

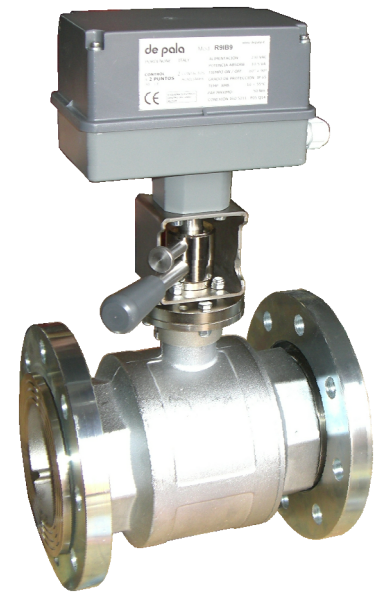
## MOTORIZED BALL VALVES WITH ISO CONNECTION

2 AND 3 WAYS DN 15 ÷ DN 100 ISO 228-1 THREADED AND FLANGED

The **valves**, ready to be motorized, are made in **nickel plated brass**, according to criteria of robustness and reliability. The ball shutter guarantees **minimum loss of pressure** and **no leakages**. The 3 ways can be chosen in **frontal or coplanar** configurations to fit in many plants' layout.

The **servomotors** have heat treated **steel gears** and are available in a **large range** with different technical features.

The **spacers** are made in **stainless steel** and are necessary when the body valve must be **insulated**; moreover when the spacer is used, the servomotor is more protected against the temperature of the conveyed fluid. The spacer with lever allows to disengage the servomotor and to **drive manually** the body valve.



BODY VALVE FEATURES	
Body valve	nickel-plated brass CW617N
Ball	chromium plated brass
Maximum operating pressure	from 16 to 40 bar
Maximum differential pressure	6 bar
Fluid temperature range	-10 °C + 100 °C
Connection flange to servomotor	standard ISO 5211
Total flow and no leakages PTFE seats Rod in brass CW614N with double o-ring in EPDM Compatible fluids: water or fluids compatible with PTFE and EPDM <b>Not intended for use with steam or partialisation</b>	

SERVOMOTORS FEATURES	
Supply voltage	230 or 24 Vac
Control type	2 or 3 wires
Static torque	from 12 to 50 Nm
Electric protection rating	up to IP65
Operation time	60" x 90°
Bidirectional rotation With auxiliary switches 12 or 24 Vdc available	



### THREADED

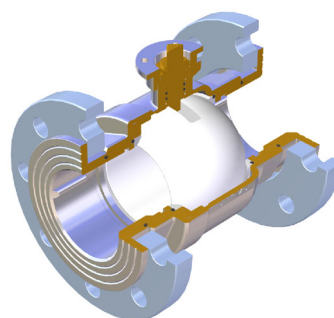
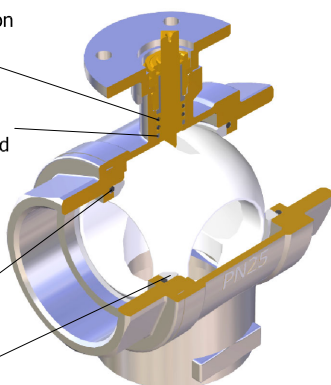
### FLANGED

Double O-Ring on control rod

PTFE antiseizing seal on control rod

Antiseizing EPDM o-ring behind seats

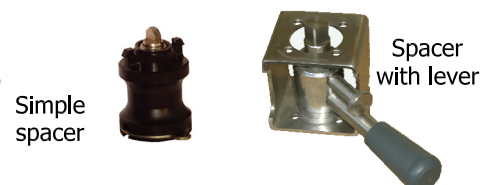
PTFE seats



Free flanges EN 1092-1 (PN 16)

Female thread ISO 228-1

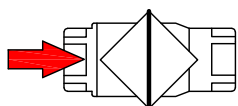
SPACERS	
Height	from 42 to 76 mm
Types	<b>Simple</b> or <b>with lever</b> for manual override
Stainless steel lever and rod. With lever type, the servomotor can be disengaged by a threaded pin to drive manually the body valve.	



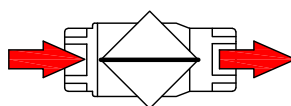
Simple spacer

Spacer with lever

# 2 WAYS VALVE



CLOSED POSITION



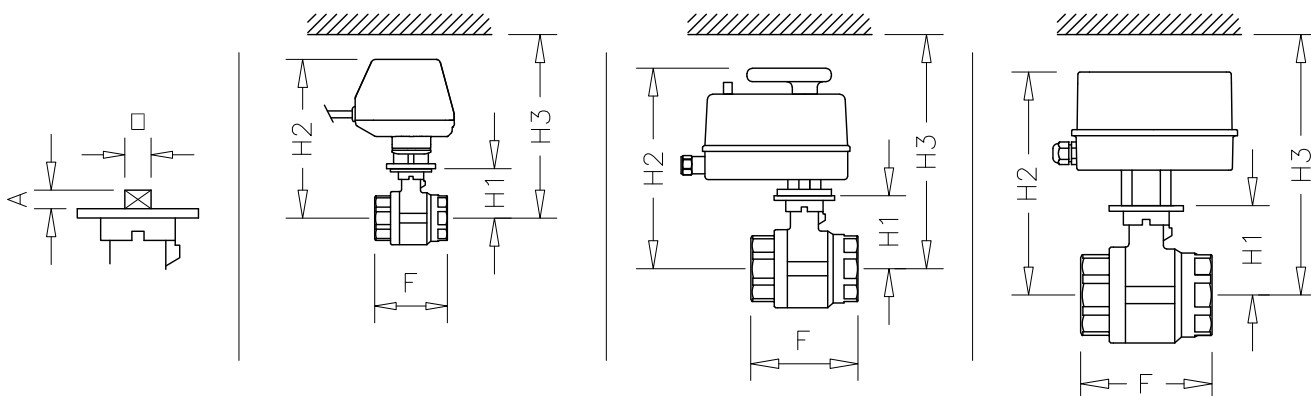
OPEN POSITION



## THREADED

FEMALE CONNECTIONS ISO 228-1

	BODY VALVES CODES								
	632 FI	602 FI	612 FI	622 FI	642 FI	652 FI	662 FI	672 FI	682 FI
<b>DN</b>	15	20	25	32	40	50	65	80	100
<b>CONNECTIONS</b>	1/2"	3/4"	1"	1" 1/4	1" 1/2	2"	2" 1/2	3"	4"
<b>F</b>	56	68	78	90	100	115	141	159	195
<b>H1</b>	48	52	56	68	73	79	92	102	129
<b>H2</b>	160	164	168	205	210	216	235	245	272
<b>H3</b>	180	184	188	295	300	306	325	335	362
<b>A</b>	8			10			12		18
<b>TORQUE</b>	4 Nm		5 Nm		6 Nm	7 Nm	15 Nm	18 Nm	
<b>PN</b>	40 bar						25 bar		16 bar
<b>FLANGE</b>	F03 □ 9			F05 □ 11			F05 □ 14		F07 □ 14
<b>SERVOMOTORS</b>	<b>M7 / R7 / P7 / T7</b> 12 Nm			<b>M8 / R8</b> 20 Nm			<b>M9 / R9</b> 50 Nm		

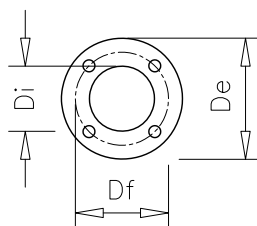


## FLANGED

FREE FLANGES EN1092-1 PN16

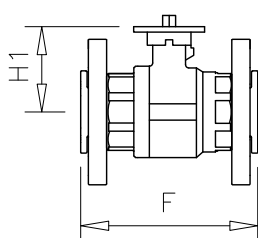
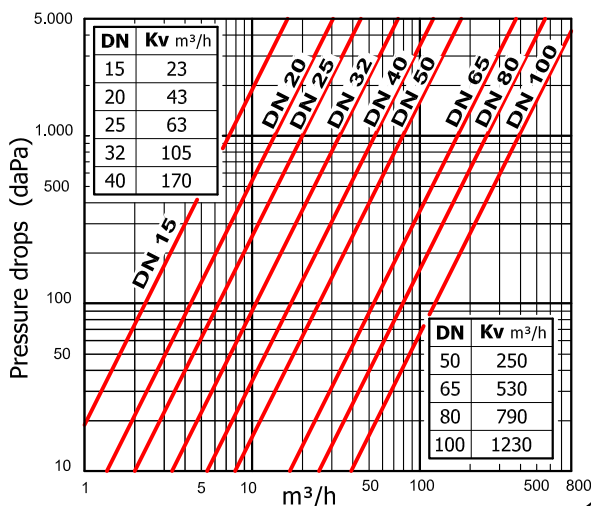
	BODYS VALVES CODES				
	642 FL	652 FL	662 FL	672 FL	682 FL
<b>DN</b>	40	50	65	80	100
<b>F</b>	146	167	190	214	254
<b>H1</b>	114	131	92	103	127
<b>H2</b>	251	268	235	246	270
<b>H3</b>	341	358	325	336	360
<b>A</b>	10	10	14	14	17
<b>D1</b>	Ø150	Ø165	Ø185	Ø200	Ø220
<b>D2</b>	Ø110	Ø125	Ø145	Ø160	Ø180
<b>TORQUE</b>	6 Nm	7 Nm	15 Nm	18 Nm	
<b>PN</b>	16 bar				
<b>FLANGE</b>	F05 □ 11		F05 □ 14		F07 □ 14
<b>SERVOMOTORS</b>	<b>M8 / R8</b> 20 Nm		<b>M9 / R9</b> 50 Nm		

MOTOR CONNENCTION  
FLANGE ISO 5211

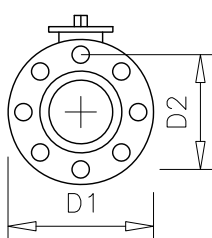


	F03	F05	F07
<b>Di</b>	Ø25	Ø35	Ø55
<b>De</b>	Ø50	Ø65	Ø90
<b>Df</b>	Ø36	Ø50	Ø70
<b>Holes</b>	Ø5.5	Ø6.5	Ø8.5

PRESSURE DROPS



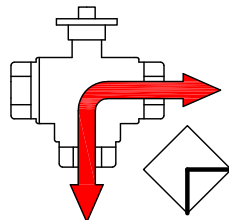
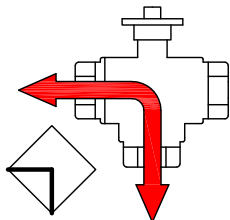
flanges DN 40 - DN 50 - DN 65  
n° 4 holes for M16



flanges DN 80 - DN 100  
n° 8 holes for M16

Not indicated  
dimensions are  
the same of  
threaded one

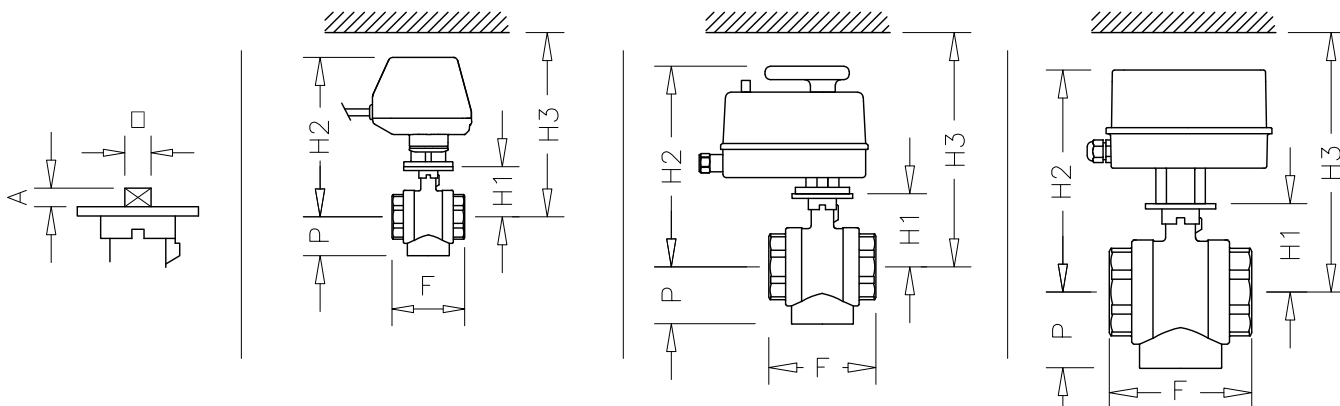
# 3 WAYS COPLANAR DEVIATING "T" BORED VALVE



## THREADED

FEMALE CONNECTIONS ISO 228-1

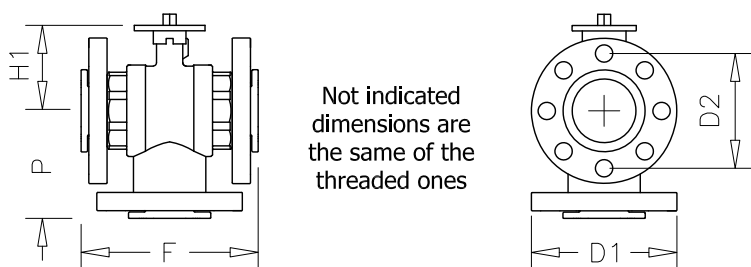
	BODY VALVES CODES						
	633 TI	603 TI	613 TI	623 TI	643 TI	653 TI	673 TI
<b>DN</b>	15	20	25	32	40	50	80
<b>CONNECTIONS</b>	1/2"	3/4"	1"	1" 1/4	1" 1/2	2"	3"
<b>F</b>	56	68	78	90	100	115	180
<b>P</b>	30	34	41	47	53	62	114
<b>H1</b>	48	52	56	68	73	79	104
<b>H2</b>	160	164	168	205	210	216	247
<b>H3</b>	180	184	188	295	300	306	337
<b>A</b>	8			10			12
<b>TORQUE</b>	4 Nm		5 Nm		6 Nm	7 Nm	18 Nm
<b>PN</b>	25 bar						
<b>FLANGE</b>	F03 □ 9			F05 □ 11			F05 □ 14
<b>SERVOMOTORS</b>	<b>M7 / R7 / P7 / T7</b> 12 Nm		<b>M8 / R8</b> 20 Nm			<b>M9 / R9</b> 50 Nm	



## FLANGED

FREE FLANGES EN1092-1 PN16

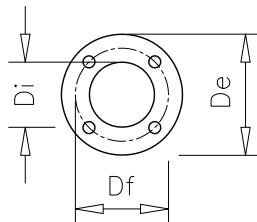
	BODY VALVES CODES
	673 FT
<b>DN</b>	80
<b>F</b>	235
<b>H1</b>	104
<b>P</b>	140
<b>H2</b>	247
<b>H3</b>	337
<b>A</b>	12
<b>D1</b>	Ø200
<b>D2</b>	Ø160
<b>TORQUE</b>	18 Nm
<b>PN</b>	16 bar
<b>FLANGE</b>	F05 □ 14
<b>SERVOMOTORS</b>	<b>M9 / R9</b> 50 Nm



Not indicated dimensions are the same of the threaded ones

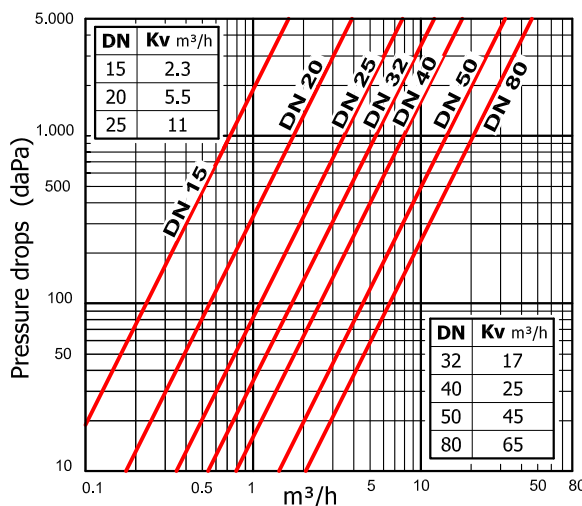
flanges DN 80 - DN 100 n° 8 holes for M16

MOTOR CONNENCTION  
FLANGE ISO 5211

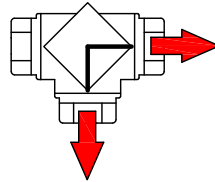
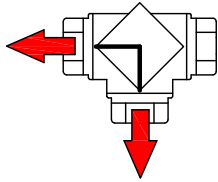


	F03	F05
<b>Di</b>	Ø25	Ø35
<b>De</b>	Ø50	Ø65
<b>Df</b>	Ø36	Ø50
<b>Holes</b>	Ø5.5	Ø6.5

PRESSURE DROPS



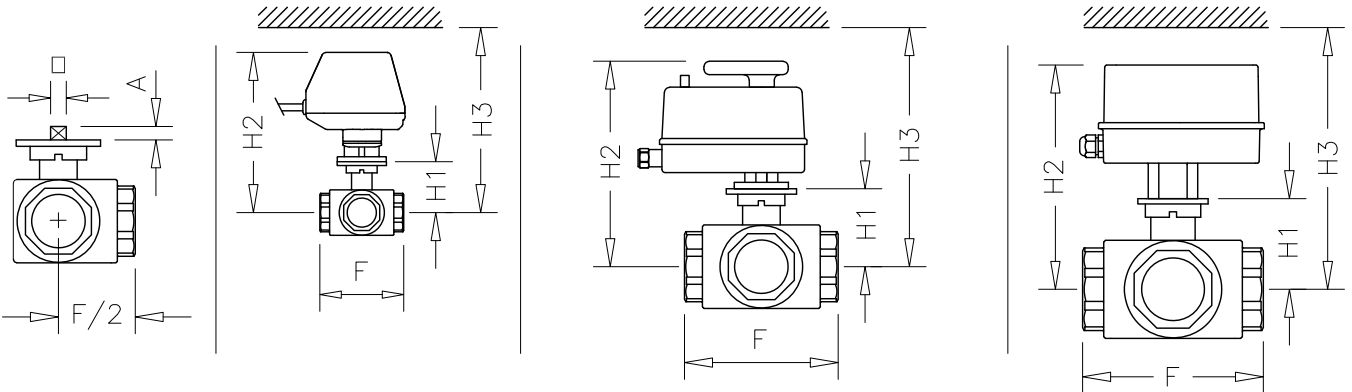
# 3 WAYS FRONTAL DEVIATING "L" BORED VALVE



## THREADED

FEMALE CONNECTIONS ISO 228-1

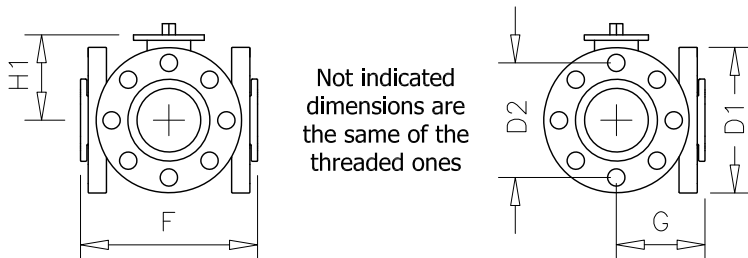
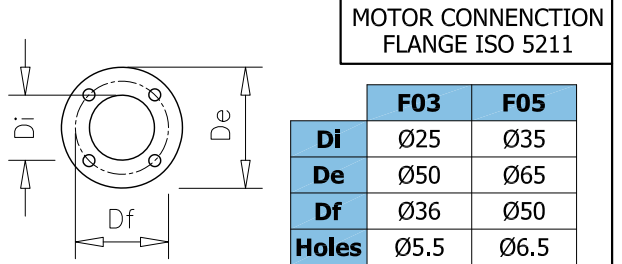
		BODY VALVES CODES						
		63A LI	60A LI	61A LI	62A LI	64A LI	65A LI	66A LI
<b>DN</b>		15	20	25	32	40	50	65
<b>CONNECTIONS</b>		1/2"	3/4"	1"	1" 1/4	1" 1/2	2"	2" 1/2
<b>F</b>		82	90	106	120	142	165	194
<b>H1</b>		51	54	63	67	73	80	91
<b>H2</b>		163	166	200	204	210	217	234
<b>H3</b>		183	186	290	294	300	307	324
<b>A</b>		8		10		12		
<b>TORQUE</b>		4 Nm		5 Nm	6 Nm	8 Nm	9 Nm	12 Nm
<b>PN</b>		40 bar						
<b>FLANGE</b>		F03 □ 9		F05 □ 11			F05 □ 14	
<b>SERVOMOTORS</b>		<b>M7 / R7</b> ... 12 Nm		<b>M8 / R8</b> 20 Nm			<b>M9 / R9</b> 50 Nm	



## FLANGED

FREE FLANGES EN1092-1 PN16

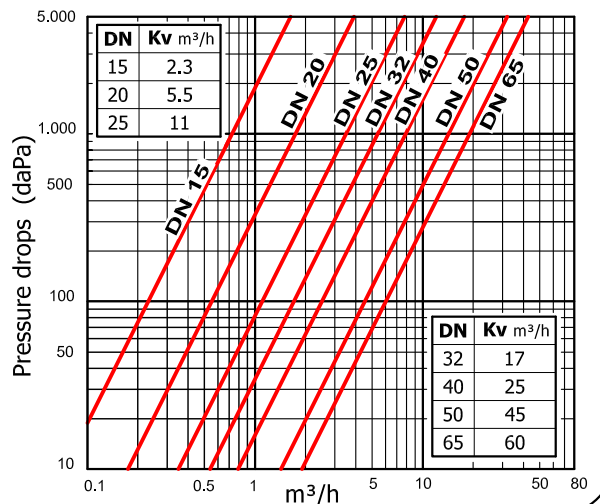
		BODY VALVES CODES		
		643 FF	653 FF	663 FF
<b>DN</b>		40	50	65
<b>F</b>		187	215	241
<b>G</b>		116	108	121
<b>H1</b>		73	80	91
<b>H2</b>		210	217	234
<b>H3</b>		300	307	324
<b>A</b>		12		
<b>D1</b>		Ø150	Ø165	Ø185
<b>D2</b>		Ø110	Ø125	Ø145
<b>TORQUE</b>		8 Nm	9 Nm	12 Nm
<b>PN</b>		16 bar		
<b>FLANGE</b>		F05 □ 11		F05 □ 14
<b>SERVOMOTORS</b>		<b>M8 / R8</b> 20 Nm		<b>M9 / R9</b>



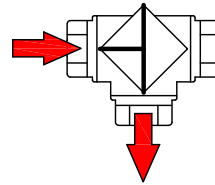
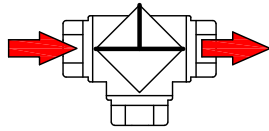
flanges DN 40 - DN 50 - DN 65 n° 4 holes for M16

Not indicated dimensions are the same of the threaded ones

## PRESSURE DROPS



# 3 WAYS FRONTAL LATERAL DEVIATING VALVE

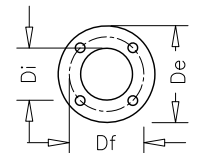


## THREADED

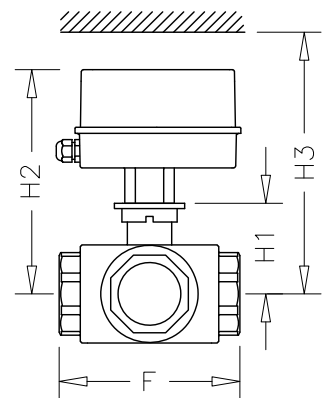
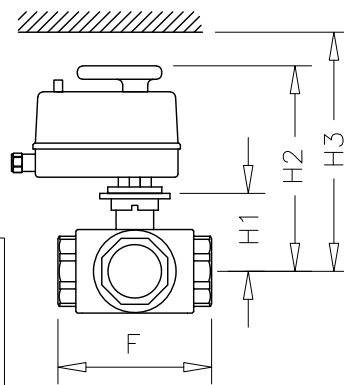
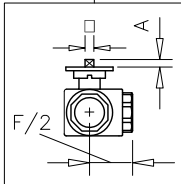
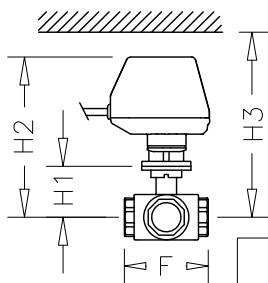
FEMALE ISO 228-1

		BODY VALVES CODES						
		63A TI	60A TI	61A TI	62A TI	64A TI	65A TI	66A TI
<b>DN</b>		15	20	25	32	40	50	65
<b>CONNECTIONS</b>		1/2"	3/4"	1"	1" 1/4	1" 1/2	2"	2" 1/2
<b>F</b>		82	90	106	120	142	165	194
<b>H1</b>		51	54	63	67	73	80	91
<b>H2</b>		163	166	200	204	210	217	234
<b>H3</b>		183	186	290	294	300	307	324
<b>A</b>		8		10		12		
<b>TORQUE</b>		4 Nm		5 Nm	6 Nm	8 Nm	9 Nm	12 Nm
<b>PN</b>		40 bar						
<b>FLANGE</b>		F03 □ 9		F05 □ 11			F05 □ 14	
<b>SERVOMOTORS</b>		M7 / R7 ... 12 Nm		M8 / R8 20 Nm			M9 / R9 50 Nm	

## CONNECTION FLANGE ISO 5211



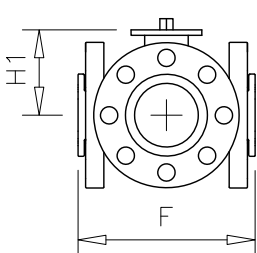
	F03	F05
<b>Di</b>	Ø25	Ø35
<b>De</b>	Ø50	Ø65
<b>Df</b>	Ø36	Ø50
<b>Holes</b>	Ø5.5	Ø6.5



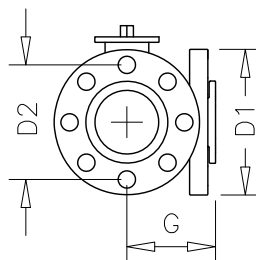
## FLANGED

FREE FLANGES EN1092-1 PN16

		BODY VALVES CODES		
		643 FD	653 FD	663 FD
<b>DN</b>		40	50	65
<b>F</b>		187	215	241
<b>G</b>		116	108	121
<b>H1</b>		73	80	91
<b>H2</b>		210	217	234
<b>H3</b>		300	307	324
<b>A</b>		12		
<b>D1</b>		Ø150	Ø165	Ø185
<b>D2</b>		Ø110	Ø125	Ø145
<b>TORQUE</b>		8 Nm	9 Nm	12 Nm
<b>PN</b>		16 bar		
<b>FLANGE</b>		F05 □ 11		F05 □ 14
<b>SERVOMOTORS</b>		M8 / R8 20 Nm		M9 / R9

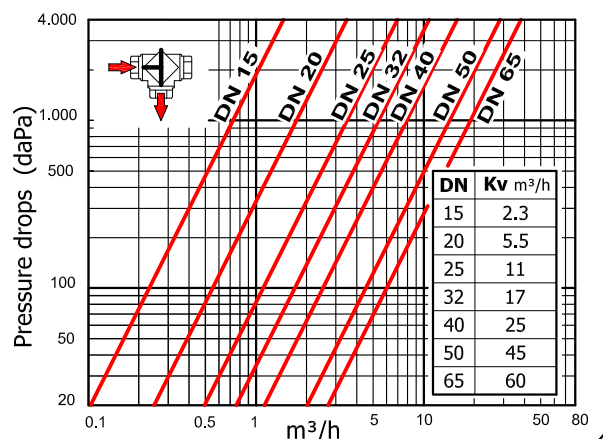
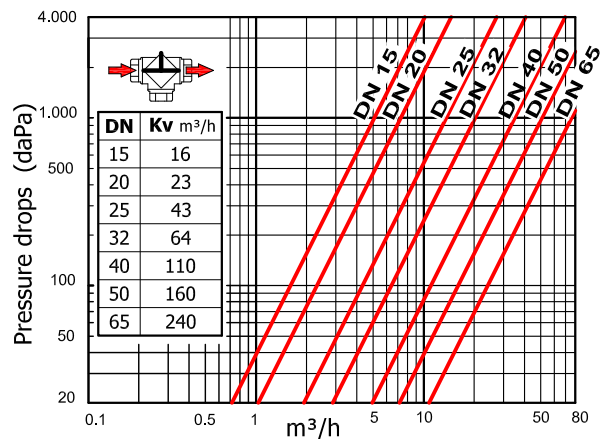


Not indicated dimensions are the same of threaded ones

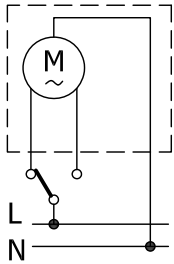


flanges DN 40 - DN 50 - DN 65 n° 4 holes for M16

## PRESSURE DROPS



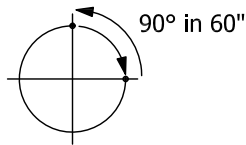
# SERVOMOTORS



**3 WIRES**

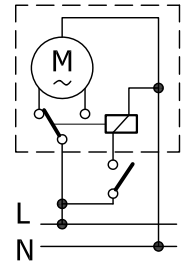
Each control commands one servomotor only

**BIDIRECTIONAL**

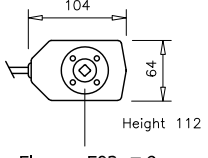


**2 WIRES**  
(relay inside)

Each control can command multiple servomotors

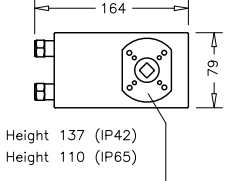


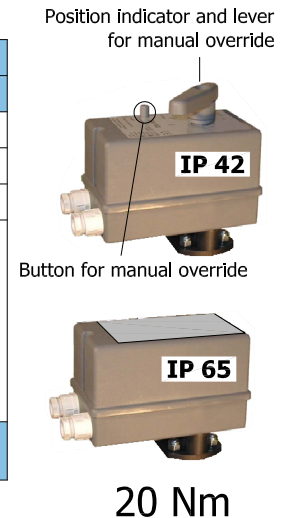
**M7 / R7 / ...**

SERVOMOTORS CODES								
	M7IB9	P7IB9	R7IB9	T7IB9	M7IC9	P7IC9	R7IC9	T7IC9
<b>POWER SUPPLY</b>	<b>230 Vac</b> +/- 10%				<b>24 Vac</b> +/- 10%			
<b>CONTROL</b>	<b>3 Wires</b>		<b>2 Wires</b>		<b>3 Wires</b>		<b>2 Wires</b>	
<b>ELECTRIC PROTECTION</b>	IP 54	IP 65	IP 54	IP 65	IP 54	IP 65	IP 54	IP 65
 <p>Flange F03 □ 9</p>	<p>Operation time: 60" x 90° bidirectional                      Static torque: 12 Nm                      Auxiliary switch: n° 1, max. 6 (2) A - 250 Vac (contact closed with valve open)                      Operating temperature: 0 ÷ + 65 °C                      Power consumption: 4 W only during rotation                      Flange ISO 5211: F03 □ 9</p>							

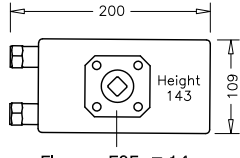


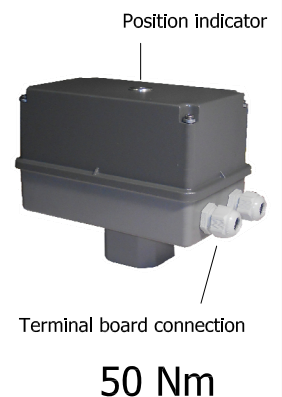
**M8 / R8**

SERVOMOTORS CODES								
	M8IB9	M8IB9P	R8IB9	R8IB9P	M8IC9	M8IC9P	R8IC9	R8IC9P
<b>POWER SUPPLY</b>	<b>230 Vac</b> +/- 10%				<b>24 Vac</b> +/- 10%			
<b>CONTROL</b>	<b>3 Wires</b>		<b>2 Wires</b>		<b>3 Wires</b>		<b>2 Wires</b>	
<b>ELECTRIC PROTECTION</b>	IP 42	IP 65	IP 42	IP 65	IP 42	IP 65	IP 42	IP 65
 <p>Flange F03 - F05 □ 11</p>	<p>Operation time: 60" x 90° bidirectional                      Static torque: 20 Nm                      Aux. switch * n° 1, max. 16 (6) A - 250 Vac (contact closed with valve open)                      Operating temperature: - 10 ÷ + 65 °C                      Power consumption: 4.5 W only during rotation                      Flange ISO 5211: F03 - F05 □ 11</p> <p>* <b>With E instead of B = 2 aux. switches</b> e.g. M8IE9      * <b>With F instead of C = 2 aux. switches</b> e.g. M8IF9</p>							



**M9 / R9**

SERVOMOTORS CODES				
	M9IB9	R9IB9	M9IC9	R9IC9
<b>POWER SUPPLY</b>	<b>230 Vac</b> +/- 10%		<b>24 Vac</b> +/- 10%	
<b>CONTROL</b>	<b>3 Wires</b>		<b>2 Wires</b>	
<b>ELECTRIC PROTECTION</b>	IP 65			
 <p>Flange F05 □ 14</p>	<p>Operation time: 60" x 90° bidirectional                      Static torque: 50 Nm                      Auxiliary switches: n° 2, max. 16 (6) A - 250 Vac                      Operating temperature: 0 ÷ + 65 °C                      Power consumption: 10.5 W only during rotation                      Flange ISO 5211: F05 □ 14</p>			



# SPACERS

## SIMPLE

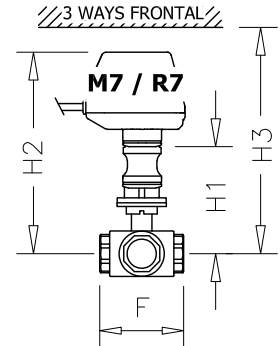
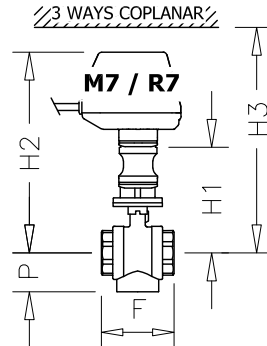
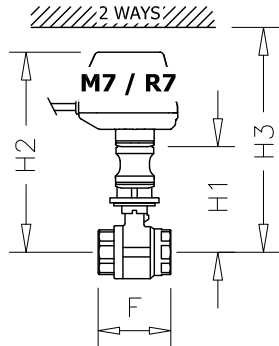
DN	15	20	25
CONNECTIONS	1/2"	3/4"	1"
F	56	68	78
P	-	-	-
H1	90	94	98
H2	202	206	210
H3	222	226	230

15	20	25
1/2"	3/4"	1"
56	68	78
30	34	41
90	94	98
202	206	210
222	226	230

15	20
1/2"	3/4"
82	90
-	-
93	96
205	208
225	228



H 42 mm  
COD. K3S7

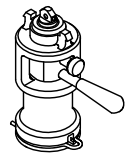


## LEVER

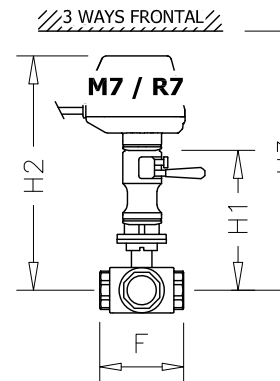
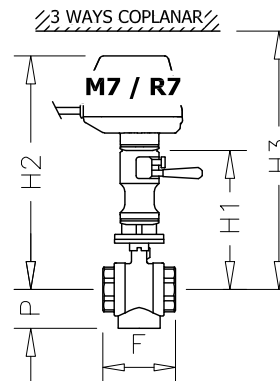
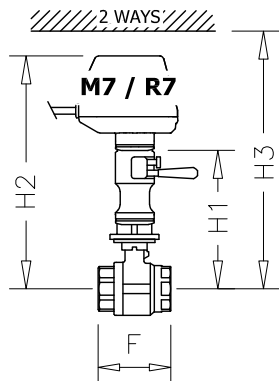
DN	15	20	25
CONNECTIONS	1/2"	3/4"	1"
F	56	68	78
P	-	-	-
H1	124	128	132
H2	236	240	244
H3	256	260	264

15	20	25
1/2"	3/4"	1"
56	68	78
30	34	41
124	128	132
236	240	244
256	260	264

15	20
1/2"	3/4"
82	90
-	-
127	130
239	242
259	262



H 76 mm  
COD. K3M7

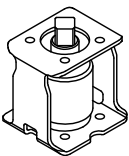


## SIMPLE

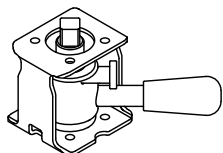
DN	32	40	50
CONNECTIONS	1" 1/4	1" 1/2	2"
F	90	100	115
P	-	-	-
H1	138	143	149
H2	248	253	259
H3	338	343	349

32	40	50
1" 1/4	1" 1/2	2"
90	100	115
47	53	62
138	143	149
248	253	259
338	343	349

25	32	40	50
1"	1" 1/4	1" 1/2	2"
106	120	142	165
-	-	-	-
133	137	143	150
243	247	253	260
333	337	343	350

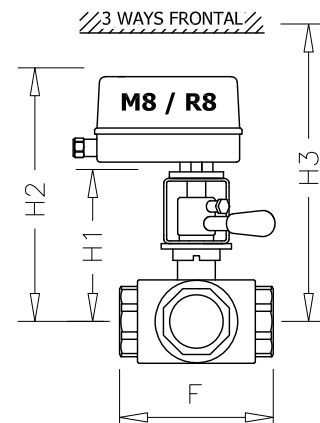
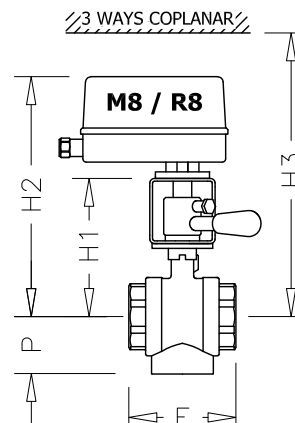
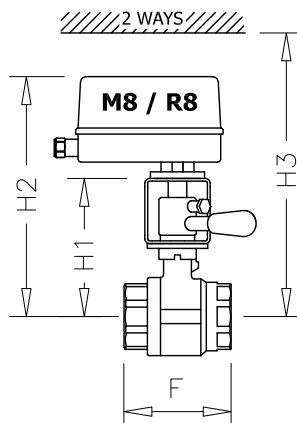


H 70 mm  
COD. K8I51



H 70 mm  
COD. DMI51

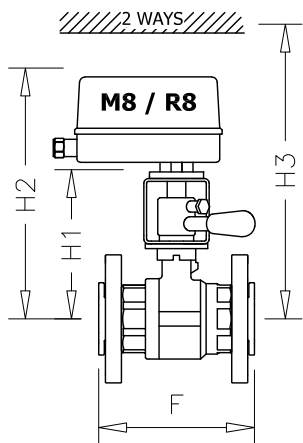
THREADED VALVES DIMENSIONS



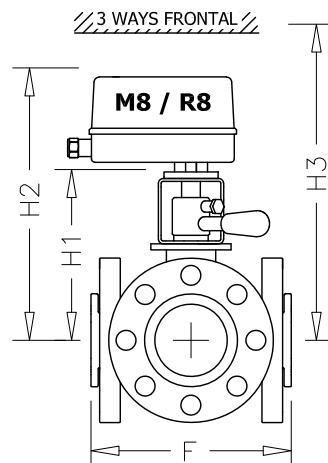
## LEVER

FLANGED VALVES DIMENSIONS

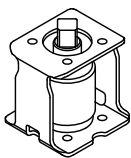
<b>DN</b>	<b>40</b>	<b>50</b>
<b>F</b>	146	167
<b>H1</b>	184	201
<b>H2</b>	294	311
<b>H3</b>	384	401



<b>DN</b>	<b>40</b>	<b>50</b>
<b>F</b>	187	215
<b>H1</b>	143	150
<b>H2</b>	253	260
<b>H3</b>	343	350



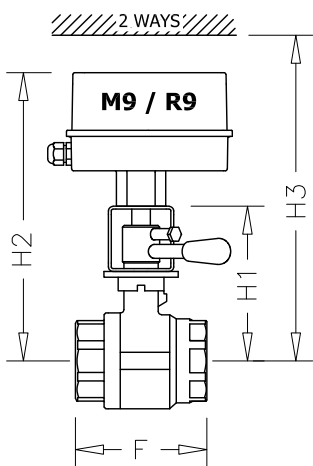
SIMPLE



H 70 mm  
COD. K9154

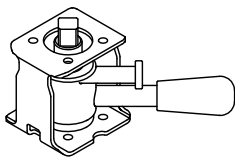
<b>DN</b>	<b>65</b>	<b>80</b>	<b>100</b>
<b>CONNECTIONS</b>	<b>2" 1/2</b>	<b>3"</b>	<b>4"</b>
<b>F</b>	141	159	195
<b>H1</b>	162	172	199
<b>H2</b>	305	315	342
<b>H3</b>	395	405	432

THREADED VALVE DIMENSION



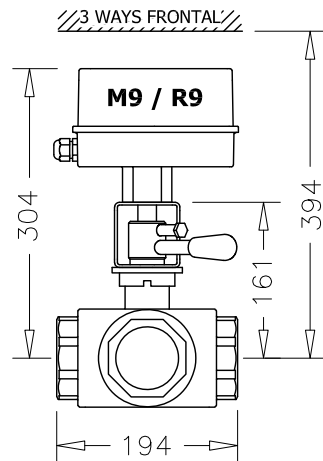
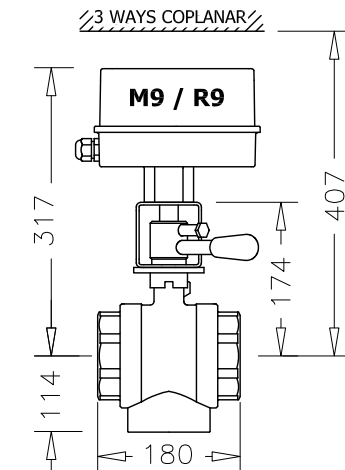
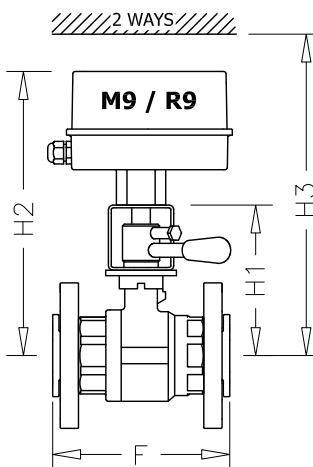
<b>DN</b>	<b>65</b>	<b>80</b>	<b>100</b>
<b>F</b>	190	214	254
<b>H1</b>	162	173	197
<b>H2</b>	305	316	340
<b>H3</b>	395	406	430

FLANGED VALVES DIMENSION



H 70 mm  
COD. DMI54

LEVER



MANUAL OVERRIDE CAN BE USED AS FLOW INDICATOR  
(e.g. 2 ways valve)

