

GD (double acting) pneumatic actuator 316 stainless steel bar

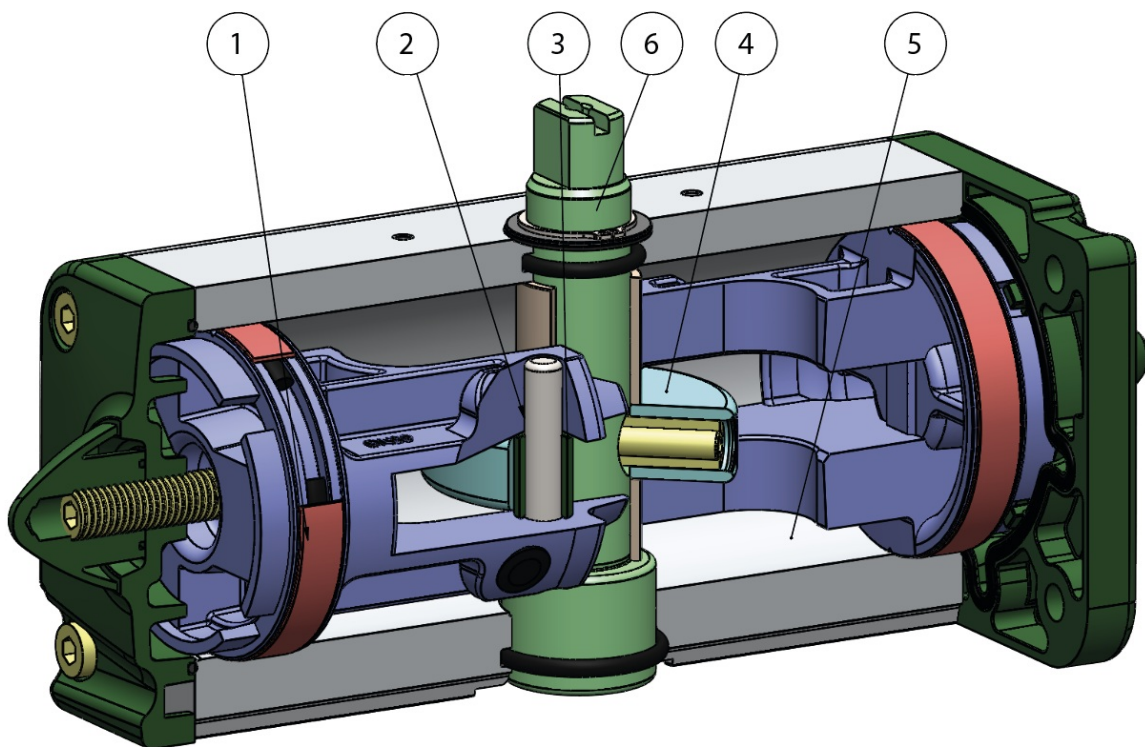


Macro Pneumatic actuators

Category Inox 316 from solid bar actuators

Nominal torque of the actuator: from 720 Nm to 3840 Nm

benefits



1.Energized and self-lubricated strips

Less friction between piston and cylinder
It prevents the bonding of the seal to the cylinder even after long periods of inactivity

2.Slots, bushes and pins made by steel with hardness higher than 50 HRC

Higher resistance to the forces inside the actuator

3.Rolling friction between piston and slot

Less friction

4.Scotch yoke with rolling friction (transforming rotary motion into linear motion using piston and shaft without teeth/gears)

Reduced friction between piston and shaft with consequently less wear on the relevant parts
Empowered Breakaway Torque (BTO & BTC)
Smaller volume/size than rack and pinion actuators (with the same torque) therefore less space required for installation
Less weight than the rack and pinion (-30% kg / Nm), with consequent savings on the construction sizing of the plant/equipment
Lower air consumption compared to the rack and pinion actuators (-40% air cm³/Nm for Double Acting and -20% air cm³/Nm for Spring Return) therefore less load on the compressor or the possibility of using a smaller compressor's size.

5.Rolled cylinder

Less wear of the energized ties thanks to the low roughness of the surface

6.Stainless steel shaft

Higher corrosion resistance

From sizes bigger than GD15, NAMUR interface for solenoid valve is already integrated

No need for extra plate.

100% in- house manufacturing process technology

Maximum control and accuracy in all the stages of the manufacturing process

ATEX Certificate

Installation is allowed in a potential explosive environment

Up to SIL 3 Certified

Guarantee of the high level of functional safety.

features

TECHNICAL FEATURES

Torque from 720 Nm to 1920 Nm

Mounting flange according to EN ISO 5211

F10 - F12 - F14 - F16

In compliance with EN 15714-3

Rotation angle: 92° (-1°, +91°)

Torque: directly proportional to the air supply (see table - general catalogue pneumatic actuator GD)

In the code of standard version GD actuators, it is indicated the breakaway torque in Nm at 5,6 bar air supply.

ATEX version in conformity with directive 2014/34/EU

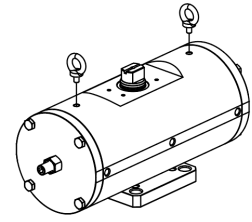
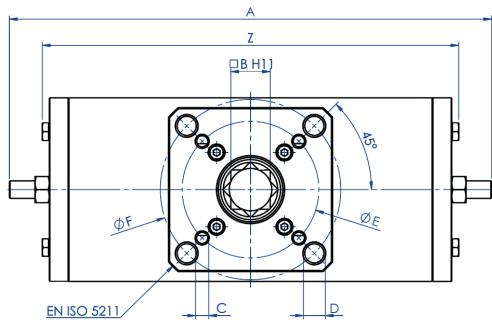
WORKING CONDITION

Temperature: from -20°C to +80°C

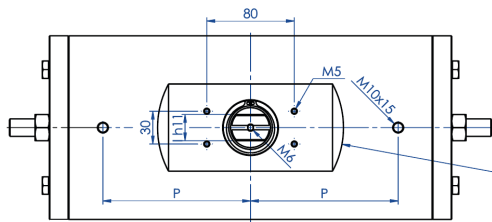
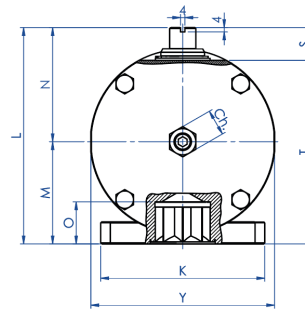
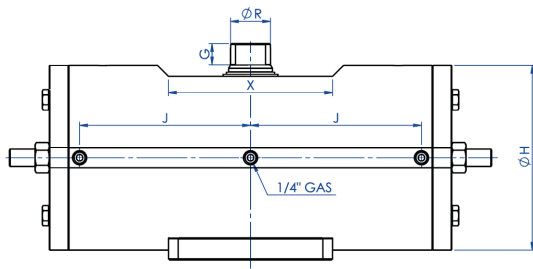
Air supply: 5,6 bar; maximum 8,4 bar

Actuating media: filtered dry compressed air, not necessarily lubricated. In case of lubricated air, either non detergent oil, NBR compatible oil, must be used.

dimensions



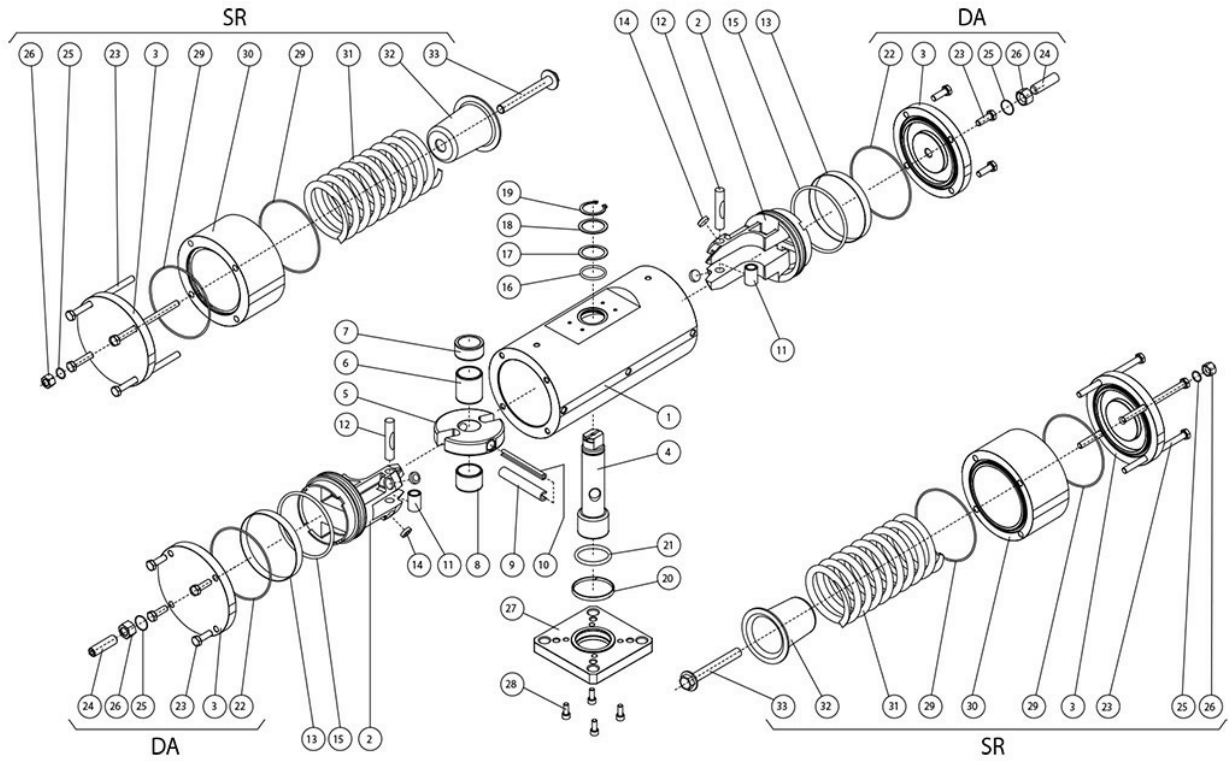
I punti di sollevamento sono progettati per il solo attuatore
Per il sollevamento utilizzare due golfari M10
For the lifting use n° 2 eyebolts M10
Lifting point are designed for actuator only



Interfaccia per accessori
 EN 15714-3 (VDI/VDE 3845)
 Accessories interface
 EN 15714-3 (VDI/VDE 3845)

DATA SHEET					
Spare seals	KGSS123	KGSS124	KGSS125	KGSS125	KGSS126
Size	GD0720 F10/F12	GD0960 F12/F16	GD1440 F12	GD1440 F14	GD1920 F12/F16
A	401,5	441	524,8	524,8	562
B	27	36		36	46
C x depth	M10x11,5	M12x20	M12x18	M16x18	M12x23
D x depth	M12x11,5	M20x20	-	-	M20x23
ØE	102	125	125	140	125
ØF	125	165	-	-	165
G	19,5	19,5	19,5	19,5	18,5
ØH	156	169	188	188	211
I	22	24	27	27	32
J	138,5	156,3	179,5	179,5	192
K	115	150	130	130	150
L	178	198	216	216	237,7
M	78,5	93,5	101,5	101,5	114,7
N	99,5	104,5	114,5	114,5	123
O	29,5	38,5	38,5	38,5	48,5
P	116	135	160	160	160
ØR	31,8	36,5	41	41	46
S	30	30	30	30	30
T	148	168	186	186	207,7
X	150	150	150	150	150
Y	155	168	187	187	209
Z	345,8	381	433,8	433,8	469
Ch	24	24	30	30	30
Weight (Kg)	30	40	50,5	50,5	73
Air (dm ³ /cycle) (l/cycle)	3,7	4,8	7,7	7,7	10

316 FROM BAR DOUBLE ACTING AND SPRING RETURN PNEUMATIC ACTUATOR COMPONENTS

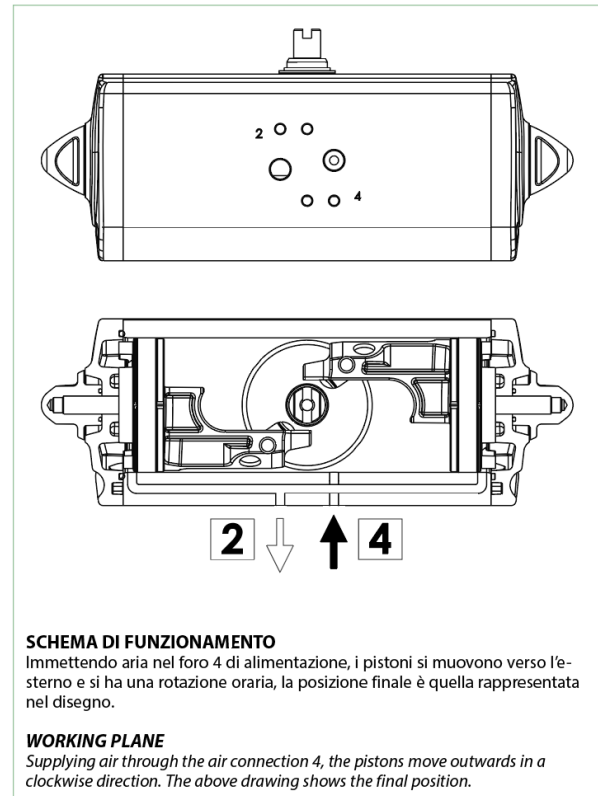
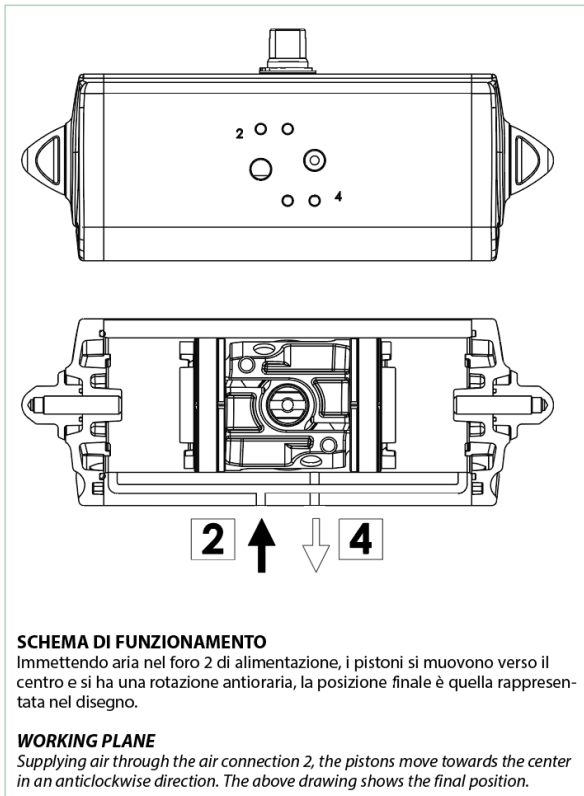


316 FROM BAR DOUBLE ACTING AND SPRING RETURN PNEUMATIC ACTUATOR COMPONENTS

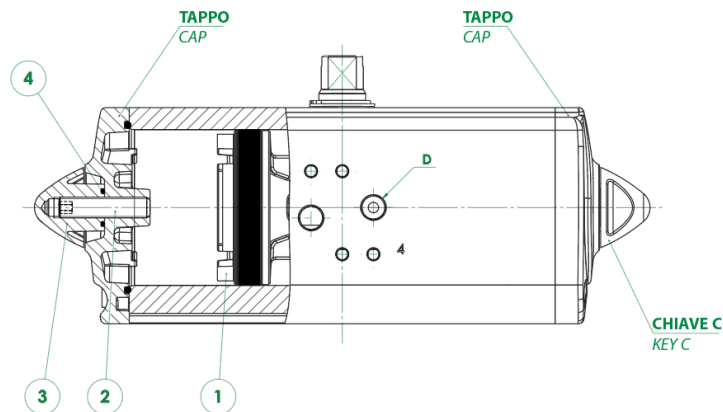
Pos	Denomination	Q.ty	Material
1	Cylinder	1	Stainless steel
2	Piston	2	Aluminium alloy
3	Cap	2	Stainless steel
4	Shaft	1	Stainless steel
5	Scotch yoke	1	Steel alloy
6	Bearing shaft	1	Acetalic resin
7	Upper shaft support	1	Acetalic resin
8	Bearing shaft	1	Acetalic resin
9	Ext.elastic pin	1	Steel alloy
10	Int.elastic pin	1	Steel alloy
11	Steel bush	2	Steel alloy
12	Rotative sleeve	2	Steel alloy
13*	Dynamic seal	2	Plyurethane
14*	Support disk	4	P.T.F.E. carbo-graphite filled
15*	O-ring	2	Nitrilic rubber
16	O-ring	1	FKM
17	Thrust bearing	1	Acetalic resin
18	Washer	1	Stainless steel
19	Seeger	1	Stainless steel
20	Lower shaft support	1	P.T.F.E. carbo-graphite filled
21	O-ring	1	FKM
22*	GD O-ring	2	Nitrilic rubber
23	Screws	8	Stainless steel
24	Grub screws	2	Stainless steel
25	O-ring	2	Nitrilic rubber
26	Adjusting nut	2	Stainless steel
27	Fixing flange	1	Stainless steel
28	Screws	4	Stainless steel
29*	GS O-ring	4	Nitrilic rubber
30	Cylinder spacer	2	Stainless steel
31	Spring	2	Steel alloy
32	Spring cap	2	Aluminium alloy
33	Spring loading screw	2	Stainless steel

* Components of spare part kit

GD PNEUMATIC ACTUATOR OPERATING DIAGRAM



ATTUATORE REGOLABILE-ISTRUZIONI PER L' UTILIZZO ACTUATOR WITH STROKE ADJUSTMENT-INSTRUCTIONS



- A) Immettere aria nel foro "D" in modo che i pistoni (part. n°1) si vengano a trovare in posizione di finecorsa verso i tappi.
 - B) Togliere il controdado (part. n°3) agendo sulla chiave C.
 - C) Togliere l'aria di alimentazione.
 - D) Con una chiave a brugola agire sulle viti (part. n°2) ed effettuare la limitazione di corsa desiderata.
 - N.B.** La corsa può essere limitata per un massimo di 10° da 80° a 90°. Altre regolazioni disponibili a richiesta.
 - E) Mettere aria nel foro "D", verificare che entrambe le viti (part. n°2) siano a battuta contro i pistoni.
 - F) Mettere il controdado (part. n°3) munito di O-ring (part. n°4) per la tenuta tra dado e tappo.
- N.B.** queste spiegazioni sono indicative, per le istruzioni operative, vedere il manuale.

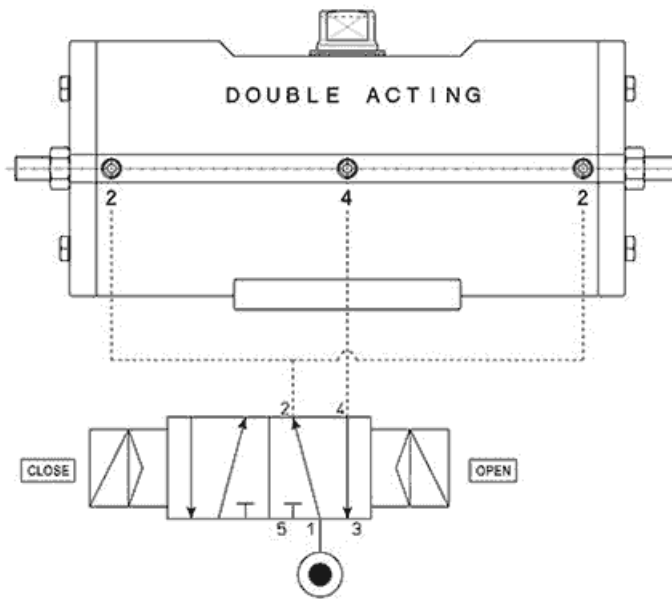
- A) Supply air through the air connection D so that the pistons (Part. 1) move to the end-stroke position, towards the caps.
 - B) Remove the counter nut (part. 3) acting on the C key.
 - C) Shut off the air supply.
 - D) Adjust the end stroke as desired, acting on the screws (part 2) with an hexagonal key.
 - Note:** maximum adjusting stroke 10°, ranging from 80° to 90°. Other regulations on request.
 - E) Supply air through the air connection D and check that both screws stop the pistons.
 - F) Screw the counter-nut (part 3) and its o-ring (part 4) to keep nut and cap tight.
- N.B.** these explanations are indicative, for operating instructions, see the manual.

Drawings on the left = valve in open position
 Drawings on the right = valve in closed position

Typical air connection diagram

Port 2 connects to the side chambers of the cylinder: by supplying pressurized air to port 2, the drive shaft of the Standard Double Acting actuator rotates anticlockwise to open. Port 4 is instead connected to the middle chamber: when it is pressurized, the shaft rotates clockwise to close. The remote control to operate the actuator must be performed by connecting the solenoid valve directly to the standard interface of the VDE/VDI 3845 NAMUR actuator, or by means of pipes screwed onto the ports marked with numbers 2 and 4 (connected to a separate electrical cabinet).

In accordance with the international standard ISO 5599-2, the position, location, orientation and shape of the actuator air port connections must be clearly identified and marketed using numbers 2 and 4.



accessories

LIMIT SWITCH BOX



MANUAL OVERRIDE WITH HAND WHEEL



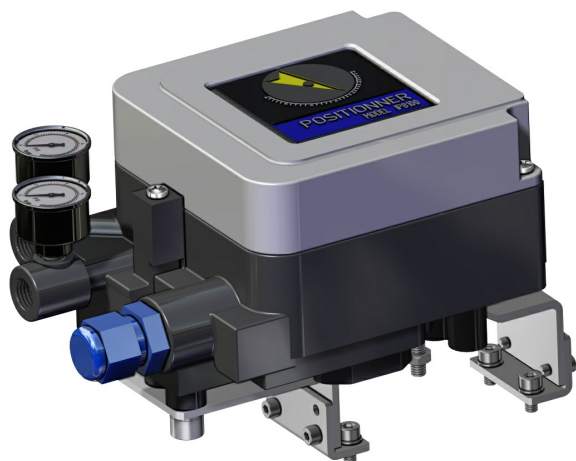
NAMUR SOLENOID VALVES



SOLENOID VALVES



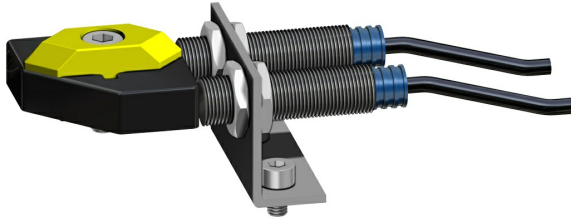
ELECTROPNEUMATIC POSITIONER (INTRINSICALLY SAFE)



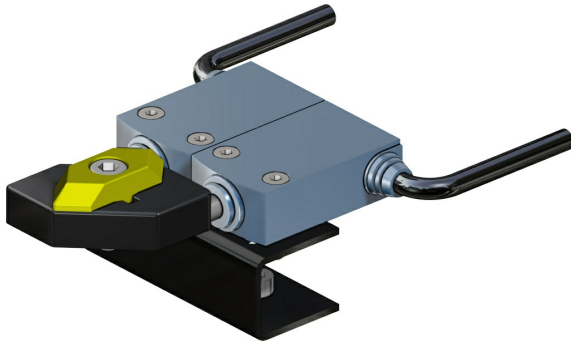
PNEUMATIC POSITIONER



PROXIMITY LIMIT SWITCHES



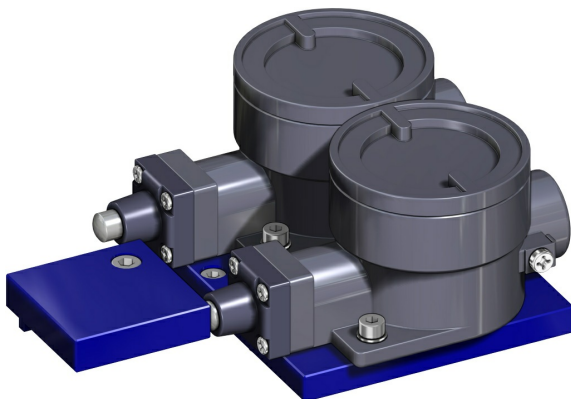
ELECTROMECHANICAL LIMIT SWITCHES



PNEUMATIC LIMIT SWITCHES



EXPLOSION PROOF LIMIT SWITCHES II2GD ExdIIC



For more information check the ACTUATECH Accessories Catalogue.

documents

Catalogs

[ATTUATORI INOX](#)

Certificates

[AKNOWLEDGEMENT OF RECEIPT - EC - ATEX](#)

[SIL CERTIFICATE GD](#)

Datasheet

[GD3840F14INOX](#)

[GD0720F10F12INOX](#)

[GD1440F12INOX](#)

[GD1920F12F16INOX](#)

[GD0960F14INOX](#)

[GD3840F16INOX](#)

[GD1440F14INOX](#)

[GD0960F12F16INOX](#)

