

Vameln

de españa, s.a.

VALVULAS DE MARIPOSA Y ACCIONAMIENTOS
ENGINEERED BUTTERFLY VALVES



Butterfly Valves



VAMEIN DE ESPAÑA, S.A. is an internationally well known leader company dedicated to the manufacture of Butterfly Valves and Actuators since 1970. Thanks to their wide experience, technical and human resources, **VAMEIN** offers a high quality product appropriated for the needs of the customer.

Steady modernization in production center, technical office and quality assurance system enable **VAMEIN DE ESPAÑA, S.A.** to supply products with certified guarantee. The Quality System of **VAMEIN DE ESPAÑA, S.A.** has been approved to design and manufacture butterfly valves according to ISO 9001:2008 standard and meets the requirements of the Pressure Equipment Directive 97/23/EC, Annex III, Module H of the European Economic Community.

Besides, **VAMEIN** also has European Directive ATEX 94/9/EC, concerning equipment and protective systems intended for using in potentially explosive atmospheres.

Fields of application for **VAMEIN** products are very diversified. This has given the possibility to develop a wide range of products with high reliability, covering practically all segments of the market where it is necessary to work with liquids, gases and high-density /powder products, at different pressures and temperatures bearing always in mind the respect towards the environment.

Applications and certifications

The VAMEIN butterfly valve has many uses in many different fields. The following list contains some of the different types of industries and fluids that our valves are used for:

INDUSTRIES	
Air and gas conductors	Mining
Cement Factories	Nuclear Power Stations
Chemical Industry	Oil Refinery
Combined Cycles	Paper Industry
Dairies	Power Stations
Dams and water Pumping Stations	Purifying plants
Desalination of sea water	River diversion
Destilleries	Sea water desalination
Fire-prevention systems	Sugar Refineries
Food industry	Vacuum installations
Heating and air conditioning	Water treatment and piping
Iron and steel Industry	Wine Industry
Irrigation	Lorry tankers
	Etc

FLUIDS	
Acids	Gases
Air	Hydrogen
Beer	Kerosene
Concrete	Milk
Chlorine	Oils
Demineralised water	Oxygen
Dissolvents	Ozone
Drinking water	Paints
Fats	Petroleum
Fluor	Raw oil
Fruit juices	Sea water
Fuels	Sewage
Wine	Water steam

ATEX: EC TECHNICAL FILE RECEIPT

EC CERTIFICATE OF CONFORMITY

Lloyd's Register
Lloyd's Register España, S.A.
 Notified Body N° 0094

EC CERTIFICATE OF CONFORMITY

In accordance with the requirements of R.D. 769/1999 which transpose the Pressure Equipment Directive 97/23/CE

This is to Certify that the Quality Management System of:

VAMEIN DE ESPAÑA, S.A.
 Pol. Ind. Tres Cantos
 28700 Tres Cantos (Madrid)
 Spain

has been assessed against the requirements of Annex III Module H of the Pressure Equipment Directive 97/23/CE and conforms to the requirements for the product shown below:

Design and production of wafer, flanged and lug type butterfly valves in ductile iron, carbon steel, stainless steel and bronze, for nominal diameters from DN-50 to DN-1200 (DN-2" to 48") and nominal pressures PN 10 and PN 16

Approval is subject to the continued maintenance of Quality System in accordance with the requirements of the above Directive and Regulations

Authorisation is hereby given to use the LR Notified Body Identification Number 0094 (Princesa 29, 1° Madrid - Spain) in accordance with the requirements of specified Directive and Regulations in relation to the products as identified above

Certificate N°: 009
 Original Approval: 30/05/2002
 11/05/2008



EC TECHNICAL FILE RECEIPT

This is to certify that Lloyd's Register Verification, a Notified Body under the terms of the Protective Systems intended for use in Potentially Explosive Atmospheres Directive, 94/9/EC and Directive Systems intended for use in Potentially Explosive Atmospheres Regulation 2014/54/EU, is in conformity with the requirements of the Conformity for assessment under Article 8 (Annex III) of the Directive (and Regulation 30 (3)(b)(ii) of the LR for verification a Technical File as detailed below:

This receipt is issued to:

APPLICANT: VAMEIN DE ESPAÑA, S.A.
 C/ Temple, 1
 28700 Tres Cantos
 Madrid (Spain)

TECHNICAL FILE DESCRIPTION:
 Wafer, flanged and lug type butterfly valves for nominal DN50 to DN1200 (2" to 48") and PN10 to P16

TECHNICAL FILE REFERENCE: AT-001, fecha 17-05-2009

The file will be stored for an initial period of two years from date of receipt, 100 years and the file will be either returned or destroyed, or a new retention

This receipt must be produced by the manufacturer to include the stored file

Storage file: 0036/ATEX/000000
 Date of Receipt: 24 June 2009
 LR Notified Body Number 0094

B. Almona on July

Export Report Reference: 00001, 9 Product 1

CERTIFICATE ISO 9001:2008

CERTIFICATE OF APPROVAL

This is to certify that the Quality Management System of:

VAMEIN DE ESPAÑA, S.A.
 Tres Cantos, Madrid
 Spain

has been approved by Lloyd's Register Quality Assurance to the following Quality Management System Standards:

ISO 9001:2008

The Quality Management System is applicable to:

Design and production of wafer, flanged and lug type butterfly valves for nominal diameters from dn 50 to dn 1200 (dn 2" to dn 48").

Approval Certificate No: SGI 2202107

Original Approval: 17 May 2002
 Current Certificate: 15 December 2009
 Certificate Expiry: 14 December 2012

Issued by: LRQA, LMI, Operaciones España



Applicable regulations

CONCERNING QUALITY SYSTEM	
CODE	TITLE
UNE-EN-ISO 9001:2008	Quality management systems. Requirements.
97/23/EC	European Directive 97/23/EC concerning pressure equipment.
ATEX 94/9/EC	European Directive concerning equipment and protective systems intended for use in potentially explosive atmospheres.

CONCERNING DESIGN	
CODE	TITLE
API 609-97	Butterfly Valves: Double Flanged, Lug-and Wafer-Type.
EN-593	Industrial valves. Metallic butterfly valves.
MSS SP-67-95	Butterfly valves.
ASME/ANSI B16.24-01	Cast copper alloy pipe flanges and flanged fittings.
ASME/ANSI B16.34-96	Valves-Flanged, threaded, and welding end.
ASME/ANSI B16.42-98	Ductile Iron pipe flanges and flanged fittings.

CONCERNING ASSEMBLY BETWEEN FLANGES	
CODE	TITLE
EN 1092-1	Flanges and their joints. Circular flanges for pipes, valves, fittings and accessories, PN designated. Part I: Steel flanges.
EN 1092-2	Flanges and their joints. Circular flanges for pipes, valves, fittings and accessories, PN designated Part 2: Cast iron flanges.
ANSI B 16.5	Pipe flanges and flanged fittings: NPS ½ through NPS 24. (DN 15 through DN 600)
ANSI B 16.1	Cast iron pipe flanges and flanged fittings classes 25, 125, and 250.
ASME B 16.47	Large diameter steel flanges NPS 26 through NPS 60. (DN 650 through DN 1500)

CONCERNING PRODUCTION - ACTUATOR COUPLING	
CODE	TITLE
UNE-EN-ISO 5211-01	Industrial valves. Part-turn valve actuator coupling.
DN 50-300 mm (2"- 12") • Standard Vamein dimensions with parallel square to 0° (two faces of square parallel to the disc) with dimensions to UNE-EN-ISO 5211 and DIN 79 standards. • Optionally, with diagonal square to 45° (vertexes of the square in line with the disc) with dimensions to UNE-EN-ISO 5211 and DIN 79 standards. N.B.: From DN 50-200mm., the central groove on the top flange, as per UNE-EN-ISO 5211, is special construction.	

Applicable regulations

DN 350-1200 (14"- 48"):

- Standard Vamein dimension with key-way shaft end to ISO/R 773.
- Optionally, with parallel or diagonal square with dimensions to UNE-EN-ISO 5211 and DIN 79 standards.

CONCERNING PRODUCTION - FACE TO FACE DN 50-500 (2" – 20")

CODE	TITLE
UNE-EN 558-1-96	Industrial valves. Face-to-face and centre-to-face dimensions of metal valves for use in flanged pipe systems. Part 1 PN-designated valves.
UNE-EN 558-2-96	Industrial valves. Face-to-face and centre-to-face dimensions of metal valves for use in flanged pipe systems. Part 2 Class-designated valves.
ISO 5752-82	Metal valves for use in flanged pipe systems – Face-to-face and centre-to-face dimensions.

CONCERNING PRODUCTION - FACE TO FACE DN 600-1200 (24" – 48")

CODE	TITLE
VAMEIN	Standard manufacture

CONCERNING TESTING

CODE	TITLE
ISO 5208-93 (DIN 3230)	Technical delivery conditions for valves. Compilation of test methods.

CONCERNING MARKING AND LABELLING

CODE	TITLE
UNE-EN 19-93 (ISO-5209)	Marking of general purpose industrial valves.

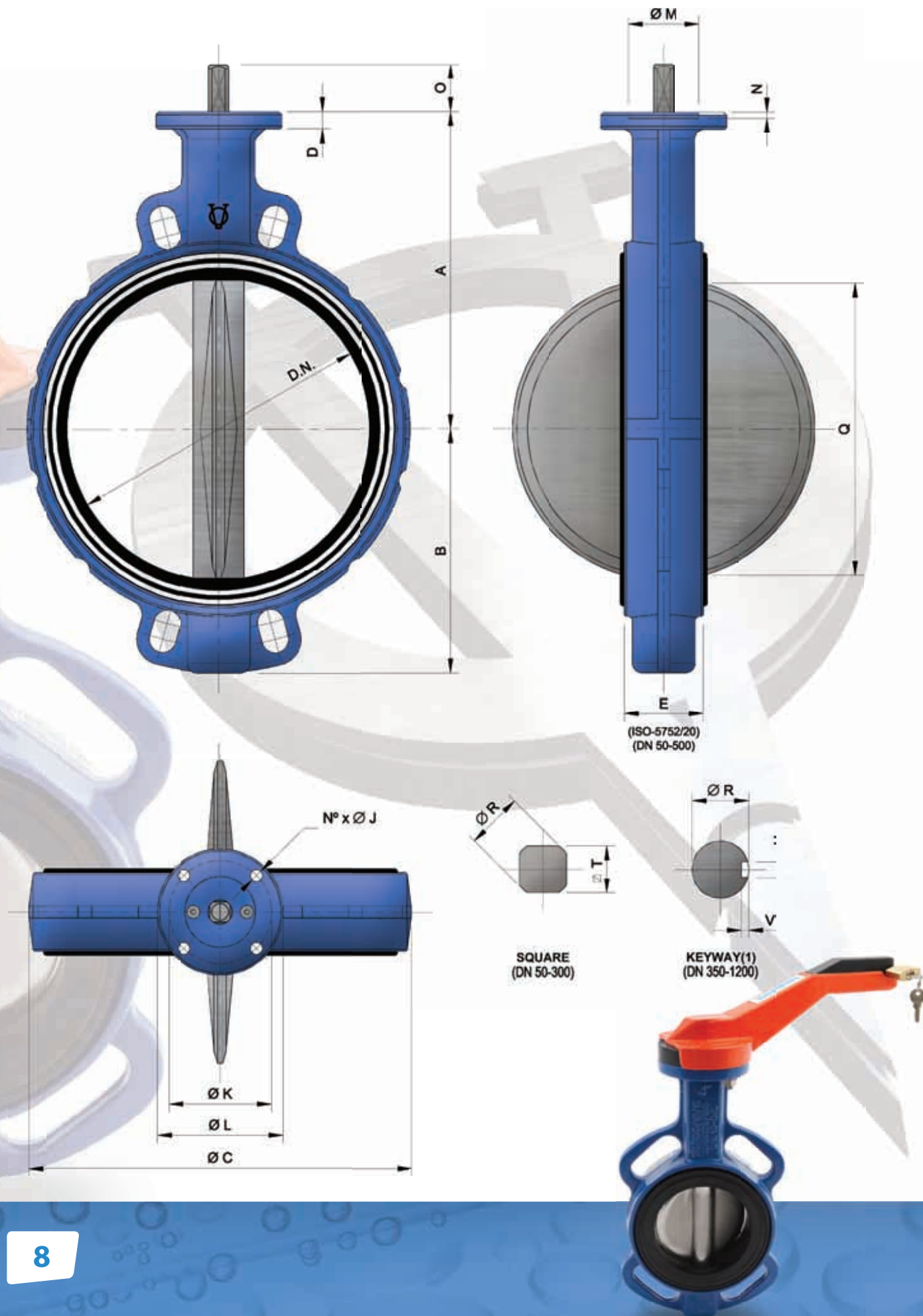
CONCERNING MATERIAL AND TEST CERTIFICATES

CODE	TITLE
EN 10204	2.2 / 3.1



Standard manufacture range

100 Series Wafer Type



Standard manufacture range

100 Series Wafer Type

Features

- ✓ Nominal diameters from 50 mm (2") to 2000 mm (80").
- ✓ Assembly between flanges : From DN 50 (2") to DN 300 (12") multiflange system, permitting with only one model of valve the assembly between PN-6, PN-10, PN-16, ANSI 125/150 Lbs, and B.S. 10-D/E flanges. From DN 350 (14"), assembly between DIN PN-10, PN-16 and ANSI 125/150. (for other drilling standards, please ask).
- ✓ Standard working pressure 16 Bar (DN 50-300) and 10 Bar (DN 350-2000) for higher pressures, ask our Technical Department.
- ✓ Temperature limits from -40°C to +180°C (depending on type of liners and coatings).
- ✓ 4 centering holes up to DN 500 for a correct alignment and quick installation.
- ✓ As this is a design to be used between flanges, the mechanical stress of the pipe is transferred to the valve only by compression on the body and therefore, there are not traction mechanical stress.
- ✓ Furthermore, as from DN 600 there are 4 threaded holes per each side of the body, according to the drilling standard required. This must be taken into consideration due to the traction.



DIMENSIONS

DN		BODY DIMENSIONS					ASSEMBLY FLANGE							SHAFT END						"Q"	WEIGHT (Kg)
mm	Inch	A	B	Ø C	D	E	ISO-5211/2	N°	Ø J	Ø K	Ø L	Ø M ⁽²⁾	N ⁽²⁾	O	Ø R	Ø T	U	V			
50	2"	140	83	102	12	43	F-07	4	9	70	90	55	3	26	13.2	11				32	3.3
65	2½"	152	93	122	12	46	F-07	4	9	70	90	55	3	26	13.2	11				51	4.0
80	3"	159	98	139	12	46	F-07	4	9	70	90	55	3	26	13.2	11				69	4.3
100	4"	178	111	159	14	52	F-07	4	9	70	90	55	3	30	16.8	14				89	5.7
125	5"	191	127	189	14	56	F-07	4	9	70	90	55	3	30	16.8	14				115	7.4
150	6"	203	143	214	15	56	F-07	4	9	70	90	55	3	33	20.4	17				143	8.9
200	8"	245	172	269	15	60	F-07	4	9	70	90	55	3	33	20.4	17				194	13.5
250	10"	275	204	331	17	68	F-10	4	11	102	125	70	3	47	28	22				243	22.8
300	12"	315	242	380	17	78	F-10	4	11	102	125	70	3	47	28	22				293	31.7
350	14"	307	291	442	22	78	F-12	4	13	125	150	85	3	55	36		10	4.7		332	43.2
400	16"	342	325	493	24	102	F-14	4	17	140	175	100	4	65	42		12	4.9		382	65.2
450	18"	387	357	544	27	113	F-14	4	17	140	175	100	4	65	48		14	5.5		432	84.5
500	20"	425	381	601	27	126	F-14	4	17	140	175	100	4	65	48		14	5.5		478	119
600	24"	532	488	695	40	146	F-25	8	18	254	300	200	5	110	72		20	7.4		585	281
650	26"	550	493	736,5	40	175	F-25	8	18	254	300	200	5	110	72		20	7.4		619	348
700	28"	573	506	798	40	175	F-25	8	18	254	300	200	5	110	72		20	7.4		683	414
750	30"	622	555	872	40	176	F-25	8	18	254	300	200	5	110	72		20	7.4		733	508
800	32"	650	578	908	40	215	F-25	8	18	254	300	200	5	110	72		20	7.4		755	572
900	36"	707	643	1004	40	246	F-25	8	18	254	300	200	5	110	98		28	9.9		852	639
1000	40"	755	729	1114	40	280	F-25	8	18	254	300	200	5	110	98		28	9.9		958	918
1050 ⁽³⁾	42"	781	755	1196	40	280	F-25	8	18	254	300	200	5	110	98		28	9.9		1013	1034
1100 ⁽³⁾	44"	800	774	1220	40	280	F-25	8	18	254	300	200	5	110	98		28	9.9		1050	1150
1200	48"	900	855	1330	50	360	F-30	8	22	298	350	230	5	130	120		32	11.1		1098	1760

Dimensions in mm are orientative

VAMEIN DE ESPAÑA, S.A. reserves the right to modify dimensions with no previous advise.

For DN >1200 please ask.

(1): For DN 1200, two keyways in line.

(2): Central recess Ø M x N optional in DN 50-200.

(3): Special manufacture valves. Ask for availability.

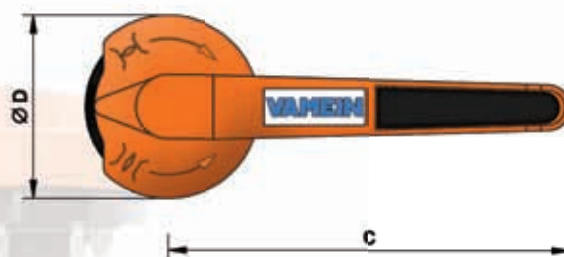
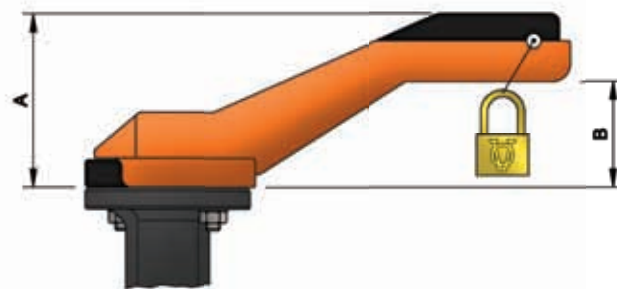
Manual actuators

Lever

PAI-01/02 (DN 50-200):

Features

- ✓ Injected aluminium casting.
- ✓ Stainless steel bolting.
- ✓ Complete integrated lever set for direct mounting on valve.
- ✓ Ideal for mounting in pipe-systems with heat-insulation.
- ✓ 6 regulating positions.
- ✓ Interchangeable plate for VAMEIN logo (Other logo-types upon request).
- ✓ Padlock blocking device.
- ✓ Possibility to fit limit switches for remote position indication.



CODE	DN	A	B	C	Ø D	WEIGHT (Kg)
PAI01-11	50-80	95	58	220	100	0.7
PAI01-14	100	95	58	220	100	0.7
PAI02-14	125	95	58	320	100	0.8
PAI02-17	150-200	95	58	320	100	0.8

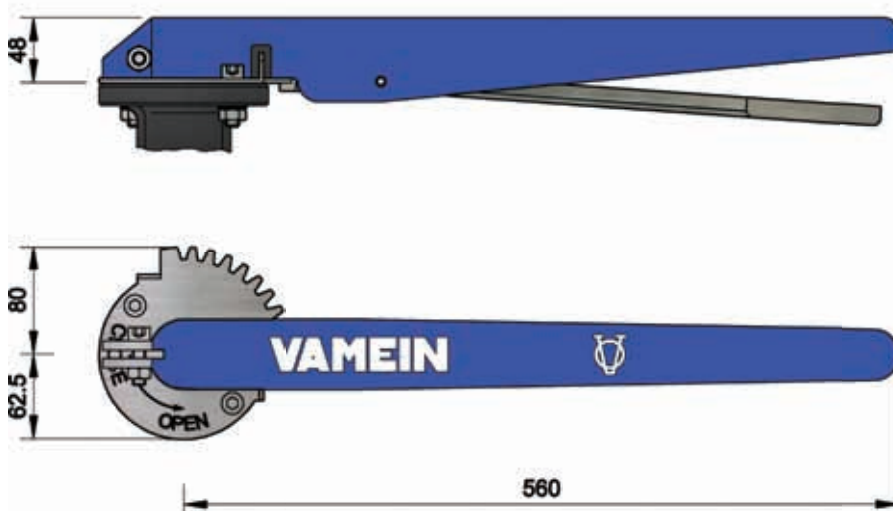
Dimensions in mm are orientative

PA-1005 (DN 250-300):

Features

- ✓ Aluminium casting.
- ✓ 10 regulating positions.
- ✓ Possibility to fit limit switches for remote positioning indication.

NOTE: For DN 250 and 300, and due to the great effort necessary to operate the levers, it is advisable to choose the gearbox as a manual actuator.

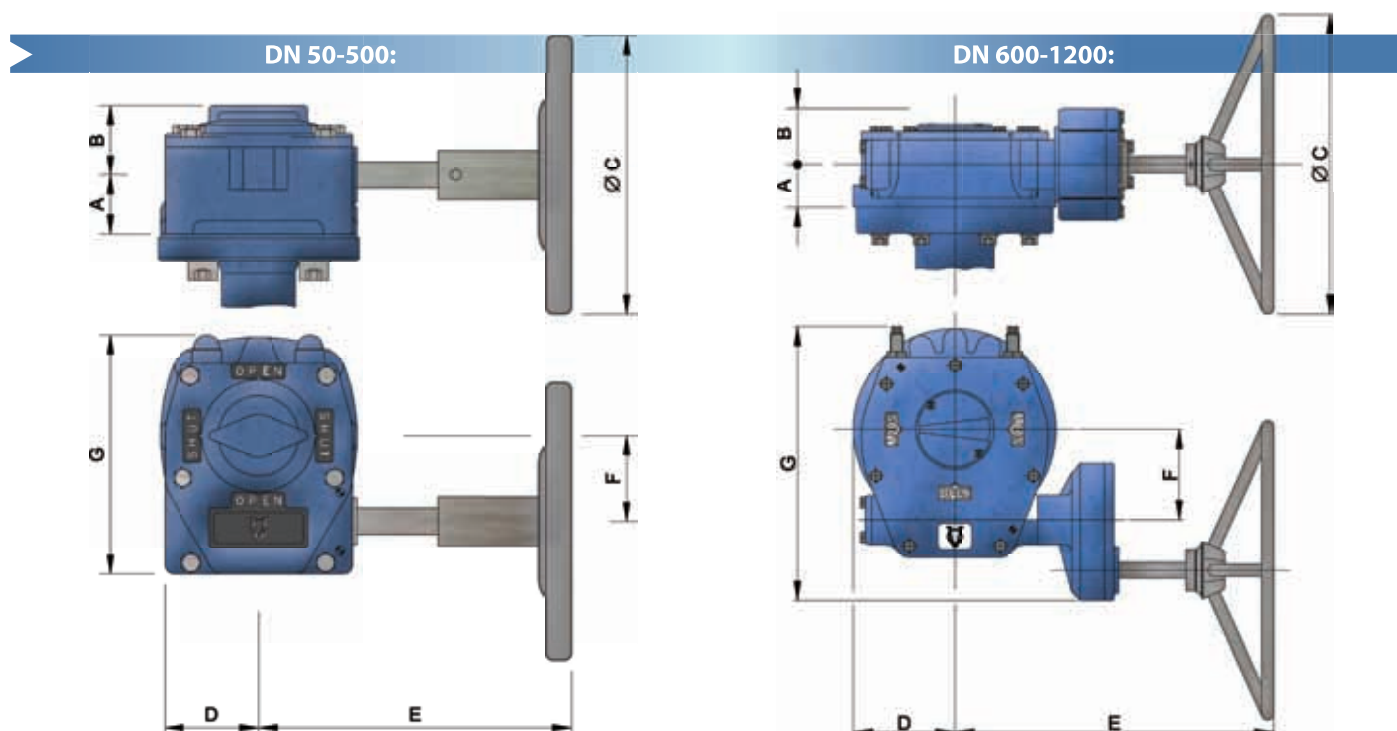


CODE	DN	WEIGHT (Kg)
PA1005-22	250-300	2,4

Dimensions in mm are orientative

Manual actuators

Gearbox



GEARBOX REFERENCE	A	B	Ø C	D	E	F	G	RATIO	TURNS AT 90°	WEIGHT (Kg)
RS DN 50-80	26.5	31.8	140	44	145,5	38.5	107,3	40:1	10	3,1
RS DN 100-125	26.5	31.8	140	44	145,5	38.5	107,3	40:1	10	3,1
RS DN 150-200	26.5	31.8	140	44	145,5	38.5	107,3	40:1	10	3,1
RS DN 250-300	28,6	34	250	51	212	52	130	37:1	9,25	5,2
RS DN 350	40,5	47	300	65	282	71	180	34:1	8,5	10,5
RS DN 400	42	50,5	300	77	270	86	226	38:1	9,5	16
RS DN 450-500	48	53.5	400	91	326	104,5	258	55:1	13,75	26
RS DN 600-800	55	100	500	142,5	447	130	402,5	208:1	52	49
RS DN 900-1000	59	100	600	185	500	182	482	312:1	79	75
RS DN 1050-1100	59	110	600	185	556	182	584	702:1	175	105
RS DN 1200	85	110	700	255	589	256	725	705:1	176	231

Dimensions in mm are orientative

Features

- ✓ Construction: cast iron body, gear mechanism from steel.
- ✓ Precise close position which guarantees full tightness.
- ✓ Self-blocking mechanism.
- ✓ Mechanical stoppers enabling regulation..
- ✓ Lubricated for life.
- ✓ Visual position indicator.
- ✓ Protection class IP 67.
- ✓ Possibility of padlock device.
- ✓ Mounting of limit switches for remote position indication possible.
- ✓ Underwater-application and service possible (IP 68)

Seat liners

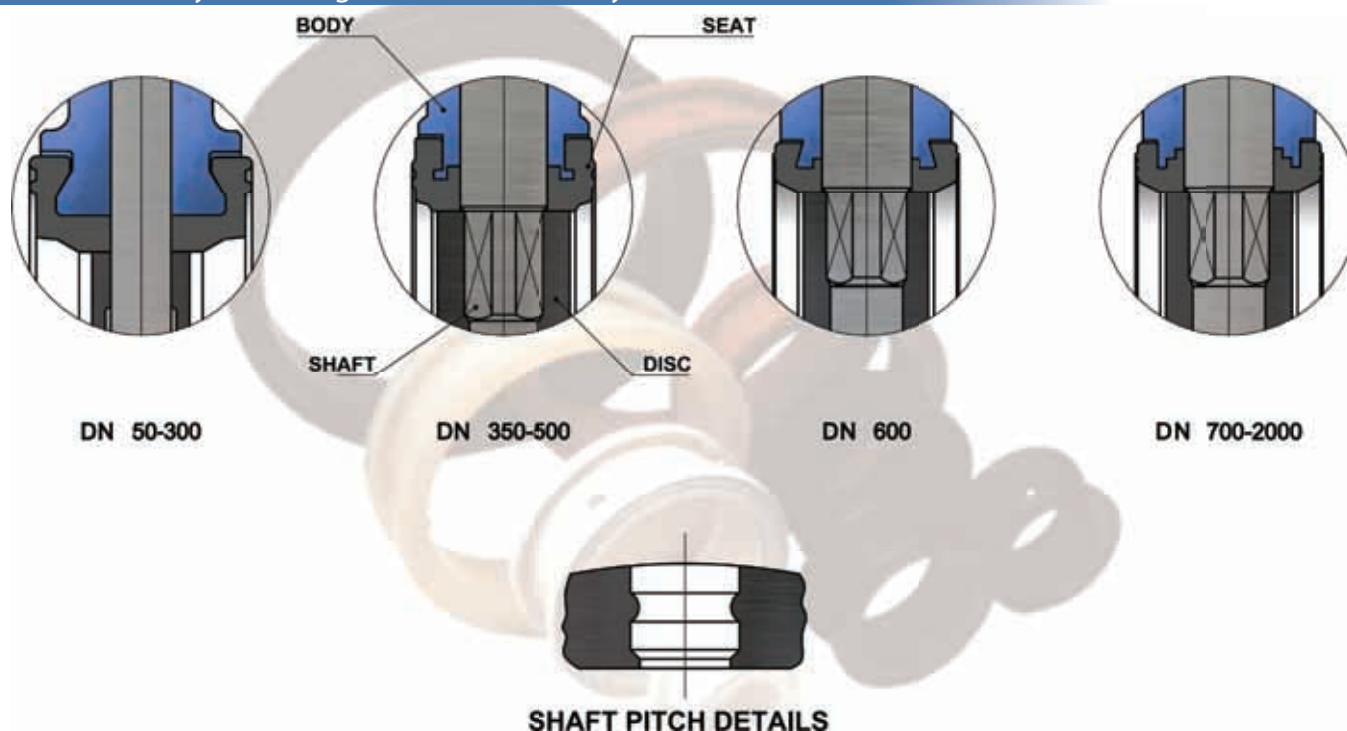
Design

They are specially designed by **VAMEIN DE ESPAÑA, S.A.** to allow a perfect fit with the valve's body and making it completely watertight. Their O-RINGS allow a perfect seal with the flanges without requiring any additional joints.

For the valve life and perfect working it is imperative that the right seat material is chosen for the line conditions, i.e., temperature and chemical composition of fluid.

VAMEIN DE ESPAÑA, S.A. Technical Department is prepared to help you choose the right kind of seat. Do not hesitate to ask about the particular conditions of the fluid to be used.

Detailed ways on fitting the seat to the body



Codes and temperatures of the most usual liners

MATERIAL	VAMEIN CODE	COMERCIAL CODE	° C MINIMUN TEMPERATURE	° C MAXIMUN TEMPERATURE
EPDM	E	EPDM	-15	100 (110)
HT-EPDM	EC	EPDM HT	-15	120 (130)
BUNA-N	N	NBR	-15	100 (115)
HYPALON	H	CSM	-15	105 (115)
VITON	V	FKM	-20	180 (200)
SILICONE	S	VMQ	-40	180 (200)

N.B.: There are two possible maximum temperatures, depending if the temperature applied is constant or intermittent. Those shown in brackets refer to the intermittent temperature.

It is to be taken into account that the more the working temperature approaches the limit temperature of the liner, the more premature ageing will take place and its original qualities reduced more quickly.

Temperatures just as an information.

Hydraulic features

Kv (m³/hour) Values

Values shown in the following table are in m³/hour in order to make the pressure drop calculation easier.

DN VALVE		OPENING ANGLE							
mm	Inches	20°	30°	40°	50°	60°	70°	80°	90°
50	2"	7	16	26	43	69	110	170	190
65	2½"	9	22	38	60	95	155	250	280
80	3"	14	33	57	95	150	240	370	430
100	4"	24	54	95	155	240	400	620	710
125	5"	38	86	155	240	390	640	950	1.100
150	6"	52	120	220	345	550	950	1.400	1.600
200	8"	95	220	345	600	950	1.600	2.400	2.800
250	10"	155	345	610	950	1.600	2.600	4.000	4.700
300	12"	220	510	860	1.500	2.300	3.800	5.900	6.900
350	14"	290	660	1.200	1.900	2.900	4.800	7.800	8.600
400	16"	380	860	1.600	2.400	3.900	6.400	9.500	11.200
450	18"	490	1.100	2.000	3.100	5.000	8.300	12.900	15.500
500	20"	610	1.400	2.500	4.000	6.200	10.300	15.500	19.000
600	24"	860	2.000	3.400	5.500	8.600	14.700	22.400	25.900
650	26"	980	2300	4000	6100	10400	16650	25850	31500
700	28"	1.100	2.600	4.600	6.700	12.200	18.600	29.300	37.100
750	30"	1.300	3.100	5.200	8.500	13.800	22.400	34.500	40.500
800	32"	1.800	3.600	6.600	9.700	16.600	28.300	43.200	52.300
900	36"	2.200	4.500	7.800	12.900	19.800	32.800	51.700	60.300
1.000	40"	3.100	5.300	8.700	16.000	24.100	42.200	62.100	78.400
1.050	42"	3.400	5.900	9.600	17.700	26.600	46.600	68.400	86.200
1.100	44"	3.800	6.500	10.600	19.500	29.300	51.300	75.100	95.100
1.200	48"	4.500	7.800	12.700	23.300	35.200	61.500	90.700	114.400

Kv (Cv) Flow coefficient value definition =Water flow value in l/ minute at 20° C (US gallons/minute at 60 ° F), which passing through a valve creates a pressure drop of 1 Kg/cm². (1 p.s.i.)

Kv – Cv Ratio:

Cv (US Gallons / minute) = 1,155 • Kv (l/minute)

N.B.: This ratio is only valid for the above mentioned units.



Torque table

NOMINAL DIAMETER		WORK PRESSURE	10 bar	16 bar	150 p.s.i.	225 p.s.i.
mm	Inches	UNITS	N•m	N•m	Lbs x Inch.	Lbs x Inch.
50	2"	 TORQUES 	15	15	133	133
65	2 ½"		20	20	177	177
80	3"		25	25	221	221
100	4"		40	40	354	354
125	5"		50	50	443	443
150	6"		60	60	531	531
200	8"		160	160	1.416	1.416
250	10"		250	250	2.213	2.213
300	12"		300	300	2.655	2.655
350	14"		900	1.350	7.965	11.948
400	16"		1.200	1.800	10.620	15.930
450	18"		1.650	2.400	14.603	21.240
500	20"		2.300	3.500	20.355	30.975
600	24"		4.100	6.150	36.285	54.428
650	26"		4800	7200	42480	63720
700	28"		5.500	8.250	48.675	73.013
750	30"		6.500	9.500	57.525	84.075
800	32"		8.100	12.150	71.685	107.528
900	36"		10.000	15.000	88.500	132.750
1.000	40"		13.500	20.000	119.475	177.000
1.050	42"		14.200	21.300	188.505	125.670
1.100	44"		15.000	22.000	132.750	194.700
1.200	48"		16.500	24.500	146.025	216.825

REMARK: Torques listed in the above table are a guideline and they have been calculated for a constant pressure and working conditions and valid for "VAMEIN" butterfly valves with PTFE liners and water at ambient temperature (20° C approx.) at 10 bar pressure.

As the figures we presented in the above table were obtained from tests made on static benches, it is necessary to take into consideration the dynamic conditions of the fluid for every specific line (velocity, flow, cavitation, hydraulic factors, etc), specially for the hydrodynamic stress caused by the flow on the valve disc.

The "VAMEIN" butterfly valve is designed to work with fluids, which act like lubricants. For air or gas service, torques are considerably higher, at least 35 %. In this case, please contact our Technical Department to analyze the situation and get the best advice.

Safety factors are included in these torque values.



Key Figures

Fig **I I 7 P E**

BODY TYPE		
1	2	5
WAFER	FLANGED	LUG

BODY MATERIALS			
GENERIC	ASTM STANDARD	DIN / EN STANDARD	COATING
1. Ductile Iron	A 395 M:88	EN-JS 1020 EN 1563	RILSÁN-EPOXY (1)
2. Cast Steel	A 216-93 WCB	1.0619 EN 10213-2	RILSÁN-EPOXY (1)
3. Aluminium Bronze	B 148-92 C95800	EN 1982-99 CC333G	NO COATING
4. Stainless Steel 18/8	A 351-94 CF8	1.4308 EN 10213-4	NO COATING
5. Stainless Steel 18/8/2	A 351-94 CF8M	1.4408 EN 10213-4	NO COATING
6. Aluminium	B 179 S12C	1706 AC44100	RILSÁN
9. Bronze	B 62-93 C83600	CC491K EN1982	NO COATING

(1): Rilsan® DN 50 to 300 and Epoxy as from DN 350.

DISC MATERIALS			
GENERIC	ASTM STANDARD	DIN / EN STANDARD	COATING
1. Ductile Iron	A 395 M:88	EN-JS 1020 EN 1563	EPOXY
2. Cast Steel	A 216-93 WCB	1.0619 EN 10213-2	EPOXY
3. Aluminium Bronze	B 148-92 C95800	EN 1982-99 CC333G	NO COATING
4. Stainless Steel 18/8	A 351-94 CF8	1.4308 EN 10213-4	NO COATING
5. Stainless Steel 18/8/2	A 351-94 CF8M	1.4408 EN 10213-4	NO COATING
6. Ductile Iron	A 395 M:88	EN-JS 1020 EN 1563	(2)
7. Ductile Iron	A 395 M:88	EN-JS 1020 EN 1563	RILSAN
8. Cast Steel	A 216-93 WCB	1.0619 EN 10213-2	RILSAN
9. Bronze	B 62-93 C83600	CC491K EN1982	NO COATING

(2): Special coatings required by customer.

ACTUATORS							
P	RS	MF	ND	NS	SE	HD	HS
Lever	Gearbox	Tee square operator	Double acting pneumatic actuator	Spring return pneumatic actuator	Electric actuator	Double acting hydraulic actuator	Spring return hydraulic actuator

SEAT MATERIALS												
B	E	H	N	NA	NE	S	V	NB	CB	CA	EC	EA
Butyl	EPDM	Hypalon	NBR	Natural rubber	Neoprene	Silicon	Viton®	White NBR	Natural rubber food-grade	Anti-abrasive natural rubber	High temperature EPDM	Non toxic EPDM

NOTE: For materials, coatings or actuators other than those listed above, please contact our Technical Department