Max-Air TECHNOLOGY

ATEX GOST-R Quality System ISO 9000

The best way to automate your process

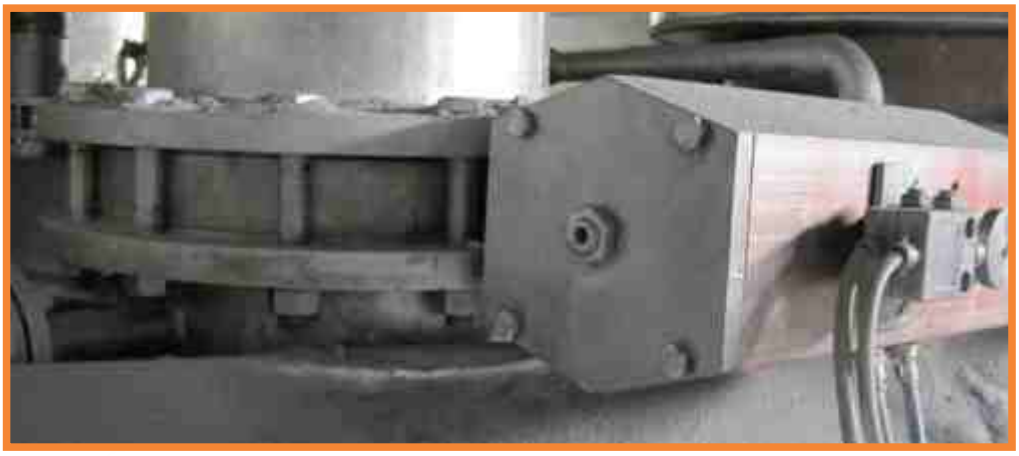
PRODUCT CATALOGUE

Valve

Actuators

Type:

Pneumatic & Electric



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C US ATEX GOST-R Quality System ISO 9000 CE

Max-Air TECHNOLOGY

ALUMINIUM ACTUATORS(Rack & Pinion Type)

FEATURES & BENEFITS:

1, Designed according to Namur VDI/VDE 3845 and ISO 5211 standard, the MAX-AIR series utilizes the same body and end caps for double acting and spring return units.
2. The standard angle of rotation is 90°. Additional travel rotations of 120°, 135°, 150° and 180° are available. MT15 (UT15) and upper sizes feature as standard a double travel stop (International Patent) which allows ± 10° stroke adjustment both in the closing and opening phase of the actuator stroke.
3. The female pinion drive is standard with a double square out put drive, and optional with a double-D drive, keyed drive and designs to meet your specific requirements.
4. Pistons and pinion are equipped with wear pads and bearings to isolate them from the housing and support them for high cycle applications.
5. The pinion teeth are engaged the full length and stroke of the piston. The pinion height NAMUR H30 allows manual override without disturbing the indicated positions and using the same bracket size to mount accessories on all the series.
6. MTseries pistons feature a keyway as anti-blowout system and anodized for corrosion resistance.
7. External open/close indicator as standard, available for all the rotations.
8. Epoxy coated special steel springs are pre-loaded with non-metallic materials. The stainless steel end cap fasteners are extra long to allow for spring relaxation. All parts are corrosion resistant.

ONLY FOR UT SERIES

9. The "patent pending" bottom plate design, unique to MAX-AIR, secures a captive pinion (anti-blowout system) and permits flexibility in mounting by retaining AISI 304 nuts (standard) or AISI 304 bolts (optional) in either dual ISO patterns, or to customer dimensions.

MATERIALS

Body:
Extruded aluminium body (6063 or 6005) is internally machined to exact specifications and lapped to reduce frictions and to increase the life of seals and skates. All internal and external surfaces are anodized for corrosion resistance. Options: hard anodizing with PTFE coating, epoxy powder coated units, electroless nickel plating.
Pinion:
Electroless nickel coated carbon steel Pinion (stainless steel available on request).
Indicator:
OPEN/CLOSED standard in techno-polymer. On request, indicator with changeable inserts for 180° rotation
Spring cartridges:
Springs are carbon steel and coated for corrosion resistance.
Seals:
Temperature range from -20°C to 80°C (-10°F to 176°F) with standard Buna-N nitrile seals. Higher temperature with optional Viton seals and techno-polymer piston guides and bearings: 120°C (250°F) continuous and 150°C (300°F) cyclic. Lower temperature available with silicones seals -50°C (-55°F).
End caps and pistons:
Die-cast aluminium pistons are anodized or epoxy powder coated for corrosion resistance; Die-cast aluminium end caps are epoxy powder coated.

A MAX AIR DOUBLE ACTING ALUMINIUM ACTUATOR

Code	Size	Act. SQ	ISO MTG	Torque Nm @ 5Bar
850100	UT05	11	F04	12.6
850102	UT15	14	F05/F07	27.5
850104	UT17	14	F05/F07	36.2
850106	UT20	17	F05/F07	50.0
850108	UT25	17	F05/F07	75.5
850110	UT30	17	F05/F07	100.5
850112	UT35	22	F07/F10	161.1
850114	UT40	22	F07/F10	201.5
850116	UT45	22	F07/F10	314.5
850118	UT50	27	F10/F12	453.0
850120	UT55	27	F10/F12	603.9
850122	UT60	36	F10/F12	916.0
850124	UT65	36	F10/F12	1208.0

Notes: The above actuator have no fail action. If air fails the actuator will remain in the last position.
These actuators are for all rotary valves eg: butterfly valves, plug valves, steel & plastic ball valves.

B MAX AIR SPRING RETURN ALUMINIUM ACTUATOR

Code	Size	Act. SQ	ISO MTG	Torque Nm @ 5Bar
Above A Plus Spring Kit	UT05	11	F04	5.0
	UT15	14	F05/F07	10.6
	UT17	14	F05/F07	14.4
	UT20	17	F05/F07	20.8
	UT25	17	F05/F07	27.9
	UT30	17	F05/F07	42.2
	UT35	22	F07/F10	68.1
	UT40	22	F07/F10	83.7
	UT45	22	F07/F10	113.7
	UT50	27	F10/F12	196.2
	UT55	27	F10/F12	238.3
	UT60	36	F10/F12	386.2
	UT65	36	F10/F12	470.5

Notes: The above actuator can either have a fail close or fail open action.
For spring return actuator use double acting actuator codes and spring codes.
The standard amount of springs per actuator is 8. Except for UTO5 which only have 4 springs.

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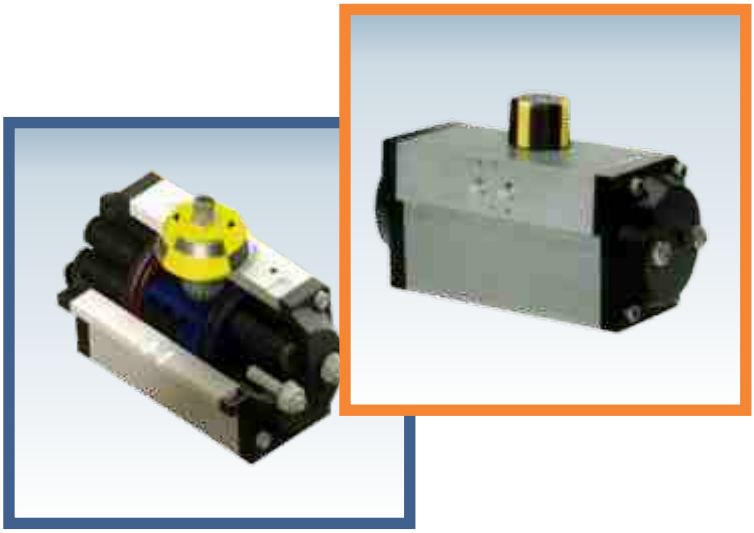
Max-Air TECHNOLOGY

ALUMINIUM ACTUATORS (RACK & PINION TYPE)

BI-DIRECTIONAL PATENTED DOUBLE TRAVEL STOP

Max-Air actuators feature a bi-directional travel stop **(InternationalPatent).** Side located stops allow a ± 10° adjustment -BEST IN THE MARKET - in both closing and opening directions, so guarantee a **range of adjustment between 70° and 110° of actuator stroke.**
Travel stops are designed to absorb the maximum rated torque of the actuator and the maximum impact load associated with recommended speed stroke.To increase pistons resistance both travel stops arrest the pistons in their part with the largest mass of material.
Adjustment of the counter clockwise and clockwise rotation is accomplished by turning the respective left (MAX) and right stop (0°) adjustment screws to increase or reduce output rotation.



TECHNOPOLYMER ACTUATORS

For more than 13 years, the Max-Air line of **thermoplastic actuators** has been installed worldwide in the most arduous environments.

FEATURES & BENEFITS:

- Designed according to Namur VDI/VDE 3845 and ISO 5211 standard, the MAX-AIR series utilizes the same body and end caps for double acting and spring return units.
- Carbon steel nickel plated pinion (stainless steel as option and standard for Polipropilene series).
- The bottom plate design, unique to MAX-AIR, secures a captive pinion (anti-blowout system) and permits flexibility in mounting by retaining AISI 304 nuts (standard) or AISI 304 bolts (optional) in either dual ISO patterns, or to customer dimensions.
- Supply: air (lubricated if possible), hydraulic oil or water, min 2 Bar (30 PSI) and max 8 Bar (120 PSI).
- Standard working temperature: -20°C +80°C (-4°F + 176°F).

D	DOUBLE ACTING TECHNOPOLYMER ACTUATOR			
Code	Model		Material	
850400	UT10	11	F04	12.6
850402	UT13	14	F05/F07	27.5
850404	UT18	17	F05/F07	50.0

Notes: This actuator have no fail action. If air fails the actuator will remain in the last position. These actuators are for small rotary valves eg: butterfly valves, plug valves, steel & plastic ball valves. These actuators are used for corrosion application.

D	SPRING RETURN TECHNOPOLYMER ACTUATOR			
Code	Model		Material	
Above	UT10	11	F04	5.0
D	UT13	14	F05/F07	10.4
with Springs	UT18	17	F05/F07	21.6

Notes: The above actuator can either have a fail close or fail open action. For spring return actuator use double acting actuator codes and spring codes. The standard amount of springs per actuator is 8. Except for UT10 which only have 4 springs

ATEX GOST-R Quality System ISO 9000 Max-Air TECHNOLOGY

ACTUATOR SIZING - TORQUE CHART

TYPE	SPRINGS	POS. 1 SPRING TORQUE		POS. 2 OPENING TORQUE															
				200 kPa		300 kPa		400 kPa		500 kPa		562 kPa		600 kPa		700 kPa		800 kPa	
		START	END	START	END	START	END	START	END	START	END	START	END	START	END	START	END	START	END
UT05	1+1	3.7	2.5	2.5	1.3	5.1	3.9	7.6	6.4	10.1	8.9	11.6	10.4	12.6	11.4	15.1	13.9	17.7	16.5
	2+2	7.4	5.0	--	--	2.6	0.2	5.1	2.7	7.6	5.2	9.1	6.7	10.1	7.7	12.6	10.2	15.2	12.8
	3+3	11.2	7.5	--	--	--	--	--	--	5.1	1.5	6.6	3	7.6	4	10.1	6.5	12.7	9.1
UT15	2+2	8.4	6.0	5.0	2.6	10.5	8.1	16.0	13.6	21.5	19.1	24.6	22.5	27	24.6	32.5	30.1	38	35.6
	3+3	12.6	9.1	--	--	7.4	3.9	12.9	9.4	18.4	14.9	21.8	18.3	23.9	20.4	29.4	25.9	34.9	31.4
	4+4	16.9	12.1	--	--	--	--	9.9	5.1	15.4	10.6	18.8	14	20.9	16.1	26.4	21.6	31.9	27.1
	5+5	21.1	15.1	--	--	--	--	6.9	0.9	12.4	6.4	15.8	9.8	17.9	11.9	23.4	17.4	28.9	22.9
	7+5	25.3	18.1	--	--	--	--	--	--	9.4	2.2	12.8	5.6	14.9	7.7	20.4	13.2	25.9	18.7
UT17	2+2	10.5	7.2	7.3	4.0	14.5	11.2	21.8	18.5	29.0	25.7	33.4	30.1	36.3	33	43.5	40.2	50.8	47.5
	3+3	15.7	10.8	--	--	10.9	6.0	18.2	13.3	25.4	20.5	29.8	24.9	32.7	27.8	39.9	35	47.2	42.3
	4+4	20.9	14.4	--	--	7.3	0.8	14.6	8.1	21.8	15.3	26.2	19.7	29.1	22.6	36.3	29.8	43.6	37.1
	5+5	26.1	18.1	--	--	--	--	10.9	2.9	18.1	10.1	22.5	14.5	25.4	17.4	32.6	24.6	39.9	31.9
	7+5	31.4	21.7	--	--	--	--	--	--	14.5	4.8	18.9	9.2	21.8	12.1	29	19.3	36.3	26.6
UT20	2+2	13.8	10.4	9.6	6.2	19.6	16.2	29.6	26.2	39.6	36.2	46.1	42.7	49.6	46.2	59.6	56.2	69.6	66.2
	3+3	20.8	15.6	--	--	14.4	9.2	24.4	19.2	34.4	29.2	40.9	35.7	44.4	39.2	54.4	49.2	64.4	59.2
	4+4	27.7	20.8	--	--	9.2	2.3	19.2	12.3	29.2	22.3	35.7	28.8	39.2	32.3	49.2	42.3	59.2	52.3
	5+5	34.6	26.0	--	--	--	--	14.0	5.4	24.0	15.4	30.5	21.9	34	25.4	44	35.4	54	45.4
	7+5	41.6	31.2	--	--	--	--	--	--	18.8	8.4	25.3	14.9	28.8	18.4	38.8	28.4	48.8	38.4
UT25	2+2	22.1	14.0	16.2	8.1	31.3	23.2	46.4	38.3	61.5	53.4	70.5	62.4	76.6	68.5	91.7	83.6	106.8	98.7
	3+3	33.2	20.9	--	--	24.4	12.1	39.5	27.2	54.6	42.3	63.6	51.3	69.7	57.4	84.8	72.5	99.9	87.6
	4+4	44.2	27.9	--	--	17.4	1.1	32.5	16.2	47.6	31.3	56.6	40.3	62.7	46.4	77.8	61.5	92.9	76.6
	5+5	55.3	34.9	--	--	--	--	25.5	5.1	40.6	20.2	49.6	29.2	55.7	35.3	70.8	50.4	85.9	65.5
	7+5	66.3	41.9	--	--	--	--	--	--	33.6	9.2	42.6	18.2	48.7	24.3	63.8	39.4	78.9	54.5
UT30	2+2	28.3	21.1	19.1	11.9	39.2	32.0	59.3	52.1	79.4	72.2	91.6	84.4	99.5	92.3	119.6	112.4	139.7	132.5
	3+3	42.4	31.6	--	--	28.7	17.9	48.8	38.0	68.9	58.1	81.4	70.3	89	78.2	109.1	98.3	129.2	118.4
	4+4	56.6	42.2	--	--	18.1	3.7	38.2	23.8	58.3	43.9	70.5	56.1	78.4	64	98.5	84.1	118.6	104.2
	5+5	70.7	52.7	--	--	--	--	27.7	9.7	47.8	29.8	60	42	67.9	49.9	88	70	108.1	90.1
	7+5	84.9	63.2	--	--	--	--	--	--	37.3	15.6	49.5	27.8	54.7	35.7	77.5	55.8	97.6	75.9
UT35	2+2	46.5	34.6	29.8	17.9	62.0	50.1	94.2	82.3	126.5	114.6	145.8	133.9	158.7	146.8	190.9	179	223.1	211.2
	3+3	69.7	52.0	--	--	44.6	26.9	76.8	59.1	109.1	91.4	128.4	110.7	141.3	123.6	173.5	155.8	205.7	188
	4+4	93.0	69.3	--	--	27.2	3.6	59.5	35.8	91.8	68.1	111.1	87.4	124	100.3	156.2	132.5	188.4	164.7
	5+5	116.2	86.6	--	--	--	--	42.2	12.6	74.5	44.9	93.8	64.2	106.7	77.1	138.9	109.3	171.1	141.4
	7+5	139.5	104.0	--	--	--	--	--	--	57.1	21.6	76.4	40.9	89.3	53.8	121.5	86	153.7	118.2
UT40	2+2	57.0	41.9	38.7	23.6	79.0	63.9	119.3	104.2	159.6	144.5	183.8	168.7	199.9	184.8	240.3	225.2	280.6	265.5
	3+3	85.5	62.8	--	--	58.1	35.4	98.4	75.7	138.7	116	162.9	140.2	179	156.3	219.4	196.7	259.7	237
	4+4	114.1	83.7	--	--	37.2	6.8	77.5	47.1	117.8	87.4	142	111.6	158.1	127.7	198.5	168.1	238.8	208.4
	5+5	142.6	104.7	--	--	--	--	56.5	18.6	96.8	58.9	121	83.1	137.1	99.2	177.5	139.6	217.8	179.9
	7+5	171.1	125.6	--	--	--	--	--	--	75.9	30.4	100.1	54.6	116.2	70.7	156.6	111.1	196.9	151.4
UT45	2+2	100.4	63.1	62.7	25.4	125.6	88.3	188.5	151.2	251.4	214.1	289.6	252.3	314.3	277	377.2	339.9	440.1	402.8
	3+3	150.6	94.7	--	--	94.0	38.1	156.9	101.0	219.8	163.9	258	202.1	282.7	226.8	345.6	289.7	408.5	352.6
	4+4	200.8	126.2	--	--	--	--	125.4	50.8	188.3	113.7	226.5	151.9	251.2	176.6	314.1	239.5	377	302.4
	5+5	251.0	157.8	--	--	--	--	--	--	156.7	63.5	194.9	101.7	219.6	126.4	282.5	189.3	345.4	252.2
	7+5	301.2	189.3	--	--	--	--	--	--	125.2	13.3	163.4	51.5	188.1	76.2	251	139.1	313.9	202
UT50	2+2	124.3	98.1	83.1	56.9	173.7	147.5	264.3	238.1	354.9	328.7	411.1	384.9	445.5	419.3	536.1	509.9	626.7	600.5
	3+3	186.5	147.2	--	--	124.6	85.3	215.2	175.9	305.8	266.5	362	322.7	396.4	357.1	487	447.7	577.6	538.2
	4+4	248.6	196.2	--	--	--	--	166.2	113.8	256.8	204.4	313	260.6	347.4	295	438	385.6	528.6	476.2
	5+5	310.8	245.3	--	--	--	--	117.1	51.6	207.7	142.2	263.9	198.4	298.3	232.8	388.9	323.4	479.5	414
	7+5	372.9	294.3	--	--	--	--	--	--	158.7	80.1	214.9	136.3	249.3	170.7	339.9	261.3	430.5	351.9
UT55	2+2	167.9	119.1	122.5	73.7	243.2	194.4	364.0	315.2	484.8	436	557.3	508.5	605.6	556.8	726.4	677.6	847.2	798.4
	3+3	251.8	178.7	--	--	183.6	110.5	304.0	231.3	425.2	352.1	497.7	424.6	546	472.9	666.8	593.7	787.6	714.5
	4+4	335.7	238.3	--	--	124.0	26.6	244.8	147.4	365.6	268.2	438.1	340.7	486.4	389	607.2	509.8	728	630.6
	5+5	419.7	297.8	--	--	--	--	185.3	63.4	306.1	184.2	378.6	256.7	426.8	305	547.7	425.8	668.5	546.6
	7+5	503.6	357.4	--	--	--	--	--	--	246.5	100.3	319	172.8	367.3	221.1	488.1	341.9	608.9	462.7
UT60	2+2	242.2	193.1	173.3	124.2	356.5	307.4	539.7	490.6	722.9	763.8	836.5	787.4	906.1	857	1089.3	1040.2	1272.5	1223
	3+3	363.4	289.6	76.8	3.0	260.0	186.2	443.2	369.4	626.4	552.6	740	666.2	812.6	735.8	992.8	919	1176	1102
	4+4	484.5	386.2	--	--	163.4	65.1	346.6	248.3	529.8	431.5	643.4	545.1	713	614.7	896.2	797.9	1079.4	981.1
	5+5	605.6	482.7	--	--	--	--	250.1	127.2	433.3	310.4	546.9	424	616.5	493.6	799.7	676.8	982.9	860
	7+5	726.6	579.3	--	--	--	--	153.5	6.2	336.7	189.4	450.3	303	519.9	372.6	703.1	555.8	886.3	739
UT65	2+2	317.1	235.2	248.0	166.1	489.6	404.7	731.2	649.3	972.8	890.9	1122.6	1040.7	1214.4	1132.5	1456.6	1374.1	1697.6	1616
	3+3	475.7	352.8	130.4	7.5	372.0	249.1	613.6	490.7	855.2	732.3	1005	882.1	1096.8	973.9	1338.4	1215.5	1580	1457
	4+4	634.2	470.5	--	--	254.3	90.6	495.9	332.2	737.5	573.8	887.3	723.6	979.1	815.4	1220.7	1057	1462.3	1299

ROTARY VALVE POSITIONERS

Max-Air offers both single & Double Acting Valve Positioners, with input signals of 4-20 mA and 3-15 psi configurations, for proportional control of rotary actuators. The Positioners operate on the force-balance principal by comparing the standard signal transmitted from a pneumatic or an Electro-Pneumatic device and the angular rotation of the operating stem, and conveys a Positioning amplified pressure to the valve actuator. Available also in explosion proof EEx md version ATEXII 2 G approved

SMART POSITIONERS - EXPLOSION PROOF EExdIIB

PESM 4-20mA, Universal MTG
T6 ATEXII2 G Approved
Smart Positioners - Optional Features
Smart Position Transmitter Adder
Smart Hart Protocol Adder

Available on request

STAINLESS STEEL ELECTRO-PNEUMATIC POSITIONERS

Legend LS= Limit Switch, PTM= Position Transmitter

ELECTRO-PNEUMATIC POSITIONER WITH GUAGE

PEY02 - 4-20 mA, Universal MTG,
Flame Proof Eexmd 11BT6
PEY04 - 4-20 mA, Universal MTG, LS
PEY05 - 4-20 mA, Universal MTG, LS+PTM

ELECTRO PHEUMATIC POSITIONER (4-20mA)	
Code	**Model**
850702	PEY01

SMART

SMART POSITIONERS Intrinsically Safe Eex ia - ATEX II 2 G approved
Available on request

SMART POSITIONERS - STAINLESS STEEL

Available on request

Accessories

NAMUR SOLENOID VALVE

FEATURES & BENEFITS:

- Design according NAMUR VDI/VDE 3845
- Universal application 3/2 or 5/2 ways selectable with a plate included (for 3/2)
- Port sizes: pressure in and exhaust ¼" GAS (optional ¼" NPT)
- Manual override as standard, PUSH type.
- Protection class IP65 as standard (according to IEC 144 with connector and O Ring). Also available on request
  - ATEXII3GD approved
  - "Intrinsically safe EExia" - ATEX approved
  - "Explosion proof EExm" - ATEX approved
  - "Explosion proof NEMA 7"
- Multiple configurations: each valve is available in single coil, dual coil ana 3 position configuration (open centers, closed centers, or center in pressure).

Code	Model	Voltage
850818	EV61-521MB1	24VDC
850820	EV61-521MJ1	220VAC
850822	EV61-521MH1	110VAC

DECLUTCHABLE GEAR BOX (with unlocking device for emergency control)

Available on request
(High and Low Temperature)

FEATURES & BENEFITS:

- Small in volume, light weight
- Equipped with integral mounting flange according to ISO5211 for an easy and cost effective actuator assembly
- Double Square connection according to ISO 5211, allowing for easy and direct mounting also for valves with square stem at 45°
- Made in Cast Iron
- Wide torque range from 300 Nm to 6000 Nm

C US

ATEX

GOST-R

Quality System ISO 9000

CE

Max-Air TECHNOLOGY

LIMIT SWITCH BOX

The MAX-AIR series of Limit Switch Boxes represent a completely new dimension in limit switches for actuators. Manufactured in various materials, these very compact units are the best choice for the most arduous environments.

Quick Set Cams

The operating position of the switches can be easily changed by adjusting the high resolution spline cams manually and independently with the need for additional tools. The cams are spring backed and will not be affected by normal vibration.

Compact Design

The Max-Air switch box is a very compact limit switch box, thereby allowing maintenance of a smaller valve envelope size.

BE 45

BE 41

Easy Wiring

MAX-AIR boxes are equipped as standard with one or two conduit entries, M20x 1.5 (½" NPT on request) and angled terminal strip to allow for easy wiring.

Mounting Bracket

Each Max-Air box comes standard with mounting bracket either in techno-polymer or stainless steel for NAMUR top-mounting hole spacing 80 mm per 30mm. The bracket allows the use of standard NAMUR stem height 30 mm and also 20 mm with a techno-polymer coupling. Now available also a new adjustable UNIVERSAL bracket that allows to mount the switch box onto NAMUR 80x30 H30 and H20 and 130x30 H50.

High Visibility Indicator

The Max-Air box comes standard with a high visibility beacon, offering clear location of the current valve position. Now available for 3 way indication (L or T) or arrow shape.

SWITCHBOX WITH MECHANICAL SWITCHES		
CODE	**MODEL**	**MATERIAL**
850460	BE45-220M03	Aluminium
850482	BE41-210002	Technopolymer

AVAILABLE SWITCH BOXES

BE45
2 Mechanical switches

BS45
Proximity sensors

BM45
2 Magnetic switches

C US

ATEX

GOST-R

Quality System
ISO 9000

CE

Max-Air
TECHNOLOGY

DISCLAIMER

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