FVS

FLOW VALVE SOLUTIONS

HP SERIES VALVES

I modelli

Valvole a farfalla gommate (Serie 12)
Dimensioni: 1.1/2" – DN12"
Valvole a farfalla gommate (Serie 20)
Dimensioni: DN14" – DN20"
Valvole a farfalla gommata (Serie 40)
Dimensioni: DN24" – DN56"
Classe di pressione: fino a ANSI150.

Materiali: ghisa sferoidale, ghisa grigia, acciaio al carbonio, acciaio inossidabile, duplex, titanio, hastelloy, bronzo-alluminio ed altre leghe speciali.

Materiali sede: EPDM, EPDM H.T., Buna N, HNBR, Neoprene,Hypalon, Viton, Gomma naturale, Silicone o altri materiali su richiesti .

Valvole a farfalla eccentrica a tenuta in elastomero (Serie HP):
Dimensioni: DN 2" ÷ 20" (DN 50 ÷ 500)
Classi di pressione: fino a ANSI 150 (PN 20)
Materiali: acciaio al carbonio, acciaio inossidabile, duplex, super duplex, titanio, hastelloy, bronzo-alluminio and altre leghe speciali.

Valvole a farfalla doppio eccentriche a tenuta in elastomero (Serie 2E):
Dimensioni: DN 3" ÷ 160" (DN 80 ÷ 4000)
Classi di pressione: fino a ANSI 150 (PN 20)
Materiali: acciaio al carbonio, acciaio inossidabile, duplex, super duplex, titanio, hastelloy, bronzo-alluminio and altre leghe speciali.

Valvole a farfalla doppio eccentriche a tenuta metallica per alte prestazioni (Serie TM):
Dimensioni: DN 3" ÷ 48" (DN 80 ÷ 1200)
Classi di pressione: fino a ANSI 300 (PN 40)
Materiali: acciaio al carbonio, acciaio inossidabile, duplex, super duplex, titanio, hastelloy, bronzo-alluminio e leghe speciali.

Valvole a farfalla triplo eccentriche a tenuta metallica (Serie TM):
Dimensioni: DN3" – DN48" (DN80 – DN1200)
Classe di pressione: fino a ANSI600 (PN100)
Materiali: acciaio al carbonio, acciaio inossidabile, duplex, super duplex, titanio, hastelloy, bronzo-alluminio e altre leghe speciali.

Valvole di regolazione (Serie VNT)
Dimensioni: DN2" – DN120" (DN50 a DN3000)
Materiali: ghisa Ni-Cr, acciaio inossidabile, acciaio al carbonio.

The models

Rubber seated butterfly valves (Series 12)
Dimensions: DN1.1/2" - DN12"
Rubber seated butterfly valves (Series 20)
Dimensions: DN14" - DN20"
Rubber seated butterfly valves (Series 40)
Dimensions: DN24" – DN56"
Pressure class : up to ANSI150.

Materials: cast iron, ductile cast iron, carbon steel, stainless steel, duplex, titanium, hastelloy, bronze-aluminium and other special alloys.

Seat material: EPDM, EPDM H.T., Buna N, HNBR, Neoprene, Hypalon, Viton, Natural Rubber, Silicone or other materials on request.

Eccentric soft seated butterfly valves (Series HP):
Dimensions: DN 2" ÷ 20" (DN 50 ÷ 500)
Pressure class: up to ANSI 150 (PN 20)
Materials: carbon steel, stainless steel, duplex, super duplex, titanium, hastelloy, bronze-aluminium and other special alloys.

Double-eccentric soft seated butterfly valves (Series 2E):
Dimensions: DN 3" ÷ 160" (DN 80 ÷ 4000)
Pressure class: up to ANSI 150 (PN 20)
Materials: carbon steel, stainless steel, duplex, super duplex, titanium, hastelloy, bronze-aluminium and other special alloys.

High performance double-eccentric metal seated butterfly valves (Series TM):
Dimensions: DN 3" ÷ 48" (DN 80 ÷ 1200)
Pressure class: up to ANSI 300 (PN 40)
Materials: carbon steel, stainless steel, duplex, super duplex, titanium, hastelloy, bronze-aluminium and other special alloys.

Triple-eccentric metal seated butterfly valves (Series TM):
Dimensions: DN 3" ÷ 48" (DN 80 ÷ 1200)
Pressure class: up to ANSI 600 (PN 100)
Materials: carbon steel, stainless steel, duplex, super duplex, titanium, hastelloy, bronze-aluminium and other special alloys.

Regulation valves (Serie VNT):
Dimensions: DN2" – DN120" (DN50 – DN3000)
Materials : ductil cast iron Ni-Cr, stainless steel, carbon steel.

GENERAL FEATURES

RR INDUSTRIAL VALVES SRL. BUTTERFLY VALVES SERIE HP ARE SUITED FOR HIGH FLOW. INDEED THESE VALVES HAVE LARGE SECTIONS OF PASSAGE, CAUSING PRESSURE DROPS.

THESE VALVES ARE INDICATED FOR THE FOLLOWING APPLICATIONS: GAS, COMPRESSED AIR, VACUUM, OIL, FUELS, CHEMICAL, FOOD, WATER, ...

THE DESIGN OF THE RR INDUSTRIAL VALVES SRL BUTTERFLY VALVES SERIE HP PERMITS TO ENSURE THE PERFECT TIGHTNESS ON BOTH DIRECTIONS BY THE USE OF AN ARMED SEAT.

THE TORQUE OF THESE VALVES IS REDUCED BECAUSE THE SEAT IS MOUNTED ON THE BODY AND NEVER STRIP ON THE SPHERICAL SURFACE OF THE DISC DURING THE WORKING BUT IT ACTS ONLY WHEN THE MANEUVER IS FINISHED AND THE VALVE IS CLOSED.

THE MAXIMUM TORQUE VALUE IS OBTAINED AT THE BEGIN OF THE OPENING OPERATION WHEN THE SEAT JOINTS THE DISC ON ALL ITS PERIMETER.

THE ONLY MAINTENANCE REQUESTED IS TO REPLACE THE RUBBER SEAT AND THIS OPERATION IS REALLY EASY AND FAST.

THE MECHANICAL AND CHEMICAL LIMITS OF EACH SEATS AVAILABLE ARE THE FOLLOWING:

NAME (ACRONYM)	COMMERCIAL NAME	COMPOSITION	COMPATIBLE MEDIA	NOT COMPATIBLE MEDIA	TEMPERATURE LIMITS	
EPDM	NORDEL – KELTAN VISTALON – DUTRAL TER BUNA AP	ETHYLENE PROLYLENE TERPOLYMER	WATER STEAM SEA WATER BRINE KETONE ALKALIS DILUTED ACIDS	HYDROCARBONS OILS FATS	-35 °C +110 °C	-30 °F +230 °F
EPDM-HT ALTA TEMP.					-35 °C +150 °C	-30 °F +300 °F
BUNA N (NBR)	KRINAC – HYCAR ELAPRIM-S BUTAKON CHEMIGUM – PERBUNAN N EUROPRENE N	COPOLYMER OF BUTADIENE AND HIGH ACRYLONITRILE	SEA WATER HYDROCARBONS NATURAL GAS OILS AND FATS AIR	DILUTED ACIDS BENZENE SOLVENTS	-18 °C +90 °C	-0 °F +194 °F
HNBR (HSN)	HYDRATED NITRIL RUBBER THERBAN – ZETPOL HIGHLY SATURATED NITRILE	COPOLYMER OF BUTADIENE AND HIGH ACRYLONITRILE HYDROGENATED			-40 °C +150 °C	-40 °F +300 °F
VITON (FKM) (FTM)	FLUOREL TECNOFLAN	FLUOROCARBON POLYMER	ACIDS OILS HYDROCARONS GASOLINE	STEAM FREON ALKALIS SOLVENTS – KETONE	-10 °C +160 °C	+14 °F +320 °F
PTFE	TEFLON – FLUON – ALGOFLON HOSTAFLON	POLYTETRAFLUOROETHYLENE	CHEMICALLY HIGHLY CORROSIVE AND TOXIC CHEMICAL PRODUCTS	FLUORINE	-40 °C +200 °C	-40 °F +392 °F

NOTE: THE ABOVE TABLE IS MERELY INDICATIVE. MANY FACTORS AFFECT THE FIELD OF CORROSION (TYPE OF SOLUTION - CONCENTRATION - TEMPERATURE - PRESENCE OF IMPURITIES, ETC..). THE LATEST ASSESSMENT IT IS THEREFORE UP TO THE CUSTOMER DEPENDING ON THE APPLICATIONS AND THE CHARACTERISTICS

TORQUE OF RUBBER SEATED VALVES

THE MAXIMUM TORQUE VALUE IS OBTAINED AT THE BEGIN OF THE OPENING OPERATION WHEN THE RUBBER SEAT JOINTS THE DISC ON ALL ITS PERIMETER.

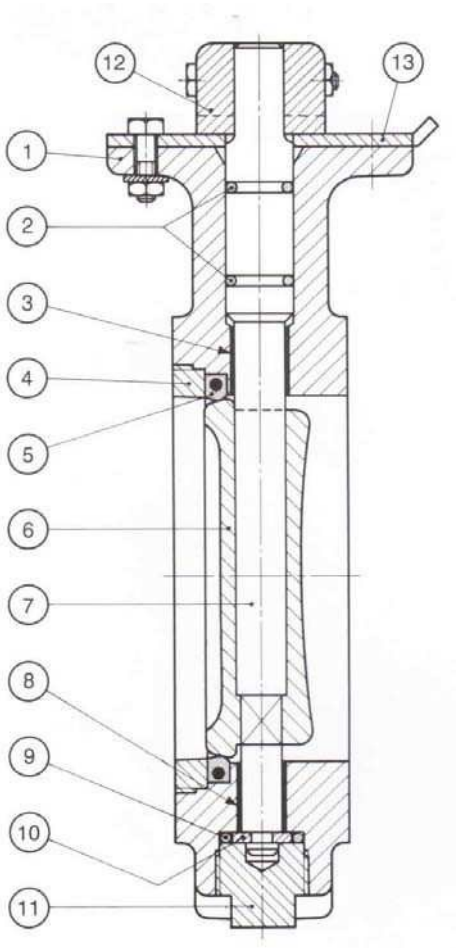
DN	50	65	80	100	125	150	200	250	300	350	400	450	500
Nm	12	15	20	32	48	70	120	180	250	725	1099	1450	2838

TORQUE OF PTFE SEATED VALVES

THE MAXIMUM TORQUE VALUE IS OBTAINED AT THE BEGIN OF THE OPENING OPERATION WHEN THE RUBBER SEAT JOINTS THE DISC ON ALL ITS PERIMETER.

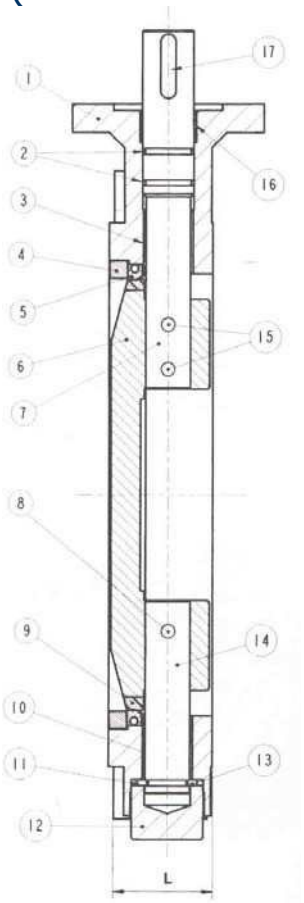
DN	50	65	80	100	125	150	200	250	300	350	400	450	500
Nm	25	32	39	61	96	143	244	365	506	1095	1471	2856	3805

PART AND MATERIAL LIST (UP TO DN 300 – STD. EXECUTION)



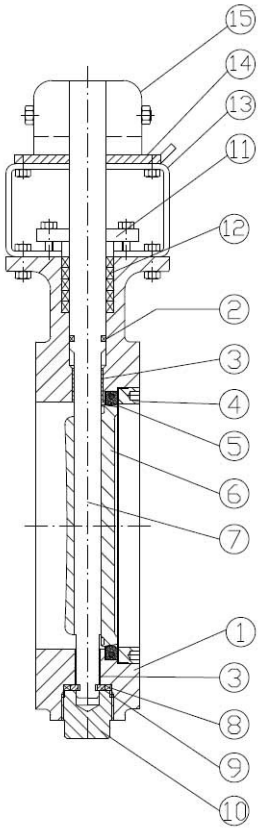
ITEM	PART NAME	STANDARD VALVES	S.S. VALVES
1	BODY	ASTM A105	AISI 316
2	RINGS	BUNA N / EPDM / VITON	BUNA N / EPDM / VITON
3	SELF-LUBRIFICATING BEARING	STAINLESS STEEL + PTFE	STAINLESS STEEL + PTFE
4	RING NUT	ASTM A105	AISI 316
5	REINFORCED SEALING RING	BUNA N / EPDM / VITON / PTFE	BUNA N / EPDM / VITON / PTFE
6	DISC	AISI 316	AISI 316
7	SHAFT	AISI 410	AISI 316
8	SELF-LUBRIFICATING BEARING	STAINLESS STEEL + PTFE	STAINLESS STEEL + PTFE
9	RING	BUNA N / EPDM / VITON / PTFE	BUNA N / EPDM / VITON / PTFE
10	SPLIT RINGS	ASTM A105	AISI 316
11	PLUG	ASTM A105	AISI 316
12	LEVER	ALUMINIUM	ALUMINIUM
13	SETTING DIAL	ALUMINIUM	AISI 304

PART AND MATERIAL LIST (FROM DN 350 – STD. EXECUTION)



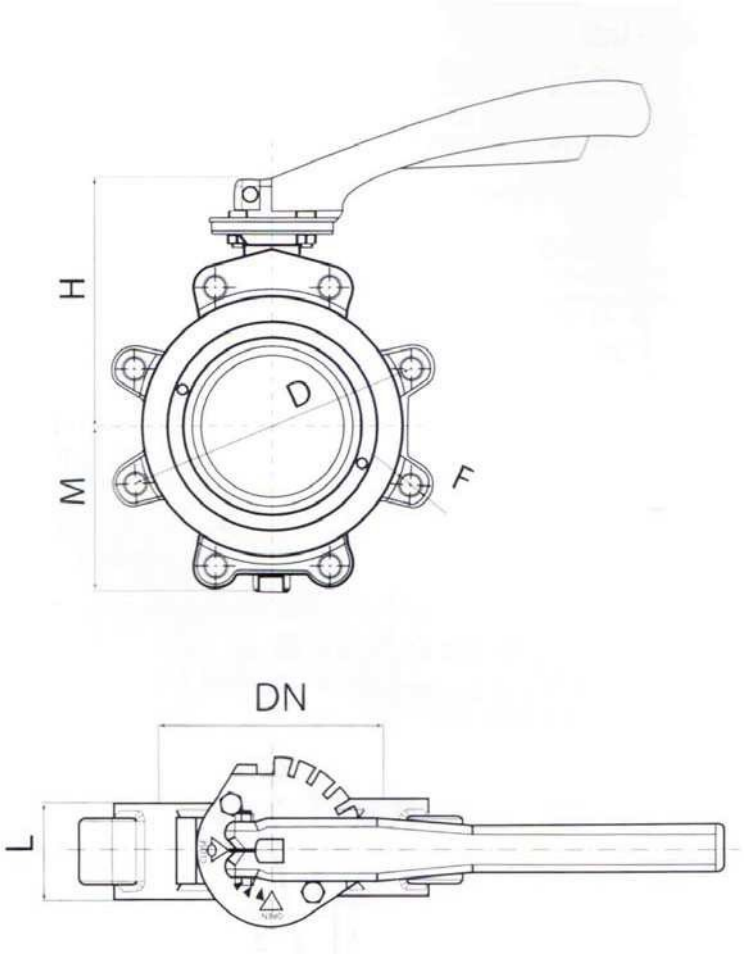
ITEM	PART NAME	STANDARD VALVES	S.S. VALVES
1	BODY	ASTM A105	AISI 316
2	RINGS	BUNA N / EPDM / VITON / PTFE	BUNA N / EPDM / VITON / PTFE
3	SELF-LUBRIFICATING BEARING	STAINLESS STEEL + PTFE	STAINLESS STEEL + PTFE
4	RING NUT	ASTM A105	AISI 316
5	REINFORCED SEALING RING	BUNA N / EPDM / VITON / PTFE	BUNA N / EPDM / VITON / PTFE
6	DISC	AISI 316	AISI 316
7	UPPER SHAFT	AISI 410	AISI 316
8	PINS	AISI 316	AISI 316
9	COVERING ON DISC	AISI 316	AISI 316
10	SELF-LUBRIFICATING BEARING	ASTM A105	AISI 316
11	RINGS	BUNA N / EPDM / VITON / PTFE	BUNA N / EPDM / VITON / PTFE
12	PLUG	ASTM A105	AISI 316
13	SPLIT RINGS	ASTM A105	AISI 316
14	BOTTOM SHAFT	AISI 410	AISI 316
15	PINS	AISI 316	AISI 316
16	SELF-LUBRIFICATING BEARING	STAINLESS STEEL + PTFE	STAINLESS STEEL + PTFE
17	OPERATOR KEY	C40	AISI 316

PART AND MATERIAL LIST (FIRE SAFE EXECUTION)



ITEM	PART NAME	FIRE-SAFE STANDARD VALVES	FIRE-SAFE S.S. VALVES
1	BODY	ASTM A105	AISI 316
2	RINGS	GRAPHOIL	GRAPHOIL
3	SELF-LUBRIFICATING BEARING	STAINLESS STEEL + PTFE	STAINLESS STEEL + PTFE
4	RING NUT	ASTM A105	AISI 316
5	REINFORCED SEALING RING	PTFE + AISI 316	PTFE + AISI 316
6	DISC	ASTM A105	AISI 316
7	SHAFT	AISI 410	AISI 316
8	RING	GRAPHOIL	GRAPHOIL
9	SPLIT RINGS	ASTM A105	AISI 316
10	PLUG	ASTM A105	AISI 316
11	GLAND	ASTM A105	AISI 316
12	PACKING	GRAPHOIL	GRAPHOIL
13	BRACKET	CARBON STEEL	AISI 304
14	SETTING DIAL	ALUMINIUM	AISI 304
15	LEVER	ALUMINIUM	ALUMINIUM

HIGH PERFORMANCE BUTTERFLY VALVES HP SERIE
PN 16 / ANSI 150 WITH LEVER



MATERIAL LIST

BODY IN CARBON STEEL A216 WCB, SHAFT IN STAINLESS STEEL 13%Cr, DISC IN STAINLESS STEEL, SEAT IN BUNA N OR EPDM OR VITON OR PTFE (UP TO DN 200 – 8”)

FEATURES

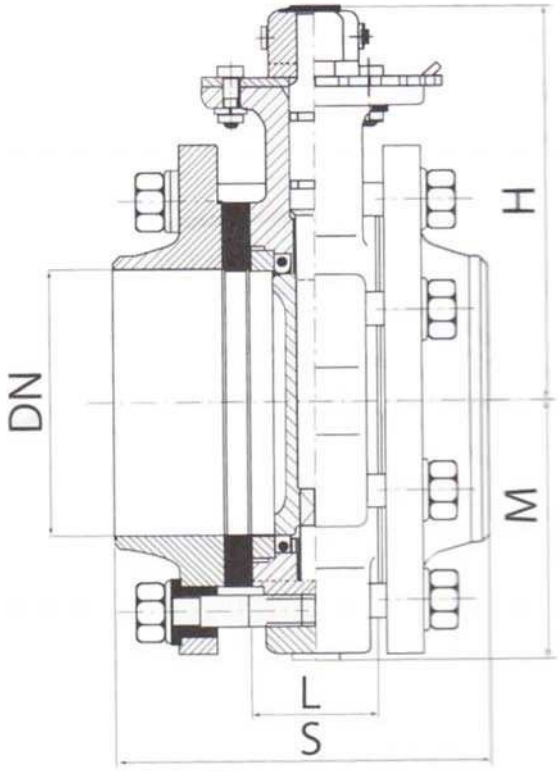
THE VALVES ARE DESIGNED FOR GAS, AIR, VACUUM APPLICATION SUITABLE FOR OIL, FUELS, WATER, ...

PERFECT PNEUMATIC SEAT TIGHTNESS WITH LARGE SECTIONS OF PASSAGE, CAUSING PRESSURE DROPS THAT ARE ALMOST NEGLIGIBLE.

TOP FLANGES OF TOP MOUNTING IN ACCORDING TO UNI 5211

DN	50	65	80	100	125	150	200	250	300
L	43	46	46	52	56	56	60	68	78
H	132	142	150	162	177	192	270	270	305
D	125	145	160	180	210	240	295	355	410
F	M16	M16	M16	M16	M16	M20	M20	M22	M22
M	76	84	90	105	120	130	170	200	225
N° HOLES	4	4	8	8	8	8	12	12	12
WEIGHT [K]	4.4	5.5	6.8	8.6	11.2	13.9	26	40	58

HIGH PERFORMANCE BUTTERFLY VALVES HP SERIE
PN 16 / ANSI 150
WITH INSULATE CONNECTIONS (DIELETRIC)



MATERIAL LIST

BODY IN CARBON STEEL A216 WCB, SHAFT IN STAINLESS STEEL 13%Cr, DISC IN STAINLESS STEEL, SEAT IN BUNA N OR EPDM OR VITON OR PTFE (UP TO DN 200 – 8")
RING AND INSULATING BUSHINGS IN PVC

FEATURES

THE VALVES ARE DESIGNED FOR GAS, AIR, VACUUM APPLICATION SUITABLE FOR OIL, FUELS, WATER, ...

PERFECT PNEUMATIC SEAT TIGHTNESS WITH LARGE SECTIONS OF PASSAGE, CAUSING PRESSURE DROPS THAT ARE ALMOST NEGLIGIBLE.

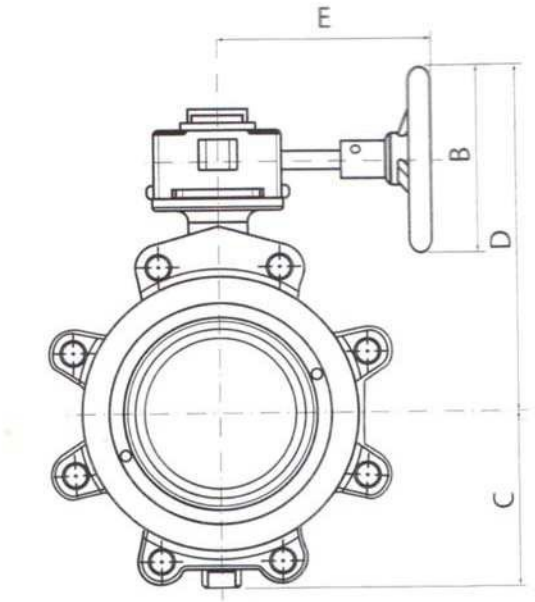
ONE OF THE FLANGES IS INSULATED FROM THE BODY WITH A RING IN PVC; THE PVC IS AN HIGH DIELECTRIC MATERIAL AND IT'S CONTAINED BETWEEN TWO GASKETS.

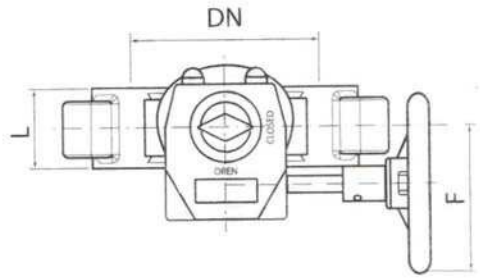
THE INSULATED FLANGE HAS THE HOLES AND THE SETBACKS OF THE SCREWS COVERED BY BUSHINGS IN PVC; SO THE PIPES JOINTS TO THE VALVE ARE PERFECTLY INSULATED.

THE MAX OPERATIVE TEMPERATURE IS 80 °C AND IT'S LIMITATED BY THE TEMPERATURE LIMITS OF THE PVC, ALSO WITH SEATS IN VITON

DN	50	65	80	100	125	150	200	250	300
L	43	46	46	52	56	56	60	68	78
H	132	142	150	162	177	192	270	270	305
S	153	156	166	176	186	186	204	228	254
M	76	84	90	105	120	130	170	200	225

HIGH PERFORMANCE BUTTERFLY VALVES HP SERIE
PN 16 / ANSI 150 WITH GEAR





MATERIAL LIST

BODY IN CARBON STEEL A216 WCB, SHAFT IN STAINLESS STEEL 13%Cr, DISC IN STAINLESS STEEL, SEAT IN BUNA N OR EPDM OR VITON OR PTFE (UP TO DN 200 – 8")
RING AND INSULATING BUSHINGS IN PVC

FEATURES

THE VALVES ARE DESIGNED FOR GAS, AIR, VACUUM APPLICATION SUITABLE FOR OIL, FUELS, WATER, ...

PERFECT PNEUMATIC SEAT TIGHTNESS WITH LARGE SECTIONS OF PASSAGE, CAUSING PRESSURE DROPS THAT ARE ALMOST NEGLIGIBLE.

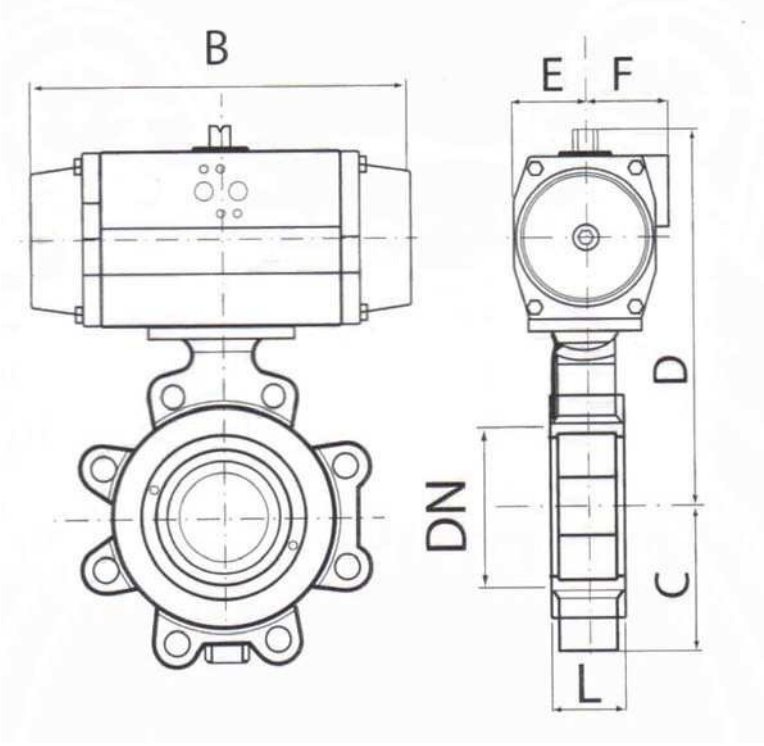
THE HANDWHEEL WORKS ON A WORM COUPLED TO A HELICAL SECTOR THAT MOVES THE DISC.

ALL THE MECHANISM IS CONTAINED INTO A GEAR BOX IN CAST IRON.

THE DISC IS AUMATICALLY LOCKED IN THE DESIRED POSITION.

DN	50	65	80	100	125	150	200	250	300	350	400	450	500
L	43	46	46	52	56	56	60	68	78	78	102	114	127
B	125						200			300	350	450	450
C	76	84	90	105	120	130	170	200	225	251	276	325	342
D	189	200	166	183	234	250	333	368	405	513	585	646	710
E	170						210			240	185	185	250
F	101						152			217	265	315	348

HIGH PERFORMANCE BUTTERFLY VALVES HP SERIE
PN 16 / ANSI 150 WITH DOUBLE ACTION PNEUMATIC ACTUATOR
(MIN. AIR 5 BAR)



MATERIAL LIST

BODY IN CARBON STEEL A216 WCB, SHAFT IN STAINLESS STEEL 13%Cr, DISC IN STAINLESS STEEL, SEAT IN BUNA N OR EPDM OR VITON OR PTFE (UP TO DN 200 – 8")
RING AND INSULATING BUSHINGS IN PVC

FEATURES

THE VALVES ARE DESIGNED FOR GAS, AIR, VACUUM APPLICATION SUITABLE FOR OIL, FUELS, WATER, ...

PERFECT PNEUMATIC SEAT TIGHTNESS WITH LARGE SECTIONS OF PASSAGE, CAUSING PRESSURE DROPS THAT ARE ALMOST NEGLIGIBLE.

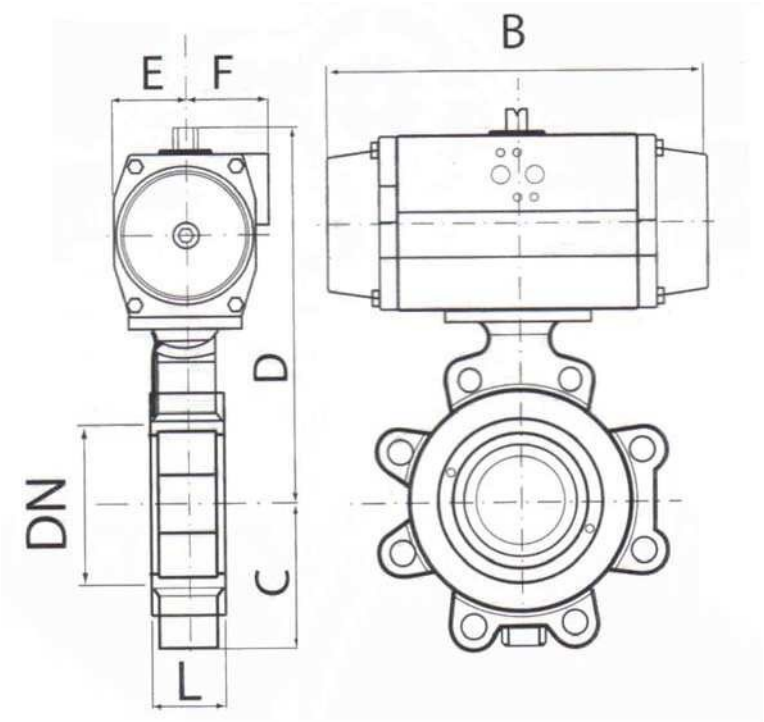
THE PNEUMATIC ACTUATOR WORKS WITH SUPPLY PRESSURE BETWEEN 4 AND 10 BAR AND IT'S MADE BY A CILINDER IN ALUMINIUM EXTRUDED WITH TWO PISTONS FIXED TO TWO RACKS.

OPTIONALS

IT'S POSSIBLE TO MOUNT THE FOLLOWING ACCESSORIES ON THE PNEUMATIC ACTUATOR:
- SOLENOID VALVES
- SPEED REGULATOS
- SILENCERS
- LIMIT SWITCHES WITH DIRECLY MOUNTING
- BOX WITH LIMIT SWITCHES
- ELECTROPNEUMATIC POSITIONERS
- MANUAL OVERRIDE

DN	50	65	80	100	125	150	200	250	300	350	400	450	500
L	43	46	46	52	56	56	60	68	78	78	102	114	127
B	119	119	175	175	186	248	241	261	367	428	467	525	636
C	76	84	90	105	120	130	170	200	225	251	276	325	342
D	171	181	199	211	243	259	315	387	472	507	617	667	758
E	27	27	34	34	42	42	52	65	72	90	116	116	169
F	40	40	47	47	54	54	62	66	73	91	114	114	169

HIGH PERFORMANCE BUTTERFLY VALVES HP SERIE
PN 16 / ANSI 150 WITH SPRING RETURN PNEUMATIC ACTUATOR
(MIN. AIR 5 BAR)



MATERIAL LIST

BODY IN CARBON STEEL A216 WCB, SHAFT IN STAINLESS STEEL 13%Cr, DISC IN STAINLESS STEEL, SEAT IN BUNA N OR EPDM OR VITON OR PTFE (UP TO DN 200 – 8")
RING AND INSULATING BUSHINGS IN PVC

FEATURES

THE VALVES ARE DESIGNED FOR GAS, AIR, VACUUM APPLICATION SUITABLE FOR OIL, FUELS, WATER, ...

PERFECT PNEUMATIC SEAT TIGHTNESS WITH LARGE SECTIONS OF PASSAGE, CAUSING PRESSURE DROPS THAT ARE ALMOST NEGLIGIBLE.

THE PNEUMATIC ACTUATOR WORKS WITH SUPPLY PRESSURE BETWEEN 4 AND 10 BAR AND IT'S MADE BY A CILINDER IN ALUMINIUM EXTRUDED WITH TWO PISTONS FIXED TO TWO RACKS WITH RETURN BY SPRINGS.

OPTIONALS

IT'S POSSIBLE TO MOUNT THE FOLLOWING ACCESSORIES ON THE PNEUMATIC ACTUATOR:
- SOLENOID VALVES
- SPEED REGULATOS
- SILENCERS
- LIMIT SWITCHES WITH DIRECLY MOUNTING
- BOX WITH LIMIT SWITCHES
- ELECTROPNEUMATIC POSITIONERS
- MANUAL OVERRIDE

DN	50	65	80	100	125	150	200	250	300	350	400	450	500
L	43	46	46	52	56	56	60	68	78	78	102	114	127
B	207	186	186	248	261	305	381	381	467	636	734	T.B.A.	T.B.A.
C	76	84	90	105	120	130	170	200	225	251	276	325	342
D	181	208	216	228	299	315	400	435	527	658	793	T.B.A.	T.B.A.
E	34	42	42	42	65	65	90	90	116	169	169	T.B.A.	T.B.A.
F	47	54	54	54	66	66	91	91	114	169	169	T.B.A.	T.B.A.

FLOW COEFFICIENT (CV VALUES)

DN	DISC DEGREE OPEN							
	20	30	40	50	60	70	80	90
50	3	7	15	20	31	39	54	66
65	8	17	31	46	66	82	97	103
80	14	31	54	81	115	144	169	180
100	31	66	117	175	250	312	367	400
125	54	114	201	302	429	536	630	670
150	85	180	317	476	677	846	995	1058
200	174	371	654	981	1395	1744	2049	2180
250	300	638	1125	1688	2401	3001	3526	3751
300	440	936	1651	2477	3523	4403	5174	5504
350	523	1110	1959	2939	4180	5225	6139	6531
400	659	1401	2473	3709	5276	6594	7748	8243
450	886	1883	3323	4985	7089	8862	10412	11077
500	1066	2266	3998	5998	8530	10662	12528	13328