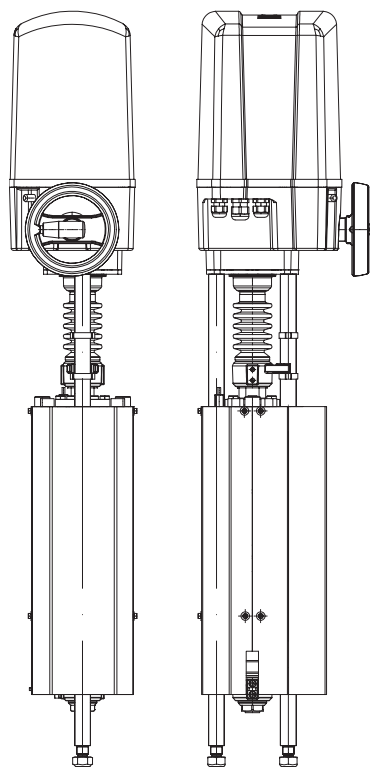


Electric thrust actuator with fail-safe function ARI-PREMIO® / ARI-PREMIO®-Plus

Electric thrust actuator
with fail-safe function
ARI-PREMIO®-Plus
9 kN



Electric thrust actuator
with fail-safe function
ARI-PREMIO®
9 kN



Features

- 2 torque switches
- Max. permissible ambient temperature
0°C to +50°C (32°F to +122°F)
(other temperatures on request)
- Enclosure IP 65
- Additional devices available, e.g. potentiometer
- Travel indicator
- Inductive switch for detecting the triggered fail-safe function
- Automatic clamping of the spring unit to restore the fail-safe function

Working principle

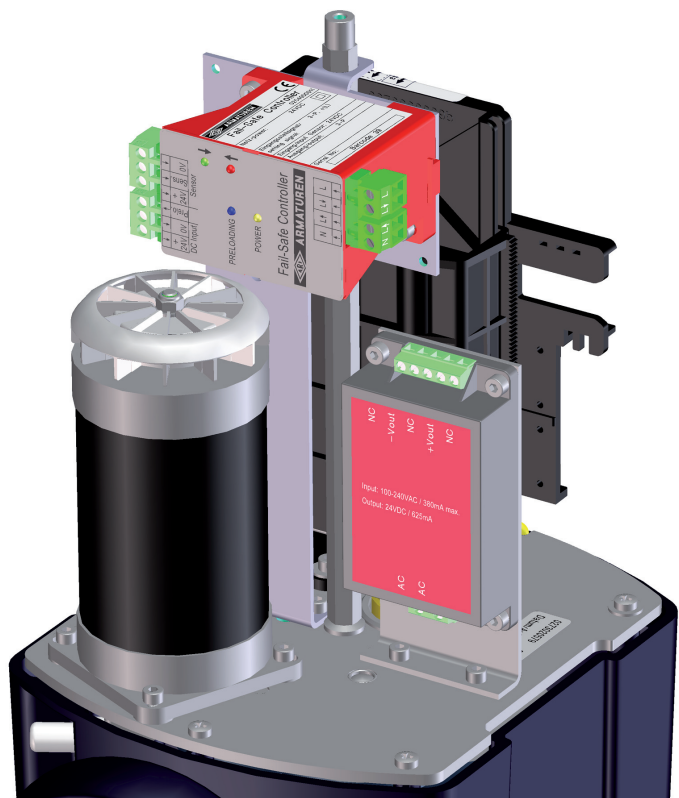
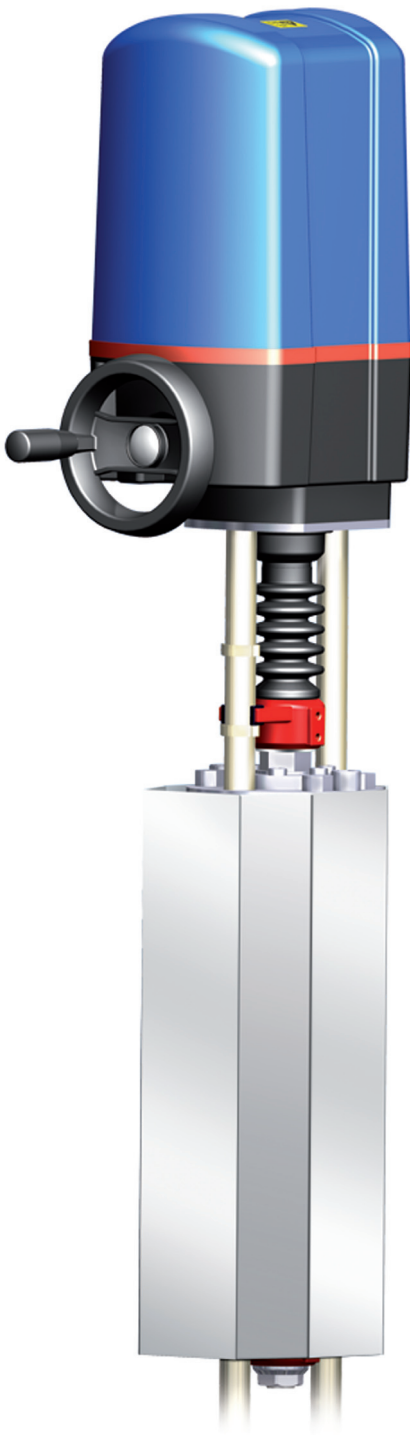
The fail-safe unit, which is located between the actuator and the valve, consists of four gas springs that are held over a toggle mechanism and an electro-adhesive magnet during normal operation. The fail-safe unit works in normal operation without any moving parts and virtually no wear. In normal operation the actuator closes up the valve with 15kN thrust force.

Putting into operation / Voltage return

When connecting the power supply, the fail-safe unit is tensioned over the built-in electronics unit. Since the actuator during the clamping process does not follow the control signal, the fail-safe controller provides a signal for the clamping process for the parent control. After the fail-safe unit is cocked, the actuator goes to the normal operation.

Power failure / mains interruptions of the fail-safe controller

Upon interruption of power supply for the fail-safe controller triggers the electro-adhesive magnet and the fail-safe unit moves the driving spindle. Depending on the travel and the temperature achieved the fail-safe unit 9 kN closing force (refer to table at "Technical Data").



Technical data

Type		ARI-PREMIO-Plus 9 kN	ARI-PREMIO 9 kN
Thrust force / Closing force	kN	9 kN (at 50 mm)	
Closing direction		extending	
Travel distance max.	mm	50 mm	
Duty classification acc. to EN 60034-1/A11		S3 50% ED / max. 1200 c/h	
Control speed ¹⁾	mm/s	0,38 mm/s	
Fail-safe speed	mm/s	100 mm/s	
Motor voltage	V - Hz	230 V - 50 Hz	
Power consumption ¹⁾	VA	131 VA	133 VA
Enclosure EN 60529		IP 65	
Max. storage temperature	°C	-20 °C ... +80 °C	
Max. permissible ambient temperature	°C	0 °C ... +50 °C - other temperatures on request	
Hand operating device		Yes (engageable)	
Operation		optional: 3-point: 12 V DC/AC to 250 V DC/AC 0 to 10 V DC: load resistance 470 kOhm resolution 10Bit 4 to 20 mA DC: load resistance 125 Ohm resolution 10Bit	3-point with nominal voltage
Switching current		max. 4A Triac-Output	--
Input for temperatur sensor		Sensor: PT1000	--
Max. cable cross section		Supply voltage: 2,5 mm ² 3-step input: 2,5 mm ² Input signals: 1,5 mm ²	--
Mounting position		Any, except: motor not hanging downwards. The actuator must be supported at horizontal orientation!	
Gear lubricant		Molyduval Valencia H2	
Weight	kg	27 kg	

Additional voltage / frequencies

Type		ARI-PREMIO-Plus 9 kN	ARI-PREMIO 9 kN
Thrust force / Closing force	kN	9 kN (at 50 mm)	
Motor voltage	V - Hz	230 V - 60 Hz ¹⁾ 115 V - 50 Hz / 115 V - 60 Hz ¹⁾ , 24 V - 50 Hz / 24 V - 60 Hz ¹⁾	

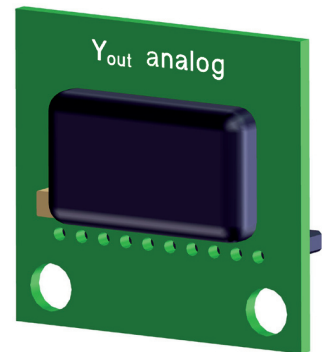
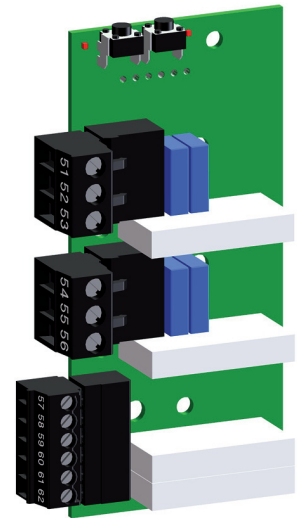
Accessories		ARI-PREMIO-Plus 9 kN	ARI-PREMIO 9 kN
Thrust force / Closing force	kN	9 kN (at 50 mm)	
Trip slide for travel switch S3		--	for actuating travel switch S3 / retracting spindle (the travel switch S3 exists in the standard version)
Additional travel switch Information: For low switching powers and in aggressive environments, gold contacts should be used		--	Standard: 2 additional intermediate position switches, zero potential, switching capacity 10A, 250V~
			Low voltage: 2 additional intermediate position switches, zero potential, with gold contacts, switching capacity max. 0,1A, 4-30V
Electronic position indicator		analog output for position feedback 4-20 mA, switchable to 0-10V (invertable)	--
Relay board		- 2 intermediate positions, positions settable with bush-buttons, zero potential change-over contact 230V AC 6A/3A, gold contacts - 1 failure signal and 1 warning signal, zero potential changeover contacts 50V AC/2A, gold contacts	--
Heating resistor	V - Hz	230V, 115V, 24V, 15 Watt	
Potentiometer		max. 2 only - Different resistance-values: 100, 200, 500, 1000 Ohm, 1 Watt (inkl. Accessories)	max. 2 only - Different resistance-values: 100, 200, 500, 1000 Ohm, 1 Watt (Options trip slide necessary)

¹⁾ Control speed and power consumption are 20% higher at frequency of 60 Hz.

Accessories ARI-PREMIO®-Plus

Relay board

Relais		1 (open)	1 (close)	3 warning	4 failure
Operating voltage	U _B	6 A - 250 V		2 A 30 V - AC/DC	
Max. cable cross section		2,5 mm²		1,5 mm²	
Contact material		Gold			
Storage temperature		-40 °C ... +85 °C			
Operating temperature		-40 °C ... +60 °C (Note temperature range of the fail-safe unit: 0 °C ... +50 °C !)			
Features:					
• Setting of the switching points over push buttons • 2 intermediate positions or end positions • 1 Collective failure message at: - Control signal failure - Position can not be reached (Motor-/gear failure) - Blocking (actual) - Actuator is not initialised - Voltage failure • 1 Collective warning message at: - Hand operating device - Blockage (identified) - Position can not be reached - Maintenance - Internal temperature exceeded - ED management active - to small travel during initialization					



Analog output card

Output control signal	Y_U	0 - 10 V DC Measuring resistance (load resistance) max. 2000 Ohm Signal resolution 8 Bit
Output control signal	Y_I	4 - 20 mA DC, active Measuring resistance (load resistance) max. 500 Ohm Signal resolution 8 Bit
Features:		
for position transmitter		

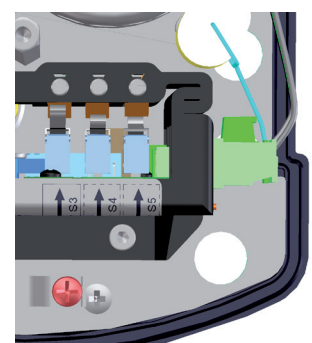
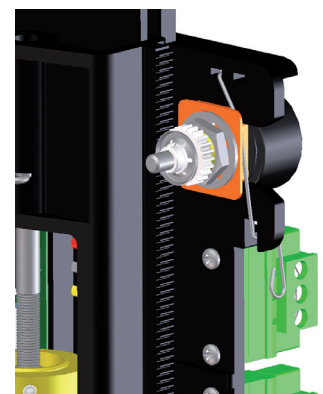
Accessories ARI-PREMIO®

Potentiometer

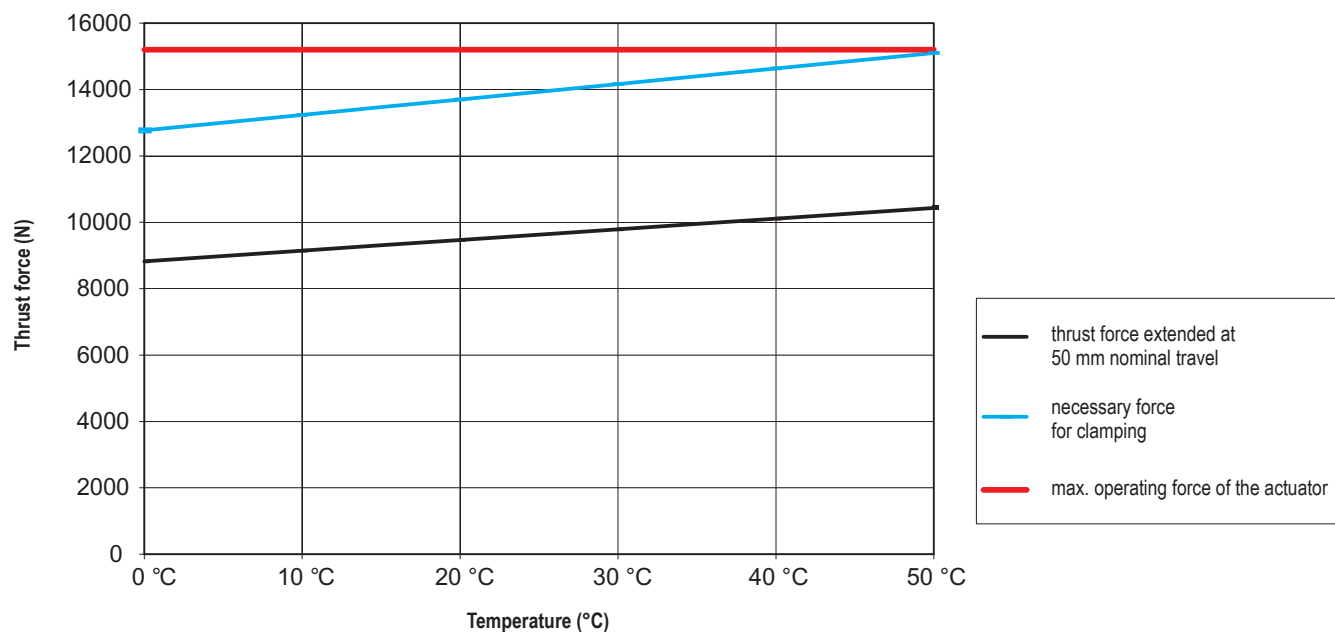
Type	MP21 (Standard)	RP19
Resistance values	500, 1000, 2000, 5000 Ohm	100, 200 Ohm
Element technology	Conductive plastic	Wire
Resistance tolerance	±15 %	±3 %
Independent linearity tolerance	±1 %	±0,5 %
Loading capacity at +70°C (0 W at 105°C)	1 Watt	0,5 Watt
Max. / recommended contact current	0,01 mA / 0,002 mA	35 mA / 0,02 mA
Max. cable cross section	2,5 mm²	
Durability	10 Mio. turns	1 Mio. turns

Additional travel switches (S4 and S5)

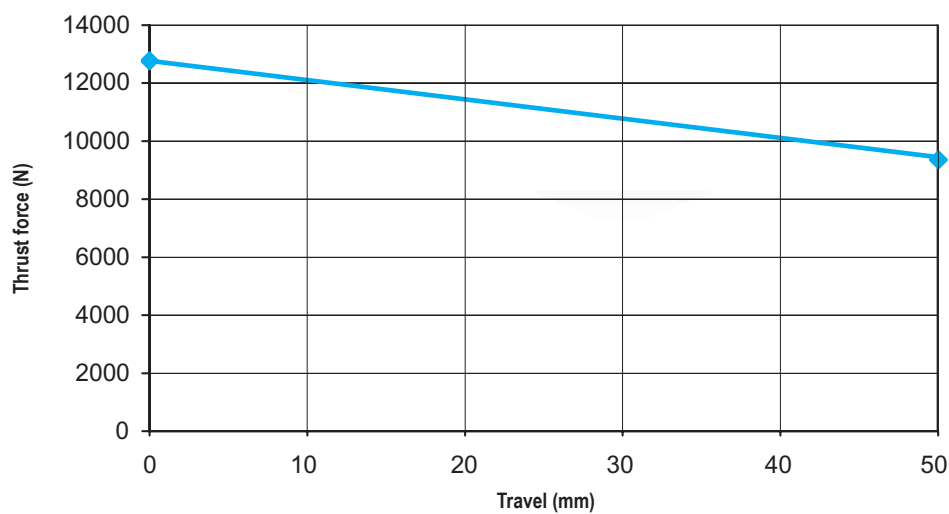
Type	Standard	Low voltage
Contact material	AgNi	AgNi gold plated
Nominal switching capacity	10 A, 250 V AC	max. 0,1 A, 4 - 30 V
Function	Changeover contact	
Mechanical durability	10 Mio. switching operations	
Approvals	UL 1054	
Max. cable cross section	2,5 mm²	



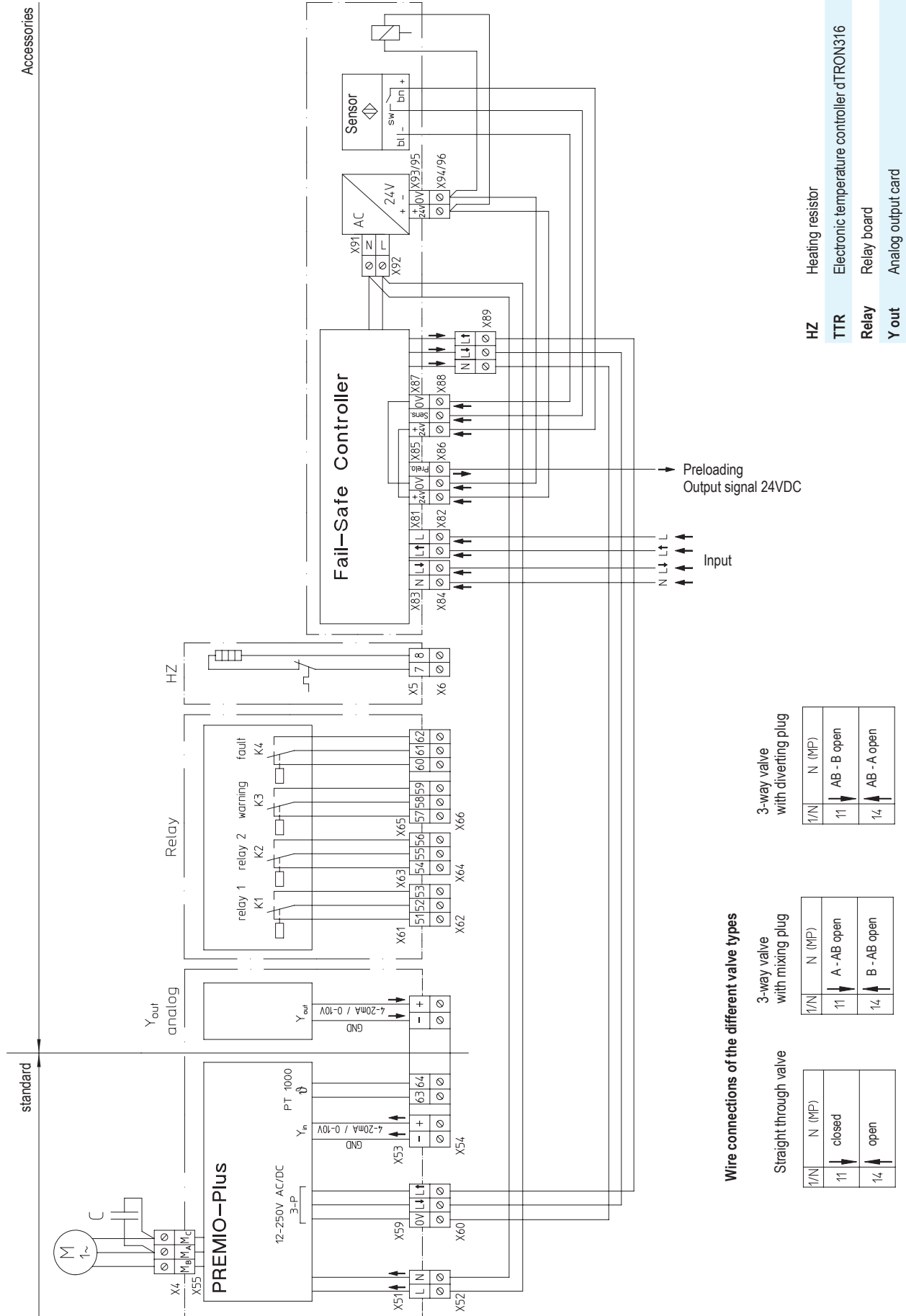
Thermal characteristic: Gas springs of the fail-safe unit



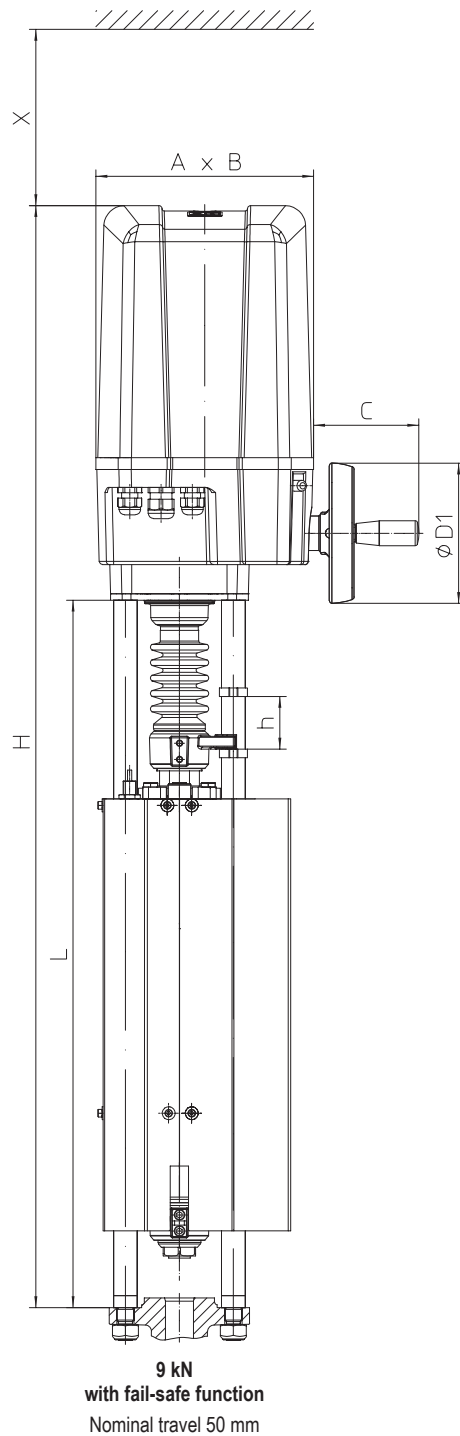
Fail-safe force depending on the travel (at 0°C)



Wiring diagram: ARI-PREMIO®-Plus 9 kN







		9 kN
A	(mm)	202
B	(mm)	176
C	(mm)	97
Ø D1	(mm)	130
X	(mm)	200
H	(mm)	1027
h (Nominal travel)	(mm)	50
L (Column)	(mm)	663



Technology for the Future.
GERMAN QUALITY VALVES

ARI-Armaturen Albert Richter GmbH & Co. KG, D-33756 Schloß Holte-Stukenbrock,

Tel. +49 52 07 / 994-0, Telefax +49 52 07 / 994-158 or 159 Internet: <http://www.ari-armaturen.com> E-mail: info.vertrieb@ari-armaturen.com