

783-4-5-6 VALVE WITH NA ELECTRIC ACTUATOR

CHARACTERISTICS

The 3-way stainless steel 783-5+NA (L-port) and 784-6+NA (T-port) ball valves are dedicated to the mixing, diverting or automatic discharging of industrial unloaded fluids. The valves with a DN from 50 to 80 have a floating ball construction and those with a DN from 100 to 150 have a trunnion mounted ball construction. They both have the EC and ATEX certifications. The ISO 5211 pad enables the direct mounting of the NA electric actuator. It is perfectly suitable for an indoor or outdoor industrial use.



AVAILABLE ITEMS

Ref.	Material	Port	Function
783	Carbon steel A216WCB	L	Diverting
784	Carbon steel A216WCB	T	Mixing
785	Stainless steel A351 CF8M	L	Diverting
786	Stainless steel A351 CF8M	T	Mixing

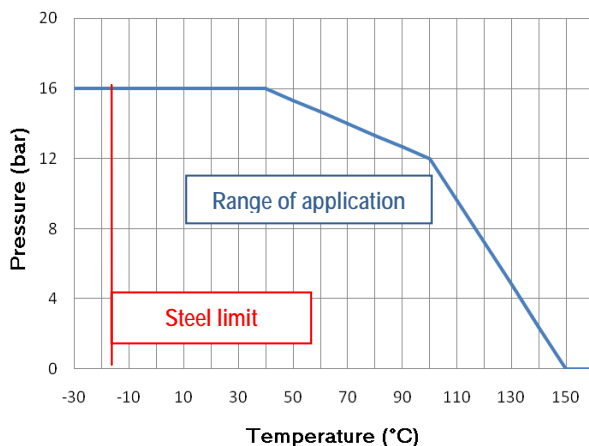
DN 50 to DN 150

Flanged connections RF PN16

Voltages: 24 V AC/DC, 230 V AC, 3~400 V AC

LIMITS OF USE

Max. allowable pressure (PS)	16 bar (20 °C)
Min./max. allowable temperature (TS)	Steel: -20 °C / +150 °C SS: -30 °C / +150 °C
Room temperature	-20 °C / +70 °C
Service	S2 – 70%



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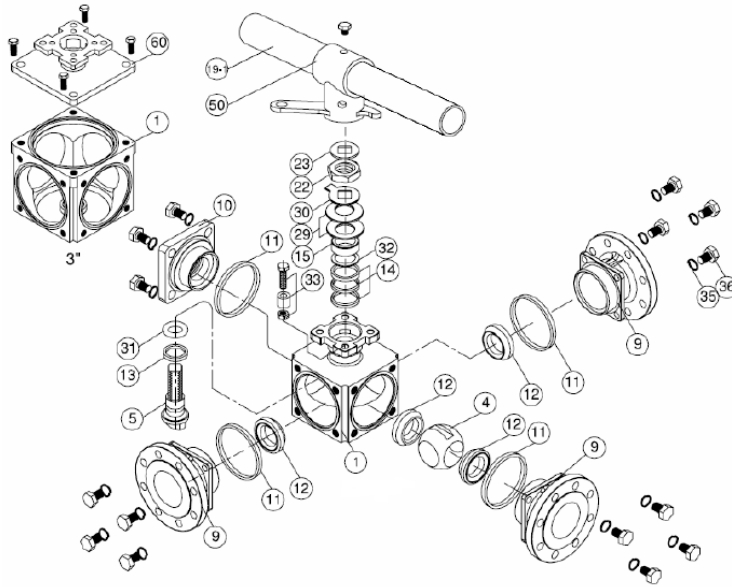
	SECTORIEL S.A. 45, rue du Ruisseau 38290 Saint Quentin-Fallavier – FRANCE Tel.: +33 474 94 90 70 – Fax: +33 474 94 13 95 www.sectoriel.fr / email: sectoriel@sectoriel.fr	Nbr. pages	1/4
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		Rev.	3
		Date	05/2012

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DIRECTIVES AND DEVELOPMENT STANDARDS APPLICABLE


	Standard	Notified bodies		Standard
97/23/EC Pressure Equipment Directive	Category II	0035	Material certificate	EN 10204
Shell design	EN 12516-1		Alloy grade	EN 1503-1
Flanges dimension	EN 1092-1		Valve testing	EN 12266
ATEX Directive	II 2G/D Tx zones 1,2,21 and 22		Actuator attachment	ISO 5211
	EN 13463-1			

CONSTRUCTION DN 50 to DN 80



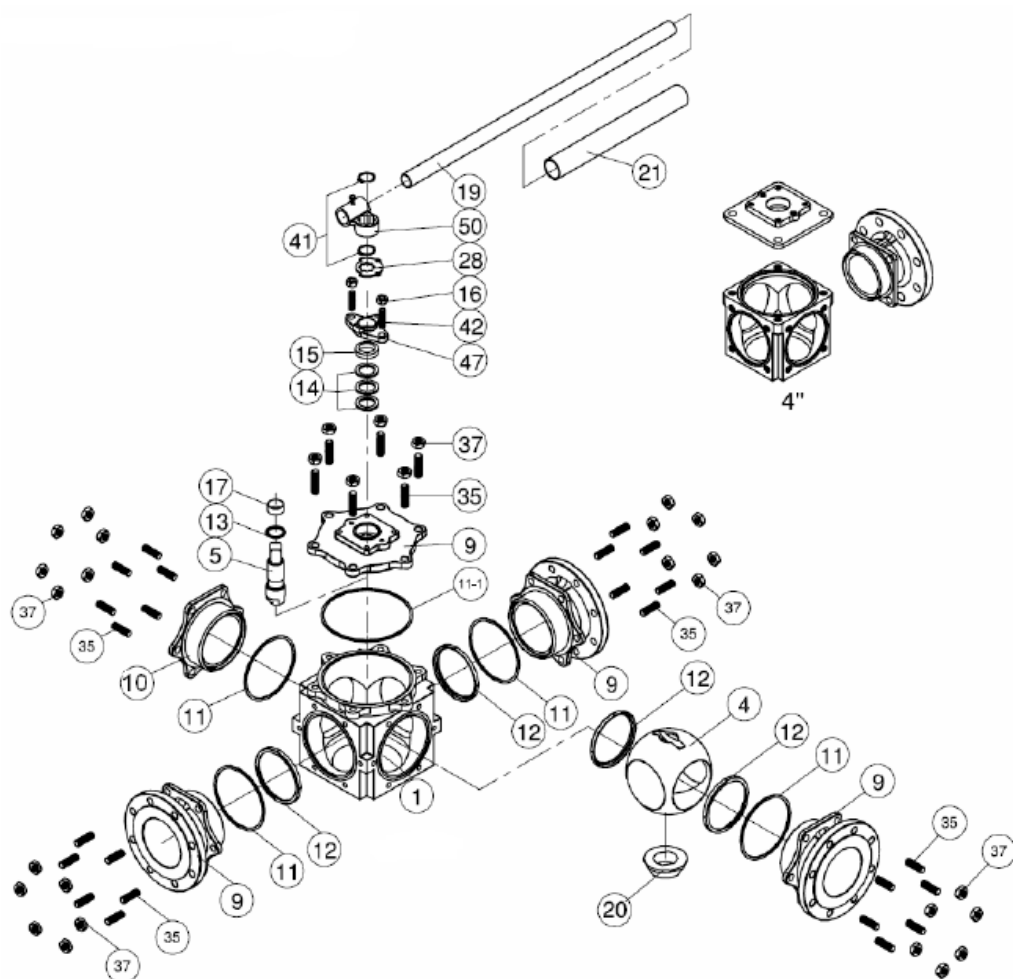
#	Item	783-784 CS	785-786 SS	#	Item	Material
1	Body	Carbon steel A216WCB	Stainless steel A351 CF8M	22	Gland pack nut	SS 304
4	Ball	SS 1.4308	Stainless steel A351 CF8M	23	Washer	SS 304
5	Stem	SS 304	SS 316	29	Belleville spring washer	SS 301
9	Ends	Carbon steel A216WCB	Stainless steel A351 CF8M	30	Locking washer	SS 304
10	Cap	Carbon steel A216WCB	Stainless steel A351 CF8M	31	O ring	FKM
11	Body gasket	PTFE		32	Gland packing	PTFE+15% Graphite
12	Seat	PTFE+15% Graphite		33	End stop	SS 304
13	Ring	PTFE		35	Washer	SS 304
14	Gland pack	PTFE		36	Screw	SS 304
15	Ring	SS 304		50	Handle adapter	SS 304
19	Handle	Steel				

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CONSTRUCTION DN 100 to DN 150



#	Item	783-784 CS	785-786 SS	#	Item	Material
1	Body	Carbon steel A216WCB	Stainless steel A351 CF8M	17	Stem gasket	PTFE
4	Ball	SS 1.4308	Stainless steel A351 CF8M	19	Handle	Steel
5	Stem	SS 304	SS 316	20	Guide screw	SS 304
9	Ends	Carbon steel A216WCB	Stainless steel A351 CF8M	21	Handle sleeve	PVC
10	Housing cover	Carbon steel A216WCB	Stainless steel A351 CF8M	28	Lock out system	SS 304
11	Body gasket	PTFE		35	Bolts	SS 304
11-1	Top body gasket	PTFE		37	Bolt screws	SS 304
12	Seat	PTFE+15% Graphite		41	Handle washer	SS 304
13	Ring	PTFE		42	Gland pack screw	SS 304
14	Gland pack	PTFE		47	Gland plate	SS 1.4308
15	Fixing ring	SS 304		50	Handle plate	SS 304
16	Gland pack nut	SS 304				

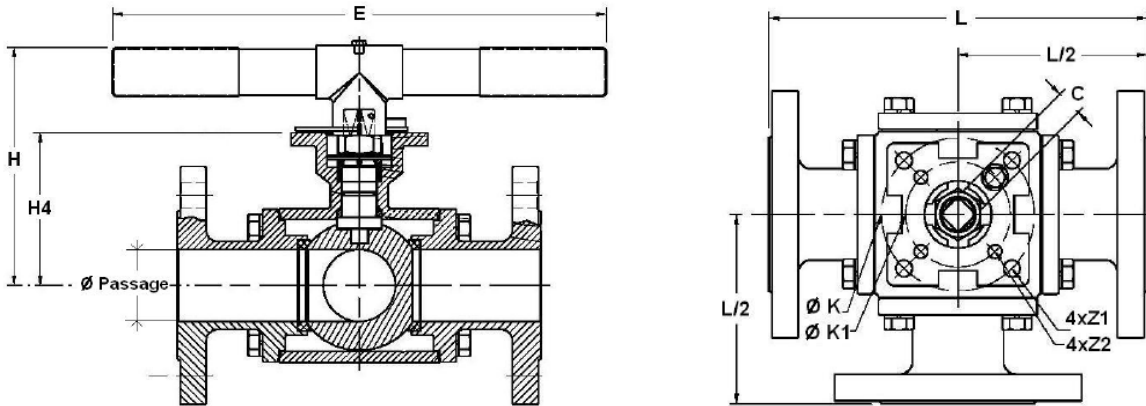
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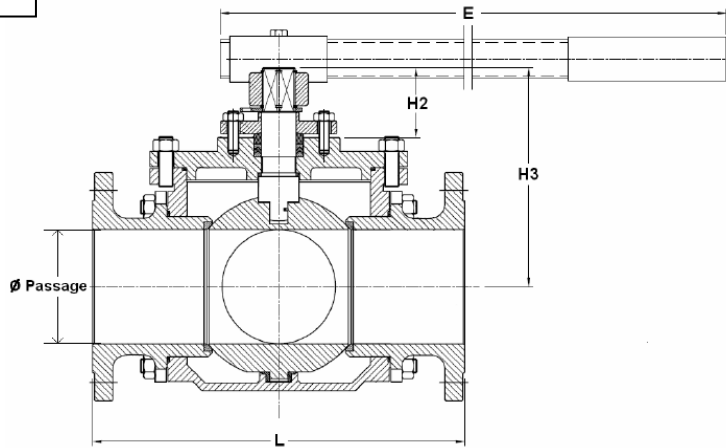
783-4-5-6 VALVE WITH NA ELECTRIC ACTUATOR

DIMENSIONS (mm)

DN 50 to DN 80




DN 100 to DN 150



DN	50	65	80
Ø	49	64	76
L	253	278	292.2
L/2	126.5	139	146.1
E	300	300	300
H	156.6	168.9	178
H1	17.8	17.5	17.5
H4	105.8	117.3	128
C	17	17	17
Ø K	102	102	102
Ø K1	70	70	70
4 x Z1	4x11	4x11	4x11
4 x Z2	4x9	4x9	4x9
Weight (kg)	19	23.8	34.5

DN	100	125	150
Ø	99	125	150
L	360	416	473
L/2	180	203	236
E	600	600	800
H1	33	33	43.5
H2	70	70	77.5
H3	193	233	266
C	27	27	36
Ø K	125	125	140
4xZ	4x12	4x12	4x16
Weight (kg) L	67.4	95	124
Weight (kg) T	61.8	95	127

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ELECTRIC ACTUATION WITH NA

Suggested standard NA actuation under the following conditions:

- Electric actuator with an IP 67 epoxy coated aluminium enclosure and steel gears
- A minimum 1.3 safety factor compared with the valve nominal torque rating,
- A maximum pressure differential up/downstream of 10 bar (=ΔP)






Electric actuator mounted with stainless steel bracket and coupler according to the EN 15081 standard

DN	Actuator	Power	Operating time*	Standard equipment of the actuator
50	NA09	25 W	17 s	2 adjustable limit switches 2 dry auxiliary switches 20 W anti-condensation heater Visual position indicator Actuator thermal cut-out (NA06 and NA09) Torque limiter (NA15 to NA38) Electrical connection: 2 gland packs M20x1.5 Manual override by declutchable handwheel
65	NA15	40 W	20 s	
80	NA28	40 W	20 s	
100	NA28	40 W	20 s	
125	NA60	90 W	29 s	
150	NA60	90 W	29 s	

*Unloaded operating time given for information purpose only. May vary depending on the medium
 For any other working conditions, please contact us.

ACTUATION OPTIONS

There are many different options, please contact our commercial department.


1	2	3	4	5
NALCU: Actuator with a local control	NAPCU: Regulation actuator 4-20 mA or 0-10 V	NARBP: Safety actuator with an integrated battery emergency shutdown	NA-X: Actuator for use in ATEX zones 1 and 2	SR: Safety spring return actuator
				
6	Electric actuator sized for a maximum pressure differential up/downstream over 10 bar (=ΔP)			
7	NA electric actuator with a declutchable manual override by handwheel			

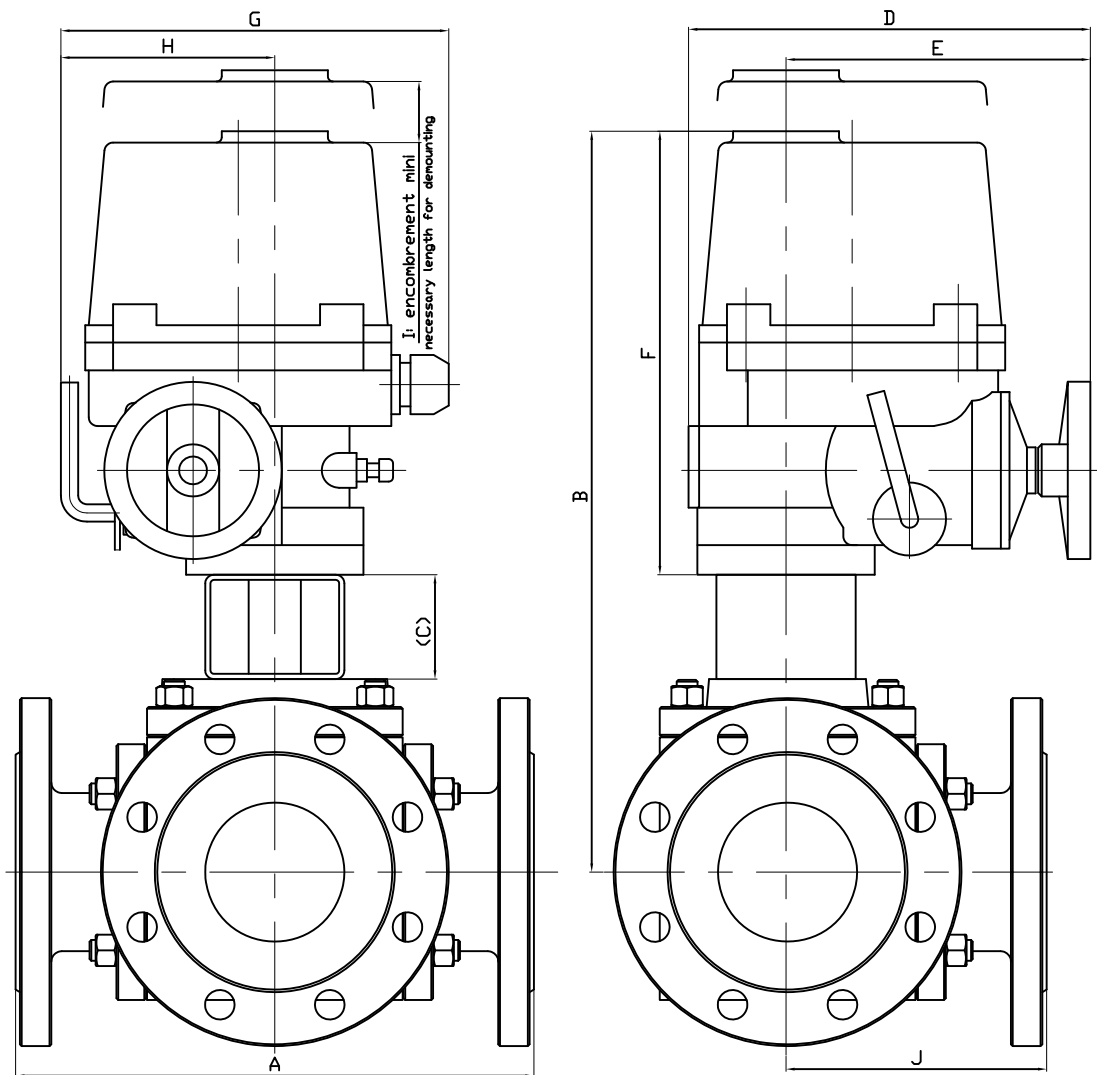
ATEX ZONES INSTALLATION

It is compulsory to specify if the installation of the automatic valve 783-4-5-6+NA-X will take place in ATEX zones 1 or 2 while making the order. Our services will proceed to the mounting check, to a grounding strip installation and will edit a mounting certificate. Those operations are performed by our proper engineers. Please contact us for further details. It is also compulsory to follow the ATEX zone mounting and maintenance special instructions for motorized valves. The ATEX gland packs and sealing plugs are not provided. Please use the following codes:

ATEX aluminium gland pack M20x1.5	Code 980179	ATEX aluminium sealing plugs M20x1.5	Code 980180
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DN	50	65	80	100	125	150
NA	09	15	28	28	60	60
A	253	278	292	360	416	473
B	360	372	430	525	606	631
C	direct	direct	direct	100	100	100
D	231	261	285	285	325	325
E	175	184	202	202	226	226
F	255	255	302	302	343	343
G	223	266	300	300	349	349
H	113	113	159	159	191	191
I	108	108	130	130	178	178
J	126.5	139	146	180	208	236.5
KG	30	35.8	51.5	88	120.5	149.4

Informations données à titre indicatif et sous réserve de modifications éventuelles
data subject to alteration

Ajout poids-Maj cote B-D-E-F-G-I	19/07/2012	C
MAJ cote A-B-J	04/11/2009	B
MAJ cote B	06/08/2008	A

Ech: /	Date :04/10/2006	Dessiné par : LL	Tolérances générales : +/- 0.2	Modifications	Date	REV.
ROBINET A TOURNANT SPHERIQUE 783-786MD/BALL VALVE 783-786MD + SERVOMOTEUR NA/ELECTRIC ACTUATOR NA				Matière :		
				Poids <Kg> :		
 45, Rue du Ruisseau 38297 SAINT QUENTIN FALLAVIER				Traitement : SANS		
				Plan n° Ens 998C		

ELECTRIC ACTUATOR TYPE NA / NA-X

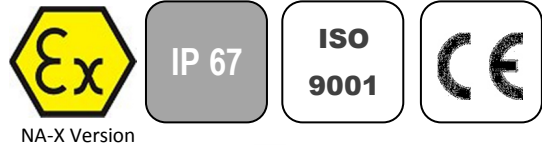
GENERAL CHARACTERISTICS

The NA electric actuator is dedicated to the actuation of industrial ¼ turn valve. The maximum torque value is 2500 Nm. With a compact design, an IP 67 cast aluminium enclosure and an epoxy protection, the NA electric actuator is especially adapted to the actuation of ball valves and butterfly valves in dusty outdoor or indoor areas. It is equipped with a declutchable manual override and a torque limiter (except on NA06 and NA09). Many options are available. The NA-X version can be used in explosive areas 1 and 2 and complies with the EN 15714-2 standard.

AVAILABLE MODELS

NA06: 60 Nm to NA250: 2500 Nm

Voltage: 230 V AC, 400 V AC, 24 V AC, 24 V DC



LIMITS OF USE

Version	NA	NA-X
Protection rating	IP 67	
Temperature range	-20 °C / +70 °C	-20 °C / +55 °C
Service	S2-70%	
Explosive areas	Forbidden	Zone 1 and 2



MECHANICAL CHARACTERISTICS

Gears	Treated steel pinions
Rotation angle	90° +/- 5°
Declutching	Lever
Manual override	Handwheel
Torque limiter	Except for NA06 and NA09

Electric actuator	NA06	NA09	NA15	NA28	NA38	NA60	NA100	NA150	NA200	NA250
Torque	60 Nm	90 Nm	150 Nm	280 Nm	380 Nm	600 Nm	1000 Nm	1500 Nm	2000 Nm	2500 Nm
Operating time	17 s	17 s	20 s	24 s	24 s	29 s	29 s	87 s	87 s	87 s
ISO 5211 pad	F07	F07	F07/F10	F10/F12	F10/F12	F12/F14	F12/F14	F14/F16	F14/F16	F14/F16
Star drive nut	17	17	17	22	27	27	27	36	36	46

DIRECTIVES AND DEVELOPMENT STANDARDS APPLICABLE

Machine 2006/42/EC	Actuator attachments : ISO 5211
Low Voltage Directive 2006/95/EC	Electromagnetic compatibility 2004/108/EC
ATEX 1994/9/EC: ATEX II 2 G EEx d II B T4 – NEMKO 03ATEX1342X (NA-X electric actuator only)	

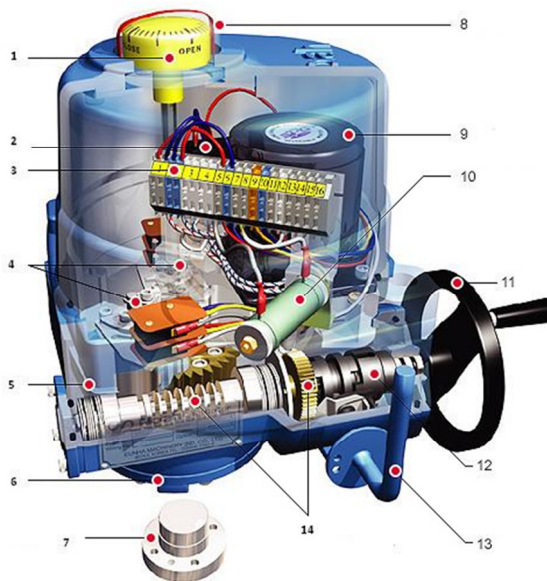
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ELECTRIC ACTUATOR TYPE NA / NA-X

CONSTRUCTION


1	Position indicator	Polycarbonate
2	Condenser	
3	Terminal block	
4	Limit switches	
5	Body / cover	Aluminium alloy
6	Base / enclosure	Aluminium alloy
7	Drive nut	Steel
8	Dome	Polycarbonate
9	Electric motor	
10	Anti-condensation heater	
11	Handwheel	Steel
12	Manual override	Steel
13	Declutching lever	Steel
14	Worm gear	Steel



ELECTRICAL CHARACTERISTICS

Motor Protection	Thermal cut-out		Anti-condensation	20 W heater						
Limit switches	2 adjustable switches		Electrical connection	2 gland packs M20x1.5						
Auxiliary switches	2 dry adjustable switches									
Electric actuator	NA06	NA09	NA15	NA28	NA38	NA60	NA100	NA150	NA200	NA250
Power	15 W	25 W	40 W	40 W	60 W	90 W	180 W	98 W	180 W	180 W
Voltage	380 V – 50 Hz									
Hold current	0.13 A	0.18 A	0.3 A	0.3 A	0.33 A	0.52 A	0.73 A	0.52 A	0.73 A	0.73 A
Inrush current	0.23 A	0.36 A	0.59 A	0.74 A	0.78 A	1.24 A	1.68 A	0.78 A	1.68 A	1.68 A
Voltage	220 V – 50 Hz									
Hold current	0.45 A	0.58 A	0.95 A	0.95 A	1.3 A	1.5 A	2.15 A	1.5 A	2.15 A	2.15 A
Inrush current	0.63 A	0.89 A	1.12 A	1.37 A	1.85 A	2.34 A	3.4 A	2.34 A	3.4 A	3.4 A
Voltage	24 V – 50 Hz									
Hold current	3.2 A	4.3 A	6.5 A	8.1 A						
Inrush current	6 A	8 A	12 A	14 A						
Voltage	24 V DC									
Hold current	2.2 A	3.5 A	4.5 A	6.5 A						
Inrush current	4.1 A	4.1 A	6.6 A	13.8 A						

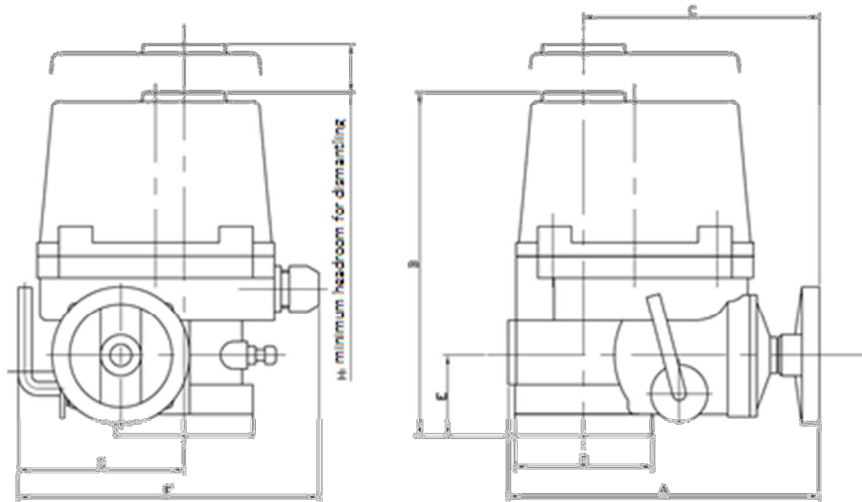
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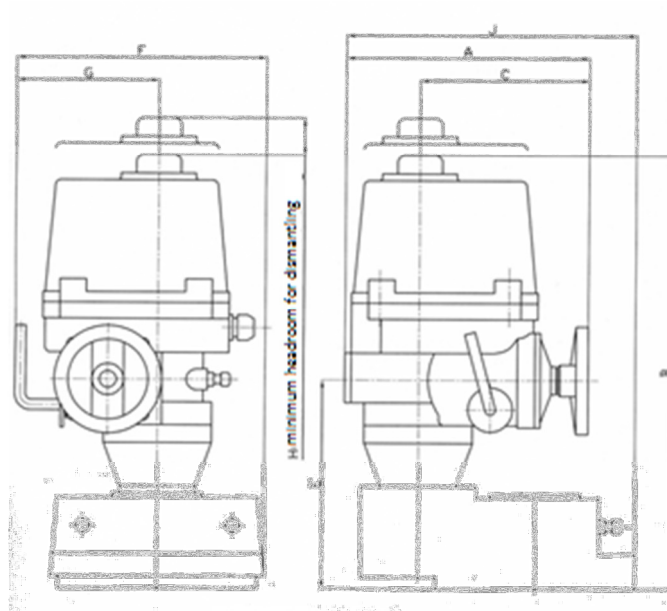
ELECTRIC ACTUATOR TYPE NA / NA-X

DIMENSIONS (mm)

NA06 to NA100




NA150 to NA250



NA	A	B	C	D	E	F	G	H
NA06 - NA09	231	255	175	102	60	223	113	108
NA15	261	255	184	120	60	266	139	108
NA28 - NA38	285	302	202	145	70	300	159	130
NA60 - NA100	325	343	226	175	78	349	191	178
NA150 - NA200 - NA250	325	556	226	-	273	388	191	178

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ELECTRIC ACTUATOR TYPE NA / NA-X

OPTIONS

1	NAPIU : feedback potentiometer version
2	NACPT: 4-20 mA position transmitter version
3	NAPCU: 0-10, 2-10 V, 2-20 mA, 4-20 mA regulation card version
4	NALCU: local control version
5	NARBP: integrated battery emergency shutdown device version
6	Earthquake simulation test
7	Low temperature version (-40 °C)
8	IP 68 version
9	Rotation angles 120°, 135°, 180°, 270°

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