die erste®

Butterfly Valve

Concentric Butterfly Valve to DIN/EN
Lug Type
PN10, DN40 ~ DN500

Series 81L(E)-PN10

Features

- Suitable for use in HVAC, irrigation, industrial applications where positive shutoff is required
- Single through-put shaft provides most economical pricing
- 10 position lever or gear operation
- Alloy material available on request

Standards

- End dimensions acc. to DIN2633
- Inspection & test acc. to EN12266

Limitation

- Do not use EPDM when hydrocarbons are present.
- Kindly anticipate increased torque for PTFE coated disc + PTFE seat option; gear operation recommended for sizes ≥ 4".
- End-of-line service at half rating

PMA: See Table A

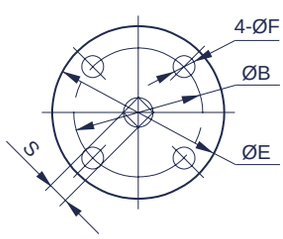
TMA: See Table B

Selection:

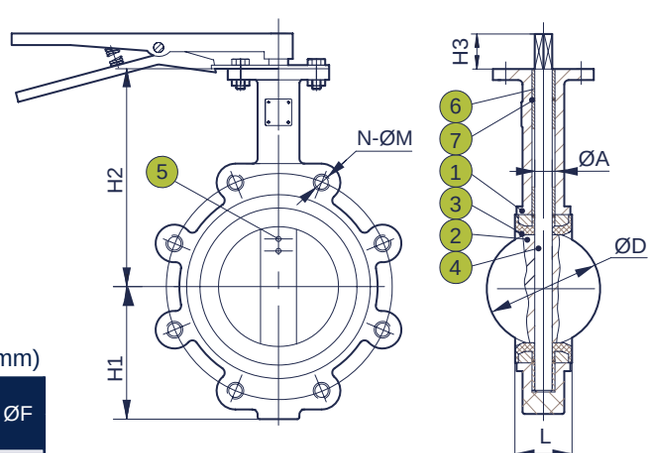
Material of Body:
CF8M/CF8/CI/DI

Options

- Double "half pin" style available for increased performance and lifecycle
- Coated disc available in: rubber, PTFE, nylon



DN40-DN500



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Materials List		
NO	PARTS NAME	MATERIAL
1	BODY	CF8M / CF8 / CI / DI
2	DISC*	CF8M / CF8 / CI / DI
3	SEAT	NBR / EPDM / VITON
4	STEM	SS410
5	TAPER PIN	SS
6	BUSHING	PTFE
7	O-RING	EPDM

*Coated disc option available.
Enclosed a condensed table, for complete options, contact DIE ERSTE directly.

Dimensions (mm)

Size		H1	H2	H3	L	ØD	ØC	N-ØM	ØA	S	ØE	ØB	ØF
IN	DN												
1½"	40	70	110	32	35	42.4	110	4-M16	12.7	9	92	70	9
2"	50	76	162	32	45	52.9	125	4-M16	12.7	9	92	70	9
2½"	65	80	175	32	48	64.6	145	4-M16	12.7	9	92	70	9
3"	80	95	181	32	49	79.04	160	4-M16	12.7	9	92	70	9
4"	100	114	200	32	55	104.4	180	8-M16	15.8	11	92	70	9
5"	125	127	213	32	58	129.5	210	8-M16	19.05	14	92	70	9
6"	150	140	225	32	59	155.8	240	8-M20	19.05	14	92	70	9
8"	200	173	260	36	64	202.7	295	8-M20	22.2	17	125	102	11
10"	250	203	292	36	70	250.7	350	12-M20	28.6	22	125	102	11
12"	300	237	337	36	80	301.9	400	12-M20	31.8	22	150	125	13
14"	350	279	368	45	80	333.3	460	16-M20	31.8	22	150	125	13
16"	400	304	400	51	90	389.6	515	16-M20	33.3	22	210	165	22
18"	450	362	422	51	109	439.9	565	20-M24	38.0	27	210	165	22
20"	500	368	479	64	135	491.6	620	20-M24	41.15	27	210	165	22

Table B: Temperature Rating	
SEAT	APPLICABLE TEMPERATURE
NBR	-20°C to +80°C(-4°F to 176°F)
EPDM	-20°C to +120°C(-4°F to 248°F)
VITON	-10°C to +200°C(+14°F to 392°F)
PTFE	-20°C to +150°C(-4°F to 302°F)

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Butterfly Valve

Concentric Butterfly Valve to DIN/EN
Lug Type
PN10, DN600 ~ DN1000

Series 81L(E)-PN10

Features

- Suitable for use in HVAC, irrigation, industrial applications where positive shutoff is required
- Single through-put shaft provides most economical pricing
- 10 position lever or gear operation
- Alloy material available on request

Standards

- End dimensions acc. to DIN2633
- Inspection & test acc. to EN12266

Limitation

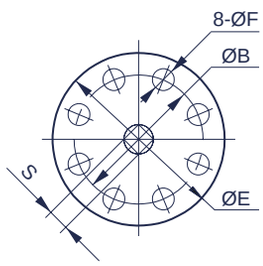
- Do not use EPDM when hydrocarbons are present.
- Kindly anticipate increased torque for PTFE coated disc + PTFE seat option; gear operation recommended for sizes ≥ 4".
- End-of-line service at half rating

Options

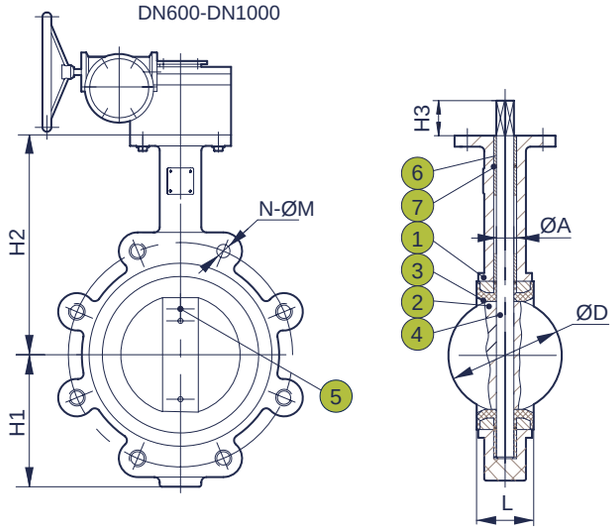
- Double "half pin" style available for increased performance and lifecycle
- Coated disc available in: rubber, PTFE, nylon

PMA: See Table A
TMA: See Table B
Selection:

Material of Body:
CF8M/CF8/CI/DI



DN600-DN1000



Materials List		
NO	PARTS NAME	MATERIAL
1	BODY	CF8M / CF8 / CI / DI
2	DISC*	CF8M / CF8 / CI / DI
3	SEAT	NBR / EPDM / VITON
4	STEM	SS410
5	TAPER PIN	SS
6	BUSHING	PTFE
7	O-RING	EPDM

*Coated disc option available.
Enclosed a condensed table, for complete options, contact DIE ERSTE directly.

Table A: Maximum Pressure Rating			
SIZE	RUBBER SEAT	PTFE SEAT	PTFE SEAT+ PTFE COATED DISC
≤ DN150 (6")	13.7 bar (200psi)	13.7 bar (200psi)	10.3 bar (150 psi)
DN200 (8")	13.7 bar (200psi)	10.3 bar (150 psi)	10.3 bar (150 psi)
DN250(10")~ DN300(12")	13.7 bar (200psi)	10.3 bar (150 psi)	6.9 bar (100 psi)
DN350(14")~ DN600(24")	10.3 bar (150 psi)	6.9 bar (100 psi)	6.9 bar (100 psi)
≥ DN600 (24")	6.9 bar (100 psi)	-	-
Gear Operation Recommendation	≥ DN300 (12")	≥ DN150 (6")	≥ DN100 (4")

Dimensions (mm)

Size		H1	H2	H3	L	ØD	ØC	N-ØM	ØA	S	ØE	ØB	ØF
IN	DN												
24"	600	444	562	70	156	592.3	725	20-M27	50.65	36	300	254	18
28"	700	520	630	70	156	694.1	840	24-M27	63.35	40	300	254	18
30"	750	621	648	72	169	744.2	-	-	63.35	40	300	254	18
32"	800	590	690	72	169	794.2	950	24-M30	63.35	40	300	254	18
36"	900	623	768	77	211	863.4	1050	28-M30	74.25	53	300	254	18
40"	1000	670	850	77	211	963.4	1160	28-M33	84.2	60	300	254	18

Table B: Temperature Rating	
SEAT	APPLICABLE TEMPERATURE
NBR	-20°C to +80°C(-4°F to 176°F)
EPDM	-20°C to +120°C(-4°F to 248°F)
VITON	-10°C to +200°C(+14°F to 392°F)
PTFE	-20°C to +150°C(-4°F to 302°F)

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Butterfly Valve

Concentric Butterfly Valve to DIN/EN
Lug Type
PN16, DN40 ~ DN500

Series 81L(E)-PN16

Features

- Suitable for use in HVAC, irrigation, industrial applications where positive shutoff is required
- Single through-put shaft provides most economical pricing
- 10 position lever or gear operation
- Alloy material available on request

Standards

- End dimensions acc. to DIN2633
- Inspection & test acc. to EN12266

Limitation

- Do not use EPDM when hydrocarbons are present.
- Kindly anticipate increased torque for PTFE coated disc + PTFE seat option; gear operation recommended for sizes ≥ 4".
- End-of-line service at half rating

PMA: See Table A

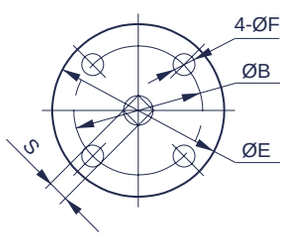
TMA: See Table B

Selection:

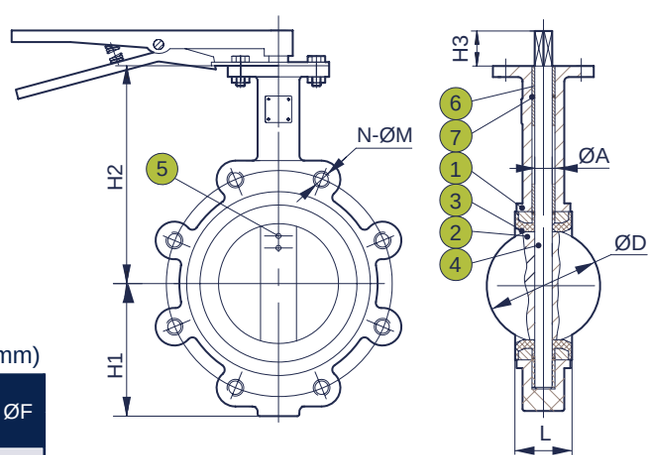
Material of Body:
CF8M/CF8/CI/DI

Options

- Double "half pin" style available for increased performance and lifecycle
- Coated disc available in: rubber, PTFE, nylon



DN40-DN500



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Materials List		
NO	PARTS NAME	MATERIAL
1	BODY	CF8M / CF8 / CI / DI
2	DISC*	CF8M / CF8 / CI / DI
3	SEAT	NBR / EPDM / VITON
4	STEM	SS410
5	TAPER PIN	SS
6	BUSHING	PTFE
7	O-RING	EPDM

*Coated disc option available.
Enclosed a condensed table, for complete options, contact DIE ERSTE directly.

Dimensions (mm)

Size		H1	H2	H3	L	ØD	ØC	N-ØM	ØA	S	ØE	ØB	ØF
IN	DN												
1½"	40	70	110	32	35	42.4	110	4-M16	12.7	9	92	70	9
2"	50	76	162	32	45	52.9	125	4-M16	12.7	9	92	70	9
2½"	65	80	175	32	48	64.6	145	4-M16	12.7	9	92	70	9
3"	80	95	181	32	49	79.04	160	8-M16	12.7	9	92	70	9
4"	100	114	200	32	55	104.4	180	8-M16	15.8	11	92	70	9
5"	125	127	213	32	58	129.5	210	8-M16	19.05	14	92	70	9
6"	150	140	225	32	59	155.8	240	8-M20	19.05	14	92	70	9
8"	200	173	260	36	64	202.7	295	12-M20	22.2	17	125	102	11
10"	250	203	292	36	70	250.7	355	12-M24	28.6	22	125	102	11
12"	300	237	337	36	80	301.9	410	12-M24	31.8	22	150	125	13
14"	350	279	368	45	80	333.3	470	16-M24	31.8	22	150	125	13
16"	400	304	400	51	90	389.6	525	16-M27	33.3	22	210	165	22
18"	450	362	422	51	109	439.9	585	20-M27	38.0	27	210	165	22
20"	500	368	479	64	135	491.6	650	20-M30	41.15	27	210	165	22

Table B: Temperature Rating	
SEAT	APPLICABLE TEMPERATURE
NBR	-20°C to +80°C(-4°F to 176°F)
EPDM	-20°C to +120°C(-4°F to 248°F)
VITON	-10°C to +200°C(+14°F to 392°F)
PTFE	-20°C to +150°C(-4°F to 302°F)

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Butterfly Valve

Concentric Butterfly Valve to DIN/EN
Lug Type
PN16, DN600 ~ DN1000

Series 81L(E)-PN16

Features

- Suitable for use in HVAC, irrigation, industrial applications where positive shutoff is required
- Single through-put shaft provides most economical pricing
- 10 position lever or gear operation
- Alloy material available on request

Standards

- End dimensions acc. to DIN2633
- Inspection & test acc. to EN12266

Limitation

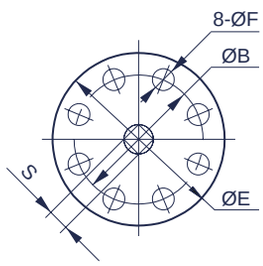
- Do not use EPDM when hydrocarbons are present.
- Kindly anticipate increased torque for PTFE coated disc + PTFE seat option; gear operation recommended for sizes ≥ 4".
- End-of-line service at half rating

Options

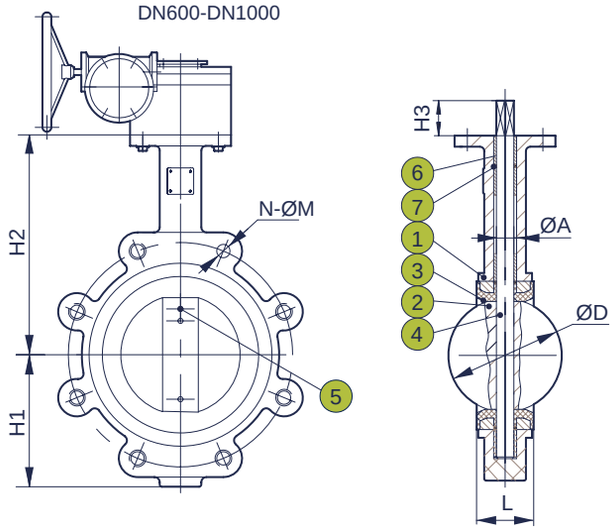
- Double "half pin" style available for increased performance and lifecycle
- Coated disc available in: rubber, PTFE, nylon

PMA: See Table A
TMA: See Table B
Selection:

Material of Body:
CF8M/CF8/CI/DI



DN600-DN1000



Materials List		
NO	PARTS NAME	MATERIAL
1	BODY	CF8M / CF8 / CI / DI
2	DISC*	CF8M / CF8 / CI / DI
3	SEAT	NBR / EPDM / VITON
4	STEM	SS410
5	TAPER PIN	SS
6	BUSHING	PTFE
7	O-RING	EPDM

*Coated disc option available.
Enclosed a condensed table, for complete options, contact DIE ERSTE directly.

Table A: Maximum Pressure Rating			
SIZE	RUBBER SEAT	PTFE SEAT	PTFE SEAT+ PTFE COATED DISC
≤ DN150 (6")	13.7 bar (200psi)	13.7 bar (200psi)	10.3 bar (150 psi)
DN200 (8")	13.7 bar (200psi)	10.3 bar (150 psi)	10.3 bar (150 psi)
DN250(10")~ DN300(12")	13.7 bar (200psi)	10.3 bar (150 psi)	6.9 bar (100 psi)
DN350(14")~ DN600(24")	10.3 bar (150 psi)	6.9 bar (100 psi)	6.9 bar (100 psi)
≥ DN600 (24")	6.9 bar (100 psi)	-	-
Gear Operation Recommendation	≥ DN300 (12")	≥ DN150 (6")	≥ DN100 (4")

Dimensions (mm)

Size		H1	H2	H3	L	ØD	ØC	N-ØM	ØA	S	ØE	ØB	ØF
IN	DN												
24"	600	444	562	70	156	592.3	770	20-M33	50.65	36	300	254	18
28"	700	520	630	70	156	694.1	840	24-M33	63.35	40	300	254	18
30"	750	621	648	72	169	744.2	-	-	63.35	40	300	254	18
32"	800	590	690	72	169	794.2	950	24-M36	63.35	40	300	254	18
36"	900	623	768	77	211	863.4	1050	28-M36	74.25	53	300	254	18
40"	1000	670	850	77	211	963.4	1170	28-M39	84.2	60	300	254	18

Table B: Temperature Rating	
SEAT	APPLICABLE TEMPERATURE
NBR	-20°C to +80°C(-4°F to 176°F)
EPDM	-20°C to +120°C(-4°F to 248°F)
VITON	-10°C to +200°C(+14°F to 392°F)
PTFE	-20°C to +150°C(-4°F to 302°F)

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Butterfly Valve

Concentric Butterfly Valve to ANSI/ASME Lug Type

CLASS125/CLASS150, 1½" ~ 20"

Series 81L(E)-CL125/CL150

Features

- Suitable for use in HVAC, irrigation, industrial applications where positive shutoff is required
- Single through-put shaft provides most economical pricing
- 10 position lever or gear operation
- Alloy material available on request

Standards

- End dimensions acc. to B16.5 (<28") and B16.47A (≥28")
- Inspection & test acc. to API598

Limitation

- Do not use EPDM when hydrocarbons are present.
- Kindly anticipate increased torque for PTFE coated disc + PTFE seat option; gear operation recommended for sizes ≥ 4".
- End-of-line service at half rating

PMA: See Table A

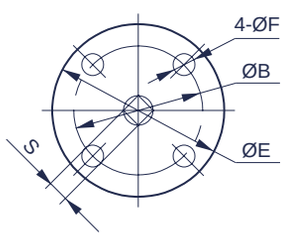
TMA: See Table B

Selection:

Material of Body:
CF8M/CF8/CI/DI

Options

- Double "half pin" style available for increased performance and lifecycle
- Coated disc available in: rubber, PTFE, nylon

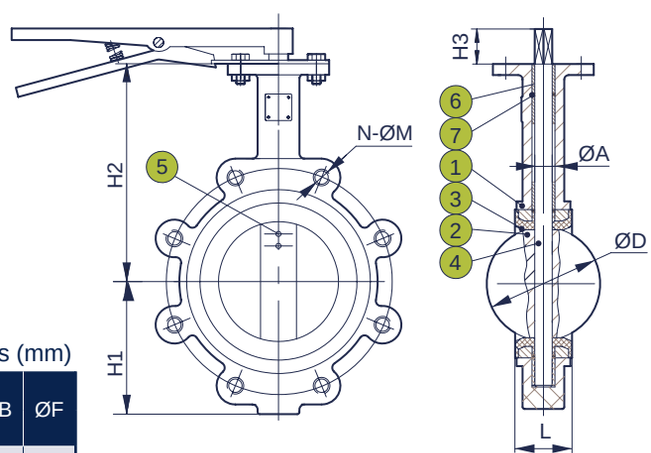


DN40-DN500

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Materials List		
NO	PARTS NAME	MATERIAL
1	BODY	CF8M / CF8 / CI / DI
2	DISC*	CF8M / CF8 / CI / DI
3	SEAT	NBR / EPDM / VITON
4	STEM	SS410
5	TAPER PIN	SS
6	BUSHING	PTFE
7	O-RING	EPDM

*Coated disc option available.
Enclosed a condensed table, for complete options, contact DIE ERSTE directly.



Dimensions (mm)

Size		H1	H2	H3	L	ØD	ØC	N-ØM	ØA	S	ØE	ØB	ØF
IN	DN												
1½"	40	70	110	32	35	42.4	98.5	4-1/2"-13	12.7	9	92	70	9
2"	50	76	162	32	45	52.9	120.5	4-5/8"-11	12.7	9	92	70	9
2½"	65	80	175	32	48	64.6	139.5	4-5/8"-11	12.7	9	92	70	9
3"	80	95	181	32	49	79.04	152.5	4-5/8"-11	12.7	9	92	70	9
4"	100	114	200	32	55	104.4	190.5	8-5/8"-11	15.8	11	92	70	9
5"	125	127	213	32	58	129.5	216.0	8-3/4"-10	19.05	14	92	70	9
6"	150	140	225	32	59	155.8	241.5	8-3/4"-10	19.05	14	92	70	9
8"	200	173	260	36	64	202.7	298.5	8-3/4"-10	22.2	17	125	102	11
10"	250	203	292	36	70	250.7	362.0	12-7/8"-9	28.6	22	125	102	11
12"	300	237	337	36	80	301.9	432.0	12-7/8"-9	31.8	22	150	125	13
14"	350	279	368	45	80	333.3	476.0	12-1"-8	31.8	22	150	125	13
16"	400	304	400	51	90	389.6	539.5	16-1"-8	33.3	22	210	165	22
18"	450	362	422	51	109	439.9	578.0	16-1⅛"-7	38.0	27	210	165	22
20"	500	368	479	64	135	491.6	635.0	20-1⅛"-7	41.15	27	210	165	22

Table B: Temperature Rating	
SEAT	APPLICABLE TEMPERATURE
NBR	-20°C to +80°C(-4°F to 176°F)
EPDM	-20°C to +120°C(-4°F to 248°F)
VITON	-10°C to +200°C(+14°F to 392°F)
PTFE	-20°C to +150°C(-4°F to 302°F)

Butterfly Valve

Concentric Butterfly Valve to ANSI/ASME Lug Type

CLASS125/CLASS150, 24" ~ 40" Series 81L(E)-PN125/CL150

Features

- Suitable for use in HVAC, irrigation, industrial applications where positive shutoff is required
- Single through-put shaft provides most economical pricing
- 10 position lever or gear operation
- Alloy material available on request

Standards

- End dimensions acc. to B16.5 (<28") and B16.47A (≥28")
- Inspection & test acc. to API598

Limitation

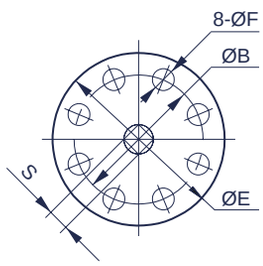
- Do not use EPDM when hydrocarbons are present.
- Kindly anticipate increased torque for PTFE coated disc + PTFE seat option; gear operation recommended for sizes ≥ 4".
- End-of-line service at half rating

Options

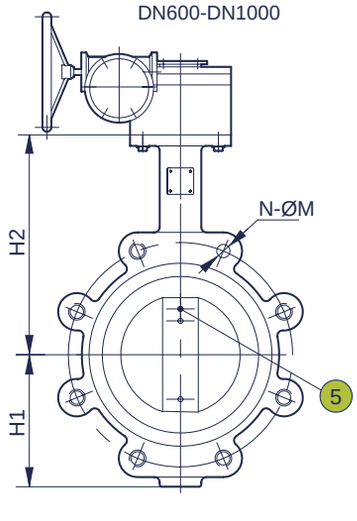
- Double "half pin" style available for increased performance and lifecycle
- Coated disc available in: rubber, PTFE, nylon

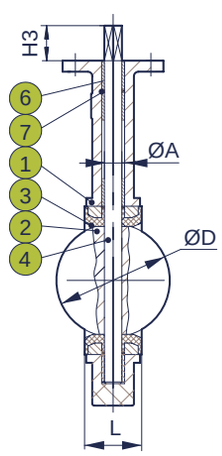
PMA: See Table A
TMA: See Table B
Selection:

Material of Body:
CF8M/CF8/CI/DI



DN600-DN1000





Materials List		
NO	PARTS NAME	MATERIAL
1	BODY	CF8M / CF8 / CI / DI
2	DISC*	CF8M / CF8 / CI / DI
3	SEAT	NBR / EPDM / VITON
4	STEM	SS410
5	TAPER PIN	SS
6	BUSHING	PTFE
7	O-RING	EPDM

*Coated disc option available.
Enclosed a condensed table, for complete options, contact DIE ERSTE directly.

Table A: Maximum Pressure Rating			
SIZE	RUBBER SEAT	PTFE SEAT	PTFE SEAT+ PTFE COATED DISC
≤ DN150 (6")	13.7 bar (200psi)	13.7 bar (200psi)	10.3 bar (150 psi)
DN200 (8")	13.7 bar (200psi)	10.3 bar (150 psi)	10.3 bar (150 psi)
DN250(10")~ DN300(12")	13.7 bar (200psi)	10.3 bar (150 psi)	6.9 bar (100 psi)
DN350(14")~ DN600(24")	10.3 bar (150 psi)	6.9 bar (100 psi)	6.9 bar (100 psi)
≥ DN600 (24")	6.9 bar (100 psi)	-	-
Gear Operation Recommendation	≥ DN300 (12")	≥ DN150 (6")	≥ DN100 (4")

Dimensions (mm)

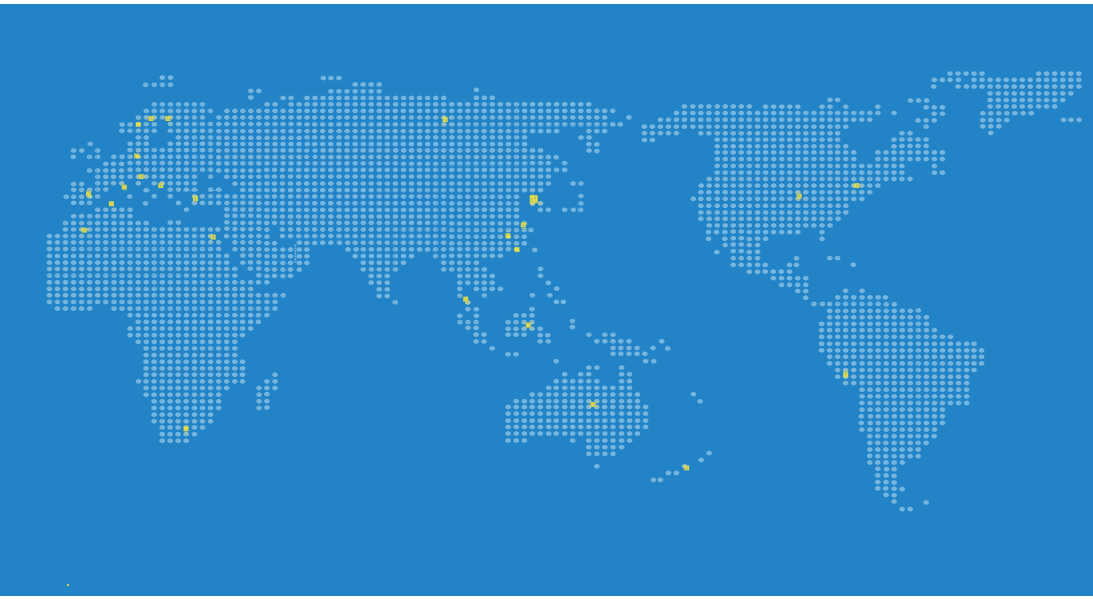
Size		H1	H2	H3	L	ØD	ØC	N-ØM	ØA	S	ØE	ØB	ØF
IN	DN												
24"	600	444	562	70	156	592.3	749.5	20-1¼"-7	50.65	36	300	254	18
28"	700	520	630	70	156	694.1	-	-	63.35	40	300	254	18
30"	750	621	648	72	169	744.2	914.5	28-1¼"-7	63.35	40	300	254	18
32"	800	590	690	72	169	794.2	-	-	63.35	40	300	254	18
36"	900	623	768	77	211	863.4	1086.0	32-1½"-6	74.25	53	300	254	18
40"	1000	670	850	77	211	963.4	-	-	84.2	60	300	254	18

Table B: Temperature Rating	
SEAT	APPLICABLE TEMPERATURE
NBR	-20°C to +80°C(-4°F to 176°F)
EPDM	-20°C to +120°C(-4°F to 248°F)
VITON	-10°C to +200°C(+14°F to 392°F)
PTFE	-20°C to +150°C(-4°F to 302°F)

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NOAH
Actuation

Part-turn Actuator





NOAH ACTUATION CO., LTD

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TEL +82-2-806-4263 / FAX +82-2-806-4266

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Domestic Sales: actuator@emico.co.kr

www.emico.co.kr

N2 BS C E – Ver.A



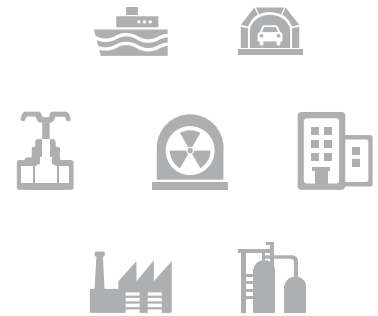
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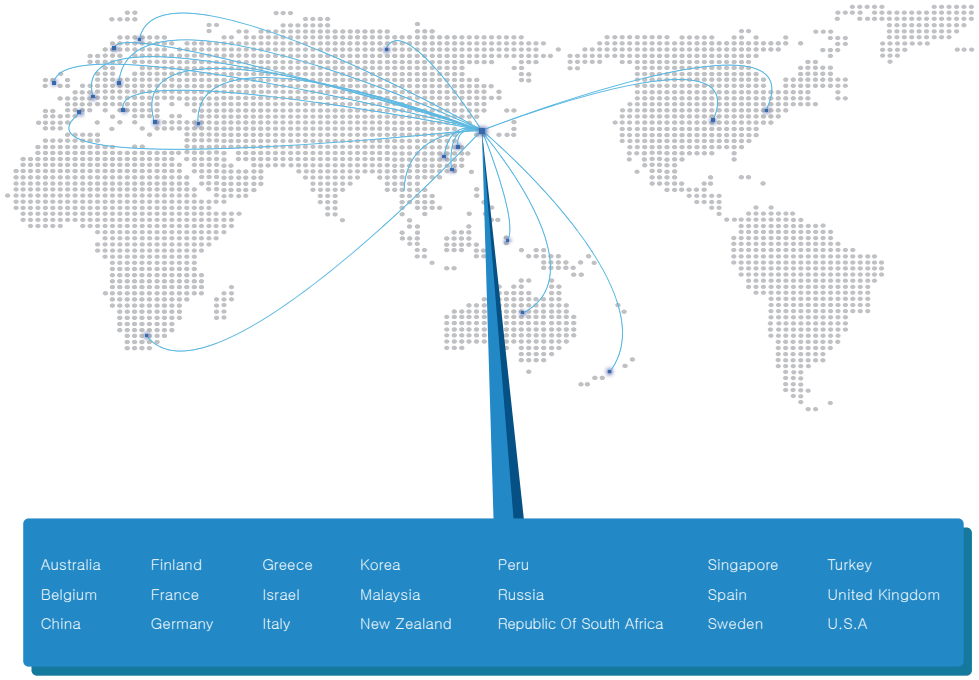
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NOAH, founded in 1977, is the leading manufacturer of electric actuators in Korea and provides the best quality products with high technology and satisfactory services.

NOAH supplies electric actuators especially to buildings, plant, steelworks, power plants over 40 countries as well as domestic sales.
NOAH has launched spring return actuator for the first time in Korea and accelerated to expand market and to satisfy customers' need by specialized products.
We have made concerted efforts with expertise in electric actuators and continuous investment in R&D to be the world best in the market.

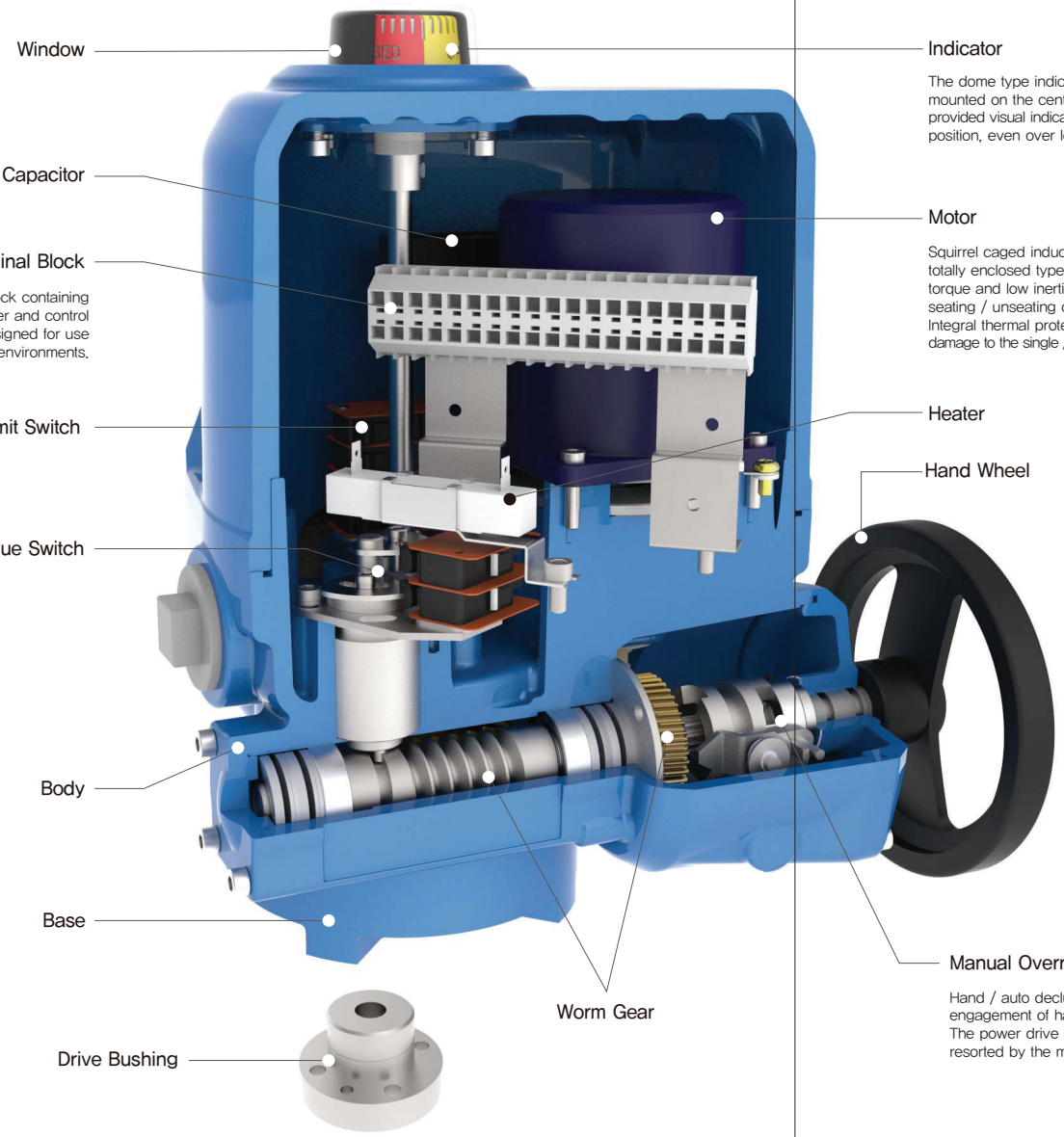
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Configuration



- **SEALING**

Standard enclosure with o-ring sealing is watertight to IEC IP67, NEMA 6. The actuator is available with optional explosion proof enclosure.

- **WIRING**

Electric wiring of control circuit is standardized for single and three phase power supply in a single module. Multiple terminal contacts sufficiently cover additional requirements such as auxiliary contacts for interlocking and other options.

- **COMPONENT ARRANGEMENT**

Mechanical and electrical module can be separated easily to improve assembling, maintenance and alteration of electrical requirements. Actuator has enough internal space for optional accessories.

- **HAND WHEEL**

Size of hand wheel is designed for safe and efficient emergency manual operation.

- **MANUAL OVERRIDE**

Hand / auto declutching lever for hand wheel engagement. The power drive is automatically restored by motor start.

- **ADAPTION**

Base mounting is standard to ISO5211.
Drive bushing is removable for maching to valve stem requirement. The actuator position on the valve can be selected for 4 positions by means of 4 bolt holes in the drive bushing.

- **HEATER**

A space heater inside the actuator prevents condensation due to temperature and weather changes. Standard heater keeps all electrical components in the actuator clean and dry.

- **LIMIT SWITCHES**

The limit switch is activated by means of a simple and yet reliable cam mechanism mounted and driven by the center column. The valve position can be accurately and easily set with the simple adjustable switch mechanism. The set position is permanent and is not affected by over-travel resulting form manual operation.

- **TORQUE SWITCHES**

Cam activated torque switches are easily adjustable to provide over-load protection.

- **SELF LOCKING**

Rolled steel wormgear on aluminium bronze wormwheel self-locks to prevent valve back drive on control signal or power failure.

- **WORM GEAR**

The precision worm and worm wheel mechanism transfers high torque with high efficiency and low sound level (Max 50db), even though small in size. Additional benefits include low backlash and longer life. Various output torques (60N.m~3,500N.m) cater for valves from 2" to 24"

Performance

Type	Max Output Torque		Operating Time (90°/sec)		Rated Current (A) 60Hz							Motor			Duty Cycle	Max Stem Dia	Handle Turns	Weight
	Kg.m	N.m	50Hz	60Hz	DC 12V	DC 24V	AC 110V	AC 220V	AC 230V	AC 380V	AC 440V	DC (W)	AC (W)	Class	S4 (%)	mm		kg
NA006	6	60	18	16	7.3	3.0	0.85	0.42	0.42	0.15	0.15	15	15	F	50	22	8.5	11
NA009	9	90	20	17	8.2	4.3	1.35	0.55	0.55	0.19	0.19	25	25	F	50	22	8.5	11
NA015	15	150	23	20	10.2	4.3	1.75	1.0	1.0	0.3	0.33	40	40	F	50	22	10	14
NA019	19	190	23	20	12	5.0	1.9	1.05	1.05	0.31	0.33	40	40	F	50	22	10	14
NA028	28	280	29	25	14	7.0	2.0	1.05	1.05	0.35	0.32	40	40	F	50	32	13.3	17
NA038	38	380	29	25	19.8	13.5	2.1	1.3	1.3	0.4	0.37	120	60	F	30	32	13.3	17
NA050	50	500	29	25	24.5	14.5	3.8	1.45	1.45	0.51	0.5	120	90	F	25	32	13.3	17
NA060	60	600	38	31	24.7	15.0	2.4	1.6	1.6	0.47	0.48	120	90	F	25	42	15	24
NA080	80	800	38	31	–	16.0	3.15	2.0	2.0	0.62	0.62	120	180	F	25	42	15	25
NA100	100	1000	38	31	–	–	3.5	2.1	2.1	0.7	0.7	–	180	F	25	42	15	25
NA120	120	1200	36	30	–	–	4.0	2.4	2.4	0.9	0.75	–	180	F	25	42	15	25
NA150	150	1500	111	93	–	–	2.4	1.6	1.6	0.47	0.48	–	90	F	25	75	45	65
NA200	200	2000	114	93	–	–	3.15	2.1	2.1	0.62	0.62	–	180	F	25	75	45	65
NA250	250	2500	114	93	–	–	3.5	2.2	2.2	0.7	0.7	–	180	F	25	75	45	65
NA300	300	3000	144	120	–	–	3.15	2.1	2.1	0.62	0.62	–	180	F	25	75	60	65
NA350	350	3500	144	120	–	–	3.5	2.2	2.2	0.7	0.7	–	180	F	25	75	60	65

Standard Specification

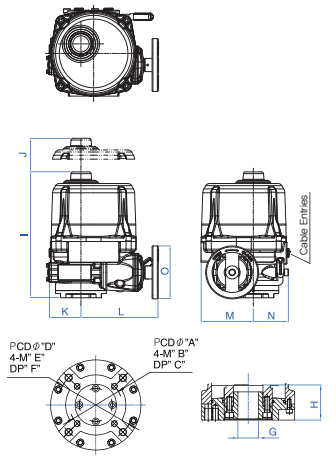
Enclosure	Watertight Ingress Protection 67 NEMA 6	
Ambient Temperation	–20℃ ~ +70℃ , 150℃ / 1hr (Option: –60℃, 400℃ / 1hr)	
Power Supply	110 ~ 230 VAC 50/60Hz , 380 / 440 VAC 50/60Hz (Option : AC 24V , DC 24V, DC 12V)	
Torque Switches	2 Open / Close (Except NA006, NA009)	
Limit Switches	2 Open / Close	
Stall Protection	Built – in Thermal Protection	
Travel Angle	90±5℃	
Indicator	Continuous Position Indicator	
Manual Override	Hand / Auto Declutching Mechanism	
Self Locking	Provided by means of Worm Gearing	
Mechanical Stops	External Adjustable Screws	
Space Heater	20W	
Conduit Entries	NA006~009	2–PF 3/4" (Option : PF 1", NPT 3/4", NPT 1", M20 Pitch1.5, M25 Pitch1.5)
	NA015~350	3–PF 3/4" (Option : PF 1", NPT 3/4", NPT 1", M20 Pitch1.5, M25 Pitch1.5)
Lubrication	Shell Gadus S2 V220 2	
External Material	Aluminium Alloy	
Surface Treatment	Anodizing	
External Coating	Polyester(TGIC–Free)	

Optional Specification

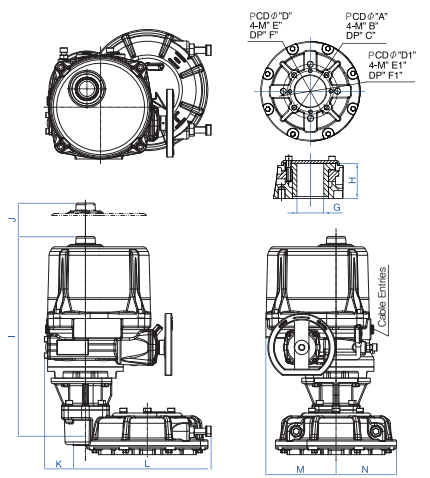
E X P	Explosion Proof / Ex d IIC T4 – S2 15min
IP68	Watertight Enclosure IP68 / NEMA 6P
A L S	Auxiliary Open, Close Limit Switches
A T S	Auxiliary Open, Close Torque Switches (Except NA006, NA009)
P I U	Potentiometer (1K–Ohm)
P C U	Proportional Control Unit Input : DC 4–20mA, 0–5VDC, 0–10VDC, 1–5VDC, 2–10VDC / Output : DC 4–20mA
C P T	Current Position Transmitter / Output : DC 4–20mA
L C U	Local Control Unit
I M S	Integral Motor Starter (On–Off Action)
E X T	Travel Angle (120 °, 135 °, 180 °, 270 °, 300 °)
D C M	Power Supply DC 24V (NA006 ~ NA080), DC 12V (NA006 ~ NA060)
Field–Bus	Profi–Bus, Mod–Bus, Can–Bus

Dimension

MODEL : NA006~NA120



MODEL : NA150~NA350



Type		NA006 NA009	NA015 NA019	NA028 NA038 NA050	NA060, NA080 NA100, NA120	NA150, NA200, NA250, NA300, NA350	
A		PCD70	PCD70	PCD102	PCD125	PCD125	
B		4–M8	4–M8	4–M10	4–M12	4–M12	
C		12	12	18	22	22	
Flange ISO5211		F07	F07	F10	F12	F12	
D	D1	–	PCD102	PCD125	PCD140	PCD140	PCD165
E	E1	–	4–M10	4–M12	4–M16	4–M16	4–M20
F	F1	–	15	18	22	22	25
Flange ISO5211		–	F10	F12	F14	F14	F16
Option		PCD82	PCD82	–	PCD102(F10)	–	
G(MAX)	Key	22	22	32	42	75	
	Square	20	20	26	34	65	
H		46	46	55	62	100	
I		269	298	307	336	547.5	
J		108	108	130	178	178	
K		51	81	83	103	103	
L		179	183	198	217	315	
M		103.5	124	142	176	176	
N		78.5	83	88	103	152	
O		102	102	125	155	170	
Cable Entries		2–PF3/4?	3–PF3/4?	3–PF3/4?	3–PF3/4?	3–PF3/4?	
		2–M20x1.5	3–M20x1.5	3–M20x1.5	3–M20x1.5	3–M20x1.5	
		2–M25x1.5	3–M25x1.5	3–M25x1.5	3–M25x1.5	3–M25x1.5	
		2–NPT1?	3–NPT1?	3–NPT1?	3–NPT1?	3–NPT1?	
		2–NPT3/4?	3–NPT3/4?	3–NPT3/4?	3–NPT3/4?	3–NPT3/4?	

NA Option Specification

Optional

ALS (Auxiliary Limit Switches)

Provide dry contact signal to check valve's positions (cam switches structure).

ATS (Auxiliary Torque Switches)

Provide dry contact signal send to customer's panel as fault signal (cam switches structure).

CPT (Current Position Transmitter)

Combined with P.I.U and transfer output signal (DC 4–20mA) from P.I.U's value of resistance.

- Output Signal : DC 4–20mA



PCU (Proportional Control Unit)

Combined with P.I.U and control the valve's position proportionally by input signal and provide valve's position as their output signal.

- Input signal : DC 4–20mA, 0–5VDC, 0–10VDC, 1–5VDC, 2–10VDC
- Output signal : DC 4–20mA



PIU (Position Indication Unit)

Provide resistance value (0~1KΩ) according to valve's position.

LCU (Local Control Unit)

LCU can be installed either on the actuator or distantly by cable. It can be controlled conveniently as it consists of Local / Remote Switch, Open / Stop / Close Switch and LED Lamp



Field–Bus

Field–Bus can control 126pcs of electric actuators at the same time using communication hardware system based on PC.

(Profi–Bus PROFIBUS, Mod–Bus Modbus, Can–Bus)
For more information please contact noah actuation.





NA Integral Standard Specification

Main Power	110/220 VAC 50/60Hz , 380/440 VAC 50/60Hz	
Internal Control Power	24 VDC	
External Control Power	110 VAC, 24 VDC	
Torque Switches	2 Open / Close (Except NA006, NA009)	
Limit Switches	2 Open / Close	
Control Unit	1. Non Instrusive Push Butttons [Open/ Stop/ Close] 2. Non Instrusive Selector Switch [Remote / Off / Local] 3. Reversing Contactor 4. Phase Discriminator	
Position Indicator	Digital Display (0~100%)	
Remote Dry Contact (Max 250VAC 5A)	1. Full Open / Close 2. Opening / Closing 3. Open / Close Over Torque 4. Monitor (Remote / Local)	
Conduit Entries	Standard	1–PF 1" , 2–PF 3/4"
	Option	1–NPT 1" , 2–NPT 3/4" 1–M25 Pitch 1.5 , 2–M20 Pitch 1.5
Potentiometer	0 ~ 1 KΩ	
Lubrication	Shell Gadus S2 V220 2	
External Materials	Aluminium Alloy	
Surface Treatment	Anodizing	
External Coating	Polyester(TGIC–Free)	

NA Integral Optional Specification

P C U	PCU enables the actuator to be controlled form a distance. Input: DC 4–20mA, DC 0–5VDC, 0–10VDC, 1–5VDC, 2–10VDC / Output: DC 4–20mA
C P T	CPT outputs signal by converting the actuator's place value to ampere. Output Signal: DC 4–20mA
Field Bus	FDB is used when controlling actuators using communication hardware system based on PC. Profi–Bus PROFIBUS, Mod–Bus Modbus, Can–Bus

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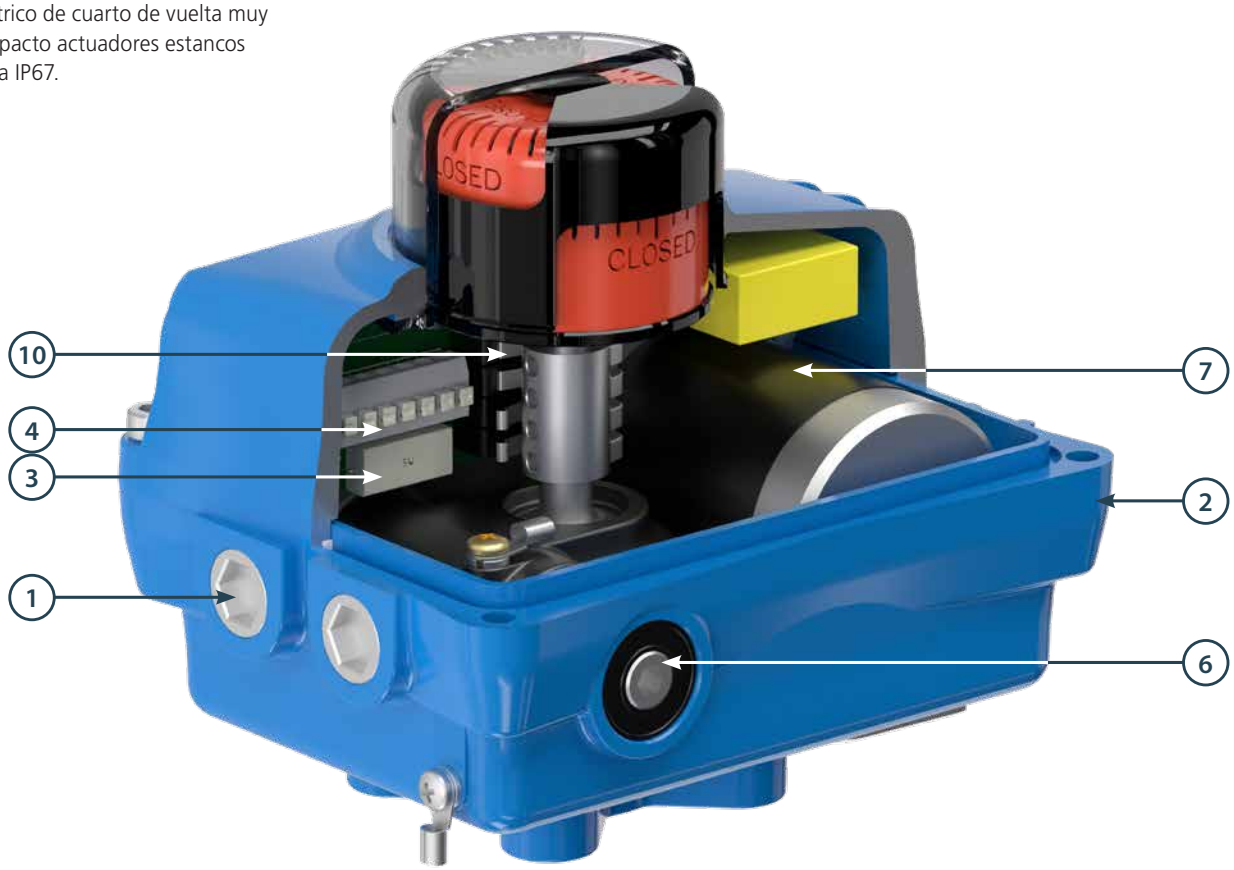
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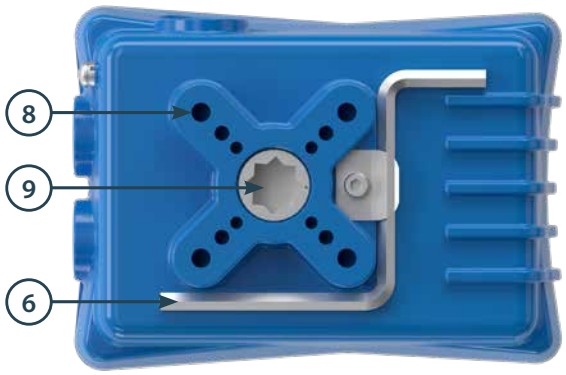
Gama Noah SA

Actuadores eléctricos compactos
de cuarto de vuelta

Noah SA

Eléctrico de cuarto de vuelta muy compacto actuadores estancos hasta IP67.







Interior del actuador Noah SA

1. Entrada de cables

Especificación estándar: 2-PF ½"

Opcional: M20 x Paso 1,5, NPT ½"

2. Caja exterior

La fundición de aleación de aluminio está tratada con película de óxido y luego recubierta de polvo (poliéster, sin TGIC) para proporcionar el mejor rendimiento de protección contra la corrosión en cualquier entorno.

Opcional - A prueba de explosiones: Exd IIB T4
(excepto modelo SA003)

3. Resistencia de caldeo interna

La resistencia interna incorporada evita la condensación y la formación de humedad en el interior del actuador para proteger los componentes internos.

4. Bloque de terminales

La regleta de bornes con estructura WAGO permite un cableado sencillo y es muy resistente a las vibraciones y a la corrosión.



5. Indicador de posición

Una lámpara LED dentro del indicador ilumina la tapa cuando se completan las operaciones de apertura total y cierre total.
El modelo SA estándar dispone de una cubierta abovedada para el indicador de posición, mientras que la versión antideflagrante utiliza un diseño plano muy robusto apto para la certificación antideflagrante.



6. Funcionamiento manual

La gama SA permite el accionamiento manual insertando la llave incluida (fijada en la base del actuador) en el lateral del actuador como se muestra a continuación y girando en sentido horario o antihorario para accionar manualmente el actuador.



7. Motor

Las tensiones de alimentación a elección del cliente incluyen monofásica (110/220 VAC) y 24 VDC. Los actuadores de la gama Noah SA incluyen un protector térmico integrado para proteger el motor en caso de sobrecarga.

8. Base

Dimensiones de montaje según la norma ISO5211, lo que facilita el montaje directo en válvulas y compuertas

Especificaciones estándar - F03, F05, F07

9. Conexión eje de salida / vástago de válvula

La gama SA incluye una conexión estándar de vástago de válvula con 14x14, con insertos opcionales de 11x11 y 9x9 disponibles.

Nota: SA003 : sólo 11x11, 9x9

10. Final de carrera

Se incluye un final de carrera mecánico tipo leva que controla con precisión la posición de las válvulas y los dispositivos giratorios. Su diseño y estructura sencillos permiten un ajuste fácil.

Especificaciones estándar



Grado de estanqueidad	Grado de protección IP67
Temperatura de funcionamiento	Tª amb -20 a +70 °C (-4 a +158 °F)
Alimentación	110 / 220 VAC 50/60 Hz / AC/DC 24 V
Indicador	Tipo cúpula (LED incorporado)
Final de carrera	2 uds Abrir/Cerrar + 2 uds Abrir/Cerrar (250 VAC) Contactos sin tensión
Ángulo de recorrido	90° ±5° (hasta 270° cuando está extendido)
Autobloqueante	Prevención de la rotación inversa mediante tornillo sin fin de dos etapas
Mando manual	Con una llave en L (hexagonal de 6 mm)
Entradas de cable	2-PF ½" (Opciones: 2-M20 x Paso 1,5, 2-NPT ½")
Resistencia de caldeo	5 W
Material de la carcasa	Aluminio
Lubricante	Shell Gadus S2 V220 2
Acabado de pintura estándar	Anodizado

Datos de rendimiento

Modelo	Opciones	Par de maniobra		Tiempo de funcionamiento (90°/seg		Potencia del motor (W)	Corriente nominal (A) 60 Hz				Ciclo de trabajo	Número de vueltas del volante	Peso		Rango de aplicación de la válvula (10K)
							1 fase (AC)			DC					
		Nm	lbf.ft	50 Hz	60 Hz	DC motor	24 V	110 V	220 V	24 V	S2 (min)		kg	lbs	
SA005L	PCU	50	37	17	14	25	1,8	0,35	0,23	1,8	15	6	3,2	7,1	Válvula de Mariposa: ~65A Válvulas de Bola: ~32A
	SCP	50	37	8	8	25	-	0,8	0,51	0,25		6	4,3	9,5	
SA009L	PCU	90	66	32	26	25	2,1	0,35	0,25	2,1	15	4,5	3,2	7,1	Válvula de Mariposa: ~100A Válvulas de Bola: ~50A
	SCP	90	66	13	15	25	-	0,8	0,51	2,25		4,5	4,3	9,5	

Extras opcionales

AC24V	Tarjeta de control para alimentación de 24 VAC
Unidad de potenciómetro (PIU)	Emite la posición del actuador como una señal de 0-1 kΩ
Unidad de control proporcional (PCU)	Se utiliza para controlar el actuador de forma que el grado de apertura/cierre de la válvula sea proporcional a la señal de entrada.
Transmisor de posición de corriente (CPT)	Se utiliza cuando se cambia el valor de resistencia de un potenciómetro conectado directamente al actuador a un valor de corriente y se utiliza la posición del actuador como valor de corriente.
Super capacitador (SCP)	Un dispositivo de super capacitador está incorporado en el actuador de modo que cuando se corta la corriente, funciona en la posición abierta/cerrada/parada establecida por el usuario.

Tarjeta PCU

La unidad de control proporcional (PCU) funciona hasta que el estado actual de apertura y cierre coincide con el valor establecido por el sistema de control externo. Proporciona la función de salida y transmisión de una señal de 4-20 mA en proporción al estado de posición actual (0-100%).

Banda muerta

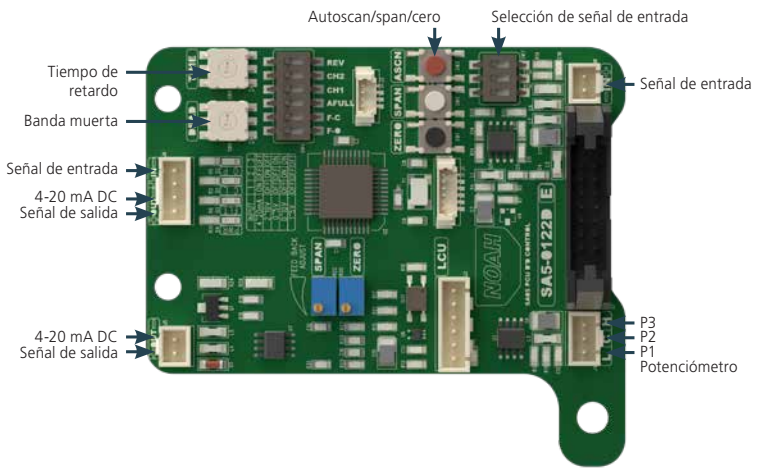
El actuador intenta detenerse en la posición exacta en función del valor ajustado, pero para evitar la caza, se establece un rango de zonas muertas que permiten al actuador abrir y cerrar repetidamente mientras intenta alcanzar la posición exacta debido a la inercia mecánica del motor o de la válvula. (±0,3 mA)

Tiempo de retardo

La señal de entrada puede verse afectada por ruidos momentáneos o frecuencias externas. El tiempo de retardo se ajusta (mín. 0,5 seg.) para evitar el fenómeno de caza causado por el funcionamiento con la misma entrada de señal durante un cierto periodo de tiempo.

Escaneo automático

La función de escaneo automático opera automáticamente desde la posición totalmente cerrada a la posición totalmente abierta con una pulsación de 2 segundos, y guarda cada posición.



Placa de alimentación

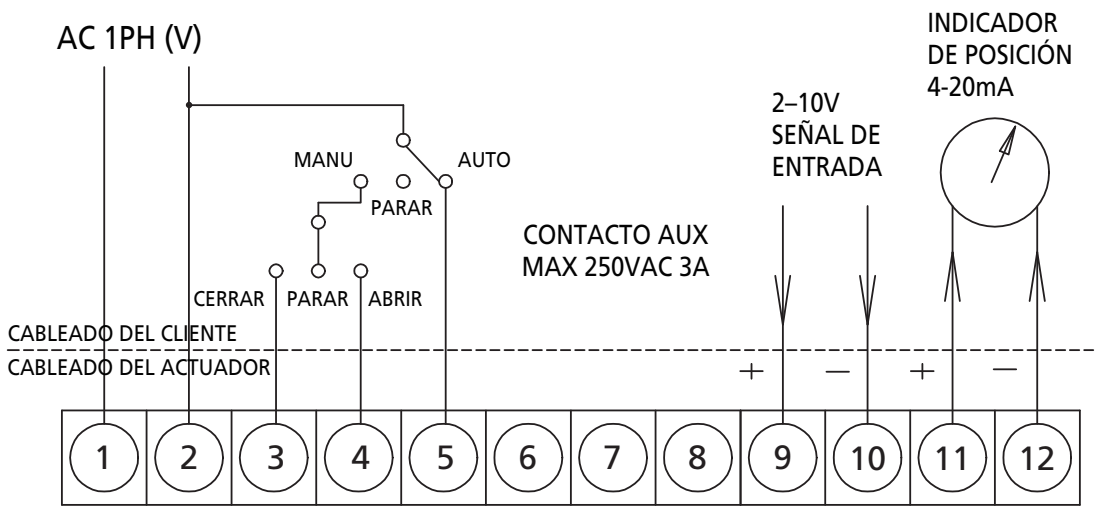
Esta tarjeta convierte la energía de una fuente externa para que el actuador la utilice para operar la tarjeta PCU.

Potenciómetro

Responsable de la resolución del actuador mediante el uso de 0-1 kΩ y desempeña un papel en el reconocimiento del valor de posición actual. (Opcional 135 Ω)

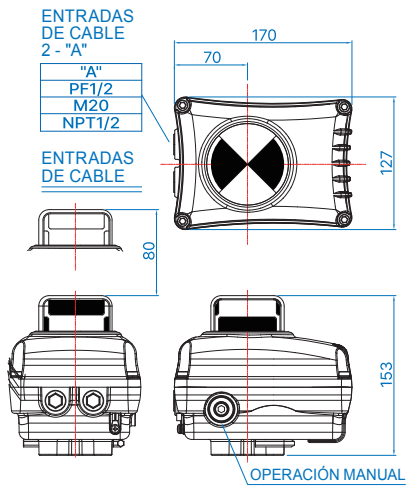
Esquema eléctrico estándar

Diagrama cableado estándar de tipo PCU

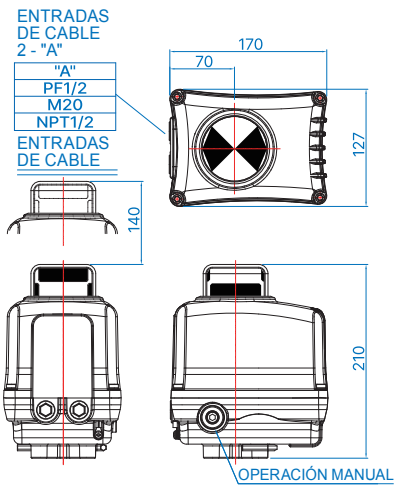


Datos dimensionales

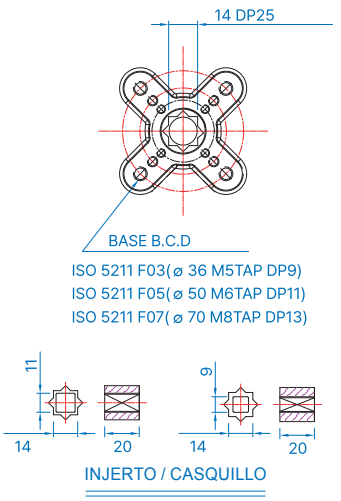
Noah SA005, SA009



Noah SA005L, SA009L

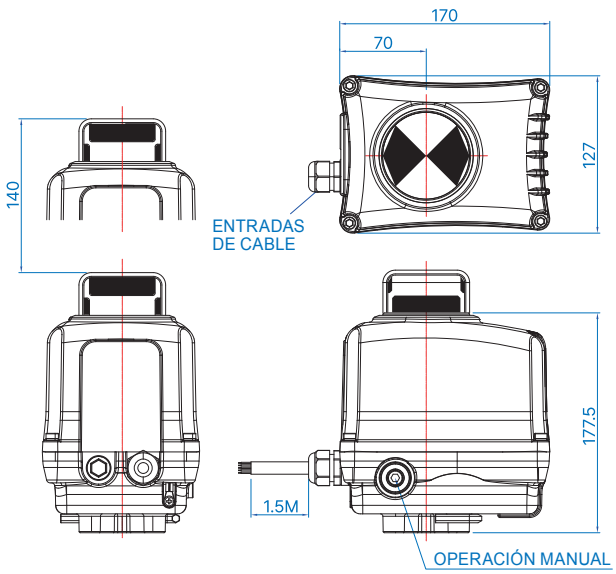


Base

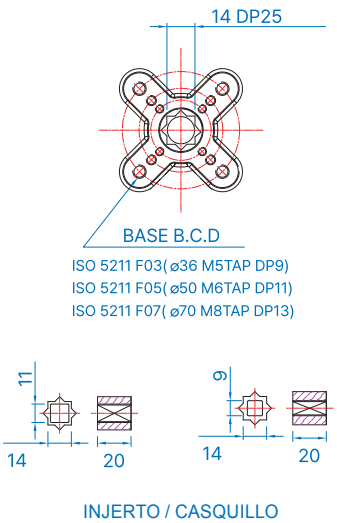


Todas las dimensiones en milímetros

Noah SCP



Base



Todas las dimensiones en milímetros