

ARC KG LINEAR PNEUMATIC ACTUATOR



ARC
Controls
20 Years of excellence

ARC DG



ARC KG Actuators are AR Controls’ range of robust linear pneumatic actuators. ARC KG actuators are manufactured in South Africa and are constructed from high quality fabricated parts.

ARC KG actuators do not include any cast components and are only constructed with parts that have been manufactured in accordance with our highest quality standards. The result is a reliable product that is readily available and can easily be customised to suit unique customer needs for special projects.

ARC KG actuators boast a simple and rugged construction that has been designed to be easy to maintain and repair.

ARC KG actuators are available in corrosion resistant materials with various corrosion resistant accessories for extended service life in corrosive applications.

The ARC KG AFS features a unique springless Air Fail Safe design that enables the valve to fail in the desired position upon loss of plant air pressure or signal, without introducing the safety hazards involved with energised or loaded internal springs. Instead, the AFS design utilises stored energy in the form of an on-board air reservoir to move the valve to the desired position upon loss of air or signal.

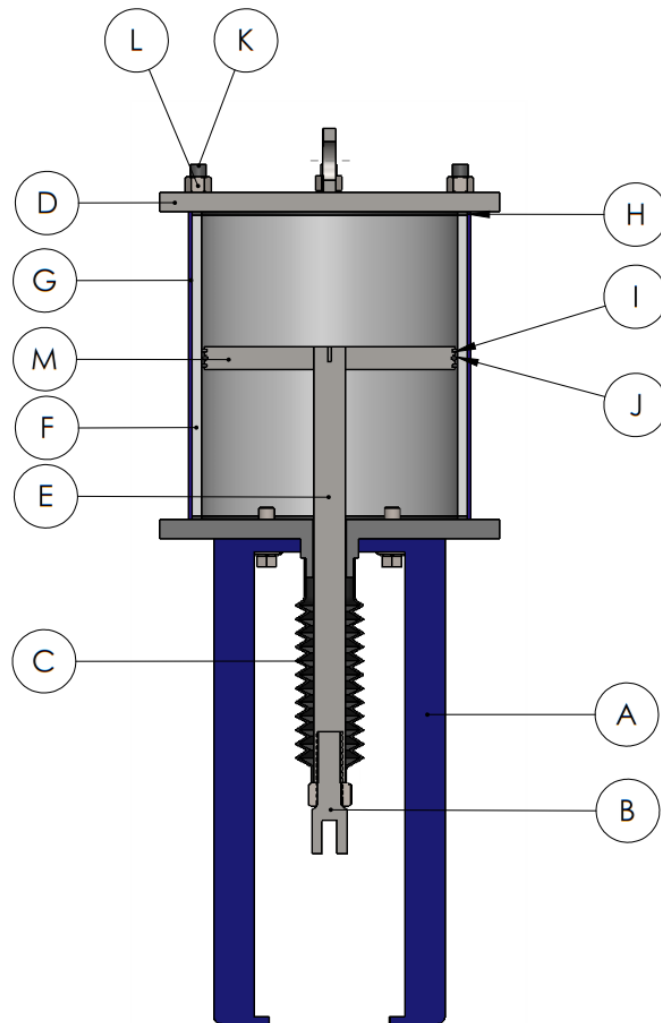
Each actuator is tested individually according to manufacturer standard and AR Controls QA/QC.

ARC KG Linear Pneumatic Actuator Range	
ARC DG 100-550	100mm – 550mm
ARC DG 3-8	3 - 8 bar
ARC DG 8	8 bar
ARC DG -15 to 80	-15°C to 80°C

ARC KG-ST

Materials of Construction

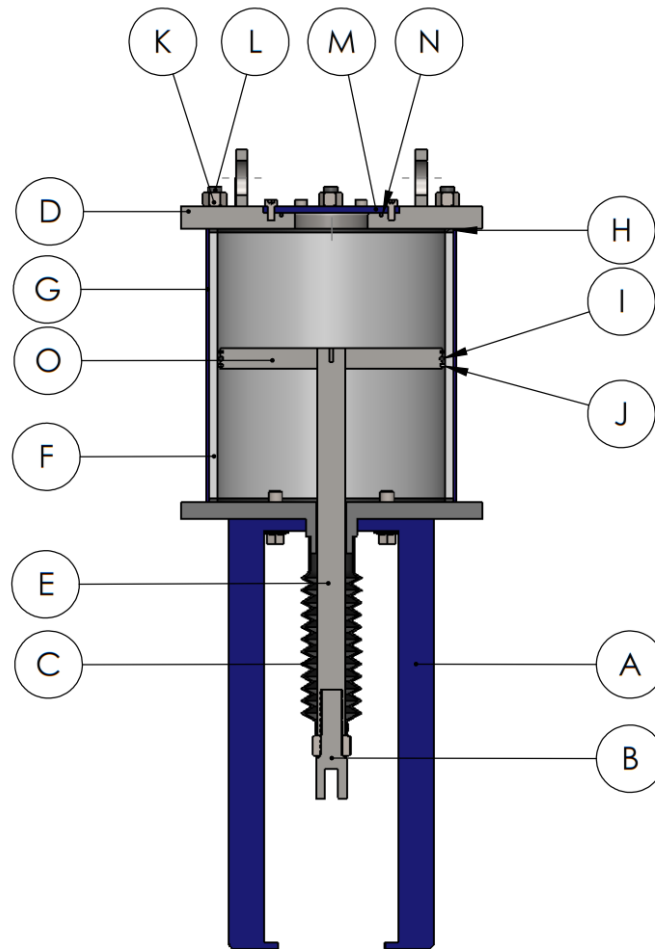
□□□□	□□r□D□□□r□□□□□□□□	□□□□	M□□□r□□□□□
□□	Pedestal	1	Powder Coated Mild Steel / 304 Stainless Steel
□□	Clevis	1	Carbon Steel (Nickle Plated) / 304 Stainless Steel
□□	Bellow	1	PVC Material
D □	End Plate	2	Carbon Steel (Nickle Plated) / 304 Stainless Steel
□□	Shaft	1	304 Stainless Steel
□□	Barrel	1	Spiral-Wound Fibreglass
□□	Protective Cover	1	Powder Coated Mild Steel / 304 Stainless Steel
□□	Barrel Seal	2	Buna-N
□□	Wiper	2	PTFE
□□	Piston O-ring	1	Buna-N
□□	Tie Rod	4-8	Class 8.8
□□	Bolts and Nuts	-	Carbon Steel / Stainless Steel
M □	Piston Head	1	Carbon Steel (Nickle Plated) / 304 Stainless Steel



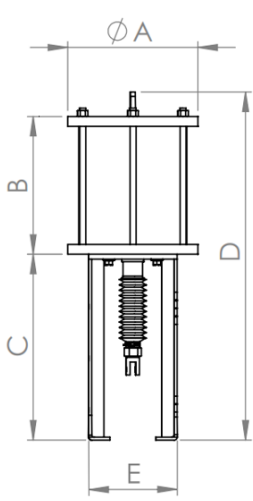
ARC KG-LT

Materials of Construction

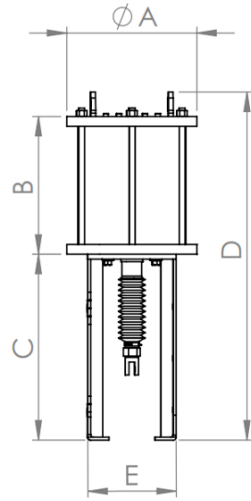
□□□□	□□r□D□□□r□□□□□□□□	□□□□	M□□□r□□□□□
□□	Pedestal	1	Powder Coated Mild Steel / 304 Stainless Steel
□□	Clevis	1	Carbon Steel (Nickle Plated) / 304 Stainless Steel
□□	Bellow	1	PVC Material
D□	End Plate	2	Carbon Steel (Nickle Plated) / 304 Stainless Steel
□□	Shaft	1	304 Stainless Steel
□□	Barrel	1	Spiral-Wound Fibreglass
□□	Protective Cover	1	Powder Coated Mild Steel / 304 Stainless Steel
□□	Barrel Seal	2	Buna-N
□□	Wiper	2	PTFE
□□	Piston O-ring	1	Buna-N
□□	Tie Rod	4-8	Class 8.8
□□	Bolts and Nuts	-	Carbon Steel / Stainless Steel
M□	Blank Flange Seal	1	Buna-N
□□	Blank Flange	1	Powder Coated Mild Steel / 304 Stainless Steel
□□	Piston Head	1	Carbon Steel (Nickle Plated) / 304 Stainless Steel



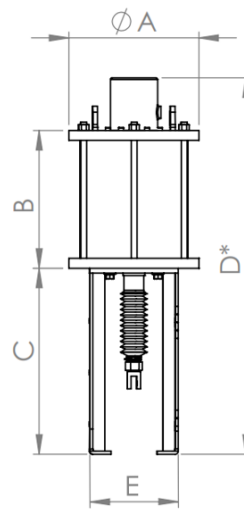
DIMENSIONAL DATA



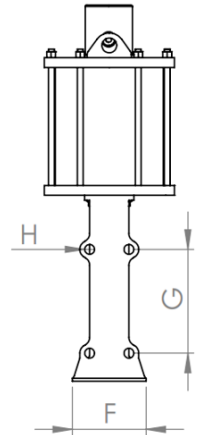
ARC KG-ST



ARC KG-LT



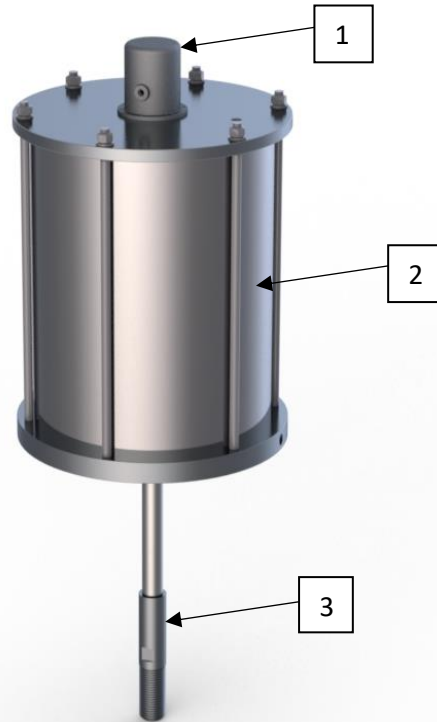
ARC KG-LT With Top Hat



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□6□□6□□	150	120	201	401	429	150	100	66	18	1/4" BSP	3.9
□6□□□□□□	150	148	225	453	481	150	125	75	18	1/4" BSP	3.9
□6□□□□□□	216	168	246	494	522	150	125	105	18	1/4" BSP	10.1
□6□□7□□	216	229	322	631	659	180	150	160	18	1/4" BSP	10.1
□□□□□□□□	259	281	378	739	767	180	150	211	18	1/4" BSP	15.7
□□□□7□□	314	337	480	897	925	250	170	266	18	1/4" BSP	24.5
□□□□□□□□	361	392	560	1032	1060	250	180	316	18	1/4" BSP	35.3
□□□□□□□□	361	412	560	1052	1080	250	200	355	18	1/2" BSP	35.3
□□□□□□□□	425	470	640	1210	1218	250	220	397	18	1/2" BSP	48.1
□□□□□□□□	478	528	690	1318	1326	280	225	452	18	1/2" BSP	62.8
□□□□□□□□	478	588	785	1473	1481	280	250	505	18	1/2" BSP	62.8
□□□6□□□□	478	709	864	1673	1681	280	240	609	18	1/2" BSP	62.8
□□67□□□□	540	793	1055	1948	1956	400	250	720	18	3/4" BSP	81.7
□□677□□□	540	838	1072	2010	2018	400	280	770	18	3/4" BSP	81.7
□□□8□□□□	640	910	1126	2144	2152	400	280	830	18	3/4" BSP	119.2

CUSTOM LINEAR ACTUATOR

AR Controls’ standard linear actuators can easily be customised to suit unique customer needs for special projects and applications. Consult with AR Controls’ team of engineers to assist with sizing, 3D modelling, FEA and special adaptations to ensure problem free interfacing. Below image is an example of a custom actuator specifically designed for dart valve actuation.



Part Identification

No.	Item Description
1	Linear transducer or “Top hat transducer” – The AR Controls top hat transducer is designed to provide reliable position feedback for use with remote mount positioners. It is perfect for tough environmental conditions as the position transducer is housed and protected by a rugged and weatherproof external stainless-steel dome. The top hat and internals can be supplied to suit various communication protocols including Profibus and HART as well as to provide 4 – 20 mA analogue feedback.
2	Pneumatic cylinder – Standard bore as per the AR KG range. Stroke is customisable to suit any application.
3	Adaptor shaft – Standard AR KG range actuator shafts can be customised to suit any connection including male thread, female thread, single or double clevis.

CUSTOM LINEAR ACTUATOR – DART VALVE ACTUATION



AR Controls' custom linear actuators is a proven technology that provides reliable and robust performance for dart valve applications. AR Controls is able to supply these actuators complete with:

- Linear transducer (Top hat transducer) – Designed and supplied by AR Controls.
- Remote mount pneumatic enclosure housing a positioner and control equipment – Designed and supplied by AR Controls.

The above image shows a typical installation where a custom solution was required.

PNEUMATIC ENCLOSURE & PANELS

AR Controls specialises in the design and supply of custom pneumatic enclosures and panels to suit unique customer requirements. Consult with AR Controls' team of engineers to assist with the design, specification, 3D modelling, or any other special requirements. The below images show some examples of AR Controls' capabilities.

