

Bevel gearboxes GK 10.2 – GK 40.2

Type	Output torque		Reduction ratio	Input torque ¹⁾		Valve attachment		Factor ²⁾	Input shaft		Handwheel max. Ø mm	Weight ³⁾ approx. kg	
	Nominal torque	Regel-moment		Nominal torque	Modulating torque	Standard EN ISO 5210	Option DIN 3210		Ø	Standard			Option
	max. Nm	Max. Nm		Nm	Nm								
GK 10.2	120	60	1 : 1	135	66	F10	G0	0.9	20	–	315	8.5	
			2 : 1	67	33						200		
GK 14.2	250	120	2 : 1	139	66	F14	G½	1.8	20	30	315	15	
			2.8 : 1	100	48						250		
GK 14.6	500	200	2.8 : 1	198	80	F14	G½	2.5	30	–	400	15	
			4 : 1	139	55						315		
GK 16.2	1,000	400	4 : 1	278	111	F16	G3	3.6	30	–	500	25	
			5.6 : 1	198	80						400		
GK 25.2	2,000	800	5.6 : 1	397	160	F25	G4	5.0	30	–	630	60	
			8 : 1	278	111						500		
GK 30.2	4,000	1 600	8 : 1	556	222	F30	G5	7.2	30	40	800	110	
			11 : 1	404	162						9.9		
GK 35.2	8,000	–	11 : 1	808	–	F35	G6	9.9	40	–	800	190	
			16 : 1	556	–						14.4		30
GK 40.2	16,000	–	16 : 1	1 111	–	F40	G7 ⁴⁾	14.4	40	–	800	250	
			22 : 1	808	–						19.8		

Possible combinations with multi-turn actuators

Gearboxes Type	Flange for mounting of actuator		Perm. actuator weight max. kg	Suitable AUMA multi-turn actuator ⁵⁾	
	Standard EN ISO 5210	Option DIN 3210		Type SA/SAR 07.1 – 25.1	Type SA/SAR 07.2 – 16.2 SA 25.1
GK 10.2	F10/F14	G0/G½	40/80	SA/SAR 10.1 / SA/SAR 14.1	SA/SAR 10.2 / SA/SAR14.2
	F10	G0	40	SA/SAR 07.5 / SA/SAR 10.1	SA/SAR 07.6 / SA/SAR 10.2
GK 14.2	F10/F14	G0/G½	40/80	SA/SAR 10.1 / SA/SAR 14.1	SA/SAR 10.2 / SA/SAR14.2
	F10	G0	40	SA/SAR 10.1	SA/SAR 10.2
GK 14.6	F14	G½	80	SA/SAR 14.1	SA/SAR 14.2
	F10/F14	G0/G½	40/80	SA/SAR 10.1 / SA 14.1	SA/SAR 10.2 / SA/SAR 14.2
GK 16.2	F14	G½	80	SA/SAR 14.1 / SA 14.5	SA/SAR 14.2 / SA/SAR 14.6
	F14	G½		SA/SAR 14.1	SA/SAR 14.2
GK 25.2	F14	G½	80	SA/SAR 14.5	SA/SAR 14.6
	F14	G½		SA/SAR 14.1 / SA 14.5	SA/SAR 14.2 / SA 14.6
GK 30.2	F14/F16	G½/G3	80/160	SA/SAR 14.5 / SA/SAR 16.1	SA/SAR 14.6 / SA/SAR 16.2
	F14	G½	80	SA/SAR 14.5	SA/SAR 14.6
GK 35.2	F16	G3	160	SA 16.1	SA 16.2
	F14/F16	G½/G3	80/160	SA 14.5 / SA 16.1	SA 14.6 / SA 16.2
GK 40.2	F16/F25	G3/G4	160/300	SA 16.1 / SA 25.1	SA 16.2 / SA 25.1
	F16	G3	160	SA 16.1	SA 16.2

1) For max. output torque

2) Conversion factor from output torque to input torque to determine the actuator size

3) Gearbox without output shaft and without mounting flange for actuator

4) Without spigot

5) Standard flange according to EN ISO 5210

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Use

For motor or manual operation of valves (e.g. gate valves and globe valves).

Features and functions

Type of duty	Short-time duty S2 - 15 min (open-close duty) Intermittent duty S4 - 25 % (modulating duty)
Direction of rotation	Standard: Clockwise rotation at input shaft results in clockwise rotation at output shaft Option: GK 10.2 - GK 25.2 Reversal of rotation direction using a reversing gearbox GW 14.1 GK 30.2 - GK 40.2 Clockwise rotation possible as an alternative
Stages	Single stage: GK 10.2 - GK 25.2 Double stage: GK 30.2 - GK 40.2
Input shaft	Input shaft made of stainless steel Standard: Cylindrical with parallel key according to DIN 6885-1 (refer to table on page 1) Option ⁶⁾ : Square: - tapered (DIN 3233) - cylindrical

Operation

Motor operation	With electric multi-turn actuator, directly Flanges for mounting the multi-turn actuator (refer to table on page 1)
Manual operation	Possible handwheel diameters (refer to table on page 1) Standard: Without ball handle Options: - With ball handle - Material GJL-200 - Remote extension shaft (not included in AUMA's scope of delivery)

Valve attachment

Output drive types	A, B1, B2, B3, B4 according to EN ISO 5210 A, B, D, E according to DIN 3210 C according to DIN 3338 Special output drive types: AF, AK, AG, IB1, IB3, IB4
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Service conditions

Mounting position	Any position
Enclosure protection in accordance with EN 60529 ⁷⁾	Standard: IP 67 Options: IP 68 (max. 6 m head of water)
Corrosion protection	Standard: KN: Suitable for installation in industrial units, in water or power plants with a low pollutant concentration Options: KS: Suitable for installation in occasionally or permanently aggressive atmosphere with a moderate pollutant concentration (e.g. in waste water treatment plants, chemical industry) KX: Suitable for installation in extremely aggressive atmospheres with high humidity and high pollutant concentration
Finish coating	Standard: Two-component iron-mica combination
Colour	Standard: AUMA silver-grey (similar to RAL 7037) if finish painted Option: andere Farbtöne auf Anforderung
Ambient temperature	Standard: -40 °C to +80 °C Options: -60 °C to +60 °C, version EL -0 °C to +120 °C, version H
Lifetime	Open-close duty: Operations (OPEN - CLOSE - OPEN) with 30 turns per stroke GK 10.2: 20,000 operations GK 14.2 – 16.2: 15,000 operations GK 25.2 – 30.2: 10,000 operations GK 35.2 – 40.2: 5,000 operations Modulating duty ⁸⁾ : GK 10.2: 5.0 million modulating steps GK 14.2 – 16.2: 3.5 million modulating steps GK 25.2 – 30.2: 2.5 million modulating steps

Accessories

Limit switching device	WSH limit switch device for manually operated valves. For signalling intermediate and end positions. (refer to separate data sheet)
Reversing gearboxes	GW reversing gearbox for reversing the rotational direction for manual and motor operation

⁶⁾ With respect to size, please contact AUMA.

⁷⁾ Refer to information sheet "Gearboxes in enclosure protection IP 68 (submersible)"

⁸⁾ The lifetime for modulating duty depends on the load and the number of starts. A high starting frequency will rarely improve the modulating accuracy. To reach the longest possible maintenance and fault-free operating time, the number of starts per hour chosen should be as low as permissible for the process.

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Technical data Multi-turn gearboxes	GK 10.2 – GK 40.2
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Special features for use in potentially explosive atmospheres	
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Explosion protection in accordance with ATEX 94/9/EC	Standard: II2G c IIC T4 II2D c T130 °C Options: II2G c IIC T3 II2D c T190 °C IM2 c
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Type of duty ⁹⁾	During open-close duty: Short-time duty S2 - 15 min with the following average output torques:																											
<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="width: 15%;">Type</th> <th colspan="2" style="width: 15%;">GK 10.2</th> <th colspan="2" style="width: 15%;">GK 14.2</th> <th colspan="2" style="width: 15%;">GK 14.6</th> <th colspan="2" style="width: 15%;">GK 16.2</th> </tr> </thead> <tbody> <tr> <td>Reduction ratio</td> <td>1 : 1</td> <td>2 : 1</td> <td>2 : 1</td> <td>2,8 : 1</td> <td>2,8 : 1</td> <td>4 : 1</td> <td>4 : 1</td> <td>5,6 : 1</td> </tr> <tr> <td>Average output torque in Nm</td> <td>40</td> <td>60</td> <td colspan="2">125</td> <td>150</td> <td>250</td> <td>300</td> <td>500</td> </tr> </tbody> </table>		Type	GK 10.2		GK 14.2		GK 14.6		GK 16.2		Reduction ratio	1 : 1	2 : 1	2 : 1	2,8 : 1	2,8 : 1	4 : 1	4 : 1	5,6 : 1	Average output torque in Nm	40	60	125		150	250	300	500
Type	GK 10.2		GK 14.2		GK 14.6		GK 16.2																					
Reduction ratio	1 : 1	2 : 1	2 : 1	2,8 : 1	2,8 : 1	4 : 1	4 : 1	5,6 : 1																				
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Type	GK 25.2		GK 30.2		GK 35.6		GK 40.2																					
Reduction ratio	5,6 : 1	8 : 1	8 : 1	11 : 1	11 : 1	16 : 1	16 : 1	22 : 1																				
Average output torque in Nm	600	1,000	2,000		4,000		8 000																					
During modulating duty: Intermittent duty S4 - 25 % with modulating torque																												

Ambient temperature	Standard: -40 °C to +40 °C (II2G c IIC T4; II2D c T130 °C) -40 °C to +60 °C (II2G c IIC T4; II2D c T130 °C) -60 °C to +60 °C (II2G c IIC T4; II2D c T130 °C) Options: -40 °C to +80 °C (II2G c IIC T3; II2D c T190 °C) 0 °C to +120 °C (II2G c IIC T3; II2D c T190 °C) -20 °C to +40 °C (IM2 c)
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Further information	
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Reference documents	Product description Multi-turn gearboxes GK 10.2 – GK 40.2; GST 10.1 – GST 40.1 Dimensions GK 10.2 - GK 40.2 Technical data SA/SAR Technical data GW Technical data WSH
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9) The type of duty must not be exceeded.

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