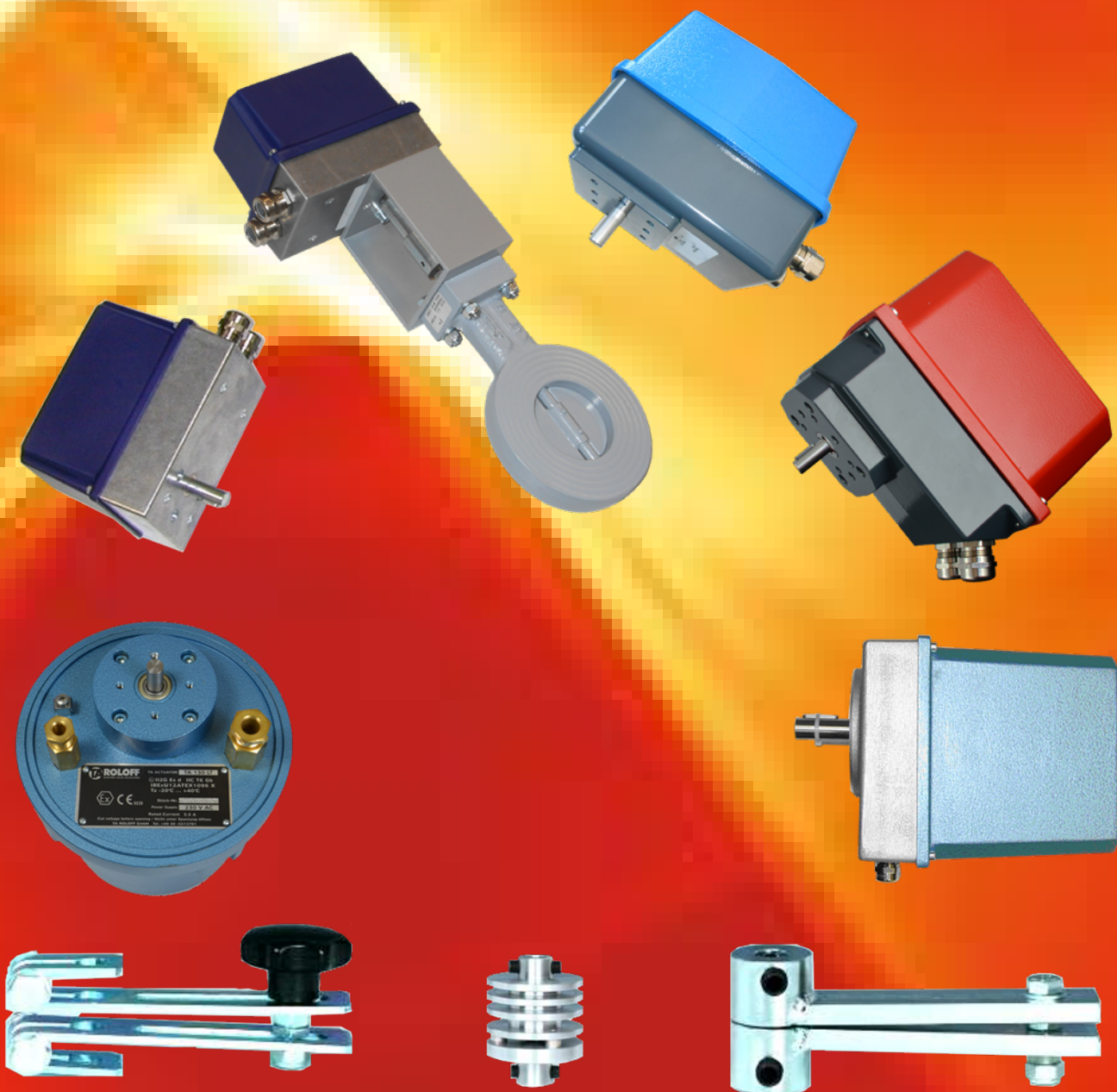




Product Catalogue

Actuators and Flow Control Butterfly Valves



Sensors and Systems for Combustion Engineering

www.lamtec.de

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General.

Information on variant numbers

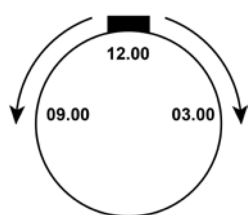
Actuators are revised with respect to variant numbers:

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 (standard):

Looking towards the shaft from 12.00 o'clock to 03.00 o'clock (Clockwise).

Bei links-drehenden Antrieben:

At counterclockwise actuators the rotation affects to the other side.

Looking towards the shaft from 12.00 o'clock to 09.00 o'clock (Anti-clockwise).

General.

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

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

Servo motors 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.

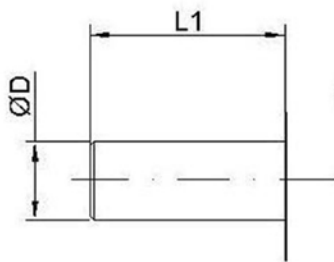
When ordering ETAMATIC (part no. 663R1) specify one of the following types at 'Attribute 30 - Control Outputs/Position Feedback'

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

General.

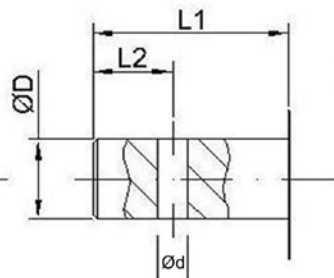
Information about the shaft forms for actuator type 662R21...

Form A



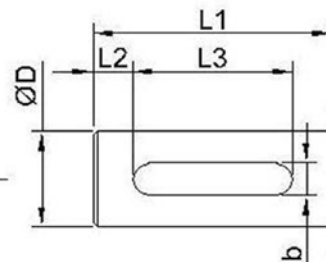
	ØD	L1
A01	10	25
A02	12	30
A03	12	36
A04	12	40
A05	12	50

Form B



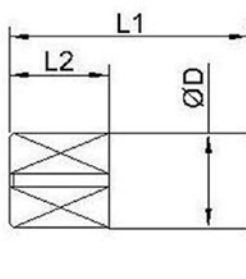
	ØD	Ød	L1	L2
B01	10	4	25	10
B02	12	4	30	10
B03	12	5	40	6

Form C

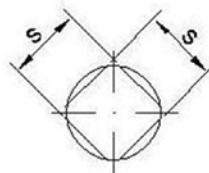


	ØD	L1	L2	L3	b
C01	12	25	5	14	4
C02	12	30	5	14	4
C03	12	30	5	20	4
C04	12	36	3	14	4
C05	12	40	5	16	4
C06	15	30	5	20	4
C07	15	40	5	25	5
C08	15	40	5	30	5
C09	20	50	5	30	6
C10	20	50	5	32	6

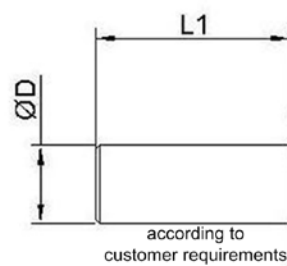
Form D



	ØD	L1	L2	s
D01	12	30	12,5	9,5



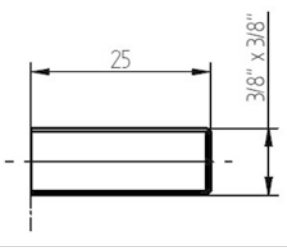
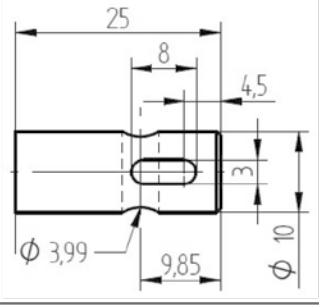
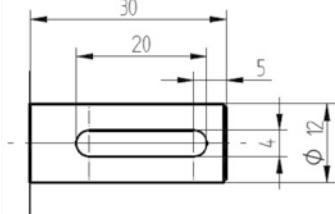
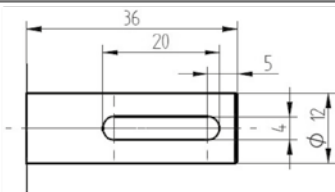
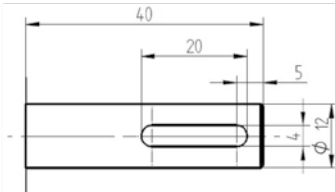
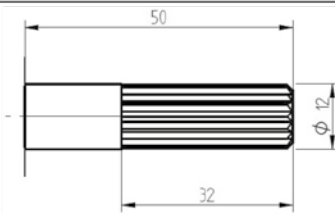
Form E



ØD	L1			

Shaft ends

Information about the shaft forms for actuator type 668M20...

Form of shaft (A10-IVK11) Internal square 11x11x11,5 mm	 11 x 11 (+0,1) x 11,5	
Form of shaft (A10-VK11) Square 11x11x12,5x30 mm		
Form of shaft (A10-VK38x1) Square 3/8" x 1"		
Form of shaft (A10-10x25) Round 10x25 mm with parallel key 3x3x8 mm and cross drilling Only available for 6Nm and 20Nm		
Form of shaft (A10-12x30) Round 12x30 mm with parallel key 4x4x20 mm		
Form of shaft (A10-12x36) Round 12x36 mm with parallel key 4x4x20 mm		
Form of shaft (A10-12x40) Round 12x40 mm with parallel key 4x4x20 mm		
Form of shaft (A10- KVZD2) Round 12x50 mm with spline 10/12 in acc. to DIN5481		

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

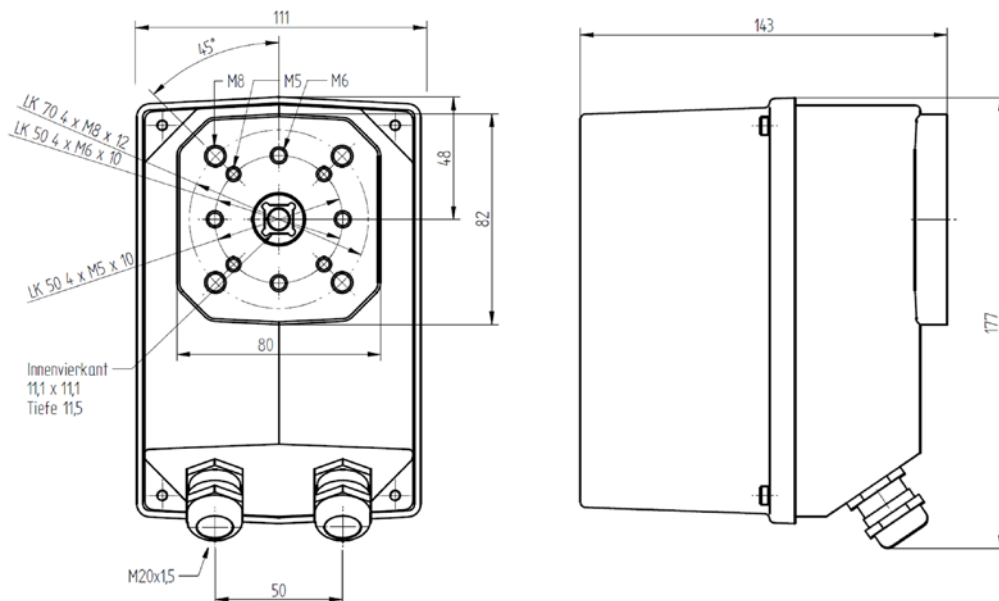
Technical Data



Actuator 6 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	Screwed cable glands	2x M20x1,5, cabel Ø min. 8,0 mm, max. 13,0 mm
Form of shaft	Innenvierkant 11x11x11,5 mm	Weigth [kg]	2,3
Running time [90°]	60 sec.	Protection class	IP65
Controlling	Three Point Step	Flange mounting according to ISO 5211 F05/F07	M5/6/8, screw-hole circle Ø 50/70 mm
End switches	2	Ambient temperature	-10...+ 60 °C
Additional switches	none	TÜV approval	when used with CMS

Illustrations and technical data refer to the standard version



Dimension drawing actuator, Type 668M20...

Ordering Information

Description / Type (standard variant)	Order no.
Electric actuator 6 Nm, TPS, position feedback potentiometer 5 kOhm, conductive plastic, 2 end switches, electric hand feed, protection class IP65	668M2006 - ...
Electric actuator 20 Nm, TPS, position feedback potentiometer 5 kOhm, conductive plastic, 2 end switches, electric hand feed, protection class IP65	668M2020 - ...
Electric actuator 40 Nm, TPS, position feedback potentiometer 5 kOhm, conductive plastic, 2 end switches, electric hand feed, protection class IP65	668M2040 - ...
A 03 - TORQUE	Selection
6 NM	006
20 NM	020
40 NM	040
A 10 - FORM OF OUTPUT SHAFT	Selection
SQUARE HOLLOW SHAFT 11x11 mm	IVK11*
SQUARE SHAFT 11x11 mm	VK11
SQUARE SHAFT 3/8" x 1"	VK38x1
ROUND SHAFT 10x25 mm WITH FEATHER KEY 3x3x8 mm (Only available for 6Nm and 20Nm)	10x25
ROUND SHAFT 12x30 mm WITH FEATHER KEY 4x4x20 mm	12x30
ROUND SHAFT 12x36 mm WITH FEATHER KEY 4x4x20 mm	12x36
ROUND SHAFT 12x40 mm WITH FEATHER KEY 4x4x20 mm	12x40
ROUND SHAFT 12x50mm, SERRATION 10/12, IN ACC. TO DIN5481	KVZD2
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, CONDUCTIVE PLASTIC, APPROVED IN ACCORDANCE TO EN12067-2, FORM CLOSURE CONSTRUCTION, FREE OF BACKLASH, Position feedback only for CMS	1PO*
2x POTENTIOMETER 5 KOHMS, CONDUCTIVE PLASTIC, APPROVED IN ACCORDANCE TO EN12067-2, FORM CLOSURE CONSTRUCTION, FREE OF BACKLASH, Position feedback only for CMS	2PO

*Default settings

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	65x50
ADAPTION IN ACCORDANCE TO CUSTOMER SPECIFICATION	
A 45 "COLOR"	Selection
HOUSING COVER RED RAL3020	RT*
HOUSING COVER ANTHRACITE RAL7016	SW
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	HEAT1
HOUSING HEATING 120V/12W, incl. THERMOSTAT, TO -30°C	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 ½NPT	NPT12
CABLE GLAND IN ACCORDANCE TO CUSTOMER SPECIFICATION	

*Default settings

Actuators 6 Nm, Type 662R2127.

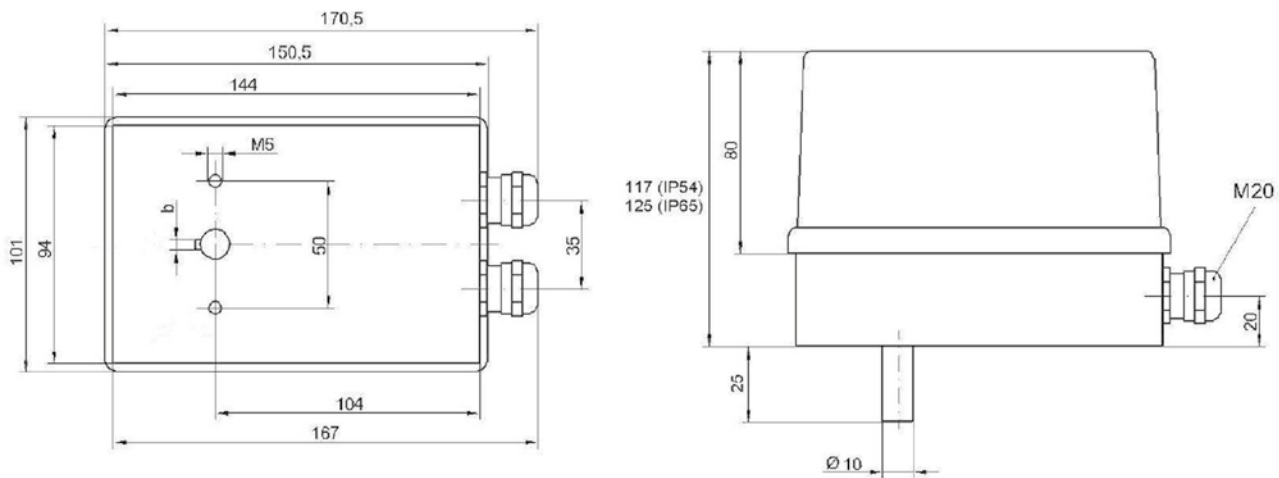
Technical Data



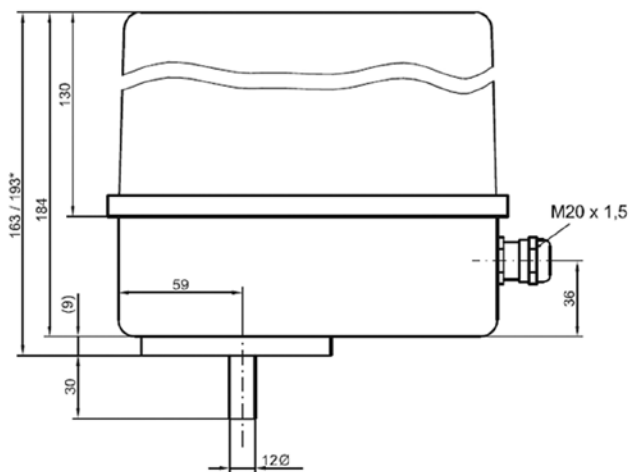
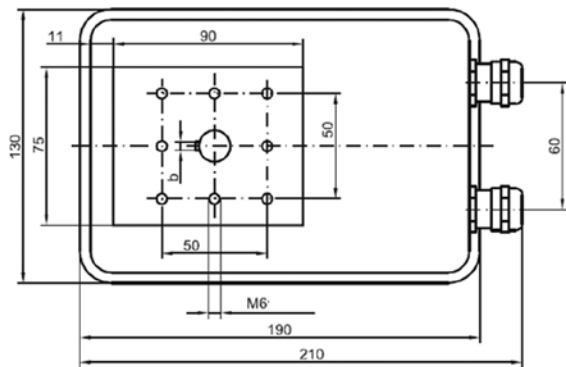
Actuator 6Nm

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
Form of shaft	Ø10 x 25, Form BC1 with cross hole 4 mm and feather key 3 x 3 x 8 mm	Weigth [kg]	1,7
Running time [90°]	60 sec.	Protection class	IP54 with plastic cover
Controlling	Three Point Step	Adaption	2x M5, screw-hole circle Ø 50 mm
End switches	2	Ambient temperature	-10...+ 60 °C
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



Dimension drawing Actuator with electronic control

Ordering Information

Description / Type (standard variant)	Order no.
Actuator 6 Nm, 230 VAC, running time 60 sec. to 90°, TPS, position feedback POTENTIOMETER 5 kOHM, conductive plastic, TÜV approved, 2 end switches, without additional switches, electr. override, IP54 ¹⁾	662 R 2127 - ...
A 03 - TORQUE	Selection
6 NM	006
A 05 - FORM OF SHAFT	Selection
ROUND SHAFT 10x25 mm WITH FEATHER KEY 3x3x8 mm and 4 mm CROSS HOLE, Standard	BC1*
SHAFT SPECIFICATION BY CUSTOMER	E01
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
POWER SUPPLY VOLTAGE 24 VAC	24AC
A 15 - RUNNING TIME TO 90°	Selection
60 SECONDS	60*
RUNNING TIME SPECIFICATION BY CUSTOMER	—
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 (only possible with CLASS OF PROTECTION IP65) POSITION FEEDBACK „4...20 mA“, additional position feedback “POTENTIOMETER 5 kOHM (COND. PLASTIC), TÜV approved”	REG

*Default settings

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, 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 such as FMS/VMS/ ETAMATIC	5K
A 40 – ELECTRICAL OVERRIDE, selection not possible, delivery only with ELECTRICAL OVERRIDE	
A 45 – IP PROTECTION CLASS	Selection
IP54 WITH PLASTIC COVER	54*
IP54 WITH METAL COVER	54M
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 (only possible with CLASS OF PROTECTION IP65)	W

*Default settings

Ordering Information

A 70 - ADAPTION	Selection
2x M5, HOLE CIRCLE Ø 50 mm	S*
BY TYPE	T / U / W
BY DRAWING	ZG
A 75 -COLOUR	Selection
COVER BLUE	1B*
COVER BLACK	2S
A 80 -CABLE GLANDS	Selection
2x M20	1S*
CABLE GLANDS SPECIFICATION BY CUSTOMER	2K
A 85 -SPECIAL CONFIGURATION	Selection
WITHOUT SPECIAL CONFIGURATION	S00*
HOUSING HEATING 230 VAC/15 W, incl. THERMOSTAT, down to -30 °C (only possible with CLASS OF PROTECTION IP65)	S02

*Default settings

Actuator 20 Nm, Type 662R2111.

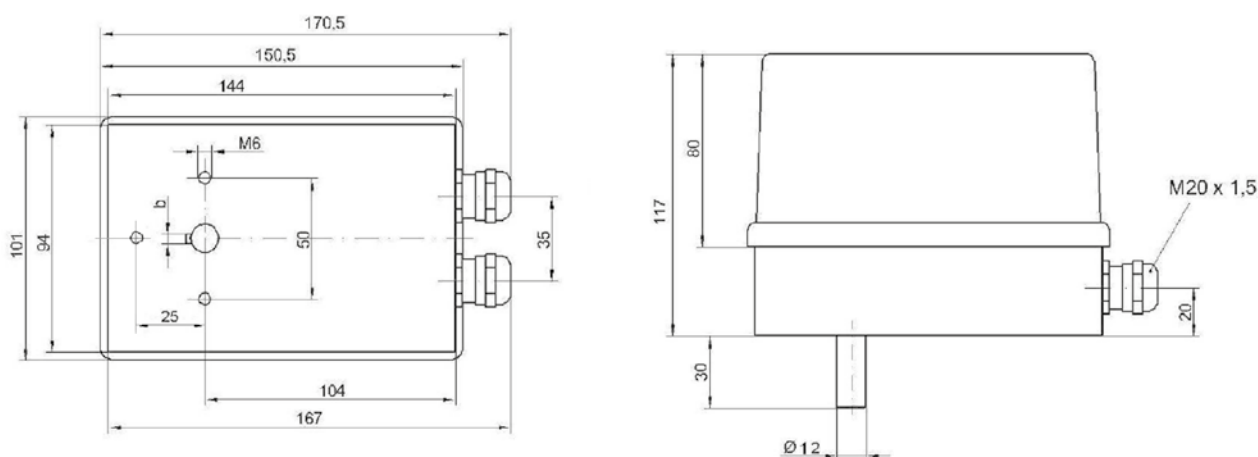
Technical Data



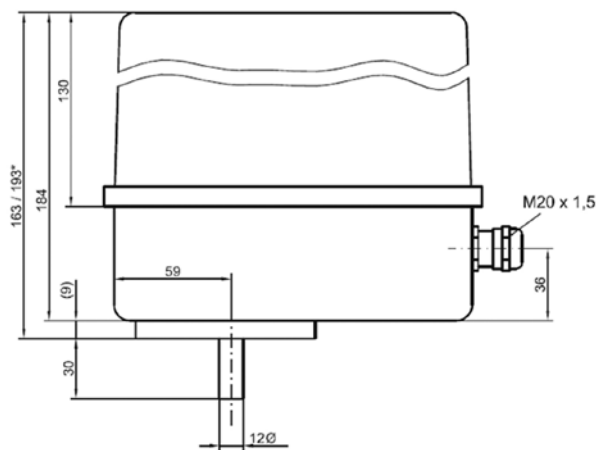
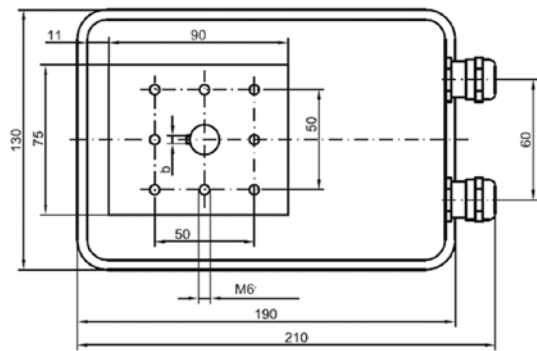
Actuator 20 Nm

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
Form of shaft	Ø12 x 30, Form C02	Weigth [kg]	1,7
Running time [90°]	60 sec.	Protection class	IP54 with plastic cover
Controlling	DPS	Adaption	3x M6, screw-hole circle Ø 50 mm
End switches	2	Ambient temperature	-10...+ 60 °C
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 IP54 with plastic cover (with metal cover H=84 mm)



Dimension drawing Actuator with electronic control

Ordering Information

Description / Type (standard variant)	Order no.
Actuator 20 Nm, 230 VAC, running time 60 sec. to 90°, TPS, position feedback POTENTIOMETER 5 kOHM, conductive plastic, TÜV approved, 2 end switches, 1 additional switch, without electr. override, IP54 ¹⁾	662 R 2111 - ...
1) Coupling or lever must be ordered separately	
A 03 - TORQUET	Selection
20 Nm	020
A 05 - FORM OF SHAFT	Selection
ROUND SHAFT 12x30 mm WITH FEATHER KEY 4 x 4 x 14 mm	C02*
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*
RUNNING TIME SPECIFICATION BY CUSTOMER	—
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 (only possible with CLASS OF PROTECTION IP65) POSITION FEEDBACK „4...20 mA“, additional position feedback “POTENTIOMETER 5 kOHM (COND. PLASTIC), TÜV approved”	REG

*Default settings

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, 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 such as FMS/VMS/ETAMATIC	5K
A 40 – ELECTRICAL OVERRIDE selection not possible, delivery only with ELECTRICAL OVERRIDE	
A 45 – IP PROTECTION CLASS	Selection
IP54 WITH PLASTIC COVER	54*
IP54 WITH METAL COVER	54M
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 settings

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
3x M6, HOLE CIRCLE Ø 50 mm	S*
BY TYPE	T / U / W
BY DRAWING	ZG
A 75 -COLOUR	Selection
COVER BLUE	1B*
COVER BLACK	2S
A 80 -CABLE GLANDS	Selection
2x M20	1S*
CABLE GLANDS SPECIFICATION BY CUSTOMER	2K
A 85 -SPECIAL CONFIGURATION	Selection
WITHOUT SPECIAL CONFIGURATION	S00*
HOUSING HEATING 230 VAC/15 W, incl. THERMOSTAT, down to -30 °C (only possible with CLASS OF PROTECTION IP65)	S02

*Default settings

Actuator 30 Nm, Type 662R2112.

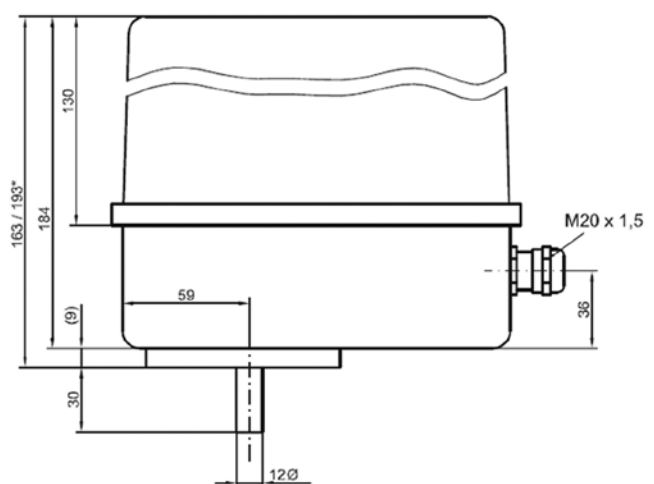
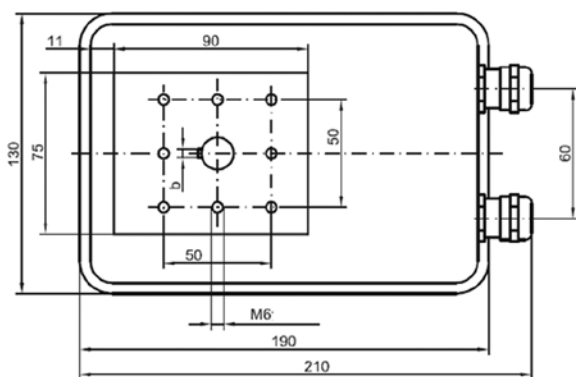
Technical Data



Actuator 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
Form of shaft	Ø12 x 30, Form C02	Weigth [kg]	2,5
Running time [90°]	60 sec.	Protection class	IP54
Controlling	Three Point Step	Adaption	8 x 90°, M6, screw-hole circle Ø 50 mm
End switches	2	Ambient temperature	-10...+ 60 °C
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

Ordering Information

Description / Type (standard variant)	Order no.
Actuator 30 Nm, 230 VAC, running time 60 sec. to 90°, TPS, position feedback POTENTIOMETER 5 kOHM, conductive plastic, TÜV approved, 2 end switches, 2 additional switch, electr. override, IP54 ¹⁾	662 R 2112 - ...
1) Coupling or lever must be ordered separately	
A 03 - TORQUE	Selection
30 Nm	030
A 05 - FORM OF SHAFT	Selection
ROUND SHAFT 12 x 30 mm WITH FEATHER KEY 4 x 4 x 14 mm when CLASS OF PROTECTION IP54	C02*
ROUND SHAFT 12 x 30 mm WITH FEATHER KEY 4 x 4 x 20 mm when CLASS OF PROTECTION IP65	C03
SHAFT SPECIFICATION BY CUSTOMER	E01
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*
RUNNING TIME SPECIFICATION BY CUSTOMER	—
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 (only possible with CLASS OF PROTECTION IP65) POSITION FEEDBACK „4...20 mA“, additional position feedback “POTENTIOMETER 5 kOHM (COND. PLASTIC), TÜV approved”	REG

*Default settings

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, 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 such as FMS/VMS/ETAMATIC	5K
A 40 – ELECTRICAL override, selection not possible, delivery only with ELECTRICAL override, except in the case of electronic controlling	Selection
A 45 – IP PROTECTION CLASS	Selection
IP54	54*
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 settings

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	S*
BY TYPE	T / U / W
BY DRAWING	ZG
A 75 -COLOUR	Selection
COVER BLUE	1B*
COVER BLACK	2S
A 80 -CABLE GLANDS	Selection
1x M20 and 1x M16 when IP54 / 2x M20 when IP65	1S*
CABLE GLANDS SPECIFICATION BY CUSTOMER	2K
A 85 -SPECIAL CONFIGURATION	Selection
WITHOUT SPECIAL CONFIGURATION	S00*
HOUSING HEATING 230 VAC/15 W, incl. THERMOSTAT, down to -30 °C (only possible with IP65 PROTECTION CLASS)	S02

*Default settings

Actuator 40 Nm and 50 NM, Type 662R212...

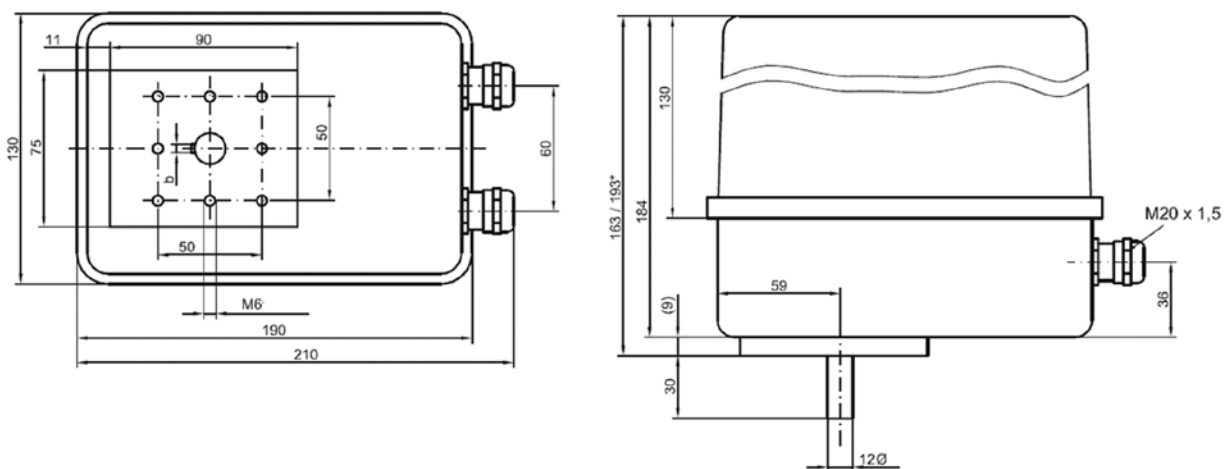
Technical Data



Actuator 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
Form of shaft	Ø12 x 30, Form C03	Weigth [kg]	3,5
Running time [90°]	60 sec.	Protection class	IP65
Controlling	Three Point Step	Adaption	4 x 90°, M6, screw-hole circle Ø 50 mm
End switches	2	Ambient temperature	-10...+ 60 °C
Additional switches	2	TÜV approval	when used with VMS/FMS/ ETAMATIC

Illustrations and technical data refer to the standard version



Dimension drawing actuator 40 NM and 50 NM

Ordering Information

Description / Type (standard variant)	Order no.
Actuator 40 Nm, 230 VAC, running time 60 sec. to 90°, TPS, position feedback POTENTIOMETER 5 kOHM, conductive plastic, TÜV approved, 2 end switches, 2 additional switch, electr. override, IP65 ¹⁾	662 R 2121 - ...
Actuator 50 Nm, 230 VAC, running time 60 sec. to 90°, TPS, position feedback POTENTIOMETER 5 kOHM, conductive plastic, TÜV approved, 2 end switches, 2 additional switch, electr. override, IP65 ¹⁾	662 R 2122 - ...

1) Coupling or lever must be ordered separately

A 03 - TORQUE	Selection
40 Nm	040
50 Nm	050
A 05 - FORM OF SHAFT	Selection
ROUND SHAFT 12 x 30 mm WITH FEATHER KEY 4 x 4 x 20 mm	C03*
SHAFT SPECIFICATION BY CUSTOMER	E01
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*
RUNNING TIME SPECIFICATION BY CUSTOMER	—
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 settings

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, 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 such as FMS/VMS/ETAMATIC	5K
A 40 – ELECTRICAL OVERRIDE, selection not possible, delivery only with ELECTRICAL OVERRIDE, except in the case of electronic controlling	
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 settings

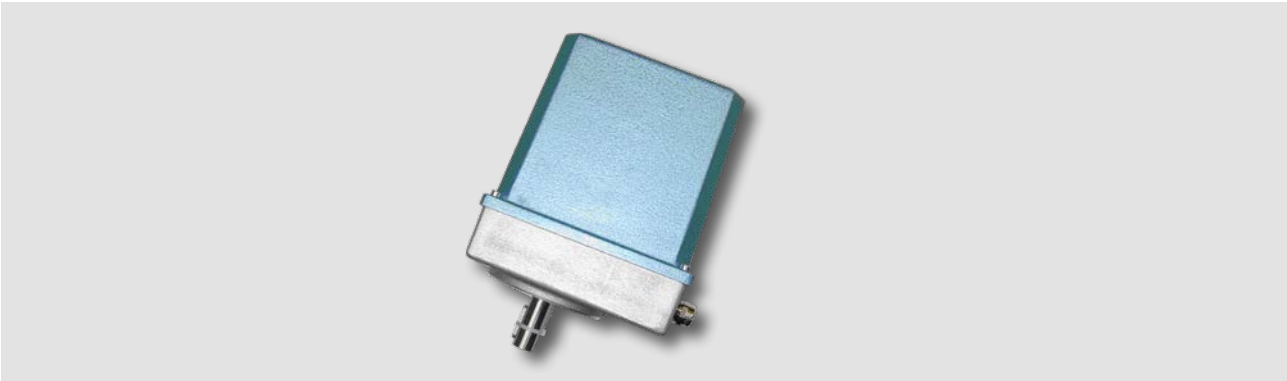
Ordering Information

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	W
A 70 - ADAPTION	Selection
4x M6, HOLE CIRCLE Ø 50 mm	S*
BY TYPE	T / U / W
BY DRAWING	ZG
A 75 -COLOUR	Selection
COVER BLUE	1B*
COVER BLACK	2S
A 80 -CABLE GLANDS	Selection
2x M20	1S*
CABLE GLANDS SPECIFICATION BY CUSTOMER	2K
A 85 -SPECIAL CONFIGURATION	Selection
WITHOUT SPECIAL CONFIGURATION	S00*
HOUSING HEATING 230 VAC/15 W, incl. THERMOSTAT, down to -30 °C	S02

*Default settings

Actuator 90 bis 180 Nm, Type 662R212...

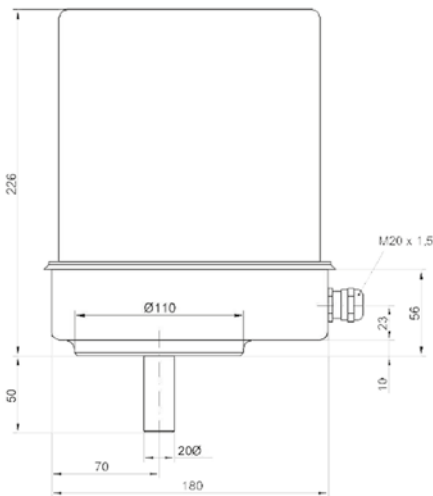
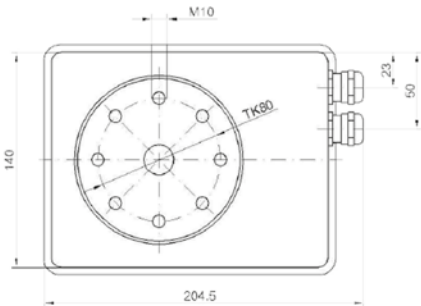
Technical Data



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
Form of shaft	Ø12 x 50, Form C10	Weigth [kg]	7
Running time [90°]	60 sec.	Protection class	IP65
Controlling	Three Point Step	Adaption	4 x 45°, M10, screw-hole circle Ø 80 mm
End switches	2	Ambient temperature	-10...+ 60 °C
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 662R212/23/24/25 IP65

Ordering Information

Description / Type (standard variant)	Order no.
Actuator 90 Nm, 230 VAC, running time 60 sec. to 90°, TPS, position feedback POTENTIOMETER 5 kOHM, conductive plastic, TÜV approved, 2 end switches, 2 additional switch, electr. override, IP65 ¹⁾	662R2123 - ...
Actuator 140 Nm, 230 VAC, running time 60 sec. to 90°, TPS, position feedback POTENTIOMETER 5 kOHM, conductive plastic, TÜV approved, 2 end switches, 2 additional switch, electr. override, IP65 ¹⁾	662R2124 - ...
Actuator 180 Nm, 230 VAC, running time 60 sec. to 90°, TPS, position feedback POTENTIOMETER 5 kOHM, conductive plastic, TÜV approved, 2 end switches, 2 additional switch, electr. override, IP65 ¹⁾	662R2125 - ...

¹⁾ Coupling or lever must be ordered separately

A 03 - TORQUE	Selection
90 Nm	090
140 Nm	140
180 Nm	180
A 05 - FORM OF SHAFT	Selection
ROUND SHAFT 20 x 50 mm WITH FEATHER KEY 6 x 6 x 32 mm	C10*
SHAFT SPECIFICATION BY CUSTOMER	—
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*
RUNNING TIME SPECIFICATION BY CUSTOMER	—
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 settings

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, 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 such as FMS/VMS/ETAMATIC	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 settings

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	W
A 70 - ADAPTION	Selection
8x M10 (45°), HOLE CIRCLE Ø 80 mm	S*
BY TYPE	T / U / W
BY DRAWING	ZG
A 75 -FARBE	Selection
COVER BLUE	1B*
COVER BLACK	2S
A 80 -CABLE GLANDS	Selection
2x M20	1S*
CABLE GLANDS SPECIFICATION BY CUSTOMER	2K
A 85 -SPECIAL CONFIGURATION	Selection
WITHOUT SPECIAL CONFIGURATION	S00*
HOUSING HEATING 230 VAC/15 W, incl. THERMOSTAT, down to -30 °C	S02

*Default settings

ATEX /IEC Actuator Type 662R2140

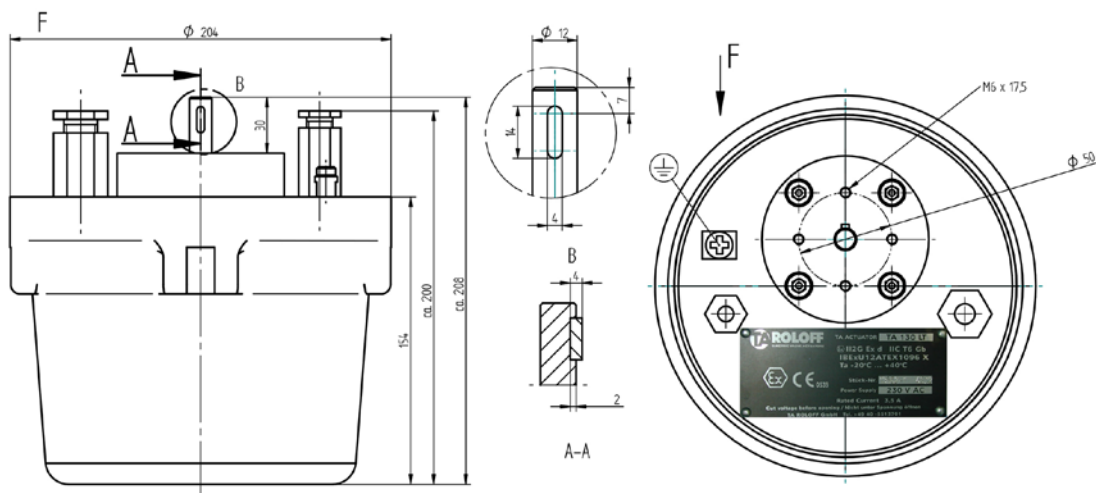
Technical Data



ATEX/IEC Actuator 6 Nm to 40 Nm

Usage	for driving dampers and valves on combustion equipment	Dimensions [mm] [mm]	see dimension drawing
EX-approval	IIC G Ex d IIC T6 Gb IBExU 12ATEX1096 X	Screwed cable glands	1x M16 x 1,5, cable Ø min. 3,5 mm, max. 8,5 mm 1x M20 x 1,5, cable Ø min. 11 mm, max 14,2 mm
Power supply voltage	230 VAC/50 Hz		
Item no.	662R2140	Weight [kg]	8
		Protection class	IP65
		Adaption	4 x M6, screw-hole circle Ø 50 mm
Form of shaft	Ø12 x 25 mm	Ambient temperature	ATEX : -20 ... + 60 °C IECEX: -20 ... + 40 °C
Running time [90°]	60 sec.		
Controlling	Three Point Step	Additional switches	2
End switches	2	TÜV approval	when used with VMS/FMS/ ETAMATIC
Position Feedback	Poti 5K0hm, positive locking and Backlash-free		

Illustrations and technical data refer to the standard version



Dimension drawing Actuator Type 662R2140/41/with feather key according to DIN 6885-1

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 - ...

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	006
20 Nm ATEX EX II 2G Ex d IIC T6 Gb, -20...60°C	020
30 Nm ATEX EX II 2G Ex d IIC T6 Gb, -20...60°C	030
40 Nm ATEX EX II 2G Ex d IIC T6 Gb, -20...60°C	040
50 Nm ATEX EX II 2G Ex d IIC T6 Gb, -20...60°C	050
6 Nm IECEx Ex d IIC T6 Gb, -20...40°C	06
20 Nm IECEx Ex d IIC T6 Gb, -20...40°C	20
30 Nm IECEx Ex d IIC T6 Gb, -20...40°C	30
40 Nm IECEx Ex d IIC T6 Gb, -20...40°C	40
50 Nm IECEx Ex d IIC T6 Gb, -20...40°C	50
A 05 - FORM OF SHAFT	Selection
ROUND SHAFT 12 x 30 mm WITH FEATHER KEY 4 x 4 x 14 mm	C02
ROUND SHAFT 12 x 30 mm WITH FEATHER KEY 4 x 4 x 20 mm	C03
SHAFT SPECIFICATION BY CUSTOMER	—

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

*Default settings

Ordering Information

A 15 - RUNNING TIME TO 90°	Selection
60 SECONDS	60*
RUNNING TIME SPECIFICATION BY CUSTOMER	—
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
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, 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 such as FMS/VMS/ETAMATIC	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 settings

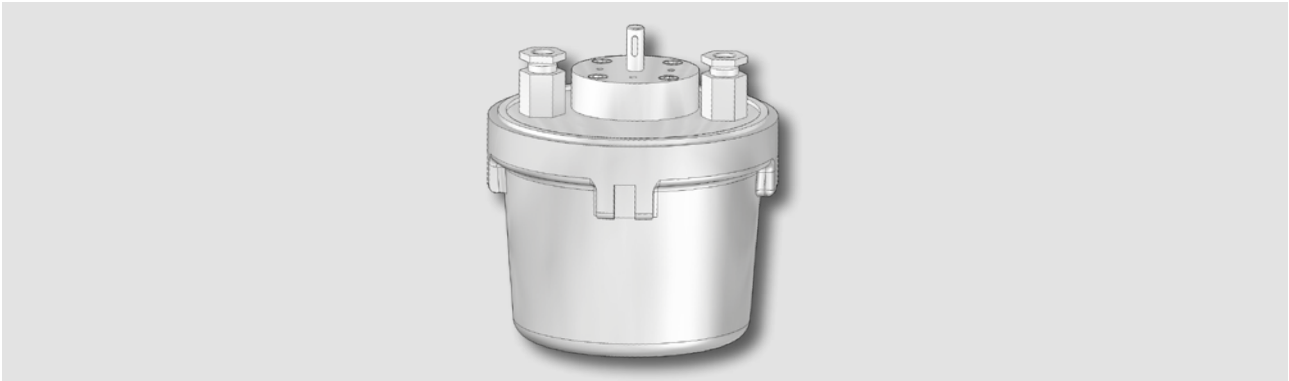
Ordering Information

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	S*
BY DRAWING	ZG
A 75 –FARBE	Selection
COVER BLUE	1B*
A 80 –CABLE GLANDS	Selection
1x M16 ATEX, 1x M20 ATEX,	1S*
CABLE GLANDS SPECIFICATION BY CUSTOMER	2K
A 85 –SPECIAL CONFIGURATION	Selection
WITHOUT SPECIAL CONFIGURATION	S00*
SPECIAL CONFIGURATION	S0x

*Default settings

ATEX/IEC Actuator Type 662R2141 Stainless steel.

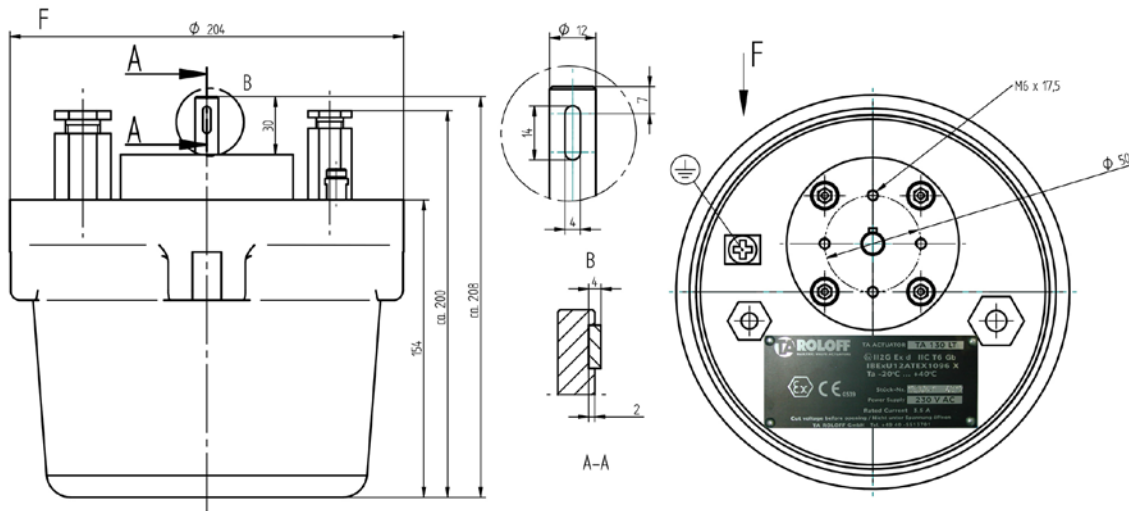
Technical Data



ATEX /IEC Actuator in stainless steel housing

Usage	for driving dampers and valves on combustion equipment	Dimensions [mm] [mm]	see dimension drawing
EX-approval	II2G Ex d IIC T6 Gb IBExU 12ATEX1096 X	Screwed cable glands	1x M16 x 1,5, cabel Ø min. 3,5 mm, max. 8,5 mm 1x M20 x 1,5, cabel Ø min. 11 mm, max 14,2 mm
Power supply voltage	230 VAC/50 Hz		
Item no.	662R2141	Weigth [kg]	11,6
Form of shaft	Ø12 x 30 mm	Protection class	IP65
Running time [90°]	60 sec.	Adaption	4 x M6, screw-hole circle Ø 50 mm
Controlling	Three Point Step		
End switches	2	Ambient temperature	ATEX : -20 ... + 60 °C IECEX: -20 ... + 40 °C
Position Feedback	Poti 5K0hm, positive locking and Backlash-free	Additional switches	2
		TÜV approval	when used with VMS/FMS/ ETAMATIC

Illustrations and technical data refer to the standard version



Dimension drawing Actuator Type 662R2140/41/with feather key according to DIN 6885-1

Ordering Information

Description / Type (standard variant)	Order no.
Actuator ATEX / IECEx stainless steel housing, 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	006
20 Nm ATEX EX II 2G Ex d IIC T6 Gb, -20...60°C	020
30 Nm ATEX EX II 2G Ex d IIC T6 Gb, -20...60°C	030
40 Nm ATEX EX II 2G Ex d IIC T6 Gb, -20...60°C	040
50 Nm ATEX EX II 2G Ex d IIC T6 Gb, -20...60°C	050
6 Nm IECEx Ex d IIC T6 Gb, -20...40°C	06
20 Nm IECEx Ex d IIC T6 Gb, -20...40°C	20
30 Nm IECEx Ex d IIC T6 Gb, -20...40°C	30
40 Nm IECEx Ex d IIC T6 Gb, -20...40°C	40
50 Nm IECEx Ex d IIC T6 Gb, -20...40°C	50
A 05 - FORM OF SHAFT	Selection
ROUND SHAFT 12 x 30 mm WITH FEATHER KEY 4 x 4 x 14 mm	C02
ROUND SHAFT 12 x 30 mm WITH FEATHER KEY 4 x 4 x 20 mm	C03
SHAFT SPECIFICATION BY CUSTOMER	—
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

*Default settings

Ordering Information

A 15 - RUNNING TIME TO 90°	Selection
60 SECONDS	60*
RUNNING TIME SPECIFICATION BY CUSTOMER	—
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
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, 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 such as FMS/VMS/ ETAMATIC	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 settings

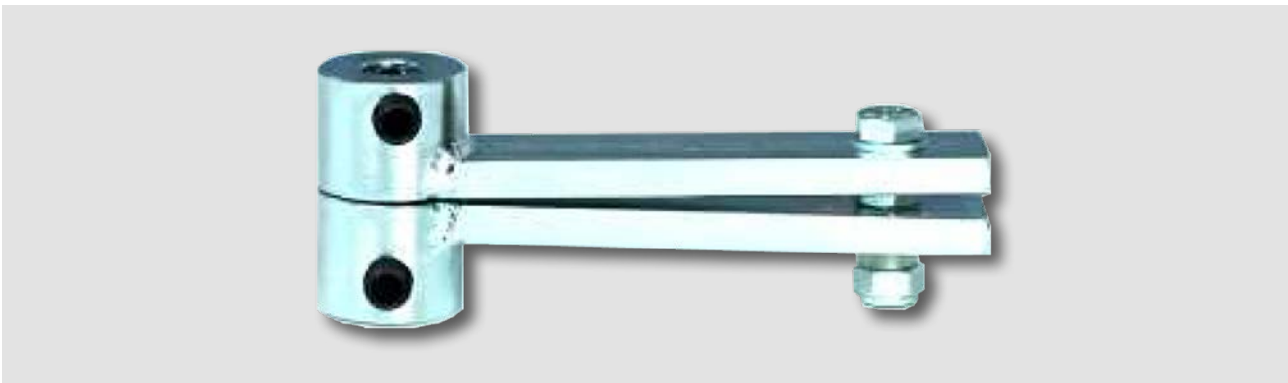
Ordering Information

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	S*
BY DRAWING	ZG
A 75 –FARBE	Selection
Stainless steel	5E*
A 80 –CABLE GLANDS	Selection
1x M16 ATEX, 1x M20 ATEX,	1S*
CABLE GLANDS SPECIFICATION BY CUSTOMER	2K
A 85 –SPECIAL CONFIGURATION	Selection
WITHOUT SPECIAL CONFIGURATION	S00*
SPECIAL CONFIGURATION	S0x

*Default settings

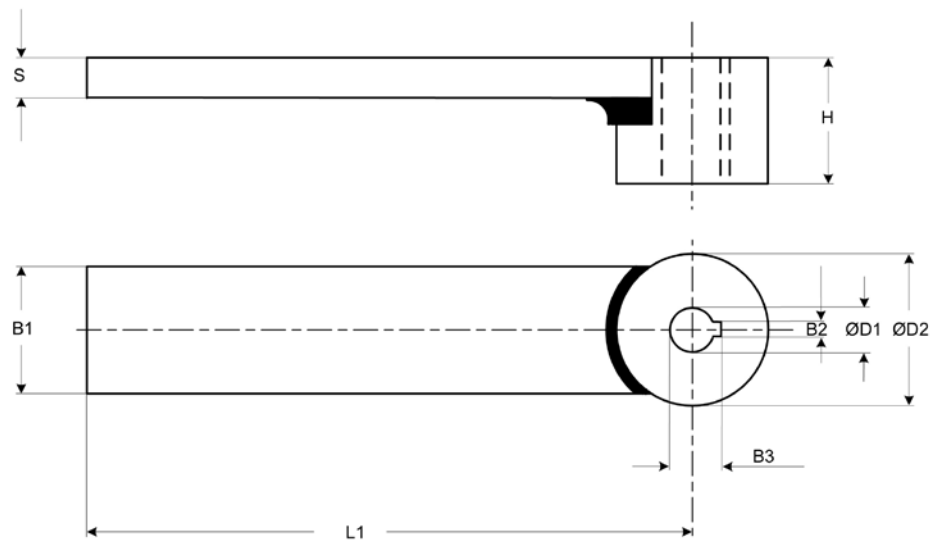
Lever arm coupling for actuators.

Technical Data



Lever arm coupling

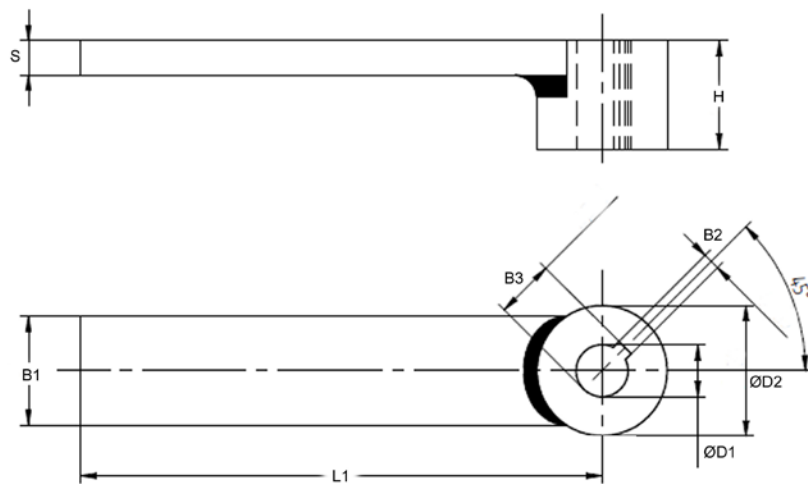
Usage	Mechanical connection between actuator and dampers/valves	Dimensions [mm]	see dimension drawing
Item number according shaft diameter d [mm]	662R2308 d=10	Outside diameter [mm]	30/35
	662R2308/1 d=12	Material	zinc-coated steel
	662R2308/S d=12, special length		
	662R2308/11 d=12, groove 45°		
	662R2308/2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



Dimension drawing Lever arm coupling

Ordering Information

Maximum torque [Nm]	B1 [mm]	B2 [mm]	B3 [mm]	ØD1 [mm]	ØD2 [mm]	H [mm]	L1 [mm]	S [mm]	Order no.
12	25	3 ^{I9}	11,5 ^{+0,1}	10 ^{H7}	30	25	120	8	662R2308
40	25	4 ^{I9}	14,1 ^{+0,1}	12 ^{H7}	30	25	120	8	662R2308/1
180	25	6 ^{I9}	22,8 ^{+0,1}	20 ^{H7}	35	40	117,5	8	662R2308/2
40	25	4 ^{I9}	14,1 ^{+0,1}	12 ^{H7}	30	25	200	8	662R2308/S



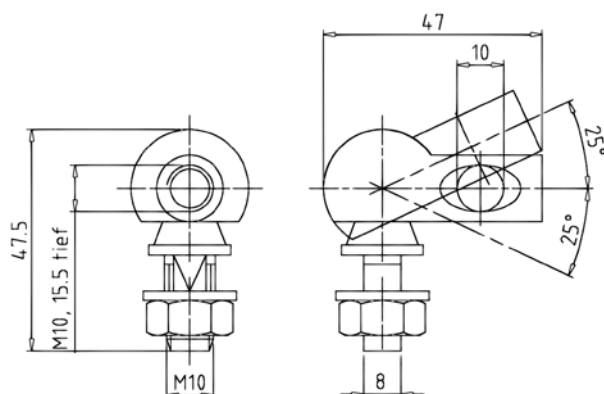
Dimension drawing Lever arm coupling 45° groove

Maximum torque [Nm]	B1 [mm]	B2 [mm]	B3 [mm]	ØD1 [mm]	ØD2 [mm]	H [mm]	L1 [mm]	S [mm]	Order no.
40	25	4 ^{I9}	13,5 ^{+0,1}	12 ^{H7}	30	25	120	8	662R2308/11
40	25	6 ^{I9}	22,8 ^{+0,1}	20 ^{H7}	35	40	200	8	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

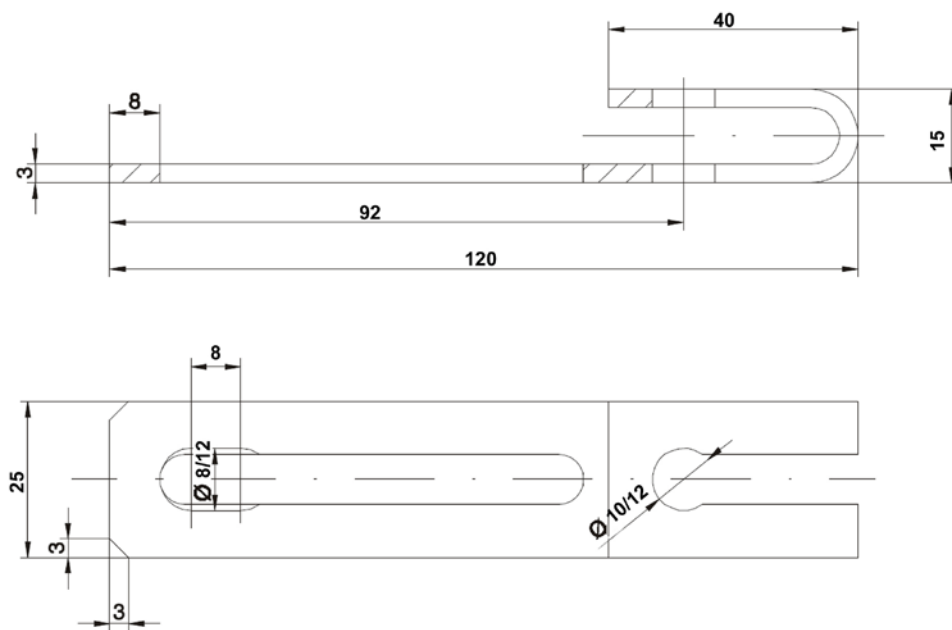
Clamping lever for ball joint.

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 [mm]	10/12
Material	zinc-coated steel	Maximum torque [Nm]	12



Dimension drawing Clamping lever for ball joint

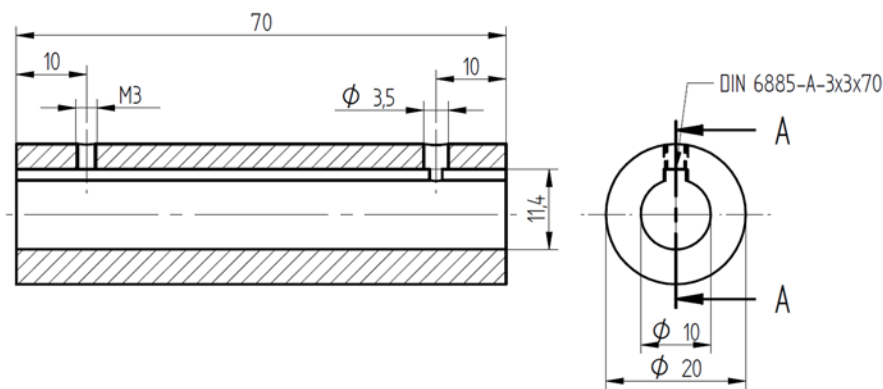
Coupling for actuators.

Technical Data

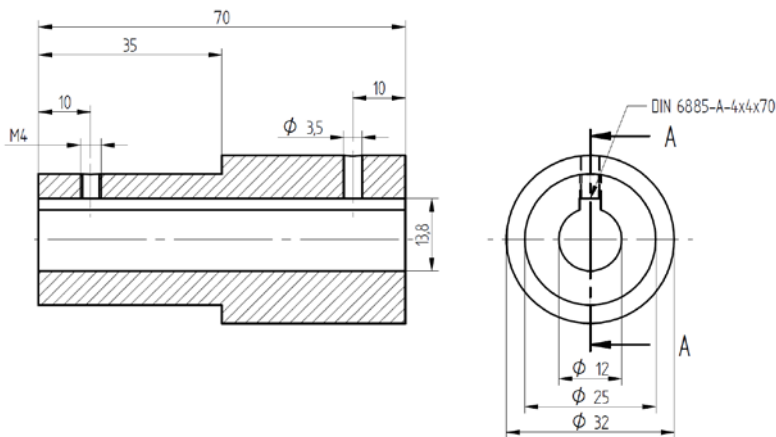


Coupling

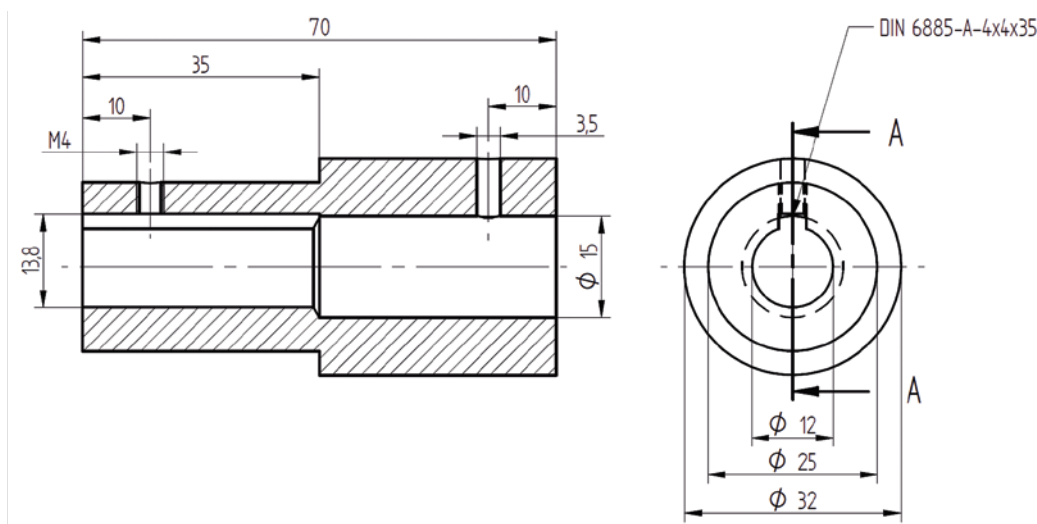
Usage	Mechanical connection between actuator and controll dampers	Dimensions [mm]	see dimension drawing
Item no.	According to shaft diameter, see order no. List on the following page	Material	free cutting steel, gunmetal finsh



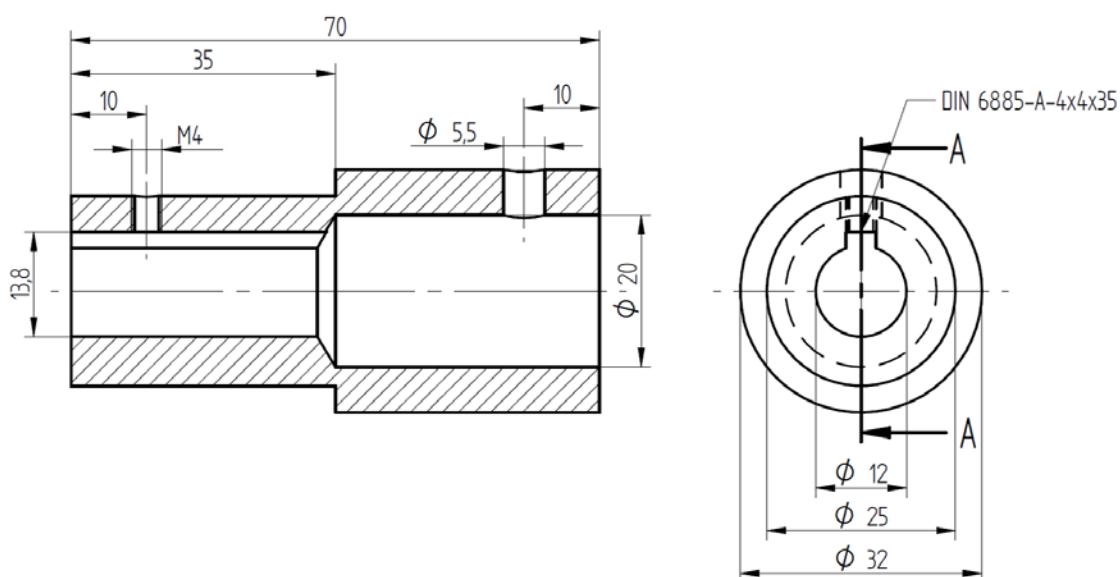
Dimension drawing Coupling Type 662R2188 shaft 10 mm to 10 mm



Dimension drawing Coupling Type 662R2189 shaft 12 mm to 12 mm



Dimension drawing Coupling type 662R2192 shaft 12 to 15 mm



Dimension drawing Coupling type 662R2196 shaft 12 on 20 mm

Ordering Information

Description / Type	Order no.
Coupling for actuator with shaft d=10 mm (motor side) to d2=10 mm (flap side)	662R2188
Coupling for actuator with shaft d=12 mm (motor side) to d2=12 mm (flap side)	662R2189
Coupling for actuator with shaft d=12 mm (motor side) to d2=15 mm (flap side)	662R2192
Coupling for actuator with shaft d=12 mm (motor side) to d2=16 mm (flap side)	662R2193
Coupling for actuator with shaft d=12 mm (motor side) to d2=10 mm (flap side)	662R2195
Coupling for actuator with shaft d=12 mm (motor side) to d2=20 mm (flap side)	662R2196
Coupling for actuator with shaft d=20 mm (motor side) to d2=20 mm (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	68 x 89
Item no.	662R2235 Shaft Ø 12 mm 662R2236 Shaft Ø 20/12 mm	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 [mm]	140 x 85 x 80
Item no.	662R2225	Material	Aluminium
Torque max. [Nm]	40	Adaption (drive)	LK Ø50 mm, 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 [mm]	126 x 90 x 80
Item no.	662R2226	Material	zinc-coated steel
Torque max. [Nm]	20	Adaption (Drive)	Hole cicle Ø50 mm, 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..

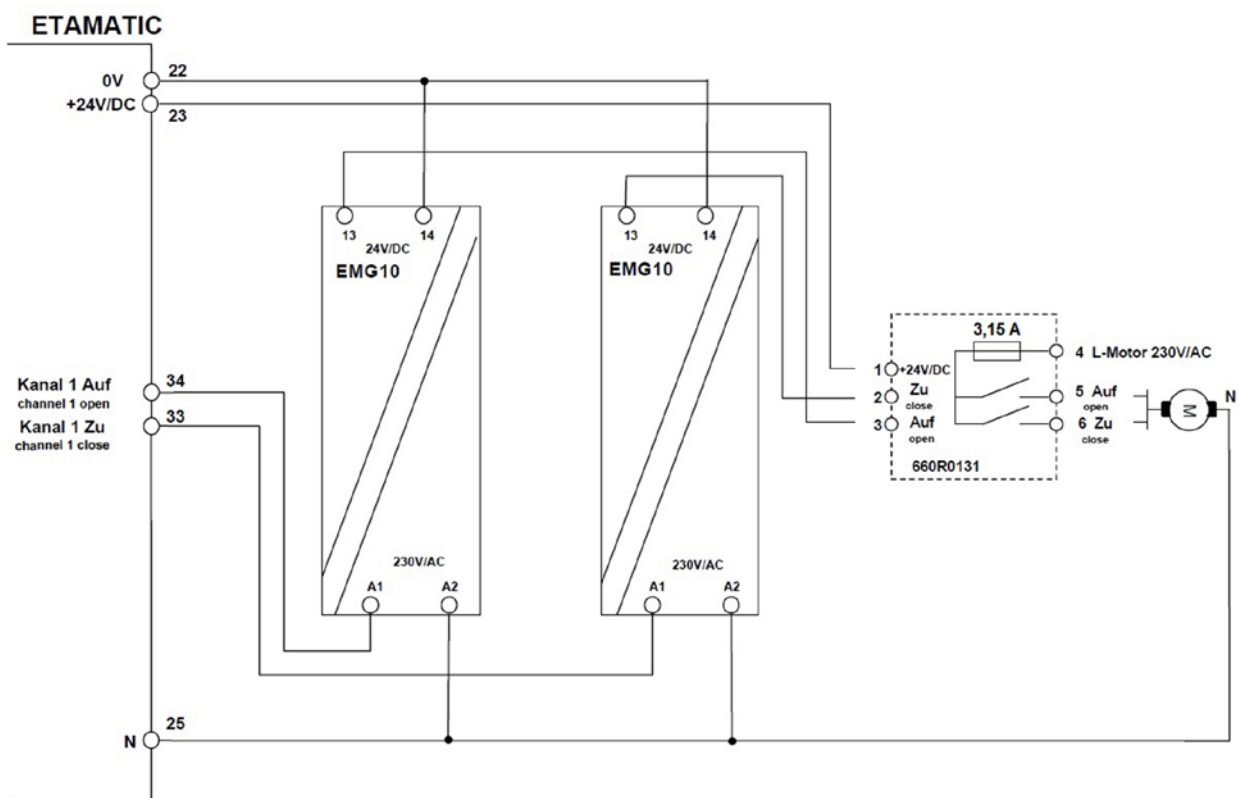
Additional parts

2x Signalconverter Interface 230 VAC/24 VDC, 1-phase

Order no. 660R0028 (230 VAC) 660R0029 (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 BR2141	662R2180
End switch, gastight, with connecting cable for actuators type 662R2111 BR2127	662R2176
Cover, plastic, blue, for actuators IP54, type 662R2127 and 662R2111	662R2190
Cover, cast, blue, for actuators IP65, type 662R2127 and 662R2111	662R2191

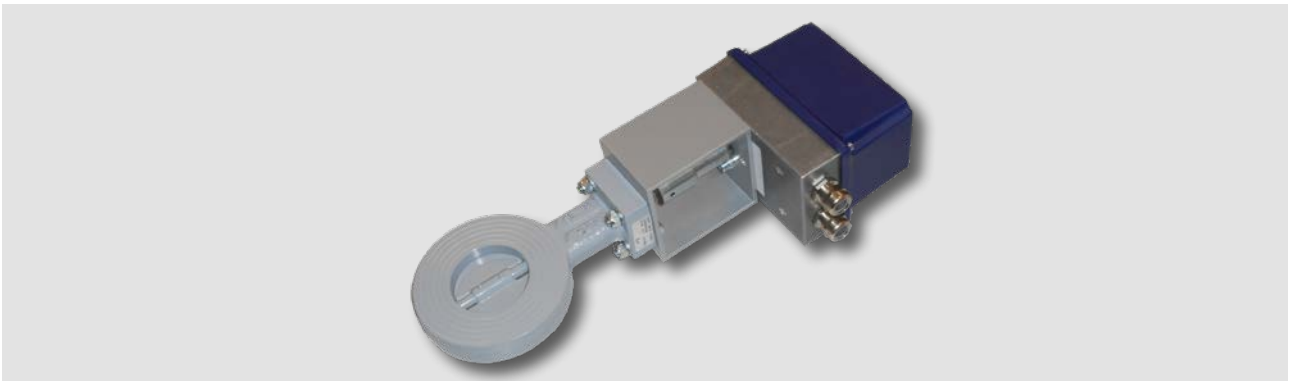
Spare parts for CMS actuator Type 668M20...

Ordering Information

Bezeichnung / Typ	Bestell-Nr.
POTENTIOMETER CONTELEC 5 kOhm 190° D-Inner shaft, connecting cable 120 mm with wire end ferrules	668P2001

Gas butterfly control valve up to 60 °C, DVGW proofed, non linear.

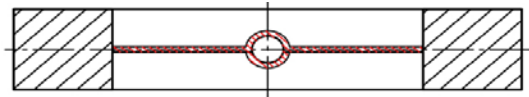
Technical Data



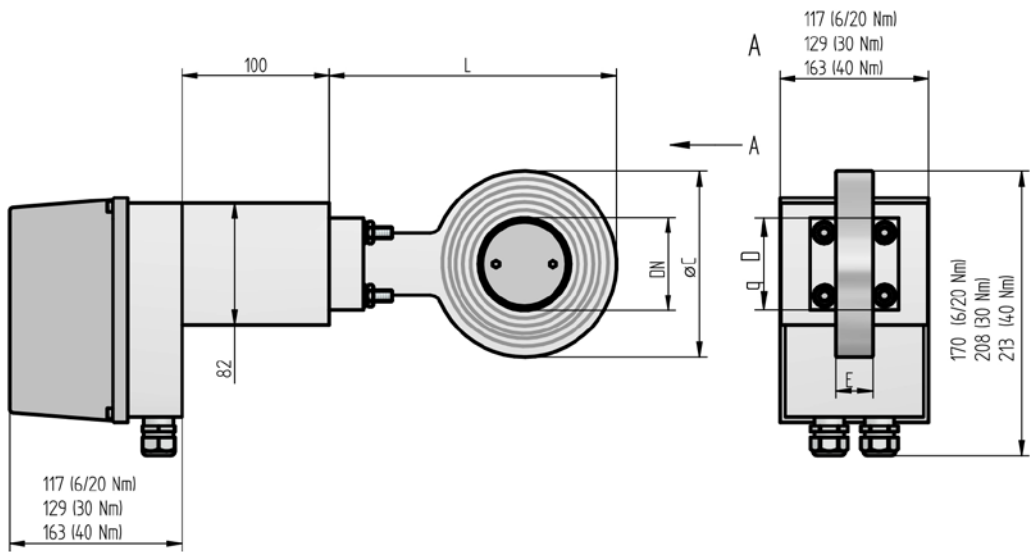
Butterfly control valve

Usage	As actuator for process control in combustion technology	Dimensions [mm]	see dimension drawing
Mode of operation	for electric drive actuator	Mounting position	for any installation position
Operating pressure	0 to 4 bar	Medium temperature	-20 °C... +60 °C
Design	Special butterfly plate, Wafer Type Butterfly Valve	Medium	Natural gas, as well as neutral and non-aggressive gases
Test specification	type approved according to 90/396/EWG Prod. ID. Nr. CE-0085-AR0408 DIN 3394-1 Klasse RO DIN 3391 (medium temperature -20 °C to +60 °C)	Leakage	approx. 1 % of the Kv value

Butterfly control valve



Butterfly plate (flow, not linear)



Dimension drawing flow control valve with console and coupling

Weight [kg]	DN	L [mm]	ØC [mm]	qD [mm]	E [mm]
2,2	25	153	70	60	25
2,2	32	153	70	60	25
2,5	40	166	90	60	25
2,7	50	183	104	60	25
3,1	65	195	124	60	25
3,8	80	211	139	60	30
4,4	100	231	161	60	30
5,9	125	258	191	60	35
6,3	150	283	214	60	35
12,7	200	344	270	80	40
13,7	250	394	320	80	40
16,2	300	444	370	80	45
27,7	350	523	428	80	45
39	400	561	465	80	45

Ordering Information

Configuration incl. console, coupling and assembly to actuator*

662R23V-	A 10 INTERNAL DIAMETER	A 20 REDUCTION
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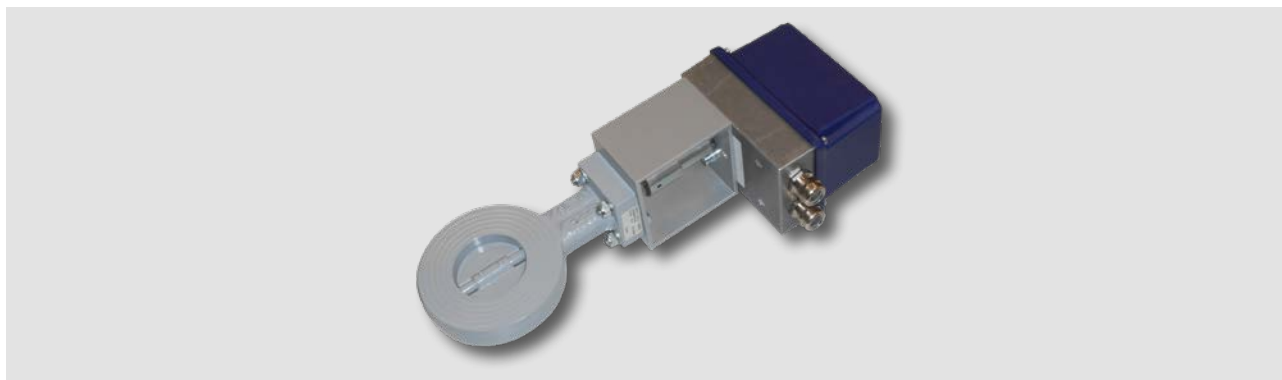
A 10 - INNENDURCHMESSER		Selection.
INTERNAL DIAMETER DN25	PRESSURE RANGE 0...4 bar, DELTA P MAX. 4 bar, PN10-PN40, ANSI 300 lbs	025
INTERNAL DIAMETER DN32	PRESSURE RANGE 0...4 bar, DELTA P MAX. 4 bar, PN10-PN40, ANSI 150 lbs, 300 lbs	032
INTERNAL DIAMETER DN40	PRESSURE RANGE 0...4 bar, DELTA P MAX. 4 bar, PN10-PN40, ANSI 300 lbs	040
INTERNAL DIAMETER DN50	PRESSURE RANGE 0...4 bar, DELTA P MAX. 4 bar, PN10-PN40, ANSI 300 lbs	050
INTERNAL DIAMETER DN65	PRESSURE RANGE 0...4 bar, DELTA P MAX. 2 bar, PN10-PN40, ANSI 300 lbs	065
INTERNAL DIAMETER DN80	PRESSURE RANGE 0...4 bar, DELTA P MAX. 2 bar, PN10-PN40, ANSI 300 lbs	080
INTERNAL DIAMETER DN100	PRESSURE RANGE 0...4 bar, DELTA P MAX. 2 bar, PN10-PN40, ANSI 150 lbs, 300 lbs	100
INTERNAL DIAMETER DN125	PRESSURE RANGE 0...4 bar, DELTA P MAX. 1 bar, PN10-PN16, ANSI 150 lbs, 300 lbs	125
INTERNAL DIAMETER DN150	PRESSURE RANGE 0...4 bar, DELTA P MAX. 1 bar, PN10-PN16, ANSI 150 lbs, 300 lbs	150
INTERNAL DIAMETER DN200	PRESSURE RANGE 0...4 bar, DELTA P MAX. 1 bar, PN10-PN16, ANSI 150 lbs	200
INTERNAL DIAMETER DN250	PRESSURE RANGE 0...4 bar, DELTA P MAX. 0,5 bar, PN10, ANSI 150 lbs	250
INTERNAL DIAMETER DN300	PRESSURE RANGE 0...4 bar, DELTA P MAX. 0,3 bar, PN6-PN10	300
INTERNAL DIAMETER DN350	PRESSURE RANGE 0...4 bar, DELTA P MAX. 0,2 bar, PN6-PN16	350
INTERNAL DIAMETER DN400	PRESSURE RANGE 0...4 bar, DELTA P MAX. 0,15 bar, PN6-PN16	400
A 20 - REDUCTION		Selection
WITHOUT REDUCTION		000
REDUCED TO SPECIFICATION BY CUSTOMER		—

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

DN25...DN125	6 Nm	Typ 662R2127
DN150...DN250	20 Nm	Typ 662R2111
DN300	30 Nm	Typ 662R2112
DN350	40 Nm	Typ 662R2121
DN400	90 Nm	Typ 662R2123

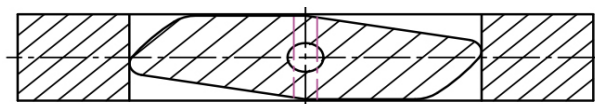
Gas butterfly control valve up to 60 °C, DVGW proofed, linear.

Technical Data

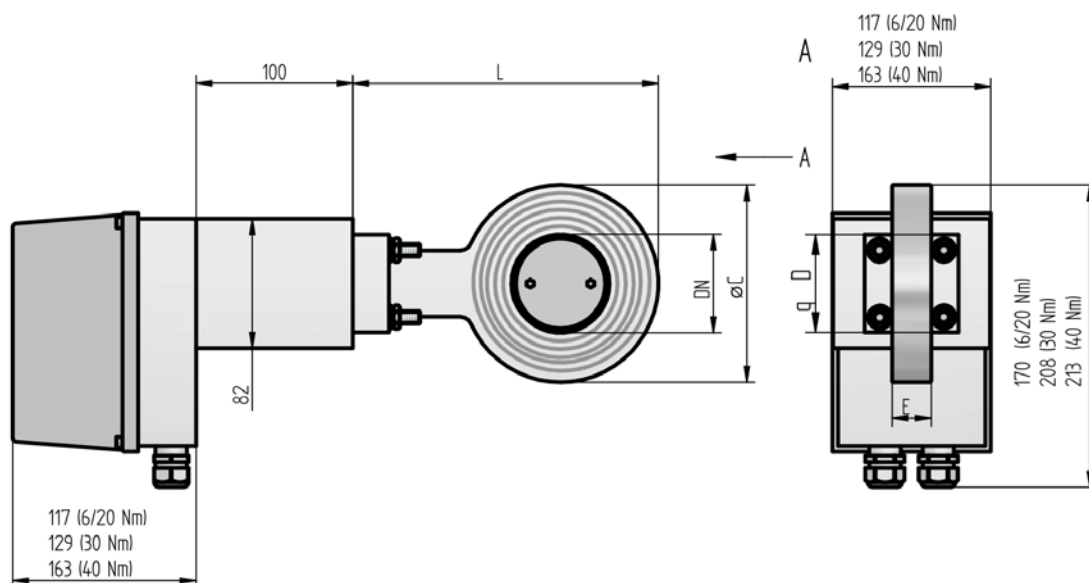


Butterfly control valve

Usage	As actuator for process control in combustion technology	Dimensions [mm]	see dimension drawing
Mode of operation	for electric drive actuator	Mounting position	for any installation position
Operating pressure	0 to 4 bar	Medium temperature	-20 °C... +60 °C
Design	Special butterfly plate, Wafer Type Butterfly Valve	Medium	Natural gas, as well as neutral and non-aggressive gases
Test specification	type approved according to 90/396/EWG Prod. ID. Nr. CE-0085-AR0408 DIN 3394-1 Klasse RO DIN 3391 (medium temperature -20 °C to +60 °C)	Leakage	approx. 1 % of the Kv value



Special butterfly plate (flow linear)



Dimension drawing flow control valve with console and coupling

Weight [kg]	DN	L [mm]	ØC [mm]	qD [mm]	E [mm]
3	40	166	90	60	25
3,2	50	183	104	60	25
3,6	65	195	124	60	25
4,3	80	211	139	60	30
4,9	100	231	161	60	30
6,4	125	258	191	60	35
7,3	150	283	214	60	35
13,7	200	344	270	80	40
14,7	250	394	320	80	40
16,2	300	444	370	80	45
29,2	350	523	428	80	45
40,5	400	561	465	80	45

Ordering Information

Configuration incl. console, coupling and assembly to actuator*

662R25V-	A 10 INTERNAL DIAMETER	A 20 REDUCTION
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A 10 - INTERNAL DIAMETER		Selection
INTERNAL DIAMETER DN40	PRESSURE RANGE 0...4 bar, DELTA P MAX. 4 bar PN10 - PN40, ANSI 300lbs	040
INTERNAL DIAMETER DN50	PRESSURE RANGE 0...4 bar, DELTA P MAX. 4 bar PN10 - PN40, ANSI 300lbs	050
INTERNAL DIAMETER DN65	PRESSURE RANGE 0...4 bar, DELTA P MAX. 2 bar PN10 - PN40, ANSI 300lbs	065
INTERNAL DIAMETER DN80	PRESSURE RANGE 0...4 bar, DELTA P MAX. 2 bar PN10 - PN40, ANSI 300lbs	080
INTERNAL DIAMETER DN100	PRESSURE RANGE 0...4 bar, DELTA P MAX. 2 bar PN10 - PN40, ANSI 150lbs, 300lbs	100
INTERNAL DIAMETER DN125	PRESSURE RANGE 0...4 bar, DELTA P MAX. 1 bar PN10 - PN40, ANSI 150lbs, 300lbs	125
INTERNAL DIAMETER DN150	PRESSURE RANGE 0...4 bar, DELTA P MAX. 1 bar PN10 - PN40, ANSI 150lbs, 300lbs	150
INTERNAL DIAMETER DN200	PRESSURE RANGE 0...4 bar, DELTA P MAX. 1 bar PN10 - PN40, ANSI 150lbs	200
INTERNAL DIAMETER DN250	PRESSURE RANGE 0...4 bar, DELTA P MAX. 0,5 bar PN10, ANSI 150lbs	250
INTERNAL DIAMETER DN300	PRESSURE RANGE 0...4 bar, DELTA P MAX. 0,3 bar PN6 - PN10	300
INTERNAL DIAMETER DN350	PRESSURE RANGE 0...4 bar, DELTA P MAX. 0,2 bar PN10 - PN16	350

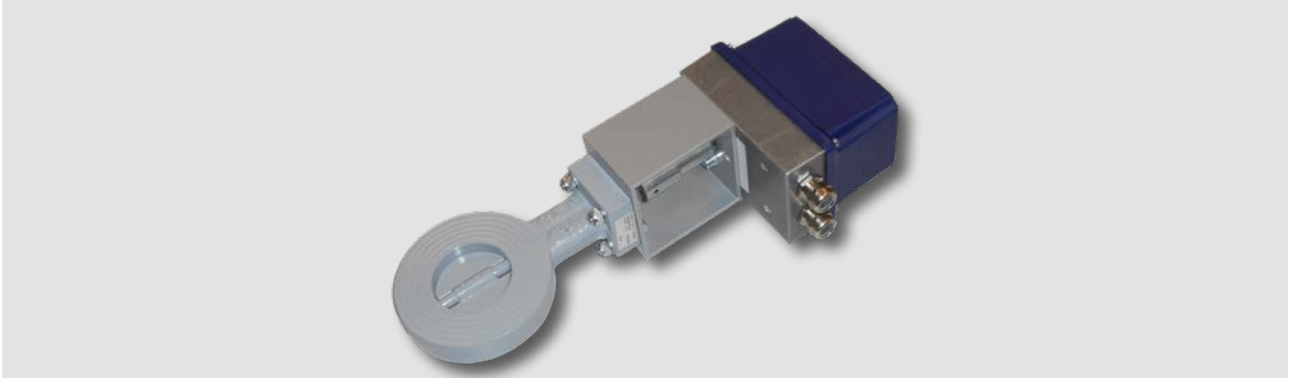
A 20 - REDUCTION	Selection
WITHOUT REDUCTION	000
REDUCED TO SPECIFICATION BY CUSTOMER	—

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

DN25...DN125	6 Nm	Typ 662R2127	DN150...DN250	20 Nm	Typ 662R2111
DN300	30 Nm	Typ 662R2112	DN350	40 Nm	Typ 662R2121
			DN400	90 Nm	Typ 662R2123

Butterfly valve for biogas up to 60 °C stainless steel, DVGW proofed, non linear.

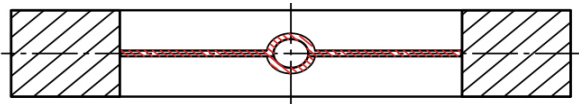
Technical Data



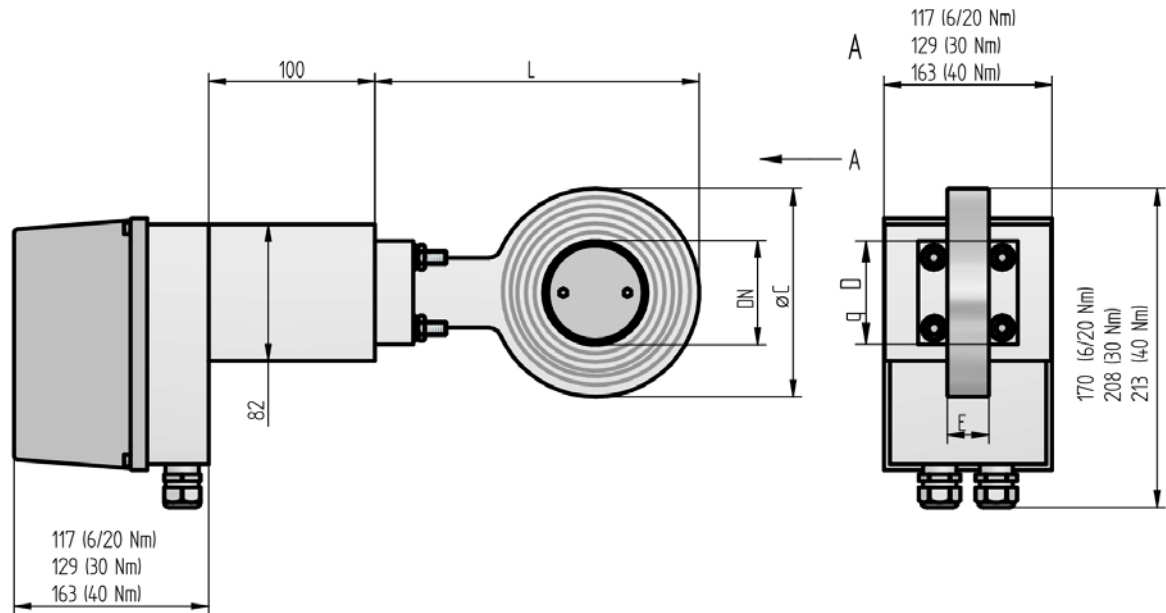
Butterfly control valve

Usage	As actuator for process control in combustion technology	Dimensions [mm]	see dimension drawing
Mode of operation	for electric drive actuator	Mounting position	for any installation position
Operating pressure	0 bis 4 bar	Medium temperature	-20 °C... +60 °C
Design	Butterfly plate, Wafer Type Butterfly Valve	Medium	Biogas
Test specification	type approved according to 90/396/EWG Prod. ID. Nr. CE-0085-AR0408 DIN 3394-1 Klasse RO DIN 3391 (medium temperature -20 °C to +60 °C)	Leakage	approx. 1 % of the Kv value

Butterfly control valve



Butterfly plate (flow, not linear)



Dimension drawing flow control valve with console and coupling

DN	L [mm]	ØC [mm]	qD [mm]	E [mm]
25	153	70	60	25
32	153	70	60	25
40	166	90	60	25
50	183	104	60	25
65	195	124	60	25
80	211	139	60	30
100	231	161	60	30
125	258	191	60	35
150	283	214	60	35
200	344	270	80	40

Ordering Information

Configuration incl. console, coupling and assembly to actuator*

662R24V-	A 10 INTERNAL DIAMETER	A 20 REDUCTION
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A 10 - INNENDURCHMESSER		Selection
INTERNAL DIAMETER DN25	PRESSURE RANGE 0...4 bar, DELTA P MAX. 4 bar PN40, ANSI 300lbs	025
INTERNAL DIAMETER DN32	PRESSURE RANGE 0...4 bar, DELTA P MAX. 4 bar PN40, ANSI 150lbs, 300lbs	032
INTERNAL DIAMETER DN40	PRESSURE RANGE 0...4 bar, DELTA P MAX. 4 bar PN40, ANSI 300lbs	040
INTERNAL DIAMETER DN50	PRESSURE RANGE 0...4 bar, DELTA P MAX. 4 bar PN40, ANSI 300lbs	050
INTERNAL DIAMETER DN65	PRESSURE RANGE 0...4 bar, DELTA P MAX. 2 bar PN40, ANSI 300lbs	065
INTERNAL DIAMETER DN80	PRESSURE RANGE 0...4 bar, DELTA P MAX. 2 bar PN40, ANSI 300lbs	080
INTERNAL DIAMETER DN100	PRESSURE RANGE 0...4 bar, DELTA P MAX. 2 bar PN40, ANSI 150lbs, 300lbs	100
INTERNAL DIAMETER DN125	PRESSURE RANGE 0...4 bar, DELTA P MAX. 1 bar PN40, ANSI 150lbs, 300lbs	125
INTERNAL DIAMETER DN150	PRESSURE RANGE 0...4 bar, DELTA P MAX. 1 bar PN16, ANSI 150lbs, 300lbs	150
INTERNAL DIAMETER DN200	PRESSURE RANGE 0...4 bar, DELTA P MAX. 1 bar PN16, ANSI 150lbs	200
INTERNAL DIAMETER DN250	PRESSURE RANGE 0...4 bar, DELTA P MAX. 0,5 bar PN10, ANSI 150lbs	250
INTERNAL DIAMETER DN300	PRESSURE RANGE 0...4 bar, DELTA P MAX. 0,3 bar PN6 - PN10	300
INTERNAL DIAMETER DN350	PRESSURE RANGE 0...4 bar, DELTA P MAX. 0,2 bar PN10 - PN16	350

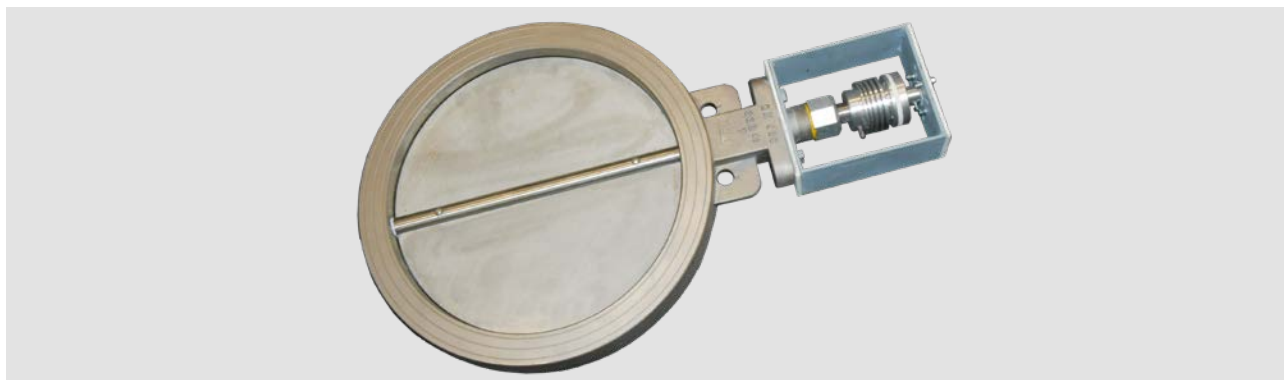
A 20 - REDUCTION	Selection
WITHOUT REDUCTION	000
REDUCED TO SPECIFICATION BY CUSTOMER	—

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

DN25...DN125	6 Nm Typ 662R2127
DN150...DN250	20 Nm Typ 662R2111
DN300	30 Nm Typ 662R2112
DN350	40 Nm Typ 662R2121
DN400	90 Nm Typ 662R2123

Butterfly valve for fluegas/air, up to 450°C, non linear, without DVGW-proof.

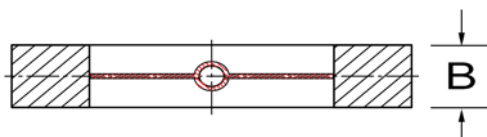
Technical Data



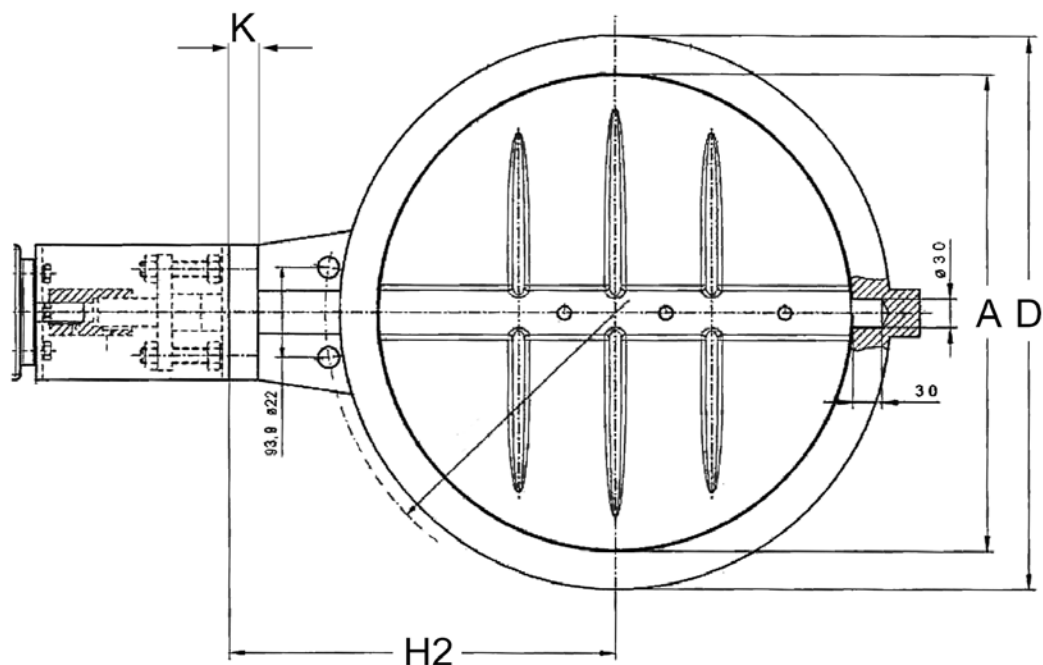
Butterfly valve

Usage	As actuator for process control in combustion technology	Dimensions [mm]	see dimension drawing
Mode of operation	for electric drive actuator	Mounting position	for any installation position
Design	Butterfly plate clamping design	Medium temperature	max. 450 °c
Leakage	approx. 1 % of the Kv value	Medium	fluegas/air

Illustrations and technical data refer to the standard version



Butterfly plate (non-linear flow)



Dimension drawing control damper for flue gas / air

DN	A [mm]	D [mm]	B [mm]	H2 [mm]	Welle [mm]	k [mm]
40	40	77	30	90	10	12
50	51	91	30	95	10	12
65	71	111	30	105	10	17
80	81	124	35	118	12	17
100	101	147	35	128	12	17
125	126	179	35	144	12	17
150	152	220	35	155	12	17
200	198	257	40	191	16	22
250	248	316	40	220	16	22
300	298	367	46	250	20	25
350	337	417	46	275	20	25
400	387	468	51	305	25	25
450	438	525	51	330	25	25
500	489	571	51	357	25	25

Ordering Information

Configuration incl. console, coupling and assembly to actuator*

662R22V-	A 10 INTERNAL DIAMETER	A 20 REDUCTION	A 30 USAGE
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A 10 - INTERNAL DIAMETER	Selection
INTERNAL DIAMETER DN40, PN6...16	040
INTERNAL DIAMETER DN50, PN6...16	050
INTERNAL DIAMETER DN65, PN6...16	065
INTERNAL DIAMETER DN80, PN6...16	080
INTERNAL DIAMETER DN100, PN6...16	100
INTERNAL DIAMETER DN125, PN6...16	125
INTERNAL DIAMETER DN150, PN6...16	150
INTERNAL DIAMETER DN200, PN6	200
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 - USAGE	Selection
Fluegas/air bis 450	450
Fluegas/air bis 550	550

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

DN25DN50 6 Nm Typ 662R2127
 DN65.....DN100 20 Nm Typ 662R2111
 DN125...DN150 30 Nm Typ 662R2112
 DN200 40 Nm Typ 662R2121
 DN300...DN450 90 Nm Typ 662R2123
 DN500 140 Nm Typ 662R2123



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