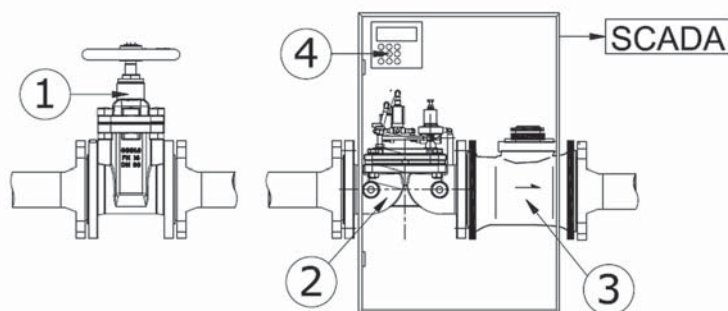


## Water Metering Unit

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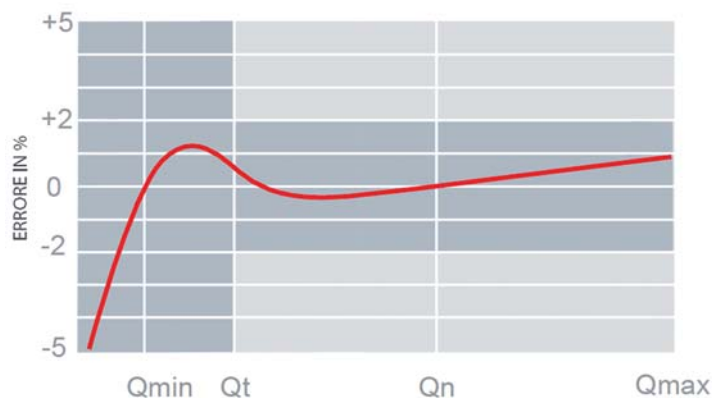




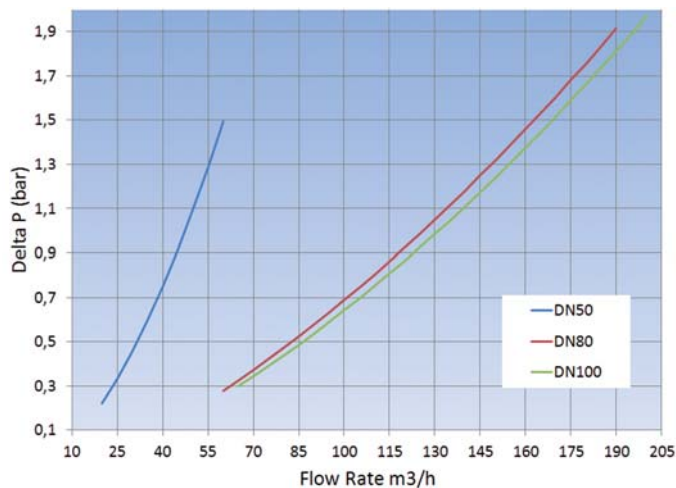
**Main Components**

Nº	Part
1	Stop Valve
2	Pressure Stabilizer
3	Flow Meter
4	Local Control Panel

**Typical Error Curve of Turbine Meters**



**Head Loss**



**Comeval Irrigation Flow Control Systems**

Wise control of water is a modern requirement and developing communities that can have a great impact on the quality of life and economic progress of counties.

An increasing world population demands more palliative resources to feed the needs and therefore new farm extensions are required.

The transformation of unproductive deserted areas into massive harvested ones can be achieved thanks to the automation techniques of a SCADA combined with the self acting package.

The Comeval automatic control system is compressive of a compact station made by isolating valves, control valves and a flow meter which is commanded by a SCADA through the signals sent to the pilot solenoid valve on top of the control valve.

The control valve is self acting by the upstream fluid through balance of the pressure chamber. A pilot package consisting on a solenoid to control the main valve as well as communicating in the field by to the SCADA can be also enhanced with additional pilot functions such as pressure reducing or pressure relief.

The flow meter provides the telemetric information of water consume into the allegation fields.

This compact and serialized package is supplied as a single unit consisting of a control valve and flow meter boxed into an insulated metal container with upstream isolating valves placed outside the box to ease the maintenance operation. The COMEVAL series are designed into 3 standard units to match flow rates corresponding to valve bores DN 50, DN 80 and DN 100

The equipments are designed to combat harsh environmental conditions such as high solid abrasion and high temperatures.

The Comeval design incorporates specific materials selected after years of experience working together with local contractors who know how important designing withstanding equipment is.

The units are delivered ready to wire to the DCS by the contractor.

**Working Conditions**

- Maximum Ambient Temperature: 60°C
- Minimum System pressure: 2 bar
- Flow rates as per hereunder curves.
- Maximum Deta P in function Cavitation limits

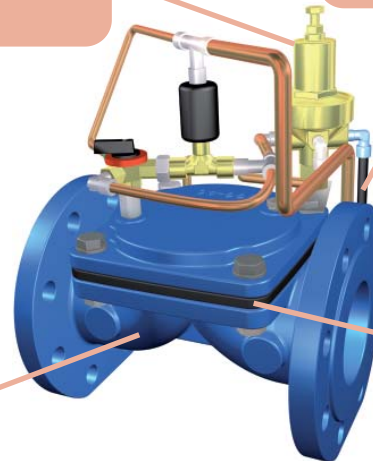
Self Acting Diaphragm Valves are a simple and economic choice to control diverse parameters such as Flow Rate, pressure, shutting off the fluid and level in all water systems and process fluids compatible with body and diaphragm materials. These valves are consisting of two main parts: the main valve body and the pilot system. The working principle is based on the self action of the fluid over the rubber and deformable diaphragm. The open and close action of the valve is achieved thanks to the upstream and downstream tube connections through the pilot system.

Multifunction thanks to the diverse available pilot systems.

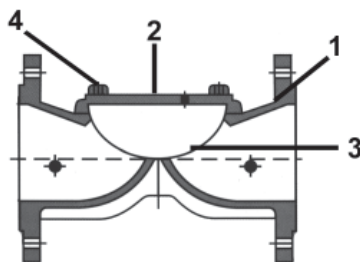
Favourable flow thanks to a low pressure drop across the valve.

Easy maintenance, by removing the diaphragm the service is restore, no need to remove the valve out of the pipe work; absolute tightness thanks to the rubber diaphragm, low internal turbulence thanks to the hydrodynamic design.

EPOXI coated bodies to prevent the environment corrosion.



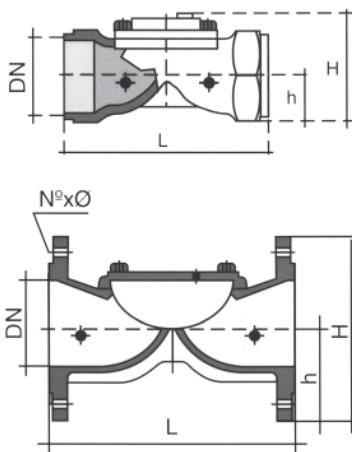
Working Temperature -10°C to 60°C \* Pressure Rating PN 16 / 10 / 16 depending on elastomeric material of diaphragm, please refer to our extensive catalogue for further details \* Flanges sized and drilled to EN1092 PN 16 (DIN2533)\* Threaded unions as per BSPP (DIN 259)



### Main Parts and Materials

ITEM	PART	MATERIAL
1	Body	Ductile Iron GGG40 EPOXI coated
2	Cover	Ductile Iron GGG40 EPOXI coated
3	Diaphragm	Nylon Braided Natural Rubber
4	Bolts	Stainless Steel
	Tubing	Copper
	Fittings	Brass
	Solenoid	Metal
	Pilot	Bronze

### Main Valve Dimensions (mm)



ENDS	DN	L mm	h mm	H mm
Threads	R 1"	184	26	90
Threads	R 1-¼"	180	32	95
Threads	R 1-½"	180	32	95
Threads	R 2"	186	37	100
Threads	R 2-½"	186	45	115
Flanges	80	255	90	190
Flanges	100	315	110	225
Flanges	125	335	128	255
Flanges	150	410	145	295
Flanges	200	410	170	340
Flanges	250	650	205	407
Flanges	300	650	230	465

Working Pressure	Standard	1,5 a 10 bar-g
	Option	0,7 a 6 bar-g 2 a 16 bar-g

### Options

Angle pattern 90° design \* Stainless steel body materials\*  
Diverse diaphragm materials \* Different pilot combinations\*

### Main Duties

ON/OFF function by solenoid control\* Level control by ball float  
\*Pressure reducing and Pressure Relief Function \* Control of Flow Velocity\* Flow Control \* Anti water Hammer\*



Immediate reading by numerical rolls

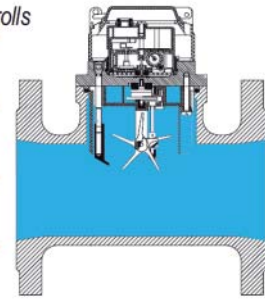
Temperature 0°- 50°C

Magnetic transmission

Removable insert

External regulation device

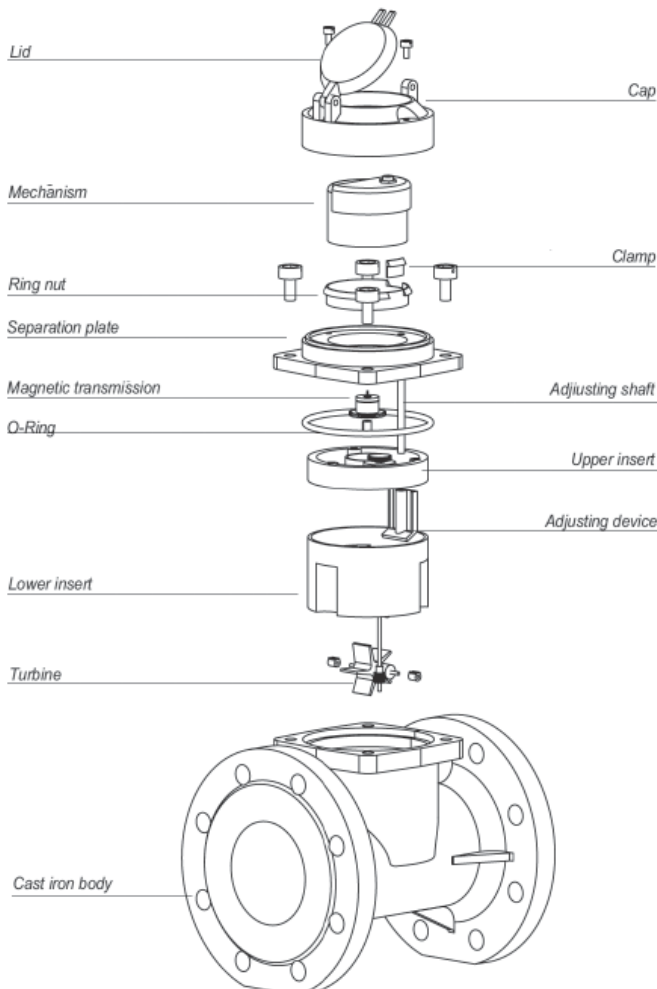
Impulse reader device on request



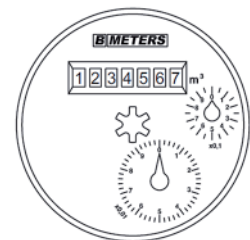
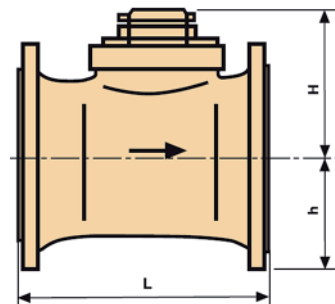
## Technical Features

Size	mm	50	65	80	100	125	150	200
Max flow rate	m <sup>3</sup> /h	70	100	150	250	350	500	900
Nominal flow	m <sup>3</sup> /h	35	50	75	125	175	250	450
Translation flow rate	m <sup>3</sup> /h	10,5	15	22,5	37,5	52,5	75	135
Min flow	m <sup>3</sup> /h	2,8	4	6	10	14	20	36
Max temperature	°C	50	50	50	50	50	50	50
Max working pressure	bar	16	16	16	16	16	16	16
Max reading dial	m <sup>3</sup>	9.999.999	9.999.999	9.999.999	9.999.999	9.999.999	9.999.999	9.999.999
Min reading dial	m <sup>3</sup>	0,005	0,005	0,005	0,005	0,005	0,005	0,005
Class		H	A	A	A	A	A	A

## Main Parts

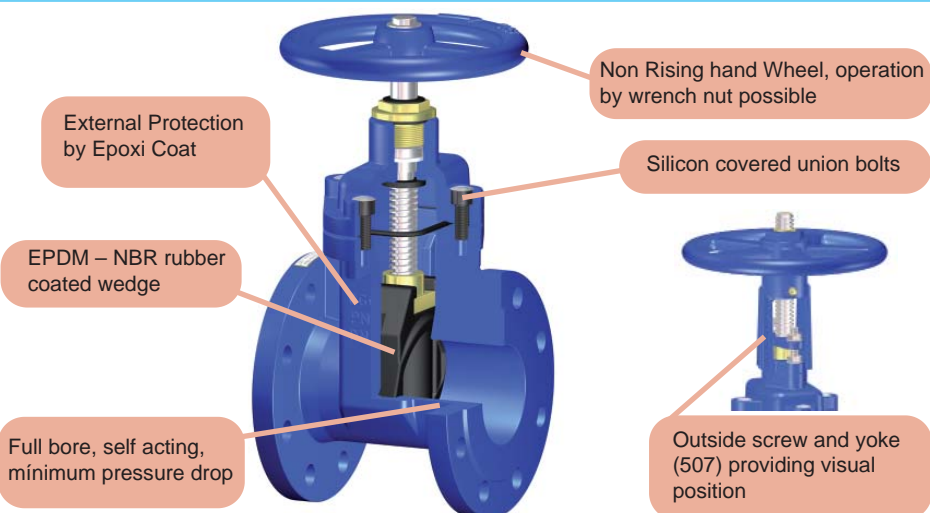


## Main Valve Dimensions (mm)

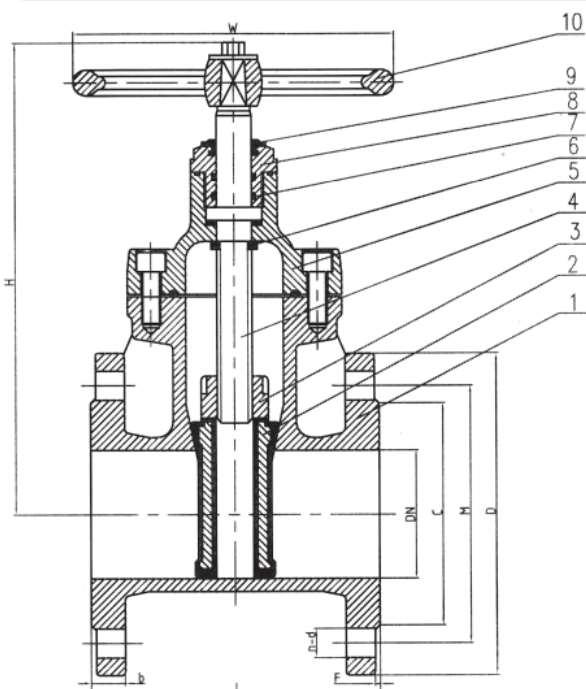


Size	mm	50	65	80	100	125	150	200
L	mm	200	200	225	250	250	300	350
H	mm	150	150	150	150	150	152	195
h	mm	80	92,5	100	110	125	142,5	170
Weight	Kg	11,5	13	15	19	24	30	48

Resilient Seat Gate Valves, free of maintenance, inner screw (504) or outside screw and yoke (507), clockwise closure, bolted bonnet. They are provided with external protection by EPOXI coater and are the right choice for general water systems. They offer a perfect tightness thanks to their resilient coated wedge even with sediment media.



Isolating Linear Valves for On/off\* Leakage Rate 0 according to Test procedure DIN 3230-3 \* bidirectional design \*Manufacturing Design to Harmonized Standard EN 1171:2002 and DIN 3352 section 4\* Design Pressure Rating: PN 16 \* Size range: DN 40 – DN 1000 \* Design Temperature Range: Up to 70/ 90°C \* Face to face length DIN 3202 F4 (EN 558-14) \* Valve End connections: flanged DIN PN 10-16\* Approvals: PED 97/23/CE – Category II, Fluids Group 1 and 2.



**Main Parts and Materials**

Nº	PART	MATERIAL
1	BODY	GGG40
2	WEDGE	GGG40/NBR/EPDM
3	BACK SEAT	38-2-2
4	SPINFLE	ST. STEEL 410/13%Cr
5	BONET	GGG40
6	PACKING SPINDLE	NBR
7	O-RINGS	NBR
8	GLAND BUSHING	38-2-2
9	BUSH SEAL	NBR
10	HANDWHEEL	GGG40

**Main Valve Dimensions (mm)**

DN		40	50	65	80	100	125	150	200	250	300	350	400
L	F4	140	150	170	180	190	200	210	230	250	270	290	310
	F5	240	250	270	280	300	325	350	400	450	500	550	600
H	Fig 504	260	270	283	311	352	435	485	520	632	745	835	953
	Fig 507	---	405	440	465	510	580	645	745	975	1165	1540	1760
C		88	102	122	138	158	188	212	268	320	378	438	490
M		110	125	145	160	180	210	240	295	355	410	470	525
D		150	165	185	200	220	250	285	340	405	460	520	580
b		18	20	20	22	22	24	24	26	28	30	32	32
f		3	3	3	3	3	3	3	3	3	3	4	4
w		160	180	180	200	250	280	320	350	400	450	500	550
n-d		4x18	4x18	4x18	8x18	8x18	8x18	8x22	12x22	12x26	12x26	16x26	16x30

Dimensional details valves DN450-DN800, on request to our Technical Dept.

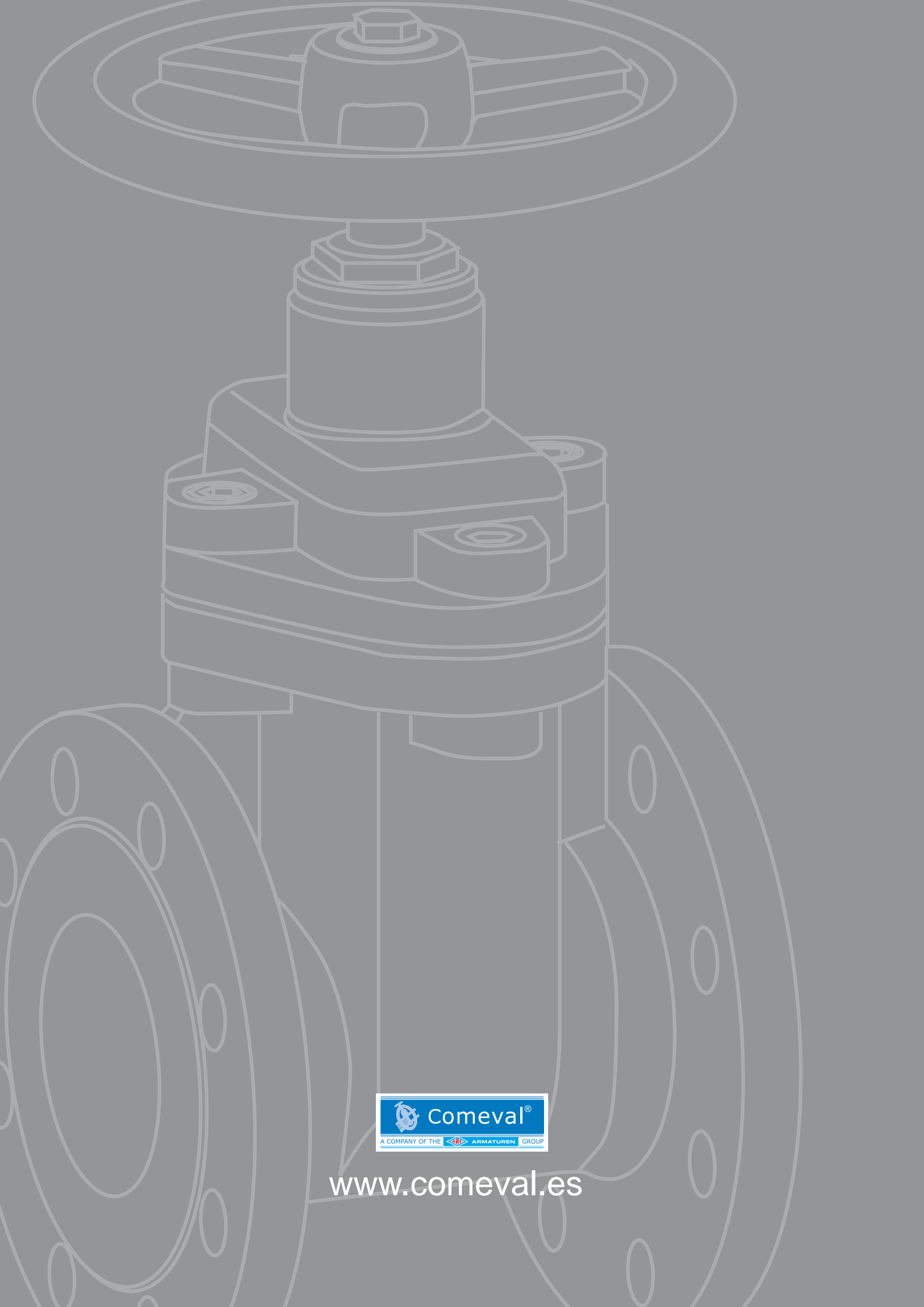
**Options**

AWWA design\* Flanged to ANSI / BS T.D, 16 \* UL/FM Approved \* extended Bonnet for underground service \* limit switches \* Chained hand Wheel \* Electric Actuation \* Gear operated\*

**Main Duties**

Water\* Neutral Liquids \* Fire Protection Systems, (507)





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