

Product Catalogue

Actuators and Control Dampers

LAMTEC

Sensors and Systems for Combustion Engineering

www.lamtec.de

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- Gas volume control dampers up to 60 °C | 140°F, DVGW proofed, non linear, Type 668M2300 Aluminium, Type 668M2310 Stainless steel. 55
- Gas volume control dampers up to 60 °C | 140 °F, DVGW proofed, non linear, from DN200, Type 662R23V. 60
- Gas volume control dampers f. Biogas up to 60 °C | 140 °F Stainless steel, DVGW proofed, non linear from DN200, Type 662R24V. 63
- Control damper for flue gas / air, up to 100 °C | 212 °F, non-linear, without DVGW approval, Type 668M2200 Aluminium. 66
- Control damper for flue gas / air, up to 650 °C | 1,202 °F non-linear, without DVGW approval, Type 668M 2205 Cast Iron. 69
- Control damper for flue gas / air, up to 650 °C | 1202 °F, non-linear, without DVGW approval, Type 668M2210, Stainless steel. 72
- Control damper for flue gas / air, up to 450 °C | 842°F non-linear, without DVGW approval from DN300 Type 662R22V. 75
- Gas Control Valve Type SVL 668M2400. 78

General.

Information on variant numbers

Actuators are revised with respect to variant numbers:

This results in an order code which consists of a purchase order number, the selection of attributes and includes all the selected options. Each attribute can have only one selection.

Description / Type

Order code

Order no.:	A05	A10	A15	A20	A25	A30	A35	A40	A45	A50	A55	A60	A65	A70	A75	A80	A85
662 R 2127	**BC1**	**2305**	**060**	**090**	**DPS**	**5K**	**0**	**HV1**	**54**	**ES2**	**ZS0**	**1R**	**S**	**S**	**1B**	**1S**	**SO0**

Attribute	Selection	Description
A05 FORM OF SHAFT	**BC1**	ROUND SHAFT 12x30 mm WITH PARALLEL KEY 4x4x14 mm
A10 POWER SUPPLY VOLTAGE	**2305**	AC230V/50 Hz
A15 RUNNING TIME TO 90°	**060**	60 SECONDS
A20 DISPLACEMENT	**090**	90°
A25 CONTROLLING	**DPS**	THREE-POINT-STEP
A30 POSITION FEEDBACK	**5K**	TÜV-POTENTIOMETER 5 kOHM, POSITIVE, FREE OF BACKLASH
A35 ADDITIONAL POSITION FEEDBACK	**0**	WITHOUT
A40 ELECTRICALLY HAND FEED	**HV1**	WITH
A45 CLASS OF PROTECTION	**54**	IP54
A50 END SWITCHES	**ES2**	2 END SWITCHES
A55 ADDITIONAL SWITCHES	**ZS0**	WITHOUT
A60 DIRECTION OF ROTATION	**1R**	RIGHT
A65 GEAR	**S**	STANDARD
A70 ADAPTION	**S**	STANDARD
A75 COLOR	**1B**	COVER BLUE
A80 CABLE GLANDS	**1S**	STANDARD
A85 SPECIAL CONFIGURATION	**SO0**	WITHOUT

Information regarding the direction of rotation of the actuators

The actuators are always delivered in „CLOSE“ position !



Rotation of the actuators to position OPEN:
At clockwise - actuators:
Looking towards the shaft from 12.00 o’clock to 03.00 o’clock (Clockwise).
For counterclockwise rotating actuators:
Counterclockwise rotation with a view of the shaft from position 12.00 in the direction of 09. clock.

General.

Information on actuators with electronic control 4 ... 20 mA

In order to comply with EN-12067, 4 ... 20 mA feedback signals cannot be used as failsafe independent position indication when actuators are installed as part of electronic burner control systems such as ETAMATIC, FMS or VMS.

Actuators supplied for use within these systems will only be delivered fitted with TÜV approved position feedback potentiometers, Potentiometer 5k Ohm (Conductive Plastic)‘.

During system planning the following points must be considered:
When used as part of FMS/VMS systems the position feedback for the corresponding control output must be configured to ‚POTENTIOMETER‘.

Channel 2 can only be used in combination with ETAMATIC S to control this type of actuator. In this case an additional continuous output for channel 2 via an LSB module (order no. 663R4029) and LSB connecting cable (order no. 663R0421N-2M) is necessary.

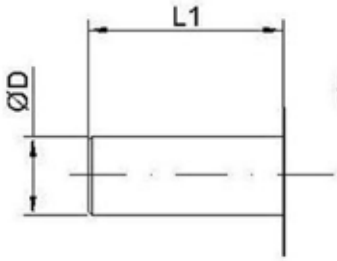
The setpoint for channel 2 (4...20mA signal) will be used to control the actuator position and the POTENTIOMETER feedback of channel 2 will be used for position feedback.
When ordering ETAMATIC (part no. 663R1) specify one of the following types at ‚Attribute 30 - Control Outputs/Position Feedback‘

004	2x THREE-POINT-STEP CONTROL OUTPUT and 2x CONTINIOUS OUTPUT 4...20 mA, FEEDBACK 4...20 mA
031	2x THREE-POINT-STEP CONTROL OUTPUT and 2x CONTINIOUS OUTPUT 4...20 mA, FEEDBACK FOR 1st CONTINIOUS OUTPUT: RPM, 2-WIRE-SYSTEM NAMUR, RANGE 300...3600 IMP/MIN
31D	2x THREE-POINT-STEP CONTROL OUTPUT and 2x CONTINIOUS OUTPUT 4...20 mA, FEEDBACK FOR 1st CONTINIOUS OUTPUT: RPM, 3-WIRE-SYSTEM INDUCTIVE, RANGE 300...3600 IMP/MIN

General.

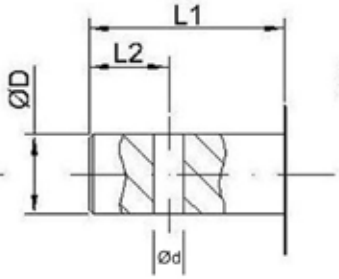
Information about the shaft types for actuator type 662R21...

Form A



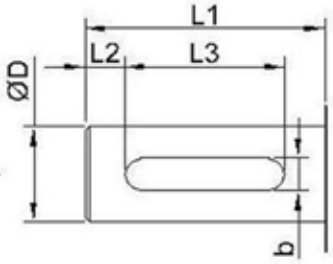
	ØD	L1
A01	10	25
A02	12	30
A03	12	36
A04	12	40
A05	12	50

Form B



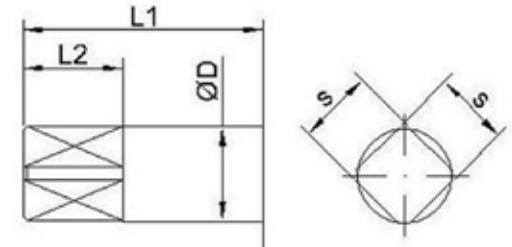
	ØD	Ød	L1	L2
B01	10	4	25	10
B02	12	4	30	10
B03	12	5	40	6

Form C



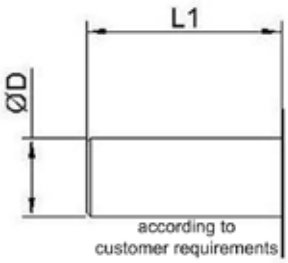
	ØD	L1	L2	L3	b
C01	12	25	5	14	4
C02	12	30	5	14	4
C03	12	30	5	20	4
C04	12	36	3	14	4
C05	12	40	5	16	4
C06	15	30	5	20	4
C07	15	40	5	25	5
C08	15	40	5	30	5
C09	20	50	5	30	6
C10	20	50	5	32	6

Form D



	ØD	L1	L2	s
D01	12	30	12,5	9,5

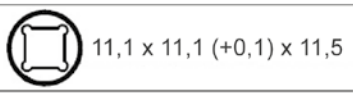
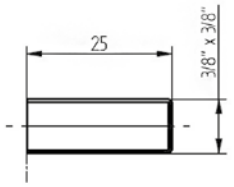
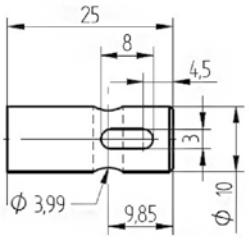
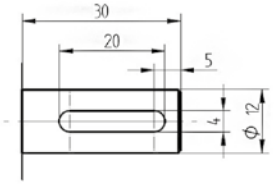
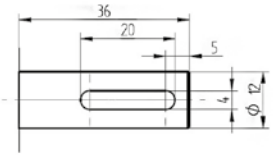
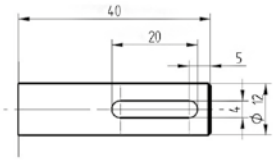
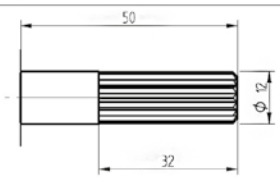
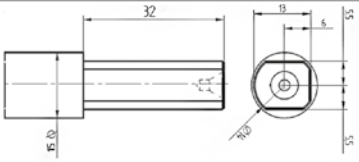
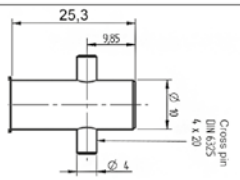
Form E



ØD	L1			

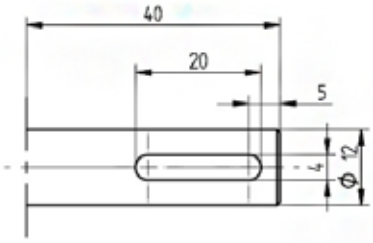
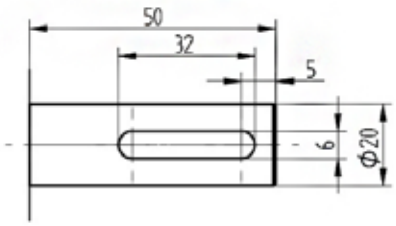
Information about the shaft types

Information about the shaft types for actuator type 668M2006/2020/2040

Shaft type (A10-IVK11) Internal square 11,1x11,1x11,5 mm	
Shaft type (A10-VK11) Square 11x11x12,5x30 mm	
Shaft type (A10-VK38x1) Square 3/8" x 1"	
Shaft type (A10-10x25) Round 10x25 mm with parallel key 3x3x8 mm and cross drilling **Only available for 6Nm and 20Nm**	
Shaft type (A10-12x30) Round 12x30 mm with parallel key 4x4x20 mm	
Shaft type (A10-12x36) Round 12x36 mm with parallel key 4x4x20 mm	
Shaft type (A10-12x40) Round 12x40 with parallel key 4x4x20 mm	
Shaft type (A10- KVZD2) Round 12x50 mm with spline 10/12 in acc. to DIN5481	
Shaft type (A10-Z11x40) 14x40 mm Two flat 11 mm with 14/13 mm D-shaft	
Shaft type (A10-10x25V) 10x25 mm with cross pin 4x20 mm	

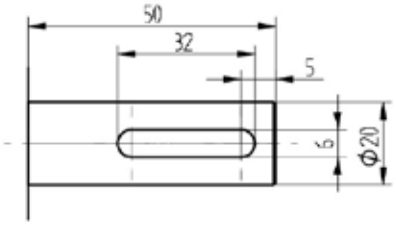
Information about the shaft types

Information about the shaft types for actuator type 668M2060-1

Type of output shaft (IVK14) Internal square 14,1 x 14,1 x 16 mm | 0.56 x 0.56 x 0.63" in	 14,1 x 14,1 (+0,1) x 16
Type of output shaft (12 x 40) Round 12 x 40 mm | 0.47 x 1.57" in with feather key 4 x 4 x 20 mm	
Form of output shaft (20 x 50) Round 20 x 50 mm | 0.79 x 1.97" in with feather key 6 x 6 x32 mm | 0.24 x 0.24 x 1.26" in	

Information about the shaft types

Information about the shaft types for actuator type 668M20100-1/20200-1

Type of output shaft (IVK17) Internal square 17.1 x 17.1 x 16 mm | 0.67 x 0.67 x 0.63" in	 17,1 x 17,1 (+0,1) x 16
Type of output shaft (20 x 50) Round 20 x 50 mm | 0.79 x 1.97" in with feather key 6 x 6 x32 mm | 0.24 x 0.24 x 1.26" in	

Information about the shaft types

Electric Actuators 6/20/40 Nm, Type 668M20...

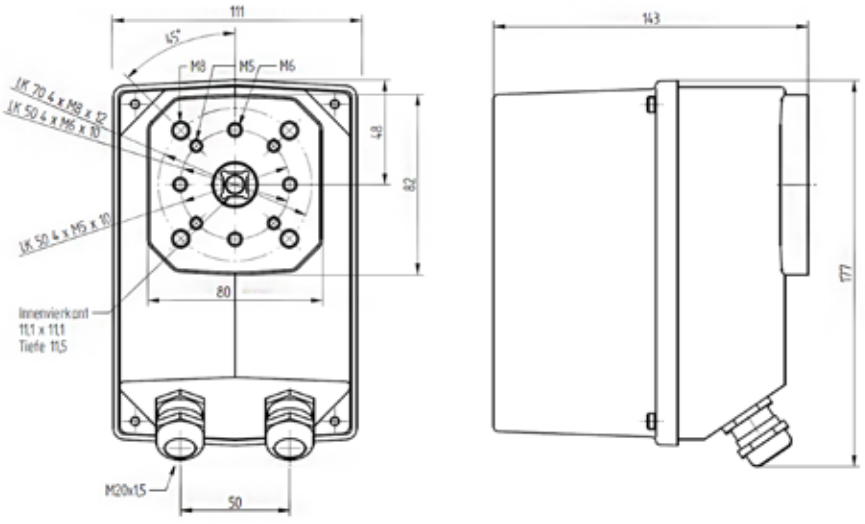
Technical Data



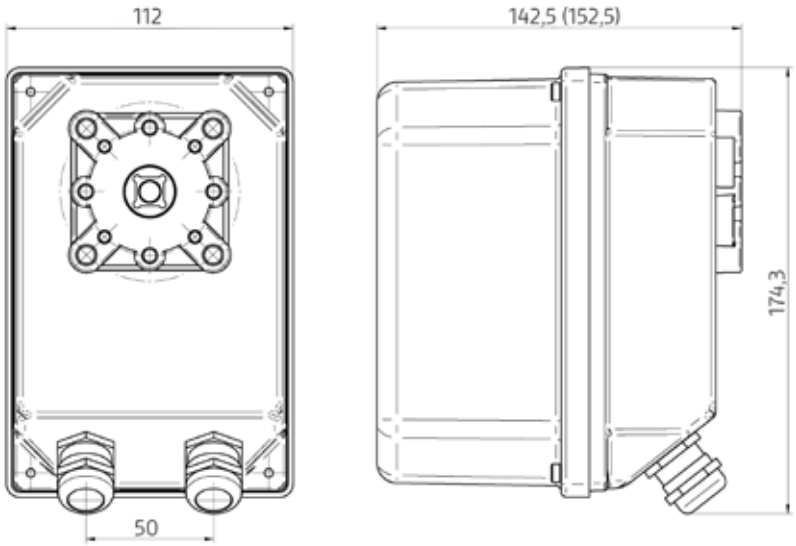
Actuators 6/20/40 Nm with round shaft and feather key

Usage	for driving dampers and valves on combustion equipment	Dimensions [mm]	see dimension drawing
Power supply voltage	230 VAC/50 Hz	Cable entry point	optionally 2x M16/M20/M25
Shaft type	Internal square 11.1x11.1x11.5 mm | 0.44x0.44x0.45“ in	Weigth	2.3 kg | 5.07 lb
Running time [90°]	60 sec.	Protection class	IP65
Torque	6/20/40 NM	Flange mounting according to ISO 5211	F05/F07
Controlling	Three Point Step		
End switches	2	Ambient temperature	-10 ... +60 °C | 14 ... 140 °F
Additional switches	none	TÜV approval	- when used with CMS - with NOVOTEC potentio-meter, also for VMS/FMS/ ETAMATIC

Illustrations and technical data refer to the standard version



Dimension drawing actuator, Type 668M20... in gravity die-cast housing



Dimension drawing actuator Type 668M20... in die-cast housing

Ordering Information

Description / Type (standard variant)	Order no.
Electric actuator TPS06, 6 Nm, TPS, position feedback potentiometer 5 kOhm, conductive plastic, 2 end switches, electric hand feed, protection class IP65	668M2006 – ...
Electric actuator TPS20, 20 Nm, TPS, position feedback potentiometer 5 kOhm, conductive plastic, 2 end switches, electric hand feed, protection class IP65	668M2020 – ...
Electric actuator TPS40, 40 Nm, TPS, position feedback potentiometer 5 kOhm, conductive plastic, 2 end switches, electric hand feed, protection class IP65	668M2040 – ...
A 05 – TORQUE	**Selection**
6 NM	006
20 NM	020
40 NM	040
6 NM, APPROVAL FOR EX-ZONE 2, Ex nR IIB T6 Gc	6NMEX2
20 NM, APPROVAL FOR EX-ZONE 2, Ex nR IIB T6 Gc	20NMEX2
40 NM, APPROVAL FOR EX-ZONE 2, Ex nR IIB T6 Gc	40NMEX2
20 NM, APPROVAL FOR DIVISION Class 3, Division 2, Group C and D (120 V only)	20NMDIV
40 NM, APPROVAL FOR DIVISION Class 3, Division 2, Group C and D (120 V only)	40NMDIV
A 10 – TYPE OF OUTPUT SHAFT	**Selection**
INTERNAL SQUARE 11.1x11.1 mm | 0.44x0.44“ in	IVK11*
SQUARE SHAFT 11x11 mm | 0.43x0.43“ in	VK11
SQUARE SHAFT 3/8” x 1”	VK38x1
ROUND SHAFT 10x25 mm | 0.39x 0.98“ in WITH FEATHER KEY 3x3x8 mm | 0.12x0.12x0.31“ in (Only available for 6 Nm and 20 Nm)	10x25
ROUND SHAFT 12x30 mm | 0.47x1.18“ in WITH FEATHER KEY 4x4x20 mm | 0.16x0.16x0.79“ in	12x30
ROUND SHAFT 12x36 mm | 0.47x1.42“ in WITH FEATHER KEY 4x4x20 mm | 0.16x0.16x0.79“ in	12x36
ROUND SHAFT 12x40 mm | 0.47x1.57“ in WITH FEATHER KEY 4x4x20 mm | 0.16x0.16x0.79“ in	12x40
ROUND SHAFT 12x50mm | , 0.47x1.97“ in SERRATION 10/12, IN ACC. TO DIN5481	KVZD2
14x50 mm | 0.55x1.97“ in TWO FLAT 11 mm | 0.43“ in WITH 14/13 D-SHAFT	Z11x40
ROUND SHAFT 10x25 mm | 0.39x 0.98“ in WITH CROSS PIN 4x20 mm | 0.16x0.79“ in	10x25V
A 15 - POWER SUPPLY VOLTAGE	**Selection**
120 VAC/50 Hz	120VAC
230 VAC/50 Hz	230VAC*
A 20 - RUNNING TIME / ANGULAR DISPLACEMENT	**Selection**
60 SECONDS / 90° (60 SEC./50 HZ / 48 SEC./60 HZ)	6090 *
90 SECONDS / 135° (90 SEC./50 HZ / 72 SEC./60 HZ)	90135
120 SECONDS / 180° (120 SEC./50 HZ / 96 SEC./60 HZ)	120180
A 25 - POSITION FEEDBACK	**Selection**
1x POTENTIOMETER 5 kOHMS, CONTELEC CONDUCTIVE PLASTIC, APPROVED IN ACCORDANCE TO EN12067-2, FORM CLOSURE CONSTRUCTION, BACKLASH-FREE, FOR POSITION FEEDBACK TO CMS	1PO*
2x POTENTIOMETER 5 kOHMS, CONTELEC CONDUCTIVE PLASTIC, APPROVED IN ACCORDANCE TO EN12067-2, FORM CLOSURE CONSTRUCTION, BACKLASH-FREE, FOR POSITION FEEDBACK TO CMS	2PO
POTENTIOMETER 5 kOHM NOVOTEC CONDUCTIVE PLASTIC, APPROVED IN ACCORDANCE TO EN12067-2, FORM CLOSURE CONSTRUCTION, BACKLASH-FREE, FOR POSITION FEEDBACK TO CMS/ETAMATIC/FMS/VMS	1NOVO

*Default selection

Ordering Information

A 30 - DIRECTION OF ROTATION (view onto the shaft, feather key at 12.00 o'clock)	Selection
CLOCKWISE (12.00 TO 3.00 O'CLOCK)	R*
ANTI CLOCKWISE (12.00 UHR NACH 9.00 UHR)	L
A 40 - ADAPTION	**Selection**
FLANGE FIXINIG IN ACCORDANCE TO ISO5211 F05 Ø50 4x45° M5 / 4x45° M6 F07 Ø70 4x90° M8	F05F07*
FLANGE FIXINIG 4x M6, 65 X 50 MM I 2.56 x 1.97" in	65x50
FLANGE FIXINIG Ø52 mm 2x M5 I Ø2.05" in 2x M5	LK52
FLANGE FIXINIG Ø68 mm 3x M6 I Ø2.68" in 3x M6	LK68
FLANGE FIXINIG Ø80 mm 8x45° M10 I Ø3.15" in 8x45° M10	LK80
ADAPTION IN ACCORDANCE TO CUSTOMER SPECIFICATION	
A 45 - COLOR	**Selection**
HOUSING COVER RED RAL3020	RT*,[1]
HOUSING COVER BLACK RAL9006	SW
OTHER COLOURS ON REQUEST	
A 50 - CUSTOMER	**Selection**
LAMTEC TYPE	S*
A 55 - POSITION INDICATOR	**Selection**
WITHOUT	POS0*
POSITION INDICATOR IN HOUSING COVER	POS1
A 60 - HOUSING HEATING	**Selection**
WITHOUT	HEAT0*
HOUSING HEATING 230V/12W, incl. THERMOSTAT, TO -30 °C I -22 °F	HEAT1
HOUSING HEATING 120V/12W, incl. THERMOSTAT, TO -30 °C I -22 °F	HEAT2
A 70 - CABLE ENTRY	**Selection**
2x CABLE GLAND M16 METAL	M16
2x CABLE GLAND M20 METAL	M20*
2x CABLE GLAND M20 PLASTIC BLACK	M20KS
2x CABLE GLAND M25 METAL	M25
CONDUIT ADAPTER 2x " NPT	NPT12
CABLE GLAND IN ACCORDANCE TO CUSTOMER SPECIFICATION	

* Default selection

[1] If there is a "D" after the color code, it indicates a new die-cast housing, available starting in 2027

Electric Actuator TPS 60.1
60 Nm, Type 668M2060-1.

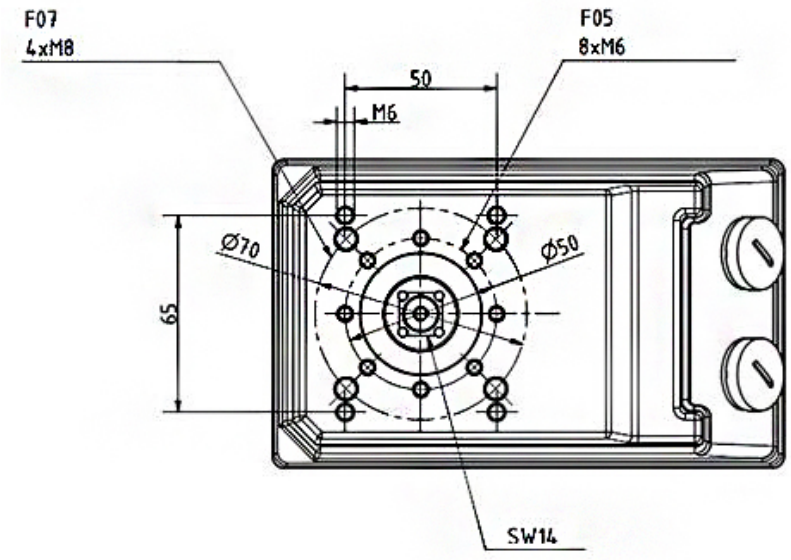
Technical Data



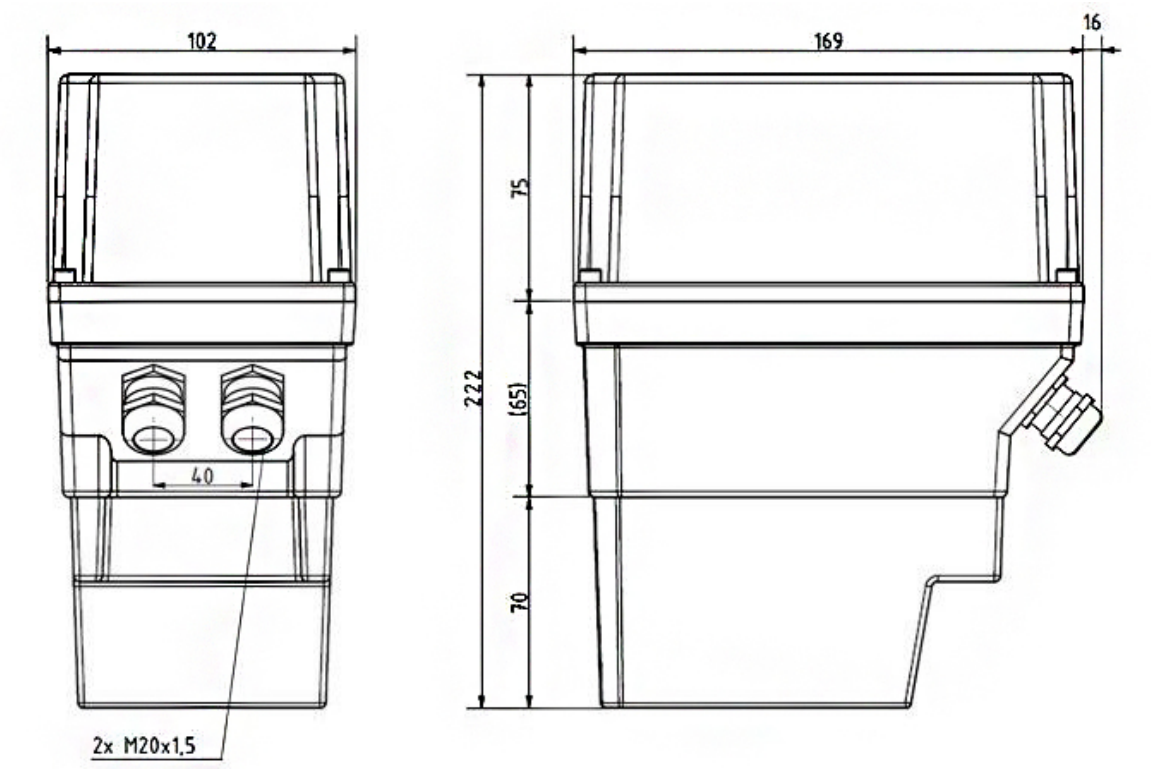
Electric Actuator 60 Nm

Usage	for driving dampers and valves on combustion equipment	Dimensions [mm]	see dimension drawing
Power supply voltage	230 VAC/50 Hz	Cable entry point	2x M20 Metal
Shaft type	Internal square 14.1x14.1 mm | 0.55x0.55“ in	Weigth	4 kg | 8.82 lb
Running time [90°]	60 sec.	Protection class	IP65
Torque	6/20/40 NM	Flange mounting according to ISO 5211	F05F07
Controlling	Three Point Step		
End switches	2	Ambient temperature	-20 ... +60 °C | -4 ... 140 °F
Additional switches	none	TÜV approval	- when used with CMS

Illustrations and technical data refer to the standard version



Dimension drawing Actuator 60Nm, type 668M2060-1 in die-cast housing (all dimensions in mm)



Dimension drawing Actuator 60Nm, type 668M2060-1 in die-cast housing (all dimensions in mm)

Ordering Information

Bezeichnung / Typ (Standardvariante)	Order no.
Electrical actuator 60 Nm, TPS, position feedback potentiometer 5 kΩ, conductive plastic, 2 end position switches to limit the actuator, electric hand feed, IP65	668M2060-1.
A 05 – NOMINAL TORQUE	Selection
60 NM	60NM
A 10 – TYPE OF OUTPUT SHAFT	Selection
INTERNAL SQUARE 14 x 14 mm | 0.55 x 0.55“ in	IVK14*
Round shaft 20 x 50 mm | 0.79 x 1.97“ in, with feather key 6 x 6 x 32 mm | 0.25 x 0.24 1.26“ in	20x50
Round shaft 12 x 40 mm | 0.47 x 1.57“ in, with feather key 4 x 4 x 20 mm | 0.16 x 0.16 0.79“ in	12x40
A 15 - POWER SUPPLY VOLTAGE	Selection
120 VAC/50 Hz	120 V
230 VAC/50 Hz	230 VAC*
A 20 - RUNNING TIME / ANGLE OF ROTATION	Selection
60 SECONDS/90° (60 SEC./50 HZ/48 SEC./60 HZ)	6090 *
90 SECONDS/135° (90 SEC./50 HZ/72 SEC./60 HZ)	90135
120 SECONDS/180° (120 SEC./50 HZ/96 SEC./60 HZ)	120180
A 25 - POSITION FEEDBACK	Selection
1 x POTENTIOMETER 5 kOHM CONTELEC (CONDUCTIVE PLASTIC), APPROVED IN ACCORDANCE TO EN12067-2, FORM CLOSURE CONSTRUCTION, FREE OF BACKLASH, Position feedback only for CMS	1PO*
2 x POTENTIOMETER 5 kOHM CONTELEC (CONDUCTIVE PLASTIC), APPROVED IN ACCORDANCE TO EN12067-2, FORM CLOSURE CONSTRUCTION, FREE OF BACKLASH, Position feedback only for CMS	2PO
A 30 - DIRECTION OF ROTATION (view onto the shaft, parallel key at 12.00 o’clock)	Selection
CLOCKWISE (12.00 TO 3.00 O’CLOCK)	R*
ANTI CLOCKWISE (12.00 TO 9.00 O’CLOCK)	L
A 40 - ADAPTION	Selection
FLANGE FIXINIG IN ACCORDANCE TO ISO5211 F05 Ø50 mm | 1.97“ in, 8xM6 F07 Ø70 mm | 2.76“ in, 4xM8 4x M6, 65 X 50 mm | 2.56 x 1.97“ in	F05F07*
ADAPTION IN ACCORDANCE TO CUSTOMER SPECIFICATION	
A 45 - COLOUR	Selection
COVER RED RAL3020	RT*
FURTHER COLOURS ON REQUEST	
A 50 - CUSTOMER	Selection
LAMTEC TYPE	S*
A 55 - POSITION INDICATOR	Selection
WITHOUT	POS0*
POSITION INDICATOR IN THE COVER	POS01
A 60 - HOUSING HEATING	Selection
WITHOUT, DOWN TO -20°C | -4°F	HEAT00*
HOUSING HEATING 230V/12W, incl. THERMOSTAT, DOWN TO -30°C | -22°F	HEAT1
HOUSING HEATING 120V/12W, incl. THERMOSTAT, DOWN TO -30°C | -22°F	HEAT2
A 70 - CABLE ENTRY	Selection
2x CABLE GLAND M16 METAL	M16
2x CABLE GLAND M20 METAL	M20*
2x CABLE GLAND M25 METAL	M25
CABLE GLAND IN ACCORDANCE TO CUSTOMER SPECIFICATION	

* Default selection

Electric Actuator TPS 100.1/200.1 100/200 Nm, Type 668M20100-1/20200-1.

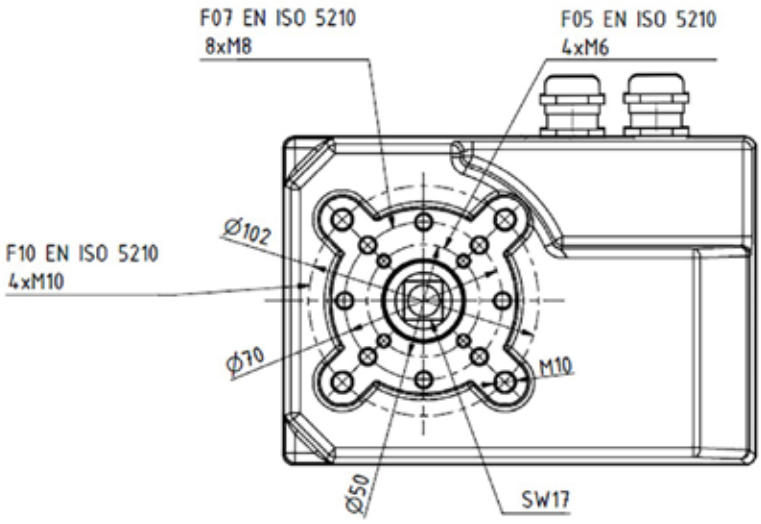
Technical Data



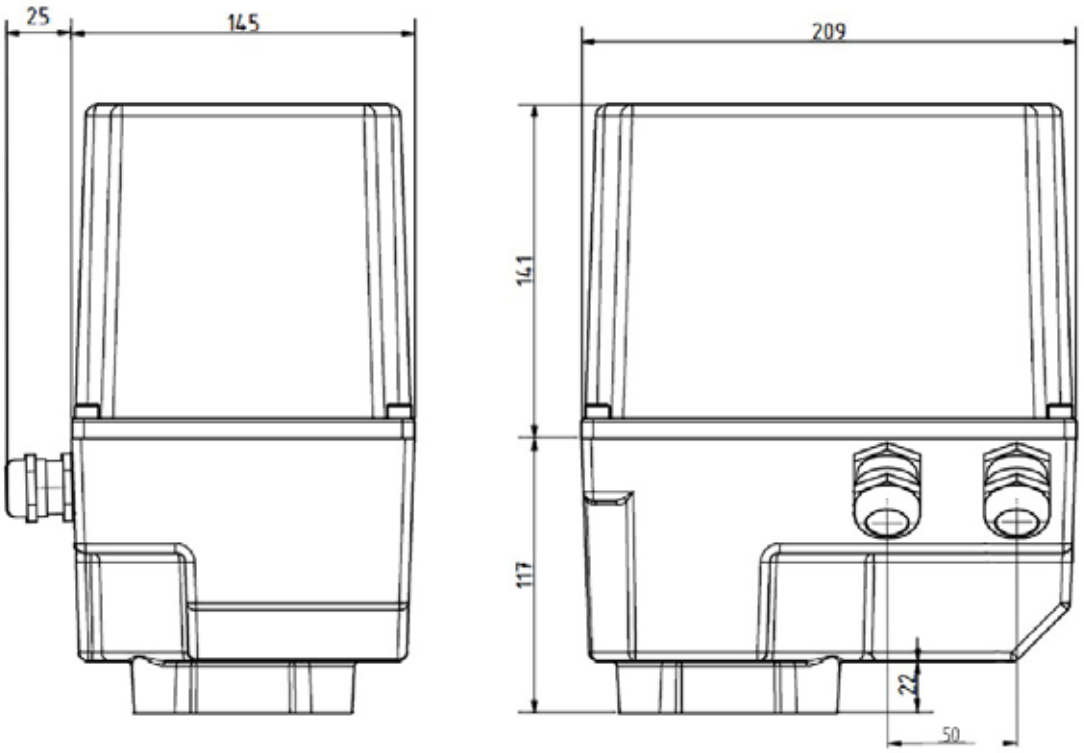
Electric Actuator 100/200 Nm

Usage	for driving dampers and valves on combustion equipment	Dimensions [mm]	see dimension drawing
Power supply voltage	230 VAC/50 Hz	Cable entry point	2x M20 Metal
Shaft type	Internal square 17.1x17.1 mm | 0.67x0.67“ in	Weigth	9.5 kg | 20.94 lb
Running time [90°]	60 sec.	Protection class	IP65
Torque	100 NM 200 NM	Flange mounting according to ISO 5211	F10
Controlling	Three Point Step	Ambient temperature	-20 ... +60 °C | -4 ... 140 °F
End switches	2	TÜV approval	- when used with CMS
Additional switches	none		

Illustrations and technical data refer to the standard version



Dimension drawing Actuator 100/200Nm, type 668M20100-1/20200-1 in die-cast housing (all dimensions in mm)



Dimension drawing Actuator 100/200Nm, type 668M20100-1/20200-1 in die-cast housing (all dimensions in mm)

Ordering Information

Description / Type (standard)		Order no.
Electric actuator TPS100.1, 100 Nm, TPS, position feedback potentiometer 5 kΩ, conductive plastic, 2 end position switches to limit the actuator, electric hand feed, IP65		668M20100-1.
Electric actuator TPS200.1, 200 Nm, TPS, position feedback potentiometer 5 kΩ, conductive plastic, 2 end position switches to limit the actuator, electric hand feed, IP65		668M20200-1.
A 05 – TORQUE		Selection
100 NM		100NM
200 NM		200NM
A 10 – FORM OF OUTPUT SHAFT		Selection
INTERNAL SQUARE 17,1x17,1 mm | 0.67x0.67“ in		IVK17*
ROUND SHAFT 20x50 mm | 0.79x1.97“ in, with feather key 6x6x32 mm | 0.24x0.24x1.26“ in		20x50
A 15 - POWER SUPPLY VOLTAGE		Selection
120 VAC/50 Hz		120 V
230 VAC/50 Hz		230 VAC*
A 20 - RUNNING TIME / ANGLE OF ROTATION		Selection
60 SECONDS/90° (60 SEC./50 HZ/48 SEC./60 HZ)		6090 *
90 SECONDS/135° (90 SEC./50 HZ/72 SEC./60 HZ)		90135
120 SECONDS/180° (120 SEC./50 HZ/96 SEC./60 HZ)		120180
A 25 - POSITION FEEDBACK		Selection
1x POTENTIOMETER 5 kOHMS CONTELEC, CONDUCTIVE PLASTIC, APPROVED IN ACCORDANCE TO EN12067-2, FORM CLOSURE CONSTRUCTION, FREE OF BACKLASH, Position feedback only for CMS		1PO*
2x POTENTIOMETER 5 kOHMS CONTELEC, CONDUCTIVE PLASTIC, APPROVED IN ACCORDANCE TO EN12067-2, FORM CLOSURE CONSTRUCTION, FREE OF BACKLASH, Position feedback only for CMS		2PO
1x POTENTIOMETER 5 kOHMS NOVOTEC, CONDUCTIVE PLASTIC, APPROVED IN ACCORDANCE TO EN12067-2, FORM CLOSURE CONSTRUCTION, FREE OF BACKLASH, Position feedback for ETAMATIC, FMS, VMS, CMS With NOVOTEC potentiometers, a position indicator or a 2nd potentiometer is not possible.		1NOVO
A 30 - DIRECTION OF ROTATION (view onto the shaft, parallel key at 12.00 o’clock)		Selection
CLOCKWISE (12.00 TO 3.00 O’CLOCK)		R*
ANTI CLOCKWISE (12.00 TO 9.00 O’CLOCK)		L
A 40 - ADAPTION		Selection
FLANGE FIXINIG IN ACCORDANCE TO ISO5211	F05 Ø50 4xM6 F07 Ø70 8xM8 F10 Ø102 4x M10	F10*
ADAPTION NACH KUNDENVORGABE		
A 45 - COLOUR		Selection
COVER RED RAL3020		RT*
Further colors on request		

* Default selection

Ordering Information

A 50 - CUSTOMER	Selection
LAMTEC TYPE	S*
A 55 - POSITION INDICATOR	**Selection**
WITHOUT	POS0*
POSITION INDICATOR IN THE COVER	POS01
A 60 - HOUSING HEATING	**Selection**
WITHOUT, DOWN TO -20°C | -4°F	HEAT00*
HOUSING HEATING 230V/12W, incl. THERMOSTAT, DOWN TO -30°C | -22°F	HEAT1
HOUSING HEATING 120V/12W, incl. THERMOSTAT, DOWN TO -30°C | -22°F	HEAT2
A 70 - CABLE ENTRY	**Selection**
2x CABLE GLAND M16 METAL	M16
2x CABLE GLAND M20 METAL	M20*
2x CABLE GLAND M25 METAL	M25
CABLE GLAND IN ACCORDANCE TO CUSTOMER SPECIFICATION	

* Default selection

Spare parts for CMS actuators Type 668M20...

Ordering Information

Description / Type	Order no.
POTENTIOMETER CONTELEC WAL300, 5 kOhm 190° internal D-shaft, connection cable 120 mm I 4.72“ in with wire end ferrules	668E2001
POTENTIOMETER NOVOTEC SP2841, 5 kOhm 100° with parallel key	668P2002

Electric Actuator 6 Nm, Type 662R2127.

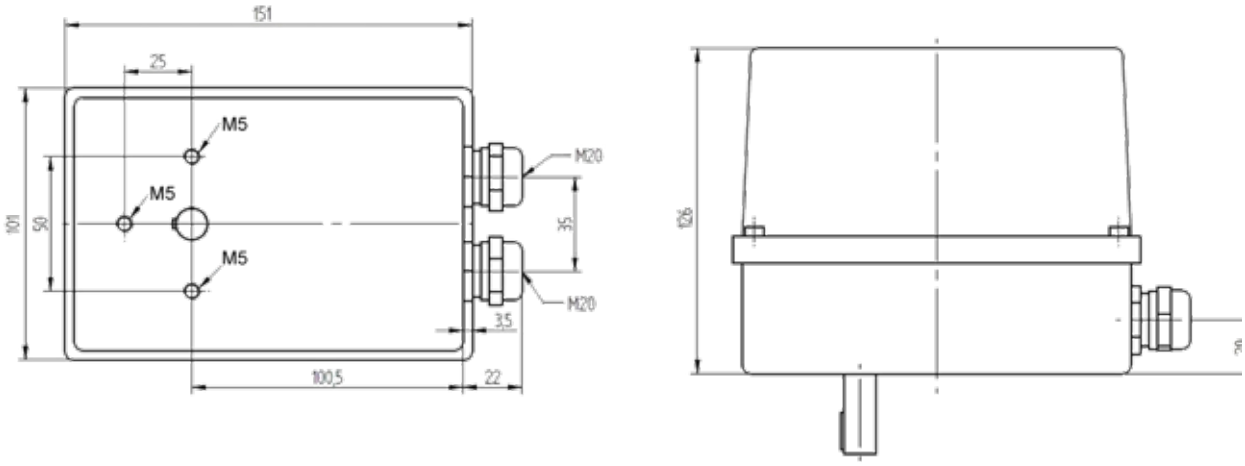
Technical Data



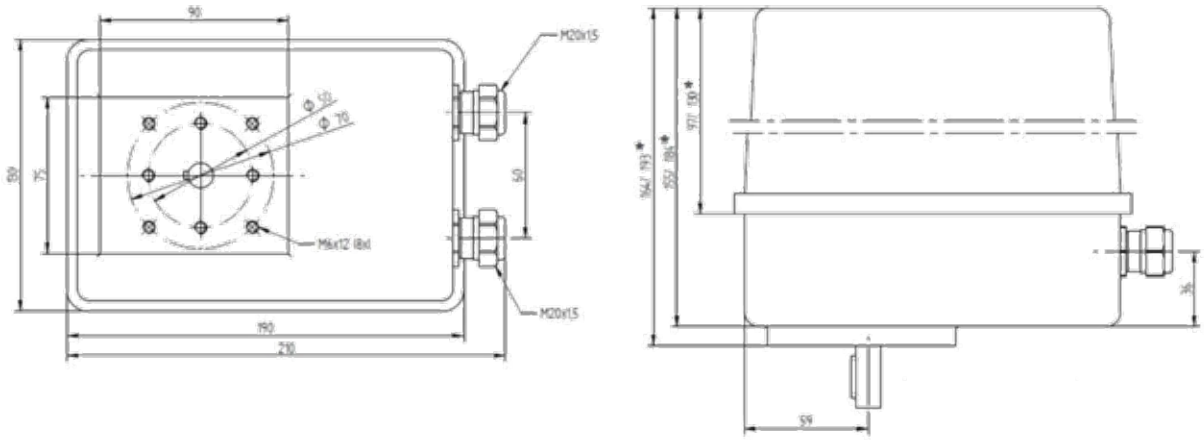
Actuator 6 Nm

Usage	for driving dampers and valves on combustion equipment	Dimensions [mm]	see dimension drawing
Power supply voltage	230 VAC/50 Hz	Screwed cable glands	2x M20x1,5, cabel Ø min. 8.0 mm, max. 13.0 mm | Ø min. 0.31, max. 0.51“ in
Shaft type	Ø10x25 | 0.39x0.98“ in, type BC1 with cross hole 4 mm | 0.16“ in and feather key 3x3x8 mm | 0.12x0.12x0.31“ in	Weigth	1.7 kg | 3.75 lb
		Protection class	IP65 with metal cover
Running time [90°]	60 sec.	Adaption	2x M5, screw-hole circle Ø 50 mm | Ø 1.97“ in
Controlling	Three Point Step		
End switches	2	Ambient temperature	-10 ... +60 °C | 14 ... 140 °F
Additional switches	none	TÜV approval	when used with VMS/FMS/ ETAMATIC

Illustrations and technical data refer to the standard version



Dimension drawing Actuator 6Nm, type 662R2127 (all dimensions in mm)



Dimensional drawing of Actuator with electronic control (all dimensions in mm)

**The construction height depends on the equipment*

Ordering Information

Description / Type (standard variant)	Order no.
Actuator 6 Nm, in the following variant	662R2127 - ...
A 03 – TORQUE	**Selection**
6 NM	006
A 05 – SHAFT TYPE	**Selection**
ROUND SHAFT 10x25 mm I 0.39x0.98“ in WITH FEATHER KEY 3x3x8 mm I 0.12x0.12x0.31“ in and 4 mm I 0.16“ in CROSS HOLE, Standard	BC1*
ROUND SHAFT 12x30 mm I 0.47x1.18“ in WITH FEATHER KEY 4x4x14 mm I 0.16x0.16x0.55“ in	CO2
FURTHER SHAFTS ON REQUEST	
A 10 – POWER SUPPLY VOLTAGE	**Selection**
POWER SUPPLY VOLTAGE 115 VAC/50 Hz	1155
POWER SUPPLY VOLTAGE 115 VAC/60 Hz	1156
POWER SUPPLY VOLTAGE 230 VAC/50 Hz	2305*
POWER SUPPLY VOLTAGE 230 VAC/60 Hz	2306
A 15 – RUNNING TIME TO 90°	**Selection**
30 SECONDS	30
40 SECONDS	40
60 SECONDS	60*
FURTHER RUNNING TIMES ON REQUEST	_
A 20 – ANGULAR DISPLACEMENT	**Selection**
DISPLACEMENT 90°	090*
DISPLACEMENT 120°	120
DISPLACEMENT 135°	135
DISPLACEMENT 180°	180
DISPLACEMENT 270°	270
A 25 – CONTROLLING	**Selection**
THREE-POINT-STEP POSITION FEEDBACK „POTENTIOMETER USE“	DPS*
ELECTRONIC CONTROLLING 4 ... 20 mA POSITION FEEDBACK „4 ... 20 mA“, additional position feedback “POTENTIOMETER 5 kOHM (COND. PLASTIC), TÜV approved”	REG

*Default selection

Ordering Information

A 30 – POSITION FEEDBACK	Selection
POTENTIOMETER 100 OHM (WIRE-WOUND) only possible with THREE-POINT-STEP-CONTROLLING	100R
POTENTIOMETER 1 kOHM (WIRE-WOUND) only possible with THREE-POINT-STEP-CONTROLLING	1K
POTENTIOMETER 200 OHM (WIRE-WOUND) only possible with THREE-POINT-STEP-CONTROLLING	200R
POTENTIOMETER 5 kOHM (CONDUCTIVE PLASTIC), TÜV approved, POSITIVE LOCKING, FREE OF BACKLASH, only possible with THREE-POINT-STEP-CONTROLLING	5K*
4 ... 20 mA Standard at ELECTRONIC CONTROLLING 4 ... 20 mA **Caution: position feedback at ETAMATIC/FMS/VMS not failsafe, use additional position feedback "POTENTIOMETER 5 kOHM (COND. PLASTIC), TÜV approved" !**	REG
A 35 – ADDITIONAL POSITION FEEDBACK	**Selection**
WITHOUT ADDITIONAL POSITION FEEDBACK	0*
POTENTIOMETER 100 OHM (WIRE-WOUND)	100R
POTENTIOMETER 1 kOHM (WIRE-WOUND)	1K
POTENTIOMETER 200 OHM (WIRE-WOUND)	200R
POTENTIOMETER 5 kOHM (CONDUCTIVE PLASTIC), TÜV approved **Mandatory for failsafe position feedback indication when using electronic control !**	5K
A 40 – ELECTRICAL OVERRIDE, selection not possible Control „DPS" only available with electrical manual override	
WITHOUT	HV0
WITH	HV1
A 45 – IP PROTECTION CLASS	**Selection**
IP65 WITH METAL COVER	65*
A 50 – END SWITCHES	**Selection**
2 END SWITCHES	ES2*
2 END SWITCHES GASTIGHT	ESG
A 55 – ADDITIONAL SWITCHES	**Selection**
WITHOUT ADDITIONAL SWITCHES	ZS0*
1 ADDITIONAL SWITCH	ZS1
1 ADDITIONAL SWITCH GASTIGHT	ZG1
A 60 – DIRECTION OF ROTATION" (view to the shaft feather key on 12.00 o'clock)	**Selection**
DIRECTION OF ROTATION TO THE RIGHT (12.00 o'clock to 3.00 o'clock ‚clockwise')	1R*
DIRECTION OF ROTATION TO THE LEFT (12.00 o'clock to 9.00 o'clock ‚anti-clockwise')	2L
A 65 – GEAR	**Selection**
STANDARD	S*
GEAR FOR INCREASED TEMPERATURE 80 °C | 176 °F	W

*Default selection

Ordering Information

A 70 – ADAPTION	Selection
3x M5, HOLE CIRCLE Ø 50 mm | 1.97“ in	S*
BY TYPE	T / U / W
BY DRAWING	ZG
FURTHER ADAPTATIONS ON REQUEST	_

A 75 – COLOUR	Selection
HOUSING COVER METAL RAL5010, BLUE, POWDER-COATED	1B*
HOUSING COVER METAL RAL7016, ANTHRACITE	2S
A 80 – CABLE GLANDS	**Selection**
2x M20 METAL	1S*
FURTHER CABLE GLANDS ON REQUEST	_
A 85 – SPECIAL CONFIGURATION	**Selection**
WITHOUT	SO0*
HOUSING HEATING 15 W, incl. THERMOSTAT, down to -30 °C | -22°F	SO2

*Default selection

Electric Actuator 20 Nm, Type 662R2111.

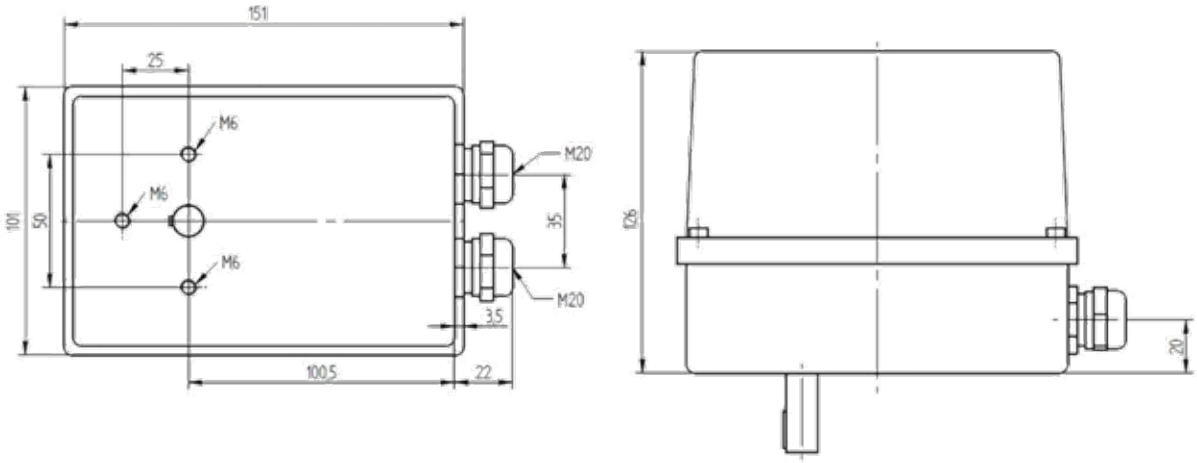
Technical Data



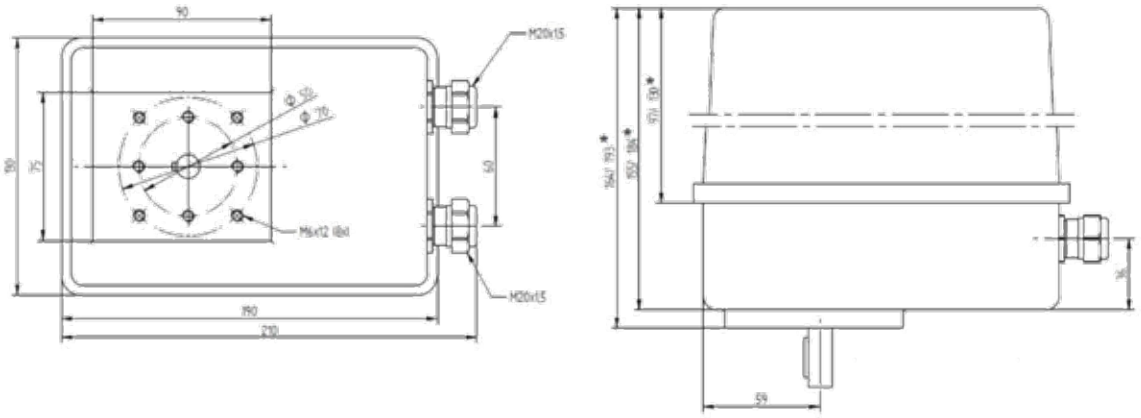
Actuator 20 Nm

Usage	for driving dampers and valves on combustion equipment	Dimensions [mm]	see dimension drawing
Power supply voltage	230 VAC/50 Hz	Screwed cable glands	2x M20x1,5, cabel Ø min. 8.0 mm, max. 13.0 mm | Ø min. 0.31“ in, max. 0.51“ in
Shaft type	Ø12x30 mm | 0.47x1.18“ in, type C02	Weigth	1.7 kg | 3.75 lb
		Protection class	IP65 with metal cover
Running time [90°]	60 sec.	Adaption	3x M6, screw-hole circle Ø 50 mm | Ø 1.97“ in
Controlling	DPS		
End switches	2	Ambient temperature	-10 ... +60 °C | 14 ... 140 °F
Additional switches	1	TÜV approval	when used with VMS/FMS/ ETAMATIC

Illustrations and technical data refer to the standard version



Dimension drawing Actuator 20 Nm type 662R2111 IP65 with metal cover (all dimensions in mm)



Dimensional drawing of Actuator with electronic control (all dimensions in mm)

**The construction height depends on the equipment*

Ordering Information

Description / Type (standard variant)	Order no.
Actuator 20 Nm in the following variant	662R2111 - ...

1) Coupling or lever must be ordered separately

A 03 – TORQUET	Selection
20 Nm	020
A 05 – SHAFT TYPE	**Selection**
ROUND SHAFT 12x30 mm WITH FEATHER KEY 4x4x14 mm	C02*
ROUND SHAFT 12x30 mm WITH FEATHER KEY 4x4x20 mm	C03
FURTHER SHAFTS ON REQUEST	_
A 10 – POWER SUPPLY VOLTAGE	**Selection**
POWER SUPPLY VOLTAGE 115 VAC/50 Hz	1155
POWER SUPPLY VOLTAGE 115 VAC/60 Hz	1156
POWER SUPPLY VOLTAGE 230 VAC/50 Hz	2305*
POWER SUPPLY VOLTAGE 230 VAC/60 Hz	2306
A 15 – RUNNING TIME TO 90°	**Selection**
60 SECONDS	60*
30 SECONDS	30
40 SECONDS	40
FURTHER RUNNING TIMES ON REQUEST	_
A 20 – ANGULAR DISPLACEMENT	**Selection**
DISPLACEMENT 90°	090*
DISPLACEMENT 120°	120
DISPLACEMENT 135°	135
DISPLACEMENT 180°	180
DISPLACEMENT 270°	270
A 25 – CONTROLLING	**Selection**
THREE-POINT-STEP POSITION FEEDBACK „POTENTIOMETER USE“	DPS*
ELECTRONIC CONTROLLING 4 ... 20 mA POSITION FEEDBACK „4 ... 20 mA“, additional position feedback “POTENTIOMETER 5 kOHM (COND. PLASTIC), TÜV approved”, Available only in “C03” shaft form	REG

*Default selection

Ordering Information

A 30 – POSITION FEEDBACK	Selection
POTENTIOMETER 100 OHM (WIRE-WOUND) only possible with THREE-POINT-STEP-CONTROLLING	100R
POTENTIOMETER 1 kOHM (WIRE-WOUND) only possible with THREE-POINT-STEP-CONTROLLING	1K
POTENTIOMETER 200 OHM (WIRE-WOUND) only possible with THREE-POINT-STEP-CONTROLLING	200R
POTENTIOMETER 5 kOHM (CONDUCTIVE PLASTIC), TÜV approved, POSITIVE LOCKING, FREE OF BACKLASH, only possible with THREE-POINT-STEP-CONTROLLING	5K*
4 ... 20 mA Standard at ELECTRONIC CONTROLLING 4 ... 20 mA **Caution: position feedback at ETAMATIC/FMS/VMS not failsafe,** **use additional position feedback "POTENTIOMETER 5 kOHM (COND. PLASTIC), TÜV approved" !**	REG
A 35 – ADDITIONAL POSITION FEEDBACK	**Selection**
WITHOUT ADDITIONAL POSITION FEEDBACK	0*
POTENTIOMETER 100 OHM (WIRE-WOUND)	100R
POTENTIOMETER 1 kOHM (WIRE-WOUND)	1K
POTENTIOMETER 200 OHM (WIRE-WOUND)	200R
POTENTIOMETER 5 kOHM (CONDUCTIVE PLASTIC), TÜV approved **Mandatory for failsafe position feedback indication when using electronic control !**	5K
A 40 – ELECTRICAL OVERRIDE, selection not possible Control „DPS" only available with electrical manual override Control „4 ... 20 mA" only available without electrical manual override	
WITHOUT	HV0
WITH	HV1
A 45 – IP PROTECTION CLASS	**Selection**
IP65 WITH METAL COVER	65*
A 50 – END SWITCHES	**Selection**
2 END SWITCHES	ES2*
2 END SWITCHES GASTIGHT	ESG
A 55 – ADDITIONAL SWITCHES	**Selection**
WITHOUT ADDITIONAL SWITCHES	ZS0
1 ADDITIONAL SWITCH	ZS1*
2 ADDITIONAL SWITCHES	ZS2
3 ADDITIONAL SWITCHES	ZS3
4 ADDITIONAL SWITCHES	ZS4
1 ADDITIONAL SWITCH GASTIGHT	ZG1
2 ADDITIONAL SWITCHES GASTIGHT	ZG2
3 ADDITIONAL SWITCHES GASTIGHT	ZG3
4 ADDITIONAL SWITCHES GASTIGHT	ZG4

*Default selection

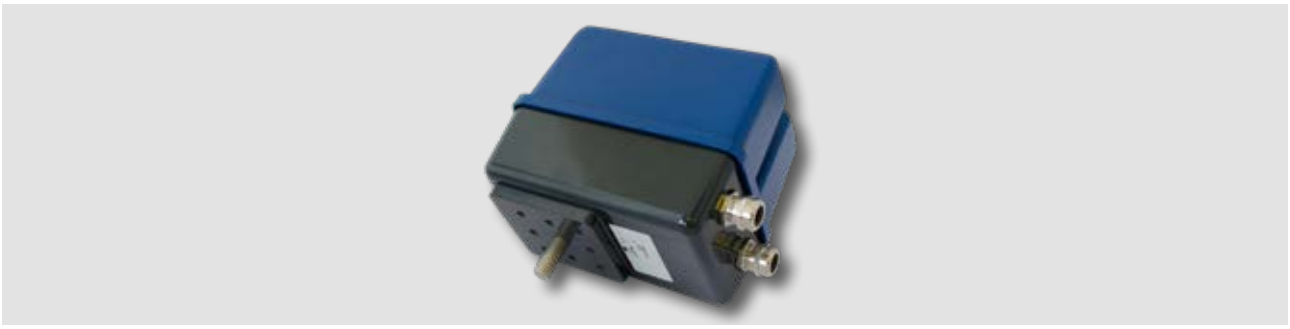
Ordering Information

A 60 – DIRECTION OF ROTATION“ (view to the shaft feather key on 12.00 o’clock)	Selection
DIRECTION OF ROTATION TO THE RIGHT (12.00 o’clock to 3.00 o’clock , clockwise‘)	1R*
DIRECTION OF ROTATION TO THE LEFT (12.00 o’clock to 9.00 o’clock , anti-clockwise‘)	2L
A 65 – GEAR	**Selection**
STANDARD	S*
GEAR FOR INCREASED TEMPERATURE 80 °C | 176 °F	W
A 70 – ADAPTION	**Selection**
3x M6, HOLE CIRCLE Ø 50 mm | 1.97“ in	S*
BY TYPE	T / U / W
BY DRAWING	ZG
FURTHER ADAPTATIONS ON REQUEST	_
A 75 – COLOUR	**Selection**
HOUSING COVER METAL RAL5010, BLUE, POWDER-COATED	1B*
HOUSING COVER METAL RAL7016, ANTHRACITE	2S
A 80 – CABLE GLANDS	**Selection**
2x M20 METAL	1S*
FURTHER CABLE GLANDS ON REQUEST	_
A 85 – SPECIAL CONFIGURATION	**Selection**
WITHOUT	SO0*
HOUSING HEATING 15 W, incl. THERMOSTAT, down to -30 °C | -22 °F	SO2

*Default selection

Electric Actuator 30/40/50 Nm, Type 662R2112/662R2121/662R2122

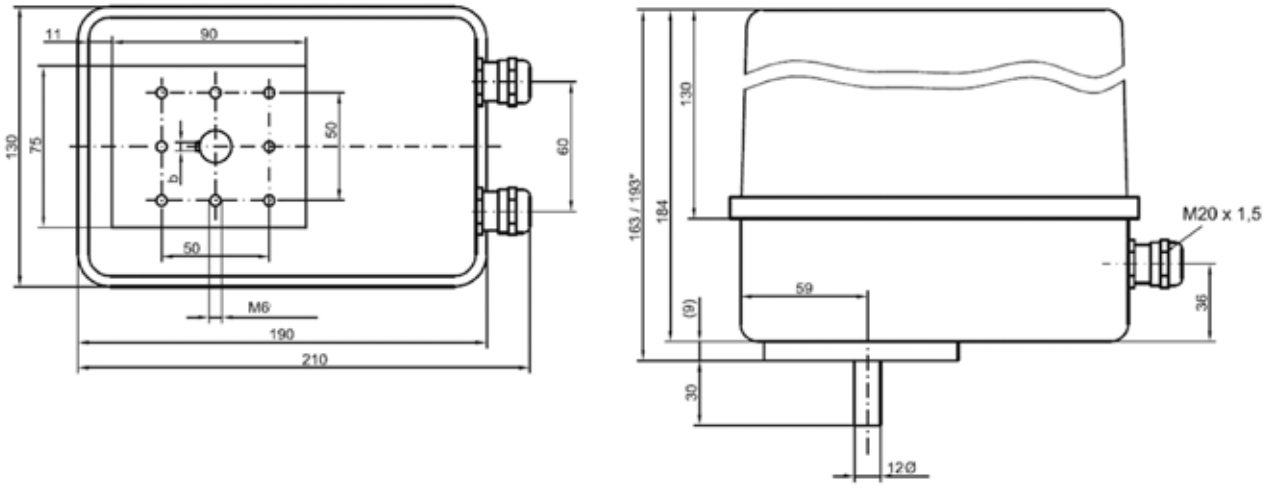
Technical Data



Actuator 30/40/50 Nm

Usage	for driving dampers and valves on combustion equipment	Dimensions [mm]	see dimension drawing
Power supply voltage	230 VAC/50 Hz	Screwed cable glands	2x M20x1,5, cabel Ø min. 8,0 mm, max. 13,0 mm | min. 0.31, max. 0.51“ in
Shaft type	Ø12x30 | 0.47x1.18“ in, Form C02	Weigth	2,5 kg | 5,51 lb
Running time [90°]	60 sec.	Protection class	IP65 with metal cover
Controlling	Three Point Step	Adaption	8 x 90°, M6, screw-hole circle Ø 50 mm | 1,97“ in
End switches	2	Ambient temperature	-10 ... +60 °C | 14 ... 140 °F
Additional switches	2	TÜV approval	when used with VMS/FMS/ ETAMATIC

Illustrations and technical data refer to the standard version



Dimension drawing actuator 30 NM 40 NM 50 NM (all dimensions in mm)

Ordering Information

Description / Type (standard variant)	Order no.
Actuator 30 Nm, in the following variants Actuator 40 Nm Actuator 50 Nm	662R2112 - ... 662R2121 - ... 662R2122 - ...

1) Coupling or lever must be ordered separately

A 03 – TORQUE	Selection
30 Nm	030
40 Nm	040
50 Nm	050
A 05 – SHAFT TYPE	**Selection**
ROUND SHAFT 12x30 mm | 0.47x1.18“ in WITH FEATHER KEY 4x4x20 mm | 0.16x0.16x0.79“ in when CLASS OF PROTECTION IP65	C03*
FURTHER SHAFTS ON REQUEST	–
A 10 – POWER SUPPLY VOLTAGE	**Selection**
POWER SUPPLY VOLTAGE 115 VAC/50 Hz	1155
POWER SUPPLY VOLTAGE 115 VAC/60 Hz	1156
POWER SUPPLY VOLTAGE 230 VAC/50 Hz	2305*
POWER SUPPLY VOLTAGE 230 VAC/60 Hz	2306
A 15 – RUNNING TIME TO 90°	**Selection**
30 SECONDS	30
40 SECONDS	40
60 SECONDS	60*
FURTHER RUNNING TIMES ON REQUEST	–
A 20 – ANGULAR DISPLACEMENT	**Selection**
DISPLACEMENT 90°	090*
DISPLACEMENT 120°	120
DISPLACEMENT 135°	135
DISPLACEMENT 180°	180
DISPLACEMENT 270°	270
A 25 – CONTROLLING	**Selection**
THREE-POINT-STEP POSITION FEEDBACK „POTENTIOMETER USE“	DPS*
ELECTRONIC CONTROLLING 4 ... 20 mA POSITION FEEDBACK „4 ... 20 mA“, additional position feedback “POTENTIOMETER 5 kOHM (COND. PLASTIC), TÜV approved”	REG

*Default selection

Ordering Information

A 30 – POSITION FEEDBACK	Selection
POTENTIOMETER 100 OHM (WIRE-WOUND) only possible with THREE-POINT-STEP-CONTROLLING	100R
POTENTIOMETER 1 kOHM (WIRE-WOUND) only possible with THREE-POINT-STEP-CONTROLLING	1K
POTENTIOMETER 200 OHM (WIRE-WOUND) only possible with THREE-POINT-STEP-CONTROLLING	200R
POTENTIOMETER 5 kOHM (CONDUCTIVE PLASTIC), TÜV approved, POSITIVE LOCKING, FREE OF BACKLASH, only possible with THREE-POINT-STEP-CONTROLLING	5K*
4 ... 20 mA Standard at ELECTRONIC CONTROLLING 4 ... 20 mA **Caution: position feedback at ETAMATIC/FMS/VMS not failsafe,** **use additional position feedback "POTENTIOMETER 5 kOHM (COND. PLASTIC), TÜV approved" !**	REG
A 35 – ADDITIONAL POSITION FEEDBACK	**Selection**
WITHOUT ADDITIONAL POSITION FEEDBACK	0*
POTENTIOMETER 100 OHM (WIRE-WOUND)	100R
POTENTIOMETER 1 kOHM (WIRE-WOUND)	1K
POTENTIOMETER 200 OHM (WIRE-WOUND)	200R
POTENTIOMETER 5 kOHM (CONDUCTIVE PLASTIC), TÜV approved **Mandatory for failsafe position feedback indication when using electronic control !**	5K
A 40 – ELECTRICAL OVERRIDE, selection not possible Control „DPS" only available with electrical manual override Control „4 ... 20 mA" only available without electrical manual override	Selection
WITHOUT	HV0
WITH	HV1
A 45 – IP PROTECTION CLASS	**Selection**
IP65	65*
A 50 – END SWITCHES	**Selection**
2 END SWITCHES	ES2*
2 END SWITCHES GASTIGHT	ESG
A 55 – ADDITIONAL SWITCHES	**Selection**
WITHOUT ADDITIONAL SWITCHES	ZS0
1 ADDITIONAL SWITCH	ZS1
2 ADDITIONAL SWITCHES	ZS2*
3 ADDITIONAL SWITCHES	ZS3
4 ADDITIONAL SWITCHES	ZS4
1 ADDITIONAL SWITCH GASTIGHT	ZG1
2 ADDITIONAL SWITCHES GASTIGHT	ZG2
3 ADDITIONAL SWITCHES GASTIGHT	ZG3
4 ADDITIONAL SWITCHES GASTIGHT	ZG4

*Default selection

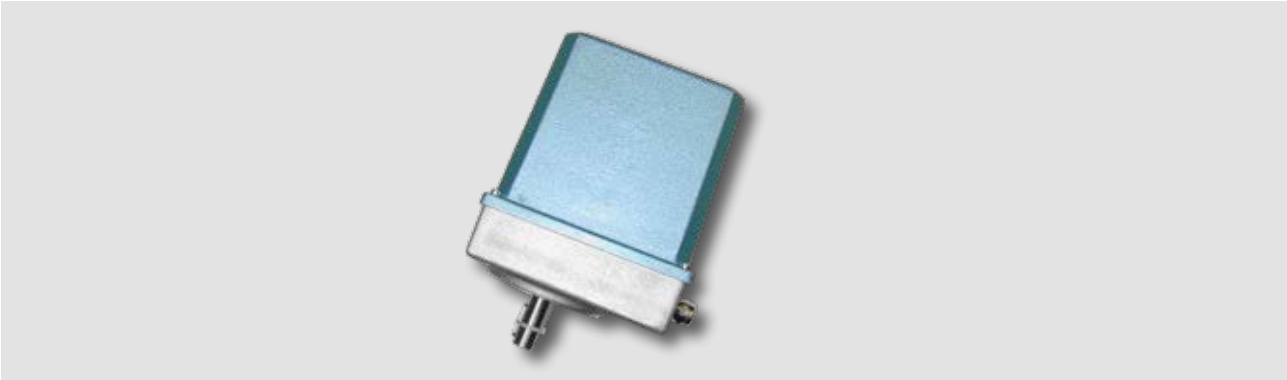
Ordering Information

A 60 – DIRECTION OF ROTATION (view to the shaft feather key on 12.00 o'clock)	Selection
DIRECTION OF ROTATION TO THE RIGHT (12.00 o'clock to 3.00 o'clock , clockwise')	1R*
DIRECTION OF ROTATION TO THE LEFT (12.00 o'clock to 9.00 o'clock , anti-clockwise')	2L
A 65 – GEAR	**Selection**
STANDARD	S*
GEAR FOR INCREASED TEMPERATURE 80 °C (only possible with IP65 PROTECTION CLASS)	W
A 70 – ADAPTION	**Selection**
4x M6, HOLE CIRCLE Ø 50 mm | 1.97" in	S*
BY TYPE	T / U / W
BY DRAWING	ZG
FURTHER ADAPTATIONS ON REQUEST	_
A 75 – COLOUR	**Selection**
HOUSING COVER METAL RAL5010, BLUE, POWDER-COATED	1B*
HOUSING COVER METAL RAL7016, ANTHRACITE	2S
A 80 – CABLE GLANDS	**Selection**
2x M20 when IP65	1S*
FURTHER CABLE GLANDS ON REQUEST	_
A 85 – SPECIAL CONFIGURATION	**Selection**
WITHOUT SPECIAL CONFIGURATION	SO0*
HOUSING HEATING 15 W, incl. THERMOSTAT, down to -30 °C | -22 °F	SO2

*Default selection

Electric Actuators 90/140/180 Nm, Type 662R2123/662R2124/662R2125

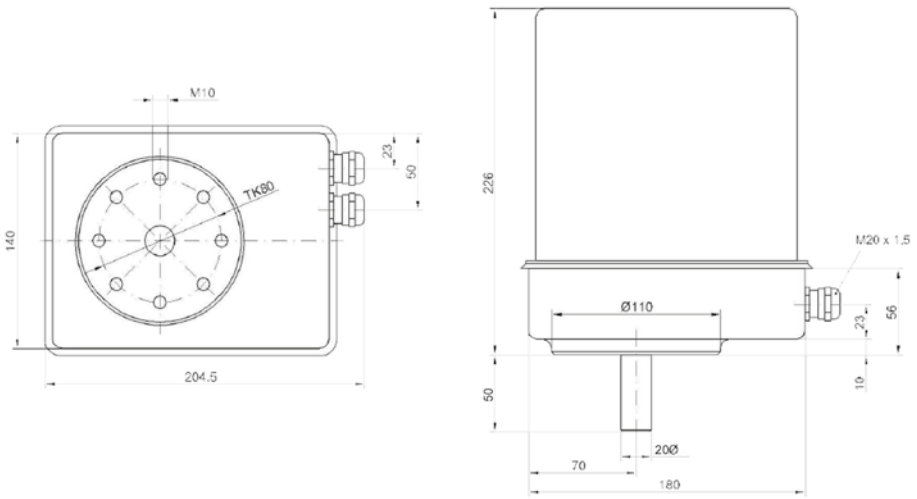
Technical Data



Actuator 90-180 Nm

Usage	for driving dampers and valves on combustion equipment	Dimensions [mm]	see dimension drawing
Power supply voltage	230 VAC/50 Hz	Screwed cable glands	2x M20x1.5, cabel Ø min. 8.0 mm, max. 13.0 mm I min. 0.31, max. 0.51“ in
Shaft type	Ø20x50 I 0.79x1.97“ in, type C10	Weigth	7 kg I 15,43 lb
Running time [90°]	60 sec.	Protection class	IP65
Controlling	Three Point Step	Adaption	4 x 45°, M10, screw-hole circle Ø 80 mm I 3.15“ in
End switches	2	Ambient temperature	-10 ... + 60 °C I 14 ... 140 °F
Additional switches	2	TÜV approval	when used with VMS/FMS/ ETAMATIC

Illustrations and technical data refer to the standard version



Dimension drawing Actuator 90-180 Nm Type 662R2123/24/25 IP65 (all dimensions in mm)

Ordering Information

Description / Type (standard variant)	Order no.
Actuator 90 Nm, in the following variants	662R2123 - ...
Actuator 140 Nm	662R2124 - ...
Actuator 180 Nm	662R2125 - ...

[1] Coupling or lever must be ordered separately

A 03 – TORQUE	Selection
90 Nm	090
140 Nm	140
180 Nm	180
A 05 – SHAFT TYPE	**Selection**
ROUND SHAFT 20x50 mm | 0.79x1.97“ in WITH FEATHER KEY 6x6x32 mm | 0.24x0.24x1.26“ in	C10*
FURTHER SHAFTS ON REQUEST	—
A 10 – POWER SUPPLY VOLTAGE	**Selection**
POWER SUPPLY VOLTAGE 115 VAC/50 Hz	1155
POWER SUPPLY VOLTAGE 115 VAC/60 Hz	1156
POWER SUPPLY VOLTAGE 230 VAC/50 Hz	2305*
POWER SUPPLY VOLTAGE 230 VAC/60 Hz	2306
A 15 – RUNNING TIME TO 90°	**Selection**
30 SECONDS	30
40 SECONDS	40*
60 SECONDS	60*
FURTHER RUNNING TIMES ON REQUEST	—
A 20 – ANGULAR DISPLACEMENT	**Selection**
DISPLACEMENT 90°	090*
DISPLACEMENT 120°	120
DISPLACEMENT 135°	135
DISPLACEMENT 180°	180
DISPLACEMENT 270°	270
A 25 – CONTROLLING	**Selection**
THREE-POINT-STEP POSITION FEEDBACK „POTENTIOMETER USE“	DPS*
ELECTRONIC CONTROLLING 4 ... 20 mA POSITION FEEDBACK „4 ... 20 mA“, additional position feedback “POTENTIOMETER 5 kOHM (COND. PLASTIC), TÜV approved”	REG

*Default selection

Ordering Information

A 30 – POSITION FEEDBACK	Selection
POTENTIOMETER 100 OHM (WIRE-WOUND) only possible with THREE-POINT-STEP-CONTROLLING	100R
POTENTIOMETER 1 kOHM (WIRE-WOUND) only possible with THREE-POINT-STEP-CONTROLLING	1K
POTENTIOMETER 200 OHM (WIRE-WOUND) only possible with THREE-POINT-STEP-CONTROLLING	200R
POTENTIOMETER 5 kOHM (CONDUCTIVE PLASTIC), TÜV approved, POSITIVE LOCKING, FREE OF BACKLASH, only possible with THREE-POINT-STEP-CONTROLLING	5K*
4 ... 20 mA Standard at ELECTRONIC CONTROLLING 4 ... 20 mA **Caution: position feedback at ETAMATIC/FMS/VMS not failsafe,** **use additional position feedback "POTENTIOMETER 5 kOHM (COND. PLASTIC), TÜV approved" !**	REG
A 35 – ADDITIONAL POSITION FEEDBACK	**Selection**
WITHOUT ADDITIONAL POSITION FEEDBACK	0*
POTENTIOMETER 100 OHM (WIRE-WOUND)	100R
POTENTIOMETER 1 kOHM (WIRE-WOUND)	1K
POTENTIOMETER 200 OHM (WIRE-WOUND)	200R
PPOTENTIOMETER 5 kOHM (CONDUCTIVE PLASTIC), TÜV approved **Mandatory for failsafe position feedback indication when using electronic control!**	5K
A 40 – ELECTRICAL OVERRIDE, selection not possible, CONTROLLING TPS delivery only with ELECTRICAL OVERRIDE CONTROLLING 4 ... 20 mA delivery only without ELECTRICAL OVERRIDE	
WITHOUT	HV0
WITH	HV1
A 45 – IP PROTECTION CLASS, selection not possible, delivery only in IP65	
IP65	65
A 50 – END SWITCHES	**Selection**
2 END SWITCHES	ES2*
2 END SWITCHES GASTIGHT	ESG
A 55 – ADDITIONAL SWITCHES	**Selection**
WITHOUT ADDITIONAL SWITCHES	ZS0
1 ADDITIONAL SWITCH	ZS1
2 ADDITIONAL SWITCHES	ZS2*
3 ADDITIONAL SWITCHES	ZS3
4 ADDITIONAL SWITCHES	ZS4
1 ADDITIONAL SWITCH GASTIGHT	ZG1
2 ADDITIONAL SWITCHES GASTIGHT	ZG2
3 ADDITIONAL SWITCHES GASTIGHT	ZG3
4 ADDITIONAL SWITCHES GASTIGHT	ZG4

*Default selection

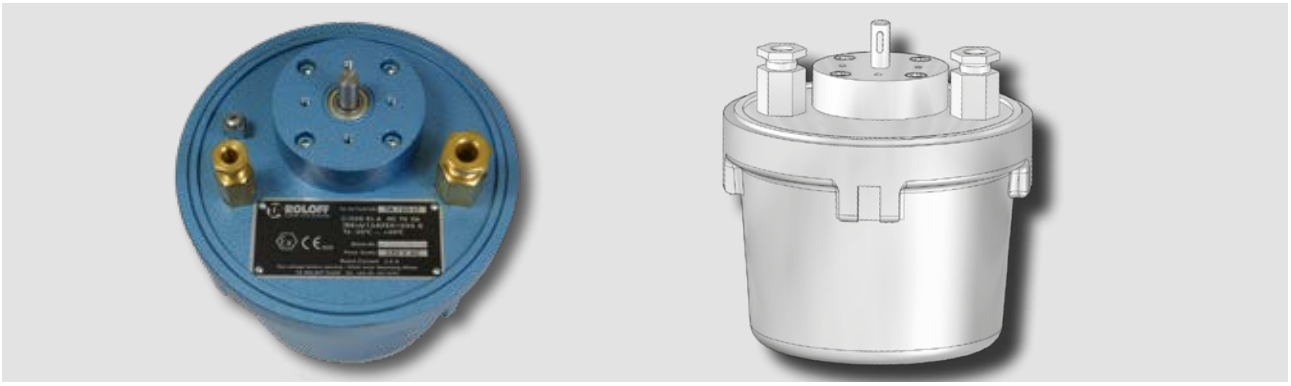
Ordering Information

A 60 – DIRECTION OF ROTATION“ (view to the shaft feather key on 12.00 o’clock)	Selection
DIRECTION OF ROTATION TO THE RIGHT (12.00 o’clock to 3.00 o’clock , clockwise‘)	1R*
DIRECTION OF ROTATION TO THE LEFT (12.00 o’clock to 9.00 o’clock , anti-clockwise‘)	2L
A 65 – GEAR	**Selection**
STANDARD	S*
GEAR FOR INCREASED TEMPERATURE 80 °C | 176 °F	W
A 70 – ADAPTION	**Selection**
8x M10 (45°), HOLE CIRCLE Ø 80 mm | 3.15“ in	S*
BY TYPE	T / U / W
BY DRAWING	ZG
FURTHER ADAPTATIONS ON REQUEST	_
A 75 – COLOUR	**Selection**
HOUSING COVER METAL RAL5010, BLUE, POWDER-COATED	1B*
HOUSING COVER METAL RAL7016, ANTHRACITE	2S
A 80 – CABLE GLANDS	**Selection**
2x M20	1S*
FURTHER CABLE GLANDS ON REQUEST	_
A 85 – SPECIAL CONFIGURATION	**Selection**
WITHOUT SPECIAL CONFIGURATION	SO0*
HOUSING HEATING 15 W, incl. THERMOSTAT, down to -30 °C | -22 °F	SO2

*Default selection

ATEX/IECEx Actuator Type 662R2140 Die-cast aluminium and 662R2141 stainless steel.

Technical Data



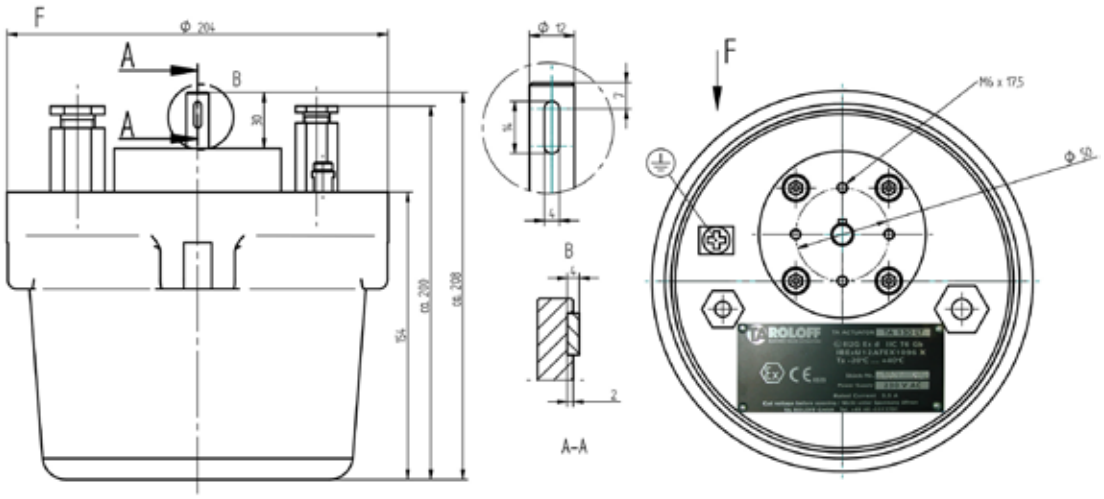
Actuator in die-cast aluminium housing and stainless steel housing

Usage	for driving dampers and valves on combustion equipment
EX-approval	II2G Ex d IIC T6 Gb IBExU 12ATEX1096 X IECEx IBE 14.0056X
Power supply voltage	230 VAC/50 Hz
Item no.	662R2140 die-cast aluminium housing 662R2141 stainless steel
Shaft type	Ø12 x 25 mm I 0.47x0.98“ in and Ø12 x 30 mm I 0.47x1.18“ in with stainless steel housing
Running time [90°]	60 sec.
Controlling	Three Point Step
End switches	2
Position Feedback	Poti 5KOhm, positive locking and Backlash-free

Dimensions [mm]	see dimension drawing
Screwed cable glands	1x M16 x 1,5, cabel Ø min. 3.5 mm, max. 8.5 mm I min. 0.14, max. 0.33“ in 1x M20 x 1.5, cabel Ø min. 11 mm, max. 14.2 mm I min. 0.43, max. 0.56“ in
Weigth	8 kg I 17.63 lb Alunkinium 11.6 kg I 25.57 lb Stainless steel version
Protection class	IP65
Adaption	4 x M6, screw-hole circle Ø 50 mm I 1.97“ in
Ambient temperature	ATEX : -20 ... + 60 °C I -4 ... 140 °F IECEx: -20 ... + 40 °C I -4 ... 104 °F
Additional switches	2
TÜV approval	when used with VMS/FMS/ ETAMATIC

Illustrations and technical data refer to the standard version

Stainless steel housing material: Base plate 1.4571
Cover 316 SS



Dimension drawing Actuator Type 662R2140/41/with feather key according to DIN 6885-1 (all dimensions in mm)

Ordering Information

Description / Type (standard variant)	Order no.
Actuator ATEX / IECEx Aluminium cast housing, position feedback POTENTIOMETER 5 kOHM, conductive plastic, TÜV approved, 2 end switches, 2 additional switch, electr. override, IP65[1)]	662R2140 - ...
Actuator ATEX / IECEx Stainless steel, position feedback POTENTIOMETER 5 kOHM, conductive plastic, TÜV approved, 2 end switches, 2 additional switch, electr. override, IP65[1)]	662R2141 - ...

[1)] Coupling or lever must be ordered separately

A 03 – TORQUE	Selection
6 Nm ATEX EX II 2G Ex d IIC T6 Gb, -20...60°C | -4 ... 140 °F	006
20 Nm ATEX EX II 2G Ex d IIC T6 Gb, -20...60°C | -4 ... 140 °F	020
30 Nm ATEX EX II 2G Ex d IIC T6 Gb, -20...60°C | -4 ... 140 °F	030
40 Nm ATEX EX II 2G Ex d IIC T6 Gb, -20...60°C | -4 ... 140 °F	040
50 Nm ATEX EX II 2G Ex d IIC T6 Gb, -20...60°C | -4 ... 140 °F	050
6 Nm IECEx Ex d IIC T6 Gb, -20...40°C | -4 ... 104 °F	06
20 Nm IECEx Ex d IIC T6 Gb, -20...40°C | -4 ... 104 °F	20
30 Nm IECEx Ex d IIC T6 Gb, -20...40°C | -4 ... 104 °F	30
40 Nm IECEx Ex d IIC T6 Gb, -20...40°C | -4 ... 104 °F	40
50 Nm IECEx Ex d IIC T6 Gb, -20...40°C | -4 ... 104 °F	50
A 05 – SHAFT TYPE	**Selection**
ROUND SHAFT 12x30 mm | 0.47x1.18“ in WITH FEATHER KEY 4x4x14 mm | 0.16x0.16x0.55“ in	C02
FURTHER SHAFTS ON REQUEST	_
A 10 – POWER SUPPLY VOLTAGE	**Selection**
POWER SUPPLY VOLTAGE 115 VAC/50 Hz	1155
POWER SUPPLY VOLTAGE 115 VAC/60 Hz	1156
POWER SUPPLY VOLTAGE 230 VAC/50 Hz	2305*
POWER SUPPLY VOLTAGE 230 VAC/60 Hz	2306
A 15 – RUNNING TIME TO 90°	**Selection**
30 SECONDS	30
40 SECONDS	40
60 SECONDS	60*
FURTHER RUNNING TIMES ON REQUEST	_
A 20 – ANGULAR DISPLACEMENT	**Selection**
DISPLACEMENT 90°	090*
DISPLACEMENT 120°	120
DISPLACEMENT 135°	135
DISPLACEMENT 180°	180
DISPLACEMENT 270°	270

*Default selection

Ordering Information

A 25 – CONTROLLING	Selection
THREE-POINT-STEP POSITION FEEDBACK „POTENTIOMETER USE“	DPS*
ELECTRONIC CONTROLLING 4 ... 20 mA POSITION FEEDBACK „4 ... 20 mA“, additional position feedback “POTENTIOMETER 5 kOHM (COND. PLASTIC), TÜV approved”	REG
A 30 – POSITION FEEDBACK	**Selection**
POTENTIOMETER 100 OHM (WIRE-WOUND) only possible with THREE-POINT-STEP-CONTROLLING	100R
POTENTIOMETER 1 kOHM (WIRE-WOUND) only possible with THREE-POINT-STEP-CONTROLLING	1K
POTENTIOMETER 200 OHM (WIRE-WOUND) only possible with THREE-POINT-STEP-CONTROLLING	200R
POTENTIOMETER 5 kOHM (CONDUCTIVE PLASTIC), TÜV approved, POSITIVE LOCKING, FREE OF BACKLASH, only possible with THREE-POINT-STEP-CONTROLLING	5K*
4 ... 20 mA Standard at ELECTRONIC CONTROLLING 4 ... 20 mA **Caution: position feedback at ETAMATIC/FMS/VMS not failsafe, use additional position feedback “POTENTIOMETER 5 kOHM (COND. PLASTIC), TÜV approved” !**	REG
A 35 – ADDITIONAL POSITION FEEDBACK	**Selection**
WITHOUT ADDITIONAL POSITION FEEDBACK	0*
POTENTIOMETER 100 OHM (WIRE-WOUND)	100R
POTENTIOMETER 1 kOHM (WIRE-WOUND)	1K
POTENTIOMETER 200 OHM (WIRE-WOUND)	200R
PPOTENTIOMETER 5 kOHM (CONDUCTIVE PLASTIC), TÜV approved **Mandatory for failsafe position feedback indication when using electronic control!**	5K
A 40 – ELECTRICAL OVERRIDE, selection not possible, CONTROLLING TPS delivery only with ELECTRICAL OVERRIDE CONTROLLING 4 ... 20 mA delivery only without ELECTRICAL OVERRIDE	
WITHOUT	HV0
WITH	HV1
A 45 – IP PROTECTION CLASS, selection not possible, delivery only in IP65	
IP65	65
A 50 – END SWITCHES	**Selection**
2 END SWITCHES	ES2*
2 END SWITCHES GASTIGHT	ESG

*Default selection

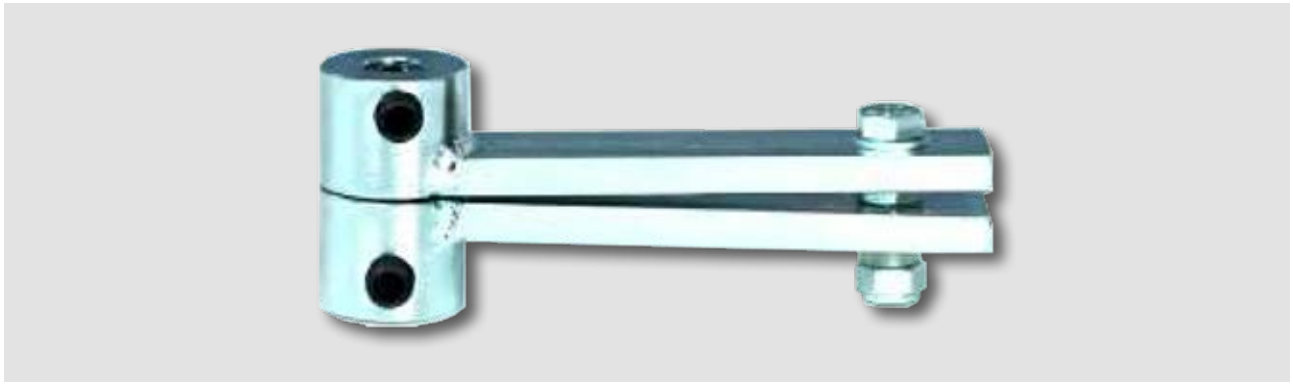
Ordering Information

A 55 – ADDITIONAL SWITCHES	Selection
2 ADDITIONAL SWITCHES	ZS2*
2 ADDITIONAL SWITCHES GASTIGHT	ZG2
A 60 – DIRECTION OF ROTATION“ (view to the shaft feather key on 12.00 o’clock)	**Selection**
DIRECTION OF ROTATION TO THE RIGHT (12.00 o’clock to 3.00 o’clock , clockwise‘)	1R*
DIRECTION OF ROTATION TO THE LEFT (12.00 o’clock to 9.00 o’clock , anti-clockwise‘)	2L
A 65 – GEAR	**Selection**
STANDARD	S*
A 70 – ADAPTION	**Selection**
4x M6, HOLE CIRCLE Ø 50 mm	1.97“ in	S*
BY DRAWING	ZG
A 75 – COLOUR	**Selection**
COVER BLUE	1B*
A 80 – CABLE GLANDS	**Selection**
1x M16 ATEX, 1x M20 ATEX,	1S*
A 85 – SPECIAL CONFIGURATION	**Selection**
WITHOUT SPECIAL CONFIGURATION	SO0*
SPECIAL CONFIGURATION	SOx

*Default selection

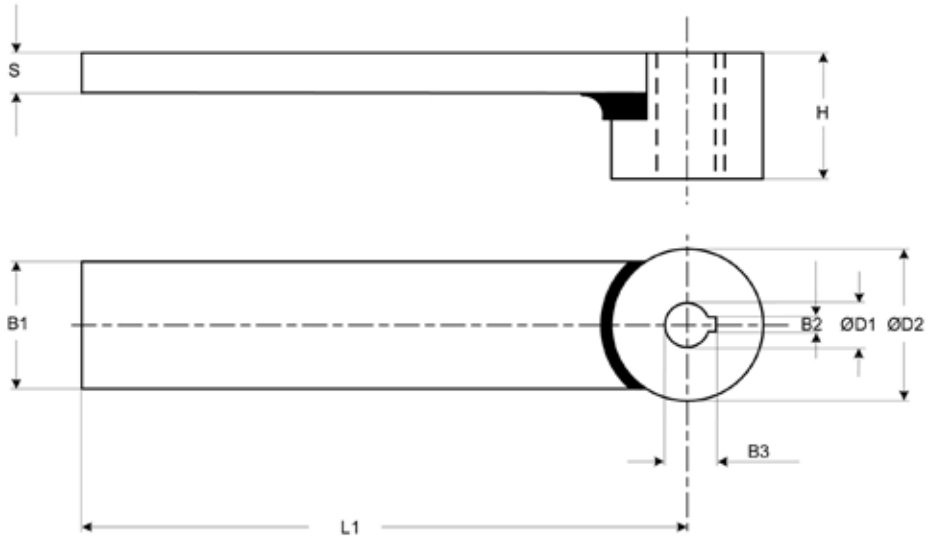
Lever arm coupling for actuators.

Technical Data



Lever arm coupling

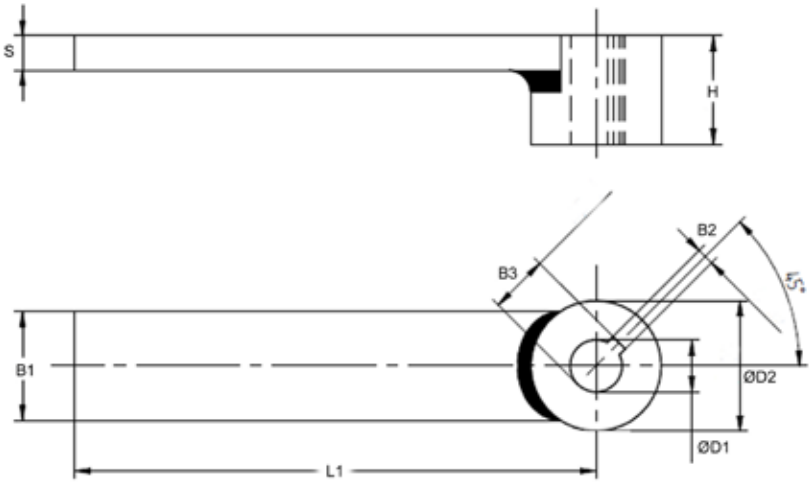
Usage	Mechanical connection between actuator and dampers/valves	Dimensions [mm]	see dimension drawing
Item number according shaft diameter d	662R2308 d=10 mm | 0.39“ in 662R2308/1 d=12 mm | 0.47“ in 662R2308/S d=12 mm | 0.47“ in, special length 662R2308/11 d=12 | 0.47“ in, special groove 45° 662R2308/2 d=20 mm | 0.79“ in 662R2308/21 d=20 mm | 0.79“ in, special groove 45° and special length	Outside diameter	30/35 mm | 1.18/1.38“ in
		Material	zinc-coated steel
		Maximum torque [Nm]	180



Dimension drawing Lever arm coupling

Ordering Information

Maximum torque	B1	B2	B3	ØD1	ØD2	H	L1	S	Order no.
12 NM	25 mm | 0.94“ in	3 mm ^{l9} | 0.12“ in ^{l9}	11,5 mm $^{+0,1}$ | 0.42“ in $^{+0,1}$	10 mm ^{H7} | 0.39“ in ^{H7}	30 mm | 1.18“ in	25 mm | 0.98“ in	120 mm | 4.72“ in	8 mm | 0.31“ in	662R2308
40 NM	25 mm | 0.94“ in	4 mm ^{l9} | 0.16“ in ^{l9}	14,1 mm$^{+0,1}$ | 0.55“ in $^{+0,1}$	12 mm ^{H7} | 0.47“ in ^{H7}	30 mm | 1.18“ in	25 mml 0.98“ in	120 mm | 4.72“ in	8 mm | 0.31“ in	662R2308/1
180 NM	25 mm | 0.94“ in	6 mm ^{l9} | 0.24“ in ^{l9}	22,8 mm$^{+0,1}$ | 0.90“ in $^{+0,1}$	20 mm ^{H7} | 0.79“ in ^{H7}	35 mm | 1.38“ in	40 mm | 1.57“ in	117,5 mm | 4.62“ in	8 mm | 0.31“ in	662R2308/2
40 NM	25 mm | 0.94“ in	4 mm ^{l9} | 0.16“ in ^{l9}	14,1 mm $^{+0,1}$ | 0.55“ in $^{+0,1}$	12 mm ^{H7} | 0.47“ in ^{H7}	30 mm | 1.18“ in	25 mm | 0.98“ in	200 mm | 7.87“ in	8 mm | 0.31“ in	662R2308/S



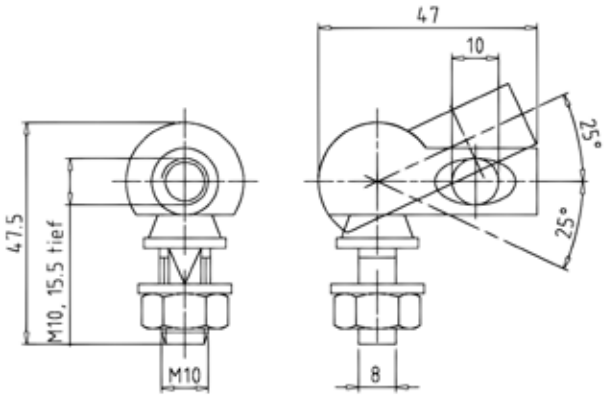
Dimension drawing Lever arm coupling 45° groove

Maximum torque	B1	B2	B3	ØD1	ØD2	H	L1	S	Order no.
40 NM	25 mm | 0.94“ in	4 mm ^{l9} | 0.16“ in ^{l9}	13.5 mm$^{+0,1}$ | 0.51“ in $^{+0,1}$	12 mm ^{H7} | 0.47“ in ^{H7}	30 mm | 1.18“ in	25 mm | 0.98“ in	120 mm | 4.72“ in	8 mm | 0.31“ in	662R2308/11
40 NM	25 mm | 0.94“ in	6 mm ^{l9} | 0.24“ in ^{l9}	22.8 mm$^{+0,1}$ | 0.90“ in $^{+0,1}$	20 mm ^{H7} | 0.79“ in ^{H7}	35 mm | 1.38“ in	40 mm | 1.57“ in	200 mm | 7.87“ in	8 mm | 0.31“ in	662R2308/21

Ball joint for actuators.

Technical Data

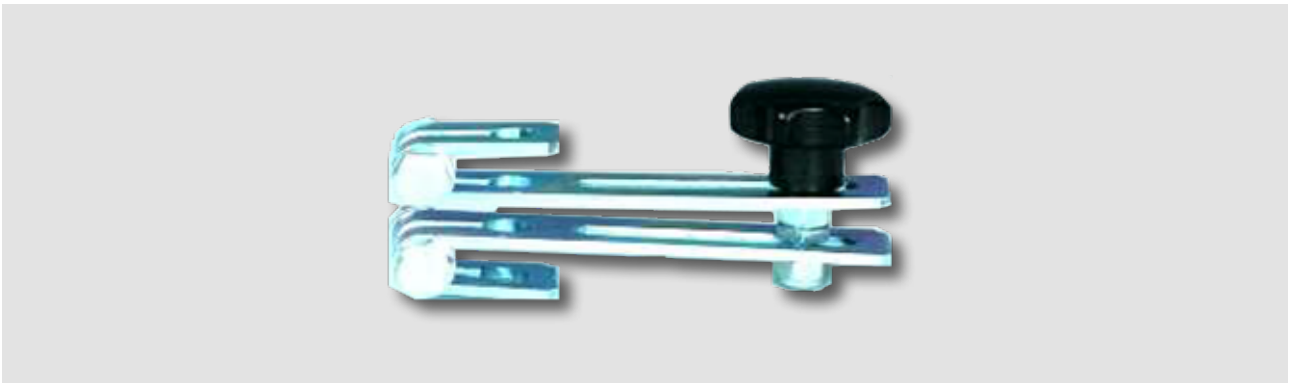
Usage	Mechanical connection between lever linkages	Dimensions [mm]	see dimension drawing
Item no.	662R2305	Material	zinc-coated steel



Dimension drawing ball joint Type 662R2305 (all dimensions in mm)

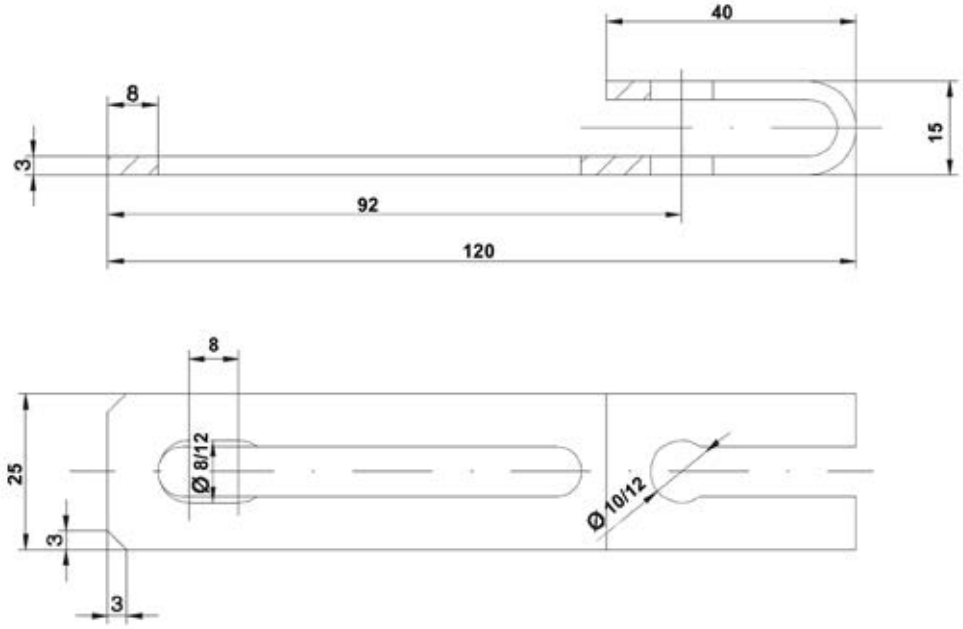
Clamping lever for ball joint.

Technical Data



Clamping lever for ball joint

Usage	Mechanical connection between actuator and dampers/valves	Dimensions [mm]	see dimension drawing
Item no.	662R2306	Shaft diameter	10/12 mm | 0.39/0.47“ in
Material	zinc-coated steel	Maximum torque [Nm]	12



Dimension drawing Clamping lever for ball joint (all dimensions in mm)

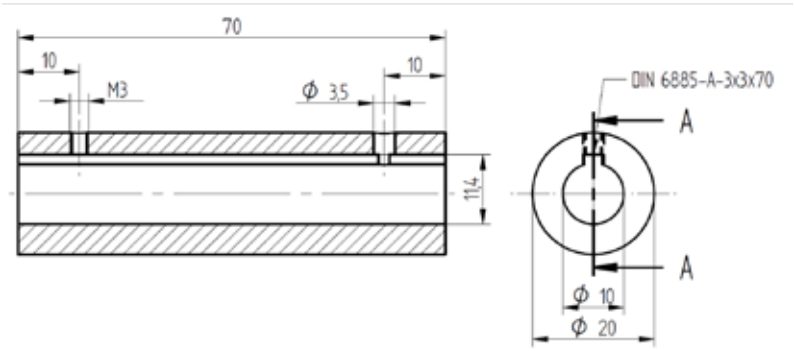
Coupling for actuators.

Technical Data

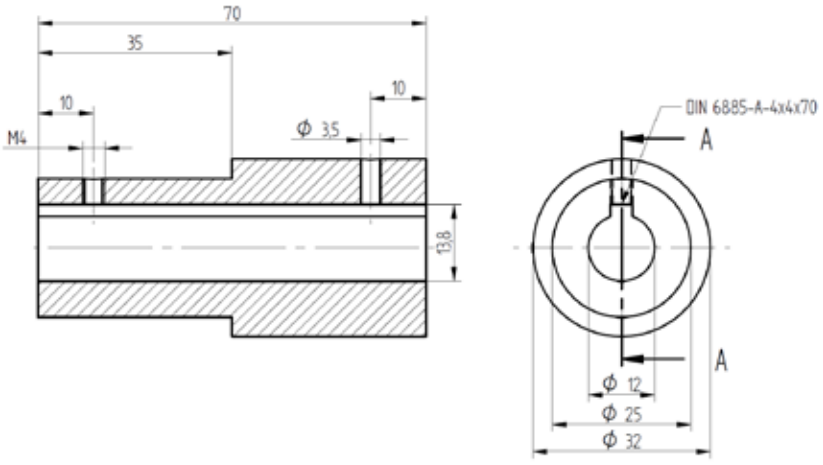


Coupling

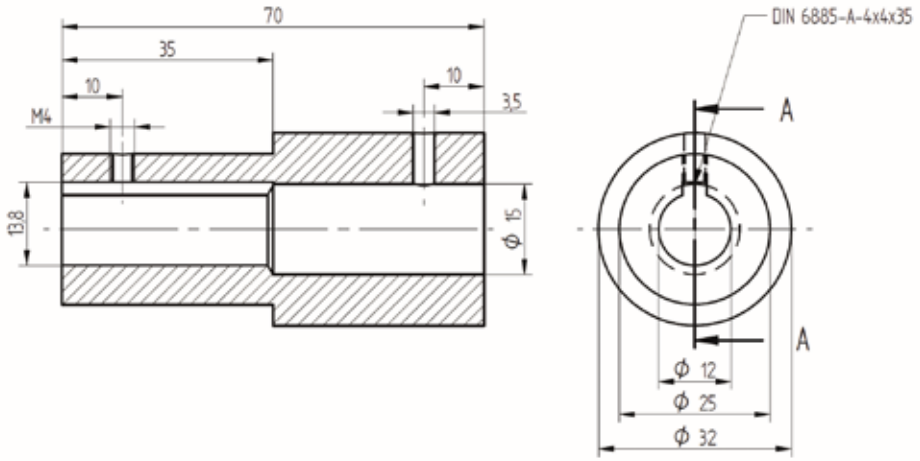
Usage	Mechanical connection between actuator and controll dampers	Dimensions [mm]	see dimension drawing
Item no.	According to shaft diameter, see order no. List on the following page	Material	free cutting steel, gunmetal finsh



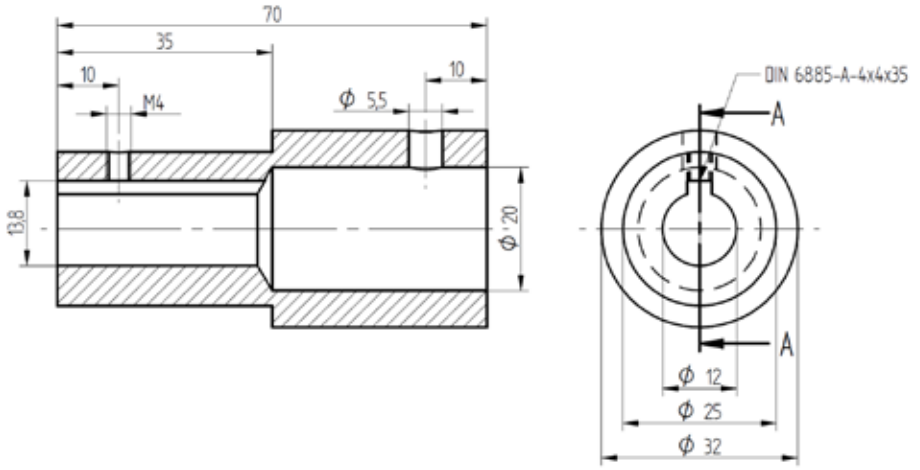
Dimension drawing plug-in coupling type 662R2188 shaft 10 mm to 10 mm (all dimensions in mm)



Dimension drawing Coupling Type 662R2189 shaft 12 mm to 12 mm (all dimensions in mm)



Dimension drawing Coupling type 662R2192 shaft 12 to 15 mm (all dimensions in mm)



Dimension drawing Coupling type 662R2196 shaft 12 on 20 mm (all dimensions in mm)

Ordering Information

Description / Type	Order no.
Coupling for actuator with shaft d=10 mm I 0.39“ in (motor side) to d2=10 mm I 0.39“ in (flap side)	662R2188
Coupling for actuator with shaft d=12 mm I 0.47“ in (motor side) to d2=12 mm I 0.47“ in (flap side)	662R2189
Coupling for actuator with shaft d=12 mm I 0.47“ in (motor side) to d2=15 mm I 0.59“ in (flap side)	662R2192
Coupling for actuator with shaft d=12 mm I 0.47“ in (motor side) to d2=16 mm I 0.63“ in (flap side)	662R2193
Coupling for actuator with shaft d=12 mm I 0.47“ in (motor side) to d2=10 mm I 0.39“ in (flap side)	662R2195
Coupling for actuator with shaft d=12 mm I 0.47“ in (motor side) to d2=20 mm I 0.79“ in (flap side)	662R2196
Coupling for actuator with shaft d=20 mm I 0.79“ in (motor side) to d2=20 mm I 0.79“ in (flap side)	662R2197

Cooling fin coupling with thermal separation.

Technical Data

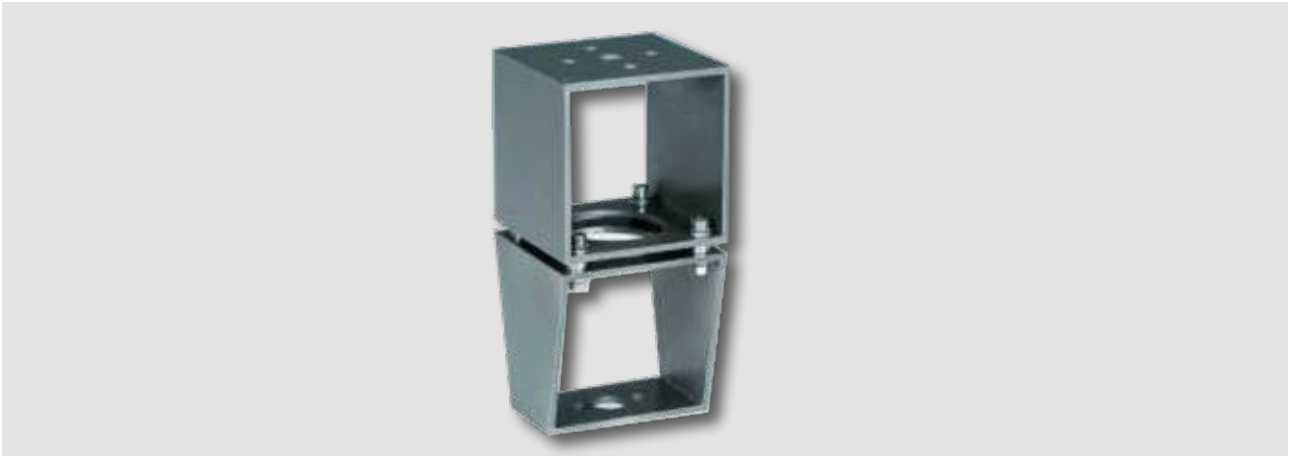


Cooling fins coupling with thermal separation

Usage	Mechanical connection between actuator and controll dampers	Dimensions (Outside Diameter x length)	68x89 mm | 2.68x3.50“ in
Item no.	662R2235 Shaft Ø 12 mm | 0.47“ in 662R2236 Shaft Ø 20/12 mm | 0.79/0.47“ in	Material	Aluminium
Torque max. [Nm]	40		

Square hollow profile console Aluminium.

Technical Data

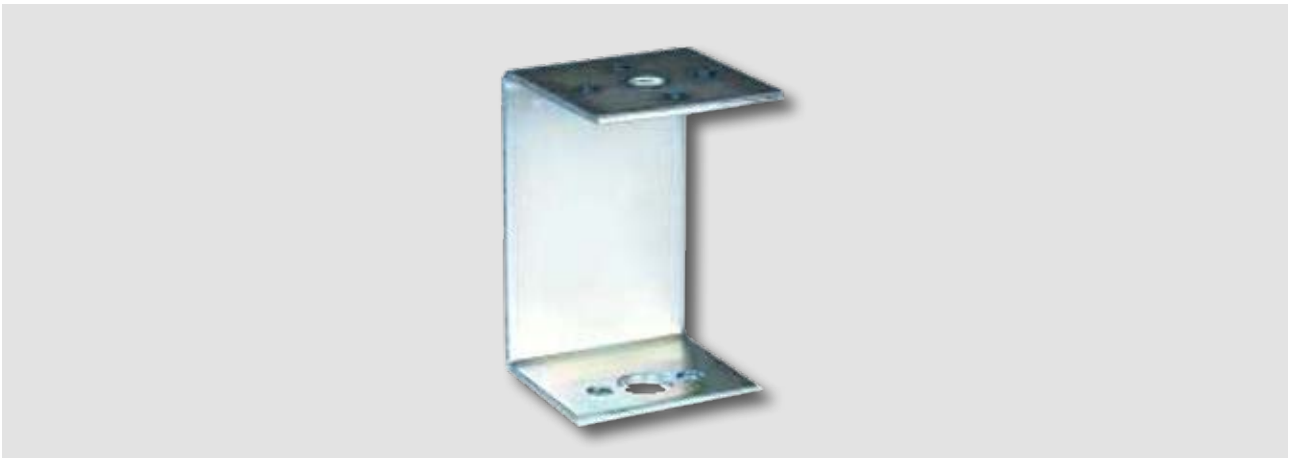


Square hollow profile console Aluminium

Usage	Mechanical connection between actuator and controll dampers	Dimensions	140x85x80 mm | 5.51x3.35x3.15“ in
Item no.	662R2225	Material	Aluminium
Torque max. [Nm]	40	Adaption (drive)	LK Ø50 mm | 1.97“ in, 4 x 90°

U-angle bracket sheet steel, galvanized.

Technical Data



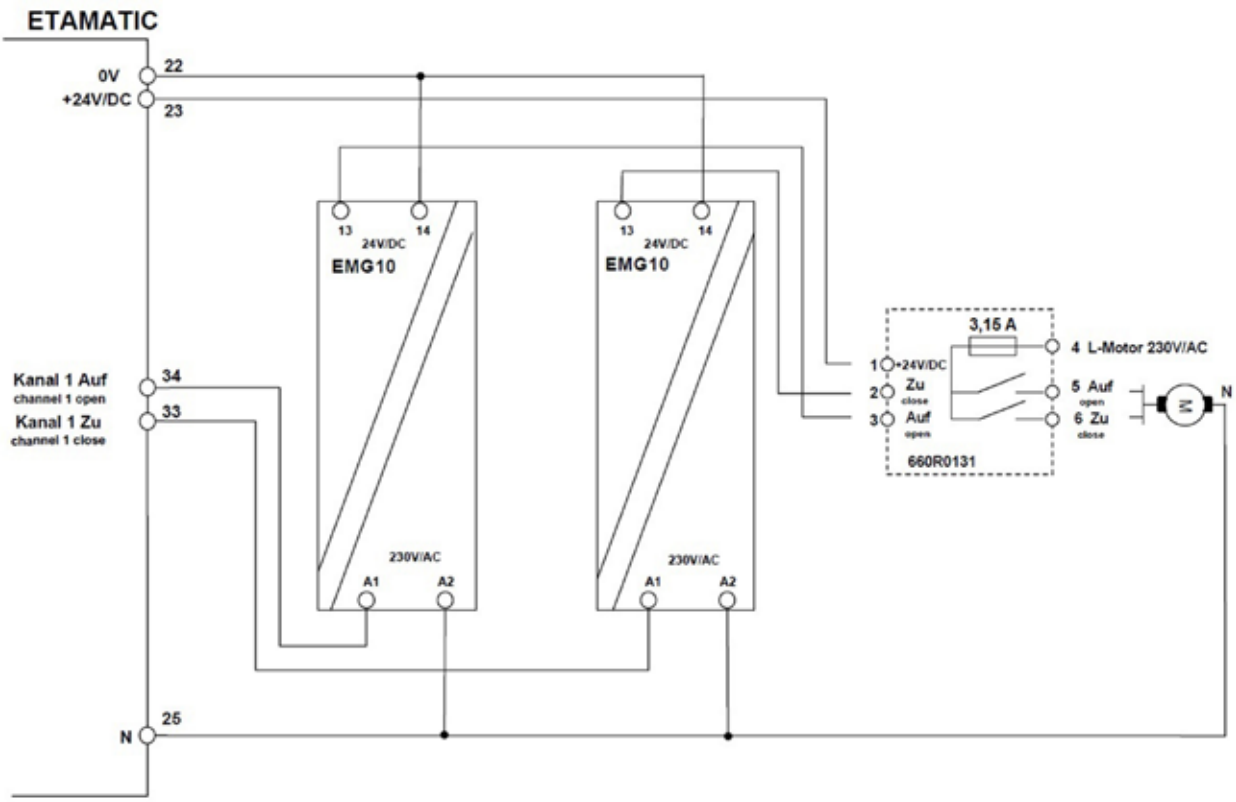
U-angle bracket sheet steel

Usage	Mechanical connection between actuator and controll dampers	Dimensions H/W/D	126x90x80	4.96x3.54x3.15“ in
Item no.	662R2226	Material	zinc-coated steel
Torque max. [Nm]	20	Adaption (Drive)	Hole cicle Ø50 mm	1.97“ in, 4 x 90°

Electrical connection to ETAMATIC.

The Three Point Step outputs of ETAMATIC are suitable for a continuous current up to max. 50 mA. Motors with a higher power consumption can only be used with an additional circuit to ETAMATIC. Otherwise, the output of ETAMATIC will be irreparably damaged.

Additional parts
2x Signalconverter Interface 230 VAC/24 VDC, 1-phase
Order no. 660R0028 (230 VAC) 660R0029N (115 VAC)
1x Relay module with 2 relays to control the pos. of an actuator up to 3.15 A
Order no. 660R0131



Wiring diagram signal converter

Spare parts for actuator.

Ordering Information

Description / Type	Order no.
POTENTIOMETER NOVOTEC 5 kOHM, TÜV approved, without gear position feedback for actuators type 662R2111...R2127	660P7001
POTENTIOMETER NOVOTEC 5 kOHM to 90°, TÜV approved, with long gear position feedback for actuators type 662R2127, 662R2112, 662R2121, 662R2122, 662R2140/41	660P7005
POTENTIOMETER NOVOTEC 5 kOHM to 135°, TÜV approved, with long gear position feedback for actuators type 662R2127, 662R2112, 662R2121, 662R2122	660P7015
POTENTIOMETER NOVOTEC 5 kOHM to 90°, TÜV approved, with short gear additional position feedback for actuators type 662R2112, 662R2121, 662R2122	660P7006
POTENTIOMETER NOVOTEC 5 kOHM to 90°, TÜV approved, with long gear position feedback for actuators type 662R2111	660P7007
POTENTIOMETER NOVOTEC 5 kOHM to 135°, TÜV approved, with long gear position feedback for actuators type 662R2111	660P7017
MST5 board, incl. capacitor, 230 VAC, for actuators type 662R2111	662R2177
Capacitor 0,18 µF/500 V for actuators type 662R2111 / 662R2112	662R2175
End switch with connecting cable for actuators type 662R2111 R2141	662R2180
End switch, gastight, with connecting cable for actuators type 662R2111	662R2176
Housing cover, plastic, blue, for actuators IP54, type 662R2127 and 662R2111 to SN. 29500	662R2190
Housing cover, die-cast, blue, for actuators IP65, type 662R2127 and 662R2111 up to SN. 29500	662R2191
Housing cover, die-cast, blue, for actuators IP65, type 662R2127 and 662R2111 from SN. 30000	662E2191
Housing cover, die-cast, blue, for actuators IP65, type 662R2112/662R2121/662R2122	662E2192

Gas volume control dampers up to 60 °C | 140°F, DVGW proofed, non linear
Type 668M2300 Aluminium
Type 668M2310 Stainless steel.

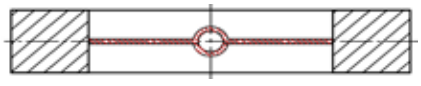
Technical Data



Gas volume control damper 668M23xx (aluminium)

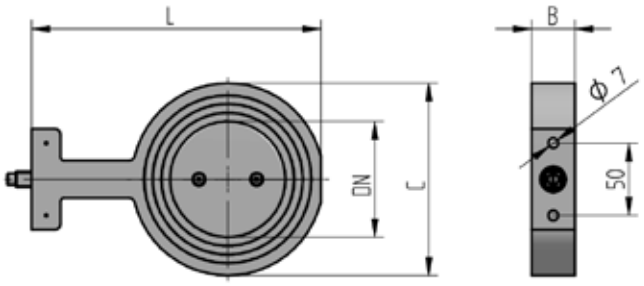
Usage	As actuator for process control in combustion technology	Dimensions [mm]	see dimension drawing
Mode of operation	for electric actuator 668M2006, 668M2020, 668M2040 with internal square 11.1x11.1 mm | 0.44x0.44“ in (IVK11)	Mounting position	horizontal to vertical, not hanging downwards
Operating pressure	max. 500 mbar | 7.25 psi	Medium temperature	-20 °C ... +60 °C | -4 ... 140 °F
Design	Butterfly disc without limit stop Intermediate flange butterfly valve - clamp-in type, flow rate non-linear	Medium	Gas families 1, 2, 3 and other neutral gaseous media*, Hydrogen
Test specification	Type examination certificate according to the Gas Appliances Directive DIN EN 13611:2019 and DIN EN161:2013 (for medium temperature -20 °C to +60 °C | -4 to 140 °F)	Leakage	approx. 1 % of Kv value
Positioning speed	max. 5 s/90°	Material	668M2300 Aluminium 668M2310 Stainless steel

*Aluminium version suitable for biogas up to max. 0.1 vol.% H_2S.
Gas must be dry under all circumstances and must not condense.



Butterfly plate (flow, not linear)

Each damper can be reduced by a maximum of 2 nominal diameters.
Nominal diameters: DN40 ... DN150
For nominal sizes > DN150, 662R23V/662R24V/662R25V must be used.



Dimension drawing Gas volume control damper 668M2xxx (all dimensions in mm)

Type non-linear	DN	L	C	B	Weight	Material
668M2300/040/ ... /B30	40	155 mm | 6.10“ in	87 mm | 3.42“ in	30 mm | 1.18“ in	0.7 kg | 1.54 lb	Aluminium
668M2310/040/ ... /B30	40	155 mm | 6.10“ in	87 mm | 3.42“ in	30 mm | 1.18“ in	1.75 kg | 3.86 lb	Stainless steel
668M2300/040/ ... /B40	40	155 mm | 6.10“ in	87 mm | 3.42“ in	30 mm | 1.18“ in	0.85 kg | 1.87 lb	Aluminium
668M2310/040/ ... /B40	40	155 mm | 6.10“ in	87 mm | 3.42“ in	30 mm | 1.18“ in	2.25 kg | 4.96 lb	Stainless steel
668M2300/050/ ... /B30	50	165 mm | 6.50“ in	97 mm | 3.81“ in	30 mm | 1.18“ in	0.8 kg | 1.76 lb	Aluminium
668M2310/050 ... /B30	50	165 mm | 6.50“ in	97 mm | 3.81“ in	30 mm | 1.18“ in	2 kg | 4.40 lb	Stainless steel
668M2300/050/ ... /B40	50	165 mm | 6.50“ in	97 mm | 3.81“ in	40 mm | 1.57“ in	1 kg | 2.20 lb	Aluminium
668M2310/050/ ... /B40	50	165 mm | 6.50“ in	97 mm | 3.81“ in	40 mm | 1.57“ in	2.6 kg | 5.73 lb	Stainless steel
668M2300/065/ ... /B30	65	183 mm | 7.20“ in	117 mm | 4.60“ in	30 mm | 1.18“ in	1 kg | 2.20 lb	Aluminium
668M2310/065/ ... /B30	65	183 mm | 7.20“ in	117 mm | 4.60“ in	30 mm | 1.18“ in	2.5 kg | 5.51 lb	Stainless steel
668M2300/065/ ... /B40	65	183 mm | 7.20“ in	117 mm | 4.60“ in	40 mm | 1.57“ in	1.25 kg | 2.75 lb	Aluminium
668M2310/065/ ... /B40	65	183 mm | 7.20“ in	117 mm | 4.60“ in	40 mm | 1.57“ in	3.2 kg | 7.05 lb	Stainless steel
668M2300/080/ ... /B30	80	201 mm | 7.91“ in	133 mm | 5.24“ in	30 mm | 1.18“ in	1.2 kg | 2.64 lb	Aluminium
668M2310/080/ ... /B30	80	201 mm | 7.91“ in	133 mm | 5.24“ in	30 mm | 1.18“ in	3 kg | 6.61 lb	Stainless steel
668M2300/080/ ... /B40	80	201 mm | 7.91“ in	133 mm | 5.24“ in	40 mm | 1.57“ in	1.5 kg | 3.30 lb	Aluminium
668M2310/080/ ... /B40	80	201 mm | 7.91“ in	133 mm | 5.24“ in	40 mm | 1.57“ in	3.8 kg | 8.38 lb	Stainless steel
668M2300/100/ ... /B30	100	221 mm | 8.70“ in	153 mm | 6.02“ in	30 mm | 1.18“ in	1.45 kg | 3.20 lb	Aluminium
668M2310/100/ ... /B30	100	221 mm | 8.70“ in	153 mm | 6.02“ in	30 mm | 1.18“ in	3.4 kg | 7.49 lb	Stainless steel
668M2300/100/ ... /B40	100	221 mm | 8.70“ in	153 mm | 6.02“ in	40 mm | 1.57“ in	1.8 kg | 3.97 lb	Aluminium
668M2310/100/ ... /B40	100	221 mm | 8.70“ in	153 mm | 6.02“ in	40 mm | 1.57“ in	4.4 kg | 9.70 lb	Stainless steel
668M2300/125/ ... /B30	125	248 mm | 9.76“ in	183 mm | 7.20“ in	30 mm | 1.18“ in	1.9 kg | 4.19 lb	Aluminium
668M2310/125/ ... /B30	125	248 mm | 9.76“ in	183 mm | 7.20“ in	30 mm | 1.18“ in	4.4 kg | 9.70 lb	Stainless steel
668M2300/125/ ... /B40	125	248 mm | 9.76“ in	183 mm | 7.20“ in	40 mm | 1.57“ in	2.3 kg | 5.07 lb	Aluminium
668M2310/125/ ... /B40	125	248 mm | 9.76“ in	183 mm | 7.20“ in	40 mm | 1.57“ in	5.6 kg | 12.46 lb	Stainless steel
668M2300/150/ ... /B30	150	273 mm | 10.75“ in	208 mm | 8.19“ in	30 mm | 1.18“ in	2.3 kg | 5.07 lb	Aluminium
668M2310/150/ ... /B30	150	273 mm | 10.75“ in	208 mm | 8.19“ in	30 mm | 1.18“ in	5.2 kg | 11,46 lb	Stainless steel
668M2300/150/ ... /B40	150	273 mm | 10.75“ in	208 mm | 8.19“ in	40 mm | 1.57“ in	2.7 kg | 5.95 lb	Aluminium
668M2310/150/ ... /B40	150	273 mm | 10.75“ in	208 mm | 8.19“ in	40 mm | 1.57“ in	6.6 kg | 14.55 lb	Stainless steel

All listed nominal diameters are available with reduction!
Order example for reduction DN100 to DN80: 668M2300/100/080

Ordering Information

Description / Type	Order no.
Damper type SVGA aluminium up to 60 °C | 140 °F: - Shaft end with square 11.1x11.1x11.5 mm | 0.44x0.44x0.45“ in - For clamping between flanges PN6 ... PN40 - Suitable for gases of the 1st, 2nd and 3rd gas family, hydrogen - Type examination certificate in accordance with the Gas Appliances Directive - Flow rate not linear - Butterfly disc without limit stop - Operating pressure: max. 500 mbar | 7.25 psi - For pressure ratings PN10 ... PN40, the valve is supplied with mounting sleeves as an installation aid Suitable for electric actuator 668M2006, 668M2020, 668M2040 with internal square socket 11x11 mm | 0.44x0.44“ in (IVK11). Incl. fastening material and mounting sleeves. No separate coupling/console is required. The console is part of the damper. As the damper does not have a position indicator, we recommend using an actuator with a position indicator.	668M2300
A10 - INTERNAL DIAMETER	Selection
INTERNAL DIAMETER DN40	040
INTERNAL DIAMETER DN50	050
INTERNAL DIAMETER DN65	065
INTERNAL DIAMETER DN80	080
INTERNAL DIAMETER DN100	100
INTERNAL DIAMETER DN125	125
INTERNAL DIAMETER DN150	150
A20 - REDUCTION	Auswahl
WITHOUT	000
DN40 REDUCED TO DN25	025
DN40/DN50 REDUCED TO DN32	032
DN50/DN65 REDUCED TO DN40	040
DN65/DN80 REDUCED TO DN50	050
DN80/DN100 REDUCED TO DN65	065
DN100/DN125 REDUCED TO DN80	080
DN125/DN150 REDUCED TO DN100	100
DN150 REDUCED TO DN125	125
A30 - TEMPERATURE RANGE	Selection
-20 ... +60 °C | -4 ... 140 °F	60
A40 - SEALING OF THE DAMPER DISC	Selection
NOT TIGHT CLOSING, leakage approx. 1% of Kvs value 90°	0
DAMPER DISC CLOSING TIGHTLY, without leakage	D
A50 - MATERIAL	Selection
HOUSING ALUMINIUM, DAMPER SHAFT / DAMPER DISC STAINLESS STEEL	AL
A60 - HAND FEED	Selection
WITHOUT HAND FEED, for mounting on actuator	0
WITH HAND FEED, infinitely adjustable locking lever	H
A70 - LENGTH	Selection
LENGTH 30 mm | 1.18“ in	B30
LENGTH 40 mm | 1.57“ in	B40

Ordering Information

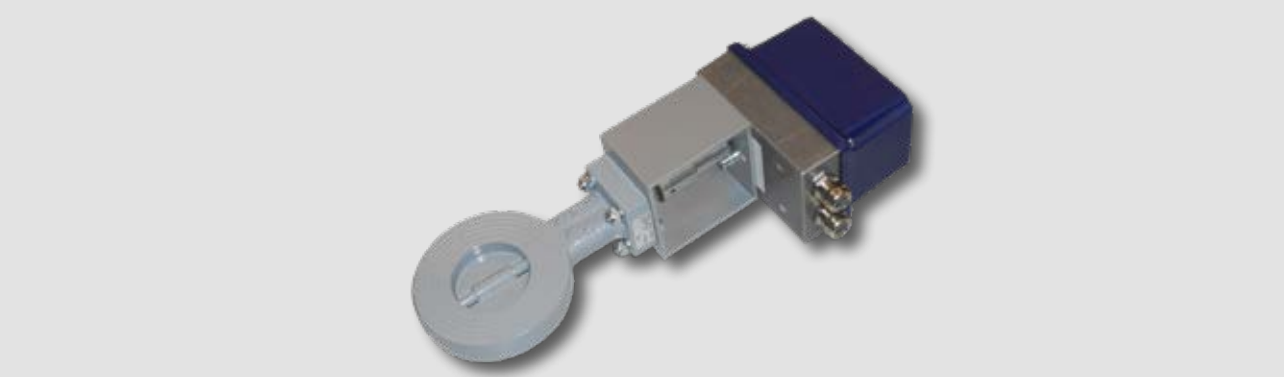
Description / Type	Order no.
Damper type SVGS Stainless steel up to 60 °C | 140 °F: - Shaft end with square 11.1x11.1x11.5 mm | 0.44x0.44x0.45“ in - For clamping between flanges PN6 ... PN40 - Suitable for biogas, hydrogen - Type examination certificate in accordance with the Gas Appliances Directive - Flow rate not linear - Butterfly disc without limit stop - Operating pressure: max. 500 mbar | 7.25 psi - For pressure ratings PN10 ... PN40, the valve is supplied with mounting sleeves as an installation aid Suitable for electric actuator 668M2006, 668M2020, 668M2040 with internal square socket 11x11 mm | 0.44x0.44“ in (IVK11). Incl. fastening material and mounting sleeves. No separate coupling/console is required. The console is part of the damper. As the damper does not have a position indicator, we recommend using an actuator with a position indicator.	668M2310
A10 - INTERNAL DIAMETER	Selection
INTERNAL DIAMETER DN40	040
INTERNAL DIAMETER DN50	050
INTERNAL DIAMETER DN65	065
INTERNAL DIAMETER DN80	080
INTERNAL DIAMETER DN100	100
INTERNAL DIAMETER DN125	125
INTERNAL DIAMETER DN150	150
A20 - REDUCTION	Auswahl
WITHOUT	000
DN40 REDUCED TO DN25	025
DN40/DN50 REDUCED TO DN32	032
DN50/DN65 REDUCED TO DN40	040
DN65/DN80 REDUCED TO DN50	050
DN80/DN100 REDUCED TO DN65	065
DN100/DN125 REDUCED TO DN80	080
DN125/DN150 REDUCED TO DN100	100
DN150 REDUCED TO DN125	125
A30 - TEMPERATURE RANGE	Selection
-20 ... +60 °C | -4 ... 140 °F	60
A40 - SEALING OF THE DAMPER DISC	Selection
NOT TIGHT CLOSING, leakage approx. 1% of Kvs value 90°	0
CLAP DISC CLOSING TIGHTLY, without leakage	D
A50 - MATERIAL	Selection
HOUSING STAINLESS STEEL, DAMPER SHAFT / DAMPER DISC STAINLESS STEEL	E
A60 - HAND FEED	Selection
WITHOUT HAND FEED, for mounting on actuator	0
WITH HAND FEED, infinitely adjustable locking lever	H
A70 - LENGTH	Selection
LENGTH 30 mm | 1.18“ in	B30
LENGTH 40 mm | 1.57“ in	B40

Mounting

Description	Bestell-Nr.
Should no actuator with 11.1 mm	0.44“ in internal square drive be available, the dampers can also be mounted on output shafts.	Montage1...
A10 - MOUNTING	Auswahl
DAMPER 668M2 ... FOR MOUNTING ON SHAFT 10 mm	0.39“ in WITH FEATHER KEY 3x3 mm	0.12x0.12“ in HOLE CIRCLE 50 mm	1.97“ in, 4x 90° 6.5 mm	0.25“ in	13
DAMPER 668M2 ... FOR MOUNTING ON SHAFT 12 mm	0.47“ in WITH FEATHER KEY 4x4 mm	0.16x 0.16 “ in HOLE CIRCLE 50 mm	1.97“ in, 4x 90° 6.5 mm	0.25“ in	14
DAMPER 668M2 ... FOR MOUNTING ON BT-ACTUATOR 662R500 ...	15
DAMPER 668M2 ... FOR MOUNTING ON EX-ACTUATOR WITH SHAFT 12 mm	0.47“ in WITH FEATHER KEY 4x4 mm	0.16x 0.16“ in HOLE CIRCLE 50 mm	1.97“ in, 4x 90° 6.5 mm	0.25“ in	16

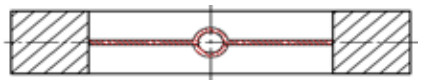
Gas volume control dampers up to 60 °C | 140 °F, DVGW proofed, non linear from DN200 Type 662R23V.

Technical Data

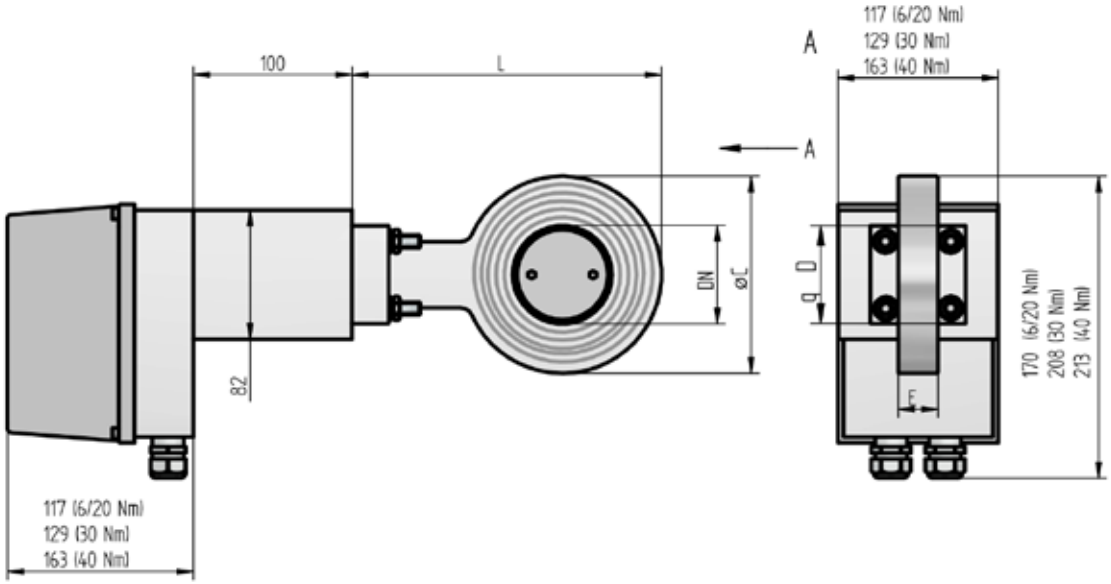


Gas control damper with bracket and coupling

Usage	As actuator for process control in combustion technology	Dimensions [mm]	see dimension drawing
Mode of operation	for electric actuator	Mounting position	any
Operating pressure	0 bis 1 bar | 0 to 14.50 psi	Medium temperature	-20 °C ... +60 °C | -4 ... 140 °F
Design	Butterfly disc without limit stop Intermediate flange butterfly valve - clamp-in type	Medium	Natural gas, as well as neutral and non-aggressive gases
Test specification	Type examination certificate according 90/396/EWG Prod. ID. Nr. CE-0085- AR0408 DIN 3394-1 Klasse RO DIN 3391 (for medium temperature -20 °C to +60 °C | -4 to 140 °F)	Leckage	approx. 1 % of Kv value



Butterfly plate (flow, not linear)



Gas control damper with bracket and coupling (all dimensions in mm)

Gewicht	DN	L	ØC	qD	E
12.7 kg | 28 lb	200	344 mm | 13.54“ in	270 mm | 10.63“ in	80 mm | 3.15“ in	40 mm | 1.57“ in
13.7 kg | 30.20 lb	250	394 mm | 15.51“ in	320 mm | 12.60“ in	80 mm | 3.15“ in	40 mm | 1.57“ in
16.2 kg | 35.7 lb	300	444 mm | 17.48“ in	370 mm | 14.57“ in	80 mm | 3.15“ in	45 mm | 1.77“ in
27.7 kg | 61.07 lb	350	523 mm | 20.59“ in	428 mm | 16.85“ in	80 mm | 3.15“ in	45 mm | 1.77“ in
39 kg | 86 lb	400	561 mm | 22.08“ in	465 mm | 18.31“ in	80 mm | 3.15“ in	45 mm | 1.77“ in

Ordering Information 662R23V, Nominal Diameter > DN150

Configuration incl. console, coupling and assembly to actuator*

662R23V-	A 10 INTERNAL DIAMETER	A 20 REDUCTION

A 10 – INTERNAL DIAMETER		Selection
INTERNAL DIAMETER DN200	PRESSURE RANGE 0 ... 4 bar | 0 ... 58 psi, DELTA P MAX. 1 bar | 14.5 psi, PN10-PN16, ANSI 150 lbs	200
INTERNAL DIAMETER DN250	PRESSURE RANGE 0 ... 4 bar | 0 ... 58 psi, DELTA P MAX. 0.5 bar | 7.25 psi, PN10, ANSI 150 lbs	250
INTERNAL DIAMETER DN300	PRESSURE RANGE 0 ... 4 bar | 0 ... 58 psi, DELTA P MAX. 0.3 bar | 4.35 psi, PN6-PN10	300
INTERNAL DIAMETER DN350	PRESSURE RANGE 0 ... 4 bar | 0 ... 58 psi, DELTA P MAX. 0.2 bar | 2.90 psi, PN10-PN16	350
INTERNAL DIAMETER DN400	PRESSURE RANGE 0 ... 4 bar | 0 ... 58 psi, DELTA P MAX. 0.15 bar | 2.17 psi, PN6-PN16	400

Selection	Selection
WITHOUT REDUCTION	000
REDUCED TO SPECIFICATION BY CUSTOMER	____

*Actuator must be ordered separately, following information are indicative at a difference pressure of 0,1 bar | 1,45 psi:

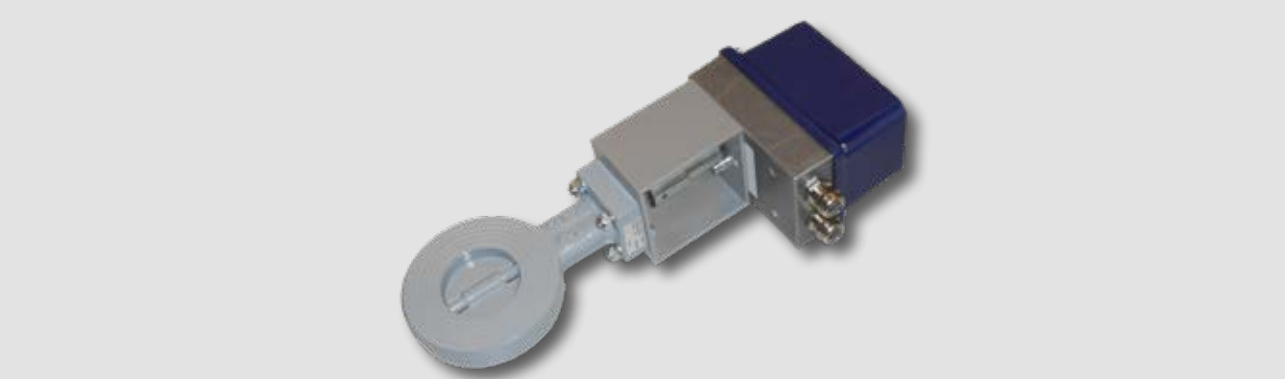
DN200 ... DN250	20 Nm	Type 662R2111 or 668M2020 with 12 mm | 0.47“ in shaft
DN300	30 Nm	Type 662R2112 or 668M2040 with 12 mm | 0.47“ in shaft
DN350	40 Nm	Type 662R2121 or 668M2040 with 12 mm | 0.47“ in shaft
DN400	90 Nm	Type 662R2123

Mounting for gas dampers 662R23 / 662R24 / 662R25

A 10 - MOUNTING	Selection
DN200/250, FOR MOUNTING ON SHAFT 12 mm | 0.47“ in WITH PARALLEL KEY 4x4 mm | 0.16x0.16“ in	____ 21
DN200/250, FOR MOUNTING ON SHAFT 20 mm | 0.79“ in WITH PARALLEL KEY 6x6 mm | 0.24x0.24“ in	____ 22
DN300, FOR MOUNTING ON SHAFT 12 mm | 0.47“ in	____ 23
DN400, FOR MOUNTING ON SHAFT 12 mm | 0.47“ in	____ 24

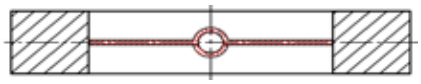
Gas volume control dampers f. Biogas up to 60 °C | 140 °F Stainless steel, DVGW proofed, non linear from DN200 Type 662R24V.

Technical Data

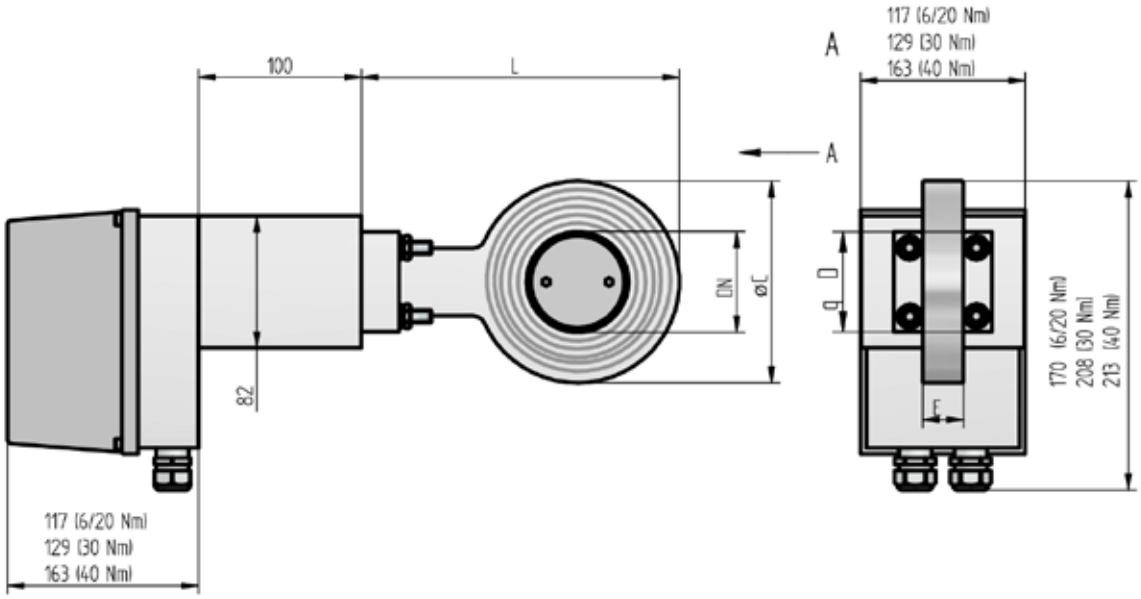


Gas control damper with bracket and coupling

Usage	As actuator for process control in combustion technology	Dimensions [mm]	see dimension drawing
Mode of operation	for electric actuator	Mounting position	any
Operating pressure	0 bis 1 bar | 0 to 14.50 psi	Medium temperature	-20 °C ... +60 °C | -4 ... 140 °F
Design	Butterfly disc - clamp-in type	Medium	Biogas
Test specification	Type examination certificate according 90/396/EWG Prod. ID. Nr. CE-0085-AR0408 DIN 3394-1 Klasse RO DIN 3391 (for medium temperature -20 °C to +60 °C | -4 to 140 °F)	Leckage	approx. 1 % of Kv value



Butterfly plate (flow, not linear)



Gas control damper with bracket and coupling (all dimensions in mm)

DN	L	ØC	qD	E
200	344 mm | 13.54“ in	270 mm | 10.63“ in	80 mm | 3.15“ in	40 mm | 1.57“ in

Rest see 662R23

Ordering Information 662R24V, Nominal Diameter > DN150

Configuration incl. console, coupling and assembly to actuator*

662R24V-	A 10 INTERNAL DIAMETER	A 20 REDUCTION

A 10 – INTERNAL DIAMETER		Selection
INTERNAL DIAMETER DN200	PRESSURE RANGE 0 ... 4 bar | 0 ... 58 psi, DELTA P MAX. 1 bar | 14.5 psi, PN10-PN16, ANSI 150 lbs	200
INTERNAL DIAMETER DN250	PRESSURE RANGE 0 ... 4 bar | 0 ... 58 psi, DELTA P MAX. 0.5 bar | 7.25 psi, PN10, ANSI 150 lbs	250
INTERNAL DIAMETER DN300	PRESSURE RANGE 0 ... 4 bar | 0 ... 58 psi, DELTA P MAX. 0.3 bar | 4.35 psi, PN6-PN10	300
INTERNAL DIAMETER DN350	PRESSURE RANGE 0... 4 bar | 0 ... 58 psi, DELTA P MAX. 0.2 bar | 2.90 psi, PN10-PN16	350

Selection	Selection
WITHOUT REDUCTION	000
REDUCED TO SPECIFICATION BY CUSTOMER	____

* Actuator must be ordered separately, following information are indicative at a difference pressure of 0,1 bar | 1,45 psi:

DN200 ... DN250	20 Nm Type 662R2111 or 668M2020 with 12 mm | 0.47“ in shaft
DN300	30 Nm Type 662R2112 or 668M2040 with 12 mm | 0.47“ in shaft
DN350	40 Nm Type 662R2121 or 668M2040 with 12 mm | 0.47“ in shaft
DN400	90 Nm Type 662R2123

Mounting for gas dampers 662R23 / 662R24 / 662R25

A 10 - MOUNTING	Selection
DN200/250, FOR MOUNTING ON SHAFT 12 mm | 0.47“ in WITH PARALLEL KEY 4x4 mm | 0.16x0.16“ in	____ 21
DN200/250, FOR MOUNTING ON SHAFT 20 mm | 0,79“ in WITH PARALLEL KEY 6x6 mm | 0.24x0.24“ in	____ 22
DN300, FOR MOUNTING ON SHAFT 12 mm | 0.47“ in	____ 23
DN400, FOR MOUNTING ON SHAFT 12 mm | 0.47“ in	____ 24

Control damper for flue gas / air, up to 100 °C | 212 °F, non-linear, without DVGW approval, Type 668M2200 Aluminium.

Technical Data

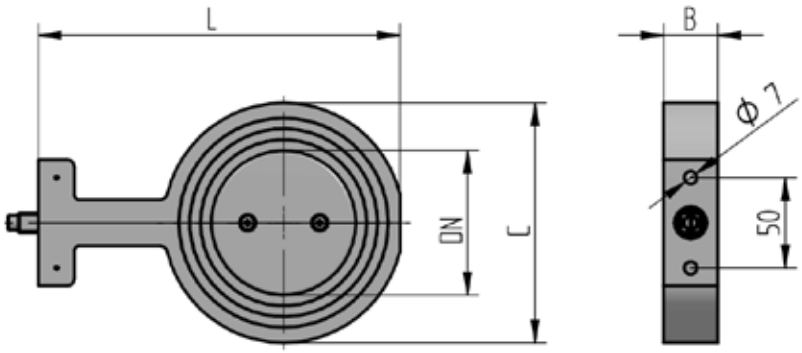


Gas volume control damper 668M23xx (aluminium)

Usage	As actuator for process control in combustion technology	Dimensions [mm]	see dimension drawing
Mode of operation	for electric actuator 668M2006, 668M2020, 668M2040 with internal square 11,1x11,1 mm | 0.44x0.44“ in (IVK11)	Mounting position	horizontal to vertical, not hanging downwards
		Medium temperature	-20 ... +100 °C |-4 ... 212 °F
Operating pressure	max 500 mbar | 7,25 psi	Medium	fluegas/air
Design	Butterfly disc without limit stop Intermediate flange butterfly valve - clamp-in type, flow rate non-linear	Leckage	approx. 1 % of Kv value
Positioning speed	max. 5 s/90°	Material	Aluminium

*Stainless steel version suitable for biogas up to max. 0.1 vol.% H_2S.
Gas must be dry under all circumstances and must not condense.

Each damper can be reduced by a maximum of 2 nominal diameters.
Nominal diameters: DN40 ... DN200
Use 662R22V for nominal sizes > DN200.



Control damper for flue gas or air 668M2xxx (all dimensions in mm)

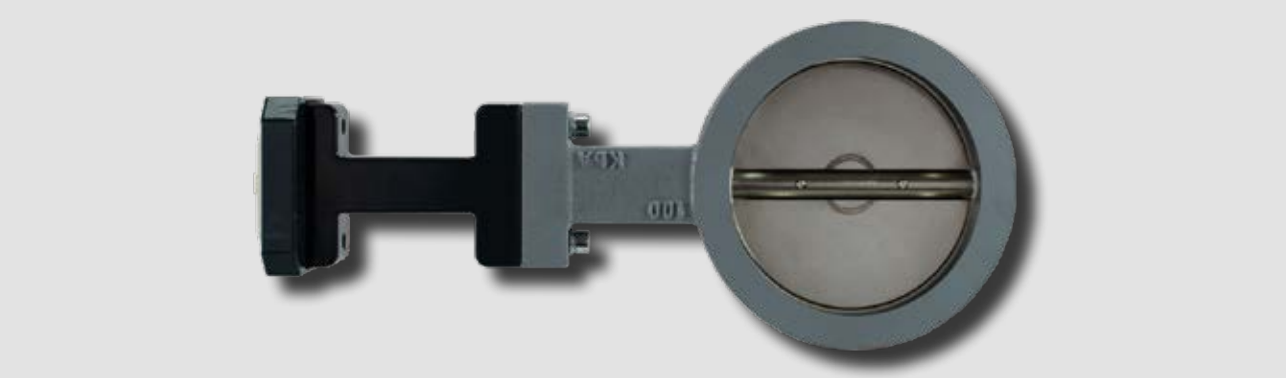
DN	C	B	L	Weight B30	Weight B40
40	87 mm | 3.42“ in	30 mm | 1.18“ in	155 mm | 6.10“ in	0.7 kg | 1.54 lb	0.85 kg | 1.76 lb
50	97 mm | 3.82“ in	30 mm | 1.18“ in	165 mm | 6.50“ in	0.8 kg | 1.76 lb	1 kg | 2.20 lb
65	117 mm | 4.60“ in	30 mm | 1.18“ in	183 mm | 7.20“ in	1 kg | 2.20 lb	1.25 kg | 2.76 lb
80	133 mm | 5.24“ in	30 mm | 1.18“ in	201 mm | 7.91“ in	1.2 kg | 2.65 lb	1.5 kg | 3.31 lb
100	153 mm | 6.02“ in	30 mm | 1.18“ in	221 mm | 8.70“ in	1.45 kg | 3.20 lb	1.8 kg | 3.97 lb
125	183 mm | 7.20 in	30 mm | 1.18“ in	248 mm | 9.76“ in	1.9 kg | 4.19 lb	2.3 kg | 5.07 lb
150	208 mm | 8.19“ in	30 mm | 1.18“ in	273 mm | 10.75“ in	2.3 kg | 5.07 lb	2.75 kg | 6.06 lb
200	256 mm | 10.08“ in	40 mm | 1.57“ in	324 mm | 12.75“ in		4.4 kg | 9.70 lb

Ordering Information

Description / Type	Order no.
Damper type SVA, aluminium, up to 100 °C | 212 °F: - Shaft end with square 11,1x11,1x11,5 mm | 0.44x0.44x0.45“ in - For clamping between flanges PN6 ... PN40 - Suitable for intake air/flue gas - Flow rate not linear - Butterfly disc without limit stop - Shaft seal: NBR - Operating pressure: max. 500 mbar | 7,25 psi - For pressure ratings PN10 ... PN40, the valve is supplied with mounting sleeves as an installation aid. Suitable for electric actuator 668M2006, 668M2020, 668M2040 with internal square socket 11x11 mm | 0.44x0.44“ in (IVK11). Incl. fastening material and mounting sleeves. No separate coupling/console is required. The console is part of the damper. As the damper does not have a position indicator, we recommend using an actuator with a position indicator.	668M2200
A10 - INTERNAL DIAMETER	Selection
INTERNAL DIAMETER DN40	040
INTERNAL DIAMETER DN50	050
INTERNAL DIAMETER DN65	065
INTERNAL DIAMETER DN80	080
INTERNAL DIAMETER DN100	100
INTERNAL DIAMETER DN125	125
INTERNAL DIAMETER DN150	150
INTERNAL DIAMETER DN200	200
A20 - REDUCTION	Auswahl
WITHOUT	000
DN40 REDUCED TO DN25	025
DN40/DN50 REDUCED TO DN32	032
DN50/DN65 REDUCED TO DN40	040
DN65/DN80 REDUCED TO DN50	050
DN80/DN100 REDUCED TO DN65	065
DN100/DN125 REDUCED TO DN80	080
DN125/DN150 REDUCED TO DN100	100
DN150/DN200 REDUCED TO DN125	125
DN200 REDUCED TO DN150	150
A30 - TEMPERATURE RANGE	Selection
-20 ... +100 °C | -4 ... 212 °F	100
A40 - SEALING OF THE DAMPER DISC	Selection
NOT TIGHT CLOSING, leakage approx. 1% of Kvs value 90°	0
DAMPER DISC CLOSING TIGHTLY, without leakage	D
A50 - MATERIAL	Selection
HOUSING ALUMINIUM, DAMPER SHAFT / DAMPER DISC STAINLESS STEEL	AL
A60 - HAND FEED	Selection
WITHOUT HAND FEED, for mounting on actuator	0
WITH HAND FEED, infinitely adjustable locking lever	H
A70 - LENGTH	Selection
LENGTH 30 mm	B30
LENGTH 40 mm	B40

Control damper for flue gas / air, up to 650 °C | 1,202 °F non-linear, without DVGW approval Type 668M2205 Cast Iron.

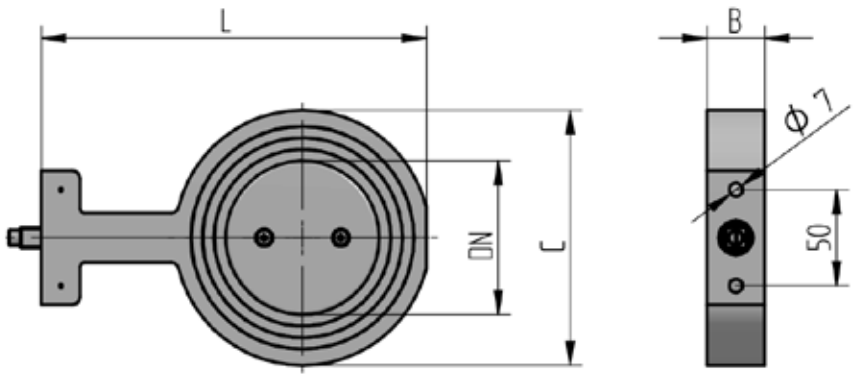
Technical Data



Flue gas air damper 668M2205, cast iron

Usage	As actuator for process control in combustion technology	Dimensions [mm]	see dimension drawing
Mode of operation	for electric actuator 668M2006, 668M2020, 668M2040 with internal square 11,1x11,1 mm | 0.44x0.44“ in (IVK11)	Mounting position	horizontal to vertical, not hanging downwards
		Medium temperature	-20 ... +650 °C |-4 ... 1,202 °F
Operating pressure	max 500 mbar | 7,25 psi	Medium	fluegas/air
Design	Butterfly disc without limit stop Intermediate flange butterfly valve - clamp-in type, flow rate non-linear	Leckage	approx. 1 % of Kv value
Positioning speed	max. 5 s/90°	Material	cast iron

Each damper can be reduced by a maximum of 2 nominal diameters.
Nominal diameters: DN40 ... DN250
Use 662R22V for nominal sizes > DN250.



Control damper for flue gas or air 668M2xxx (all dimensions in mm)

DN	C	B	L	Weight B30	Weight B40
40	77 mm | 3.03“ in	30 mm | 1.18“ in	152 mm | 5.98“ in*	1.56 kg | 3.44 lb	
50	87 mm | 3.42“ in	30 mm | 1.18“ in	162 mm | 6.38“ in*	1.75 kg | 3.86 lb	
65	105 mm | 4.13“ in	30 mm | 1.18“ in	179 mm | 7.05“ in*	2 kg | 4.41 lb	
80	122 mm | 4.80“ in	30 mm | 1.18“ in	197 mm | 7.75“ in*	2.5 kg | 5.51 lb	
100	140 mm | 5.51“ in	30 mm | 1.18“ in	216 mm | 8.50“ in*	2.75 kg | 6.06 lb	
125	170 mm | 6.69“ in	35 mm | 1.38“ in	244 mm | 9.60“ in*	3.85 kg | 8.48 lb	
150	196 mm | 7.72“ in	40 mm | 1.57“ in	269 mm | 10.59“ in*		5.5 kg | 12.12 lb
200	256 mm | 10.08“ in	40 mm | 1.57“ in	324 mm | 12.75“ in*		8.5 kg | 18.74 lb
250	313 mm | 12.08“ in	40 mm | 1.57“ in	379 mm | 14.92“ in*		11.8 kg | 26.02 lb

* For a temperature range up to 450 °C | 842 °F the dimension increases by 100 mm | 3.94“ in
For a temperature range up to 650 °C | 1,202 °F the dimension increases by 200 mm | 7.87“ in

Ordering Information

Description / Type	Order no.
Flue gas/air damper type SVH Cast Iron up to 650 °C | 1,202 °F: - Shaft end with square 11.1x11.1x11.5 mm | 0.44x0.44x0.45“ in - For clamping between flanges PN6 ... PN40 - Suitable for intake air/flue gas - Flow rate not linear - Butterfly disc without limit stop - Shaft seal: NBR - Operating pressure: max. 500 mbar | 7.25 psi - For pressure ratings PN10 ... PN40, the valve is supplied with mounting sleeves as an installation aid. Suitable for electric actuator 668M2006, 668M2020, 668M2040 with internal square socket 11x11 mm | 0.44x0.44“ in (IVK11). Incl. fastening material and mounting sleeves. No separate coupling/console is required. The console is part of the damper. As the damper does not have a position indicator, we recommend using an actuator with a position indicator.	668M2205
A10 - INTERNAL DIAMETER	Selection
INTERNAL DIAMETER DN40	040
INTERNAL DIAMETER DN50	050
INTERNAL DIAMETER DN65	065
INTERNAL DIAMETER DN80	080
INTERNAL DIAMETER DN100	100
INTERNAL DIAMETER DN125	125
INTERNAL DIAMETER DN150	150
INTERNAL DIAMETER DN200	200
INTERNAL DIAMETER DN250	250
A20 - REDUCTION	Auswahl
Retracted only possible in aluminium or stainless steel!	000
A30 - TEMPERATURE RANGE	Selection
-20 ... +100 °C | -4 ... 212 °F, without temperature lock, length 100 mm	100
-20 ... +450 °C | -4 ... 842 °F, with temperature lock, length 100 mm	450
-20 ... +650 °C | -4 ... 1,202 °F, with temperature lock, length 200 mm	650
A40 - SEALING OF THE DAMPER DISC	Selection
NOT TIGHT CLOSING, leakage approx. 1% of Kvs value 90°	0
DAMPER DISC CLOSING TIGHTLY, only possible in aluminium or stainless steel!	
A50 - MATERIAL	Selection
HOUSING CAST IRON, DAMPER SHAFT / DAMPER DISC STAINLESS STEEL	GG
A60 - HAND FEED	Selection
WITHOUT HAND FEED, for mounting on actuator	0
WITH HAND FEED, infinitely adjustable locking lever	H
A70 - LENGTH	Selection
LENGTH 30 mm | 1.18“ in (DN40 ... DN100)	B30
LENGTH 35 mm | 1.38“ in (DN125)	B35
LENGTH 40 mm | 1.57“ in (DN150 ... DN250)	B40

Control damper for flue gas / air, up to 650 °C | 1202 °F, non-linear, without DVGW approval, Type 668M2210, Stainless steel.

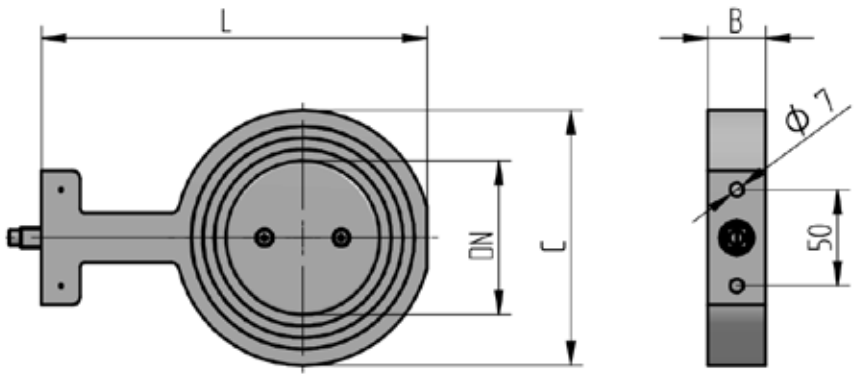
Technical Data



Abgas/Luftklappe 668M2210, Edelstahl

Usage	As actuator for process control in combustion technology	Dimensions [mm]	see dimension drawing
Mode of operation	for electric actuator 668M2006, 668M2020, 668M2040 with internal square 11.1x11.1 mm | 0.44x0.44“ in (IVK11)	Mounting position	horizontal to vertical, not hanging downwards
		Medium temperature	-20 ... +650 °C |-4 ... 1202 °F
Operating pressure	max 500 mbar | 7.25 psi	Medium	fluegas/air
Design	Butterfly disc without limit stop Intermediate flange butterfly valve - clamp-in type, flow rate non-linear	Leckage	approx. 1 % of Kv value
Positioning speed	max. 5 s/90°	Material	Stainless steel

Each damper can be reduced by a maximum of 2 nominal diameters.
Nominal diameters: DN40 ... DN200
Nominal diameters > DN200 on request.



Control damper for flue gas or air 668M2xxx (all dimensions in mm)

DN	C	B	L	Weight [kg/B30]	Weight [kg/B40]
40	87 mm | 3.42“ in	30 mm | 1.18“ in	155 mm | 6.10“ in*	1.75 kg | 3.86 lb	2.25 kg | 4.96 lb
50	97 mm | 3.82“ in	30 mm | 1.18“ in	165 mm | 6.50“ in*	2 kg | 4.41 lb	2.25 kg | 4.96 lb
65	117 mm | 4.60“ in	30 mm | 1.18“ in	183 mm | 7.20“ in*	2.5 kg | 5.51 lb	3.2 kg | 7.05 lb
80	133 mm | 5.24“ in	30 mm | 1.18“ in	201 mm | 7.91“ in*	3 kg | 6.61 lb	3.8 kg | 8.38 lb
100	153 mm | 6.02“ in	30 mm | 1.18“ in	221 mm | 8.70“ in*	3.4 kg | 7.50 lb	4.4 kg | 9.70 lb
125	183 mm | 7.20“ in	30 mm | 1.18“ in	248 mm | 9.76“ in*	4.4 kg | 9.70 lb	5.65 kg | 12.46 lb
150	208 mm | 8.19“ in	30 mm | 1.18“ in	273 mm | 10.75“ in*	5.2 kg | 11.46 lb	6.6 kg | 14.55 lb
200	256 mm | 10.08“ in	40 mm | 1.57“ in	324 mm | 12.75“ in*		10.1 kg | 22.27 lb

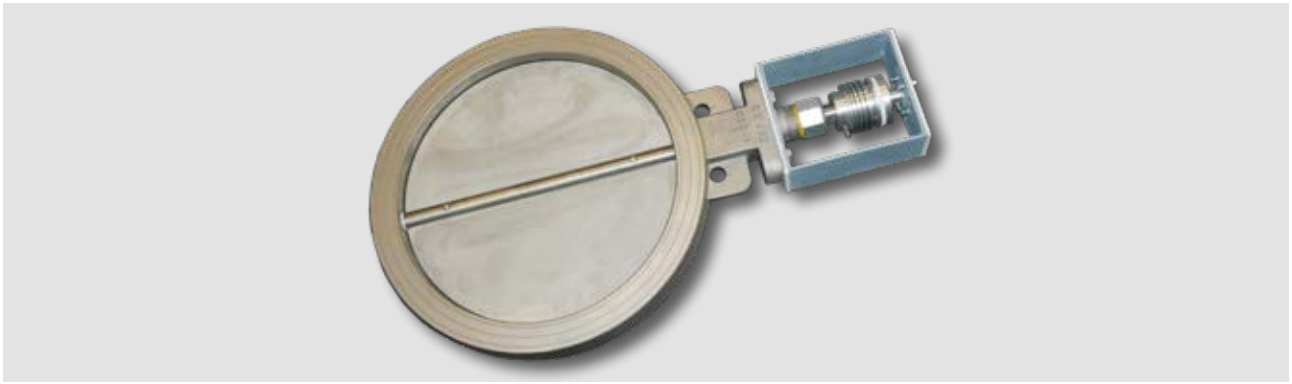
* For a temperature range up to 450 °C | 842 °F the dimension increases by 100 mm | 3.94“ in
For a temperature range up to 650 °C | 1,202 °F the dimension increases by 200 mm | 7.87“ in

Ordering Information

Description / Type	Order no.
Damper type SVHT stainless steel up to 100 °C | 212 °F, 450 °C | 842°F, 650 °C | 1202°F: - Shaft end with square 11.1x11.1x11.5 mm | 0.44x0.44x0.45“ in - For clamping between flanges PN6 ... PN40 - Suitable for intake air/flue gas - Flow rate not linear - Butterfly disc without limit stop - Operating pressure: max. 500 mbar | 7,25 psi - For pressure ratings PN10 ... PN40, the valve is supplied with mounting sleeves as an installation aid Suitable for electric actuator 668M2006, 668M2020, 668M2040 with internal square socket 11x11 mm | 0.44x0.44“ in (IVK11). Incl. fastening material and mounting sleeves. No separate coupling/console is required. The console is part of the damper. As the damper does not have a position indicator, we recommend using an actuator with a position indicator.	668M2210
A10 - INTERNAL DIAMETER	Selection
INTERNAL DIAMETER DN40	040
INTERNAL DIAMETER DN50	050
INTERNAL DIAMETER DN65	065
INTERNAL DIAMETER DN80	080
INTERNAL DIAMETER DN100	100
INTERNAL DIAMETER DN125	125
INTERNAL DIAMETER DN150	150
INTERNAL DIAMETER DN200	200
A20 - REDUCTION	Selection
WITHOUT	000
DN40 REDUCED TO DN25	025
DN40/DN50 REDUCED TO DN32	032
DN50/DN65 REDUCED TO DN40	040
DN65/DN80 REDUCED TO DN50	050
DN80/DN100 REDUCED TO DN65	065
DN100/DN125 REDUCED TO DN80	080
DN125/DN150 REDUCED TO DN100	100
DN150/DN200 REDUCED TO DN125	125
DN200 REDUCED TO DN150	150
A30 - TEMPERATURE RANGE	Selection
-20 ... +100 °C | -4 ... 212 °F, without temperature barrier	100
-20 ... +450 °C | -4 ... 842 °F, with temperature barrier, Länge 100 mm | 3.94“ in	450
-20 ... +650 °C | -4 ... 1202 °F, with temperature barrier, Länge 200 mm | 7.87“ in	650
A40 - SEALING OF THE DAMPER DISC	Selection
NOT TIGHT CLOSING, leakage approx. 1% of Kvs value 90°	0
DAMPER DISC CLOSING TIGHTLY, without leakage	D
A50 - MATERIAL	Selection
HOUSING STAINLESS STEEL, DAMPER SHAFT / DAMPER DISC STAINLESS STEEL	E
A60 - HAND FEED	Selection
WITHOUT HAND FEED, for mounting on actuator	0
WITH HAND FEED, infinitely adjustable locking lever	H
A70 - LENGTH	Selection
LENGTH 30 mm | 1.18“ in	B30
LENGTH 40 mm | 1.57“ in	B40

Control damper for flue gas / air, up to 450 °C | 842°F non-linear, without DVGW approval from DN300 Type 662R22V.

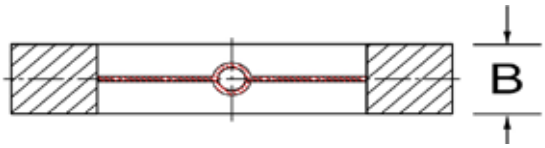
Technical Data



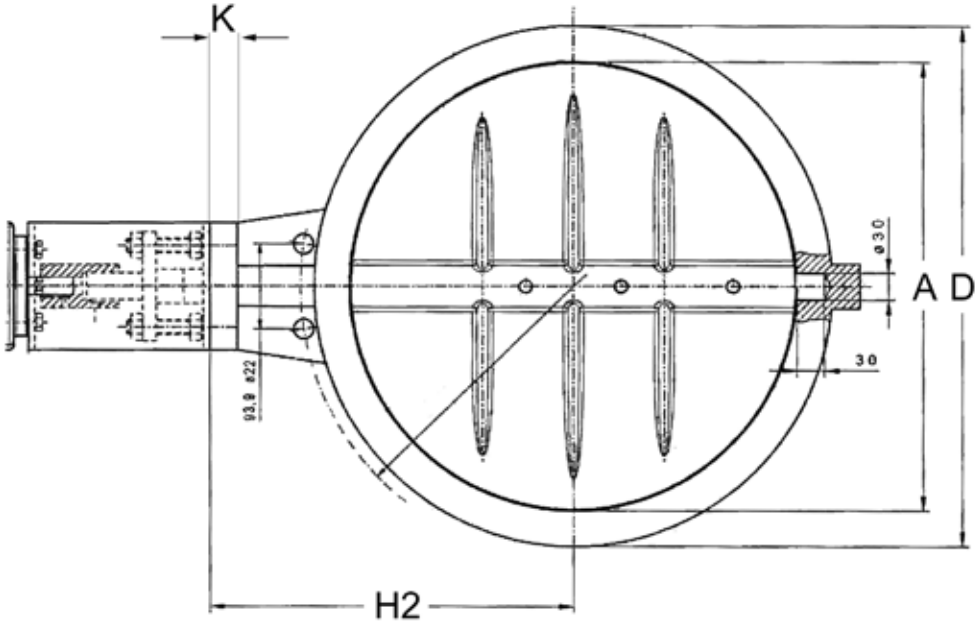
Flue gas/air damper

Usage	As actuator for process control in combustion technology	Dimensions [mm]	see dimension drawing
Mode of operation	for electric actuator	Mounting position	any
Design	Intermediate flange butterfly valve - clamp-in type,	Medium temperature	max. 450 °C	842°F
Leckage	approx. 1 % of Kv value	Medium	fluegas/air

Illustrations and technical data refer to the standard version.



Butterfly plate (flow, not linear)



Dimension drawing Control damper for flue gas / air (all dimensions in mm)

DN	A	D	B	H2	Welle	k
300	298 mm | 11.73“ in	367 mm | 14.45“ in	46 mm | 1.81“ in	250 mm | 9.84“ in	20 mm | 0.79“ in	25 mm | 0.98“ in
350	337 mm | 13.27“ in	417 mm | 16.42“ in	46 mm | 1.81“ in	275 mm | 10.83“ in	20 mm | 0.79“ in	25 mm | 0.98“ in
400	387 mm | 15.24“ in	468 mm | 18.42“ in	51 mm | 2.00“ in	305 mm | 12.01“ in	25 mm | 0.98“ in	25 mm | 0.98“ in
450	438 mm | 17.24“ in	525 mm | 20.67“ in	51 mm | 2.00“ in	330 mm | 12.99“ in	25 mm | 0.98“ in	25 mm | 0.98“ in
500	489 mm | 19.25“ in	571 mm | 22.48“ in	51 mm | 2.00“ in	357 mm | 14.05“ in	25 mm | 0.98“ in	25 mm | 0.98“ in

Ordering Information

Configuration incl. console, coupling and assembly to actuator*

668R22V-	A 10 INTERNAL DIAMETER	A 20 REDUCTION	A 30 APPLICATION

A 10 – INTERNAL DIAMETER	Selection.
INTERNAL DIAMETER DN250, PN6	250
INTERNAL DIAMETER DN300, PN6	300
INTERNAL DIAMETER DN350, PN6	350
INTERNAL DIAMETER DN400, PN6	400
INTERNAL DIAMETER DN450, PN6	450
INTERNAL DIAMETER DN500, PN6	500

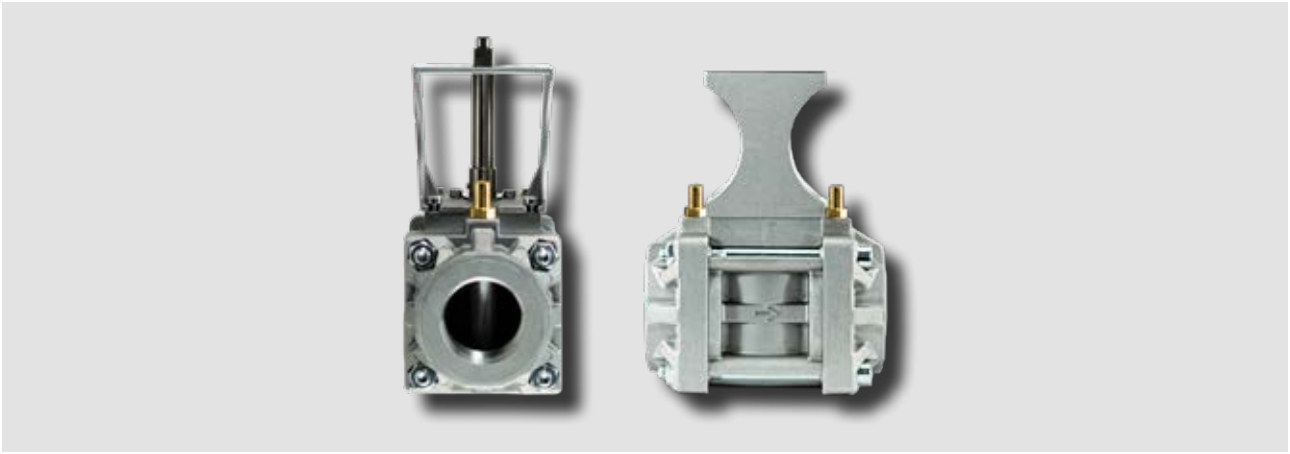
A 20 – REDUCTION	Selection
WITHOUT REDUCTION	000
REDUCED TO SPECIFICATION BY CUSTOMER	____

A 30 – APPLICATION	Selection
Flue gas/air up to 450 °C | 842 °F	450
Flue gas/air up to 550 °C | 1022 °F	550

* Actuator must be ordered separately, following information are indicative at a difference pressure of 0,1bar | 1,45 psi:
DN200 ... DN250 40 Nm Type 662R2121 / 662M2040
DN300 ... DN450 90 Nm Type 662R2123 / 60 Nm Type 668M2060-1
DN500 140 Nm Type 662R2123 / 100 Nm Type 668M20100-1

Gas Control Valve Type SVL 668M2400.

Technical Data



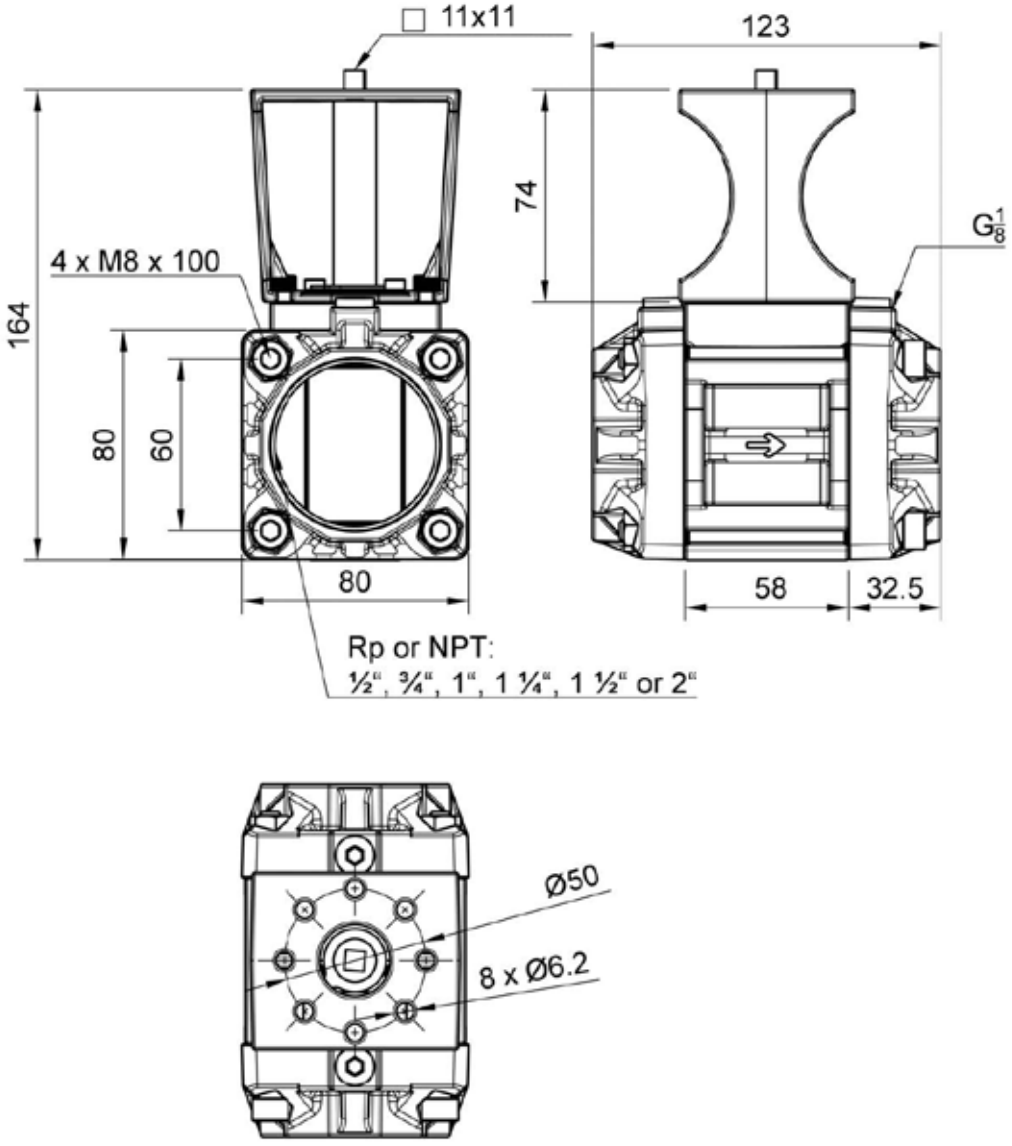
Gas Control Valve Type SVL

Usage	As actuator for process control in combustion technology
Mode of operation	for electric actuator 668M2006, 668M2020, with internal square 11.1x11.1 mm | 0.44x0.44“ in (IVK11) and electric stepper motor with at least 3 Nm 662R5003-x and 662R5009-x
Operating pressure	max. 50 kPa (500 mbar) | 7.25 psi
Design	For screwing into the pipeline. Connection range Rp or NPT 1/2“ ... 2“
Positioning speed	max. 1,5 s/90°
Connection	Rp or NPT thread

Dimensions [mm]	see dimension drawing
Mounting position	horizontal to vertical, not hanging downwards
Medium temperature	-20 ... +60 °C |-4 ... 140 °F
Medium	for gases of gas families 1, 2, 3 and other neutral gaseous media. Suitable for gases up to max. 0.1 vol. % H_2S*, hydrogen
Flow	up to DN40 linear, DN50 roughly linear
Material	Aluminium

*Gas must be dry under all circumstances and must not condense.

Nominal diameter: DN8 ... DN50



Dimension drawing Gas Control Valve Type SVL 668M2400 (all dimensions in mm)

Ordering Information

Description / Type	Order no.
Gas Control Valve Type SVL - DN08 ... DN40 linear, DN50 approximately linear - Mounting between threaded flange, connection range " - 2" - Rotation angle 90° - for gas families 1, 2, 3 and other neutral gaseous media - Hydrogen - max. operating pressure: 500 mbar - max. differential pressure: 500 mbar - Ambient temperature: -20 ... +60 °C | -4 ... +140 °F - Medium temperature: -20 ... +60 °C | -4 ... +140 °F - max. actuation speed 1.5 s/90° - Can be used for electric actuator 668M2006, 668M2020 with inner square 11.1 x 11.1 mm | 0.437 x 0.437" in (IVK11), clockwise-turning No separate connector/console is needed. The console is a component of the damper.	668M2400
A10 - NOMINAL DIAMETER	Selection
NOMINAL DIAMETER DN08 - LINEAR	08
NOMINAL DIAMETER DN15 - LINEAR	15
NOMINAL DIAMETER DN20 - LINEAR	20
NOMINAL DIAMETER DN25 - LINEAR	25
NOMINAL DIAMETER DN32 - LINEAR	32
NOMINAL DIAMETER DN40 - LINEAR	40
NOMINAL DIAMETER DN50 - NON LINEAR	50
A20 - GAS CONNECTION	Selection
GAS CONNECTION INTERNAL THREAD Rp $^{1}/_{2}$"	R12
GAS CONNECTION INTERNAL THREAD Rp $^{3}/_{4}$"	R34
GAS CONNECTION INTERNAL THREAD Rp 1"	R1
GAS CONNECTION INTERNAL THREAD Rp 1 $^{1}/_{4}$"	R114
GAS CONNECTION INTERNAL THREAD Rp 1 $^{1}/_{2}$	R112
GAS CONNECTION INTERNAL THREAD Rp 2	R2
GAS CONNECTION INTERNAL THREAD NPT $^{1}/_{2}$"	N12
GAS CONNECTION INTERNAL THREAD NPT $^{3}/_{4}$"	N34
GGAS CONNECTION INTERNAL THREAD NPT 1"	N1
GAS CONNECTION INTERNAL THREAD NPT 1 $^{1}/_{4}$"	N114
GAS CONNECTION INTERNAL THREAD NPT 1 $^{1}/_{2}$	N112
GAS CONNECTION INTERNAL THREAD NPT 2"	N2
A30 - DIRECTION OF ROTATION	Selection
FOR CLOCKWISE ROTATING ACTUATORS	R
A40 - HAND FEED	Selection
WITHOUT HAND FEED, for mounting on actuator	0
WITH HAND FEED, infinitely adjustable locking lever	H
A 50 - SHAFT TYPE	Auswahl
SQUARE 11,1 ADAPTION TO DPS-ACTUATORS	0
ADAPTION TO STEPPER MOTORS	BT

Notes.

Notes.

Notes.

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