

PRO Range

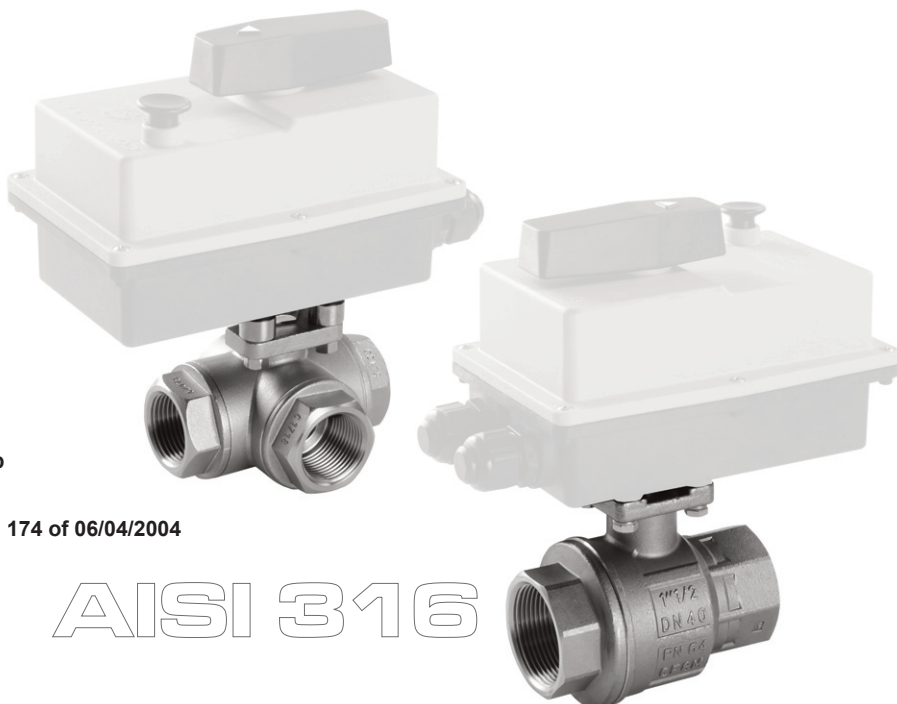
AISI 316 BALL VALVES WITH ISO 5211 CONNECTION

USE

- automation systems
- glycol cooling systems
- food processing plants (2 WAY)
- industrial systems using hot and cold fluids
- drinking water systems
- water treatment plants
- compressed air systems

MAIN FEATURES

- female threaded connections EN 10226-1 Rp
- actuator connection ISO 5211
- compliant with Italian Ministerial Decree No. 174 of 06/04/2004
- zero leakage – EN 12266-1 Grade A



AISI 316

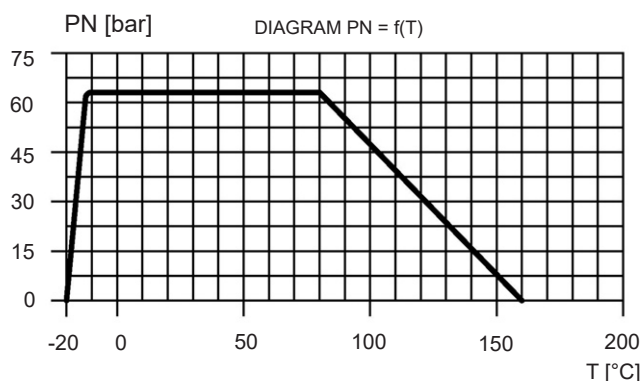
FUNCTIONS

The 2-way and 3-way ball valves, in combination with the suitable actuator of the **PRO Range**, are used to intercept, divert and regulate fluids.

TECHNICAL FEATURES

BALL VALVES

AISI 316 ISO 5211 connection, FULL BORE



When the value of the flow is known, the general expression for the calculation of pressure losses is the following:

$$\Delta p [\text{bar}] = \left[\frac{Q [\text{m}^3/\text{h}]}{K_v} \right]^2$$

The expression provided applies to water or technically similar fluids.

FLUIDS Water (glycol max 30%) and FKM & PTFE-compatible fluids

TEMPERATURE

Valve	
• Minimum	-10°C
• Maximum	+110 °C
Valve with spacer	
• Minimum	-20°C
• Maximum	+160°C (peak) *

* maximum temperature that can be reached for a short period of time





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PRO Range

AISI 316 BALL VALVES WITH ISO 5211 CONNECTION

VERSIONS AND HYDRAULIC FEATURES

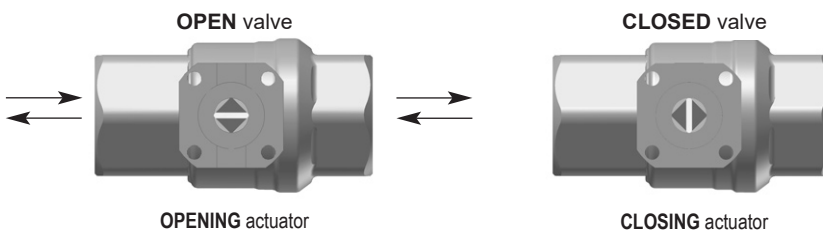
Ball valve	DN	Connections	PN	Kvs [m³/h]	Δp max [bar]	Function	Ball drilling	Rotation	Code	Actuator to be paired
2-WAY FF FULL PORT 	15	Rp 1/2"	64	19,2	64			90°	DC2A2B	Diamant PRO ISO 5211 **
	20	Rp 3/4"	64	35	64			90°	DC2B2B	Diamant PRO ISO 5211 **
	25	Rp 1"	64	64,5	25			90°	DC2C2B	Diamant PRO ISO 5211 **
					64					Compact PRO
	32	Rp 1"1/4	64	103,8	64			90°	UC2D2B5	Compact PRO
	40	Rp 1"1/2	64	174	40			90°	UC2E2B5	Compact PRO
					64					Universal PRO
	50	Rp 2"	64	301,3	25			90°	UC2F2B5	Universal PRO
3-WAY FFF HORIZONTAL REDUCED PORT 	-	Rp 1/4"	64	4 *	64	Diverting	"T" ball	90°	DC3S6B5	Diamant PRO ISO 5211 **
	10	Rp 3/8"	64	4 *	64	Diverting	"T" ball	90°	DC3R6B5	Diamant PRO ISO 5211 **
	15	Rp 1/2"	64	5,2 *	25	Diverting	"T" ball	90°	DC3A6B5	Diamant PRO ISO 5211 **
					64					Compact PRO
	20	Rp 3/4"	64	8,4 *	64	Diverting	"T" ball	90°	UC3B6B5	Compact PRO
	25	Rp 1"	64	12 *	40	Diverting	"T" ball	90°	UC3C6B5	Compact PRO
					64					Universal PRO
	32	Rp 1"1/4	64	19 *	64	Diverting	"T" ball	90°	UC3D6B5	Universal PRO
	-	Rp 1/4"	64	4	64	Diverting	"L" ball	90°	DC3S5B5	Diamant PRO ISO 5211 **
	10	Rp 3/8"	64	4	64	Diverting	"L" ball	90°	DC3R5B5	Diamant PRO ISO 5211 **
	15	Rp 1/2"	64	5,2	25	Diverting	"L" ball	90°	DC3A5B5	Diamant PRO ISO 5211 **
					64					Compact PRO
	20	Rp 3/4"	64	8,4	64	Diverting	"L" ball	90°	UC3B5B5	Compact PRO
	25	Rp 1"	64	12	40	Diverting	"L" ball	90°	UC3C5B5	Compact PRO
					64					Universal PRO
	32	Rp 1"1/4	64	19	64	Diverting	"L" ball	90°	UC3D5B5	Universal PRO

* Value referred to the less favored port (angled port)

** In case of coupling with the spacers on page 5 (DIDM01 - DIDM02), a Diamant PRO actuator with COMPARATO connection must be used.

2-WAY BALL VALVE

The ball valve can be mounted in both flow directions, without distinction.



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P20 Range

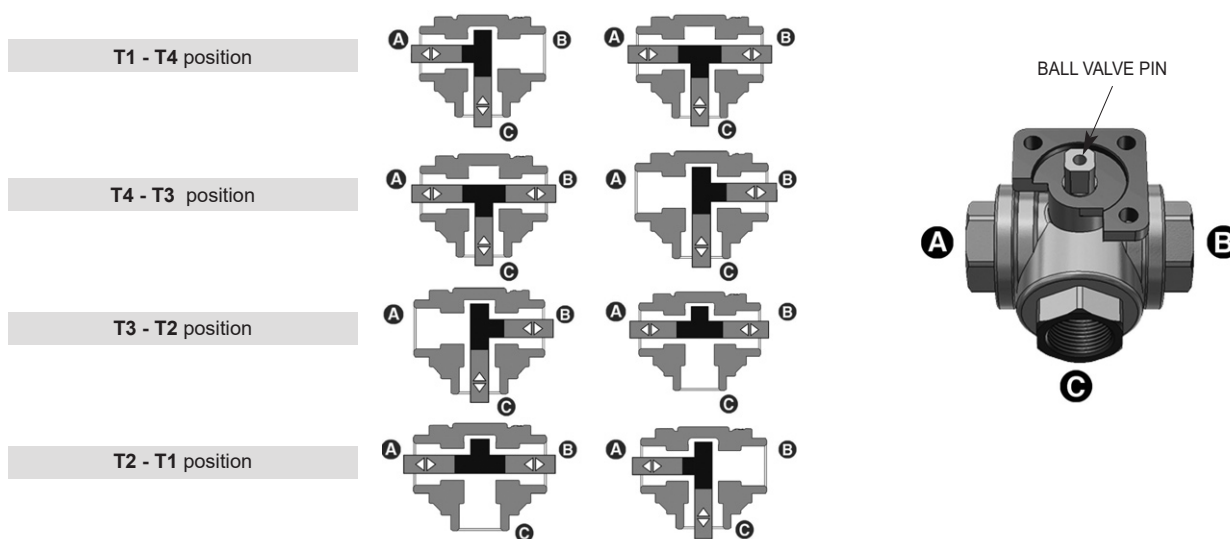
AISI 316 BALL VALVES WITH ISO 5211 CONNECTION

3-WAY DIVERTER BALL VALVES • REDUCED PORT

In the **AISI 316** valves with ISO 5211 connection, the horizontal 3-way version is available with T-ball or L-ball. In both cases, they are used to make deviations. The characteristic of both ball valves is the possibility to close one of the inlets when the other one begins to open: for a short while, during the operating phase, all the three ways are communicating. Despite the condition described above, however, it is not possible to carry out a mixing adjustment by means of this type of valve because the size of the sections created is too small.

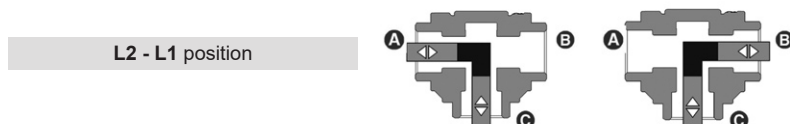
DIVERTER BALL VALVE • “T” BALL

The T-BALL diverter valve features a ball that can be used differently depending on the initial orientation. As can be seen in the opposite picture, different configurations can be obtained through a 90° rotation. The position of the holes is indicated by a T engraved on the ball valve pin.

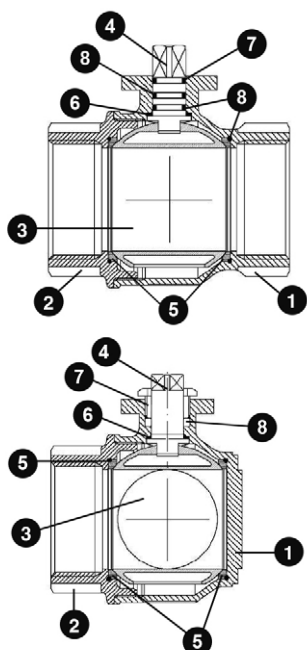


DIVERTER BALL VALVE • “L” BALL

The L-sphere diverter ball valve has a common central way C and two ways which are put into communication with it when they make a 90° rotation. The position of the holes is indicated by an L engraved on the ball valve pin.



MATERIALS USED



2-WAY FF BALL VALVE, AISI 316 ISO 5211

1	BODY	A351-CF8M
2	COUPLING	A351-CF8M
3	BALL	A479-Tp316/A351-CF8M
4	CONTROL ROD	A479-Tp316
5	BALL SEAL	P.T.F.E.
6	ANTIFRICTION SEAL	P.T.F.E.
7	ANTIFRICTION SEAL	P.T.F.E.
8	O-RING	FKM

3-WAY FFF BALL VALVE, AISI 316 ISO 5211

1	BODY	CF8M
2	COUPLING	CF8M
3	BALL	AISI 316
4	CONTROL ROD	AISI 316
5	BALL SEAL	P.T.F.E.
6	O-RING	FKM
7	NUT	AISI 304
8	ROD SEAL	P.T.F.E.



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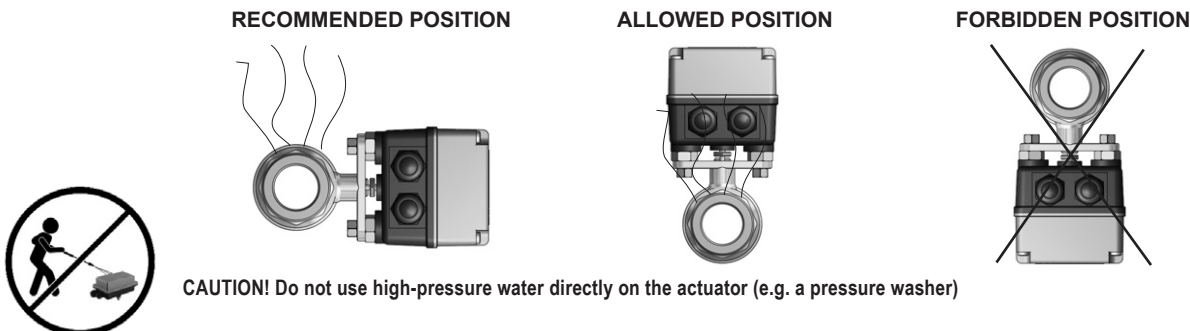
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AISI 316 BALL VALVES WITH ISO 5211 CONNECTION

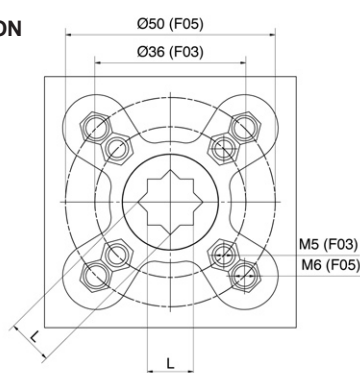
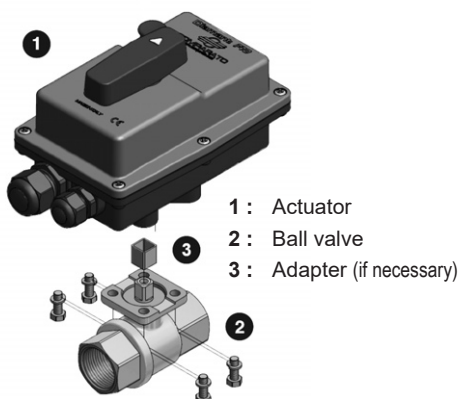
INSTALLATION

The valve shall not be installed with the actuator's connection facing downwards.



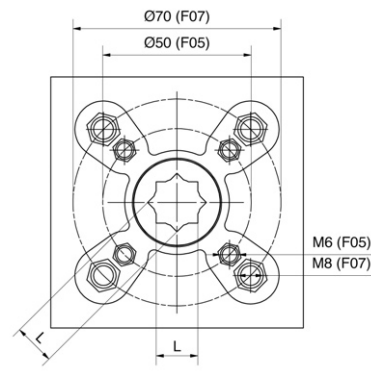
CONNECTION TO THE BALL VALVE

DIRECT CONNECTION TO THE VALVE - ISO 5211 CONNECTION



Diamant PRO ISO Compact PRO

ISO connection	L
F03	9 mm
F05	11 mm

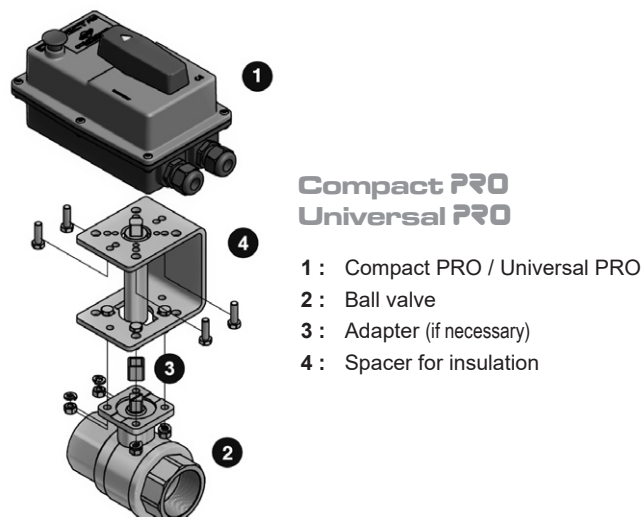
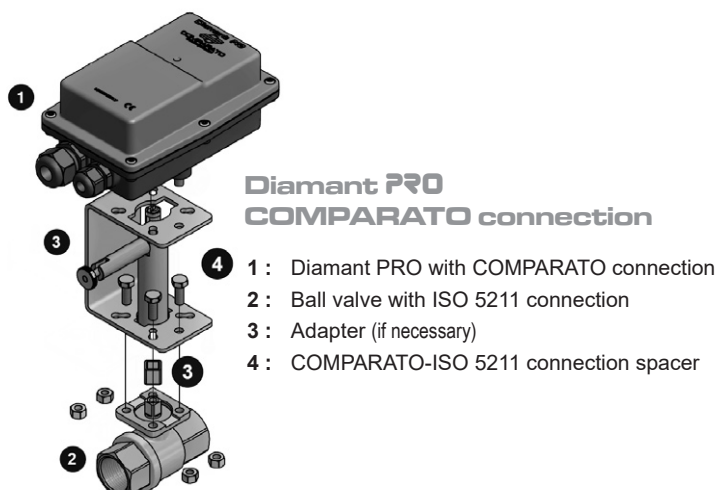


Universal PRO

ISO connection	L
F05	11 mm
F07	14 mm

CONNECTION TO THE BALL VALVE WITH A SPACER

It is possible to insert a spacer between the actuator and the valve body to facilitate pipe insulation and reduce the influence of fluid temperature on the actuator. The spacer can be with a direct shaft or with manual override. For valve bodies to be paired with **Diamant PRO** actuators, inserting the spacer (DIDM01 - DIDM02) converts the actuator connection from ISO 5211 to **COMPARATO** connection. In this case, a **Diamant PRO actuator with COMPARATO connection** must be used. Do not pair spacers with manual override with actuators that also feature a top manual override.



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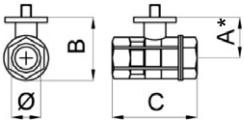
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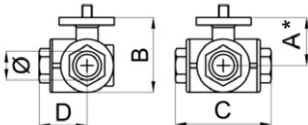
PRO Range

AISI 316 BALL VALVES WITH ISO 5211 CONNECTION

OVERALL SIZE

BALL VALVES

MODEL	DN	Ø	A *	B	C	
2-way ISO 5211 connection						
	15	1/2"	33	50	67	
	20	3/4"	35	55	78	
	25	1"	45	71	90	
	32	1 1/4"	48	80	100	
	40	1 1/2"	63	101	112	
	50	2"	72	114	135	

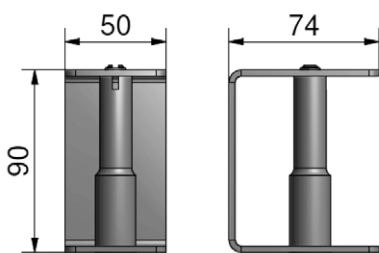
MODEL	DN	Ø	A *	B	C	D	
3-way "T" ball "L" ball ISO 5211 connection							
	8	1/4"	40	55	75	38	
	10	3/8"	40	55	75	38	
	15	1/2"	40	55	75	38	
	20	3/4"	43	63	85	43	
	25	1"	50	73	100	50	
	32	1 1/4"	63	93	122	61	

* the size of the spacer must always be added to the "A" dimension

SPACERS for Diamant PRO with COMPARATO connection

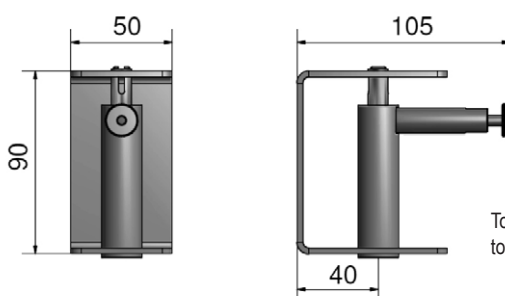
Spacer for insulation
ISO 5211 connection • ball valve side
COMPARATO connection • actuator side

Code **DIDM01**



Spacer for insulation and manual override
ISO 5211 connection • ball valve side
COMPARATO connection • actuator side

Code **DIDM02**



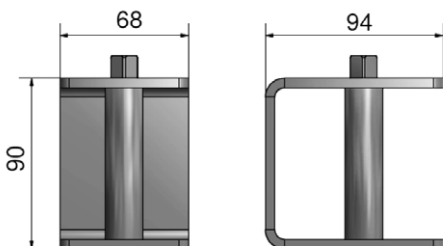
To be combined with actuators without manual top opening only

SPACERS for Compact PRO • Universal PRO

Spacer for insulation

Compact PRO code - **DICOM35**

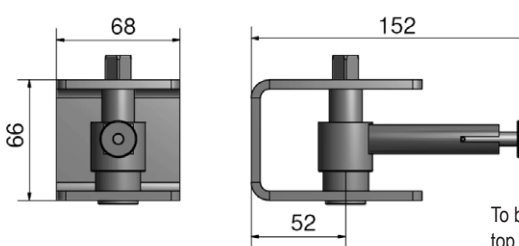
Universal PRO code - **DICOM57**



Spacer for insulation with manual override

Compact PRO code - **DIC005ADC**

Universal PRO code - **DIC007ADC**



To be combined with actuators without manual top opening only



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P20 Range

AISI 316 BALL VALVES WITH ISO 5211 CONNECTION

ACTUATOR COMBINATION

The ball valves can be combined with all the IP67 and IP68 actuators in the **Diamant**, **Compact** and **Universal** range, depending on their use.

AISI 316



DN	Ø	2-way INOX	3-way INOX
-	1/4"	-	DIAMANT PRO
10	3/8"	-	DIAMANT PRO
15	1/2"	DIAMANT PRO	DIAMANT PRO COMPACT PRO
20	3/4"	DIAMANT PRO	COMPACT PRO
25	1"	DIAMANT PRO COMPACT PRO	COMPACT PRO UNIVERSAL PRO
32	1"1/4	COMPACT PRO	UNIVERSAL PRO
40	1"1/2	COMPACT PRO UNIVERSAL PRO	-
50	2"	UNIVERSAL PRO	-

DIAMANT PRO ISO *

- DIAMANT PILOT
- DIAMANT SMART PRO
- DIAMANT CLIMA
- DIAMANT CRONO
- DIAMANT IP68
- DIAMANT DC

* Direct connection to ISO 2-way and 3-way ball valves is only possible with DIAMANT PRO actuators with ISO 5211 connection

COMPACT PRO

- COMPACT PILOT
- COMPACT SMART PRO
- COMPACT CLIMA
- COMPACT CRONO
- COMPACT IP68
- COMPACT DC

UNIVERSAL PRO

- UNIVERSAL PILOT
- UNIVERSAL SMART PRO
- UNIVERSAL IP68
- UNIVERSAL DC

EXAMPLE OF SPECIFICATIONS

BALL VALVE • AISI 316 ball valve A351-CF8M, PTFE seals, full bore, PN64, FF connections, EN 10226-1-Rp. Operating temperatures -20°C...+160°C. Type of fluids: water or FKM & PTFE-compatible fluids. ISO 5211 connection to the actuator. Version: 2-way FF DN32 - 1"1/4 - Kvs 103,8.

Brand: **COMPARATO**

Code: **UC2D2B5**

SPACER • Insulation spacer, bracket in AISI 304, connecting rod in AISI 303, connection to valve body ISO 5211. Version: with manual override - H 66 mm - for pairing with ISO 5211 Compact PRO actuators.

Brand: **COMPARATO**

Code: **DICO05ADC**

UPDATED DATA SHEETS AVAILABLE AT www.comparato.com

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HYDROTHERMAL SYSTEMS
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