

Příloha č. 1

EL. INVALIDNÍ VOZÍK	díl	rozměry	hmotnost	výrobce	cena/ks	množství	poznámky
hlavní funkční díly:	Pohony-motor+převodovka		3,6 kg	RAVEO	19 560,00 Kč	1	24V, 270W
	přední kola-hnací	pr. 350mm, sírka 70mm	2,8 kg	ROLKO	1 899,00 Kč	2	R350/70-LA2GH L or R
	zadní kola	pr. 200mm, sírka 50mm	0,52 kg	DELFI	315,00 Kč	2	01C-FR-200-50-C179-4PR
	vidlice zadních kol		0,35 kg	DELFI	291,00 Kč	2	06-NY-RO-200-60-12-ID
	baterie	242x190x175 mm	16,8 kg	VARTA	2 250,00 Kč	2	12V, 60 Ah
	aktuátor		2,3 kg	LINAK	2 709,24 Kč	1	24V, zdvih 150mm
	Ovládání-elektronika			PENNY and GILES	4 633,23 Kč	1	vzorek zdarma
	tlumič		1,63 kg	BRANO	250,00 Kč	2	
	podpůrné kolečko				230,00 Kč	1	
					32 137,47 Kč		
mezisoučet							
sedáky, polstrování:	sedák(opěradlo)	480x450x50 mm		ROLKO	164,58 Kč	2	SK-450x480-S
	opěrka rukou	262x82x30 mm		ROLKO	265,86 Kč	2	PU-AG-260-S
	hlavová opěrka	190x150x50 mm		OTTO BOCK	2 135,75 Kč	1	430H2=3-7
	držák hlavové opěry			OTTO BOCK	1 526,45 Kč	1	476L52=SK010
	opora kolen	130x90 mm		OTTO BOCK	1 337,55 Kč	2	434P1=2-7
	textilní podpory + pásy			PLASTY	743,00 Kč	1	
	úchyty pásů			OTTO BOCK	230,00 Kč	1	
					6 403,19 Kč		
materiál:	zdvíhací mechanismus			MOAS CS	9 424,00 Kč	1	
	doplňky k extr. Profilům			MOAS CS	421,00 Kč	1	
	plechy drátověz			PEUKERT	14 700,00 Kč	1	externí, vč. práce
	jelektrický rám			ALMIO	399,00 Kč	1	
	trubky rámu			CHARVÁT a spol.	390,00 Kč	1	včetně ohýbaní
	kabely, svorky - baterie			K+B ELEKTRO	216,00 Kč	1	
	pružiny - tlumič			HENNLICH	954,00 Kč	1	
	o-kroužky			HADE LOŽISKA	17,00 Kč	1	
	spojovací materiál			ALMIO	362,00 Kč	1	
	materiál ze skladu			BRANO	500,00 Kč	1	odhad
mezisoučet					27 383,00 Kč		
povrchová úprava:	zinkování dílů			GALOVANO TECH.	95,00 Kč	1	
	lakování pružin			ŠIKOLA LAKOVNA	199,00 Kč	1	
	lakovací černý sprej			TRIGA COLOR	366,00 Kč	1	
mezisoučet					660,00 Kč		

KURZ	k 18.5.2012
euro	25,32
libra	31,48

cena total:	73 356,65 Kč
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Příloha č. 2

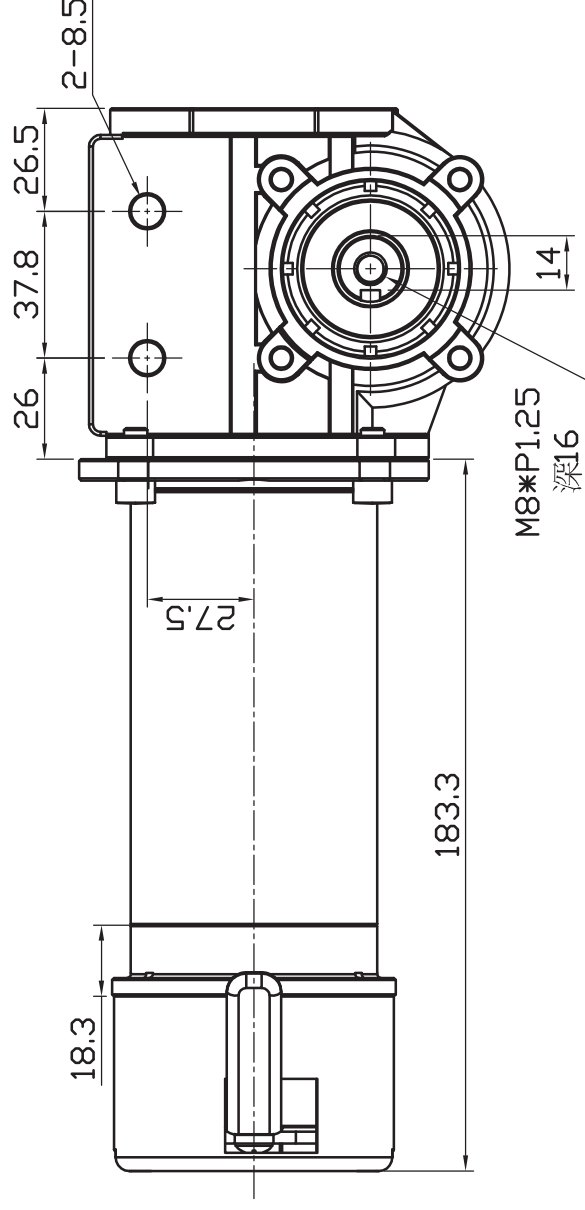
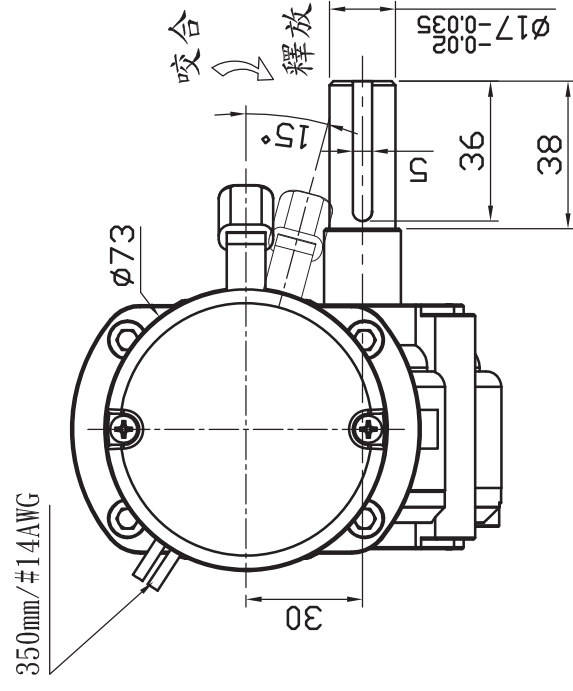
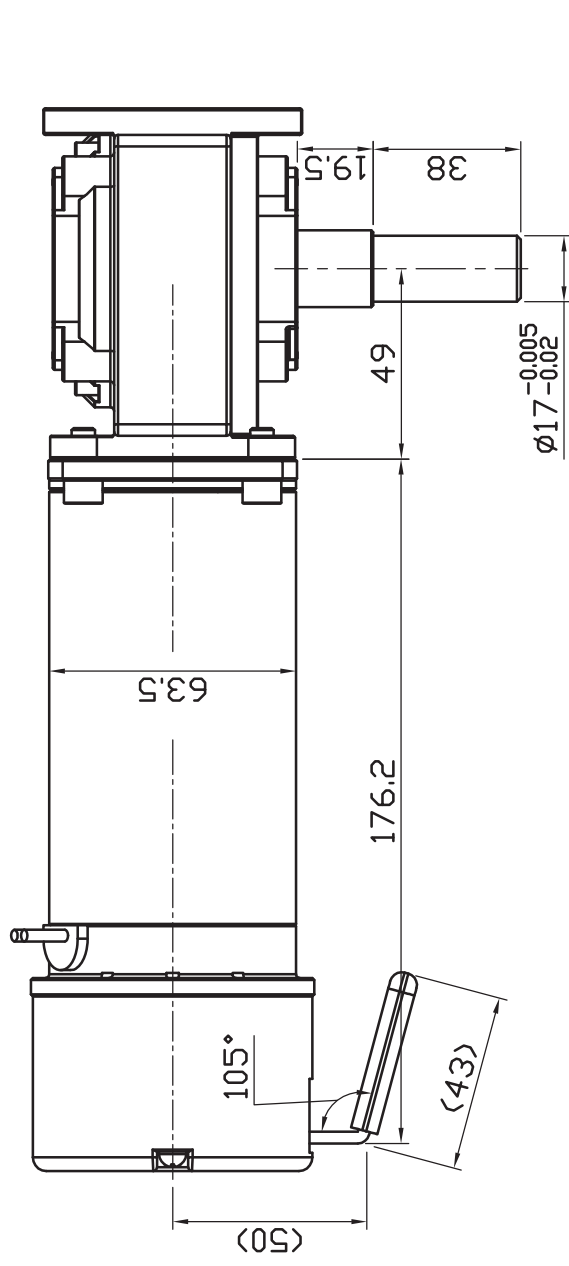
Příloha č. 3

MODEL:	
RATIO:	25:1
MOTOR:	DC24V
OUTPUT:	270W
SPEED:	4700±150rpm
BRAKE:	DC24V 0.45A 30Kg
NOISE:	65dB (max)

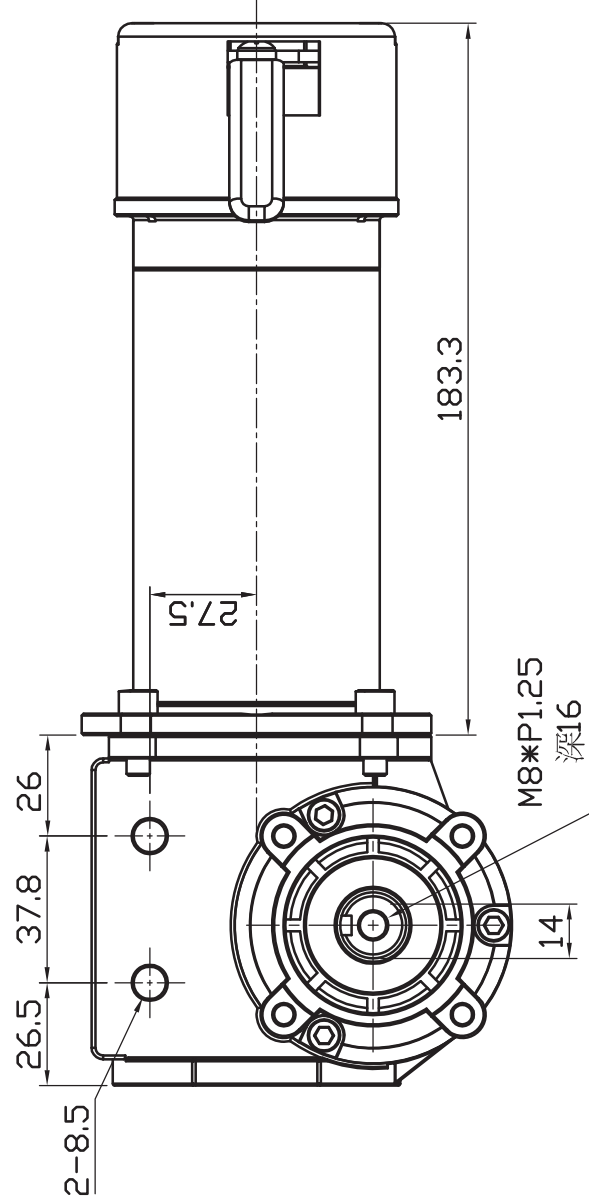
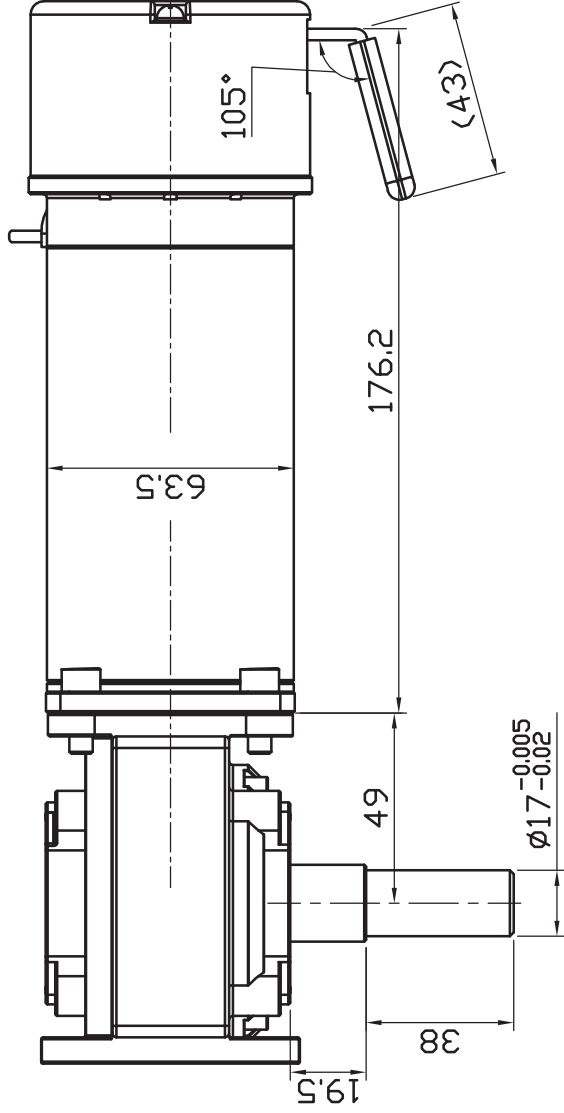
- ① MTR+(紅)#14AWG
- ② MTR-(黑)#14AWG
- ③ BRAKE(黑)#22AWG
- ④ BRAKE(紅)#22AWG

Housing: IPG-7401-PS
D50750

馬達端子:AMP 160914-2
煞車端子:AMP 280095-2

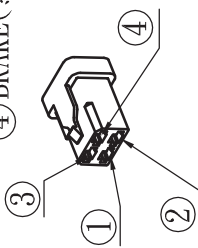


圖名	馬達齒輪箱總成										比例	0.4:1	單位	mm														
型號	**										件數	**	第三角法															
圖號											碩陽電機股份有限公司																	
										版數		設變單號		簽名	月·日·西元						核定				材質	*		
																					審查				標準無註明公差			
																					校對				0.5-6	±0.1	120-315	±0.5
																					製圖	林國錦	03-14-'11		6-30	±0.2	315-1000	±0.8
																									30-120	±0.3	1000-2000	±1.2

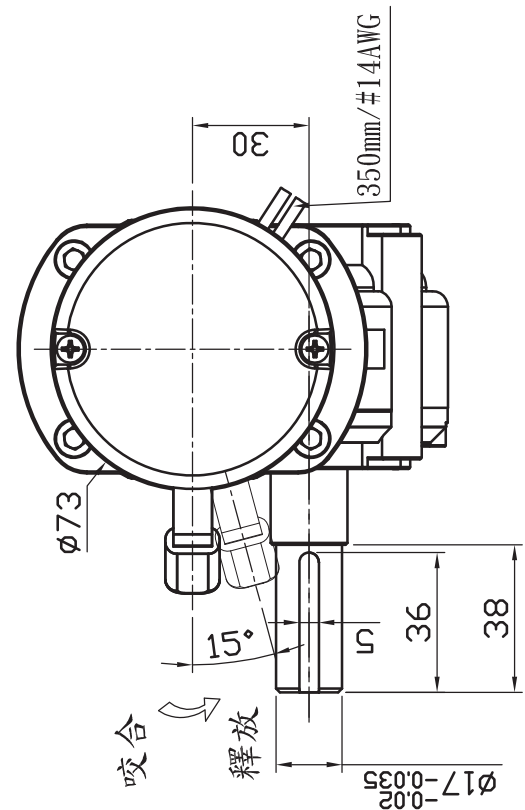


MODEL: 25:1
 RATIO: DC24V 3.0A(max)
 MOTOR: 270W
 OUTPUT: 4700±150rpm
 SPEED: DC24V 0.45A 30Kgf-cm
 BRAKE: 65dB (max)
 NOISE:

- ① MTR+(紅)#14AWG
- ② MTR-(黑)#14AWG
- ③ BRAKE(黑)#22AWG
- ④ BRAKE(紅)#22AWG



Housing: IPG-7401-PS
 D50750
 馬達端子: AMP 160914-2
 煞車端子: AMP 280095-2



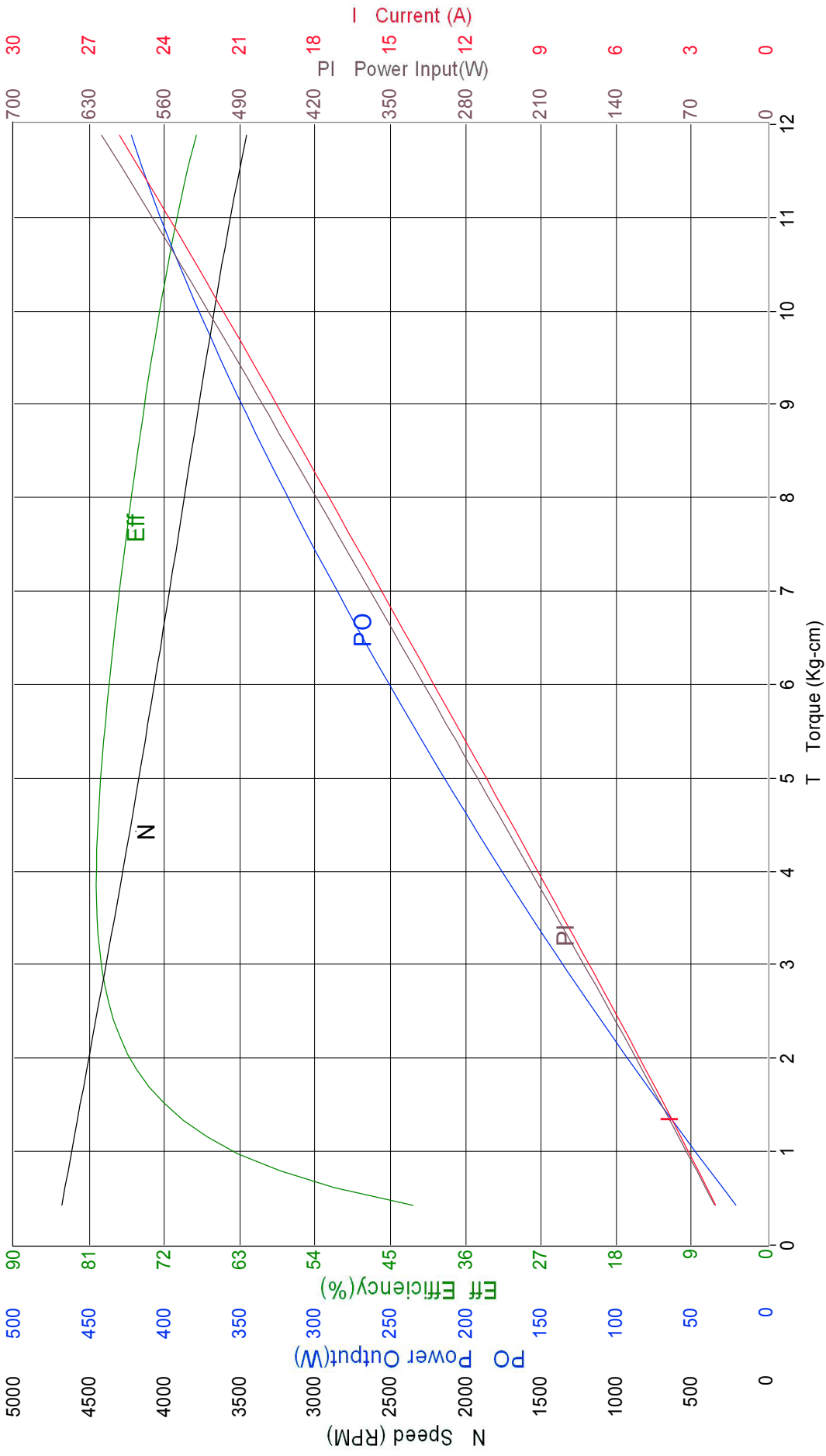
圖名	馬達齒輪箱總成	比例	0.4:1	單位	mm	核對	材質	*
型號	**	件數	**	第三角法	☐	審查	標準無註明公差	
圖						校對	0.5-6 ±0.1	120-315 ±0.5
號						製圖	6-30 ±0.2	315-1000 ±0.8
		版數	設變單號	簽名	月-日-西元	簽名	30-120 ±0.3	1000-2000 ±1.2
						林國錦	03-14-11	

碩陽電機股份有限公司

電動機特性測試報告

客戶名稱(Customer):
客戶檔名(Filename):
電動機型號(Motor Model):
額定電壓(Voltage):
額定輸出(Pout Rated):

客戶馬達機型編號(Customer Model):
無載轉速(No-Load R.P.M.):
無載電流(No-Load Current):
馬達轉向(Motor Direction):
測試日期(Test Date):2011/4/14 下午 03:13:08



電動機特性測試報告

客戶名稱(Customer):

客戶檔名(Filename):

電動機型號(Motor Model):

額定電壓(Voltage):

額定輸出(Pout Rated):

客戶馬達機型編號(Customer Model):

無載轉速(No-Load R.P.M.):

無載電流(No-Load Current):

馬達轉向(Motor Direction):

測試日期(Test Date):2011/4/14 下午 03:13:08

	電流 Amps	電壓 Volts	輸入功率 Win	轉速 Speed	轉矩 Kg-cm	輸出功率 Wout	效率 Eff	功率因素 PF	馬力 HP
1	2.05	24.10	48.3	4681	0.43	20.4	42.29	0.980	0.027
2	2.40	24.10	56.9	4660	0.62	29.5	51.75	0.984	0.039
3	2.74	24.10	65.1	4640	0.79	37.9	58.21	0.987	0.051
4	3.43	24.10	81.9	4599	1.16	54.7	66.88	0.991	0.073
5	3.76	24.10	90.0	4579	1.33	62.8	69.71	0.993	0.084
6	4.46	24.09	106.9	4538	1.69	78.9	73.81	0.995	0.106
7	4.82	24.09	115.6	4517	1.88	87.0	75.28	0.996	0.117
8	5.53	24.09	132.7	4476	2.23	102.7	77.35	0.997	0.138
9	5.88	24.09	141.2	4456	2.41	110.2	78.06	0.997	0.148
10	6.60	24.08	158.6	4415	2.77	125.5	79.10	0.998	0.168
11	6.96	24.08	167.2	4395	2.94	132.9	79.45	0.998	0.178
12	7.70	24.08	185.1	4354	3.31	147.9	79.91	0.999	0.198
13	8.08	24.08	194.3	4333	3.49	155.5	80.04	0.999	0.209
14	8.82	24.08	212.2	4293	3.86	170.1	80.14	0.999	0.228
15	9.60	24.07	230.9	4252	4.23	184.9	80.08	0.999	0.248
16	10.00	24.07	240.5	4231	4.43	192.4	80.00	0.999	0.258
17	10.80	24.07	259.7	4190	4.81	207.1	79.76	0.999	0.278
18	11.19	24.06	269.1	4170	5.00	214.3	79.62	0.999	0.287
19	12.01	24.06	288.7	4129	5.39	228.8	79.27	0.999	0.307
20	12.41	24.06	298.4	4109	5.59	235.9	79.07	0.999	0.316
21	13.25	24.05	318.4	4068	5.99	250.4	78.63	0.999	0.336
22	13.68	24.05	328.8	4047	6.20	257.7	78.39	0.999	0.345
23	14.51	24.05	348.7	4007	6.60	271.6	77.90	0.999	0.364
24	14.95	24.04	359.2	3986	6.81	278.9	77.63	0.999	0.374
25	15.82	24.04	380.0	3945	7.22	292.8	77.07	0.999	0.393
26	16.24	24.04	390.1	3925	7.43	299.6	76.79	0.999	0.402
27	17.12	24.03	411.0	3884	7.85	313.1	76.18	0.999	0.420
28	18.00	24.02	432.0	3843	8.26	326.4	75.55	0.999	0.438
29	18.42	24.02	442.2	3823	8.47	332.7	75.23	0.999	0.446
30	19.30	24.02	463.2	3782	8.89	345.3	74.56	0.999	0.463
31	19.75	24.01	473.9	3761	9.10	351.6	74.21	0.999	0.471
32	20.60	24.01	494.1	3721	9.50	363.2	73.51	0.999	0.487
33	21.04	24.01	504.6	3700	9.71	369.1	73.14	0.999	0.495
34	21.89	24.00	525.0	3659	10.11	380.0	72.38	0.999	0.509
35	22.30	24.00	534.8	3639	10.30	385.0	72.00	0.999	0.516
36	23.13	23.99	554.5	3598	10.68	394.9	71.21	0.999	0.529
37	23.54	23.99	564.4	3577	10.87	399.6	70.79	0.999	0.536
38	24.31	23.99	582.9	3537	11.22	407.9	69.97	0.999	0.547
39	24.71	23.99	592.3	3516	11.40	411.8	69.53	0.999	0.552
	25.80	23.98	618.5	3455	11.88	421.8	68.20	0.999	0.565
最高效率	8.82	24.08	212.2	4293	3.86	170.1	80.14	0.999	0.228
最高馬力	25.80	23.98	618.5	3455	11.88	421.8	68.20	0.999	0.565
最高轉矩	25.80	23.98	618.5	3455	11.88	421.8	68.20	0.999	0.565
最高轉速	2.05	24.10	48.3	4681	0.43	20.4	42.29	0.980	0.027
最高電流	25.80	23.98	618.5	3455	11.88	421.8	68.20	0.999	0.565

Příloha č. 4

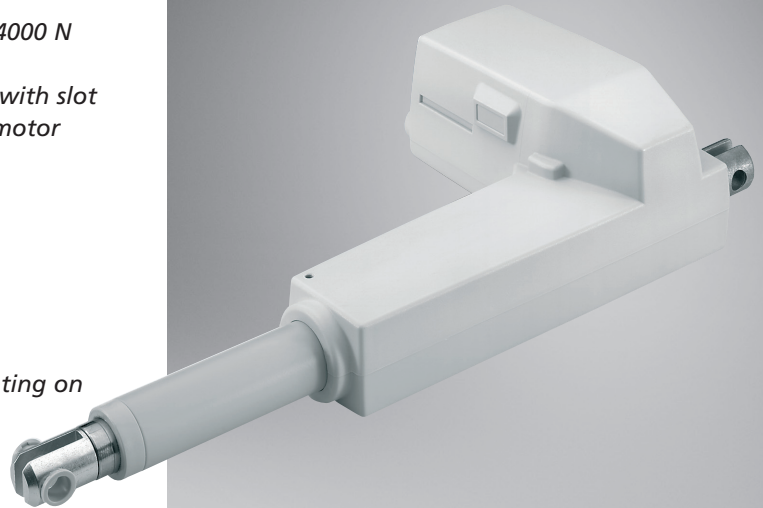
ACTUATOR LA31

Features:

- 24 V DC permanent magnet motor
- Thrust up to 6000 N in push and up to 4000 N in pull
- Electric chromated steel piston rod eye with slot
- High-strength plastic housing protects motor and gears
- Elegant and compact design with small installation dimensions
- Standard protection class: IPX4
- Colour: black
- 2.25 m straight cable
- Built-in limit switches (not adjustable)
- Scratch and wear-resistant powder painting on outer tube Ø30 mm
- Zinc alloy back fixture
- Strong wear and corrosion resistant stainless steel inner tube
- Noise level 48 dB (A); measuring method DS/EN ISO 3746, actuator not loaded
- Winding isolation class F (155 degrees)

Options:

- LA31 Basic version CARELINE® (no slot in piston rod eye)
- Flexible back fixture
- Reed switch (8 pulses per spindle revolution) for exact positioning of memory control and compatibility with CB9P)
- Hall positioning (for use with CB6 OBF, CB16 OBF, CB20)
- Fast motor
- Mechanical splines (the actuator can only push)
- Jack plug for use with other control boxes than CB9
- Mini-fit cable for use with OpenBus™
- Protection class IPX6
- IPX6 Washable: only with cable placement standard and forward
- Quick release on LA31 (different types of release handle) only available in grey
- 0.2/0.4 m coiled cable with DIN or Jack plug
- Colour: grey
- Safety nut in push
- Mechanical end stop for first failure safety
- Exchangeable cables (also for DIN Reed and protection class IPX6 Washable)
- Emergency lowering



CARELINE®
IMPROVING EFFICIENCY

The LA31 actuator is a very quiet and powerful actuator designed for a variety of applications such as furniture, care or hospital beds. The standard LA31 actuator is available for both the HOMELINE®, CARELINE® TECHLINE® and DESKLINE® product ranges.

Due to its high capacity, design and protection class up to IP66 Washable, the CARELINE® actuator is ideal for the care sector e.g. for beds. The CARELINE® LA31 actuator is available as a standard or a Basic version. The standard LA31 actuator features known parts such as piston rod eye with slot. The LA31 actuator has exchangeable cables and is ideal in combination with OpenBus™ control boxes.

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Usage:

- Duty cycle: Max 10% or 2 minutes continuous use followed by 18 minutes not in use
- Duty cycle of fast motor is only 5%
- Ambient temperature +5°C to +40°C
- The CARELINE system has full compliance with EN 60601-1

Technical specifications:

Spindle type	Spindle pitch (mm)	Max load [N]		Typical Amp.	Typical speed		Self lock Max [N]		
		Push	Pull		Full load	Unloaded	Full load	Push	Pull
Standard 24V motor									
31.1	3	6000	4000	4.0	6.2	3.2	6000	4000	
31.2	5	4000	4000	3.1	11.2	5.4	2000	2000	
31.2 With brake	5	4000	4000	3.3	11.2	5.6	4000	4000	
31.3 With brake	9	1500	1500	2.5	19.4	10.5	1500	1500	
31.4 With brake	4	6000	4000	4.1	8.2	5.4	6000	4000	
31.6 With brake	12	1000	1000	2.4	26.6	14.5	1000	1000	
31.7 With brake	6	2500	2500	2.5	13.2	6.8	2500	2500	
Fast 24V motor									
31.1	3	6000	4000	4.2	8.2	4.9	6000	4000	
31.2	5	4000	4000	3.7	14	6.9	2000	2000	
31.2 With brake	5	4000	4000	4.0	14	6.4	4000	4000	
31.3 With brake	9	1500	1500	2.9	26.6	13	1500	1500	
31.4 With brake	4	6000	4000	5	10.7	5.3	6000	4000	
31.6 With brake	12	1000	1000	2.8	32.6	17.6	1000	1000	
31.7 With brake	6	2500	2500	3.1	16.7	8.3	2500	2500	
Standard 24V motor and Quick release									
31.2 with Quick release, max. release force: 75 kg	5	3500	200	3.3	11.2	5.6	3500	-	
31.3 with Quick release, max. release force: 75 kg	9	1500	200	2.5	19.4	10.5	1500		
31.7 With Quick Release max release force: 50 kg	6	2500	200	2.5	13.2	6.8	2500	-	
Fast 24V motor and Quick release									
31.2 with Quick release with max. release force: 75 kg	5	3500	200	4	14	6.4	3500	-	
31.3 with Quick release with max. Release force: 75 kg	9	1500	200	2.9	26.6	13	1500	-	
31.7 With Quick Release with double worm gear max. release force: 50 kg	6	2500	200	6	15	10	2500	-	

Comments to table:

- The above values are with a CB9 as the power supply.
- LINAK control boxes are designed so that they will short-circuit the motor terminals (poles) of the actuator(s), when the actuator(s) are not running. This solution gives the actuator(s) a higher self-locking ability. If the actuator(s) are not connected to a LINAK control box, the terminals of the motor must be short-circuited to achieve the selflocking ability of the actuator.
- When the load in push is above 4000 N (max. 6000 N), the max. stroke length is 250 mm.

LA31 CARELINE

Ordering example

31 1 1 0 0 - 0 0 1 0 0 2 0

Cables

Jack-cables

0 = Straight 2.25 m
1 = Straight 1.0 m
2 = Coiled 0.40 m
3 = Coiled 0.20 m
6 = Straight 1.50 m
7 = Straight 0.75 m
8 = Straight 0.5 m

Mini-fit cables

For CB20, CB16, CB6 (6 wires)
I = Straight 1.0 m
L = Coiled 0.40 m (Pending*)
M = Straight 2.25 m

DIN-Cables

A = Straight 2.25 m
B = Straight 1.0 m
C = Coiled 0.40 m
D = Coiled 0.20 m
E = Straight 0.25 m
F = Straight 1.50 m
G = Straight 0.75 m
H = Straight 0.50 m

When mounting CB

E = Straight 0.25 m (IP54 / IP66)

Exchangeable cables

K = 0.08 m with Hall feedback for CB6 OBF, CB16 OBF, CB20
P = Mini-fit cable, 0.08 m (Without Hall feedback- REED feedback possible)

IP-Degree:

2 = IPX6
4 = IPX4
9 = IPX6 Washable

Motor type:

0 = 24VDC Standard
3 = 24VDC. Basic fast motor L3

Stroke length:

XXX = (100 - 250 mm = Standard)
(50 - 100 mm and 250 - 600 mm)

Brake:

0 = None
1 = Brake Push
2 = Brake Pull

Option: Spindle

0 = None
1 = Safety Nut
2 = Splines
3 = Splines with safety nut
4 = Mechanical End Stop
5 = Mechanical End stop + Safety Nut
6 = Mechanical End stop + Splines + Safety Nut

Colour:

- = Black
+ = Grey

Option:

0 = None
A = Quick Release Internal - pos. A
B = Quick Release Internal - pos. B
C = Quick Release Internal V0 - pos. A
D = Quick Release Internal V0 - pos. B
E = Emergency lowering
F = Quick Release Std. Grip V0 (Q2)
H = Hall positioning for use with CB6 OBF, CB16 OBF, CB20
I = Quick-Release Std. Grip (Q2)
J = Q.Release Bowden Cable V0 (Q1)
K = Quick Release Bowden cable (Q1)
L = Quick Release Side grip (Q3)
M = Quick Release without grip (Q0)
N = Quick Release side grip V0 (Q3)
P = Quick Release without grip V0 (Q0)
R = REED (not for OpenBus)
S = V0 plast
T = V0 plast + Reed
U = V0 plast + Hall positioning for use with CB6 OBF, CB16 OBF, CB20

Piston rod eye:

0 = Standard with slot (and Quick release)
1 = Standard solid
2 = Standard painted
3 = Standard chromatering

Back fixture:

1 - 2 = Standard with 6.1 mm slot, ø10.1 mm hole
5 - 6 = Flexible, ø10.1 mm hole
7 - 8 = Solid, ø12.1 mm hole
A - B = Standard, 10.5 mm slot, 12.2 mm hole

Spindle type:

1 = 3 mm
2 = 5 mm
3 = 9 mm
4 = 4 mm
6 = 12 mm
7 = 6 mm

Actuator type:

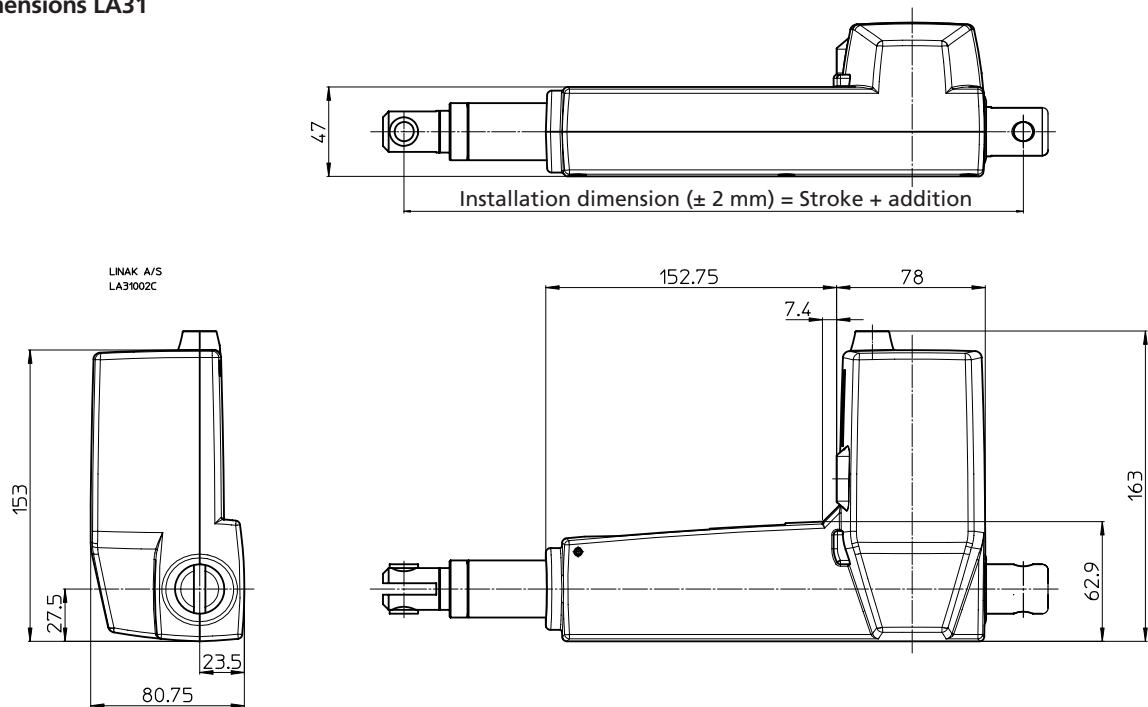
31 = LA31

* Mini-fit cable pending not in stock at present



Option H and U: only together with exchangeable cables K (Hall positioning for use with CB6 OBF, CB16 OBF, CB20)

Dimensions LA31



Standard installation dimensions with different combinations of Piston Rod Eyes and back fixtures to LA31.

	LA31 Standard		LA31 Splines		LA31 External Quick release		LA31 Internal Quick release		LA31 Splines + EL + Mech. End-stop + 50 mm Overlap	
	Stroke	Stroke	Stroke	Stroke	Stroke	Stroke	Stroke	Stroke	Stroke	Stroke
Eye	length>115 mm	length<115 mm	length>100 mm	length<100 mm	length>115 mm	length<115 mm	length>115 mm	length<115 mm	length>100 mm	length<100 mm
	0, 1, 2 and 3	0, 1, 2 and 3	0, 1, 2 and 3	0, 1, 2 and 3	With QR	With QR	0, 1, 2 and 3	0, 1, 2 and 3	0, 1, 2 and 3	0, 1, 2 and 3
Back Fixture	S + 173 mm		S + 189 mm						S + 274 mm	
1/2 and 7/8	288 mm		289 mm						374 mm	
5/6	S + 173 mm		S + 189 mm		S + 227 mm		342 mm		S + 274 mm	
A/B	S + 176 mm		S + 192 mm						S + 277 mm	
	291 mm		292 mm						377 mm	

Min. inst. dim. = 288 mm., with splines = 289 mm., with quick release (ext.) = 342 mm.

Min. installation dimension type I, K, L, M = 342 mm

Min. installation dimension type A, B = 288 mm

- With mechanical end-stop the installation dimension is increased by 20 mm.
- With Emergency Lowering the installation dimension is increased as shown above, include SPLINE, MECHANICAL END-STOP + 50 mm OVERLAP (20 mm from mechanical endstop is included in the 50 mm).

Installation dimensions - explanation of table.

LA31 Standard:

With a stroke length greater than 115 mm, the installation dim. = Stroke length + 173 mm (+ 176 mm with an A / B type back fixture).

With a stroke length of 115 mm or less the installation dim. = 288 mm (291 mm with A / B type back fixture).

LA31 Splines:

With a stroke length greater than 100 mm, the installation dim. = Stroke length + 189 mm (+ 192 mm with A / B type back fixture).

With a stroke length of 100 mm or less the installation dim. = 289 mm (292 mm with A / B type back fixture).

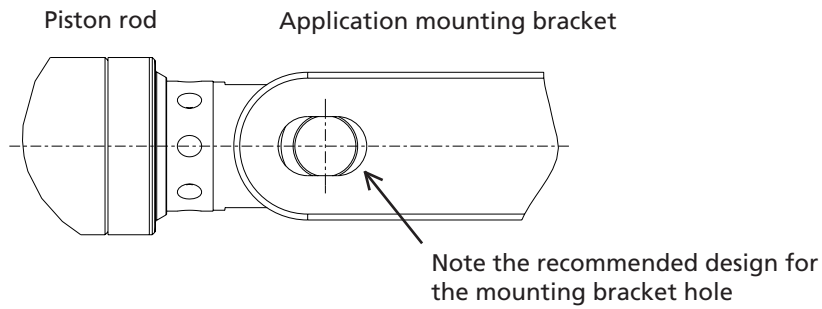
LA31 External Quick Release:

With a stroke length greater than 115 mm, the installation dim. = Stroke length + 227 mm (with type 5 / 6 back fixture). With 115 mm or less the installation dim. will be 342 mm (with type 5 / 6 back fixture).

LA31 Internal Quick Release:

With a stroke length greater than 115 mm, the installation dim. = Stroke length + 173 mm (with type 5 / 6 back fixture). With 115 mm or less the installation dim. will be 288 mm (with type 5 / 6 back fixture).

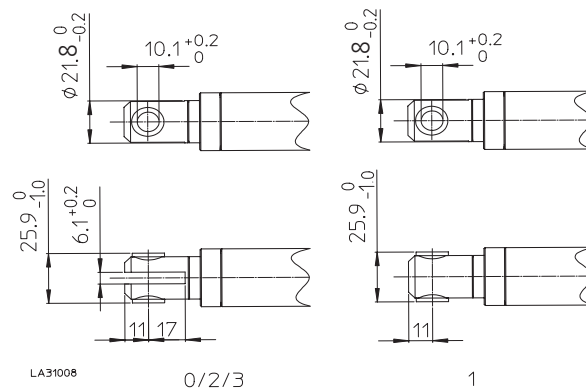
Mounting bracket instructions:



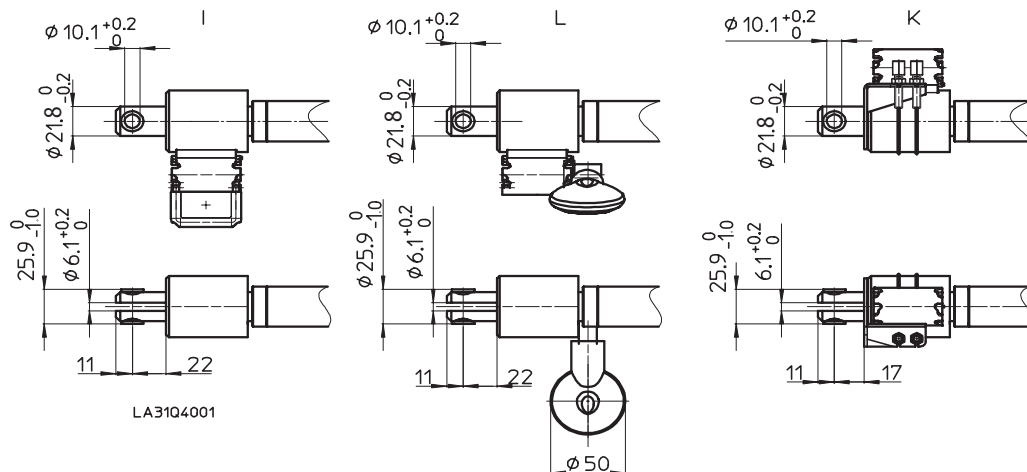
To avoid damage to the actuator.

When the application is in the "rest" position there should be no load / tension on the actuator.

Piston Rod Eyes:



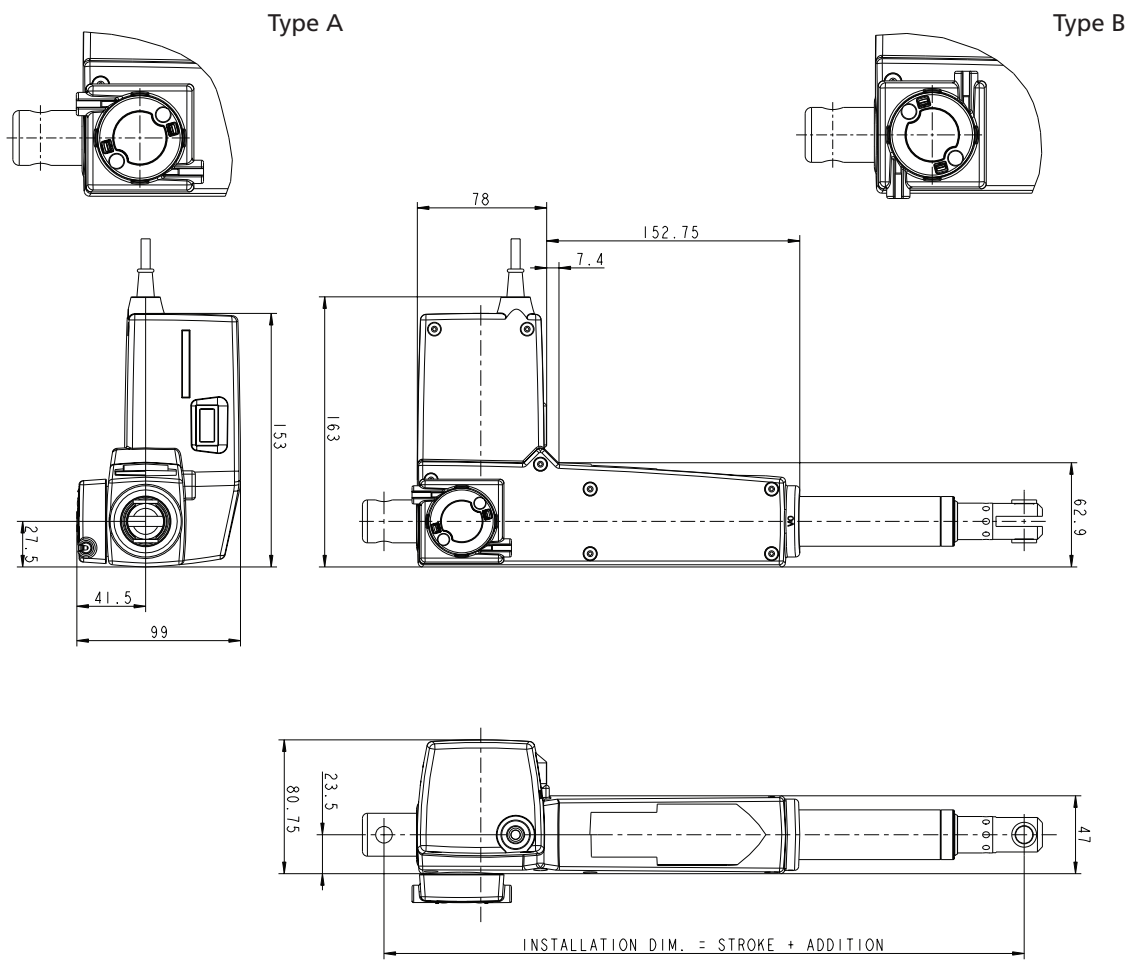
Quick releases:



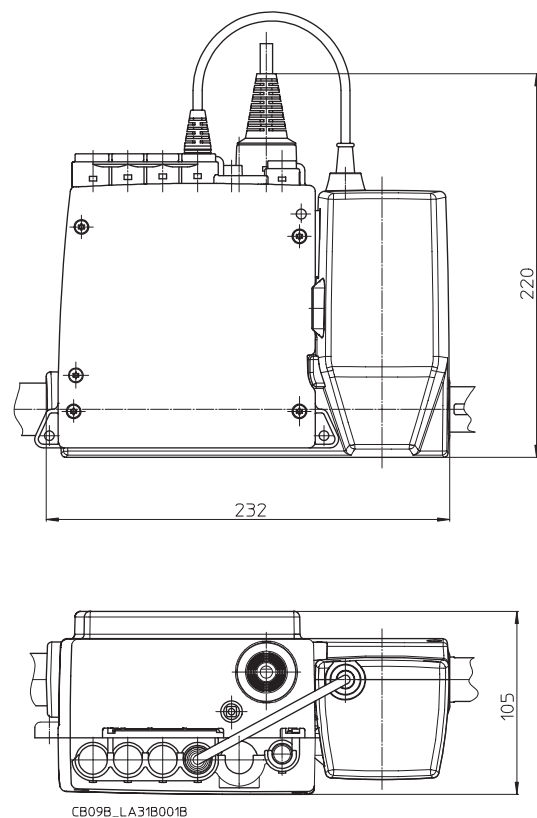
Quick release

- LA31 with external quick release, types I, K, L, and M can maximum pull 200 N. LA31 with quick release types A and B is not designed for use in pull.
- The necessary release force on an actuator with 5 mm pitch is 75 kg for 6 mm pitch = 50 kg.
- It is not possible to combine splines with the external quick release.
- LA31 with quick release is always with brake (push).
- The flexible back fixtures (05 or 06) must be standard when the LA31 is equipped with quick release.
- With QR types A and B, when operating the QR function the QR must be activated all the way down.

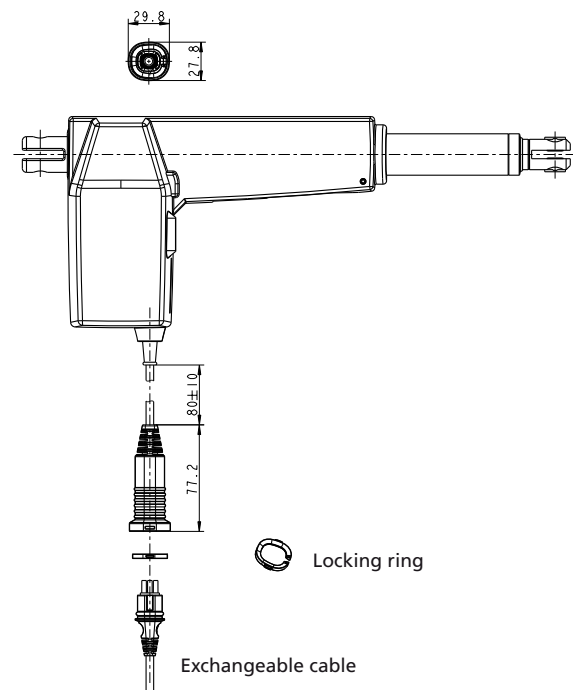
Dimensions: LA31 with internal quick release



Dimensions: LA31 with CB9



LA31 with exchangeable cable connector and ring:



Exchangeable cables

Article number:	Description:	Colour:	Length (mm):
00914572	DIN plug / minifit plug (2 wires)	Grey	2100 mm straight
00914624-200	DIN plug / minifit plug (2 wires)	Grey	200 mm coiled
00914624-400	DIN plug / minifit plug (2 wires)	Grey	400 mm coiled
00914573	JACK plug / minifit plug	Grey	2100 mm straight
00914622-200	JACK plug / minifit plug	Grey	200 mm coiled
00914622-400	JACK plug / minifit plug	Grey	400 mm coiled
00914571	DIN plug / minifit plug (2 wires)	Black	2100 mm straight
00914623-200	DIN plug / minifit plug (2 wires)	Black	200 mm coiled
00914623-400	DIN plug / minifit plug (2 wires)	Black	400 mm coiled
00914569	JACK plug / minifit plug	Black	2100 mm straight
00914621-200	JACK plug / minifit plug	Black	200 mm coiled
00914621-400	JACK plug / minifit plug	Black	400 mm coiled



Locking ring:

Locking ring must be ordered separately. Part no. 0961006-B (for an individual locking ring), please order in multiples of 100 pcs.

Remember to ensure the locking ring is in position when connecting cables.

Exchangeable Reed cables

00914668-200	DIN Reed / minifit plug	Grey	200 mm coiled
00914668-400	DIN Reed / minifit plug	Grey	400 mm coiled
00614667-200	DIN Reed / minifit plug	Black	200 mm coiled
00914667-400	DIN Reed / minifit plug	Black	400 mm coiled
00914666	DIN Reed / minifit plug	Grey	2100 mm straight
00914665	DIN Reed / minifit plug	Black	2100 mm straight

Exchangeable cables from OPENBUS™ CB / CBJH to actuator.

Article number:	Description:	No. of wires:	Colour:	Length (mm):
0694003-300	Minifit to minifit	6	Grey	300 mm straight
0964003-500	Minifit to minifit	6	Grey	500 mm straight
0964003-1000	Minifit to minifit	6	Grey	1000 mm straight
0964003-1250	Minifit to minifit	6	Grey	1250 mm straight
0964003-2500	Minifit to minifit	6	Grey	2500 mm straight
0964002-200	Minifit to minifit	6	Grey	200 mm coiled
0964002-400	Minifit to minifit	6	Grey	400 mm coiled

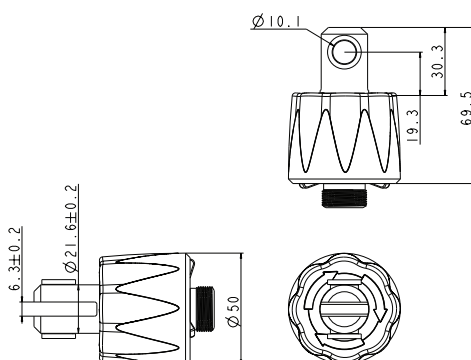
LA31 with Emergency lowering:



The purpose of the EL (Emergency Lowering) is in case of a power-failure, to be able to mechanically lower a patient by turning the EL part in the clockwise direction until the actuator is fully lowered.

The EL part substitutes the std. piston rod eye, and its function is intended for patient hoists. In normal operation the EL part will work as a piston rod eye, but in a failure condition the actuator can be lowered by turning the outer ring manually.

Dimensions:



Features:

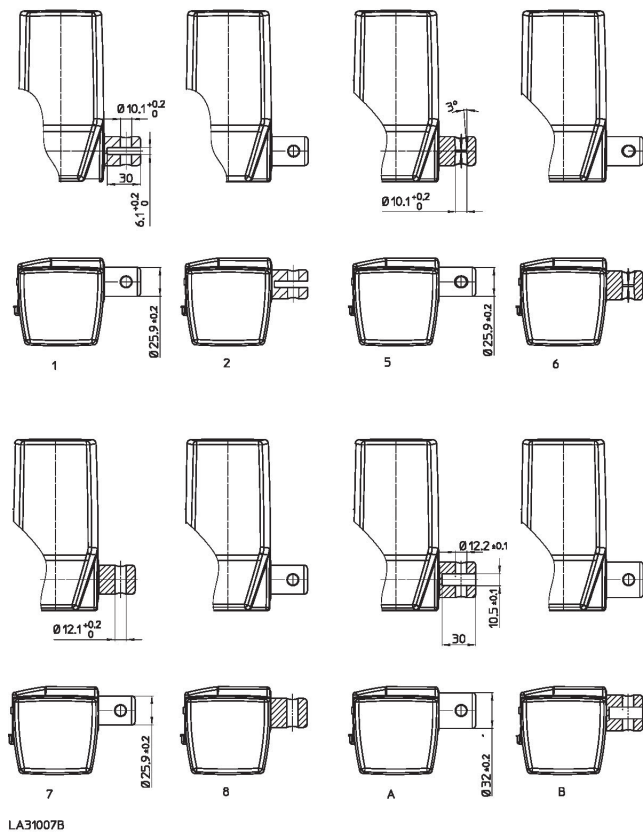
- Mechanical lowering of actuator
- Zinc piston rod eye - slotted
- With Ø10.1 POM bushings
- Max. 6000N in push
- Only 3 mm and 4 mm pitch actuators
- IPx4
- Grey - RAL 7035

Precautions:

- An addition of 35 mm to installation dimension compared to standard (with spline)
- Only for push applications
- Use spline actuators
- Cannot be retro fitted

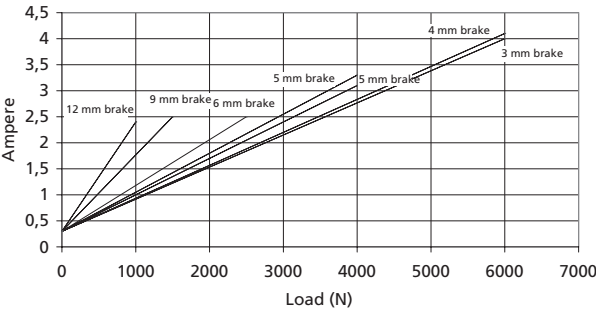
Drawing no. 03111202

Back fixtures:

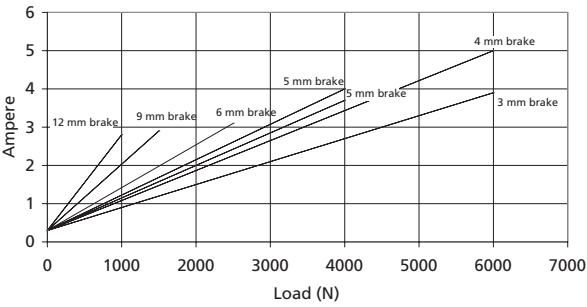


Curves:

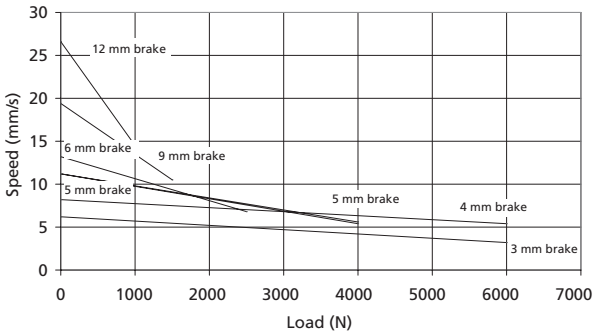
LA31 24V std. motor current v's load



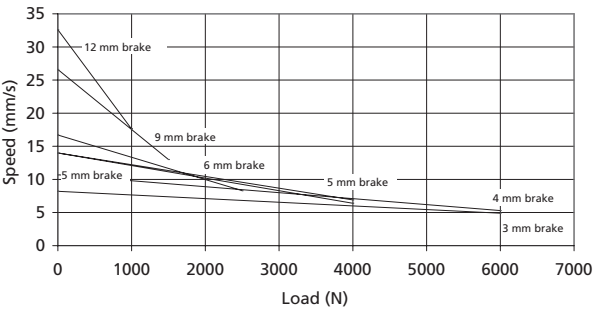
LA31 24V Fast motor current v's load



LA31 24V Std. motor speed v's load



LA31 24V Fast motor speed v's load



Terms of use

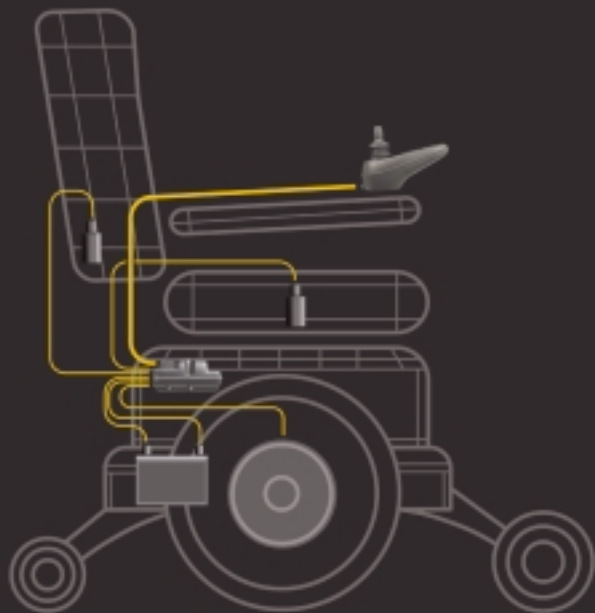
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Příloha č. 5

VR2

NEW HORIZONS

VERSATILE
WHEELCHAIR
CONTROL
SYSTEM FOR
TODAY'S
ENVIRONMENT



system

VR2

VERSATILE CONTROL SYSTEM
FOR WHEELCHAIRS

VR2 WHEELCHAIR CONTROL SYSTEM

- Compact Power Module
- Stylish Joystick Module
- Drive plus 1 or 2 actuators
- Flexible and manageable cable
- Easy installation onto all types of wheelchair
- Simple and familiar programming
- TÜV certified, documentation for FDA/CE
- Service-friendly

JOYSTICK MODULE

- Ergonomic and stylish design
- Low force pushbuttons
- Simple and clear displays
- User-friendly speed control
- Up to 5 drive profiles
- Field serviceable components

POWER MODULE

- 60A and 70A versions
- Superior drive control
- High power charger connector
- Versatile inhibit inputs
- Readily available mating connectors



PG DRIVES TECHNOLOGY

The small, robust

The VR2 sets new standards of performance and value for mainstream wheelchair controllers. The configuration comprises a compact Power Module and an extremely well styled Joystick Module. These are interconnected by a convenient cable, which can be easily routed and secured, and is equally suitable for both powerbase and folding wheelchair models. PGDT's previous series, the VSI controller, set a high precedent but the VR2 beats that performance, as well as introducing many new features. The VR2's power, superb drive control and flexibility of seating adjustment really set new standards of versatility for a controller in this category. Conversion to VR2 is simple and easy; the Joystick Module has the same fixing hole pitch as the VSI, meaning little or no modifications to armrests. Full documentation packages for FDA and CE files are available and the product has TÜV certification.

VR2

VR2 JOYSTICK MODULE

Two versions of the Joystick Module are offered - drive only and drive with seat actuator control. Both versions are ergonomic in their design and stylish in their appearance, enhancing the looks of any wheelchair to which they are fitted. The controls are simple and easy to understand, making it very easy for new wheelchair drivers to become quickly confident. Proven push-button technology has been used for the keypad and high-intensity LEDs for the displays; and there is volume adjustable, audible feedback of all user operations. Via simple programming, the VR2 can be configured to operate with single or multiple drive profiles, up to a maximum of 5. This gives the option to create unique drive performance personalities, which the user can easily select to suit the wheelchair's environment. As has been standard with PGDT for many years, the Joystick Module contains an off-board charging socket and supports a security lock function.



The thin and flexible interconnecting cable is ideal for use on swing-away arm mechanisms. Because the cable is 'pig-tailed' to the Joystick Module, there is no rigid protruding connector that could possibly receive damage.



PG DRIVES TECHNOLOGY

system that's flexible and simple to install with

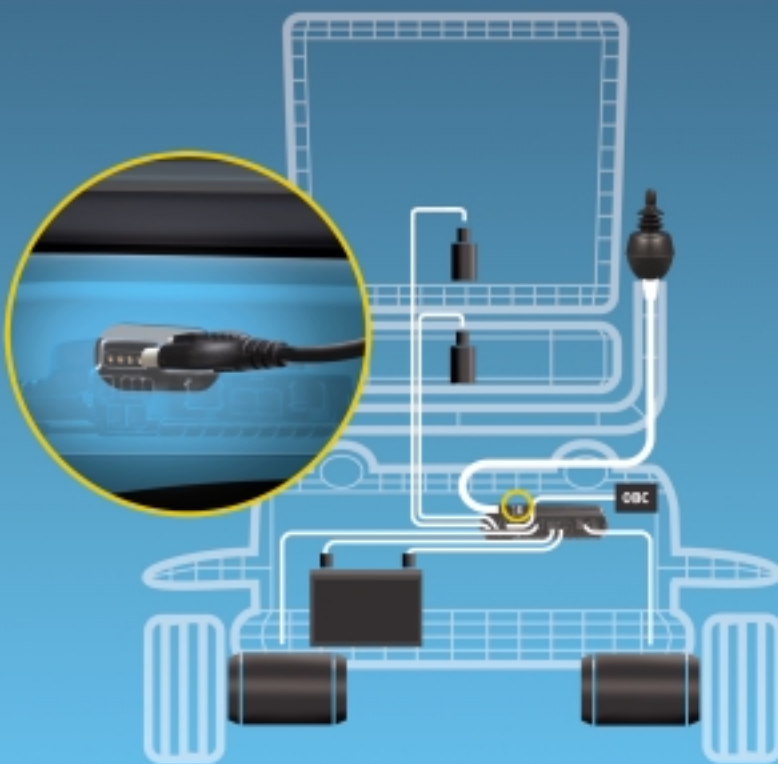
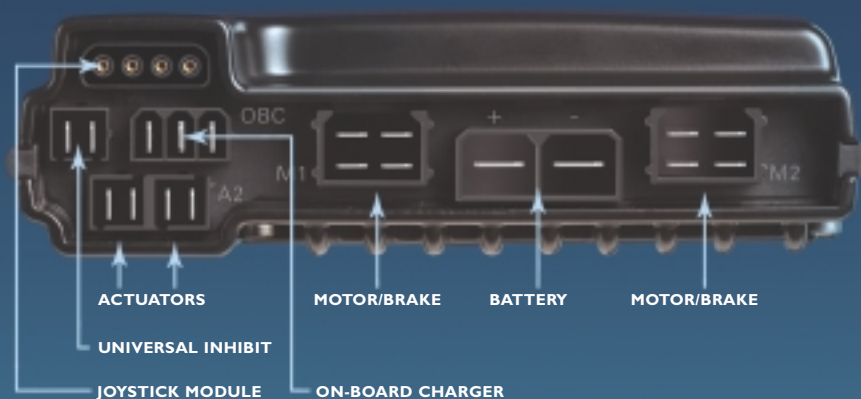
VR2 POWER MODULE

To offer the optimum combination of power and price, the Power Module comes in two forms - a full 60A model and a full 70A model. These current ratings provide much more than just a short burst of high current, which in turn means that manufacturers can specify heavier load ratings or faster speeds for their wheelchairs. Perhaps the most exciting aspect of the Power Module is its drive control capability. Advances in PGDT's software design have led to a gradient performance never previously available in cost-effective systems. If the wheelchair is driven up a hill, there is practically zero roll-back between the time the joystick is released and the brakes are applied.

To add further value to the system, the Power Module can be populated to drive 1 or 2 seat actuators. Each output channel has a 12A capability and automatic end-stop detection, meaning there is no need to fit expensive and potentially unreliable limit switches.

A high-power connector, primarily intended for an On-Board Charger, is fitted to the Power Module as standard. The 12Arms rating of this connector means it can be safely used for charging even large capacity batteries. A universal inhibit pin is included, which can be set-up for compatibility with any type of charger inhibit output. A second inhibit connection is also provided and can be used wherever there is a need to limit the speed or prevent the drive of the wheelchair. Each of these inhibits can be programmed independently, with each offering four different programmable speed levels depending on the state of the inputs. This unique flexibility is further enhanced by innovative, new actuator interlocking functions, whereby the VR2 can be programmed to lock-out movement of either actuator in either or both directions, in response to switches or potentiometers connected to one or both of the inhibit inputs. This is a level of functionality never previously available, even within very complex control systems.

The entire connection system for the Power Module has been designed not only to the highest standards of reliability, but also with cost and logistics in mind. All mating connectors are reasonably priced and easily available from PGDT UK, PGDT US or our connector partner in Asia.

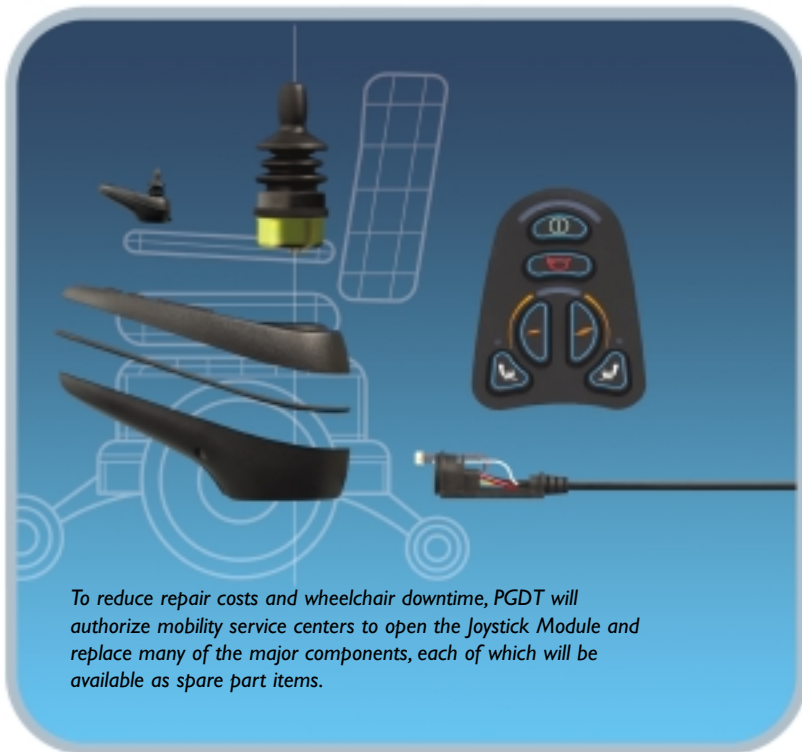


PG DRIVES TECHNOLOGY

cost-effective servicing

PROGRAMMING AND SERVICE

- The VR2 is programmable using either the PPI Handheld Programmer or PGDT's PC Programmer. Both methods provide familiar and user-friendly adjustment of drive performance parameters, making it simple to tune a wheelchair to the preferences of an individual user. The PC Programmer has comprehensive and informative diagnostics help, intended to aid the service professional in effecting timely and correct repairs.



- PGDT's eWarranty is an exciting new scheme, through which a mobility service center can report a suspected defective controller directly to PGDT, via our website. If the controller is within the warranty period and has a genuine defect, then a replacement unit will be promptly dispatched. Part of the submission is to supply programming information; this is then used to program the replacement exactly as the original, meaning the new unit can be fitted without further adjustment. The reporting process also aims to eliminate correctly functioning controllers being returned inadvertently.

Training courses, within North America and Europe, are also available. The standard sessions concentrate on mobility vehicle diagnosis, service and repair; however, custom training can be provided to cover any aspect of PGDT's products and services.

For more information on servicing, eWarranty and training, visit our website pgdt.com



PG DRIVES TECHNOLOGY

VR2

SPECIFICATIONS

Supply Voltage:	24 Vdc
Operating voltage:	16Vdc to 28Vdc
Peak Voltage:	38Vdc
Reverse battery voltage:	40Vdc
Drive current:	60A
	70A
PWM Frequency:	20kHz
Brake Voltage:	Programmable, 12Vdc or 24Vdc
Brake Current:	1A max. per brake
Battery Charging Current:	12Arms max.
JSM Charger Connector:	Use Neutrik NC3MX
PM Charger Connector:	Use PG D50752
Actuator Current:	12A max.
Moisture Resistance:	IPX4
Safety:	Multiple hardware & software strategy Designed to ISO7176/14
Operating temperature:	-25°C to 50°C
Storage temperature:	-40°C to 65°C
EMC on sample powerchair	
Susceptibility:	Tested at 30V/m to EN12184 and ANSI/RESNA requirements
Emissions:	To EN55022 class B
ESD:	IEC801 part 2

For further details refer to VR2 Technical ManualSK78064



PG DRIVES TECHNOLOGY

A SPRENT Company



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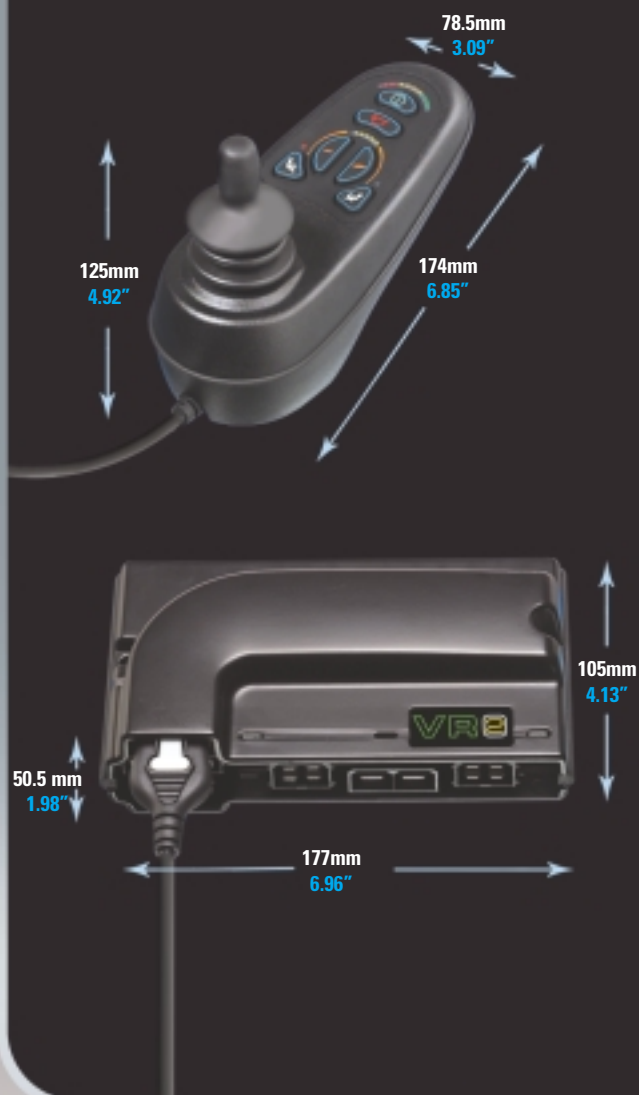
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DIMENSIONS



SK78064/04/05

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