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Vacuum Control Valves

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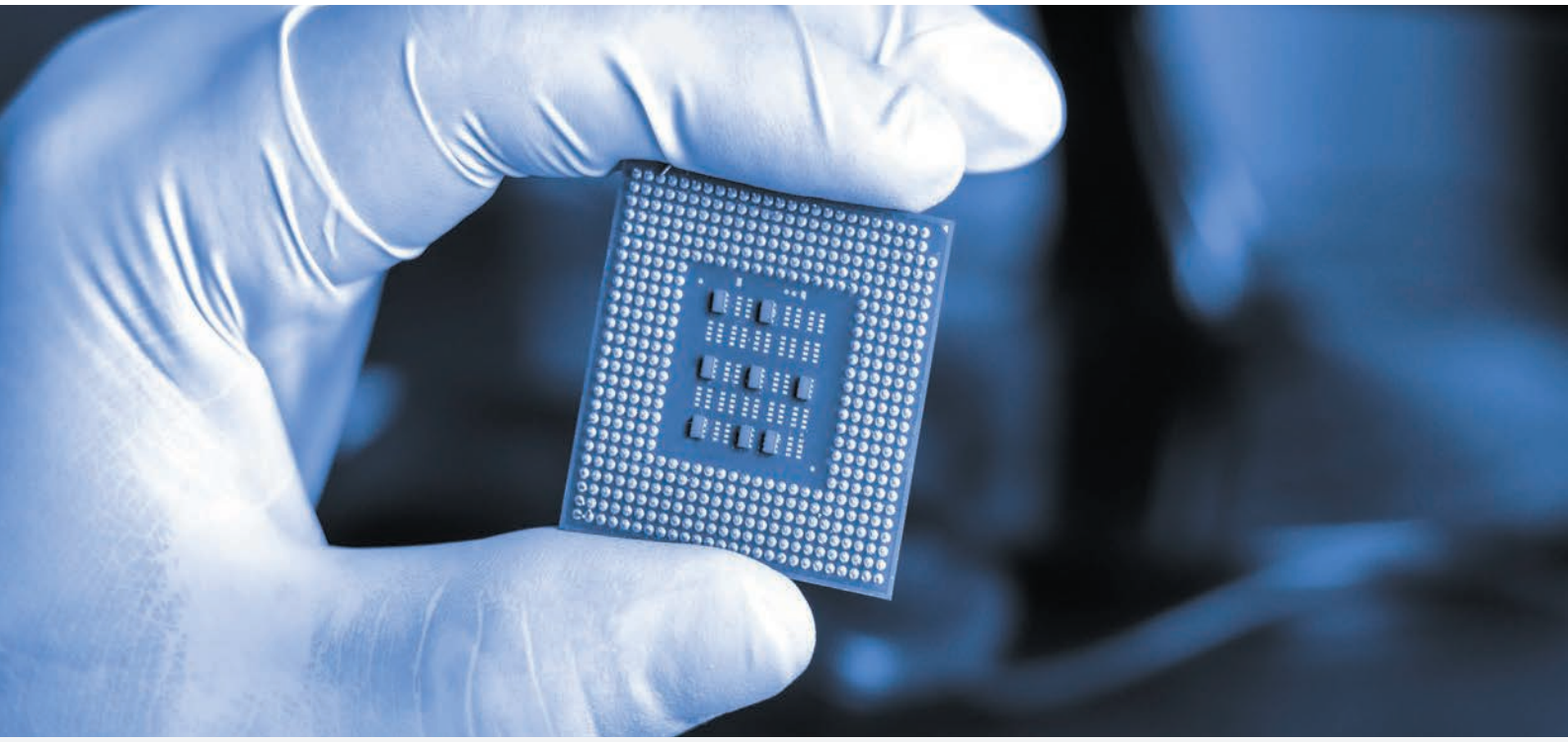
Make it Best or Not !

CLIENTS — CREATION — HUMANITY



Content

Product Selection Guide

A	B	N	080	F	S	LO	B	1

Quantity of Sensors	1 : 1 Sensor	
	2 : 2 Sensor	
Power Option*	B : Basic	S : with SPS
	P : with PFO	D : with SPS and PFO
Communication Interface	R2 : RS-232	R3 : RS-232(Analog output)
	R4 : RS-485	
	LO : Logic	DN : DeviceNet®
	PB : Profibus	EN : Ethernet
	CC : CC-Link	EC : EtherCAT
Body Material	A : Aluminum	
	S : SUS304	
	L : SUS316L	
Method of Contract	K : ISO-KF	F : ISO-F
	C : CF-F	P : ISO-K(Pipe connection)
Flange Size	025 : DN25	040 : DN40
	050 : DN50	063 : DN63
	080 : DN80	100 : DN100
	160 : DN160	200 : DN200
	250 : DN250	320 : DN320
Sealing Type	N : Non-Sealing	
	S : Sealing	
	F : F-cup Sealing	
Valve Type	B : Butterfly	
Valve Model	A : APC	

Product List

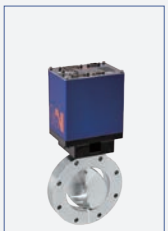

25N

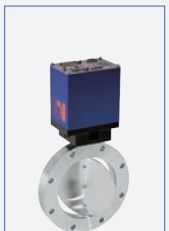

40N


50N

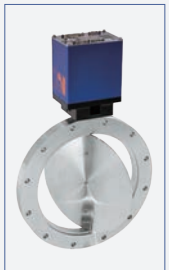

63N


80N


100N


160N

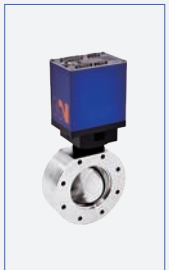

200N


250N


320N


40S


50S


100S


40F

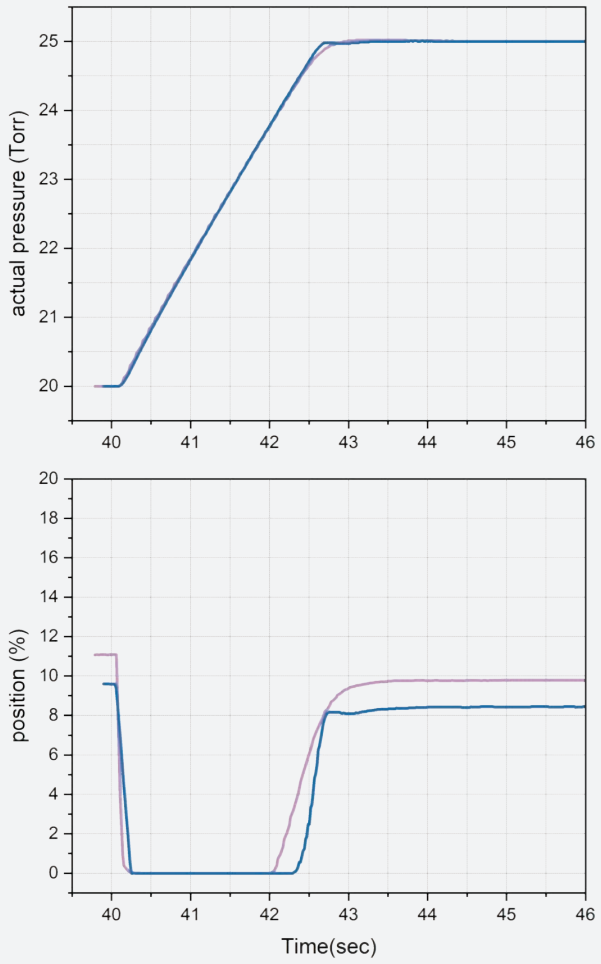

50F

Setup & Management S/W

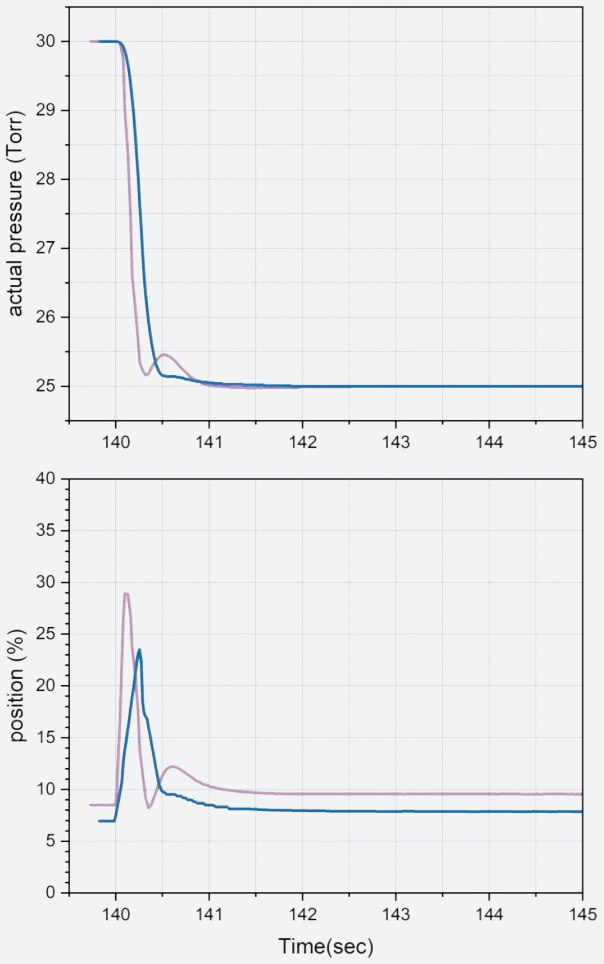
APC Butterfly Valve

Control Performance

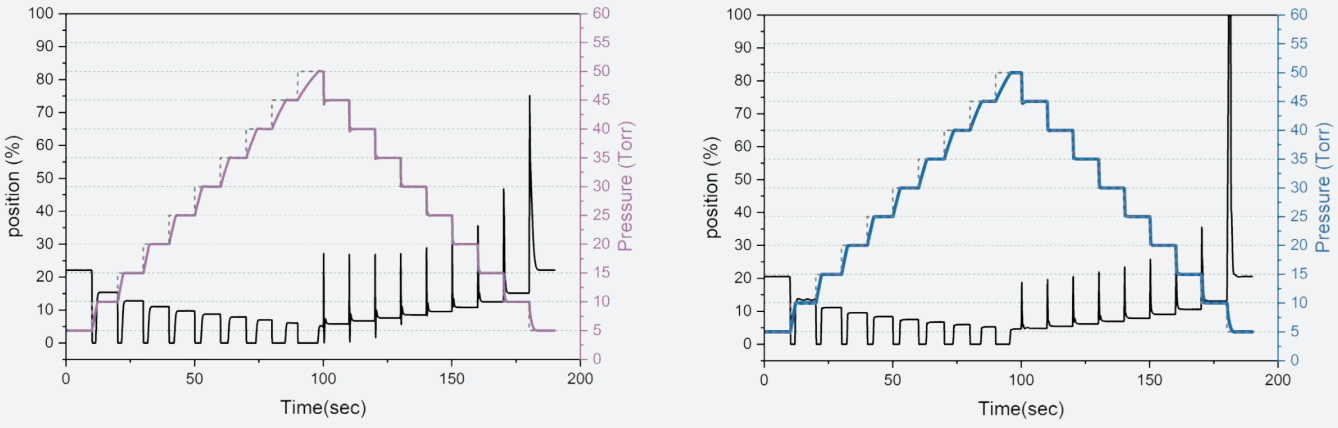
NOVASEN
Competitor



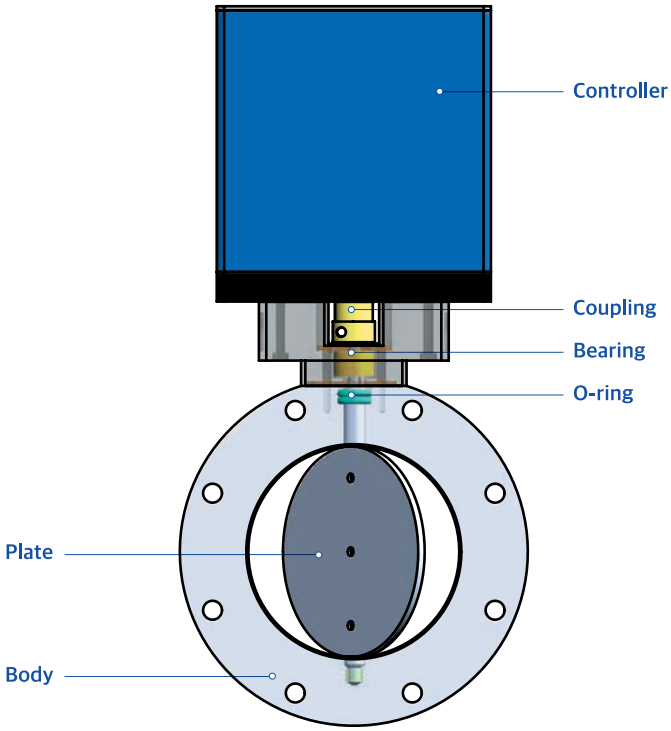
Pressure Up



Pressure Down



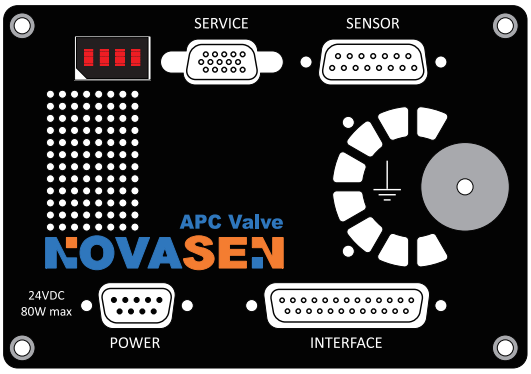
Control Response



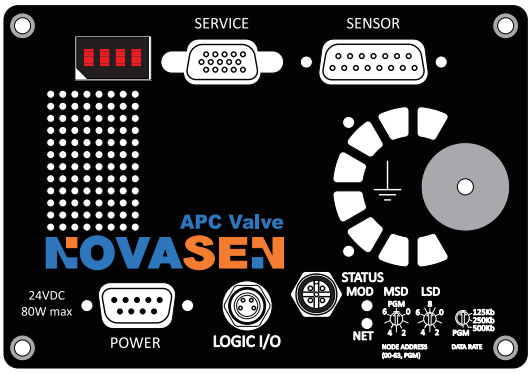
Product Specifications

Pressure range at 20°C		1 × 10E-8 mbar to 1.2 bar (abs)
Leak rate to outside at 20°C		1 × 10E-9 mbar l/s
Cycles until first service		2,000,000 (unheated and under clean conditions)
Admissible operating temperature		+10°C to +150°C
Mounting position		Any Control unit for ISO-KF version needs support when mounted on horizontal piping and control unit does not hang.
Wetted materials - Body, plate - Shaft - Plate screws		Body, Plate - Stainless steel 304 , Aluminum 6061 Shaft - Stainless steel 316L Plate screws - Stainless steel 304
- Shaft seal		Viton® (standard). Other materials available on request. Seal materials are declared on dimensional drawing of specific valve ordering number.
- Slide bearing for shaft		iglidur® X
Power input [1]		+24 VDC (±10%) @ 0.5V pk-pk max.[connector: POWER]
Power Consumption		80 W max. (operation of valve with max. load) without PFO4)
Sensor power supply [2]		+24 VDC / 1500 mA max. [connector: POWER] ±15 VDC (±5%) / 667 mA max. [connector: SENSOR]
- Input - Output		
Sensor input		0-10 VDC / Ri>100 kΩ [connector: SENSOR] 0.16 mV 1 ms
- Signal input - ADC resolution - Sampling time		
Digital inputs [3]		±24 VDC max.
Digital outputs [3]		70 VDC or 70 V peak max. 0.5 ADC or 0.5 A peak max. 10 W max.
- Input voltage - Input current - Breaking capacity		
Ambient temperature		0 °C to +50 °C max. (<35 °C recommended)
Pressure control accuracy		5 mV or 0.1% of setpoint, whichever is greater
Position resolution / position control capability		20000
Actuating time	closing	0.3 s typ.
	opening	0.3 s typ.
Utilizable valve torque		2.5 Nm

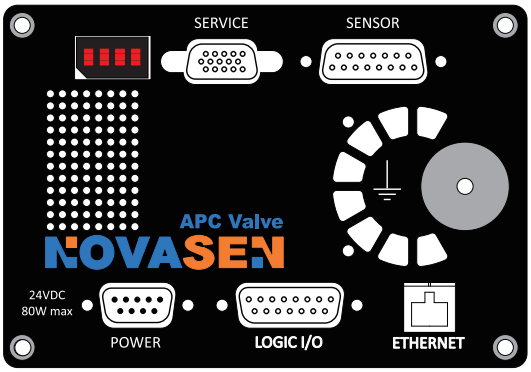
1) Internal overcurrent protection by a PTC device. 2) Refer to chapter ≪Sensor supply concepts≫ for details. 3) Refer to chapter ≪Schematics≫ for details.



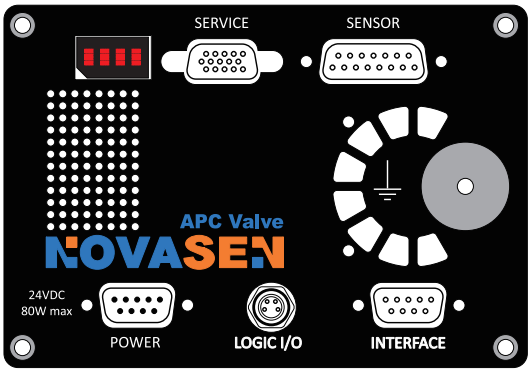
RS232, Logic, RS422, RS485



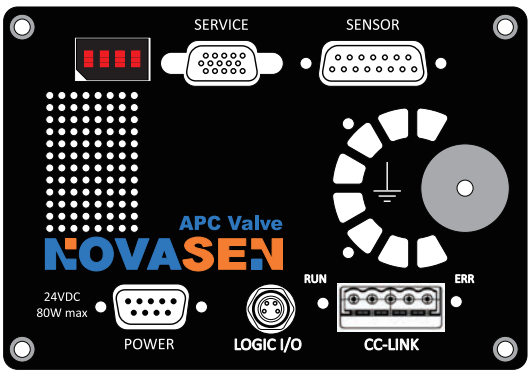
DeviceNet



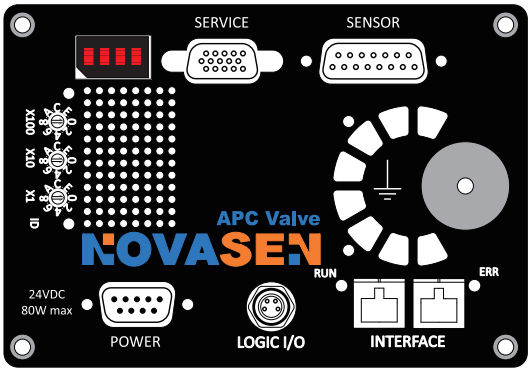
Ethernet



Profibus



CC-Link



EtherCAT

ELECTRICAL CONNECTIONS

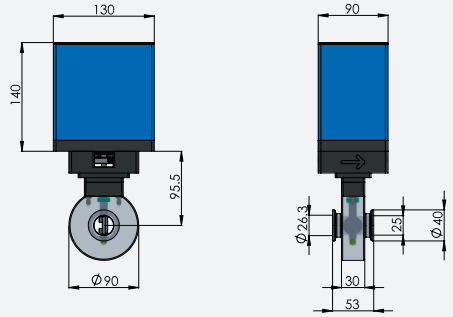
	CONNECTION	TYPE
POWER	Power input	DB-9 male
SENSOR	Sensor input Sensor power supply	DB-15 female
INTERFACE	RS232, Logic, RS422, RS485	DB-25 female
	DeviceNet®	Micro-style male
	Ethernet	RJ-45
BUS Mudules	Profibus	DB-9 female
	CC-Link	5-pole terminal screw
	EtherCAT	RJ-45 x 2

BUTTERFLY

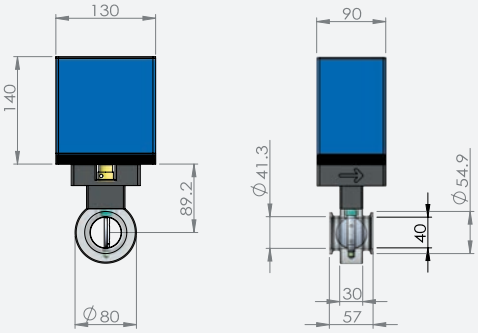
Non-Sealing

25N / 40N / 50N

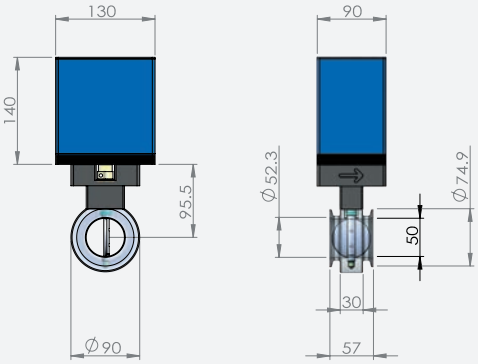
25N



40N



50N



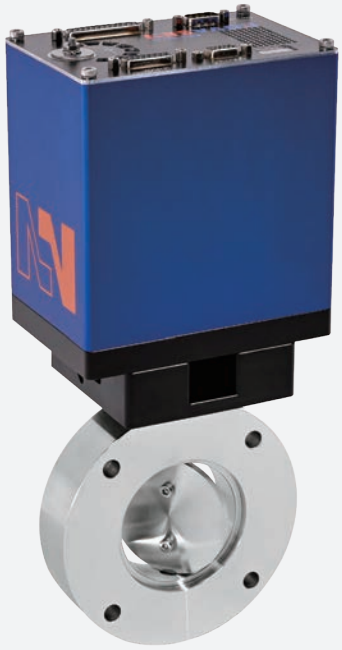
Product Specification

DN (nominal I.D.)		Conductance in open position (molecular flow)	Minimum controllable conductance (molecular flow)	Max. differential pressure	Typical closing / opening time	Weight(approx.)			
						Aluminum		Stainless steel	
mm	inch	ls-1	ls-1	mbar	s	kg	lbs	kg	lbs
25	1	22	0.25	1,000	0.3	2.9	6.5	4.0	8.8
40	1½	80	0.25	1,000	0.3	2.8	6.3	3.9	8.6
50	2	150	0.3	1,000	0.3	2.9	6.4	4.1	9.0

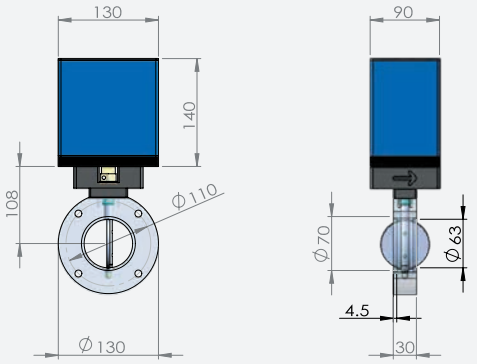
BUTTERFLY

Non-Sealing

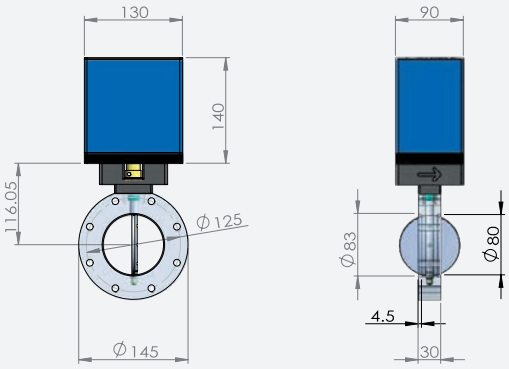
63N / 80N



63N



80N



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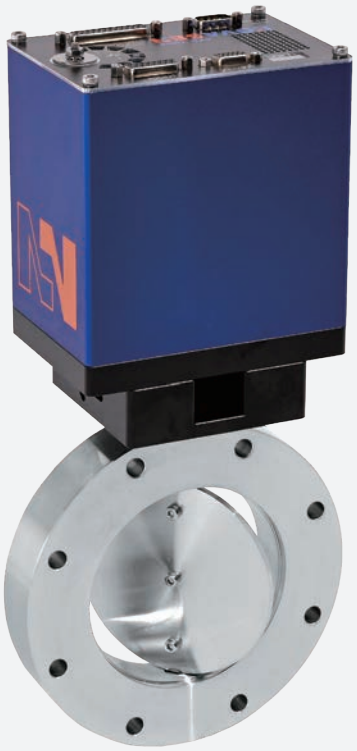
						Aluminum		Stainless steel	
mm	inch	ls-1	ls-1	mbar	s	kg	lbs	kg	lbs
63	2½	360	0.45	1,000	0.3	3.3	7.2	5.2	11.5
80	3	850	0.65	1,000	0.3	3.4	7.5	5.5	12.1

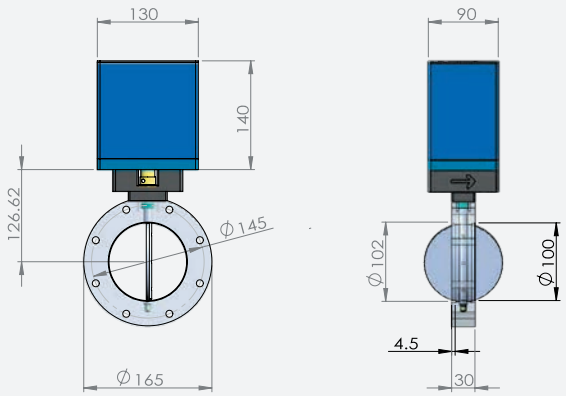
BUTTERFLY

Non-Sealing

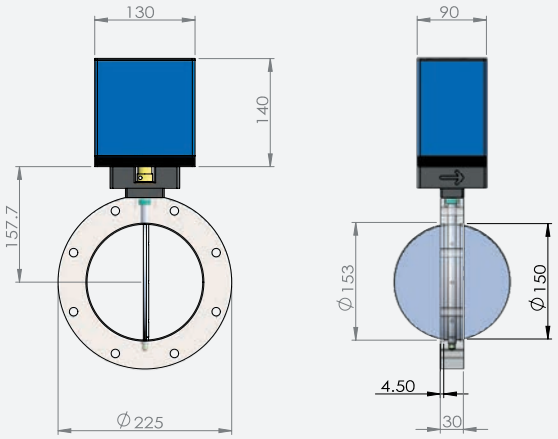
100N / 160N



100N



160N



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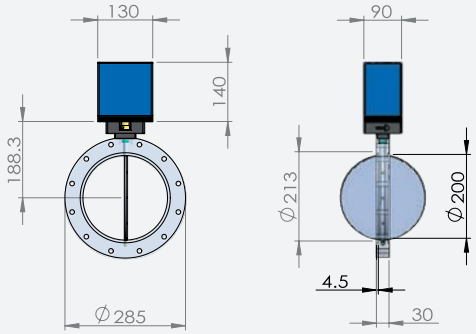
						Aluminum		Stainless steel	
mm	inch	ls-1	ls-1	mbar	s	kg	lbs	kg	lbs
100	4	1,400	0.85	800	0.3	3.6	7.9	6.1	13.4
160	6	3,800	1.7	300	0.3	4.3	9.5	8.3	18.3

BUTTERFLY

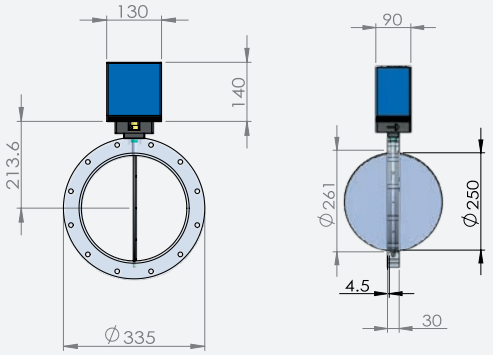
Non-Sealing

200N / 250N / 320N

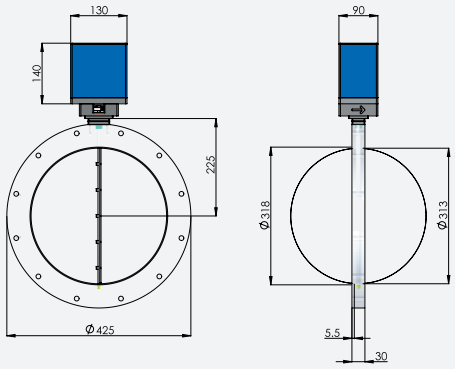
200N



250N



320N



Product Specification

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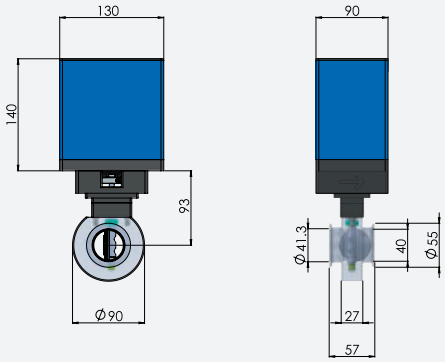
						Aluminum		Stainless steel	
mm	inch	ls-1	ls-1	mbar	s	kg	lbs	kg	lbs
200	8	7,800	2.8	150	0.3	5.2	11.5	10.9	24.0
250	10	15,000	5.0	100	0.3	5.9	13.0	13.0	28.7
320	12	27,000	6	75	1	7.7	17.0	18.0	39.6

BUTTERFLY

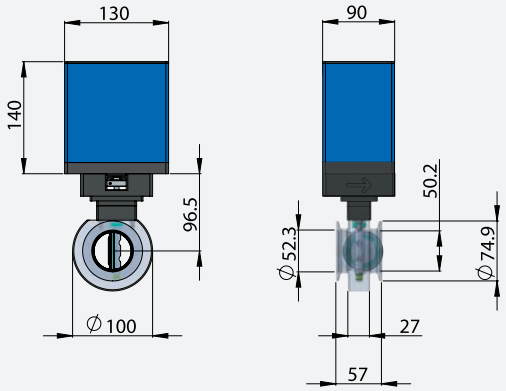
Sealing

40S / 50S

40S



50S



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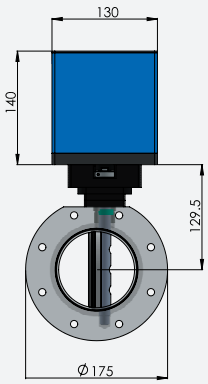
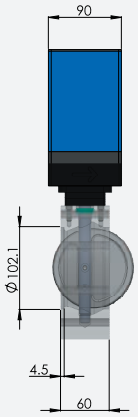
						Aluminum		Stainless steel	
mm	inch	ls-1	ls-1	mbar	s	kg	lbs	kg	lbs
40	1½	60	0.05	1,000	0.6	2.8	6.2	3.6	7.8
50	2	120	0.1	1,000	0.6	2.9	6.3	3.8	8.4

BUTTERFLY

Sealing

100S





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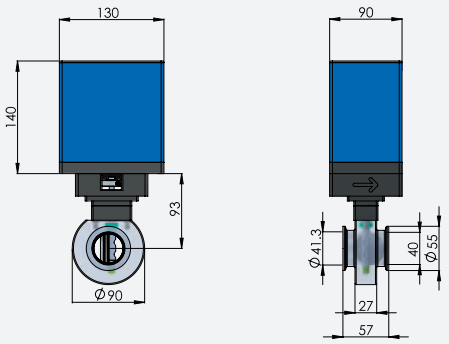
						Aluminum		Stainless steel	
mm	inch	ls-1	ls-1	mbar	s	kg	lbs	kg	lbs
100	4	600	0.25	1,000	0.6	4.9	10.9	9.9	21.7

BUTTERFLY

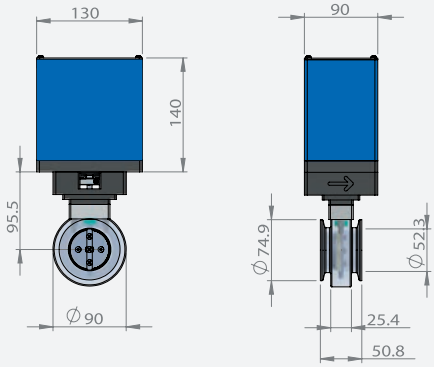
Sealing (F-cup)

40F / 50F

40F



50F



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						Aluminum		Stainless steel	
mm	inch	ls-1	ls-1	mbar	s	kg	lbs	kg	lbs
40	1½	31	0.25	1,000	0.6	2.8	6.2	3.6	7.9
50	2	150	0.7	1,000	0.6	2.9	6.4	3.9	8.5

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