



**Double acting
pneumatic actuators**

**ACTAIR 1.5, 3, 6, 12, 25 and 50 :
rack and pinion kinematics**

**ACTAIR 100 and 200 :
scotch-yoke kinematics**

**ACTAIR 400, 800 and 1600 :
yoke patented kinematics**

Output torques up to 17600 Nm

General features

Designed for the automation of ¼ turn valves (butterfly valves, ball valves), the ACTAIR series of double acting pneumatic actuators and their AMTROBOX/AMTRONIC/SMARTRONIC boxes are involved in all functions of control and supervision encountered in all modern processes, and more particularly in communication by fieldbus.

3 kinematics are used for the actuators operation:

- rack and pinion kinematics for ACTAIR 1.5, ACTAIR 3, ACTAIR 6, ACTAIR 12, ACTAIR 25 and ACTAIR 50,
- scotch-yoke kinematics for ACTAIR 100 and ACTAIR 200,
- yoke patented kinematics for ACTAIR 400, ACTAIR 800 and 1600.

Mounting plate according to ISO 5211 standard.

Equipped with an interchangeable insert, they can be easily fitted on different valve shaft (square end, flat end, key...). The ACTAIR series actuators are equipped, in standard version, with a visual pointer and adjustable mechanical travel stops:

- on the closed **or** open positions for ACTAIR 1.5 to 200 (see pages 6 and 7),
- on the closed **and** open positions for ACTAIR 400, 800 and 1600.

The actuator is mounted directly or by means of an adaptator on ¼ turn valve plate.

Protection:

They are hose and fine dust proof and are protected against accidental immersion effects (protection degree: IP 67).

External coating:

ACTAIR 1.5 to 200: Housing with hard anodization 50 µm thickness and cylinder head with black cataphoresis coating 30 µm.
ACTAIR 400 to 1600: Polyurethane paint (colour dark grey RAL 7016, 80 µm thickness).

Working temperature range:

From -20° to +80° C: standard,

Alternative construction for ACTAIR 1.5 to 200:

- 40° to +80°C: dynamic O-rings in special Nitrile,
- 20° to +120°C: dynamic O-rings in Viton (available with corrosive motive medium).

Other working temperature range for ACTAIR 400 to 1600: Please consult us.

This double acting actuator range is completed by the DYNACTAIR series spring return actuator range which is based on the double acting actuators. Please consult the type series booklet DYNACTAIR 1.5 to 800 no. 8511.1.

Standard variant:

ATEX version in accordance with 94/9/EC directive.

Production range

ACTAIR Type	ISO 5211 Mounting plate*	Maximum allowable dimensions for the shaft			
		Height	Driving by square	Driving by flat	Driving by key
1.5	F04	24	11	11	Please, consult us
3	F04 or F05+F04 (45°)*	24	11	11	
6	F05 – F07	30	16	14	
12	F05 – F07	32	19	17	
25	F07 – F10	40	22	22	
50	F10 – F12	45	27	27	
100	F10 – F12	55	36	36	
200	F14	65	50	46	
400	F16	80	60	55	
800	F16 – F25	95	70	75	
1600	F25 – F30	110	90	85	

* Direct adaptation onto identical mounting plate.

Adaptation by intermediate flange onto different plate (different size or shape).

Output torques (Nm) relating to control fluid pressure

The output torque of the actuator depends on the pressure of the control fluid.
The table below shows different output torques as a function of control fluid pressure.

Type	Maximum allowable output torque (Nm)	Control fluid pressure in bar																			
		3			4			5			6			8							
Rack and pinion kinematics																					
1.5	20	9			12			15			18			20							
3	55	25			33			40			50			55							
6	105	48			64			80			96			105							
12	170	89			115			140			155			170							
25	385	178			237			290			350			385							
50	640	357			475			520			580			640							
Scotch-yoke kinematics																					
		0°	45°	90°	0°	45°	90°	0°	45°	90°	0°	45°	90°	0°	45°	90°					
100	1320	600	360	600	800	480	800	1000	600	1000	1200	720	1200	1320	792	1320					
200	2640	1200	720	1200	1600	960	1600	2000	1200	2000	2400	1440	2400	2640	1584	2640					
Yoke patented kinematics																					
		0°	30°	60°	90°	0°	30°	60°	90°	0°	30°	60°	90°	0°	30°	60°	90°				
400	4400	2700	2970	2700	700	3200	3200	800	4000	4400	4000	1000	4400	4840	4400	1100	4400	4840	4400	1100	
800	8800	5160	5676	5160	1300	6800	7480	6800	1700	8600	9460	8600	2150	8800	9680	8800	2200	8800	9680	8800	2200
1600	17600	9500	10450	9500	2500	12500	13750	12500	3150	15500	17050	15500	3900	17600	19360	17600	4400	17600	19360	17600	4400

Control fluid pressure

Air or any neutral gas, filtered, dry or lubricated and compressed to a pressure 3 to 8 bar:

- filtration: 50 µm,
- drying: dew point at max. working pressure ≤ 4° C and min. temperature -5° C

If a lubrication is required - the lubrication increases the actuator life - the use of a non detergent oil without aggressive additive is recommended:

- viscosity 2 to 3° ENGLER at 50° C
- aniline point 90° C to 105° C
- flow 1 to 3 drop for 500 NL/mn.

Operating time

The table below defines the minimum operation times under control air pressure 5 bar and the operation rates per minute of the ACTAIR on/off function.

ACTAIR Type	Mini operation time			Operation rates per minute
	On/off function			
	ACTAIR + AMTRONIC	ACTAIR with distributor ISO-1 or NAMUR onto the housing	ACTAIR direct connexion	
1.5			0,5 second	60 max.
3	1 second		0,5 second	60 max.
6	1 second		0,5 second	60 max.
12	2 seconds		1 second	30 max.
25	4 seconds		1,5 seconds	20 max.
50	5 seconds		2 seconds	15 max.
100	6 seconds		3 seconds	10 max.
200	9 seconds		4 seconds	7 max.
400	25 seconds	12 seconds	8 seconds	4 max.
800	50 seconds	25 seconds	15 seconds	2 max.
1600	90 seconds	45 seconds	20 seconds	1 max.

Adjust construction on request for:

- other operation times,
- high operation rates.

Consult us.

Capacity

ACTAIR Type	Capacity in cm ³		ACTAIR Type	Capacity in cm ³	
	For opening	For closing		For opening	For closing
1.5	72	100	100	5 280	4 380
3	240	305	200	9 800	8 500
6	570	660	400	15 960	15 720
12	1 180	1 265	800	35 300	35 300
25	2 400	2 508	1600	62 500	62 500
50	4 700	4 680			

Construction

In the standard version, ACTAIR actuators are designed to ensure clockwise valve closure. On request, anticlockwise arrangement is available.

The ACTAIR 1.5 to 200 are equipped with adjustable end-stops on only one position: adjustment range $\pm 2,5^\circ$. In standard, adjustable end-stop on close position. In option, adjustable end-stop on open position.

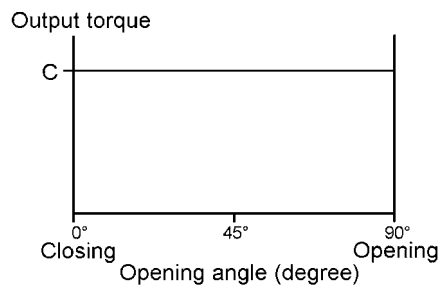
The ACTAIR 400 to 1600 are equipped with adjustable end-stops on both positions: adjustment range $\pm 2^\circ$.

ACTAIR 1.5 to 50: Rack and pinion kinematics

The rack and pinion kinematics develop a constant output torque. The movement of the rack/pistons secured by the pressure causes a $\frac{1}{4}$ turn clockwise rotation of the pinion integral with the valve shaft.

Curve of the rack and pinion kinematics

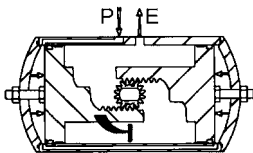
Constant output torque



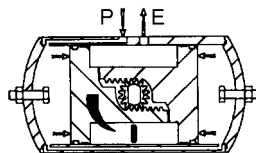
Clockwise closure version – Adjustable mechanical travel stop at the closed position

Opening operation

Actuator/Valve closed

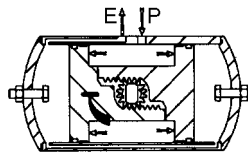


Actuator/Valve open

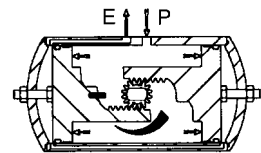


Closure operation

Actuator/Valve open



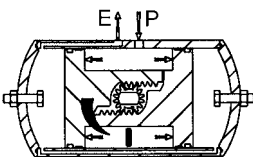
Actuator/Valve closed



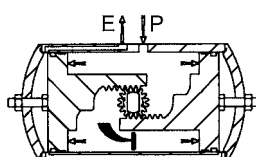
Clockwise closure version – Adjustable mechanical travel stop at the open position

Opening operation

Actuator/Valve closed

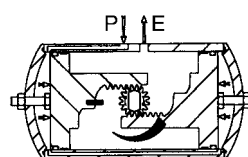


Actuator/Valve open

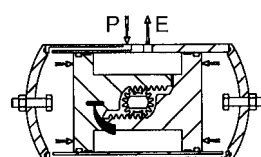


Closure operation

Actuator/Valve open



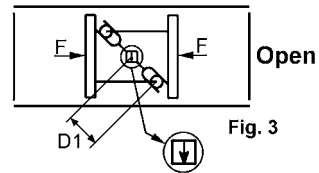
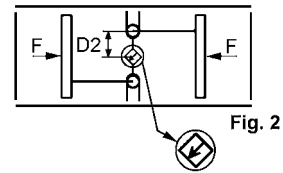
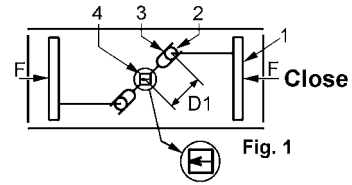
Actuator/Valve closed



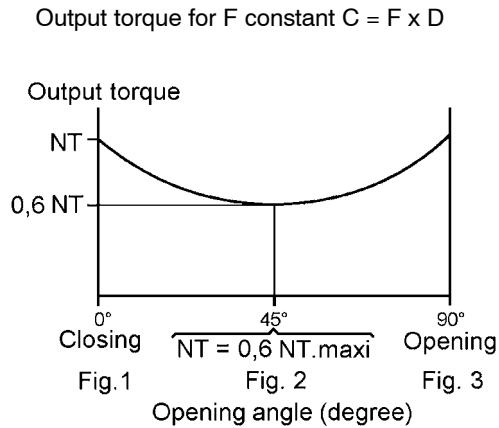
ACTAIR 100 and 200: Scotch-yoke kinematics

The scotch-yoke kinematics develop a variable output torque very well suited to the operation of 1/4 turn valves.

The movement transmission is achieved by means of the piston system ①, rollers ②, scotch-yoke ③ and shaft ④.
 The movement of the pistons ① secured by the pressure causes the sliding of the rollers ② in the grooves of the yoke ③. The yoke ③ allows the rotation of the shaft ④ integral with the valve shaft.



Curve of the Scotch yoke kinematics



Clockwise closure version – Adjustable mechanical travel stop at the closed position

Opening operation

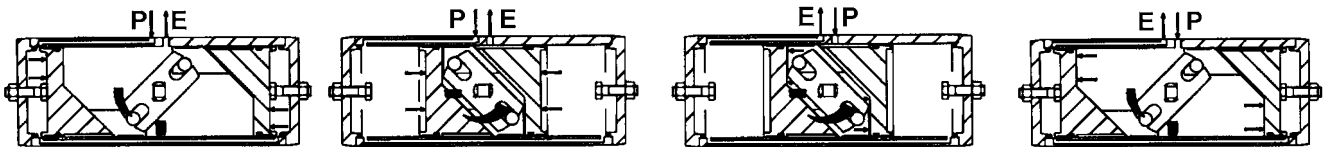
Actuator/Valve closed

Actuator/Valve open

Closure operation

Actuator/Valve open

Actuator/Valve closed



Clockwise closure version – Adjustable mechanical travel stop at the open position

Opening operation

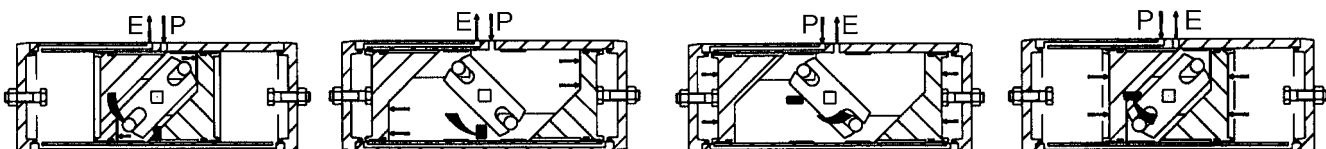
Actuator/Valve closed

Actuator/Valve open

Closure operation

Actuator/Valve open

Actuator/Valve closed



ACTAIR 400 to 1600: Yoke AMRI patented kinematics

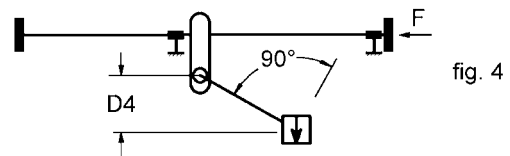
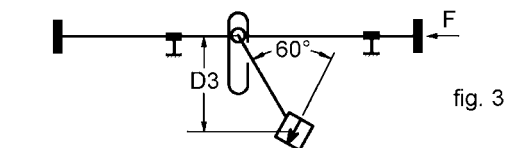
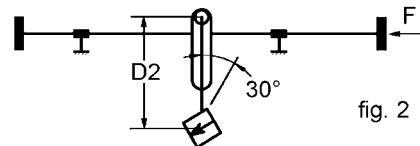
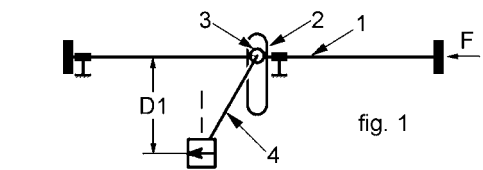
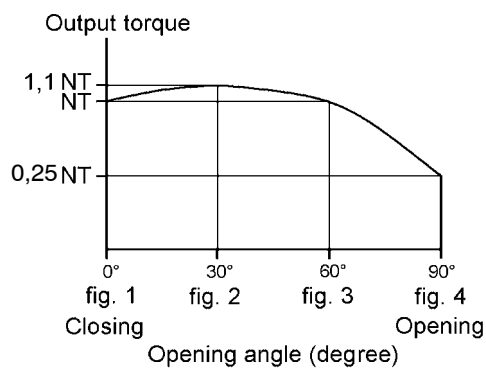
The yoke AMRI patented kinematics develop a variable output torque very well suited to the operation of 1/4 turn valves with hydrodynamic torque.

The movement transmission is achieved by means of the piston system ①, the slide operating nut ②, the rolling pad ③ and the yoke ④.

The movement of the piston ① secured by the pressure in the actuator cylinder causes the linear travel of the operating nut ②. This movement drives the sliding of the pads ③ in the 2 slides of the operating nut ② and allows the rotation of the yoke ④ integral with the valve shaft.

Curve of the yoke AMRI patented kinematics

Output torque for F constant $C = F \times D$

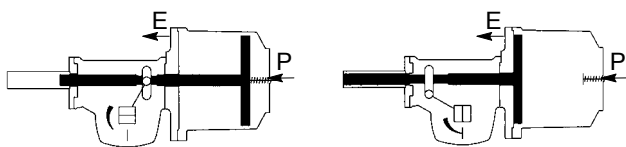


ACTAIR 400

Opening operation

Actuator/Valve closed

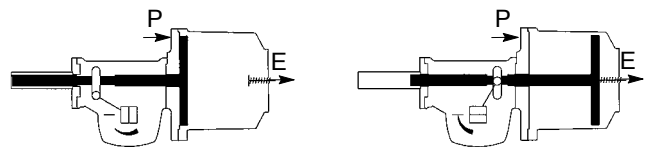
Actuator/Valve open



Closure operation

Actuator/Valve open

Actuator/Valve closed



ACTAIR 800 and 1600

Opening operation

Actuator/Valve closed

Actuator/Valve open



Closing operation

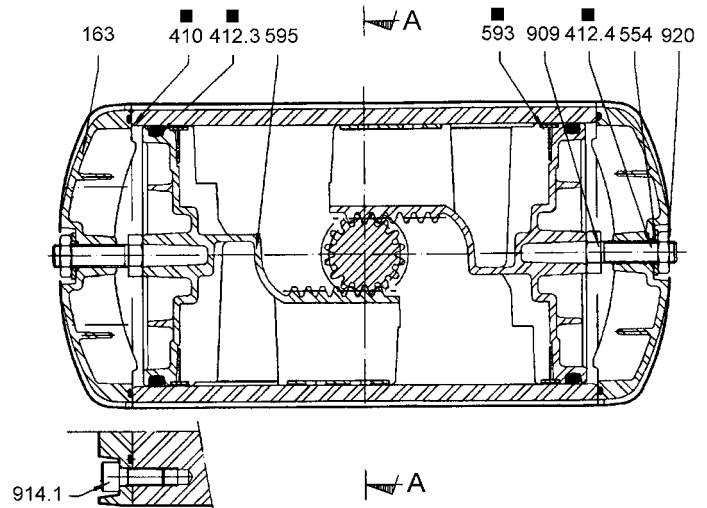
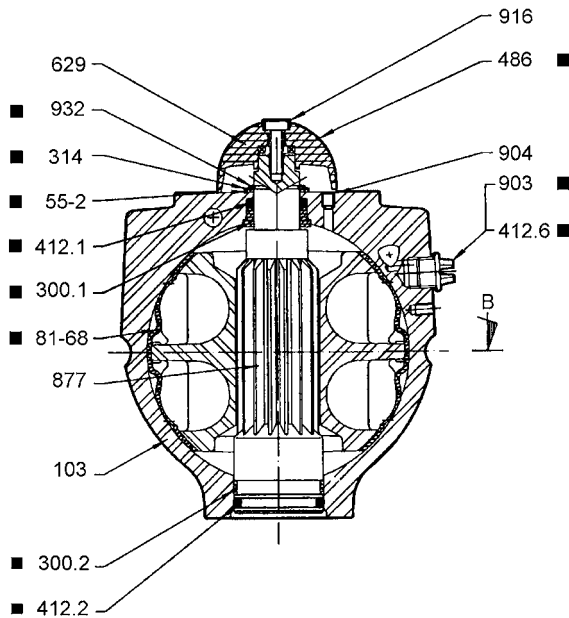
Actuator/Valve open

Actuator/Valve closed



ACTAIR 1.5 to 50
Construction

Direct pneumatic connection 1/4" G.

Section A-A
Section B-B


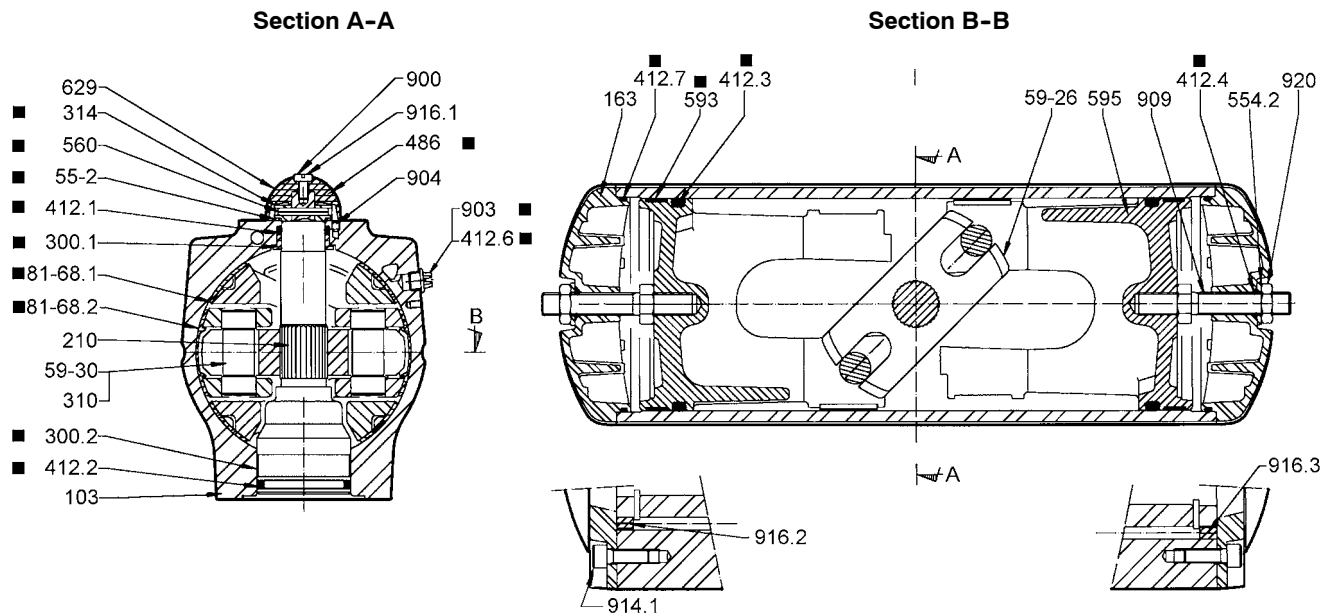
Item	Designation	Materials
103	Housing	Light alloy with 50 µm hard anodization
163	Cylinder head	Light alloy with 30 µm cataphoresis coating
300.1	■ Upper bearing	Acetal
300.2	■ Lower bearing	Acetal
314	■ Thrust washer	Stainless steel type 316
410	■ Cylinder head gasket	Nitrile
412.1	■ O-ring	Nitrile (Working temperature range: from -20° up to +80° C)*
412.2	■ O-ring	Nitrile (Working temperature range: from -20° up to +80° C)*
412.3	■ Piston O-ring	Nitrile (Working temperature range: from -20° up to +80° C)*
412.4	■ O-ring	Nitrile
412.6	■ O-ring	Nitrile
486	■ Ball	Stainless steel
554	Washer	Stainless steel A4-70
55-2	■ Friction washer	Acetal
593	■ Piston bearing	Acetal
595	Piston	Light alloy
629	Pointer	Polyamide 6-6 + treatment against U.V. rays
81-68	■ Piston guide	Acetal
877	Pinion	Zinc coated steel
903	■ Plug	Polyamide 6-6
904	Socket screw	Stainless steel with cladding
909	Adjusting screw	Stainless steel A4-70
914.1	Hexagon socket head screw	Stainless steel A4-70
916	Plug	Polyethylene
920	Hexagonal nut	Stainless steel A4-70
932	■ Spring retaining ring	Stainless steel

■ Parts included in the spare parts kit

* Alternative: Special Nitrile (-40° to +80° C) or Viton (-20° to +120° C)

ACTAIR 100 and 200
Construction

Direct pneumatic connection 1/4" G



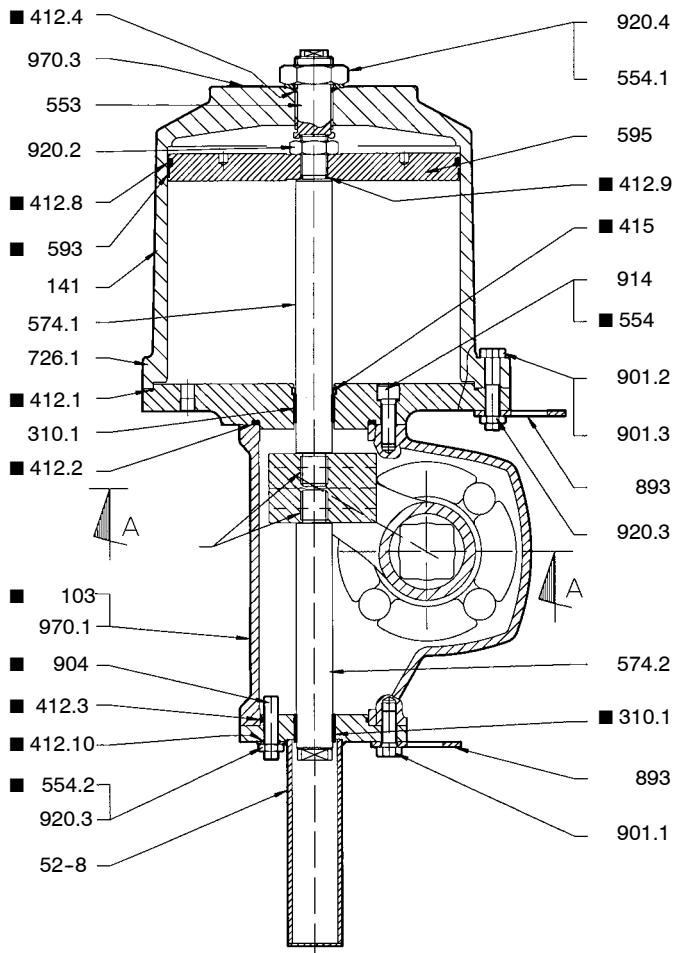
Item	Designation	Materials
103	Housing	Light alloy with 50 µm hard anodization
163	Cylinder shaft	Light alloy with 30 µm cataphoresis coating
210	Shaft	Zinc coated treated steel
300.1	■ Upper bearing	Acetal
300.2	■ Lower bearing	Stainless steel + PTFE
310	Self lubricating bearing	PTFE filled
314	■ Thrust washer	Zinc coated treated steel
412.1	■ O-ring	Nitrile
412.2	■ O-ring	Nitrile (Working temperature range: from -20° up to +80° C)*
412.3	■ Piston O-ring	Nitrile (Working temperature range: from -20° up to +80° C)*
412.4	■ O-ring	Nitrile (Working temperature range: from -20° up to +80° C)*
412.6	■ O-ring	Nitrile
412.7	■ O-ring	Nitrile
486	■ Ball	Stainless steel
554.2	Washer	Stainless steel A4-70
55-2	■ Friction washer	Acetal
560	■ Pin	Stainless steel
593	■ Piston bearing	Acetal
595	Piston	JS 1030 spheroidal graphite cast iron
59-26	Scotch-yoke	Treated steel
59-30	Roller	Treated steel
629	Pointer	Polyamide 6-6 + treatment against U.V. rays
81-68.1	■ Piston guide	Acetal
81-68.2	■ Piston guide	Acetal
900	Cheese head screw	Stainless steel A4-70
903	■ Plug	Polyamide 6-6
904	Socket screw	Stainless steel
909	Adjusting screw	Stainless steel A4-70
914.1	Hexagon socket head screw	Stainless steel A4-70
916.1	Plug	Polyethylene
916.2	Cylindric plug	Nitrile
916.3	Triangular plug	Nitrile
920	Hexagonal nut	Stainless steel A4-70
932	■ Circlips	Stainless steel

■ Parts included in the spare parts kit

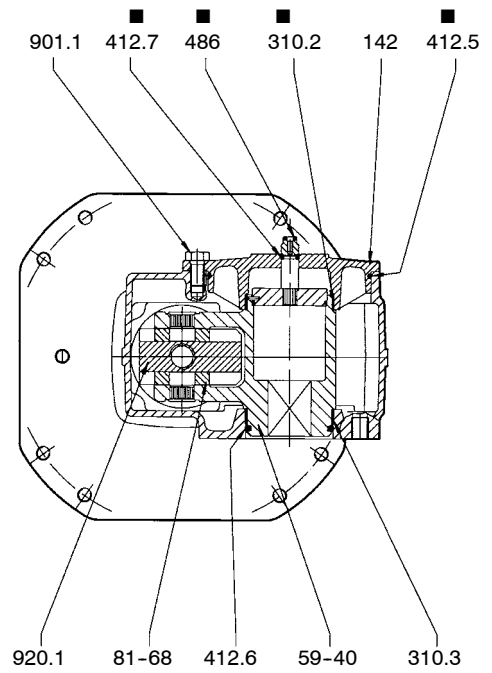
* Alternative: Special Nitrile (-40° to +80° C) or Viton (-20° to +120° C)

ACTAIR 400

Construction



Section A-A



■ Parts included in the spare parts kit

ACTAIR 400
Standard construction

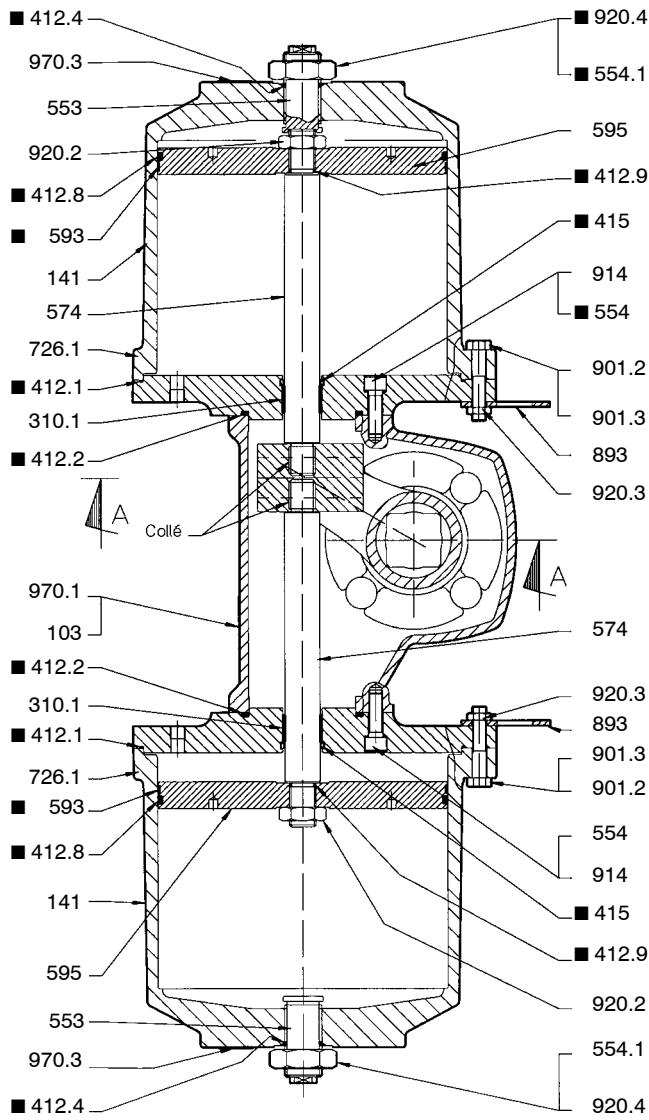
Direct pneumatic connection 1/2" G

Item	Designation	Materials
103	Housing	JL 1040 grey cast iron or JS 1030 spheroidal graphite cast iron
141	Cylinder	JS 1030 spheroidal graphite cast iron
142	Cover	JL 1040 grey cast iron or JS 1030 spheroidal graphite cast iron
310.1	Self-lubricating bearing	PTFE filled on steel casing
310.2	■ Self-lubricating bearing	PTFE filled on steel casing
310.3	Self-lubricating bearing	PTFE filled on steel casing
412.1	■ O-ring	Nitrile
412.2	■ O-ring	Nitrile
412.3	■ O-ring	Nitrile
412.4	■ O-ring	Nitrile
412.5	■ O-ring	Nitrile
412.6	O-ring	Nitrile
412.7	■ O-ring	Nitrile
412.8	■ O-ring	Nitrile
412.9	■ O-ring	Nitrile
412.10	■ O-ring	Nitrile
415	■ Leap seal ring	Nitrile
486	■ Ball	Stainless steel
52.8	Protection sleeve	Treated steel
553	Thrust insert	Stainless steel 316
554	■ Washer	Nylon
554	Washer	Stainless steel A4-70
554.2	Washer	Stainless steel A4-70
574.1	Piston rod	Chromed steel
574.2	Rod	Chromed steel
593	■ Guiding strip	PTFE + Bronze
595	Piston	Steel
59-40	Chuck	JS 1030 spheroidal graphite cast iron + stainless steel
726.1	Flange	Steel + cataphoresis coating
81-68	Pressure pad	Nitrured steel
893	Soleplate	Steel + cataphoresis coating
901.1	Hexagon head screw	Stainless steel A4-70
901.2	Hexagon head screw	Stainless steel A4-70
901.3	Hexagon head screw	Stainless steel A4-70
904	Grub screw	Stainless steel A4-70
914	Screw	Stainless steel A4-70
920.1	Operating nut	JS 1060 spheroidal graphite cast iron
920.2	Hexagon nut	Stainless steel A4-70
920.3	Hexagon nut	Stainless steel A4-70
920.4	Hexagon nut	Stainless steel A4-70
970.1	Identity plate	Stainless steel
970.3	Stiker for mechanical stop use	Adhesive

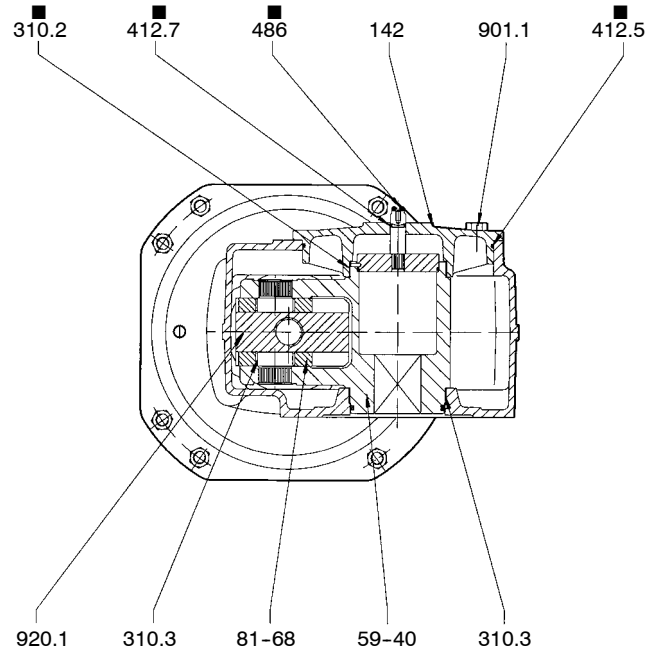
■ Parts included in the spare parts kit

ACTAIR 800

Construction



Section A-A



■ Parts included in the spare parts kit

ACTAIR 800
Standard construction

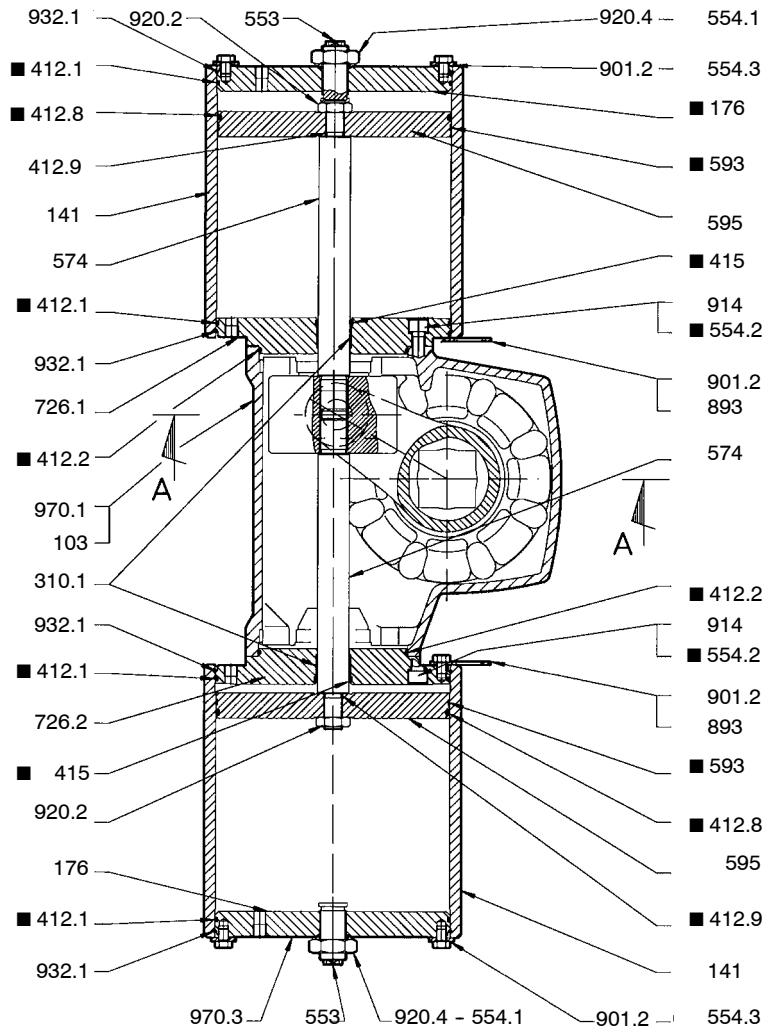
Direct pneumatic connection 1/2" G

Item	Designation	Materials
103	Housing	JL 1040 grey cast iron or JS 1030 spheroidal graphite cast iron
141	Cylinder	JS 1030 spheroidal graphite cast iron
142	Cover	JL 1040 grey cast iron or JS 1030 spheroidal graphite cast iron
310.1	Self-lubricating bearing	PTFE filled on steel casing
310.2	■ Self-lubricating bearing	PTFE filled on steel casing
310.3	Self-lubricating bearing	PTFE filled on steel casing
412.1	■ O-ring	Nitrile
412.2	■ O-ring	Nitrile
412.4	■ O-ring	Nitrile
412.5	■ O-ring	Nitrile
412.7	■ O-ring	Nitrile
412.8	■ O-ring	Nitrile
412.9	■ O-ring	Nitrile
412.10	■ O-ring	Nitrile
415	■ Leap seal ring	Nitrile
486	■ Ball	Stainless steel
52.8	Protection sleeve	Treated steel
553	Thrust insert	Stainless steel 316
554	■ Washer	Nylon
554.1	Washer	Stainless steel A4-70
574	Rod	Chromed steel
593	■ Guiding strip	PTFE + Bronze
595	Piston	Steel
59-40	Chuck	JS 1030 spheroidal graphite cast iron + stainless steel
726.1	Flange	Steel + cataphoresis coating
81-68	Pressure pad	Nitrured steel
893	Soleplate	Steel + cataphoresis coating
901.1	Hexagon head screw	Stainless steel A4-70
901.2	Hexagon head screw	Stainless steel A4-70
901.3	Hexagon head screw	Stainless steel A4-70
914	Screw	Stainless steel A4-70
920.1	Operating nut	JS 1060 spheroidal graphite cast iron
920.2	Hexagon nut	Stainless steel A4-70
920.3	Hexagon nut	Stainless steel A4-70
920.4	Hexagon nut	Stainless steel A4-70
970.1	Identity plate	Stainless steel
970.3	Stiker for mechanical stop use	Adhesive

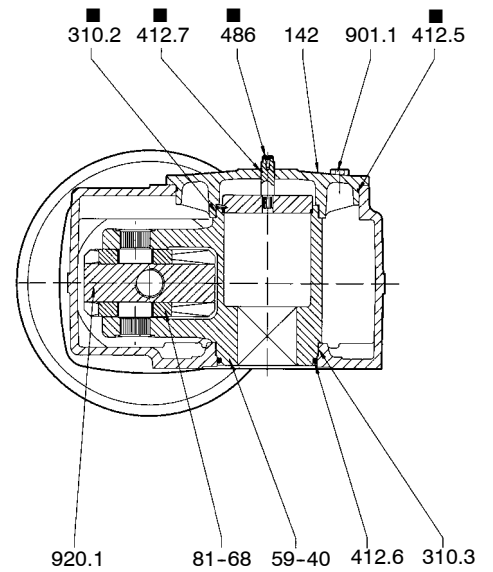
■ Parts included in the spare parts kit

ACTAIR 1600

Construction



Section A-A



■ Parts included in the spare parts kit

ACTAIR 1600
Standard construction

Direct pneumatic connection 3/4" G

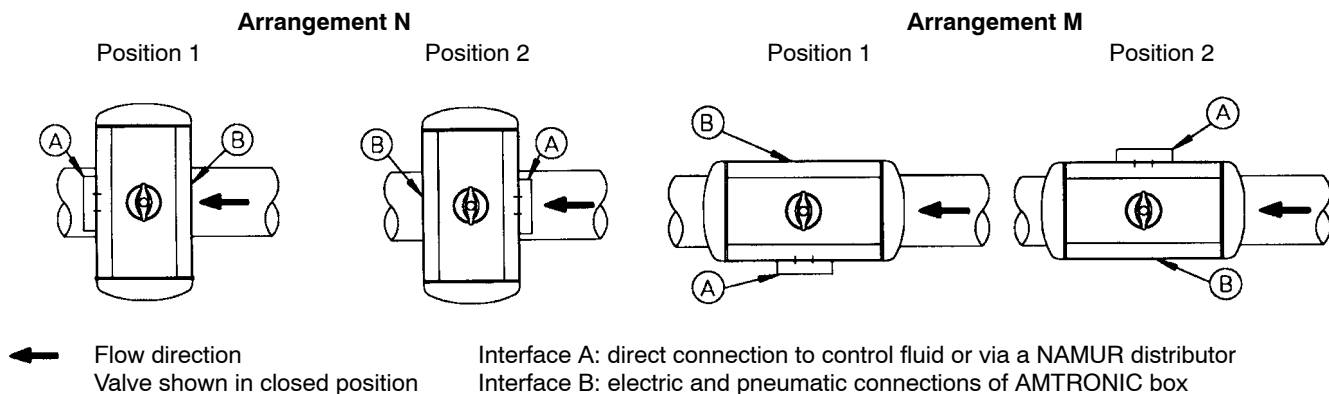
Item	Designation	Materials
103	Housing	JS 1030 spheroidal graphite cast iron
141	Cylinder	Steel
142	Cover	JS 1030 spheroidal graphite cast iron
176	■ Cylinder head	Steel + cataphoresis coating
310.1	Self-lubricating bearing	PTFE filled on steel casing
310.2	■ Self-lubricating bearing	PTFE filled on steel casing
310.3	Self-lubricating bearing	PTFE filled on steel casing
412.1	■ O-ring	Nitrile
412.2	■ O-ring	Nitrile
412.5	■ O-ring	Nitrile
412.6	O-ring	Nitrile
412.7	■ O-ring	Nitrile
412.8	■ O-ring	Nitrile
412.9	■ O-ring	Nitrile
415	■ Leap seal ring	Nitrile
486	■ Ball	Stainless steel
553	Thrust insert	Stainless steel 316
554.1	Washer	Stainless steel A4-70
554.2	■ Washer	Stainless steel A4-70
554.3	Washer	Nylon
574	Piston rod	Chromed steel
593	■ Guiding strip	PTFE + Bronze
595	Piston	Steel
59-40	Chuck	JS 1030 spheroidal graphite cast iron + stainless steel
726.1	Flange	Steel + cataphoresis coating
726.2	Flange	Steel + cataphoresis coating
81-68	Pressure pad	Nitrured steel
893	Soleplate	Steel + cataphoresis coating
901.1	Hexagon head screw	Stainless steel A4-70
901.2	Hexagon head screw	Stainless steel A4-70
914	Screw	Stainless steel A4-70
920.1	Operating nut	JS 1060 spheroidal graphite cast iron
920.2	Hexagon nut	Stainless steel A4-70
920.4	Hexagon nut	Stainless steel A4-70
932	Retaining ring	Treated steel
970.1	Identity plate	Stainless steel
970.3	Stiker for mechanical stop use	Adhesive

■ Parts included in the spare parts kit

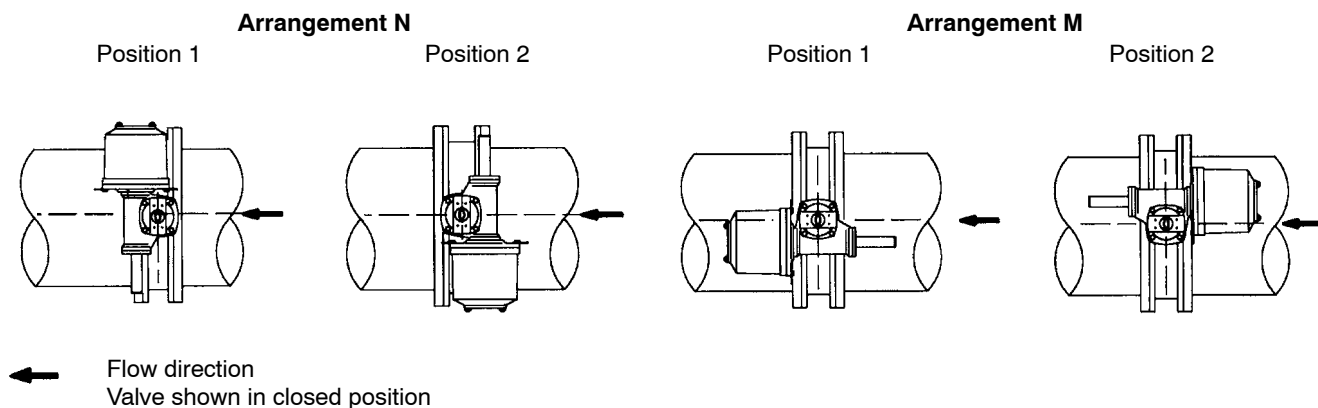
Mounting on valve

The actuator can be positioned in four positions, at intervals of 90°. Unless otherwise stated, the actuator is mounted according to the arrangement N position1.

ACTAIR 1.5 to 200



ACTAIR 400 to 800



These actuators are equipped with interchangeable inserts manufactured to the size and the form of different valve shafts for motorized operation (square end, flat end, key...).

ACTAIR 1.5 to 50

Pinion with star driving allowing mounting of the insert at intervals of 45°

Flat end



Key end



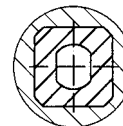
Square end



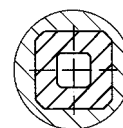
ACTAIR 100 to 1600

Shft or yoke with driving square and insert

Flat end



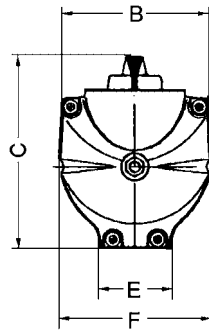
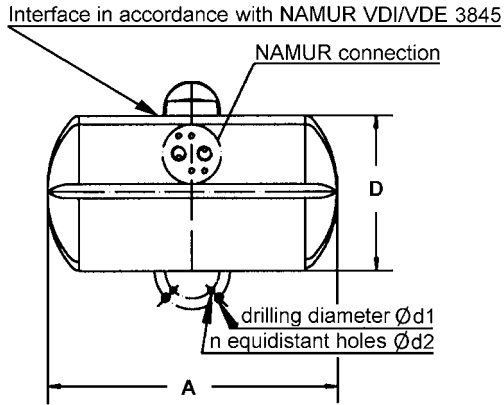
Square end



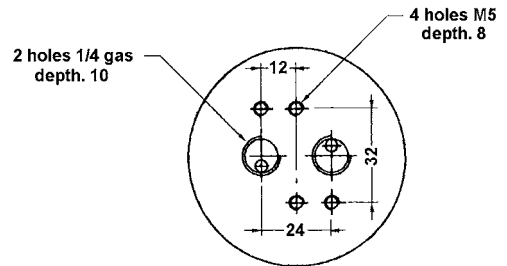
The actuators can be delivered with or without the coupling parts.

Overall dimensions (mm) and weights (kg)

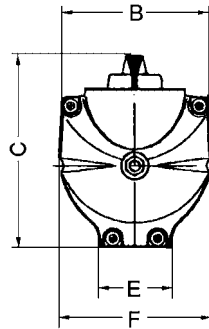
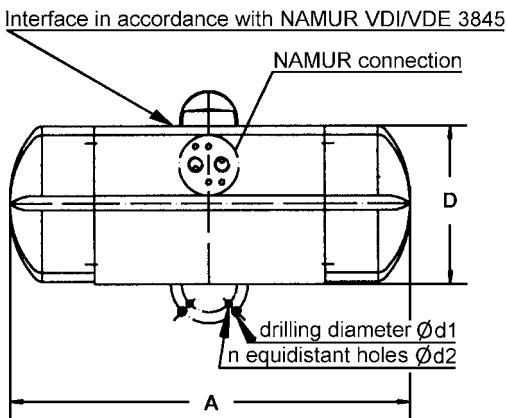
ACTAIR 1.5 to 50



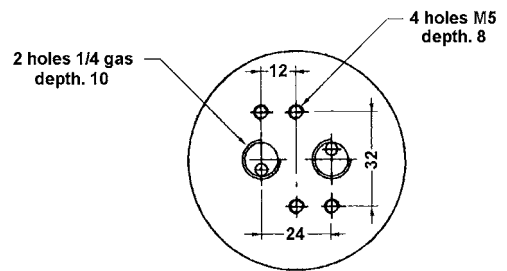
NAMUR connection (détail)



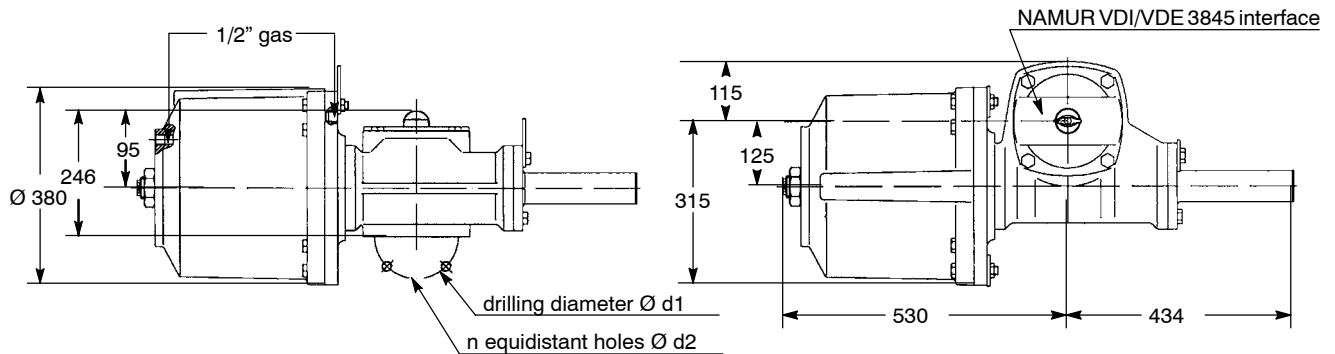
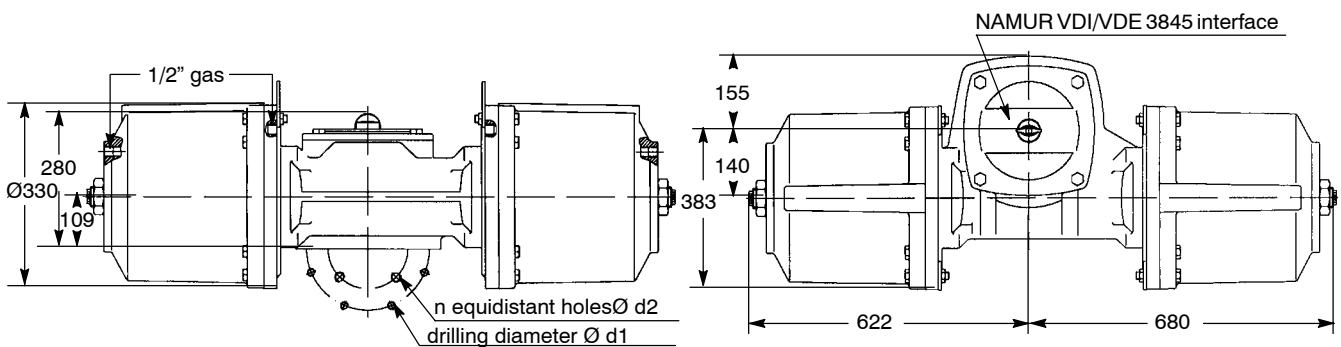
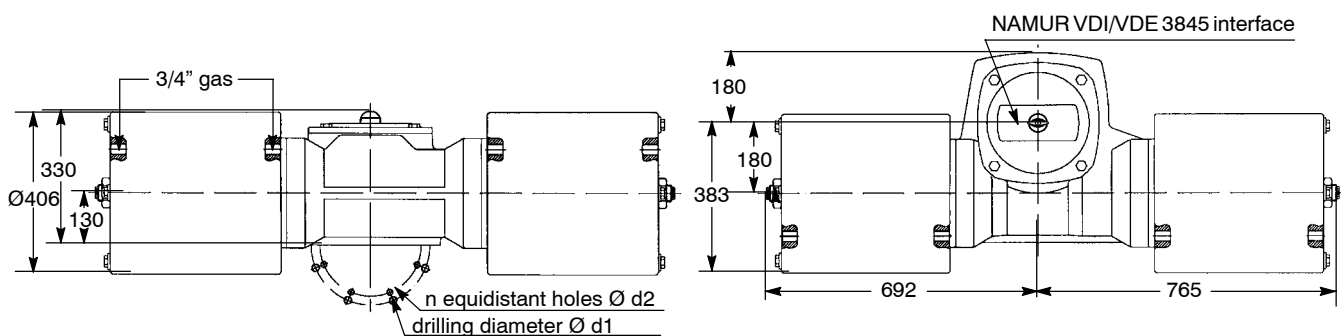
ACTAIR 100 and 200



NAMUR connection (détail)



ACTAIR Type	A	B	C	D	E	F	ISO 5211 mounting plate				Weight kg
							ref	$\varnothing d1$	$\varnothing d2$	n	
1.5	143	76	96	66	44	76	F04	42	M5	4	1.2
3	194	100	119	98	55	100	F04 (45°)	42	M5	4	2.8
							F05	50	M6	4	
6	218	114	137	116	65	118	F05	50	M6	4	3.9
							F07	70	M8	4	
12	272	132	163	142	65	138	F05	50	M6	4	6.0
							F07	70	M8	4	
25	344	156	197	176	90	166	F07	70	M8	4	11.0
							F10	102	M10	4	
50	424	174	238	217	125	200	F10	102	M10	4	18.3
							F12	125	M12	4	
100	505	157	216	195	122	170	F10	102	M10	4	30.0
							F12	125	M12	4	
200	592	174	258	237	144	210	F14	140	M16	4	48.0

Overall dimensions (mm) and weights (kg)
ACTAIR 400 (Standard version - Direct connection)

ACTAIR 800 (Standard version - Direct connection)

ACTAIR 1600 (Standard version - Direct connection)


ACTAIR Type	ref	ISO 5211 Mounting plate			Weight kg
		$\varnothing d1$	$\varnothing d2$	n	
400	F16	165	M20	4	160.0
800	F16	165	M20	4	290.0
	F25	254	M16	8	
1600	F25	254	M16	8	504.0
	F30	298	M20	8	

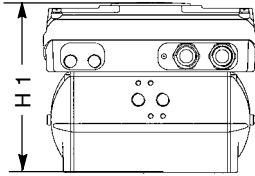
Indication function

Limit switch box IP 67 AMTROBOX

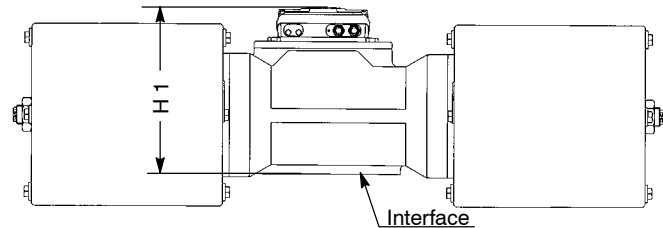
The function provided by AMTROBOX is as follow:

- Position detection:
 - On/off position detection by means of microswitches or inductive proximity detectors (1/O, 1/C, 1 on intermediate position on request).

ACTAIR 1.5 to 200



ACTAIR 400 to 1600



Consult type series booklet AMTROBOX ref. 8525.1

Control and supervision functions

Piloting-servo control by AMTRONIC/SMARTRONIC

The functions provided are as follows :

AMTRONIC :

- On/off pneumatic distribution: 4/2 or 4/3 configuration, spring return or double acting, A.C. or D.C. supply.
- Operating time adjustment.

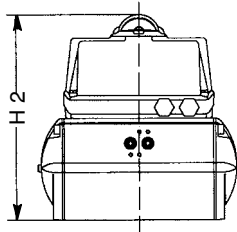
SMARTRONIC :

- Proportional distribution for autocalibration setting, 4-20 mA pilot.
- Operating time adjustment

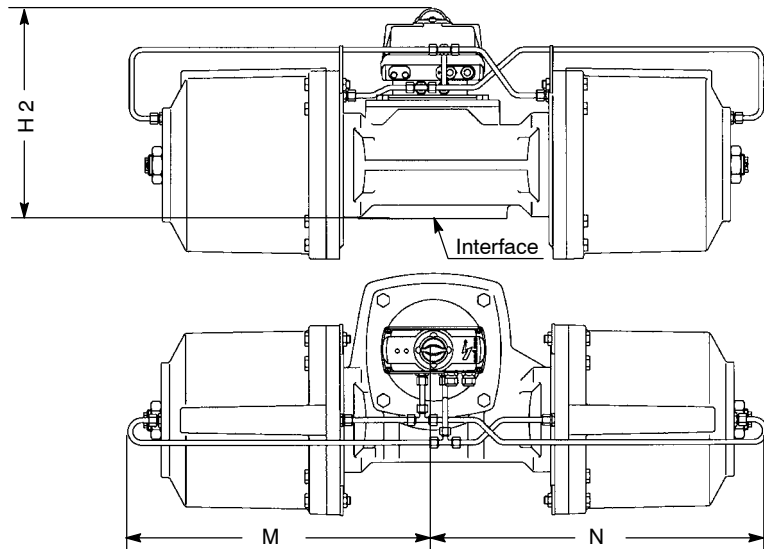
Options :

- On/off position detection (2 microswitches or inductive proximity detectors),
- Proportional position detection (4-20 mA).
- Field bus: AS-i, Profibus DP, Device Net.

ACTAIR 1.5 to 200



ACTAIR 400 to 1600



Consult type series booklets AMTRONIC ref. 8512.1 and SMARTRONIC MA 8527.1

ACTAIR Type	H1	H2	M	N	Weight kg
1.5	144				2,9
3	168	235			4.5
6	185	252			5.5
12	211	278			8.0
25	245	312			13.0
50	286	353			20.0
100	264	331			32.0
200	306	373			50.0
400	293	390	580	434	170.0
800	328	425	672	730	300.0
1600	378	475	742	815	514.0

Options :
Visual position indicator type “BEACON”

Instead of the standard pointer.

ACTAIR 3 to 1600

Direct NPT air connection

1/4" NPT connection plate made of anodised Aluminium, fitted onto the Namur interface of the standard actuator.

ACTAIR 1.5 to 200

ACTAIR 400 to 1600

NPT air connection directly threaded on the cylinder:
 - 1/2" NPT on ACTAIR 400 and 800,
 - 3/4" NPT on ACTAIR 1600

Declutchable manual override: ACTAIR 3 to 1600

The manual override using a declutchable gear box may be fitted between the valve mounting plate and the actuator. This manual override will override with the pneumatic actuator and can be set in clutched or declutched positions. This device is based on worm wheel and screw kinematics. Please consult us.

Note: The manual override should only be used under the following recommendations:

- absence of air pressure in the actuator,
- Leakage to air free of all the cylinders of the actuator.

The manual override should not be declutched when pressure is in the actuator.

Construction :

- Housing, cover and extension in JL 1040 grey cast iron,
- Handwheel in welded iron,
- Screw in steel,
- Worm in JS 1030 spheroidal graphite cast iron,
- Drive shaft, clutch lever, locking pointer, adjustable mechanical travel stops (+/-5°) and external bolting in 13 % chromium steel.

Protection :

They are hose and fine dust proof (protection degree: IP 65). Construction for protection degree IP 67 on request: please, consult us.

External coating:

Polyurethane paint (colour dark grey RAL 7016, 80 µm thickness).

Working temperature range:

From -20° C to +80° C.



Please refer to the type series booklet manual override ref. no.5350.1.

Options

Stroke limiter

ACTAIR 1.5 to 200

Stroke limiter adjustable between 0 and 90° in only one direction. The device is fitted instead of the standard adjustment end-stop. Available on open or close direction. Consult us.

ACTAIR 3 to 12

Stroke limiter adjustable in both directions (open and close). The device is fitted between the valve top flange and the actuator. Consult us.

ACTAIR actuators can be equipped with different accessories instead of AMTRONIC instrumentation box.

**Limit switch box
ACTAIR 1.5 to 1600**



This switchbox is fitted onto the top of the actuator housing by means of a yoke with interface in accordance with VDI/VDE 3845 NAMUR specification. Please consult us.

**Positioner
ACTAIR 1.5 to 1600**



A positioner with a 3-15 PSI pneumatic piloting signal or a 4-20 mA electric signal (standard or with intrinsically safety) can be mounted onto the top of actuator housing by means of a yoke with VDI/VDE 3845. Please consult us.

**NAMUR distributor
ACTAIR 1.5 to 200**



A distributor with electric or pneumatic piloting with NAMUR interface can be fitted directly onto the side of the actuator housing. Please consult us.

**ISO size 1 distributor
ACTAIR 3 to 1600
ISO size 2 distributor
ACTAIR 400 to 1600**

A distributor with an ISO 5599 size 1 or size 2 interface can also be fitted to the actuator by means of a distributor plate.

This leaflet is not contractual and may be amended without notice.

11.07.05

8515.1/8-10