联轴器与接触面间隙均匀。
- 建议最后做径向跳动检测。

安装指导请参考GI-1~GI-4页。

电机

将装有联轴器的电机对准减速箱输入轴轴心装入，并锁紧螺栓。

输出轴（齿轮轴）

除非输出齿轮轴已经装配完毕，否则我们推荐如下安装步骤：清理齿轮轴和减速箱空心输出轴孔，然后涂抹一些油脂。对于特殊齿轮轴我们推荐轴径公差为h6 (DIN ISO 286).材料必须拥有385N/mm²以上的屈服点强度。重新计算扭力是必要。

Mounting instructions

Worm gear units

Five mounting faces with sufficiently dimensioned tapped holes are provided for mounting in any position. In order to accommodate all supplementary forces (see page GA-12) we recommend mounting at the largest contact faces., i.e. at one of the two cap sides. Putting the worm shaft (input shaft) in a lateral or inferior position is ideal for lubrication. Mounting the shaft in a top position will reduce the driving capacity by about 10%.

Coupling

The coupling will be delivered pre-assembled. Before attaching it to the motor shaft all contact surfaces must be cleaned and protected by applying a thin oil film. A retaining ring inserted in the hub of the coupling locks it on the motor shaft preventing axial movement of the coupling. It may be necessary to insert this ring in the next recess. Recommended sequence:

- Slide the coupling onto the motor shaft until it clicks home (shoulder/retaining ring).
- Tighten the clamping screws slightly and check the coupling for true running.
- Tighten screws alternately crosswise using torque figures as shown in operation and maintenance instructions ensuring that the gap between coupling and contact face remains even.
- A final check of true running is recommended at the applicable reference diameter!

A mounting guide can be found on page GI-1 to GI-4

Motor

Insert the motor with coupling mounted into the gear centering piece and bolt it to the gearbox.

Output drive (pinion) shaft

Unless the output pinion shaft comes already fully assembled, we recommend to proceed as follows:

Clean pinion shaft and hollow shaft extension and then oil them. For the special output drive shaft we recommend tolerance h6 (DIN ISO286). the material must have a minimum yield point of 385 N/mm².

A recalculation of the strength is necessary.



减速箱输出轴为胀紧盘式结构

将胀紧盘安装到减速箱空心输出轴上（切勿在未安装状态下锁紧胀紧盘螺栓！）。将齿轮轴插入减速箱空心输出轴希望安装的一侧，直至停止。均匀的锁紧胀紧盘上的螺栓。按照依次顺序锁紧螺栓（不是交叉锁紧）达到表格中所需求的扭矩。

维护

背隙的调整

减速箱在出厂前已经调整到最小背隙。经过长时间的运行，由于磨损，背隙可能会增加（参考值>15'）。背隙可以通过调整装在减速箱两侧的偏心法兰盘再次调整（支撑蜗轮）。

我们推荐按照如下步骤执行：

拧下两侧端盖上的内六角螺栓，为了避免漏油，不要取下两侧端盖。同时旋动两侧端盖，使箭头指向减速箱壳体上更高的数字。至少检测蜗轮旋转一周的背隙值，来评定调整背隙的结果。如果必要，再次调整。交叉锁紧螺栓达。通过以上调整，减速箱的中心距会变化，此时必须调整安装附件达到安装中心距的要求。

更换润滑油

减速箱出厂前已经充满合成润滑油，并进行了运行测试。可以直接安装。运行期间建议每个月检查一次液位，运行的第一周建议多次检查。正常负载情况下，单班工作，我们建议每4年更换一次润滑油；如果2到3班工作建议每年更换一次。更换润滑油必须将原有废油排空，并用新油冲洗干净，再次填充新的推荐的润滑油至减速箱中部。（重要：合成润滑油不可与矿物润滑油混用）请参考下表填充油量。

我们推荐如下合成润滑油：

Klübersynth GH 6 - 220

订购代码: 65 90 010 (1 升)

替代品：

SHELL Tivela S 220, BP Enersyn SG-XP 220,

ARAL Degol GS 220

防护等级

防护等级: IP65/67 符合 ISO 20653

(腐蚀性已被单独验证)

Output drive shaft for
shrink-disc connection

Slide shrink disc onto the hollow shaft extension of the gear unit (please do not tighten the screws beforehand!). Insert the output shaft from the desired side into the hollow shaft fully up to the stop. Make the transverse pressure connection by evenly tightening the clamping screws. Tighten the screws one after the other (not crosswise) in several passes to the torque indicated in the operation and maintenance instructions.



Maintenance

Adjustment of the circumferential backlash

The units are set up in the factory with a minimal amount of backlash. After prolonged usage, backlash may increase due to wear (reference value >15'). It can be adjusted by moving the eccentrically supported output shaft (= worm wheel).

We recommend to proceed as follows:

Unscrew the hexagon socket head screw of the two end caps without removing the caps in order to avoid oil leakage. Turn both caps towards the next higher number marked on the casing ensuring that they are both moved by the same amount. Check the backlash by turning the worm gear at least one complete revolution. If necessary, adjust further by another step. Evenly retighten the hexagon socket head screws alternately crosswise. An alteration of the gear centre distance in relation to the overall operating conditions of the unit must be made up for by adjusting the attachment of the gear unit.

Lubricant change

In the factory the gear units are filled with a synthetic lubricant and test run. They are delivered ready for use. A check of the lubricant level once a month - during the first weeks of operation more frequently - is recommended. Under normal load conditions and with single shift working it is recommended that the lubricant be changed every four years; with 2 or 3 shift working the lubricant should be changed annually. To do this, the unit must be emptied, flushed through and then refilled to the oil-level hole approximately in the middle of the gear unit using one of the lubricants recommended below. (Important: Synthetic lubricants must not be mixed with mineral oils.) For oil quantities see table.

We recommend the following synthetic gear lubricant:

Klübersynth GH 6 - 220

Order code: 65 90 010 (1 litre)

alternative:

SHELL Tivela S 220, BP Enersyn SG-XP 220,

ARAL Degol GS 220

中心距 Centre distance	润滑油量 Oil quantity
a = 50 mm	0,3 l
a = 63 mm	0,5 l
a = 80 mm	1,2 l
a = 100 mm	2,0 l

Degree of protection

Degree of protection: IP65/67 according to ISO 20653
(Corrosion has to be verified separately).



ATLANTA



< 1 arcmin

