



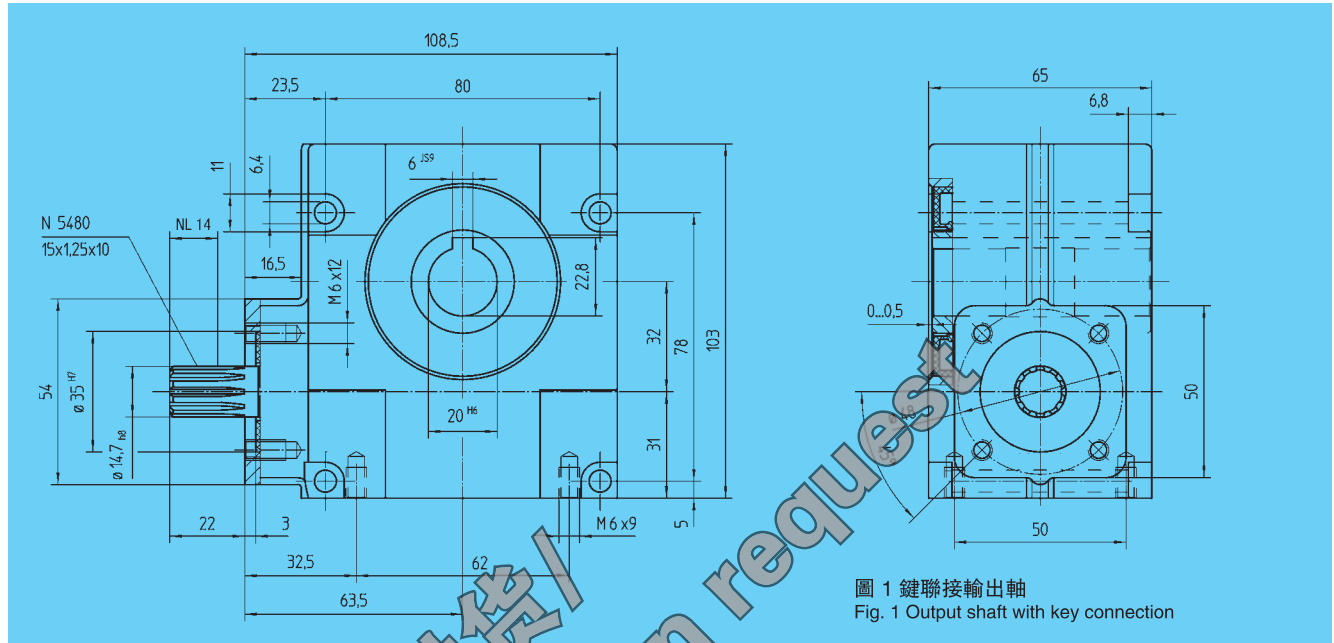
背隙 < 12'基礎型伺服蝸輪蝸杆減速箱	B-servo worm gear units < 12'	GD2 – GD9
中心距 32 mm	Centre distance 32 mm	GD2 – GD3
中心距 50 mm	Centre distance 50 mm	GD4 – GD5
中心距 63 mm	Centre distance 63 mm	GD6 – GD7
中心距 80 mm	Centre distance 80 mm	GD8 – GD9
中心距 100 mm	Centre distance 100 mm	GD9.1 – GD9.2
聯軸器及免鍵軸襯	Couplings and shrink-disc	GD10
選用負荷表	Selection and load tables	GD11 – GD12
簡述	Short description	GD13
安裝及維護	Mounting and maintenance	GD14 – GD15
減速機的計算和選擇	Gear units calculation and selection	GE1 – GE3
減速箱輔件	Gear units accessories	GF1 – GF9
伺服電機選配表	Motor applications	GG17 – GG31





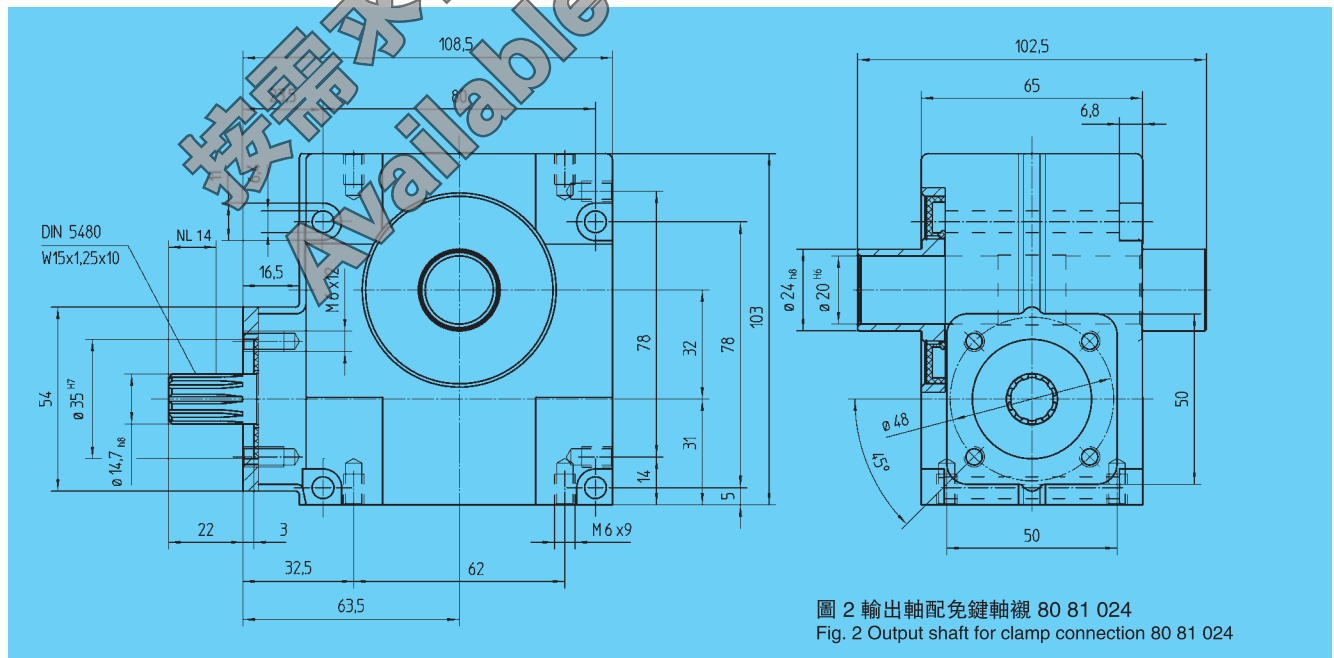
鍵聯接 / Key connection

中心距 / Centre distance $a_0 = 32 \text{ mm}$ 5 個安裝面 / 5 Mounting surfaces



軸襯聯接 / Shrink-disc connection

中心距 / Centre distance $a_0 = 32 \text{ mm}$ 5 個安裝面 / 5 Mounting surfaces



訂貨號 / Order code

5 個安裝面 / 5 Mounting surfaces

減速比 i

Ratio i



$J_{red} 10^{-4}$
kg m²

鍵連接

Key connection

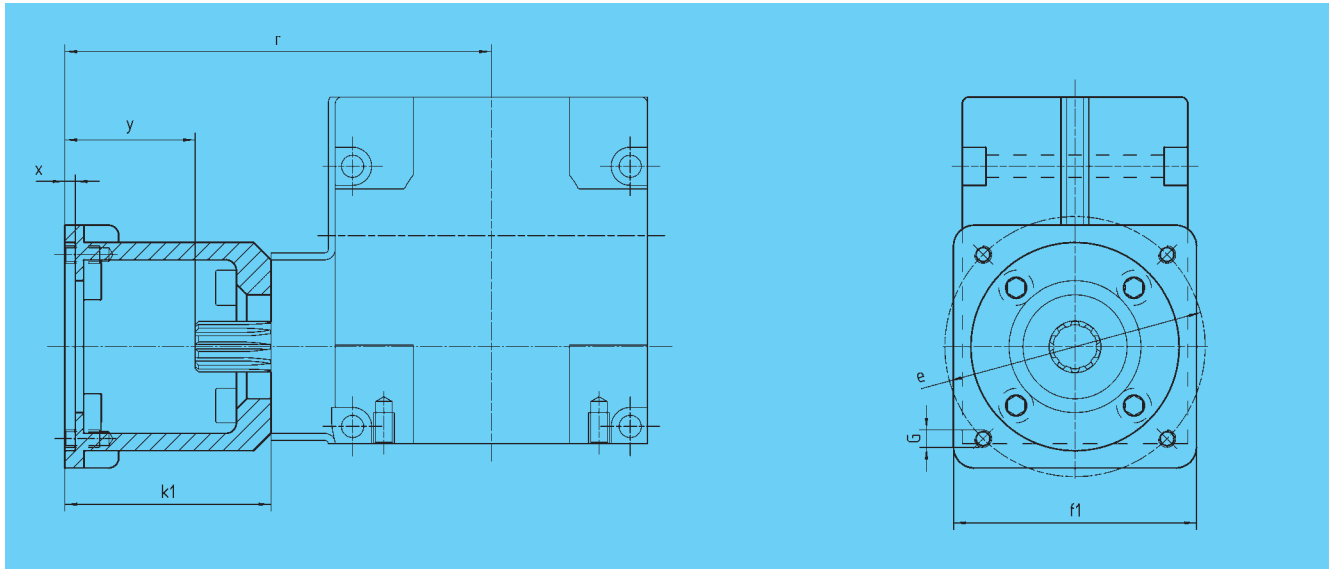
軸襯聯接

Shrink-disc connection

57 01 005	57 11 005	4,75	3,0	0,0495
57 01 007	57 11 007	6,75	3,0	0,0425
57 01 009	57 11 009	9,25	3,0	0,0405
57 01 015	57 11 015	14,50	3,0	0,0287
57 01 020	57 11 020	19,50	3,0	0,0201
57 01 029	57 11 029	29,00	3,0	0,0271
57 01 039	57 11 039	39,00	3,0	0,0237
57 01 050	57 11 050	50,00	3,0	0,0219



電機安裝法蘭 / Motor flange



中心距 / Centre distance $a_o = 32 \text{ mm}$

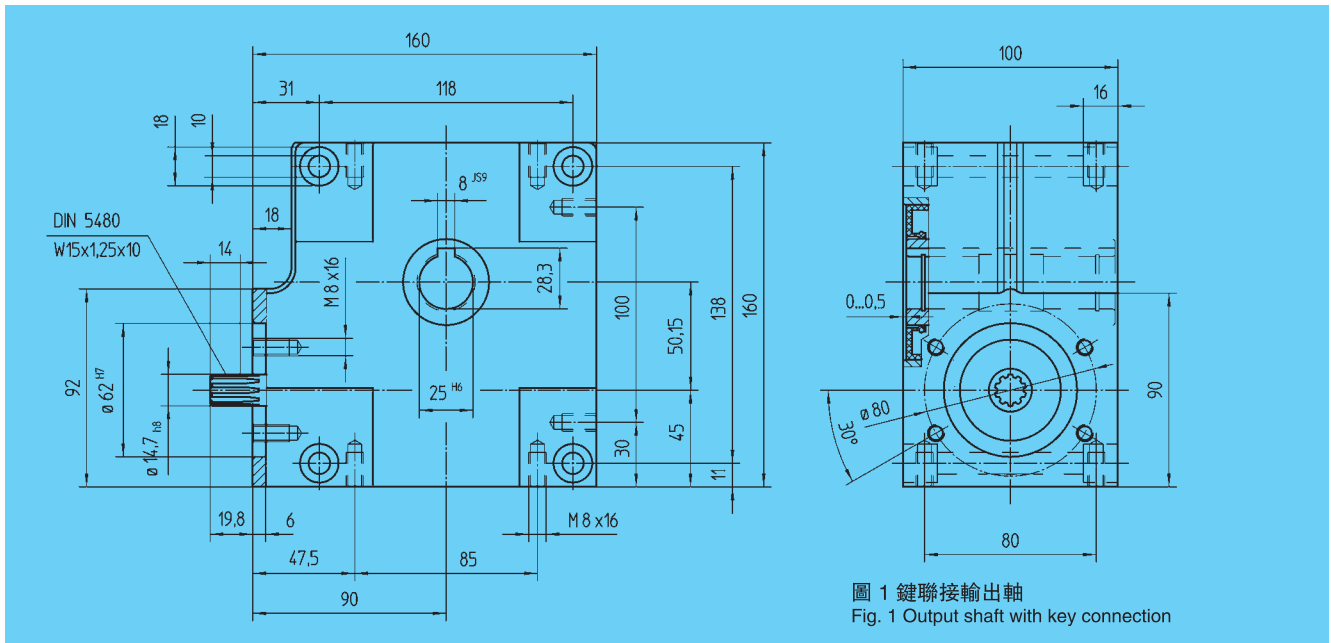
訂貨號 Order code	D ^{G7}	k ₁	r	x	y	f ₁	e	G	kg
65 59 101	40	56,5	120,0	2,5	34,5	60	63	M5	0,8
65 59 102	50	64,0	127,5	4,0	42,0	60	70	M5	0,8
65 59 103	60	60,0	123,5	3,5	38,0	70	75	M5	0,8
65 59 104	80	64,0	127,5	5,0	42,0	85	100	M6	0,8
65 59 105	60	64,0	127,5	5,0	42,0	85	90	M5	0,8

定貨時應當包含減速箱 57 01 0xx / 57 11 0xx和法蘭 65 59 1 xx。
The order should contain gear box 57 01 0xx / 57 11 0xx and flange 65 59 1xx.



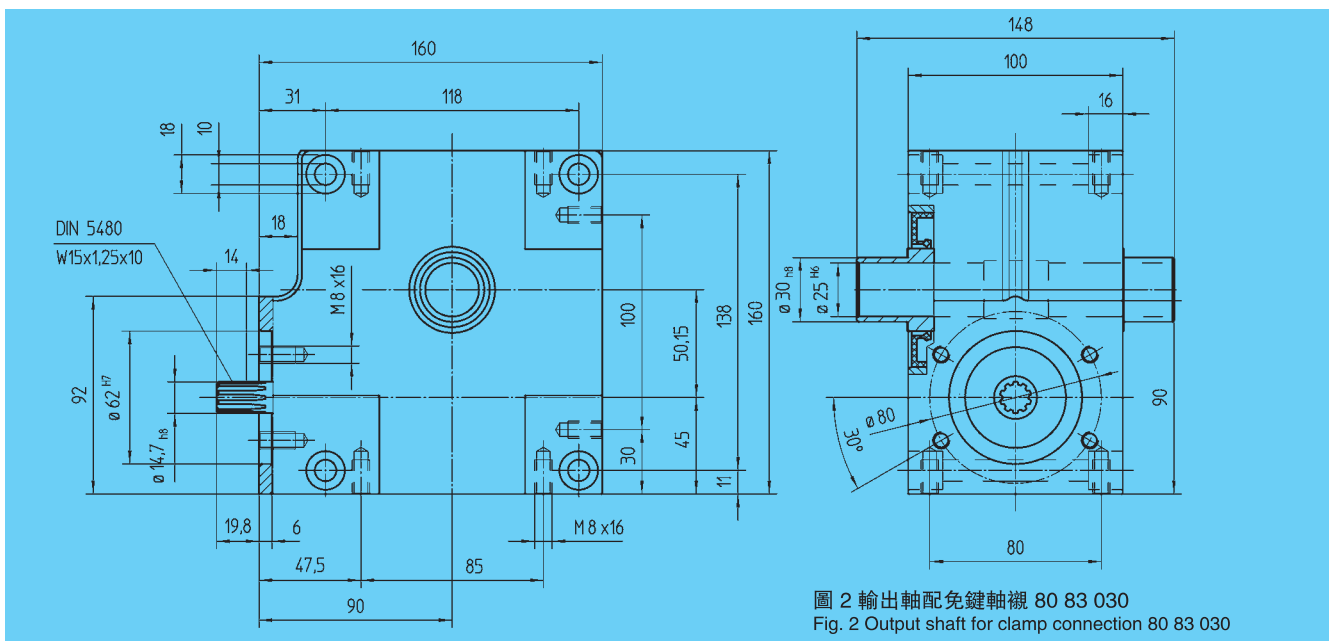
鍵聯接 / Key connection

中心距 / Centre distance $a_o = 50 \text{ mm}$ 5 個安裝面 / 5 Mounting surfaces



軸襯聯接 / Shrink-disc connection

中心距 / Centre distance $a_o = 50 \text{ mm}$ 5 個安裝面 / 5 Mounting surfaces



訂貨號 / Order code

5 個安裝面 / 5 Mounting surfaces

減速比 i

Ratio i



$J_{red} 10^{-4}$
kg m²

鍵連接

軸襯聯接

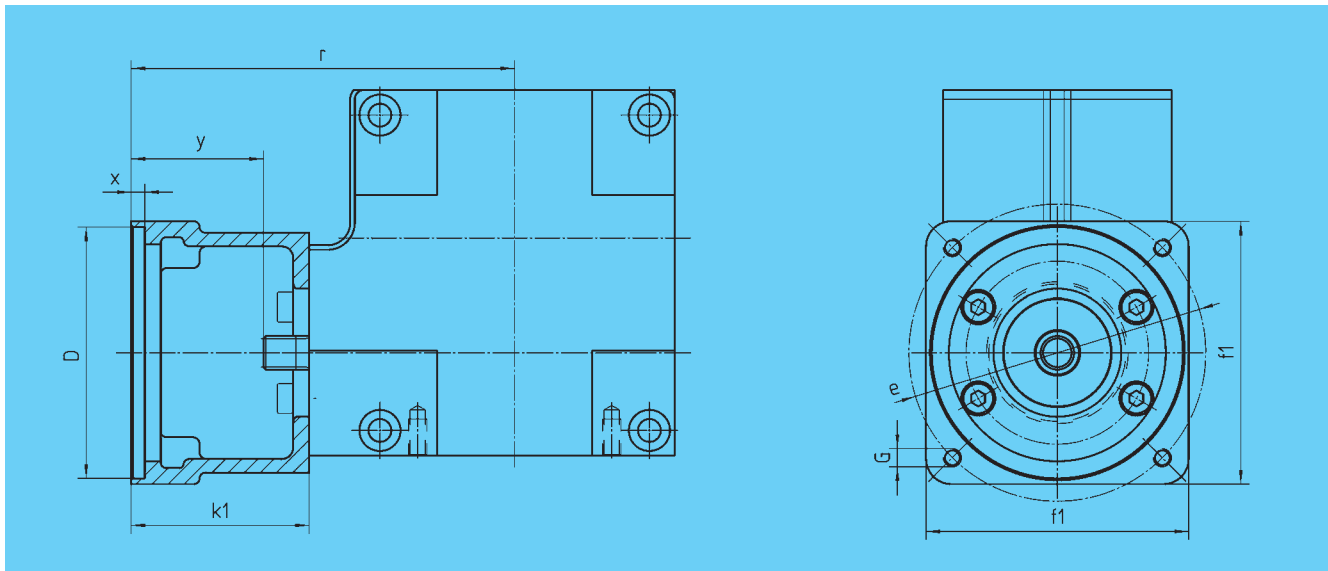
Key connection

Shrink-disc connection

57 03 005	57 13 005	4,75	6,5	0,8280
57 03 007	57 13 007	6,75	6,5	0,4140
57 03 009	57 13 009	9,25	6,5	0,3490
57 03 015	57 13 015	14,50	6,5	0,2800
57 03 020	57 13 020	19,50	6,5	0,1960
57 03 029	57 13 029	29,00	6,5	0,2694
57 03 039	57 13 039	39,00	6,5	0,2310
57 03 052	57 13 052	52,00	6,5	0,2140



電機安裝法蘭 / Motor flange



< 12 arcmin

中心距 / Centre distance $a_o = 50 \text{ mm}$

訂貨號 Order code	D ^{G7}	k ₁	r	x	y	f ₁	e	G	kg
65 59 301	95,0	62	152	5	42	100	115	M8	1,0
65 59 302	50,0	62	152	5	42	100	95	M6	1,0
65 59 303	80,0	62	152	5	42	100	100	M6	1,0
65 59 304	95,0	78	168	5	58	115	130	M8	1,0
65 59 305	95,0	72	162	5	52	105	115	M8	1,0
65 59 306	60,0	74	164	5	54	100	75	M5	1,0
65 59 307	70,0	70	160	5	50	100	90	M6	1,0
65 59 401	95,0	73	163	5	53	100	115	M8	1,0
65 59 402	110,0	78	168	5	58	115	130	M8	1,0
65 59 403	95,0	73	163	5	53	115	130	M8	1,0
65 59 404	110,0	73	163	5	53	115	130	M8	1,0
65 59 405	95,0	78	168	5	58	140	165	M10	1,0
65 59 406	110,0	78	168	5	58	140	165	M10	1,0
65 59 407	130,0	78	168	5	58	140	165	M10	1,0
65 59 409	130,0	98	188	5	78	140	165	M10	1,5
65 59 410	110,0	74	164	5	54	120	145	M8	1,0
65 59 411	110,0	84	174	7	64	120	145	M8	1,5
65 59 412	114,3	105	195	5	85	180	200	M12	3,5
65 59 413	114,3	139	229	5	119	180	200	M12	6,0
65 59 414	114,3	91	181	5	71	180	200	M12	2,5
65 59 415	110,0	89	179	5	69	120	145	M8	1,5

定貨時應當包含減速箱 57 03 0xx / 57 13 0xx和法蘭 65 59 3 xx。
The order should contain gear box 57 03 0xx / 57 13 0xx and flange 65 59 3xx.



ATLANTA

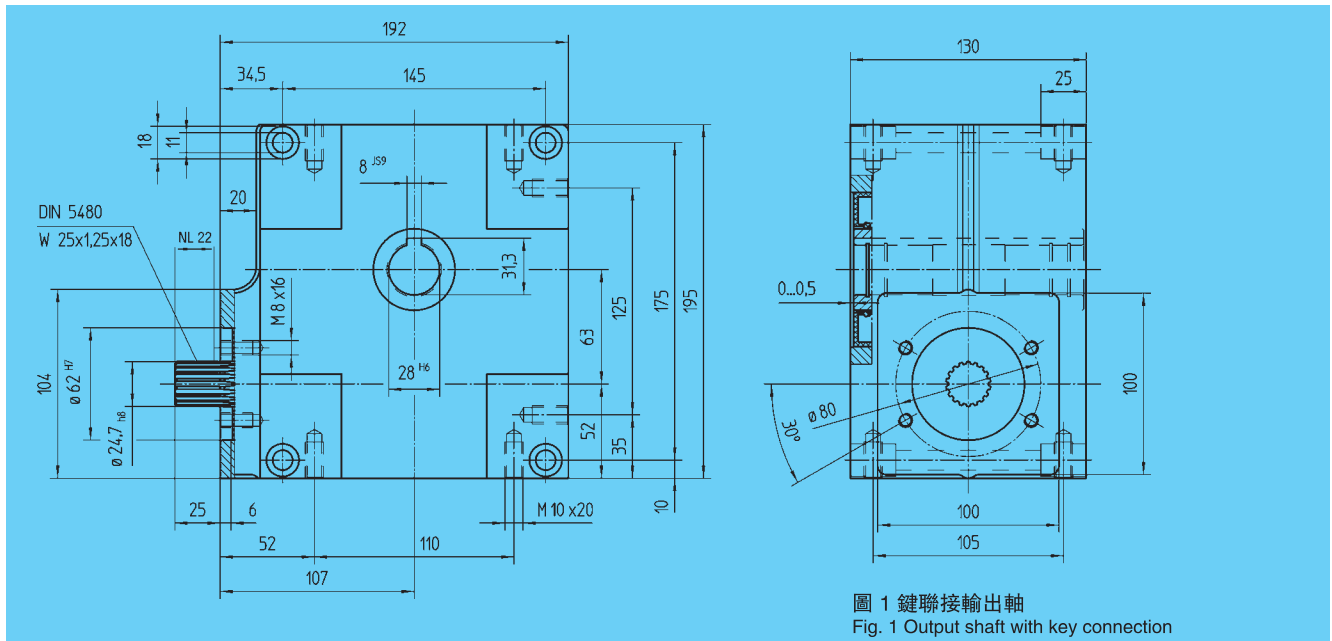
背隙 < 12' 基礎型蝸輪蝸杆減速箱
B-servo worm gear units with < 12' backlash

鍵聯接 / Key connection

中心距 / Centre distance

$a_0 = 63 \text{ mm}$

5 個安裝面 / 5 Mounting surfaces

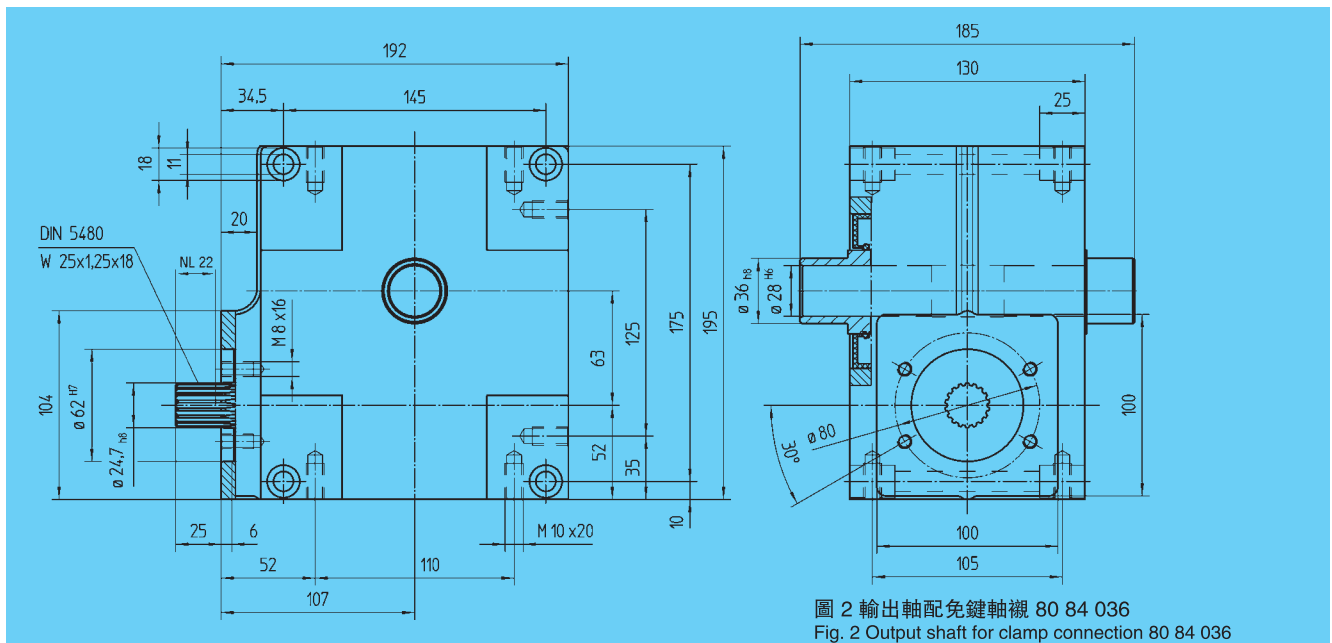


中心距 / Centre distance

$a_0 = 63 \text{ mm}$

軸襯聯接 / Shrink-disc connection

5 個安裝面 / 5 Mounting surfaces



訂貨號 / Order code

5 個安裝面 / 5 Mounting surfaces

減速比 i

Ratio i



$J_{red} 10^{-4}$
kg m²

鍵連接

軸襯聯接

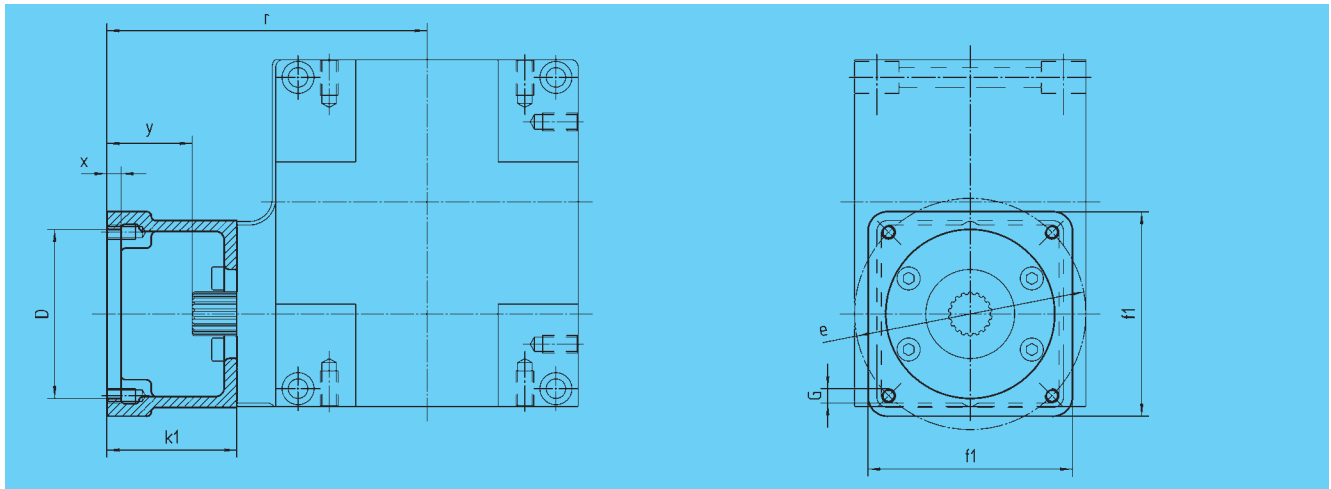
Key connection

Shrink-disc connection

57 04 005	57 14 005	4,75	11,5	2,5350
57 04 007	57 14 007	6,75	11,5	1,3720
57 04 009	57 14 009	9,25	11,5	0,9825
57 04 015	57 14 015	14,50	11,5	0,9590
57 04 020	57 14 020	19,50	11,5	0,6940
57 04 029	57 14 029	29,00	11,5	0,9966
57 04 039	57 14 039	39,00	11,5	1,0100
57 04 051	57 14 051	51,00	11,5	0,5305



電機安裝法蘭 / Motor flange



< 12 arcmin

中心距 / Centre distance $a_o = 63 \text{ mm}$

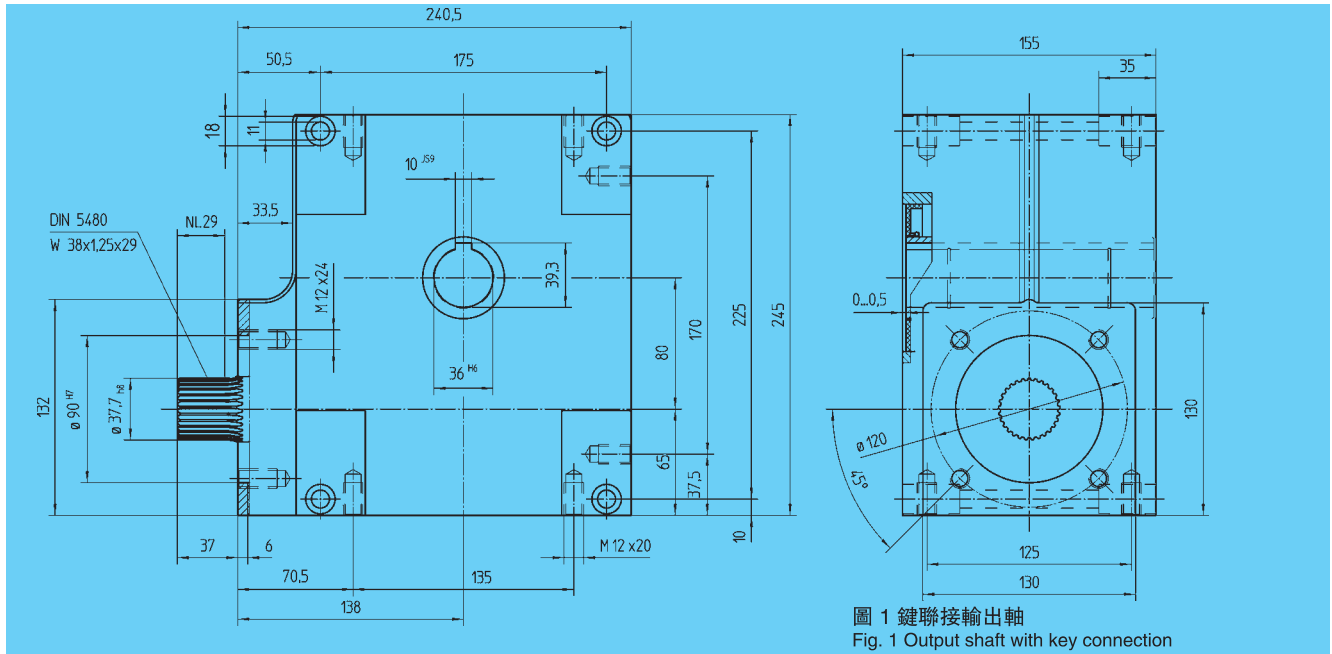
訂貨號 Order code	D ^{G7}	k ₁	r	x	y	f ₁	e	G	kg
65 59 301	95,0	62	169	5	37	100	115	M8	1,0
65 59 302	50,0	62	169	5	37	100	95	M6	1,0
65 59 303	80,0	62	169	5	37	100	100	M6	1,0
65 59 304	95,0	78	185	5	53	115	130	M8	1,0
65 59 305	95,0	72	179	5	47	105	115	M8	1,0
65 59 306	60,0	74	181	5	49	100	75	M5	1,0
65 59 307	70,0	70	177	5	45	100	90	M6	1,0
65 59 401	95,0	73	180	5	48	100	115	M8	1,0
65 59 402	110,0	78	185	5	53	115	130	M8	1,0
65 59 403	95,0	73	180	5	48	115	130	M8	1,0
65 59 404	110,0	73	180	5	48	115	130	M8	1,0
65 59 405	95,0	78	185	5	53	140	165	M10	1,0
65 59 406	110,0	78	185	5	53	140	165	M10	1,0
65 59 407	130,0	78	185	5	53	140	165	M10	1,0
65 59 409	130,0	98	205	5	73	140	165	M10	1,5
65 59 410	110,0	74	181	5	49	120	145	M8	1,0
65 59 411	110,0	84	191	7	59	120	145	M8	1,5
65 59 412	114,3	105	212	5	80	180	200	M12	3,5
65 59 413	114,3	139	246	5	114	180	200	M12	6,0
65 59 414	114,3	91	198	5	66	180	200	M12	2,5
65 59 415	110,0	89	196	5	64	120	145	M8	1,5

定貨時應當包含減速箱 57 04 0xx / 57 14 0xx和法蘭 65 59 4 xx。
The order should contain gear box 57 04 0xx / 57 14 0xx and flange 65 59 4xx.



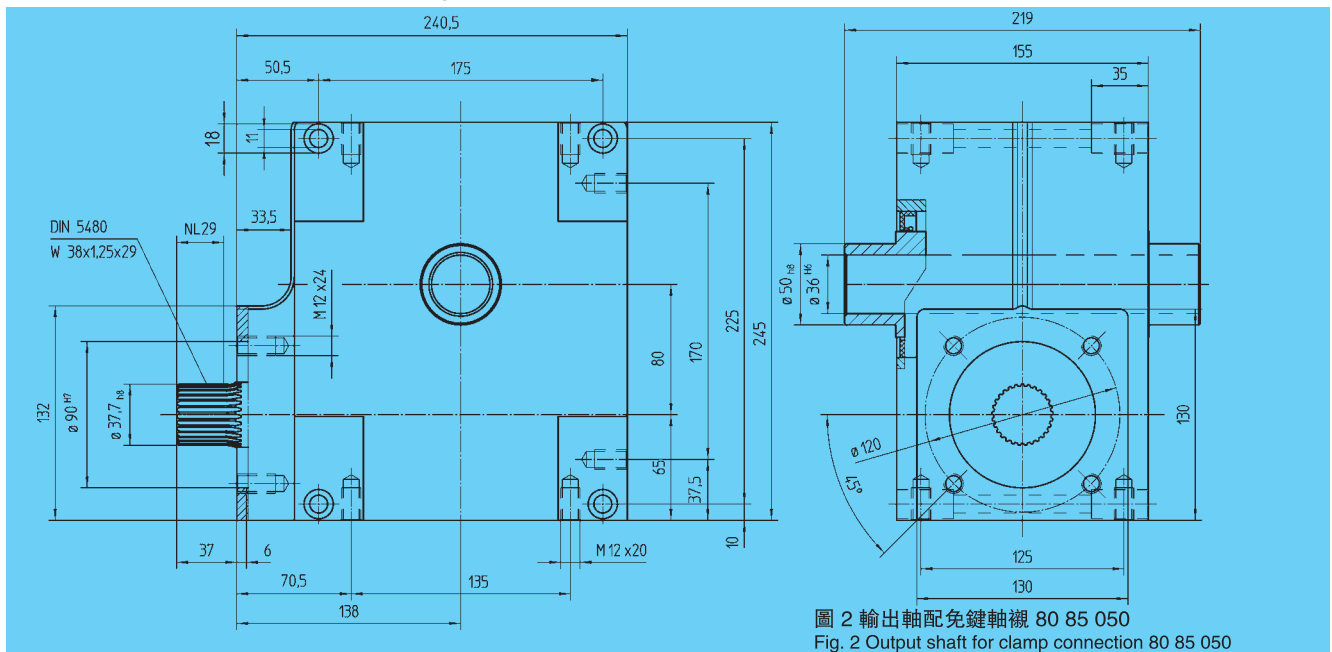
鍵聯接 / Key connection

中心距 / Centre distance $a_o = 80 \text{ mm}$ 5 個安裝面 / 5 Mounting surfaces



軸襯聯接 / Shrink-disc connection

中心距 / Centre distance $a_o = 80 \text{ mm}$ 5 個安裝面 / 5 Mounting surfaces



訂貨號 / Order code
5個安裝面/5Mounting surfaces

減速比 i
Ratio i



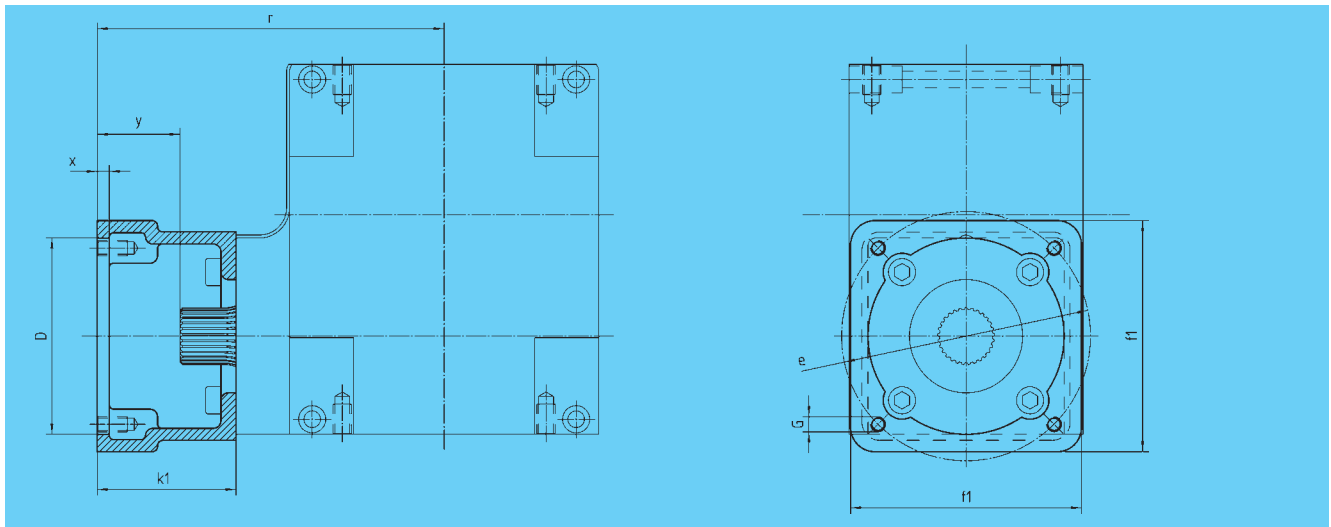
$J_{red} 10^{-4}$
kg m²

鍵連接 軸襯聯接
Key connection Shrink-disc connection

57 05 005	57 15 005	4,75	22	9,6180
57 05 007	57 15 007	6,75	22	6,0910
57 05 009	57 15 009	9,25	22	4,7650
57 05 015	57 15 015	14,50	22	5,3080
57 05 020	57 15 020	19,50	22	3,9350
57 05 029	57 15 029	29,00	22	4,0500
57 05 039	57 15 039	39,00	22	4,1800
57 05 053	57 15 053	53,00	22	3,7140



電機安裝法蘭 / Motor flange




< 12 arcmin

中心距 / Centre distance

$a_o = 80 \text{ mm}$

訂貨號

Order code	D ^{G7}	k ₁	r	x	y	f ₁	e	G	
65 59 501	110,0	92,0	230,0	5	55,0	153	165	M10	2,0
65 59 502	130,0	92,0	230,0	5	55,0	153	165	M10	3,0
65 59 503	180,0	122,0	260,0	5	85,0	192	215	M12	3,5
65 59 504	180,0	127,0	265,0	6	90,0	192	215	M12	3,5
65 59 505	180,0	112,0	250,0	5	75,0	192	215	M12	3,0
65 59 506	130,0	112,0	250,0	5	75,0	192	215	M12	3,0
65 59 507	130,0	112,0	250,0	5	75,0	155	165	M10	4,5
65 59 508	110,0	90,0	228,0	5	53,0	130	145	M8	2,0
65 59 509	110,0	108,5	246,5	5	71,5	130	145	M8	2,5
65 59 510	114,3	129,5	267,5	5	92,5	180	200	M12	5,5
65 59 511	114,3	163,5	301,5	5	126,5	180	200	M12	8,0
65 59 512	114,3	105,5	243,5	5	68,5	180	200	M12	4,0
65 59 513	110,0	113,5	251,5	5	76,5	130	145	M8	2,5

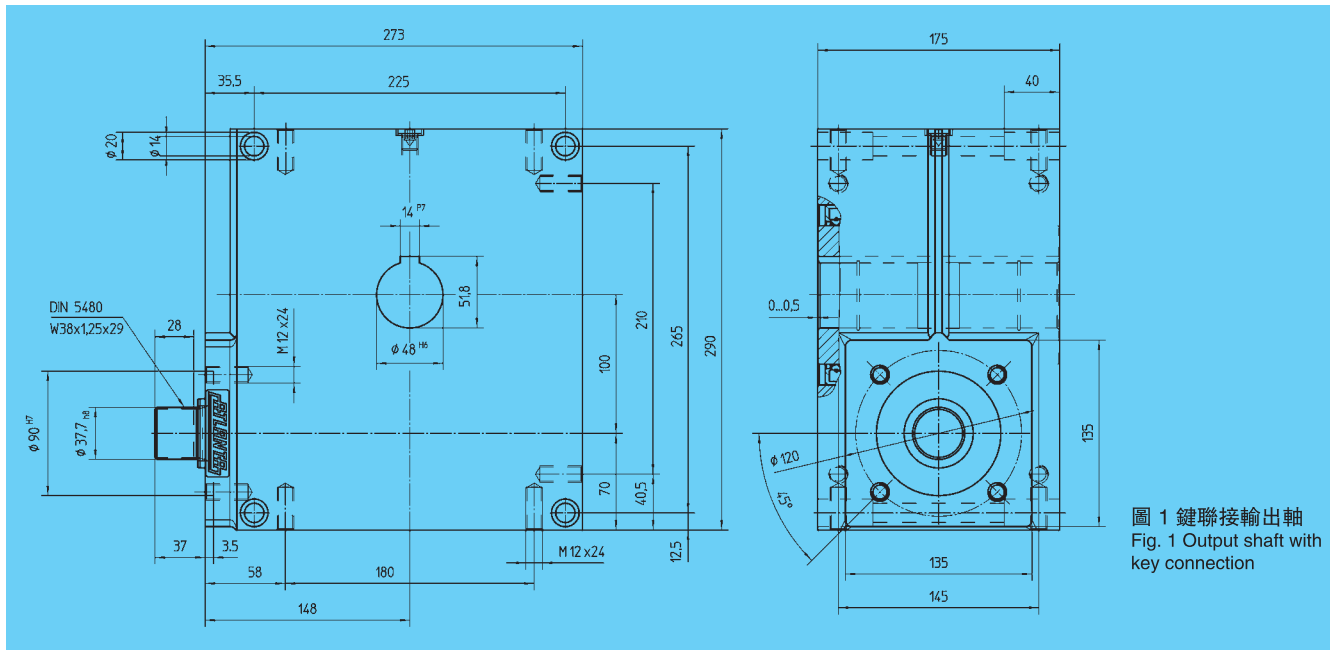
定貨時應當包含減速箱 57 05 0xx / 57 15 0xx和法蘭 65 59 5 xx。

The order should contain gear box 57 05 0xx / 57 15 0xx and flange 65 59 5xx.



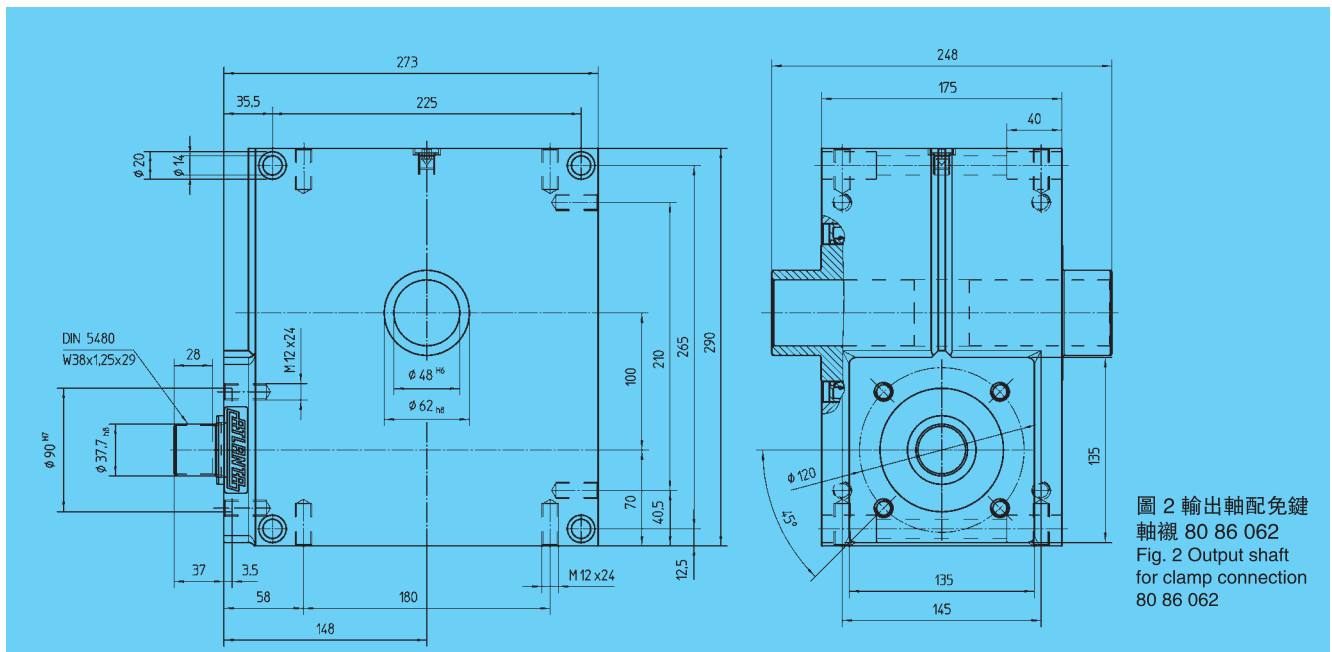
鍵聯接 / Key connection

中心距 / Centre distance $a_o = 100 \text{ mm}$ 5 個安裝面 / 5 Mounting surfaces



軸襯聯接 / Shrink-disc connection

中心距 / Centre distance $a_o = 100 \text{ mm}$ 5 個安裝面 / 5 Mounting surfaces



訂貨號 / Order code

5 個安裝面 / 5 Mounting surfaces

減速比 i

Ratio i



$J_{red} 10^{-4}$
kg m²

鍵連接

軸襯聯接

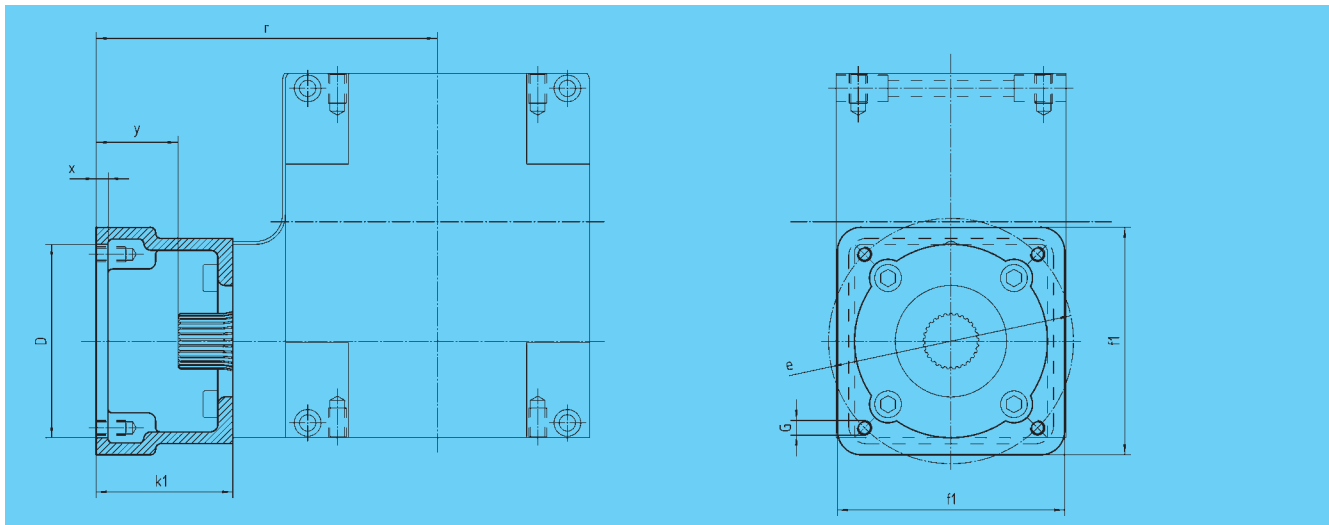
Key connection

Shrink-disc connection

57 06 005	57 16 005	4,75	28	16,7210
57 06 007	57 16 007	6,75	28	12,8835
57 06 009	57 16 009	9,25	28	8,0975
57 06 015	57 16 015	14,50	28	7,2190
57 06 020	57 16 020	19,50	28	5,4030
57 06 029	57 16 029	29,00	28	4,7207
57 06 039	57 16 039	39,00	28	8,4300
57 06 052	57 16 052	52,00	28	9,7400



電機安裝法蘭 / Motor flange



< 12 arcmin

中心距 / Centre distance

$a_o = 100 \text{ mm}$

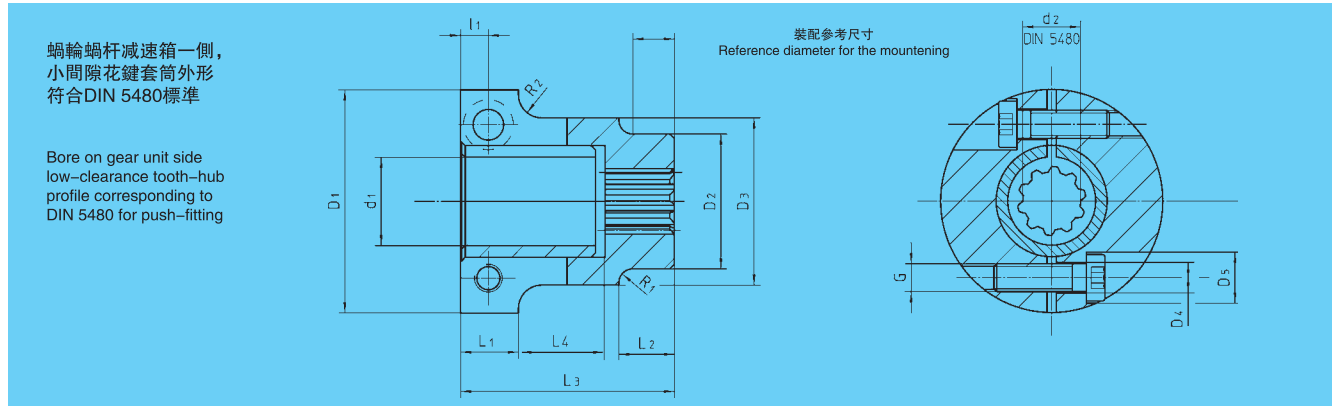
訂貨號 Order code	D ^{G7}	k ₁	r	x	y	f ₁	e	G	kg
65 59 501	110,0	92,0	240,0	5	55,0	153	165	M10	2,0
65 59 502	130,0	92,0	240,0	5	55,0	153	165	M10	3,5
65 59 503	180,0	122,0	270,0	5	85,0	192	215	M12	3,5
65 59 504	180,0	127,0	275,0	6	90,0	192	215	M12	3,5
65 59 505	180,0	112,0	260,0	5	75,0	192	215	M12	3,0
65 59 506	130,0	112,0	260,0	5	75,0	192	215	M12	3,0
65 59 507	130,0	112,0	260,0	5	75,0	155	165	M10	4,5
65 59 508	110,0	90,0	238,0	5	53,0	130	145	M8	2,0
65 59 509	110,0	108,5	256,5	5	71,5	130	145	M8	2,5
65 59 510	114,3	129,5	277,5	5	92,5	180	200	M12	5,5
65 59 511	114,3	163,5	311,5	5	126,5	180	200	M12	8,0
65 59 512	114,3	105,5	253,5	5	68,5	180	200	M12	4,0
65 59 513	110,0	113,5	261,5	5	76,5	130	145	M8	2,5

定貨時應當包含減速箱 57 06 0xx / 57 16 0xx和法蘭 65 59 5 xx。
The order should contain gear box 57 06 0xx / 57 16 0xx and flange 65 59 5xx.



伺服電機/減速箱專用聯軸器，剛性聯接，滲氮、無鍵電機預裝件

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



訂貨號 / Order code

聯軸器

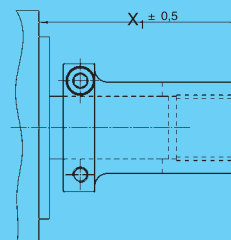
Coupling	d ₁	d ₂	D ₁	D ₂	D ₃	D ₄	D ₅	I ₁	I ₂	L ₁	L ₂	L ₃	R ₁	R ₂	G	L ₄	J _{red} 10 ⁻⁴ kg m ²	kg
65 51 008	8	15x1,25x10	36	23	-	5,5	9,0	7,5	13,0	14,0	-	46,0	5	-	M5	31,2	0,236	0,2
65 51 009	9	15x1,25x10	36	23	-	5,5	9,0	7,5	13,0	14,0	-	46,0	5	-	M5	31,2	0,246	0,2
65 51 010	10	15x1,25x10	36	23	-	5,5	9,0	7,5	13,0	14,0	-	46,0	5	-	M5	31,2	0,244	0,2
65 51 011	11	15x1,25x10	36	23	-	5,5	9,0	7,5	13,0	14,0	-	46,0	5	-	M5	31,2	0,243	0,2
65 51 014	14	15x1,25x10	36	23	-	5,5	9,0	7,5	13,0	14,0	-	46,0	5	-	M5	31,2	0,234	0,2
65 51 016	16	15x1,25x10	36	23	-	5,5	9,0	7,5	13,0	14,0	-	46,0	5	-	M5	31,2	0,225	0,2
65 53 019	19	15x1,25x10	48	33	36	6,6	11,0	8,0	16,5	16,5	9	46,0	5	3	M5	31,2	0,704	0,3
65 53 022	22	15x1,25x10	48	33	36	6,6	11,0	8,0	16,5	16,5	9	46,0	5	3	M5	31,2	0,704	0,3
65 53 024	24	15x1,25x10	48	33	36	6,6	11,0	8,0	16,5	16,5	9	46,0	5	3	M5	31,2	0,647	0,2
65 53 025	25	15x1,25x10	78	51	-	9,0	15,0	9,0	29,0	18,0	-	55,5	5	-	M8	41,5	5,946	1,1
65 53 028	28	15x1,25x10	78	51	-	9,0	15,0	9,0	29,0	18,0	-	55,5	5	-	M8	41,5	5,871	1,1
65 53 035	35	15x1,25x10	78	51	-	9,0	15,0	9,0	29,0	18,0	-	55,5	5	-	M8	41,5	5,605	1,0
65 53 038	38	15x1,25x10	78	51	-	9,0	15,0	9,0	29,0	18,0	-	55,5	5	-	M8	41,5	5,432	0,9
65 54 009	9	25x1,25x18	49	35	-	6,6	11,0	8,5	18,0	17,0	-	68,0	5	-	M6	43,5	2,306	0,5
65 54 010	10	25x1,25x18	49	35	-	6,6	11,0	8,5	18,0	17,0	-	68,0	5	-	M6	43,5	2,300	0,5
65 54 011	11	25x1,25x18	49	35	-	6,6	11,0	8,5	18,0	17,0	-	68,0	5	-	M6	43,5	2,381	0,5
65 54 014	14	25x1,25x18	49	35	-	6,6	11,0	8,5	18,0	17,0	-	68,0	5	-	M6	43,5	1,161	0,5
65 54 015	15	25x1,25x18	49	35	-	6,6	11,0	8,5	18,0	17,0	-	68,0	5	-	M6	43,5	2,328	0,5
65 54 016	16	25x1,25x18	49	35	-	6,6	11,0	8,5	18,0	17,0	-	68,0	5	-	M6	43,5	1,161	0,5
65 54 019	19	25x1,25x18	49	35	-	6,6	11,0	8,5	18,0	17,0	-	68,0	5	-	M6	43,5	1,112	0,4
65 54 020	20	25x1,25x18	49	35	-	6,6	11,0	8,5	18,0	17,0	-	68,0	5	-	M6	43,5	2,268	0,5
65 54 022	22	25x1,25x18	49	35	-	6,6	11,0	8,5	18,0	17,0	-	68,0	5	-	M6	43,5	2,179	0,4
65 54 024	24	25x1,25x18	49	35	-	6,6	11,0	8,5	18,0	17,0	-	68,0	5	-	M6	43,5	1,007	0,4
65 54 025	25	25x1,25x18	78	51	-	9,0	15,0	9,0	29,0	18,0	-	68,0	5	-	M8	43,5	8,165	1,2
65 54 028	28	25x1,25x18	78	51	-	9,0	15,0	9,0	29,0	18,0	-	68,0	5	-	M8	43,5	8,061	1,2
65 54 032	32	25x1,25x18	78	51	-	9,0	15,0	9,0	29,0	18,0	-	68,0	5	-	M8	43,5	7,751	1,2
65 54 035	35	25x1,25x18	78	51	-	9,0	15,0	9,0	29,0	18,0	-	68,0	5	-	M8	43,5	7,690	1,1
65 54 038	38	25x1,25x18	78	51	-	9,0	15,0	9,0	29,0	18,0	-	68,0	5	-	M8	43,5	7,348	1,1
65 54 042	42	25x1,25x18	78	51	-	9,0	15,0	9,0	29,0	18,0	-	65,5	5	-	M8	43,5	6,595	1,1
65 55 014	14	38x1,25x29	78	51	-	9,0	15,0	9,0	29,0	18,0	-	72,5	5	-	M8	41,5	8,056	1,2
65 55 016	16	38x1,25x29	78	51	-	9,0	15,0	9,0	29,0	18,0	-	72,5	5	-	M8	41,5	8,029	1,2
65 55 019	19	38x1,25x29	78	51	-	9,0	15,0	9,0	29,0	18,0	-	72,5	5	-	M8	41,5	7,978	1,2
65 55 020	20	38x1,25x29	78	51	-	9,0	15,0	9,0	29,0	18,0	-	72,5	5	-	M8	41,5	7,945	1,2
65 55 022	22	38x1,25x29	78	51	-	9,0	15,0	9,0	29,0	18,0	-	72,5	5	-	M8	41,5	7,911	1,2
65 55 024	24	38x1,25x29	78	51	-	9,0	15,0	9,0	29,0	18,0	-	72,5	5	-	M8	41,5	7,860	1,2
65 55 025	25	38x1,25x29	78	51	-	9,0	15,0	9,0	29,0	18,0	-	72,5	5	-	M8	41,5	7,818	1,1
65 55 028	28	38x1,25x29	78	51	-	9,0	15,0	9,0	29,0	18,0	-	72,5	5	-	M8	41,5	8,105	1,3
65 55 032	32	38x1,25x29	78	51	-	9,0	15,0	9,0	29,0	18,0	-	72,5	5	-	M8	41,5	7,863	1,2
65 55 035	35	38x1,25x29	78	51	-	9,0	15,0	9,0	29,0	18,0	-	72,5	5	-	M8	41,5	7,610	1,1
65 55 038	38	38x1,25x29	78	51	-	9,0	15,0	9,0	29,0	18,0	-	72,5	5	-	M8	41,5	7,284	1,0
65 55 042	42	38x1,25x29	78	51	-	9,0	15,0	9,0	29,0	18,0	-	70,5	5	-	M8	41,5	6,547	1,0

GA-10頁的聯軸器一樣可以適用

Couplings on page GA-10 can be used as well.

X₁尺寸用于固定聯接電機
軸參見GG-17頁

For the dimension X₁ to fix the
coupling on the motor shaft
see page GG-17





57 8. ...系列減速箱輸出驅動軸帶免鍵軸襯組件
Shrink-disc clamping sets
for output drive shafts of gear series 57 8. ...

作為完整一套供應
Supplied as complete set

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



訂貨號 Order code	a ₀ mm	T _{2max} Nm	d ₁	d ₂	d ₃	D	L ₁	L ₂	L ₃	I	G	鎖緊扭矩 moment Torque	J 10 ⁻⁴ kg m ²	kg
80 81 024	32	266	24	20	36	50,2	23,4	19,40	7,60	14,0	6 x M5	5 Nm	0,780	0,2
80 83 130	50	300	30	25	44	60,2	25,0	18,00	7,25	14,0	7 x M5	4 Nm	1,756	0,3
80 84 136	63	508	36	28	52	72,2	27,5	21,70	9,10	17,5	5 x M6	12 Nm	4,029	0,4
80 85 150	80	860	50	36	70	90,2	28,0	24,00	10,25	22,0	9 x M6	12 Nm	11,322	0,8
80 86 062	100	1760	62	48	89	110,2	34,5	30,50	13,00	22,0	10 x M6	12 Nm	27,137	1,3



表中值根據12000小時滿負荷且在伺服運行環境條件下的磨損或最大齒廓載荷測得。對於連續滿負荷運行必須考慮溫度限制! (如果有疑問, 請諮詢我們)

The values in the tables are based upon wear or maximum flank load at 12,000 h full load and on servo-operation. With continuous full-load operation it may be necessary to consider temperature limits! (Please ask us, if in doubt.)

T_{2max} = 避免齒斷裂的靜態扭矩 (Nm), P_1 =驅動功率 (kW) T_2 =輸出扭矩 (Nm)

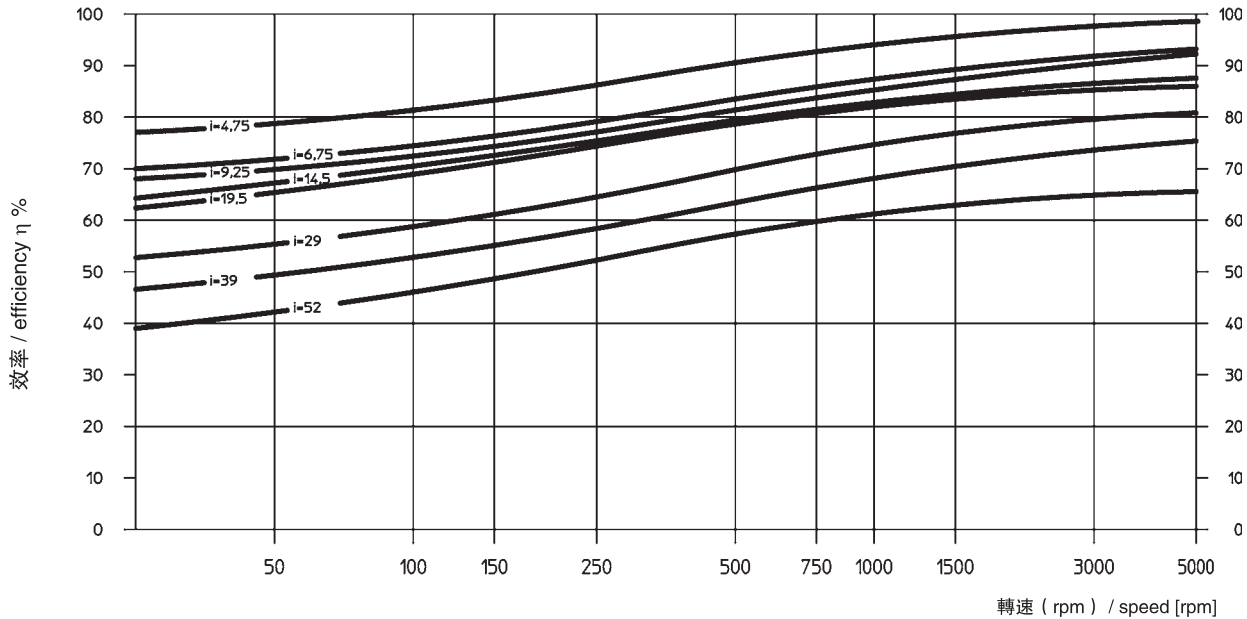
T_{2max} = static torque to avoid tooth fracture, P_1 = driving power in kW, T_2 = output torque in Nm.

訂貨號 Order code	a_0 (mm)	i	T_{2max}	輸入轉速 n_1 / 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)	
57 01 005	57 11 005	32	4,75	122	0,15	14	0,25	14	0,36	15	0,55	15	1,09	15	1,55	16	1,94	16	0,83
57 01 007	57 11 007		6,75	90	0,12	13	0,17	14	0,25	14	0,39	15	0,77	15	1,09	16	1,37	16	0,82
57 01 009	57 11 009		9,25	50	0,07	11	0,12	12	0,16	13	0,25	14	0,57	15	0,80	16	1,01	16	0,80
57 01 015	57 11 015		14,50	77	0,06	13	0,09	14	0,13	14	0,19	15	0,38	16	0,52	16	0,65	16	0,76
57 01 020	57 11 020		19,50	50	0,04	11	0,05	11	0,08	12	0,12	13	0,26	14	0,36	14	0,45	14	0,74
57 01 029	57 11 029		29,00	63	0,03	11	0,05	12	0,06	13	0,09	14	0,19	15	0,26	15	0,33	15	0,69
57 01 039	57 11 039		39,00	45	0,03	12	0,04	13	0,05	14	0,08	14	0,16	16	0,22	16	0,26	16	0,66
57 01 050	57 11 050		50,00	32	0,02	10	0,03	10	0,04	11	0,05	12	0,11	14	0,15	14	0,21	16	0,63
57 03 005	57 13 005	50	4,75	495	0,73	59	1,08	59	1,53	63	2,27	63	4,50	63	5,58	59	6,57	55	0,83
57 03 007	57 13 007		6,75	360	0,45	50	0,69	53	0,99	57	1,58	62	3,15	62	3,96	59	4,68	55	0,82
57 03 009	57 13 009		9,25	248	0,29	43	0,45	46	0,63	49	0,99	52	2,30	63	3,20	63	3,69	59	0,80
57 03 015	57 13 015		14,50	315	0,23	51	0,36	54	0,51	59	0,80	63	1,64	68	2,25	68	2,84	68	0,75
57 03 020	57 13 020		19,50	225	0,14	41	0,23	43	0,36	45	0,50	50	1,08	59	1,49	59	1,89	59	0,73
57 03 029	57 13 029		29,00	270	0,13	43	0,18	47	0,26	50	0,40	54	0,84	63	1,11	63	1,27	59	0,68
57 03 039	57 13 039		39,00	180	0,11	48	0,15	50	0,22	54	0,33	59	0,69	68	0,90	68	1,13	68	0,63
57 03 052	57 13 052		52,00	135	0,07	38	0,11	40	0,14	42	0,23	45	0,46	54	0,65	54	0,81	54	0,58
57 04 005	57 14 005	63	4,75	900	1,89	153	2,97	162	3,96	162	5,50	153	9,27	131	11,88	122			0,83
57 04 007	57 14 007		6,75	675	1,35	153	2,12	162	2,79	162	3,83	153	6,48	131	8,37	122			0,82
57 04 009	57 14 009		9,25	450	0,67	104	1,06	113	1,47	117	2,27	122	4,44	122	5,72	113			0,81
57 04 015	57 14 015		14,50	540	0,67	149	1,07	162	1,39	162	2,21	162	3,76	153	4,73	144			0,76
57 04 020	57 14 020		19,50	450	0,35	104	0,55	113	0,77	117	1,15	122	2,68	149	3,45	140			0,75
57 04 029	57 14 029		29,00	585	0,43	158	0,68	171	0,94	185	1,40	198	2,31	176	2,90	167			0,69
57 04 039	57 14 039		39,00	405	0,27	126	0,40	135	0,55	144	0,87	158	1,69	171	2,30	171			0,66
57 04 051	57 14 051		51,00	270	0,14	86	0,23	95	0,32	104	0,50	113	1,08	135	1,47	144			0,61
57 05 005	57 15 005	80	4,75	1800	4,68	378	6,21	342	7,68	324	10,44	297	17,55	252					0,85
57 05 007	57 15 007		6,75	1260	3,24	378	4,37	342	5,53	324	7,60	297	12,61	252					0,82
57 05 009	57 15 009		9,25	990	2,14	333	3,18	333	4,08	324	5,60	297	9,27	252					0,81
57 05 015	57 15 015		14,50	1170	1,78	405	2,61	405	3,21	378	4,14	333	6,30	266					0,78
57 05 020	57 15 020		19,50	900	1,12	333	1,80	360	2,34	360	3,24	342	5,16	288					0,77
57 05 029	57 15 029		29,00	1080	1,24	468	1,84	495	2,27	477	2,99	441	4,88	378					0,72
57 05 039	57 15 039		39,00	765	0,78	387	1,22	414	1,67	441	2,26	432	3,63	369					0,69
57 05 053	57 15 053		53,00	540	0,34	216	0,51	234	0,72	248	1,10	270	2,21	297					0,67
57 06 005	57 16 005	100	4,75	2970	9,69	792	12,80	720	15,99	675	21,69	616	36,33	522					0,85
57 06 007	57 16 007		6,75	2070	6,51	747	8,64	675	10,89	648	15,03	594	26,10	522					0,83
57 06 009	57 16 009		9,25	1710	4,81	747	6,39	675	8,19	648	11,07	594	19,08	522					0,82
57 06 015	57 16 015		14,50	1845	3,78	837	5,22	792	6,12	729	8,10	648	12,87	558					0,78
57 06 020	57 16 020		19,50	1620	2,72	810	3,84	783	4,68	729	6,00	648	9,99	558					0,78
57 06 029	57 16 029		29,00	2070	2,66	1035	3,62	963	4,20	909	5,37	765	9,28	720					0,69
57 06 039	57 16 039		39,00	1485	1,86	972	2,59	927	3,27	900	4,08	810	6,73	702					0,72
57 06 052	57 16 052		52,00	990	1,04	684	1,64	738	2,17	765	2,77	706	4,50	612					0,69



滿負荷條件下，蝸輪蝸杆減速箱的效率

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

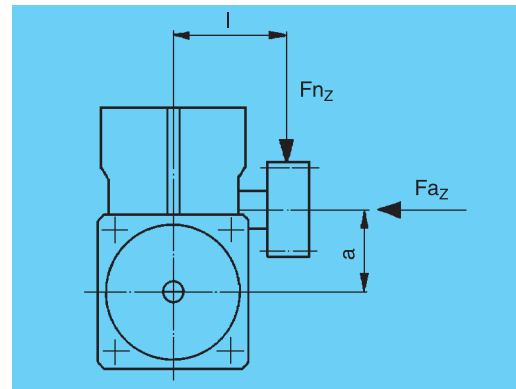


輸出傳動的附加載荷

所列出的數據為參考值，你可以認為數值是由選擇不同的齒形系統而產生的。並假定力的作用點處於軸心位置而得到的，如果有附加軸向力，超過最大允許力的情況出現，請諮詢我們。

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	
殼體中心到輸出/ 齒輪中心距離 Dimensions centre casing/ centre teeth									
l (mm)		70	100	90	140	110	160	125	175
最大附加載荷 Max. additional load									
徑向 F_{n_z}	[N]	1575	1100	2500	1600	3500	2450	5800	4200
軸向 F_{a_z}	[N]	1050	1050	1250	1250	1750	1750	2800	2800



簡述

ATLANTA B-基礎型蝸輪蝸杆減速箱專門開發用于新交流和直流伺服電機。和本樣本中的其它元件一樣，都常備有庫存，至少在很短的時間內可以交貨。

下列是基礎型蝸輪蝸杆減速箱的典型特性：

- 同59系列伺服減速箱相同的尺寸
- 低背隙 (<12')
- 輕金屬殼體具有良好的散熱性能
- 強力滾子軸承支撐空心軸輸出，可承受較大的外力

中心距，傳動比和齒形系統的選擇依照DIN3975/76標準。

采用磨削加工的右旋蝸杆和特制的銅蝸輪和浸入式潤滑（特種合成油）確保雙向高效而平穩的運行，并具有較高的使用壽命。殼體上分布的裝配鑽孔和螺紋孔確保箱體在任意位置安裝。

驅動部分聯接使用一個專用聯軸器，蝸輪蝸杆減速箱輸入軸端外花鍵結構與聯軸器內花鍵嚙合，這樣可確保傳動無間隙運行。

對於輸出傳動部分，有多種輸出軸選擇，有直齒和斜齒之分。除了齒輪軸外，還有諸多S&L齒輪系中不同齒數的齒輪，這些齒輪可以組合，也可以與特定的輸出軸配合使用。

Short description

ATLANTA B-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 b-servo-performance gear units:

- the same dimensions as our servo worm gear units serie 59
- low-clearance gearing (back lash < 12'),
- casing of light metal for optimal heat dissipation
- robust bearings for the output drive hollow shaft, permitting 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.



裝配說明

蝸輪蝸杆減速箱

五個安裝面上均有適用的裝配孔，可以保證在任何位置安裝，為了能承受所有的附加力（參見GD-12頁）我們建議在接觸面最大的一端安裝，即在兩側端蓋之一上安裝，把蝸杆軸（輸入軸）置于側面或下方，有利于潤滑，如果該軸置于上方，將降低驅動能力大約10%。

聯軸器

所供貨的聯軸器已是預先裝配好的。在把聯軸器裝到電機軸上之前，必須清理所有接觸面，並且塗上一層薄油脂加以保護。一個重要的安裝尺寸是數值“x 1”（比對樣本第GD-12頁），推薦的安裝順序：

- 小心擦淨接觸面，并塗上一薄層油脂進行保護。
- 依照給出的距離尺寸“x 1”（參見樣本GC-12）將聯軸器裝在電機軸上；一把深度測量尺有助于距離尺寸的保證。
- 輕輕地緊上聯軸器上夾緊螺釘，檢查聯軸器轉動情況。
- 交替均勻地擰緊螺釘。
- 按照表中所需所知值，交替對角擰緊螺釘。
- 建議在合適的徑向參考位置做一次最後的實際運動檢驗。

電機

把帶聯軸器的電機插入減速箱的蝸杆驅動軸，并用螺栓緊固。

輸出驅動（齒輪）軸

除非輸出齒輪軸供貨時已完全裝配好，否則我們建議做如下處理：清潔齒輪軸和空心軸延伸部分，然後塗機油或油脂。

軸襯連結的輸出驅動軸

在減速箱空心軸上裝上軸襯（請不要先擰緊螺釘），從所要求的一側把輸出軸插入空心軸，注意完全插到底。均勻擰緊各個夾緊螺釘，使之產生橫向壓力連接，依次擰緊各螺釘（不是對角擰緊）鎖緊扭矩按表中的扭矩要求。

鍵連接的輸出驅動軸

輸出驅動軸用卡環，盤和螺釘僅用于緊固輸出驅動軸，防止軸向移動，為此把卡環插在空心軸的凹槽，把輸出軸從所要求的一側推入空心軸，注意推到底，從減速箱的另一側，用螺釘把盤擰到輸出軸上，卡環必須夾緊小齒輪軸和盤。

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 GD – 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%.



<12 arcmin

Coupling

螺紋孔 Thread-holes	鎖緊扭矩 Torque
M5	7 Nm
M6	10 Nm
M8	25 Nm

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 page GD – 12).

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 page GD – 12); a depth gauge is rather helpful for determining the measurement.
- Slightly tighten the clamping screws and check the coupling for true running
- Tighten the screws alternately and uniformly.
- The correct tightening torque can be seen from the opposite table. 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!

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 grease or oil them.

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 table.

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.



維護

潤滑劑更換

ATLANTA B-伺服減速箱內灌充有合成潤滑劑。

在以下條件使用為終身免潤滑：

減速箱的放置依照ATLANTA樣本的要求嚴格同導軌保持一致。減速箱的運行完全在所容許的特性數值和極限範圍內，操作者周期性地（每四周一次）檢查減速箱以防漏油。減速箱表面溫度最高不超過80°C，經驗顯示完全適合正常狀況下的連接運行。在輸入速度主要為低速運行（蝸杆的運行速度 $v < 0.5 \text{ m/s}$ ）的情況下，我們推薦二年更換一次潤滑油。

我們推薦如下合成潤滑油：

Kl ü bersynth GH 6 – 220
訂貨號： 65 90 010 (1 升)

替代品為：

SHELL Tivela S 220, BP Energol SG-XP 220,
ARAL Degol GS 220

防護等級

防護等級：IP65/67依據DIN40 050
(請單獨確認防腐性要求)。

Maintenance

Lubricant change

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

Under the following conditions this is a 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.

中心距 Centre distance	油量 Oil quantity
a = 32 mm	0,1 l
a = 50 mm	0,3 l
a = 63 mm	0,5 l
a = 80 mm	1,2 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 Energol SG-XP 220,
ARAL Degol GS 220

Degree of protection

Degree of protection: IP65/67 according to DIN 40 050
(Corrosion has to be verified separately).