



Automating pool covers

Main catalogue for drives, control units and accessories
from **Becker**.



BECKER
Together it's easier.

Your satisfaction is what drives us: For solutions you'll be happy to explore.



The best thing about our ideas is their flexibility

Developed and produced in Germany, our drive solutions can be integrated into almost any application with flexibility.

The wide range of applications and sectors in which our drives are already being successfully used proves just how versatile they are in terms of their technical usage possibilities: Whether in the area of smoke and fire protection, in agriculture, the caravanning sector or the shipping industry. Becker drives can be found wherever the associated technologies require power that is reliable, safe and above all compatible with the relevant components – and this also applies to the automation of pool covers.

Our drives taken one step further for your ideas



In line with our “Together it’s easier” claim, we can provide you with a drive

assembly kit system that is primarily intended for applications for which no standard drive solutions exist.

After all, our technology is tried and tested, giving you the security of an established, technically proven solution.

Smart protection for every season

Our drive systems powered by direct current mean that pool covers can be moved with ease. This provides multiple benefits for swimmers to enjoy all year round.



Clean: Leaves, pollen and insects are kept out thanks to the pool cover. This keeps the pool cleaner, meaning that less cleaning is required. This saves both time and money.



Economical: Less dirt and heat loss from the pool also saves both time and energy.

Quality to rely on



Today we operate globally, but as a family-owned business, we have kept our roots in the town of Sinn, in

Hesse, where the company was first established. And we continue to manufacture our products in Germany. What’s more, every drive is subjected to comprehensive testing on our specially developed test benches, ensuring quality that you and your customers can rely on-and we’ve been doing this for 100 years.

Simply efficient



We regard it as our key drive that we are certified to DIN EN ISO 9001 and that we strive constantly to become

even better for our customers and partners. At the same time, we take our environmental responsibility very seriously, so energy efficiency is high on our list of priorities. For solutions that are guaranteed to succeed on a permanent basis.



Temperature-controlled: A pool cover has an insulating effect and prevents unnecessary heat loss. This keeps the pool comfortable while also reducing heating costs.



Safe: An automated pool cover means that people or animals cannot accidentally fall into the water. The risk of accident is significantly reduced.



Together it's easier
is the philosophy
we live by.



Frank Haubach
Sales and Marketing Manager

Dear customer,

We are both operating in an exciting market. While automated drives and control units for an extremely wide range of applications were previously seen as luxuries, Smart Home is now here to change the world.

More and more people are enjoying this new way of living and are taking steps to make their lives easier.

Both then and now, we at Becker have one key aim: we want to work together with you to be a reliable partner for our customers. Whether in complex building automation or the provision of high-quality drive technology in and around the home.

We are delighted to be presenting this catalogue highlighting the application possibilities of our drives and control units for pool covers. If you have any questions or comments when planning your projects, please don't hesitate to give us a call.

Yours,

Frank Haubach

Frank Haubach
Sales and Marketing Manager

PS: Do you know about our BECKER Academy? It's where we offer training courses and seminars on everything to do with our drives and control units. Further information on this can be found at www.becker-antriebe.de

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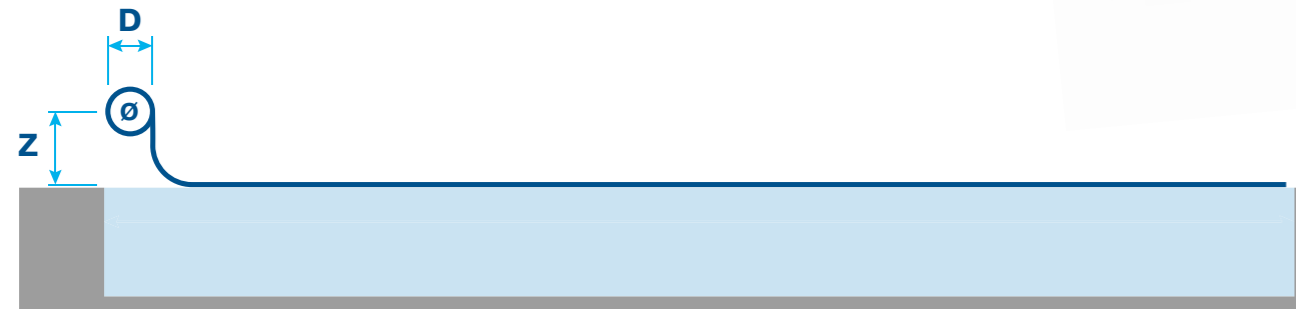
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Technical Information

Determining the drive torque requirements

To determine the required drive torque, various parameters need to be known. The load table below provides an initial overview and serves as a rough guide. We will gladly support you in calculating the drive torque requirements for your pool cover.



Load table

Calculation basis:

- Height above water (Z): 400 mm
- Specific shutter weight: 5 kg/m²
- Barrel diameter (D): 133 mm
- Shutter thickness: 16 mm
- Friction and water resistance: 20 %

		Length of the pool [m]																			
		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Width of the pool [m]	2,0	8	10	11	12	12	13	14	15	15	16	17	17	18	18	19	19	20	20	21	Type XL35
	2,5	10	12	13	14	15	16	17	18	19	20	21	22	22	23	24	24	25	26	26	
	3,0	12	14	16	17	18	20	20	22	23	24	25	26	27	27	28	29	30	31	31	Type XL60
	3,5	14	17	18	20	21	23	24	26	27	28	29	30	31	32	33	34	35	36	37	
	4,0	16	19	21	23	24	26	27	29	30	31	34	35	36	37	38	39	40	41	42	Type XL120
	4,5	18	21	24	26	27	30	31	33	34	35	38	39	40	41	42	44	45	46	47	
	5,0	20	24	26	29	30	33	34	37	38	39	42	43	45	46	47	48	50	51	52	
	5,5	22	26	29	32	33	36	38	40	42	43	46	48	49	50	52	53	55	56	58	
6,0	24	29	32	35	36	39	41	44	46	47	50	52	53	55	57	58	60	61	63		
6,5	26	31	34	38	39	43	44	48	49	51	55	56	58	60	61	63	65	66	68		
7,0	28	33	37	41	42	46	48	52	53	55	59	60	62	64	66	68	70	71	73		
7,5	30	36	40	43	45	49	51	55	57	59	63	65	67	69	71	73	75	77	78		
8,0	32	38	42	46	48	53	55	59	61	63	67	69	71	73	75	77	80	82	84		
Winding bale diameter [m]	0,26	0,29	0,33	0,36	0,39	0,41	0,44	0,45	0,49	0,50	0,52	0,53	0,57	0,58	0,60	0,61	0,63	0,65	0,66		

Attention: Values below the red line exceed BECKER's maximum permissible total weight of 150 kg drawbar load on the drive head.

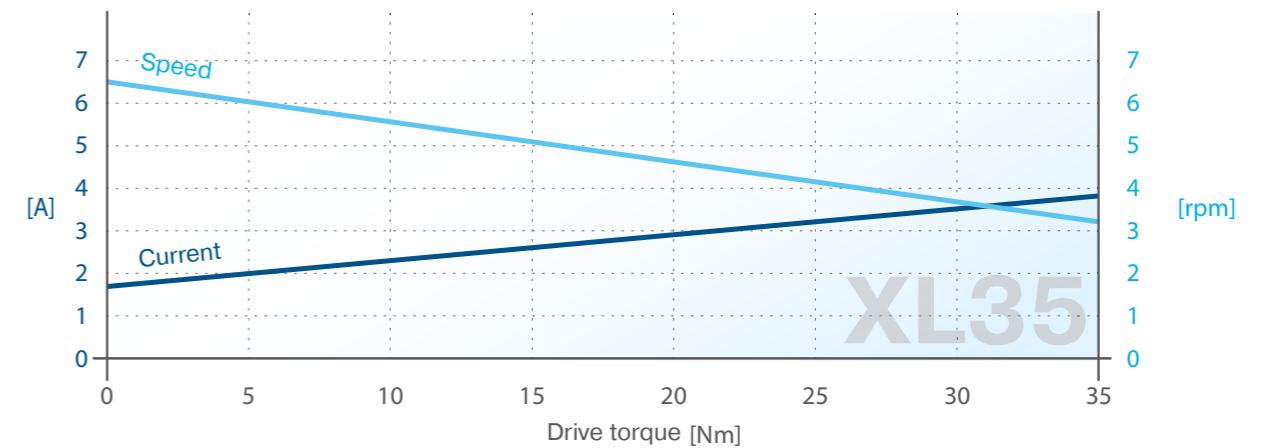
Exclusion of liability:
All specifications are calculated values based on physical variables and are dependent on the particular system as well as external factors. This load table has been created with the utmost care. Becker-Antriebe GmbH accepts no liability for incorrect drive setups arising from the use of this load table. Becker-Antriebe GmbH reserves the right to make changes to the load table at any time and without prior notice.

INFO

Permissible cable lengths and cross-sections must be respected. A regenerative effect may occur during the breakaway part of the unrolling process. This must be taken into account when selecting the control unit.

Drive torque - speed - current consumption relationship using the example of an XL35/3G 4A

For physical reasons, the speed decreases in a linear fashion as the drive torque increases. The current consumption increases in a linear fashion at the same time.



Protection against water

The various IP classifications ensure that electrical operating equipment is reliably protected against external influences. This applies in particular to the effects of weather as well as dust or moisture.

International Protection IP 55

Protection against the intrusion of foreign bodies:		Protection against the ingress of water:	
No protection	0	No protection	0
> 50 mm	1	Vertically dripping water	1
> 12,5 mm	2	Dripping water when tilted (15°)	2
> 2,5 mm	3	Spray water up to 60° from the vertical	3
> 1 mm	4	Spray water from all sides	4
Protected against dust that may harm equipment	5	Water jets from any angle	5
Dust-tight	6	Powerful water jets	6
		Temporary immersion	7
		Permanent immersion	8



DC drives










for barrels with 63 mm or larger diameter

XL35/3G 4A

Can be used with:

- Above-ground pool covers

Functions

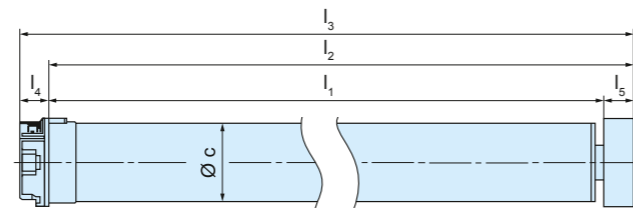
 Mechanical limit switching	 12 V DC power supply	 Running time: 8 minutes
 End position adjustment: Point to point	 Increased axial load The drive can be statically loaded with up to 150 kg	 Integrated closed circuit current brake Holds the drive in position when de-energised
 Suitable for left and right installation	 Protected against water jets Increased protection against the ingress of water	 4-wire connecting cable

Technical data

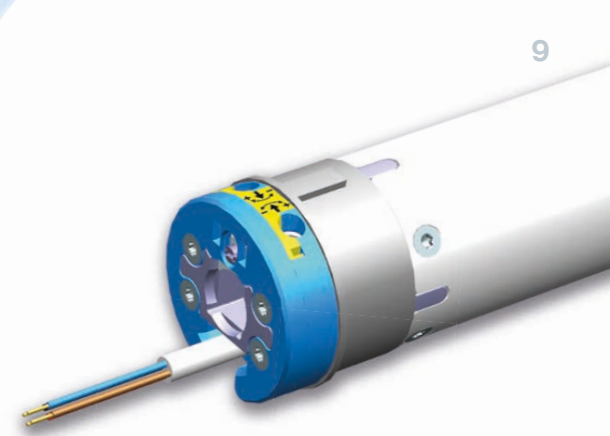
Designation	XL35/3G 4A
Item number	2035 096 009 0
Drive torque (Nm)	35
Speed (rpm)	3
Rated voltage (V DC)	12
Nominal current (A)	3,6
Power consumption (W)	43
IP class of protection	IP55
Class of protection	III
Operating mode	S2 8min
Cable length (m)	4
Cable type	Rubber - S05RN-F 4x1 white

Dimensions (in mm)

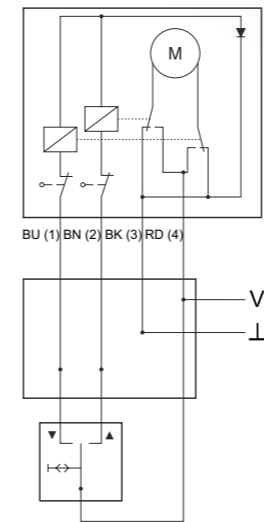
L1	L2	L3	L4	L5	ØC
582	612	632	20	30	58



*Drive adapter width of "Drive adapter 98x2" (4931 300 115 0), if a different drive adapter is selected, the dimensions L₂, L₃ and L₅ will be different



Wiring diagram



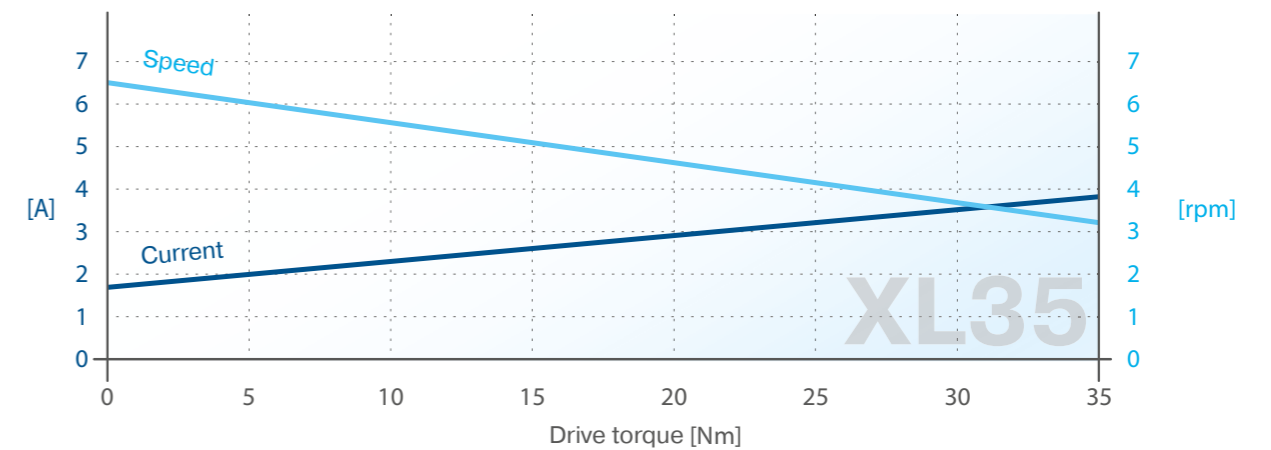
Top highlight

XL35/3G 4A

IP55

Protected against water jets
Increased protection against the ingress of water

Drive torque-speed-current diagram**



**See also the technical information on page 6 - 7

DC drives










for barrels with 63 mm or larger diameter

XL60/4G 4A

Can be used with:

- Above-ground pool covers

Functions

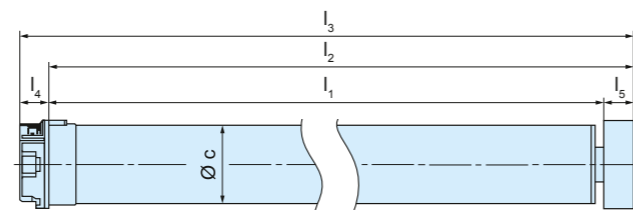
 Mechanical limit switching	 24 V DC power supply	 Running time: 8 minutes
 End position adjustment: Point to point	 Increased axial load The drive can be statically loaded with up to 150 kg	 Integrated closed circuit current brake Holds the drive in position when de-energised
 Suitable for left and right installation	 Protected against water jets Increased protection against the ingress of water	 4-wire connecting cable

Technical data

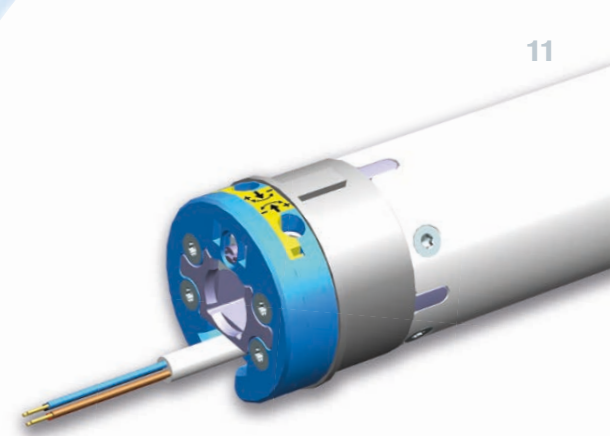
Designation	XL60/4G 4A
Item number	2060 096 106 0
Drive torque (Nm)	60
Speed (rpm)	4
Rated voltage (V DC)	24
Nominal current (A)	4
Power consumption (W)	160
IP class of protection	IP55
Class of protection	III
Operating mode	S2 8min
Cable length (m)	4
Cable type	Rubber - S05RN-F 4x1 white

Dimensions (in mm)

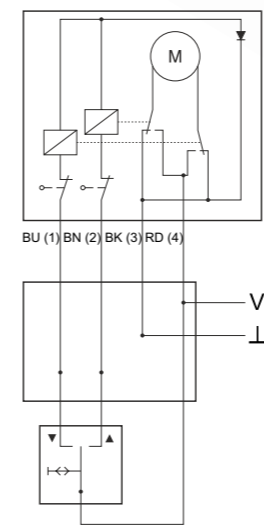
L1	L2	L3	L4	L5	ØC
582	612	632	20	30	58



*Drive adapter width of "Drive adapter 98x2" (4931 300 115 0), if a different drive adapter is selected, the dimensions L₂, L₃ and L₅ will be different



Wiring diagram



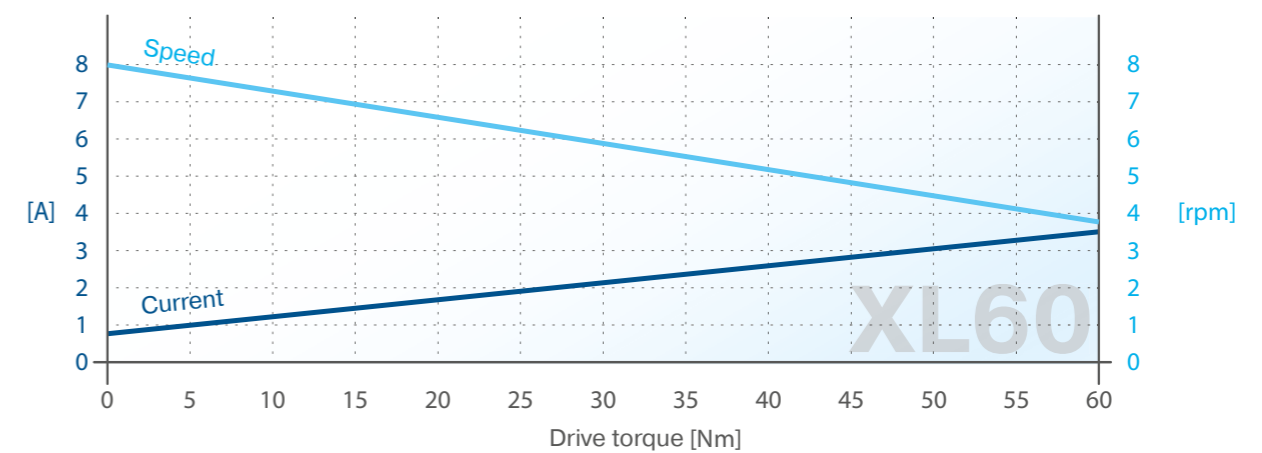
Top highlight

XL60/4G 4A

IP55

Protected against water jets
Increased protection against the ingress of water

Drive torque-speed-current diagram**



**See also the technical information on page 6 - 7

DC drives










for barrels with 63 mm or larger diameter

XL120/3G 4A

Can be used with:

- Above-ground pool covers

Functions

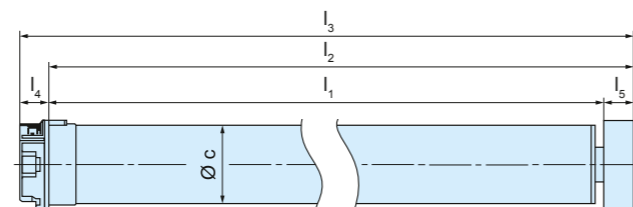
 Mechanical limit switching	 24 V DC power supply	 Running time: 8 minutes
 End position adjustment: Point to point	 Increased axial load The drive can be statically loaded with up to 150 kg	 Integrated closed circuit current brake Holds the drive in position when de-energised
 Suitable for left and right installation	 Protected against water jets Increased protection against the ingress of water	 4-wire connecting cable

Technical data

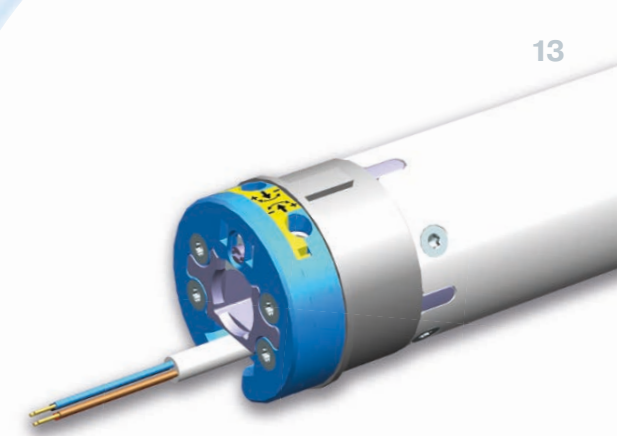
Designation	XL120/3G 4A
Item number	2120 096 007 0
Drive torque (Nm)	120
Speed (rpm)	4
Rated voltage (V DC)	24
Nominal current (A)	5
Power consumption (W)	120
IP class of protection	55
Class of protection	III
Operating mode	S2 8min
Cable length (m)	4
Cable type	Rubber - S05RN-F 4x1 white

Dimensions (in mm)

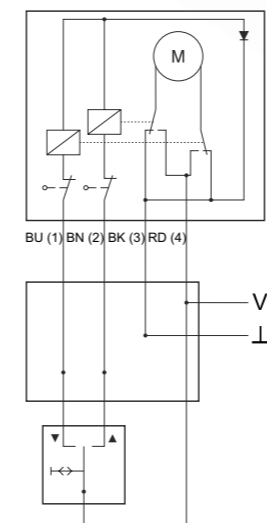
L1	L2	L3	L4	L5	ØC
606	636	656	20	30	58



*Drive adapter width of "Drive adapter 98x2" (4931 300 115 0), if a different drive adapter is selected, the dimensions L_2 , L_3 and L_5 will be different



Wiring diagram



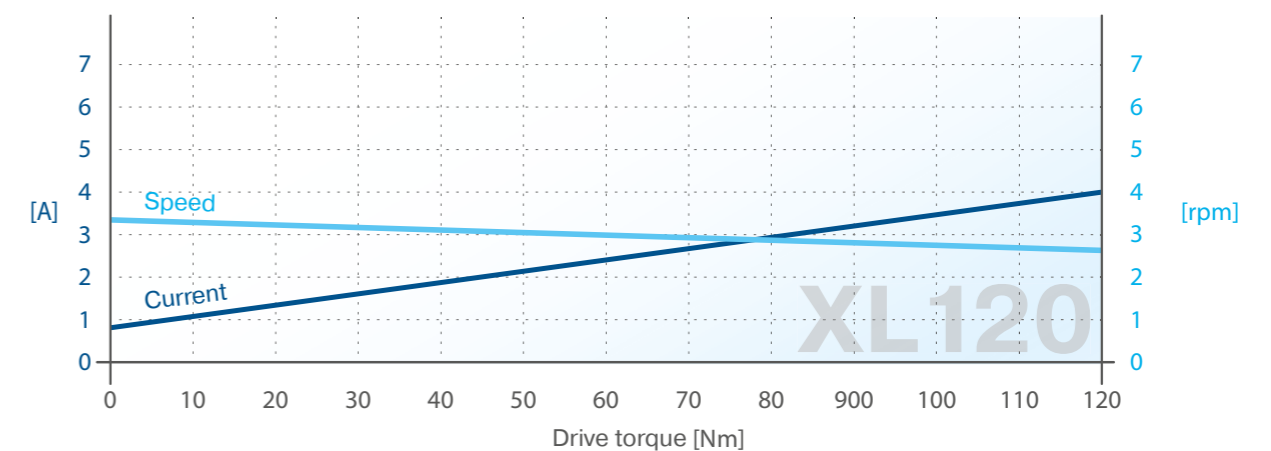
Top highlight

XL120/3G 4A

IP55

Protected against water jets
Increased protection against the ingress of water

Drive torque-speed-current diagram**



**See also the technical information on page 6 - 7

DC drives










for barrels with 63 mm or larger diameter

XL200/3G 4A

Can be used with:

- Above-ground pool covers

Functions

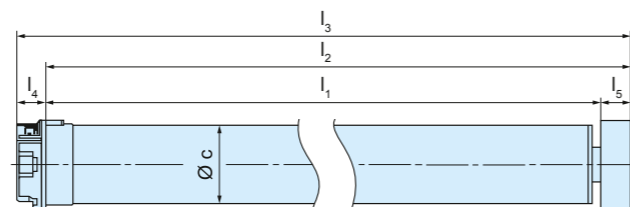
 Mechanical limit switching	 24 V DC power supply	 Running time: 8 minutes
 End position adjustment: Point to point	 Increased axial load The drive can be statically loaded with up to 150 kg	 Integrated closed circuit current brake Holds the drive in position when de-energised
 Suitable for left and right installation	 Protected against water jets Increased protection against the ingress of water	 4-wire connecting cable

Technical data

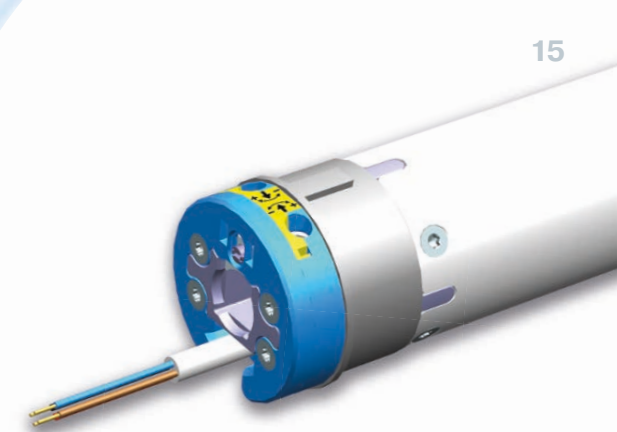
Designation	XL200/3G 4A
Item number	2200 096 001 0
Drive torque (Nm)	200
Speed (rpm)	3
Rated voltage (V DC)	24
Nominal current (A)	6,8
Power consumption (W)	163
IP class of protection	55
Class of protection	III
Operating mode	S2 8min
Cable length (m)	4
Cable type	Rubber - S05RN-F 4x1 white

Dimensions (in mm)

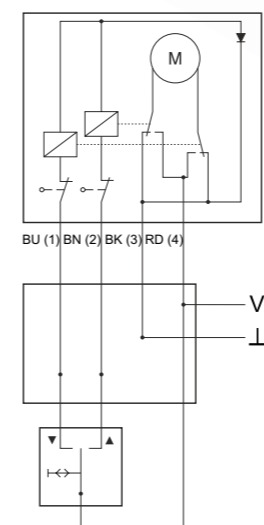
L1	L2*	L3*	L4	L5*	ØC
776	806	826	20	30	58



*Drive adapter width of "Drive adapter 98x2" (4931 300 115 0), if a different drive adapter is selected, the dimensions L₂, L₃ and L₅ will be different



Wiring diagram



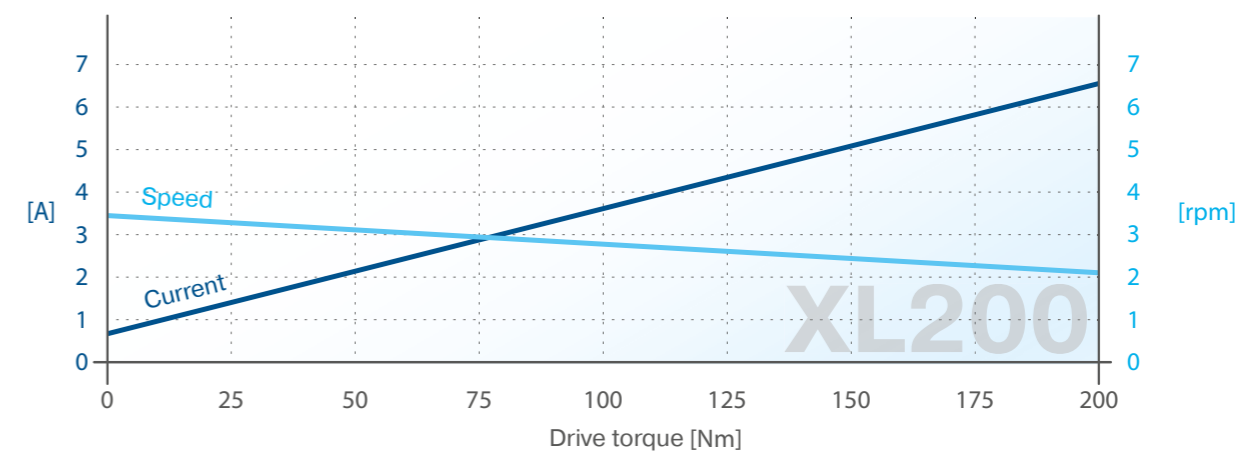
Top highlight

XL200/3G 4A

IP55

Protected against water jets
Increased protection against the ingress of water

Drive torque-speed-current diagram**



**See also the technical information on page 6 - 7

Control units

DC control unit GS2 / GS2-P



DC control unit for operating tubular drives with safety extra-low voltage 12/24 V DC

- Output voltage: 12/24 VDC
- Pushbutton input UP/DOWN
- In plastic housing

Item no. 4007 000 023 0 (12 V)	
Item no. 4007 000 016 0 (24 V)	
Item no. 4007 000 021 0 (GS2-P, excl. connection cable)	
Colour	Light grey
Dimensions W x H x D	182x180x90 mm
Mains connection	230 V/50 Hz
Degree of protection	IP65
Loading capacity	9 A (12 V) / 7,5 A (24 V)
Type of mounting	In surface-mounted housing
Class of protection	II

DC control unit GSA 24 V / 7,5 A



Control unit for overload cut-off for 24 V tubular drives

- Output voltage: 24 V DC
- Pushbutton input UP/DOWN
- Overload cut-off > 7,5 A
- In plastic housing

Item no. 4007 000 017 0	
Colour	Light grey
Dimensions W x H x D	94 x 94 x 58 mm
Mains connection	24 V DC
Degree of protection	IP65
Loading capacity	7,5 A / 24 V
Type of mounting	In surface-mounted housing
Class of protection	III

DC control unit GSA 24 V / 2,5 - 6,5 A

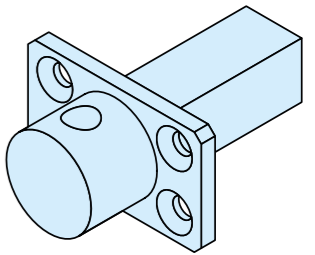


Control unit for the adjustable overload cut-off for 24 V tubular drives

- Output voltage: 24 V DC
- Pushbutton input UP/DOWN
- Infinitely adjustable overload cut-off 2,5 - 6,5A
- In plastic housing

Item no. 4007 000 018 0	
Colour	Light grey
Dimensions W x H x D	94 x 94 x 58 mm
Mains connection	24 V DC
Degree of protection	IP65
Loading capacity	2,5 - 6,5 A / 24 V
Type of mounting	In surface-mounted housing
Class of protection	III

Mechanical accessories



3 steps to the right accessories.

To power your application, please select the right combination. We will be happy to advise you on this.

1

Wall bracket: Select an appropriate wall bracket depending on the design features and the required drive torque.

2

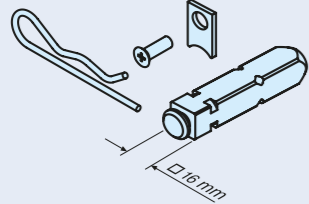

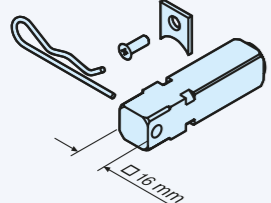

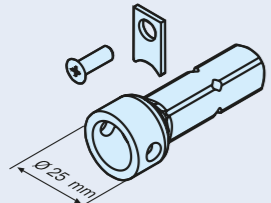

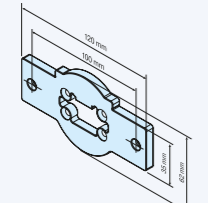

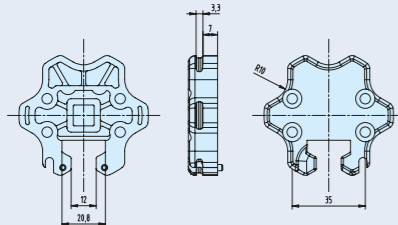

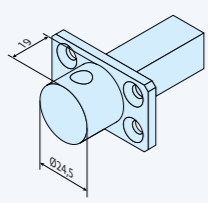

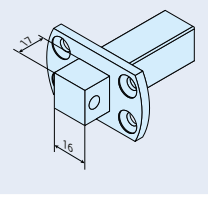

Connecting piece: The connecting piece is attached to the drive and forms the connection to the wall bracket. Select a connecting piece that is compatible with the wall bracket.

3

Drive adapter + ring: To establish the connection to the barrel, select the matching adaptation. This consists of a drive adapter and a ring.

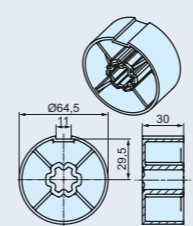
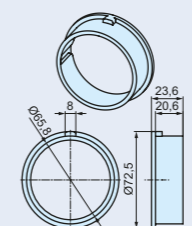
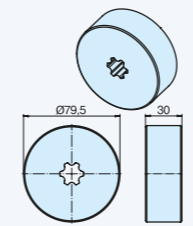
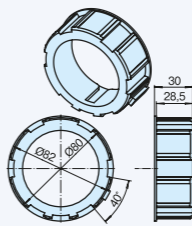
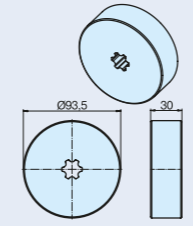
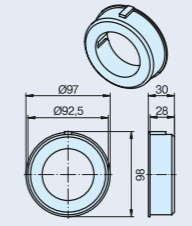
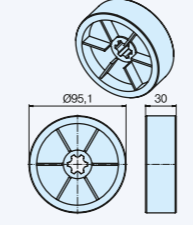
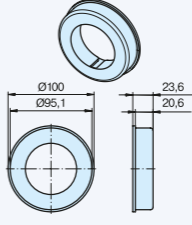
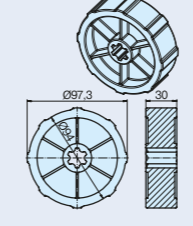
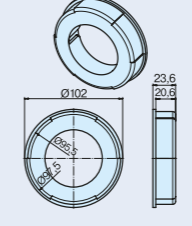
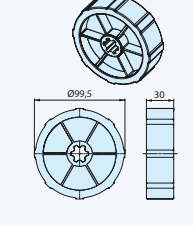
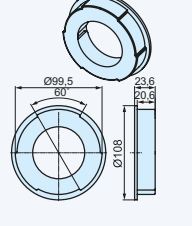
Connecting piece

Tubular drives XL35 – XL200

Connecting piece	Designation	Use for drive type	Item number
	Mounting pin L 1/16 square, 16 mm Material: Galvanised steel	 XL35-XL120	4931 200 040 0
	Mounting pin L 2/16 square, 16 mm Material: Galvanised steel	 XL35-XL120 Note: For wall brackets with 16 mm square receptacle (4931...)	4931 200 034 0
	Mounting pin L 3/25 round, d = 25 mm Material: Galvanised steel	 XL35-XL200	4931 200 035 0
	B-strip L Material: Diecast zinc	 XL35-XL60	4931 300 169 0
	Star adapter L Material: Plastic	 XL35-XL120	4931 300 416 0
	Mounting pin with screw-on bracket Material: Stainless steel	 XL35-XL200	4931 200 108 0
	Mounting pin with screw-on bracket Material: Galvanised steel	 XL35-XL120	4931 200 109 0

Drive adapters and rings

Round tube

Drive adapter	Ring	Designation	Item number
		Drive adapter 70x2 Ring 70x2	4931 300 085 0 4931 060 707 4
		Drive adapter 83x1.5 / 85x2.5 Ring 83x1.5 / 85x2.5	4931 300 119 0 4931 300 125 0
		Drive adapter 98x2 Ring 98x2	4931 300 115 0 4931 300 126 0
		R7 – R25 Drive adapter 100x2 Ring 100x2 Ring 63x1.5	4931 300 167 0 4931 300 160 0
		Drive adapter 102x2 Ring 102x2	4931 300 104 0 4931 300 049 0
		Drive adapter 108x3.6 Ring 108x3.6	4931 300 155 0 4931 300 043 0

Drive adapters and rings

Round tube

Drive adapter	Ring	Designation	Item number
		Drive adapter 133x2	4931 300 120 0
		Ring 133x2	4931 300 127 0
		Drive adapter 140x5	4931 300 438 0
		Ring 140x5	4931 300 439 0
		Drive adapter 159 x 4	4931 300 172 0
		Ring 159 x 4	4931 300 173 0

Identification rings

For drives with a diameter of 58mm

Detection ring	Item number
White	2060 370 066 0
Grey	2060 370 067 0
Red	2060 370 068 0
Blue	2060 370 069 0
Black	2060 370 085 0
Light blue	2060 370 095 0

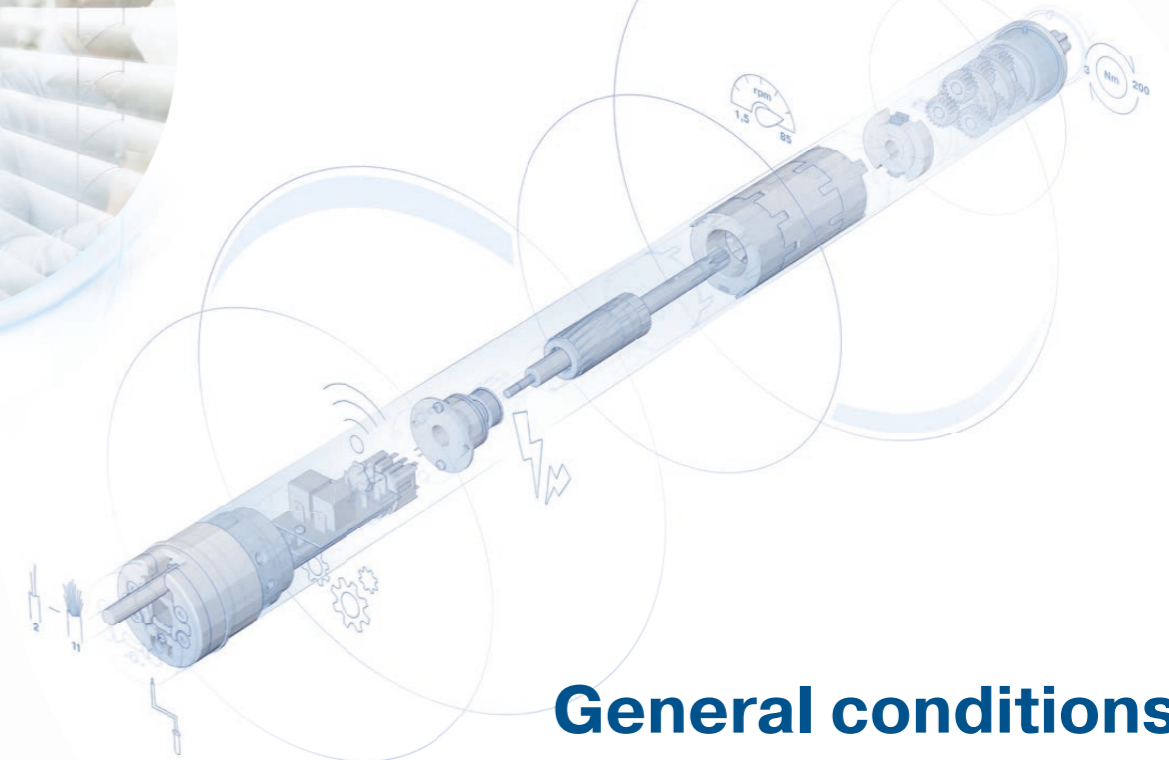
- Compatible with drive type XL35 - XL200
- Various colours for individual marking and identification
- For plugging onto the motor head
- Covers the mechanical adjustment spindles



Additional requirements? Just get in touch!

Do you have requirements or preferences that extend beyond the scope of this catalogue?

We will gladly help with these and can design a customised solution for you. Whether you need different cable lengths, different drive torques or special functions. We will also gladly help you by providing CAD data during your design and development phase.



General conditions of sale

Please note our general conditions of sale.
You can find these online at www.becker-antriebe.com/agb





BECKER-Antriebe GmbH

Drives and control units for roller
shutters, sun protection and extended
applications

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