

# PRO Range

ROTARY ACTUATORS - ISO 5211 CONNECTION

**USE**

- systems using alternative energy
- automation systems
- glycol cooling systems
- heating/cooling systems
- open and closed hydraulic systems
- industrial systems using hot and cold fluids
- drinking water systems, with suitable ball valve
- water treatment systems
- compressed air systems

Diamant  
PRO



Compact  
PRO



Universal  
PRO

**KEY FEATURES**

- innovative “ALL IN ONE” control
- IP67 degree of electrical protection
- extra microswitches in opening and closing position
- manual override from the top
- different operating times

TECHNICAL FEATURES	Diamant PRO		Compact PRO	Universal PRO
Electric control			2/3-point ALL IN ONE	
Connection with ball valve	ISO 5211 F03/F05		ISO 5211 F03/F05	ISO 5211 F05/F07
Operation			ON/OFF • Modulating	
Rotation			90° • 180°	
Compatible ball valves			2-way • 3-way diverter • 3-way mixer	
Position indicator			Arrow on the lever for manual opening	
Motor			Bidirectional - synchronous	
Power supply			230V 50/60 Hz • 24V 50/60 Hz • 110V 50/60 Hz * ±10%	
Electrical connection			Internal terminal block	
Nominal torque	5 Nm	11 Nm	22 Nm	40 Nm
Operating time for 90° (seconds)	4	12 • 35 ** • 108 • 320	9 • 45 **	14 • 32 • 55 **
Maximum power consumption	13 VA	7,5 VA	24 VA	24 VA
Flow rate of outlet phase to terminals 4 and 5			1A, resistive	
Maximum noise (at 1 meter distance)	35 dB(A)		42 dB(A)	50 dB(A)
Power output of extra micros			1A, resistive	
Operational room temperature			- 10° C ÷ 50° C	
Fluid temperature			See features of ball valves	
Protection degree			IP67	
External covering			Glass-filled “polyarylamide” technopolymer	
Material of external metal components and seals			AISI 303 GVR and brass CW617N • silicone seals	
Maintenance			None	
Certification			CE	




\* per le UNIVERSAL PRO le versioni DIAMANT PRO 4 sec e 12 sec la versione 60Hz è disponibile a richiesta • \*\* versione standard



# PRO Range

ROTARY ACTUATORS - ISO 5211 CONNECTION

## VERSIONS

Actuator	Rotation angle	Operating time	Power supply	Base code
<b>Diamant PRO ISO</b> 	90°	35 sec	230V 50/60Hz	DY222F2A
	90°	35 sec	110V 50/60Hz	DY212F2A
	90°	35 sec	24V 50/60Hz	DY242F2A
	180°	70 sec	230V 50/60Hz	DY322F2A
	180°	70 sec	110V 50/60Hz	DY312F2A
	180°	70 sec	24V 50/60Hz	DY342F2A
<b>Compact PRO ISO</b> 	90°	45 sec	230V 50/60Hz	CY2222P
	90°	45 sec	110V 50/60Hz	CY2122P
	90°	45 sec	24V 50/60Hz	CY2422P
	180°	90 sec	230V 50/60Hz	CY3222P
	180°	90 sec	110V 50/60Hz	CY3122P
	180°	90 sec	24V 50/60Hz	CY3422P
<b>Universal PRO ISO</b> 	90°	55 sec	230V 50/60Hz	UY2222P
	90°	55 sec	110V 50/60Hz	UY2122P
	90°	55 sec	24V 50/60Hz	UY2422P
	180°	110 sec	230V 50/60Hz	UY3222P
	180°	110 sec	110V 50/60Hz	UY3122P
	180°	110 sec	24V 50/60Hz	UY3422P

## ACCESSORIES

You can add any accessory to the actuators of the **PRO Range** by adding or removing items from the **base code**.

**Diamant PRO**

**D Y 2 2 2 F 2 A**

- Manual override from the top \*  
remove A = Not present
- Operating times  
Q = 4 sec (90°)  
D = 12 sec (90°)  
C8 = 106 sec (90°)  
32 = 320 sec (90°)
- Heating resistance  
R = Present

STARTING base code

**Compact PRO**

**C Y 2 2 2 2 P**

- Manual override from the top \*  
SA = Not present
- Operating times  
9 = 9 sec (90°)
- Heating resistance  
R = Present

STARTING base code

\* only available with standard operating time

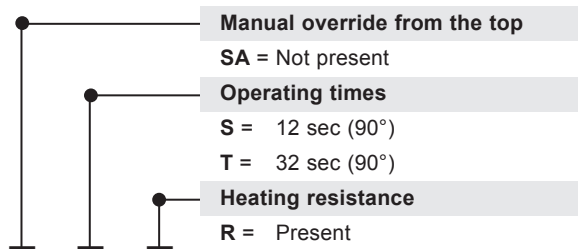


# PRO Range

ROTARY ACTUATORS - ISO 5211 CONNECTION

Universal PRO

**UY2222P**



## STARTING base code

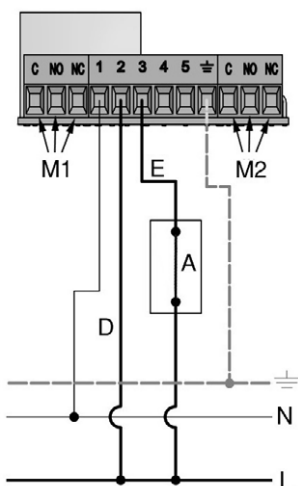
### ELECTRICAL CONNECTIONS

With the electrical **ALL IN ONE** control, you can select the **2-POINT** control or the **3-POINT** control by moving the selector (jumper) mounted on the electrical circuit inside the actuator.

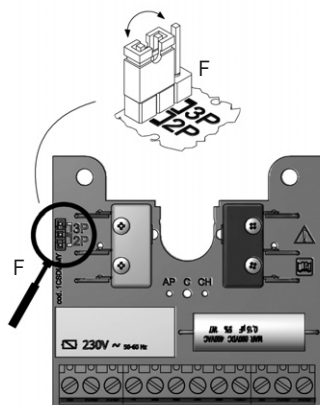
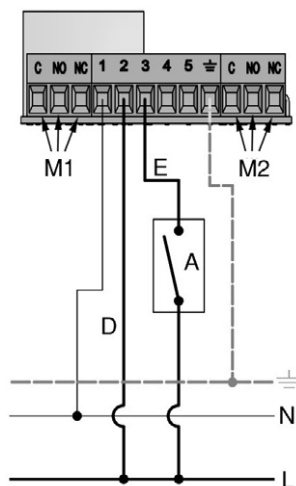
#### 2-POINT CONTROL • ON/OFF (SWITCH)

One electric control can activate several actuators.

##### OPENING ACTUATOR



##### CLOSING ACTUATOR



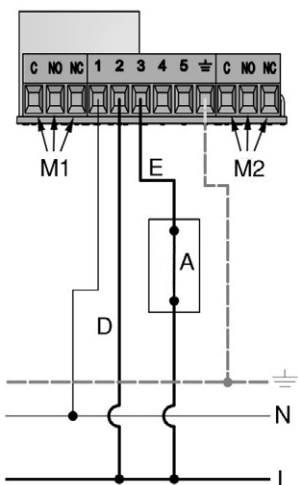
Position the jumper as shown in the picture to have the desired electrical connection

- 1 - Neutral
- 2 - Closing phase
- 3 - Opening phase
- 4 - Outlet opening phase
- 5 - Outlet closing phase
- M1 - Auxiliary micro in opening position
- M2 - Auxiliary micro in closing position
- A - Switch-type control
- ≡ - Earth

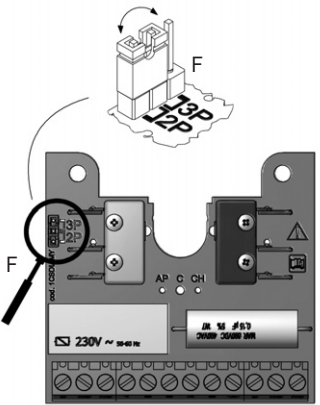
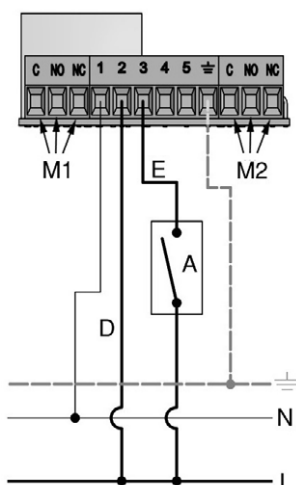
#### 3-POINT CONTROL • ON/OFF (DIVERTER)

Each actuator must be operated by a single electric control

##### OPENING ACTUATOR



##### CLOSING ACTUATOR



Position the jumper as shown in the picture to have the desired electrical connection

- 1 - Neutral
- 2 - Closing phase
- 3 - Opening phase
- 4 - Outlet opening phase
- 5 - Outlet closing phase
- M1 - Auxiliary micro in opening position
- M2 - Auxiliary micro in closing position
- A - Switch-type control
- ≡ - Earth



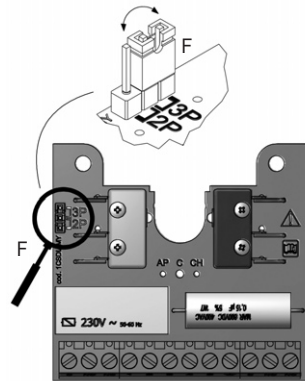
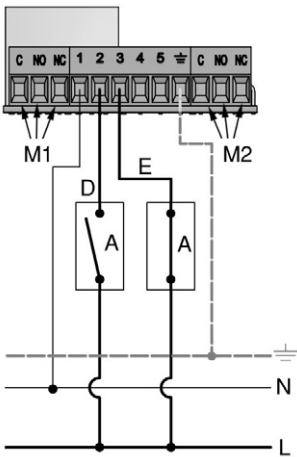
# PRO Range

## ROTARY ACTUATORS - ISO 5211 CONNECTION

### 3-POINT CONTROL • MODULATING

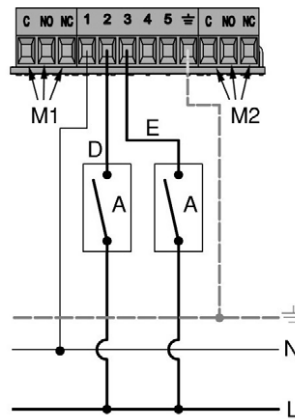
Each actuator must be operated by a single electric control

#### OPENING ACTUATOR

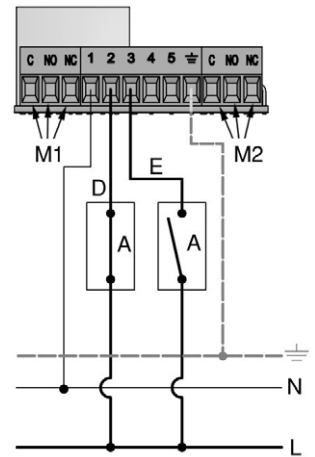


Position the jumper as shown in the picture to have the desired electrical connection

#### INTERMEDIATE POSITION



#### CLOSING ACTUATOR

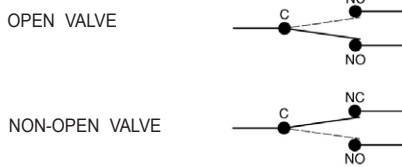


- 1 - Neutral
- 2 - Closing phase
- 3 - Opening phase
- 4 - Outlet opening phase
- 5 - Outlet closing phase
- M1 - Auxiliary micro in opening position
- M2 - Auxiliary micro in closing position
- A - Switch-type control
- ⊕ - Earth

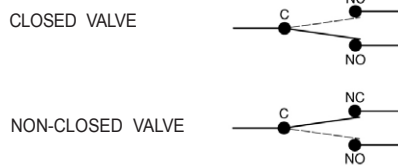
### AUXILIARY MICROSWITCHES

The layout of the extra microswitch contacts is shown in the following pictures:

#### M1 • OPENING AUXILIARY MICROSWITCH

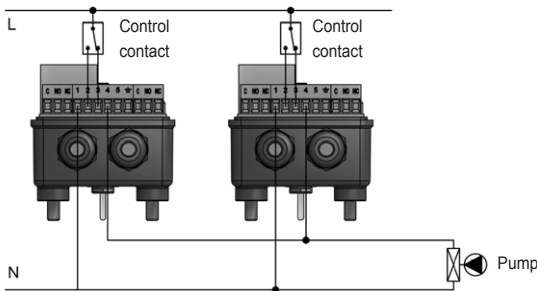


#### M2 • CLOSING AUXILIARY MICROSWITCH

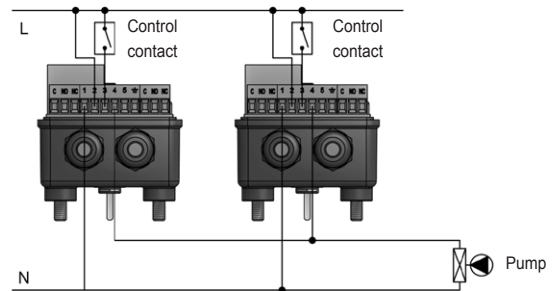


### EXAMPLES OF ELECTRICAL CONNECTIONS

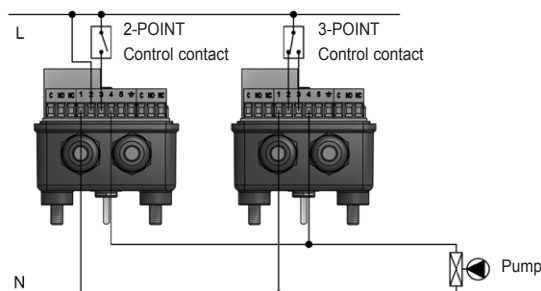
#### CONNECTION OF THE PUMP STOP WITH TWO 3-POINT ACTUATOR



#### CONNECTION OF THE PUMP STOP WITH TWO 2-POINT ACTUATOR



#### CONNECTION OF THE PUMP STOP WITH A 2-POINT ACTUATOR AND A 3-POINT ACTUATOR



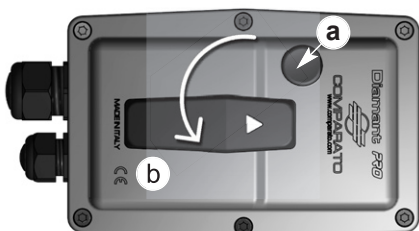
# PRO Range

ROTARY ACTUATORS - ISO 5211 CONNECTION

## MANUAL OPERATION

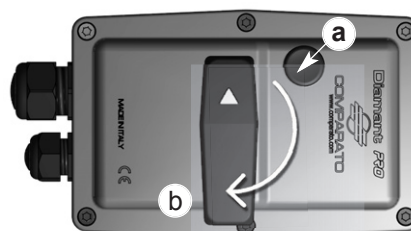
The manual override allows to activate the valve in case of emergency or black-out.

For **Diamant PRO ISO** and **Compact PRO** the manual opening is only available for standard operating times.



Actuator in **OPENING** position.

Press the release button (a) and, simultaneously, rotate the lever (b) 90° **COUNTERCLOCKWISE**, in order to move the actuator in the **CLOSING** position.



Actuator in **CLOSING** position.

Press the release button (a) and, simultaneously, rotate the lever (b) 90° **CLOCKWISE**, in order to move the actuator in the **OPENING** position.



When you release the plunger, the actuator returns to the control position if it still powered and is able to perform the operation



### Universal PRO

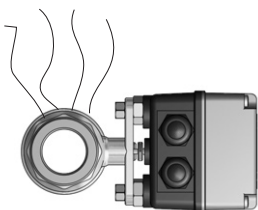
If you cannot manually operate the ball valve, you can remove the plastic handle by pressing the lever in the direction shown and operate it manually using a size 17mm wrench. Pay attention not to exceed the 40 Nm torque provided by the actuator, in order to avoid the risk of breaks.

## INSTALLATION

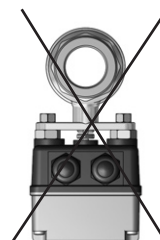
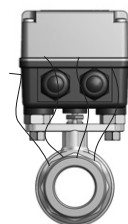
The valve shall not be installed with the actuator's connection facing downwards.



RECOMMENDED POSITION



ALLOWED POSITION



FORBIDDEN POSITION

CAUTION! Do not use high-pressure water directly on the actuator (e.g. a pressure washer)

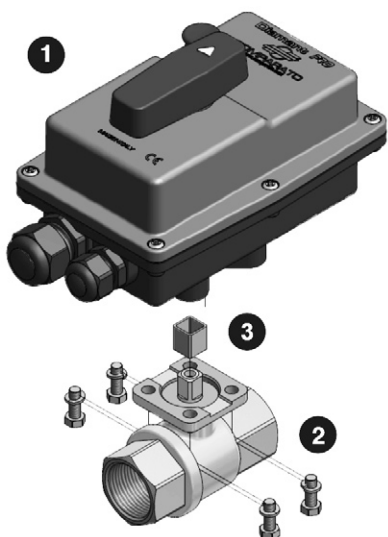


# PRO Range

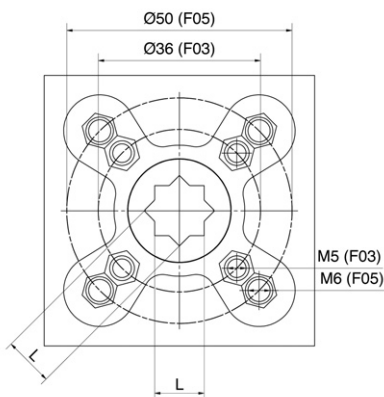
ROTARY ACTUATORS - ISO 5211 CONNECTION

## CONNECTION TO THE BALL VALVE

### DIRECT CONNECTION TO THE VALVE

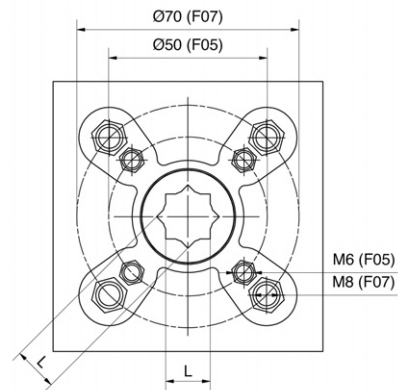


**Diamant PRO iso**  
**Compact PRO iso**



ISO 5211 connection	L
F03	9 mm
F05	11 mm

**Universal PRO iso**

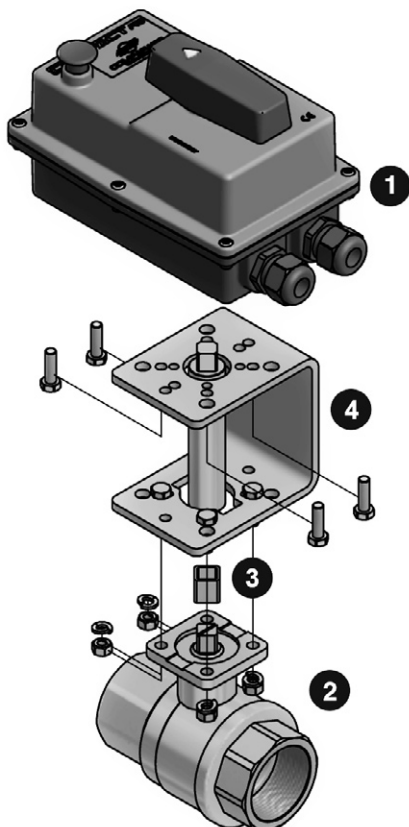


ISO 5211 connection	L
F05	11 mm
F07	14 mm

- 1: PRO Range actuator
- 2: Ball valve
- 3: Panel adapter (if necessary)

### CONNECTION TO THE BALL VALVE WITH A SPACER

On **Compact PRO** and **Universal PRO** motorized valves, the insulation spacer can be added by adding "D1" to the end of the assembly code. For the use of the insulation spacer (or spacer with manual opening) with **Diamant PRO** actuators, please refer to the "**Diamant PRO** Comparato connection - DP0.0-20".



**Compact PRO**  
**Universal PRO**

- 1: Compact PRO / Universal PRO
- 2: Ball valve
- 3: Panel adapter (if necessary)
- 4: Spacer for insulation





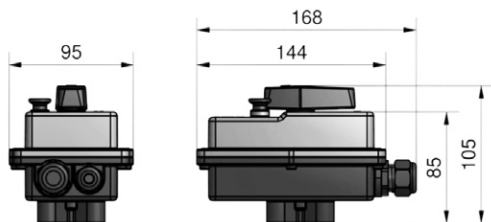
# PRO Range

ROTARY ACTUATORS - ISO 5211 CONNECTION

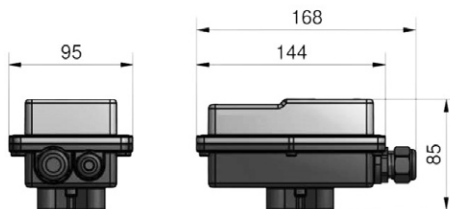
## OVERALL SIZE

### ACTUATORS

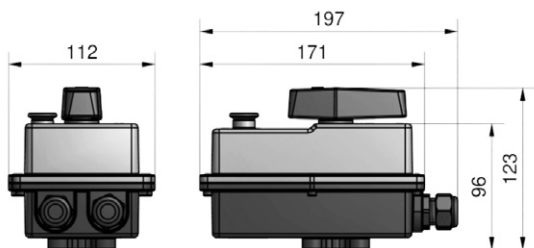
#### Diamant PRO ISO



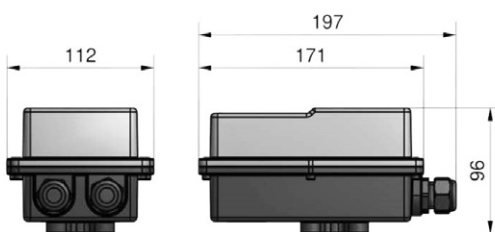
#### Diamant PRO ISO version WITHOUT manual override from the top



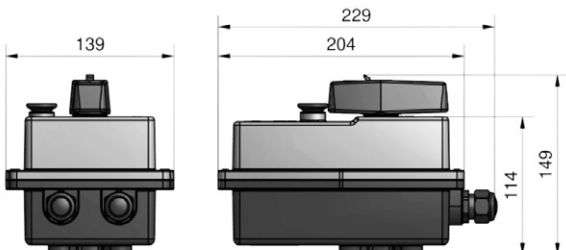
#### Compact PRO ISO



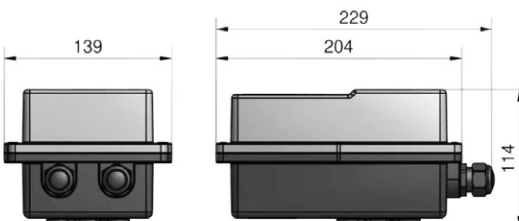
#### Compact PRO ISO version WITHOUT manual override from the top



#### Universal PRO ISO

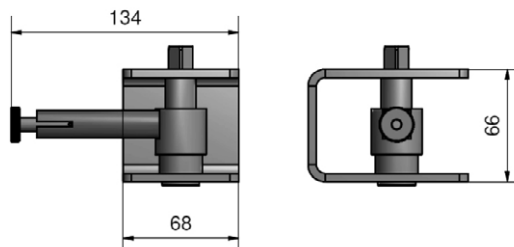
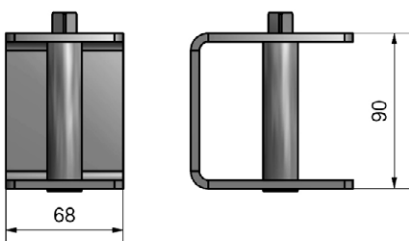


#### Universal PRO ISO version WITHOUT manual override from the top



### SPACERS

#### SPACERS FOR INSULATION



	Compact PRO	Universal PRO
Part code	DICOM35	DICOM57

	Compact PRO	Universal PRO
Part code	DICO05ADC	DICO07ADC

Add "D1" to end of motorized valve code

To be combined with actuators without manual top opening only



# PRO Range

## ROTARY ACTUATORS - ISO 5211 CONNECTION

### BALL VALVE ASSIGNMENT - LISTED COUPLINGS



DN	Ø	2-way BRASS	3-way BRASS "T"- port "L"- port	3-way BRASS Mixing Diverting	2-way INOX	3-way INOX	2-way PVC	3-way PVC	2-way FLANGED BALL VALVE cast iron	BUTTERFLY	
-	1/4"	DIAMANT PRO ISO	DIAMANT PRO ISO	-	-	DIAMANT PRO ISO	DIAMANT PRO ISO		-	-	
10	3/8"	DIAMANT PRO ISO	DIAMANT PRO ISO	-	-	DIAMANT PRO ISO	DIAMANT PRO ISO	AVAILABLE ON DIAMANT PRO COMPACTO CONNECTION	-	-	
15	1/2"	DIAMANT PRO ISO	DIAMANT PRO ISO	DIAMANT PRO ISO	DIAMANT PRO ISO	DIAMANT PRO ISO COMPACT PRO	DIAMANT PRO ISO		-	-	
20	3/4"	DIAMANT PRO ISO	DIAMANT PRO ISO COMPACT PRO	DIAMANT PRO ISO	DIAMANT PRO ISO	COMPACT PRO	DIAMANT PRO ISO		-	-	
25	1"	DIAMANT PRO ISO	COMPACT PRO	DIAMANT PRO ISO COMPACT PRO	DIAMANT PRO ISO COMPACT PRO	COMPACT PRO UNIVERSAL PRO	DIAMANT PRO ISO		COMPACT PRO	-	
32	1" 1/4	DIAMANT PRO ISO COMPACT PRO	COMPACT PRO UNIVERSAL PRO	COMPACT PRO	COMPACT PRO	UNIVERSAL PRO	DIAMANT PRO ISO		COMPACT PRO UNIVERSAL PRO	COMPACT PRO	
40	1" 1/2	COMPACT PRO	UNIVERSAL PRO	COMPACT PRO UNIVERSAL PRO	COMPACT PRO UNIVERSAL PRO	UNIVERSAL PRO	DIAMANT PRO ISO COMPACT PRO		COMPACT PRO UNIVERSAL PRO	COMPACT PRO UNIVERSAL PRO	
50	2"	DIAMANT PRO ISO COMPACT PRO	UNIVERSAL PRO	UNIVERSAL PRO	UNIVERSAL PRO	-	COMPACT PRO UNIVERSAL PRO		COMPACT PRO UNIVERSAL PRO	UNIVERSAL PRO UNIVERSAL PRO	
65	2" 1/2	UNIVERSAL PRO	-	-	-	-	UNIVERSAL PRO		-	-	UNIVERSAL PRO
80	3"	UNIVERSAL PRO	-	-	-	-	UNIVERSAL PRO		-	-	UNIVERSAL PRO
100	4"	UNIVERSAL PRO	-	-	-	-	UNIVERSAL PRO		-	-	UNIVERSAL PRO

Other combinations on request

### EXAMPLE OF SPECIFICATIONS

**DIAMANT PRO ISO ACTUATOR** • ALL IN ONE (2-point ON/OFF or 3-point ON/OFF or 3-point modulating), nominal torque: 11 Nm, power supply: 230V - 50/60 Hz, operating times: 35 sec / 90°, operating angle: 90°, protection degree: IP67, for ball valve: 2 - 3 way, connection to ball valve via ISO 5211 F03/F05 connection, two auxiliary microswitches and manual override from the top.

Brand: **COMPARATO**  
Code: **DY222F2A**

UPDATED DATA SHEETS AVAILABLE AT [www.comparato.com](http://www.comparato.com)

In order to provide an up-to-date service, Comparato Nello S.r.l. reserves the right to modify technical data, drawings, graphs and photos of this data sheet at any time, without prior notice.



**HYDROTHERMAL SYSTEMS**  
**COMPARATO NELLO SRL**

17014 CAIRO MONTENOTTE (SV) ITALIA VIALE DELLA LIBERTÀ • LOCALITÀ FERRANIA • Tel. +39 019 510.371 - FAX +39 019 517.102

[www.comparato.com](http://www.comparato.com)

e-mail: [info@comparato.com](mailto:info@comparato.com)

UNI EN ISO 9001:2015 CERTIFIED COMPANY