

**E-伺服 经济型减速箱纵览 背隙 <5'**

中心距	32 mm
中心距	50 mm
中心距	63 mm
中心距	80 mm
中心距	100 mm

E-servo worm gear units <5'

Centre distance	32 mm
Centre distance	50 mm
Centre distance	63 mm
Centre distance	80 mm
Centre distance	100 mm

GC2 – GC11

GC2 – GC3

GC4 – GC5

GC6 – GC7

GC8 – GC9

GC10 – GC11

联轴器和胀紧盘**Couplings and shrink-disc**

GC12 – GC13

选型和负载表**Selection and load tables**

GC14 – GC15

简述**Short description**

GC16

安装和维护**Mounting and maintenance**

GC17 – GC18

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**

GI5 – GI9





ATLANTA

E-伺服 经济型减速箱 背隙< 5
E-servo worm gear units with < 5' backlash

中心距 / Centre distance

$a_o = 32 \text{ mm}$

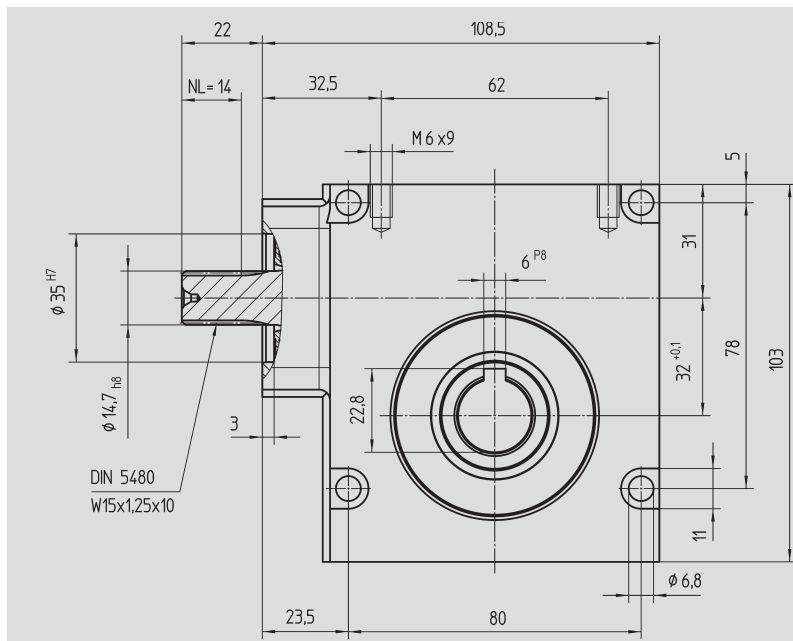


图1 键连接输出轴
Fig. 1 Output shaft with key connection

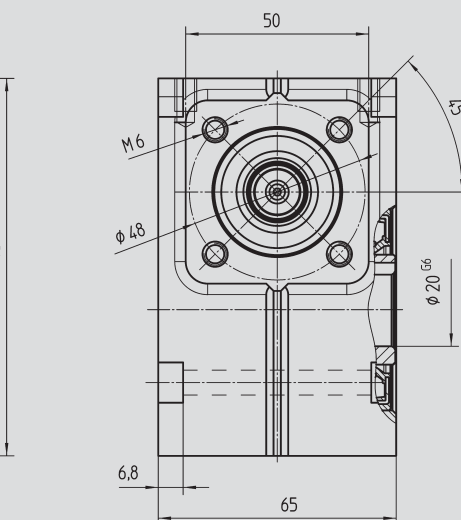
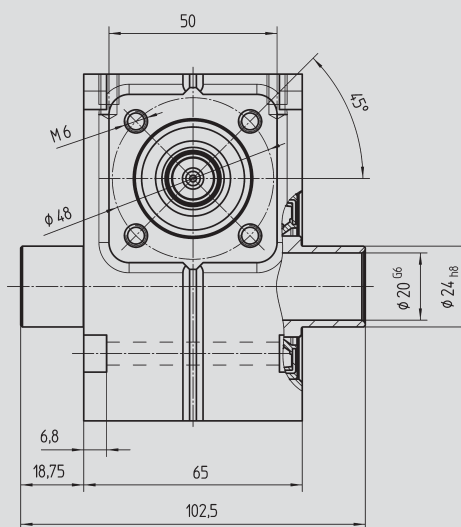
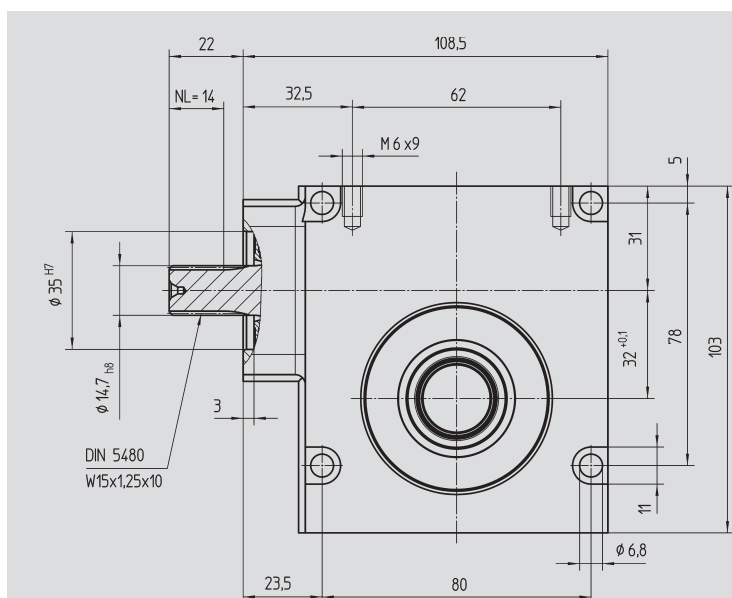


图2 胀紧盘型连接空心输出轴 80 81 024
Fig. 2 Output shaft for clamp connection 80 81 024



订购代码 / Order code
图 1 / Fig. 1

图 2 / Fig. 2

减速比 i
Ratio i

kg

$J_{red} 10^{-4}$
kg m²

59 01 005	59 11 005	4,75	2	0,8280
59 01 007	59 11 007	6,75	2	0,4140
59 01 009	59 11 009	9,25	2	0,3490
59 01 015	59 11 015	14,50	2	0,2800
59 01 020	59 11 020	19,50	2	0,1960
59 01 029	59 11 029	29,00	2	0,2694
59 01 019	59 11 019	39,00	2	0,2310
59 01 050	59 11 050	50,00	2	0,2140

润滑油来自食品行业用油
订购代码. 59 01 1xx / 59 11 1xx

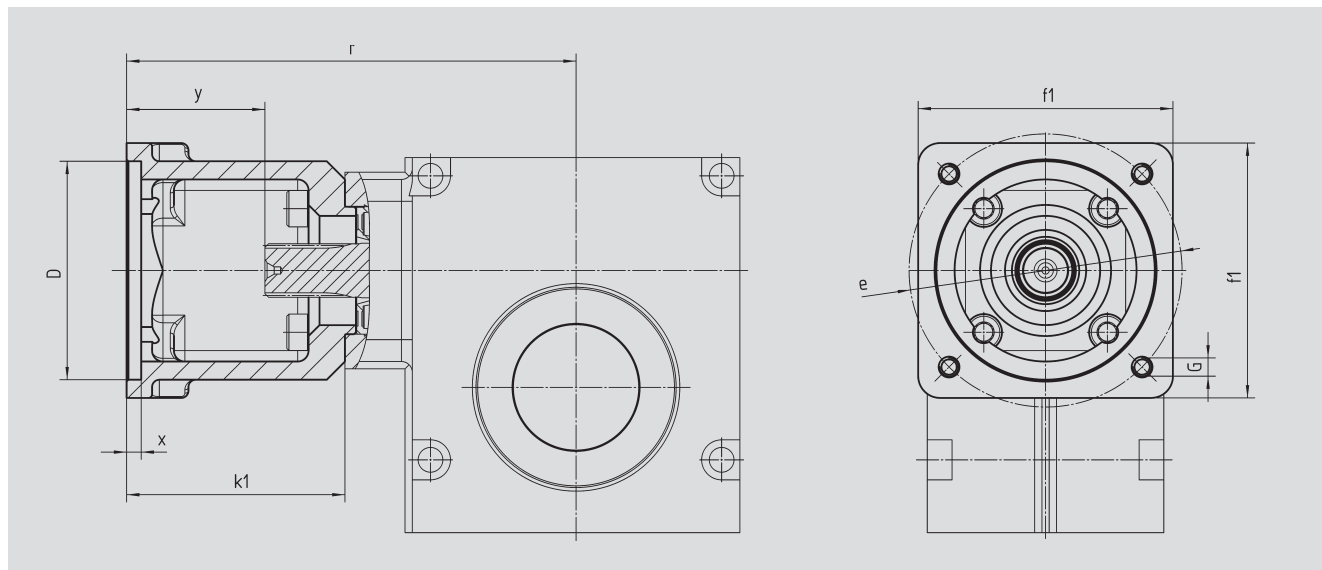
With suitable oil for food
Order code 59 01 1xx / 59 11 1xx



ATLANTA

E-伺服 经济型减速箱 背隙< 5
E-servo worm gear units with < 5' backlash

电机法兰 / Motor flange



中心距 / Centre distance

$a_o = 32 \text{ mm}$

订购代码 Order code	D ^{G7}	k ₁	r	x	y	f ₁	e	G	 kg
65 59 101	40,0	56,5	120,0	2,5	34,5	60	63	M5	0,80
65 59 102	50,0	64,0	127,5	4,0	42,0	60	70	M5	0,80
65 59 103	60,0	60,0	123,5	3,5	38,0	70	75	M5	0,80
65 59 104	80,0	64,0	127,5	4,5	42,0	85	100	M6	0,80
65 59 105	60,0	64,0	127,5	4,5	42,0	85	90	M5	0,80
65 59 107	40,0	56,5	120,0	2,5	34,5	60	63	M4	0,80

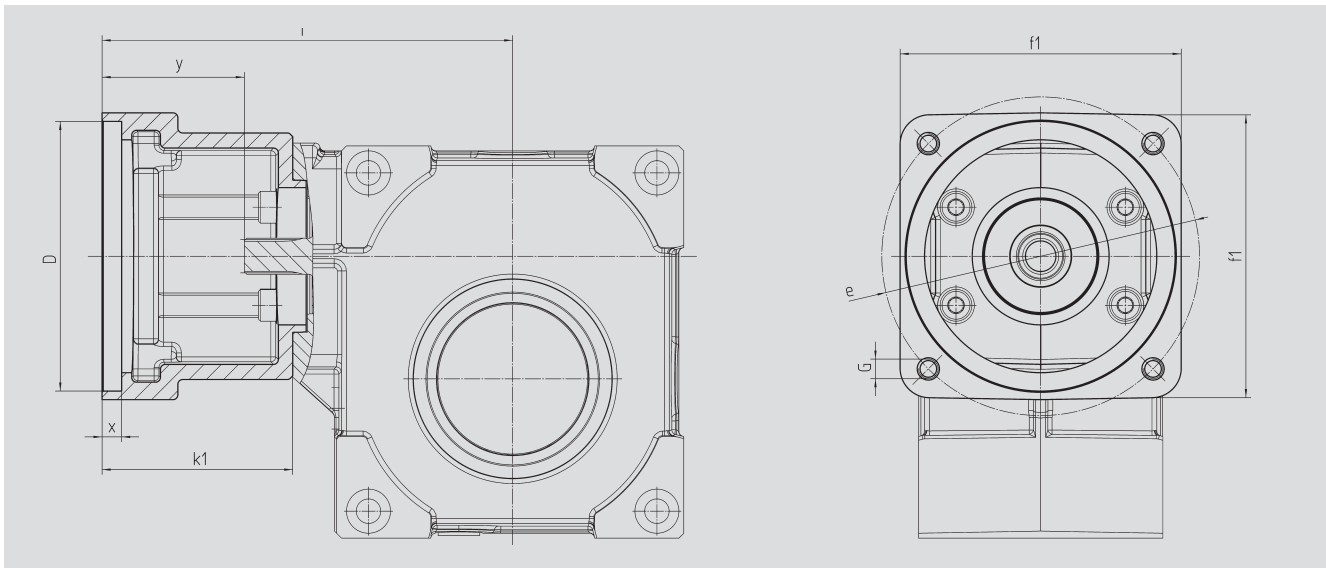
订购代码需包括减速箱代码 59 01 0xx / 59 11 0xx 及法兰代码 65 59 1xx.
The order should contain gear box 59 01 0xx / 59 11 0xx and flange 65 59 1xx.



ATLANTA

E-伺服 经济型减速箱 背隙 < 5 E-servo worm gear units with < 5' backlash

电机法兰 / Motor flange



中心距 / Centre distance

$a_o = 50 \text{ mm}$

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	59	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	59	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	59	140	165	M10	1,20
65 59 406	110,0	78	168	11,0	59	140	165	M10	1,15
65 59 407	130,0	78	168	11,0	59	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

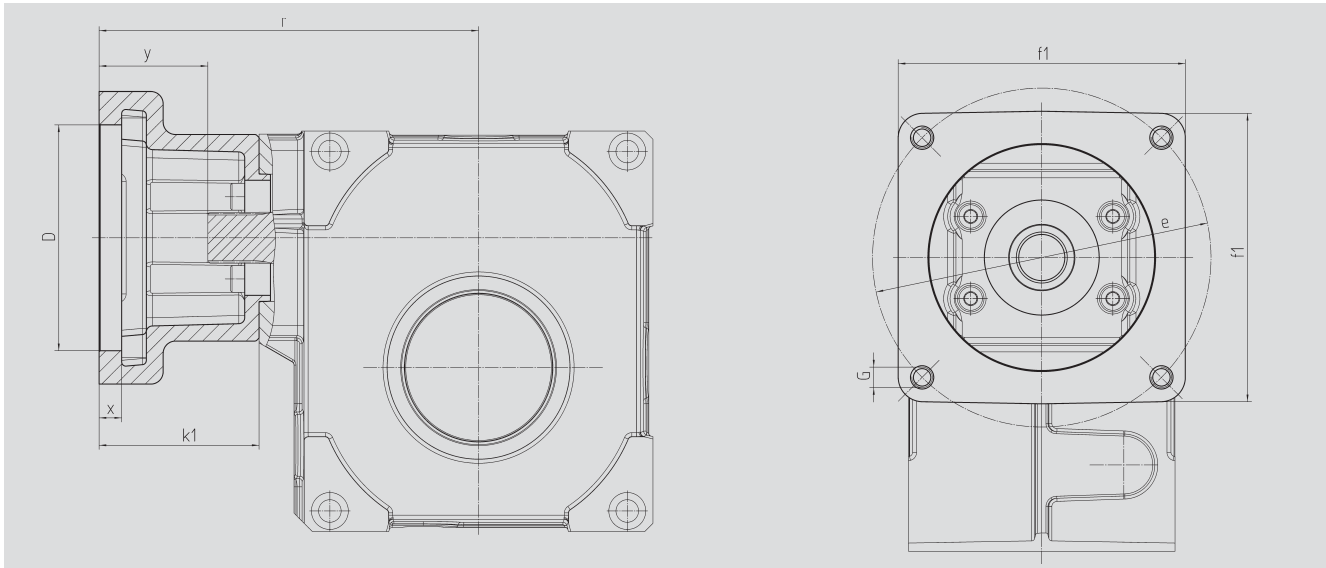
订购代码需包括减速箱代码 59 03 0xx / 59 13 0xx 及法兰代码 65 59 3xx bzw. 4xx.

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

**ATLANTA**

E-伺服 经济型减速箱 背隙 < 5
E-servo worm gear units with < 5' backlash

电机法兰 / Motor flange



中心距 / Centre distance

 $a_o = 63 \text{ mm}$

订购代码 Order code	D ^{G7}	k ₁	r	x	y	f ₁	e	G	
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	59	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	59	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	59	140	165	M10	1,20
65 59 406	110,0	78	168	11,0	59	140	165	M10	1,15
65 59 407	130,0	78	168	11,0	59	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箱代码 59 04 0xx / 59 14 0xx 及法兰代码 65 59 3xx bzw. 4xx.

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



ATLANTA

E-伺服 经济型减速箱 背隙< 5
E-servo worm gear units with < 5' backlash

中心距 / Centre distance

$a_o = 80 \text{ mm}$

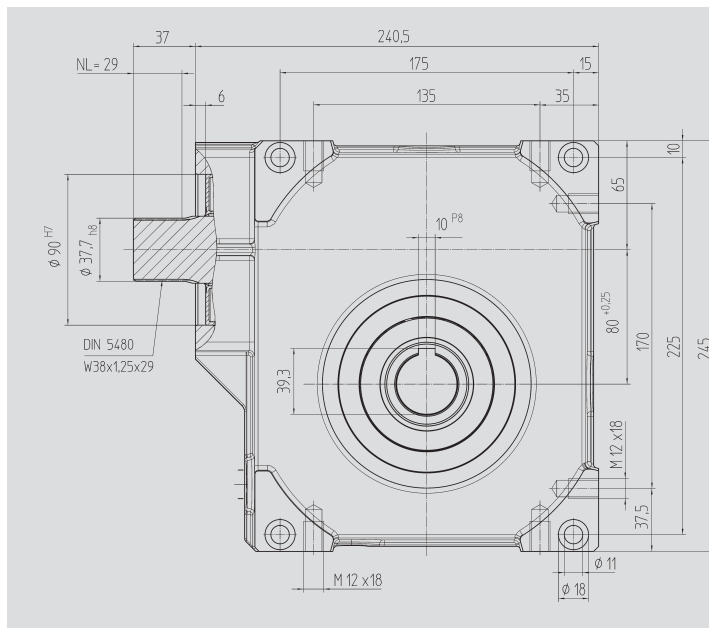


图1 键连接输出轴
Fig. 1 Output shaft with key connection

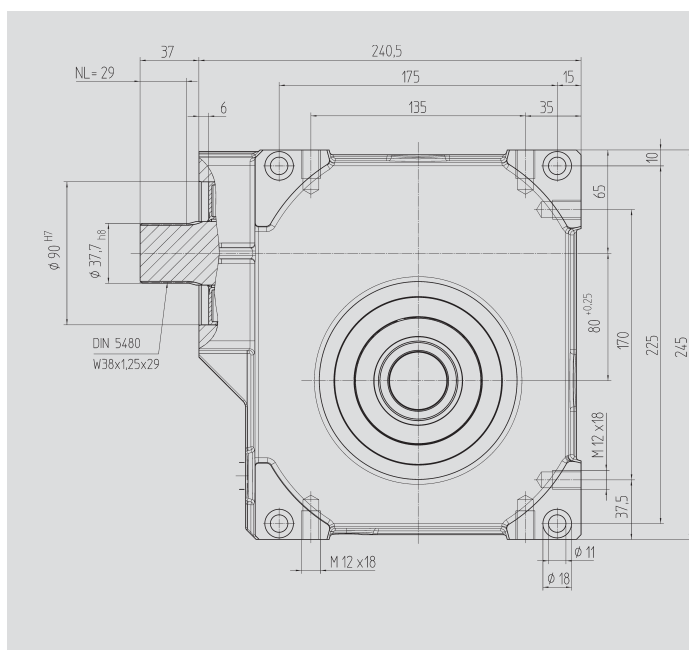
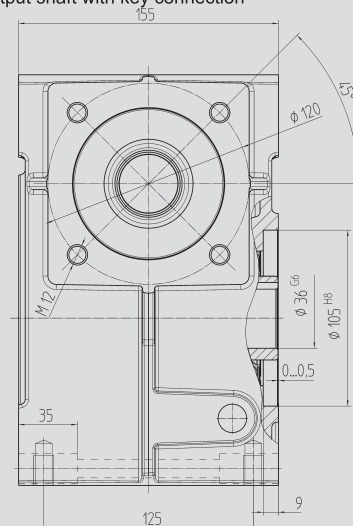
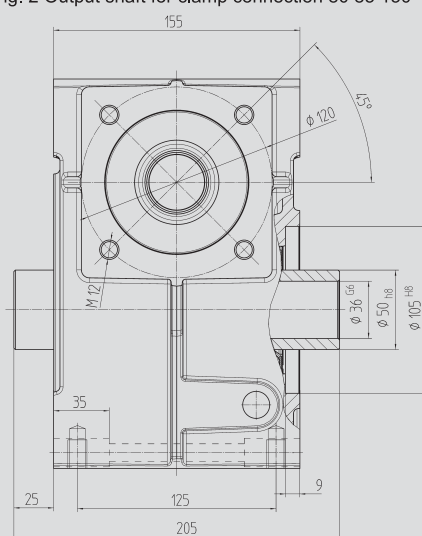


图2 胀紧盘型连接空心输出轴 80 85 150
Fig. 2 Output shaft for clamp connection 80 85 150



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

59 05 005	59 15 005	4,75	22	9,6180
59 05 007	59 15 007	6,75	22	6,0910
59 05 009	59 15 009	9,25	22	4,7650
59 05 015	59 15 015	14,50	22	5,3080
59 05 020	59 15 020	19,50	22	3,9350
59 05 029	59 15 029	29,00	22	4,0500
59 05 039	59 15 039	39,00	22	4,1800
59 05 052	59 15 052	52,00	22	3,7140

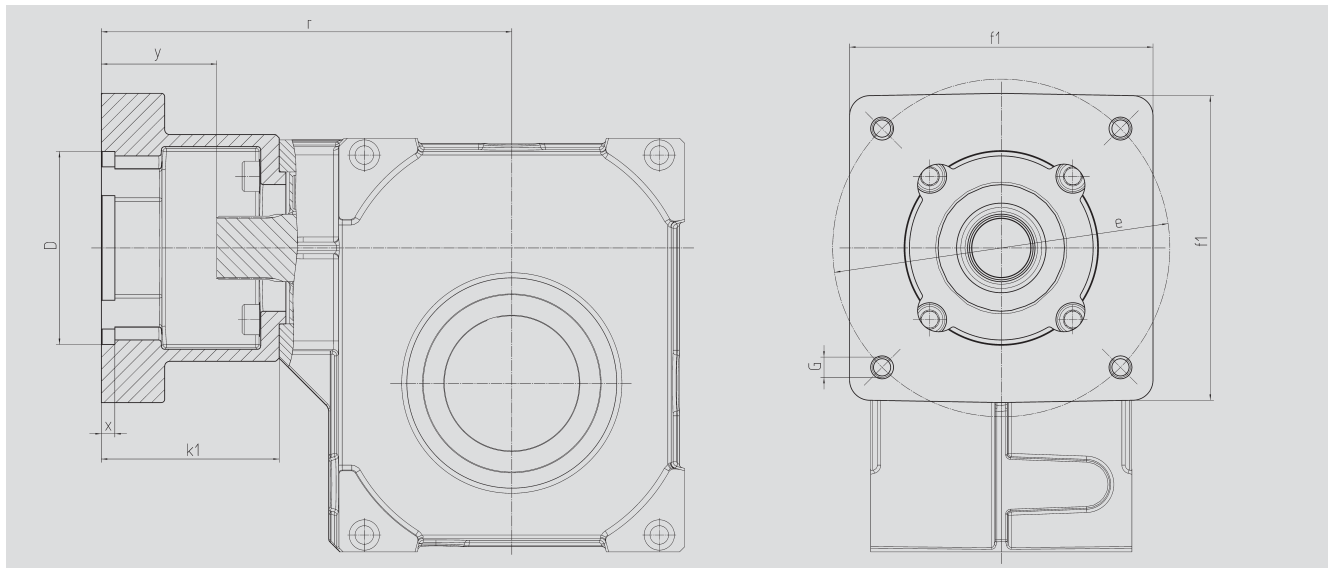
润滑油来自食品行业用油
订购代码. 59 05 1xx / 59 15 1xx

With suitable oil for food
Order code 59 05 1xx / 59 15 1xx

**ATLANTA**

E-伺服 经济型减速箱 背隙 < 5
E-servo worm gear units with < 5' backlash

电机法兰 / Motor flange



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箱代码 59 05 0xx / 59 15 0xx 及法兰代码 65 59 5xx.

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



ATLANTA

E-伺服 经济型减速箱 背隙< 5
E-servo worm gear units with < 5' backlash

中心距 / Centre distance

$a_o = 100 \text{ mm}$

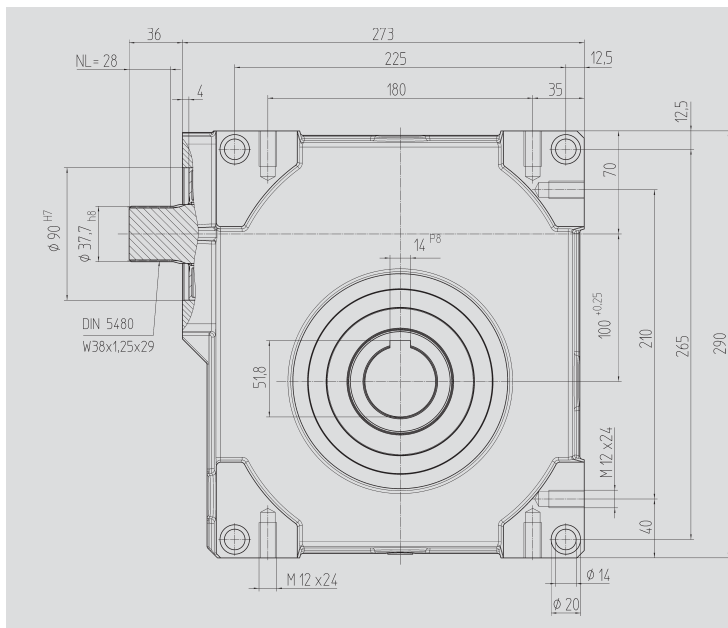


图1 键连接输出轴

Fig. 1 Output shaft with key connection

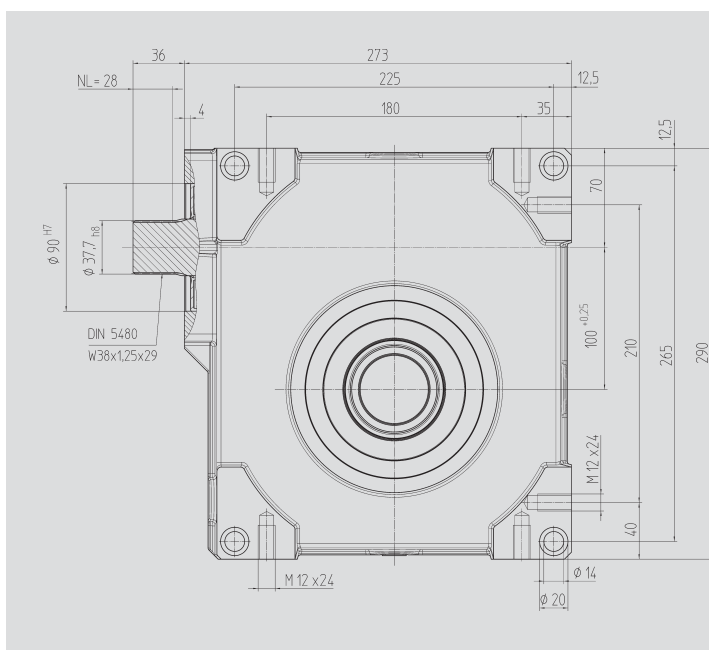
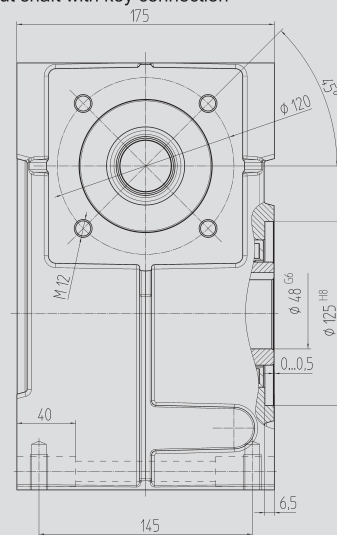
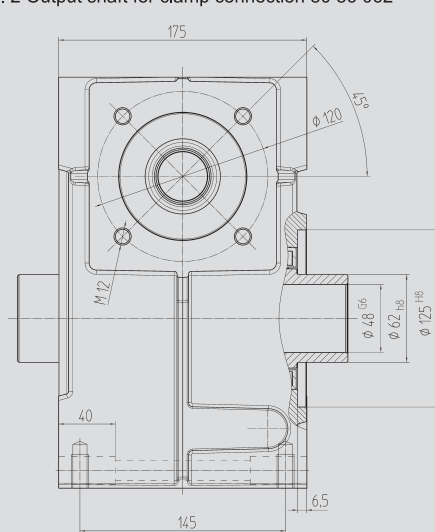


图2 胀紧盘型连接空心输出轴 80 86 062

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

59 06 005	59 16 005	4,75	37	22,9320
59 06 007	59 16 007	6,75	37	12,8835
59 06 009	59 16 009	9,25	37	8,0975
59 06 015	59 16 015	14,50	37	7,2190
59 06 020	59 16 020	19,50	37	5,4030
59 06 029	59 16 029	29,00	37	4,7207
59 06 039	59 16 039	39,00	37	8,4300
59 06 052	59 16 052	52,00	37	9,7400

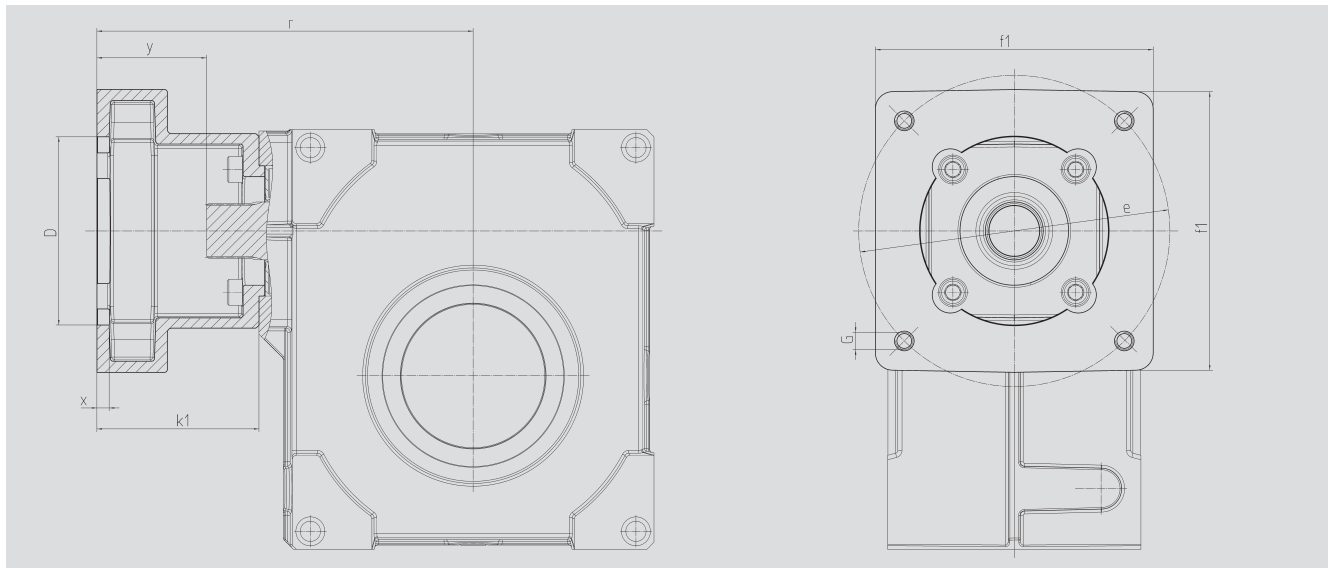
润滑油来自食品行业用油
订购代码: 59 06 1xx / 59 16 1xx

With suitable oil for food
Order code 59 06 1xx / 59 16 1xx

**ATLANTA**

E-伺服 经济型减速箱 背隙 < 5
E-servo worm gear units with < 5' backlash

电机法兰 / Motor flange



中心距/ Centre distance

$a_o = 100 \text{ mm}$

订购代码. Order code	D ^{G7}	k ₁	r	x	y	f ₁	e	G	
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箱代码 59 06 0xx / 59 16 0xx 及法兰代码 65 59 5xx.

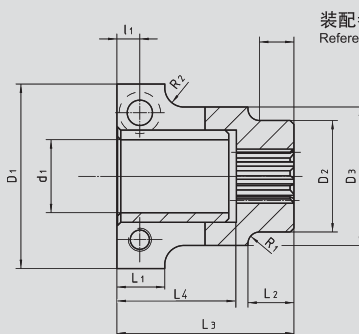
The order should contain gear box 59 06 0xx / 59 16 0xx and flange 65 59 5xx.



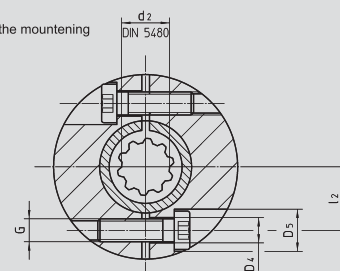
伺服电机与减速机专用特制联轴器，刚性联接，渗氮，与伺服电机安装无键槽 Special couplings for motor/gear units, rigid model, nitrided, preassembled for motor shafts without key

减速机输入轴侧
采用符合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



装配参考尺寸
Reference diameter for the mounting



订购代码 / Order code

联轴器

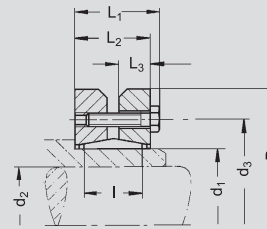
Coupling	d ₁	d ₂	D ₁	D ₂	L ₁	L ₃	R ₁	G	L ₂	J _{red} 10 ⁻⁴ kg m ²	kg
65 51 008	8	15x1,25x10	36	23	14,0	46,0	5	M5	31,2	0,236	0,2
65 51 009	9	15x1,25x10	36	23	14,0	46,0	5	M5	31,2	0,246	0,2
65 51 010	10	15x1,25x10	36	23	14,0	46,0	5	M5	31,2	0,244	0,2
65 51 011	11	15x1,25x10	36	23	14,0	46,0	5	M5	31,2	0,243	0,2
65 51 014	14	15x1,25x10	36	23	14,0	46,0	5	M5	31,2	0,234	0,2
65 51 016	16	15x1,25x10	36	23	14,0	46,0	5	M5	31,2	0,225	0,2
65 53 019	19	15x1,25x10	48	33	16,5	46,0	5	M6	31,2	0,704	0,3
65 53 020	20	15x1,25x10	48	33	16,5	46,0	5	M6	31,2	0,704	0,3
65 53 022	22	15x1,25x10	48	33	16,5	46,0	5	M6	31,2	0,704	0,3
65 53 024	24	15x1,25x10	48	33	16,5	46,0	5	M6	31,2	0,647	0,2
65 53 025	25	15x1,25x10	64	51	18,0	55,5	5	M8	41,5	5,946	1,1
65 53 028	28	15x1,25x10	64	51	18,0	55,5	5	M8	41,5	5,871	1,1
65 53 032	32	15x1,25x10	64	51	18,0	55,5	5	M8	41,5	4,158	0,8
65 53 035	35	15x1,25x10	78	51	18,0	55,5	5	M8	41,5	5,605	1,0
65 53 038	38	15x1,25x10	78	51	18,0	55,5	5	M8	41,5	5,432	0,9
65 54 009	9	25x1,25x18	49	35	17,0	68,0	5	M6	43,5	2,306	0,5
65 54 010	10	25x1,25x18	49	35	17,0	68,0	5	M6	43,5	2,300	0,5
65 54 011	11	25x1,25x18	49	35	17,0	68,0	5	M6	43,5	2,381	0,5
65 54 014	14	25x1,25x18	49	35	17,0	68,0	5	M6	43,5	1,161	0,5
65 54 015	15	25x1,25x18	49	35	17,0	68,0	5	M6	43,5	2,328	0,5
65 54 016	16	25x1,25x18	49	35	17,0	68,0	5	M6	43,5	1,161	0,5
65 54 019	19	25x1,25x18	49	35	17,0	68,0	5	M6	43,5	1,112	0,4
65 54 020	20	25x1,25x18	49	35	17,0	68,0	5	M6	43,5	2,268	0,5
65 54 022	22	25x1,25x18	49	35	17,0	68,0	5	M6	43,5	2,179	0,4
65 54 024	24	25x1,25x18	49	35	17,0	68,0	5	M6	43,5	1,007	0,4
65 54 025	25	25x1,25x18	64	51	18,0	68,0	5	M8	43,5	8,165	1,2
65 54 028	28	25x1,25x18	64	51	18,0	68,0	5	M8	43,5	8,061	1,2
65 54 032	32	25x1,25x18	64	51	18,0	68,0	5	M8	43,5	7,751	1,2
65 54 035	35	25x1,25x18	78	51	18,0	68,0	5	M8	43,5	7,690	1,1
65 54 038	38	25x1,25x18	78	51	18,0	68,0	5	M8	43,5	7,348	1,1
65 54 042	42	25x1,25x18	78	51	18,0	65,5	5	M8	43,5	6,595	1,1
65 55 014	14	38x1,25x29	64	51	18,0	72,5	5	M8	41,5	8,056	1,2
65 55 016	16	38x1,25x29	64	51	18,0	72,5	5	M8	41,5	8,029	1,2
65 55 019	19	38x1,25x29	64	51	18,0	72,5	5	M8	41,5	7,978	1,2
65 55 020	20	38x1,25x29	64	51	18,0	72,5	5	M8	41,5	7,945	1,2
65 55 022	22	38x1,25x29	64	51	18,0	72,5	5	M8	41,5	7,911	1,2
65 55 024	24	38x1,25x29	64	51	18,0	72,5	5	M8	41,5	7,860	1,2
65 55 025	25	38x1,25x29	64	51	18,0	72,5	5	M8	41,5	7,818	1,1
65 55 028	28	38x1,25x29	64	51	18,0	72,5	5	M8	41,5	8,105	1,3
65 55 032	32	38x1,25x29	64	51	18,0	72,5	5	M8	41,5	7,863	1,2
65 55 035	35	38x1,25x29	78	51	18,0	72,5	5	M8	41,5	7,610	1,1
65 55 038	38	38x1,25x29	78	51	18,0	72,5	5	M8	41,5	7,284	1,0
65 55 042	42	38x1,25x29	78	51	18,0	70,5	5	M8	41,5	6,547	1,0

GA-10页中所列联轴器也可以应用
Couplings on page GA-10 can be used as well.



59 1. ...系列减速箱空心输出轴用胀紧盘 Shrink-disc clamping sets for output drive shafts of gear series 59 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	
80 81 024	32	270	24	20	36	50	23,0	19,5	7,80	14,0	6 x M5	0,780	0,2
80 83 130	50	280	30	25	44	60	21,5	18,0	7,25	14,0	7 x M5	1,756	0,3
80 84 136	63	430	36	28	52	72	25,5	21,5	9,00	17,5	5 x M6	4,029	0,4
80 85 150	80	950	50	36	70	90	28,0	24,0	10,25	22,0	9 x M6	11,322	0,8
80 86 062	100	2300	62	48	86	110	34,5	30,5	14,00	23,0	10 x M6	27,137	1,3



ATLANTA

E-伺服 蜗轮蜗杆减速箱选型负载表格 Selection and load tables for E-servo worm 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12 000 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.

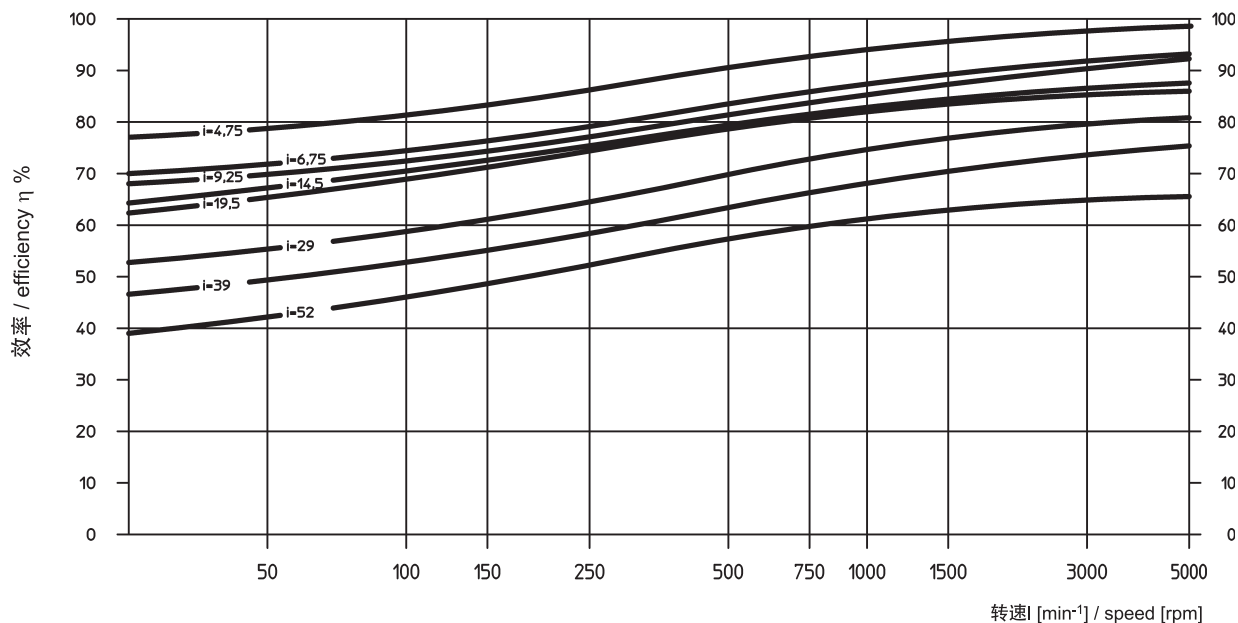


< 5 arcmin

订购代码 Order code		a_0	i	$T_{2\max.}$	驱动速度 / Driving speed n_1 in min ⁻¹																η
		(mm)			500		750		1000		1500		3000		4000		5000		bei 1500		
					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)			
59 01 003	59 11 003	32	3,00																		
59 01 005	59 11 005		4,75	135	0,17	16	0,28	16	0,40	17	0,61	17	1,21	17	1,72	18	2,15	18	0,93		
59 01 007	59 11 007		6,75	100	0,13	14	0,19	15	0,28	16	0,43	17	0,85	17	1,21	18	1,52	18	0,90		
59 01 009	59 11 009		9,25	65	0,08	12	0,13	13	0,18	14	0,28	15	0,63	17	0,89	18	1,12	18	0,88		
59 01 015	59 11 015		14,50	85	0,07	14	0,10	15	0,14	16	0,21	17	0,42	18	0,58	18	0,72	18	0,84		
59 01 020	59 11 020		19,50	55	0,04	12	0,06	12	0,09	13	0,13	14	0,29	16	0,40	16	0,50	16	0,83		
59 01 029	59 11 029		29,00	70	0,03	12	0,05	13	0,07	14	0,10	15	0,21	17	0,29	17	0,37	17	0,76		
59 01 039	59 11 039		39,00	50	0,03	13	0,04	14	0,06	15	0,09	16	0,18	18	0,24	18	0,29	18	0,70		
59 01 050	59 11 050		50,00	35	0,02	11	0,03	11	0,04	12	0,06	13	0,12	15	0,17	16	0,23	18	0,63		
59 03 003	59 13 003	50	3,00																		
59 03 005	59 13 005		4,75	550	0,81	65	1,20	65	1,70	70	2,52	70	5,00	70	6,20	65	7,30	61	0,93		
59 03 007	59 13 007		6,75	400	0,50	56	0,77	59	1,10	63	1,75	69	3,50	69	4,40	65	5,20	61	0,90		
59 03 009	59 13 009		9,25	275	0,32	48	0,50	51	0,70	54	1,10	58	2,55	70	3,55	70	4,10	65	0,88		
59 03 015	59 13 015		14,50	350	0,26	57	0,40	60	0,57	65	0,89	70	1,82	75	2,50	75	3,15	75	0,84		
59 03 020	59 13 020		19,50	250	0,16	45	0,25	48	0,34	50	0,55	55	1,20	65	1,65	65	2,10	65	0,83		
59 03 029	59 13 029		29,00	300	0,14	48	0,20	52	0,29	55	0,44	60	0,93	70	1,23	70	1,41	65	0,76		
59 03 039	59 13 039		39,00	200	0,12	53	0,17	56	0,24	60	0,37	65	0,77	75	1,00	75	1,25	75	0,70		
59 03 050	59 13 050		50,00	150	0,08	42	0,12	44	0,16	47	0,25	50	0,51	60	0,72	60	0,90	60	0,63		
59 04 003	59 14 003	63	3,00																		
59 04 005	59 14 005		4,75	1000	2,10	170	3,30	180	4,40	180	6,11	170	10,30	145	13,20	135			0,93		
59 04 007	59 14 007		6,75	750	1,50	170	2,35	180	3,10	180	4,25	170	7,20	145	9,30	135			0,90		
59 04 009	59 14 009		9,25	500	0,74	115	1,18	125	1,63	130	2,52	135	4,93	135	6,35	126			0,88		
59 04 015	59 14 015		14,50	600	0,74	165	1,19	180	1,54	180	2,45	180	4,18	170	5,25	160			0,84		
59 04 020	59 14 020		19,50	500	0,39	115	0,61	125	0,85	130	1,28	135	2,98	165	3,83	155			0,83		
59 04 029	59 14 029		29,00	650	0,48	175	0,75	190	1,04	205	1,55	220	2,57	195	3,22	185			0,76		
59 04 039	59 14 039		39,00	450	0,30	140	0,44	150	0,61	160	0,97	175	1,88	190	2,55	190			0,70		
59 04 052	59 14 052		52,00	300	0,16	95	0,25	105	0,35	115	0,55	125	1,20	150	1,63	160			0,63		
59 05 003	59 15 003	80	3,00																		
59 05 005	59 15 005		4,75	2000	5,20	420	6,90	380	8,53	360	11,60	330	19,50	280					0,93		
59 05 007	59 15 007		6,75	1400	3,60	420	4,86	380	6,14	360	8,44	330	14,01	280					0,90		
59 05 009	59 15 009		9,25	1100	2,38	370	3,53	370	4,53	360	6,22	330	10,30	280					0,88		
59 05 015	59 15 015		14,50	1300	1,98	450	2,90	450	3,57	420	4,60	370	7,00	295					0,84		
59 05 020	59 15 020		19,50	1000	1,24	370	2,00	400	2,60	400	3,60	380	5,73	320					0,83		
59 05 029	59 15 029		29,00	1200	1,38	520	2,04	550	2,52	530	3,32	490	5,42	420					0,76		
59 05 039	59 15 039		39,00	850	0,87	430	1,35	460	1,85	490	2,51	480	4,03	410					0,70		
59 05 052	59 15 052		52,00	600	0,38	240	0,57	260	0,80	275	1,22	300	2,46	330					0,63		
59 06 005	59 16 005	100	4,75	3300	10,77	880	14,22	800	17,77	750	24,10	685	40,37	580					0,93		
59 06 007	59 16 007		6,75	2300	7,23	830	9,60	750	12,10	720	16,70	660	29,00	580					0,90		
59 06 009	59 16 009		9,25	1900	5,34	830	7,10	750	9,10	720	12,30	660	21,20	580					0,88		
59 06 015	59 16 015		14,50	2050	4,20	930	5,80	880	6,80	810	9,00	720	14,30	620					0,84		
59 06 020	59 16 020		19,50	1800	3,02	900	4,27	870	5,20	810	6,67	720	11,10	620					0,83		
59 06 029	59 16 029		29,00	2300	2,96	1150	4,02	1070	4,67	1010	5,97	850	10,31	800					0,76		
59 06 039	59 16 039		39,00	1650	2,07	1080	2,88	1030	3,63	1000	4,53	900	7,48	780					0,70		
59 06 052	59 16 052		52,00	1100	1,16	760	1,82	820	2,41	850	3,08	785	5,00	680					0,63		



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.

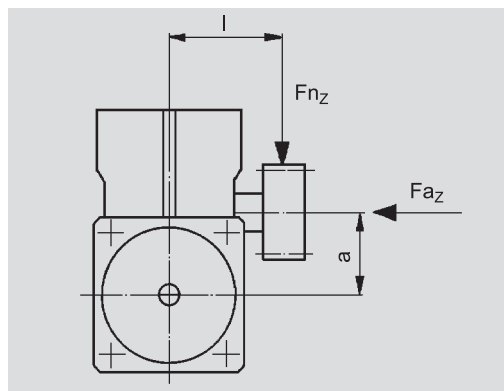


作用在输出轴上的附加载荷

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。如果有额外的轴向力，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)		32		50		63		80		100	
减速机中心到齿轮中心的距离 Dimensions centre casing/ centre teeth	l (mm)		70	100	90	140	110	160	125	175	140	190
最大附加载荷 Max. additional load												
径向 radial F_{Nz}	[N]		2250	1600	3600	2300	5000	3500	8400	6000	10000	7500
轴向 axial F_{az}	[N]		1500	1500	1800	1800	2500	2500	4000	4000	5000	5000



简述

亚特兰E-伺服 经济型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。



E-伺服减速箱的基本特征：

- 与58系列减速箱有相同的尺寸
- 低背隙(背隙 < 5')
- 与58系列减速箱有相同的负载能力
- 轻合金而壳体结构具有很好的散热性能
- 坚固的滚柱轴承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。

使用经过磨削右旋的蜗杆，特制的铜合金蜗轮，并浸入特种润滑油种润滑，来保证较高的效率，平顺的运行和长效寿命。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。

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。

对于减速箱安全停止的最大传动扭矩（参考GC-14）和胀紧盘（GH-1）必须核对完毕。

Short description

ATLANTA E-servo worm gear units have been specially developed for use with the latest three-phase and DC servo-motors. 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 E-servo gear units:

- the same dimensions as our servo worm gear units serie 58
- low-clearance gearing (back lash < 5'),
- the same load values as our servo worm gear units serie 58
- casing of light metal for optimal heat dissipation
- robust bearings for the output drive hollow shaft, permitting greater additional forces.

Centre distances, gear ratios and tooth systems have been chosen in accordance with DIN 3975/76.

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 casing with its many fixing bores and tapped holes permits mounting in any position.

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.

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 S & L gearwheel program which can be combined and used together with suitable special output drive shafts.

For safety-stop is the maximum transmittable torque of the gear unit (see page GC-14) and shrink disc (see page GH-1) has to be checked. The output keyway has to be calculated separately.



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GC-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。装配尺寸“X1”是非常重要的数据 (参考GI-5~GI-9)
推荐安装顺序:

- 仔细清理接触面, 并在表面涂抹一层薄油脂进行保护。
- 参考手册GI-5~GI-9页面中的尺寸, 将联轴器装配到伺服电机的轴上; 深度测量器有助于保证安装精确。
- 预紧螺栓, 检测联轴器的运行情况。
- 锁紧扭矩请参考表格中相应数值, 联轴器两侧的间隙必须是均匀一致的。
- 建议最后做径向跳动检测。

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 ISO286)。材料必须拥有385 N/mm²以上的屈服点强度。重新计算扭力是必要。

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。按照依次的顺序锁紧螺栓 (不是交叉锁紧) 达到表格中所需求的扭矩。

减速箱输出轴为键连接形式

通过卡簧, 挡片和螺栓固定住齿轮轴的轴向方向。为了达到这个目的, 先将卡簧卡在空心输出轴的卡簧槽内, 再将齿轮轴插入减速箱空心输出轴另一侧, 直至停止。挡片和螺栓从齿轮轴的另一侧拉住齿轮轴锁紧。卡簧必须卡住齿轮轴不令其移动。

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 GC-15) 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 is supplied pre-assembled. All contact surfaces must be cleaned and protected by a thin oil film before attaching it to the motor shaft. An important dimension for mounting is the value „X1“ (compare pages GI – 5 to GI –9).

Recommended procedure:

- Carefully clean the contact surfaces and protect them with a thin oil film.
- Place the coupling onto the motor shaft at the distance given by the measurement “X1” (see pages GI – 5 to GI –9); a depth gauge is helpful for determining the measurement.
- Slightly tighten the clamping screws and check the clutch for true running
- Tighten the screws alternately and uniformly.
- The correct tightening torque can be seen from the operation and maintenance instructions. The gap in the coupling must be equally wide on both sides.
- It is recommended to make another final check for true running at the appropriate reference diameter!

A mounting guide can be found on page GI-5 to GI-9

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.

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.

Output drive shaft for key connection

The retaining ring, the disc and the screw supplied with the output drive shaft serve for locking the output shaft in axial direction. For this purpose insert the retaining ring in the applicable recess of the hollow shaft and slide the output drive shaft from the desired side into the hollow shaft up to the stop. Disc and screw are screwed to the output shaft from the other side of the gear unit. The retaining ring must be clamped between disc and pinion shaft.



维护

更换润滑油

亚特兰B-伺服减速箱充满了合成润滑油。

在如下条件下使用，减速箱终生免维护：

减速箱严格遵照亚特兰目录和减速箱操作手册中的要求进行安装和使用，减速箱的实际工作情况完全在目录中所列的性能数值和极限范围内。操作者定期进行漏油检查（每4周）。减速箱表面温度不得高于80°C。以往的经验显示伺服电机操作（间歇运行）减速箱温度不会超过该值。如果减速箱主要在低速状态（蜗杆的圆周速度 $<0.5\text{m/s}$ ）运行，建议每两年更换一次润滑油。



我们推荐如下合成润滑油：

Kl ü bersynth 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

中心距 Centre distance	润滑油量 Oil quantity
a = 32 mm	0,07 l
a = 50 mm	0,40 l
a = 63 mm	0,70 l
a = 80 mm	1,70 l
a = 100 mm	2,00 l

We recommend the following synthetic gear lubricant:

Kl ü bersynth GH 6 - 220

Order code: 65 90 010 (1 litre)

alternative:

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)

Maintenance

Lubricant change

ATLANTA servo-assisted worm-gear units are filled with synthetic polyglycol oil.

Under the following conditions this means lifetime lubrication:

The layout of the gear unit is made strictly in conformance with the guidelines specified in the ATLANTA catalogue and the gear unit is operated exclusively within the permissible characteristic values and limits. The operator checks the gear unit regularly (every 4 weeks) for oil leakage. The surface temperature does not exceed max. 80° C. Experience has shown that this temperature is not reached with servo-operation (intermittent operation).

In the case of an operation with mainly low input speeds (circumferential speed of the worm

$v < 0.5\text{ m/s}$) we recommend to change the lubricant every two years.

Degree of protection

Degree of protection: IP65/67 according to ISO 20653

(Corrosion has to be verified separately).