

1150-1158 BUTTERFLY VALVES + NA ELECTRIC ACTUATOR

CHARACTERISTICS

The butterfly valves 1150 to 1158 are dedicated to the automatic opening/shut-off of various fluid pipes. It has a ductile iron body. Thanks to various material possibilities for both the butterfly and the sleeve, it can be used in different applications. The wafer type body enables the mounting between PN10/16 or ANSI 150 flanges. The ISO 5211 pad enables the direct mounting of the NA electric actuator. It is perfectly adapted for an indoor or outdoor industrial use.



AVAILABLE ITEMS

DN 100 to DN 350

Flanged connections RF PN10/16 and ANSI 150

Voltage: 24 V AC/DC and 230 V AC

Ref.	Butterfly	Sleeve	Application examples	Min. TS	Max. TS
1141	Ductile iron	NBR	Natural gas –NF-ROB GAZ 5 bar Certification	-10 °C	+60 °C
1147	Stainless steel 316	Carboxylated NBR.	Powdery – abrasive material	-10 °C	+80 °C
1150	Ductile iron	EPDM	Cold water – warm water (max 110 °C) - ACS	-10 °C	+90 °C
1151	Stainless steel 316	NBR	Hydrocarbons, natural gas, compressed air	-10 °C	+80 °C
1152	Ductile iron	NBR	Hydrocarbons, natural gas, compressed air	-10 °C	+80 °C
1153	Stainless steel 316	EPDM	Demineralised water – Alkaline materials (max 110 °C) - ACS	-10 °C	+90 °C
1154	Stainless steel 316	FKM	Compatible aggressive fluids, oil	-5 °C	+150 °C
1156	Stainless steel 316	White NBR	Compatible aggressive fluids	-10 °C	+80 °C
1157	Stainless steel 316	SILICONE	Oils and greases	-15 °C	+150 °C
1157A	Polished Stainless steel	Food grade silicone	Food fluids (FDA certification)	-15 °C	+150 °C
1158	Aluminium bronze	NBR	Sea water	-10 °C	+80 °C

LIMITS OF USE

Max. allowable pressure (PS)	16 bar until DN 200 10 bar until DN 400
Min./max. allowable temperature (TS)	According to the upper chart
Room temperature	-15 °C / +70 °C
Service	S2 - 70%



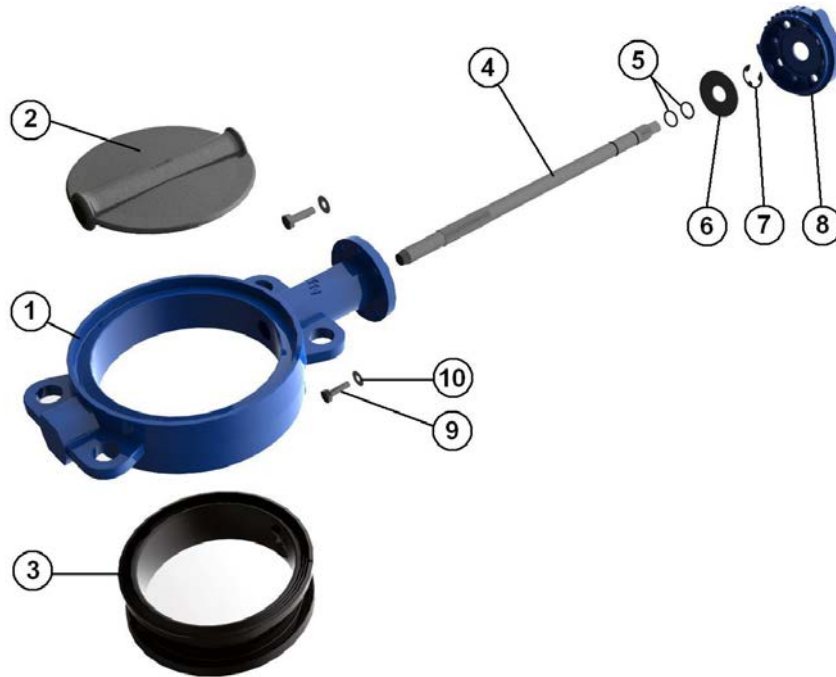
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DIRECTIVES AND DEVELOPMENT STANDARDS APPLICABLE


	Standard	Notified bodies		Standard
97/23/EC Pressure Equipment Directive	Cat. III modules B+C1	0409	Valve testing	ISO 5208
ATEX Directive	II 2G/D Tx zones 1,2,21 and 22	0038	Face-to-face dimension	ISO 5752 series 20
Flanges dimension	EN 1092-1		Sanitary compliance	ACS N° 07 ACC LY 504
Actuator attachment	ISO 5211			



CONSTRUCTION

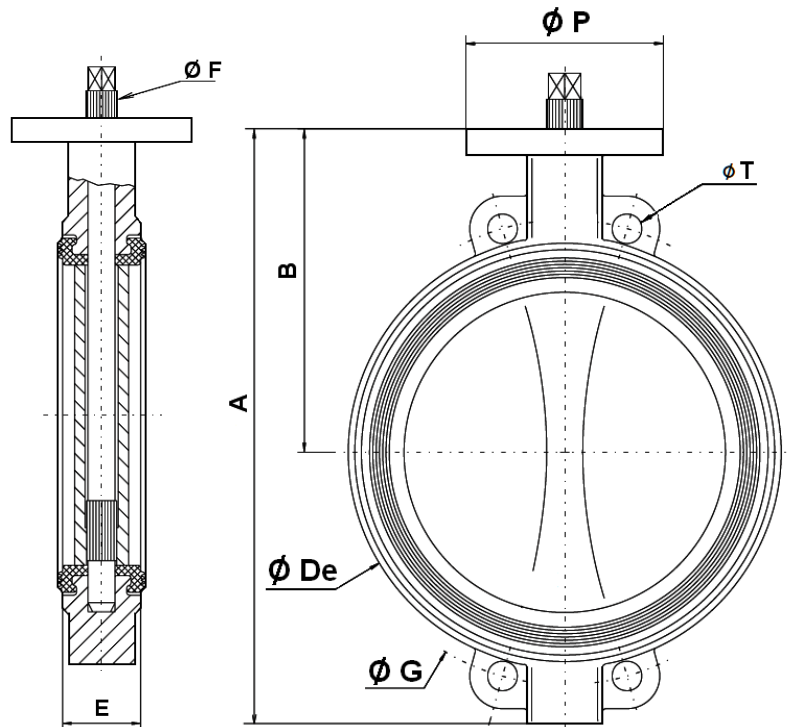
#	Item	1147	1150	1151	1152	1153	1154	1156	1157	1158
1	Body	Ductile iron GS EN GJS-500-7								
2	Butterfly DN32-100	Stainless steel A351 CF8M /1.4408								
3	Butterfly DN125-400	Stainless steel	Ductile iron GS EN GJS-500-7			Stainless steel A351 CF8M /1.4408				Aluminium bronze
3	Sleeve	NBR C.	EPDM	NBR	NBR	EPDM	FKM	White NBR	Silicone	NBR
4	Stem	SS 304	SS 420	SS 304	SS 420	SS 304	SS 304	SS 304	SS 304	SS 304
5	O-ring	NBR	EPDM	NBR	NBR	EPDM	FKM	NBR	EPDM	NBR
6	Ring	Steel								
7	Securing rings / Circlips	Steel								
8	ISO pad	Aluminium								
9	Screw	Steel 5.6								
10	Washer	Steel								

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DIMENSIONS (mm)



DN	32-40	50	65	80	100	125	150	200	250	300	350	400
A	206	228	243	266	294	324	349	438	461	523	582	645
B	140	156	162	170	185	207	216	256	248	280	300	340
Ø De	82	102	119	135	155	185	208	270	328	381	437	486
E	33	43	46	46	52	56	56	60	68	78	78	102
Ø F	10.5	10.5	14.5	16.5	16.5	18.5	18.5	22.5	25.5	30.5	30.5	35.5
Ø G	110	125	145	160	180	210	240	295	350	400	460	515
Ø P	88	88	88	88	88	105	105	105	150	150	170	170
Ø T	18	18	18	18	18	18	23	23	23	23	23	17
Weight (kg)	2.46	3.66	4.40	4.60	6	7.60	9.20	14.7	24.7	33	39	52

FLOW FACTOR Kv (m³/h)

DN	32-40	50	65	80	100	125	150	200	250	300	350	400
Kv	70	109	200	334	551	901	1427	2383	3825	5659	8177	10659

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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 ($=\Delta P$)

The actuator is mounted:

- Directly with an aluminium actuation pad for DN 100 to 200
- With stainless steel bracket and coupler according to the EN 15081 standard for DN 250 and 300






DN	Actuator	Power	Operating Time*	Standard equipment of the actuator
32 to 80	Refer to 1150 + SA actuator			
100	NA06	15 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 NA150) Electrical connection: 2 gland packs M20 x 1.5 Manual override by declutchable handwheel
125	NA09	25 W	17 s	
150	NA15	40 W	20 s	
200	NA15	40 W	20 s	
250	NA28	40 W	20 s	
300	NA38	60 W	24 s	
350	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 ($=\Delta P$)			
7	NA electric actuator with a declutchable manual override by handwheel			

VALVE OPTIONS

1	Carbon steel body, stainless steel 304 and 316, bronze and aluminium
2	Carbon steel butterfly, stainless steel 304 and 316, bronze aluminium, uranus, hastelloy
3	Hypalon seats, steam silicone, white EPDM, natural rubber, vulcanized neoprene
4	Stainless steel 420, 304, 316 stems, hastelloy

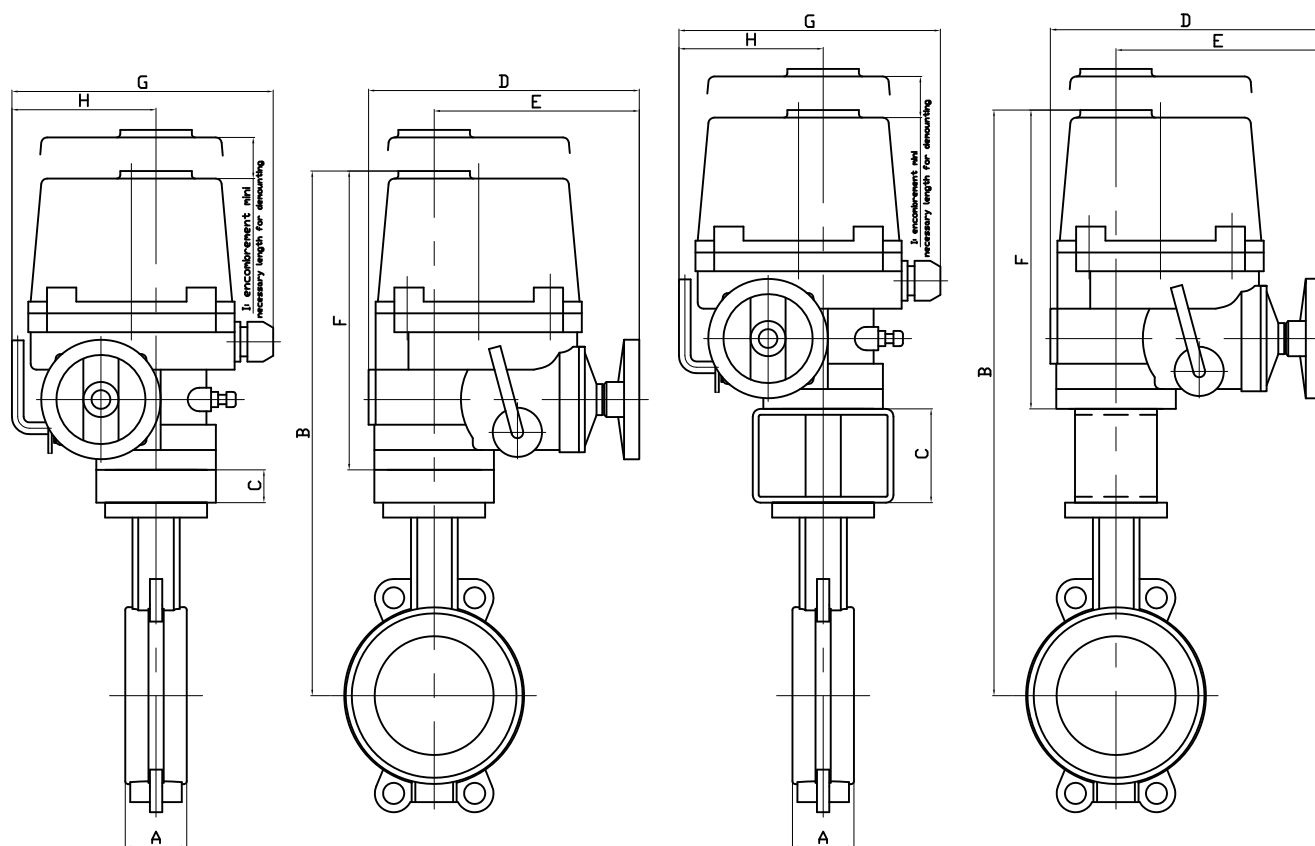
ATEX ZONES INSTALLATION

It is compulsory to specify if the installation of the automatic valve 1150+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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** : montage avec platine H=80mm

NA	06	09	15	15	28	38	60
DN	100	125	150	200	250	300	350
A	52	56	56	60	68	78	78
B	453	475	484	524	630**	662**	723**
C	28	28	28	28	80	80	80
D	231	231	261	261	285	285	325
E	175	175	184	184	202	202	226
F	255	255	255	255	302	302	343
G	223	223	266	266	300	300	349
H	113	113	139	139	159	159	191
I	108	108	108	108	130	130	178
KG	17.3	19	22.8	25.7	45	55	70.4

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

				Ajout poids - Suppression NA100	31/08/2011	A
Ech:	Date :05/10/2006	Dessiné par : L.L	Tolérances générales : +/- 0.2	Modifications	Date	REV.
ROBINET A PAPILLON 1149-1158 + SERVOMOTEUR NA(NAX)06-60				Matière :		
				Poids (Kg) :		
 45, Rue du Ruisseau 38297 SAINT QUENTIN FALLAVIER				Traitement : SANS		
				Plan n° Ens 1008-A		

ELECTRIC ACTUATOR TYPE NA / NA-X

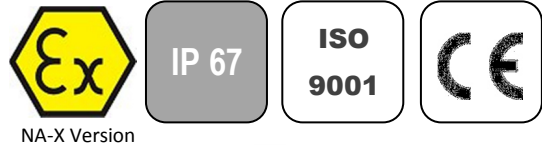
GENERAL CHARACTERISTICS

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)	

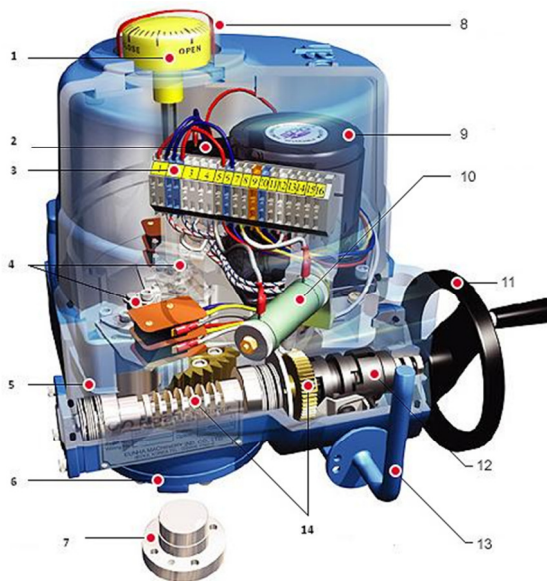
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		Date	06/2012

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						

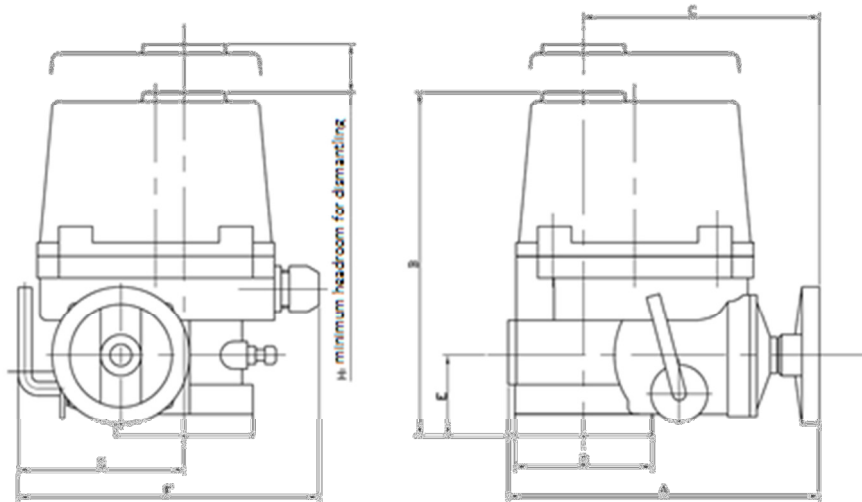
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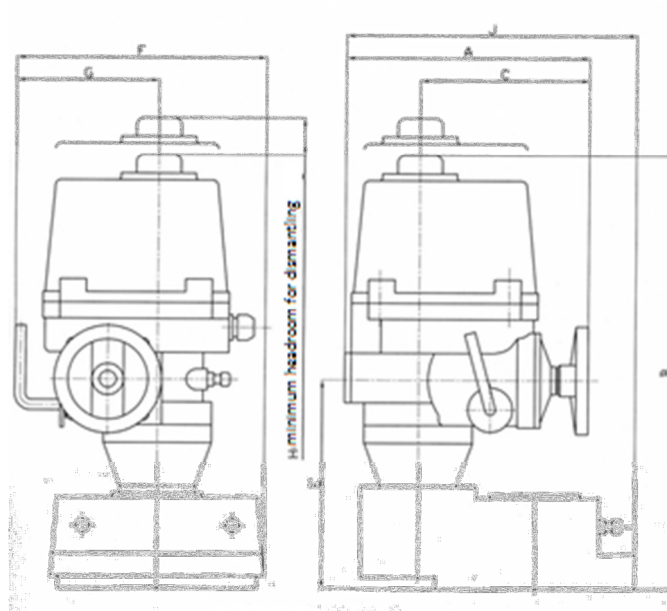
ELECTRIC ACTUATOR TYPE NA / NA-X

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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