

Description



Pizzato Elettrica offers a wide range of products suitable for places where chemical and corrosive agents are used and for aseptic places where particular attention must be paid to cleanliness and hygiene.

The technopolymer housings and external metal parts in stainless steel allow these devices to be used for a variety of applications, ranging from the food and pharmaceutical sectors to the chemical and marine sectors.

Main features:

- Technopolymer housings
- External metallic parts exclusively in stainless steel
- Protection degree IP67 (FW, FP series switches)
- Protection degree IP67 and IP69K (FR, FX, FK series sensors)
- Protection degree IP67 and IP69K (SR, ST, HX series sensors)

Resistance against corrosion

Substance	Stainless steel	Technopolymer	Substance	Stainless steel	Technopolymer
Acetylene	■	■	Whisky malt	■	■
Vinegar	■	■	Molasses	■	■
Acetone	■	■	Nickel chloride	□	□
Acetic acid	■	□	Aluminium nitrate	■	■
Boric acid	■	■	Combustible oils	■	■
Citric acid	■	■	Tanning oil	■	-
Hydrochloric acid 100%	□	□	Linseed oil	■	■
Chromic acid 5%	■	□	Hydraulic oil (synthetic)	■	■
Hydrofluoric acid 100%	■	□	Mineral Oil	■	■
Formic acid	■	□	Motor Oil	■	■
Phosphoric acid (<40%)	□	■	Transformer oil	■	■
Lactic acid	■	■	Paraffin	■	■
Nitric acid (concentrated)	■	□	Potassium chloride	■	■
Oleic acid	■	■	Potassium hydroxide (caustic potash)	■	□
Sulphuric acid (<10%)	■	□	Potassium sulphate	■	■
Sulphuric acid (10-75%)	□	□	Propane (liquid)	■	■
Sulphuric acid (75-100%)	□	□	Copper sulphate >5%	■	□
Stearic acid	■	■	Liquid soaps	■	■
Tartaric acid	□	■	Chocolate syrup	■	■
White water	■	■	Milk whey	■	-
Sea water	□	■	Sodium bicarbonate	■	■
Distilled water	■	■	Sodium bisulphate	□	■
White spirit	■	■	Sodium carbonate	■	■
Ethyl alcohol	■	■	Sodium chloride	■	■
Methyl alcohol	■	■	Sodium hydroxide (80%)	■	□
Liquid ammonia	■	■	Sodium hypochlorite (100%)	□	□
Ammonium acetate	■	■	Sodium nitrate	■	■
Ammonium carbonate	■	■	Sodium sulphate	■	■
Ammonium sulfate	■	■	Sodium sulphide	□	■
Leaded petrol	■	■	Aluminium sulphate	■	■
Unleaded petrol	■	■	Ferrous sulphate	■	■
Benzol	■	□	Calcium hydroxide	□	■
Beer	■	■	Potassium hydroxide	■	■
Butane	■	■	Sodium hydroxide	-	■
Butanol	■	■	Tanning solutions	■	■
Quicklime	■	■	Photographic solutions	-	■
Calcium chloride	■	■	Fruit juice	■	■
Calcium hydroxide	■	■	Vegetable juice	■	■
Chloroform	■	■	Toluene	■	□
Aluminium chloride	■	■	Transparent (paint)	■	-
Ferrous chloride	□	□	Trichloroethylene	■	■
Chrome plating	□	□	Whisky and wine	■	■
Diesel	■	■	Zinc plate	□	□
Ether	■	■	Zinc chloride	■	■
Formaldehyde 100%	■	□	Zinc sulphate	-	■
Furfural	■	■	Sulphur chloride	■	■
Gelatine	■	■	Sugar (liquid)	■	■
Glycerine	■	■	Sugar beet	■	■
Glucose	■	■			
Shellac (orange)	■	■			
Hydrogen (gas)	■	■			
Iodine	□	■			
Milk	■	■			
Magnesium chloride	□	■			
Magnesium hydroxide	■	■			
Magnesium sulphate (Epsom salt)	■	■			
Mayonnaise	■	■			

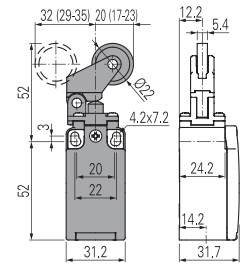
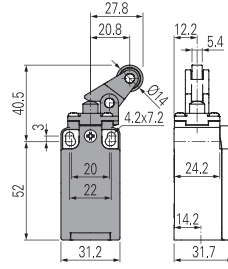
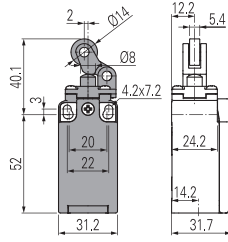
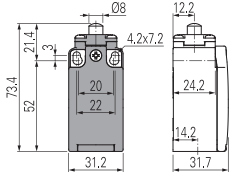
Resistance against corrosion

- No corrosion
- Possible corrosion
- Corrosion
- Data not available



Contact type

- R** = snap action
- L** = slow action

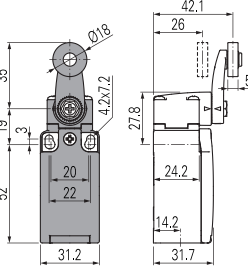
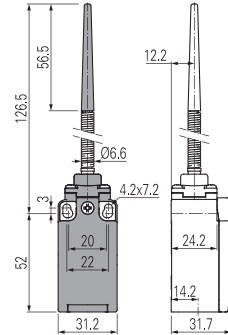
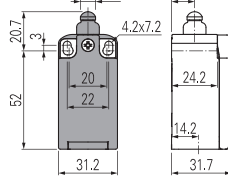
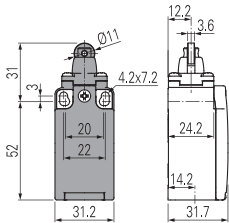


Contact block

2	R	FR 201-XM2	2x(1NO-1NC)	FR 202-XM2	2x(1NO-1NC)	FR 205-XM2	2x(1NO-1NC)	FR 207-XM2	2x(1NO-1NC)
5	R	FR 501-XM2	1NO+1NC	FR 502-XM2	1NO+1NC	FR 505-XM2	1NO+1NC	FR 507-XM2	1NO+1NC
6	L	FR 601-XM2	1NO+1NC	FR 602-XM2	1NO+1NC	FR 605-XM2	1NO+1NC	FR 607-XM2	1NO+1NC
9	L	FR 901-XM2	2NC	FR 902-XM2	2NC	FR 905-XM2	2NC	FR 907-XM2	2NC
20	L	FR 2001-XM2	1NO+2NC	FR 2002-XM2	1NO+2NC	FR 2005-XM2	1NO+2NC	FR 2007-XM2	1NO+2NC
Max. speed		page 231 - type 4		page 231 - type 3		page 231 - type 3		page 231 - type 3	
Actuating force		8 N (25 N ⊕)		6 N (25 N ⊕)		6 N (25 N ⊕)		4 N (25 N ⊕)	
Travel diagrams		page 232 - group 1		page 232 - group 2		page 232 - group 2		page 232 - group 3	

Contact type

- R** = snap action
- L** = slow action

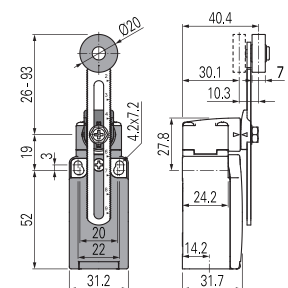
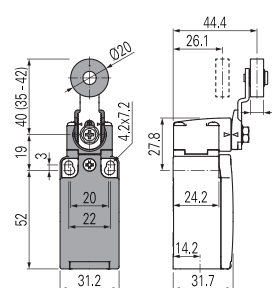
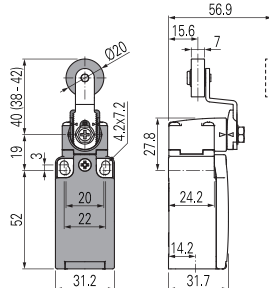
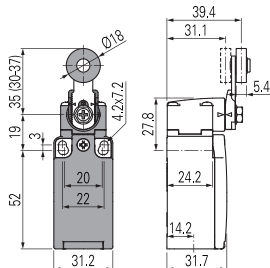


Contact block

2	R	FR 215-XM2	2x(1NO-1NC)	/	FR 220-XM2	2x(1NO-1NC)	FR 230-XM2V38	2x(1NO-1NC)	
5	R	FR 515-XM2	1NO+1NC	FR 5A1-XM2	1NO+1NC	FR 520-XM2	1NO+1NC	FR 530-XM2V38	1NO+1NC
6	L	FR 615-XM2	1NO+1NC	FR 6A1-XM2	1NO+1NC	/	/	FR 630-XM2V38	1NO+1NC
9	L	FR 915-XM2	2NC	FR 9A1-XM2	2NC	/	/	FR 930-XM2V38	2NC
20	L	FR 2015-XM2	1NO+2NC	FR 20A1-XM2	1NO+2NC	FR 2020-XM2	1NO+2NC	FR 2030-XM2V38	1NO+2NC
Max. speed		page 231 - type 2		page 231 - type 4		1 m/s		page 231 - type 1	
Actuating force		8 N (25 N ⊕)		6 N (25 N ⊕)		0.07 Nm		0.06 Nm (0.25 Nm ⊕)	
Travel diagrams		page 232 - group 1		page 232 - group 1		page 232 - group 4		page 232 - group 5	

Contact type

- R** = snap action
- L** = slow action



Contact block

2	R	FR 231-XM2V38	2x(1NO-1NC)	FR 251-XM2V38	2x(1NO-1NC)	FR 254-XM2V38	2x(1NO-1NC)	FR 256-XM2V38	2x(1NO-1NC)
5	R	FR 531-XM2V38	1NO+1NC	FR 551-XM2V38	1NO+1NC	FR 554-XM2V38	1NO+1NC	FR 556-XM2V38	1NO+1NC
6	L	FR 631-XM2V38	1NO+1NC	FR 651-XM2V38	1NO+1NC	FR 654-XM2V38	1NO+1NC	FR 656-XM2V38	1NO+1NC
9	L	FR 931-XM2V38	2NC	FR 951-XM2V38	2NC	FR 954-XM2V38	2NC	FR 956-XM2V38	2NC
20	L	FR 2031-XM2V38	1NO+2NC	FR 2051-XM2V38	1NO+2NC	FR 2054-XM2V38	1NO+2NC	FR 2056-XM2V38	1NO+2NC
Max. speed		page 231 - type 1		page 231 - type 1		page 231 - type 1		page 231 - type 1	
Actuating force		0.06 Nm (0.25 Nm ⊕)		0.06 Nm (0.25 Nm ⊕)		0.06 Nm (0.25 Nm ⊕)		0.06 Nm (0.25 Nm ⊕)	
Travel diagrams		page 232 - group 5		page 232 - group 5		page 232 - group 5		page 232 - group 5	

All values in the drawings are in mm

Accessories See page 207

→ The 2D and 3D files are available at www.pizzato.com

Switches with external parts in stainless steel

Contact type							
R = snap action							
L = slow action							
Contact block							
2	R	FX 201-XM2	2x(1NO-1NC)	FX 202-XM2	2x(1NO-1NC)	FX 205-XM2	2x(1NO-1NC)
5	R	FX 501-XM2	1NO+1NC	FX 502-XM2	1NO+1NC	FX 505-XM2	1NO+1NC
6	L	FX 601-XM2	1NO+1NC	FX 602-XM2	1NO+1NC	FX 605-XM2	1NO+1NC
9	L	FX 901-XM2	2NC	FX 902-XM2	2NC	FX 905-XM2	2NC
20	L	FX 2001-XM2	1NO+2NC	FX 2002-XM2	1NO+2NC	FX 2005-XM2	1NO+2NC
Max. speed		page 231 - type 4		page 231 - type 3		page 231 - type 3	
Actuating force		8 N (25 N ⊕)		6 N (25 N ⊕)		6 N (25 N ⊕)	
Travel diagrams		page 232 - group 1		page 232 - group 2		page 232 - group 2	
						page 232 - group 3	

Contact type				External gasket		External gasket	
R = snap action							
L = slow action							
Contact block							
2	R	FX 215-XM2	2x(1NO-1NC)	FX 220-XM2	2x(1NO-1NC)	FX 225-XM2	2x(1NO-1NC)
5	R	FX 515-XM2	1NO+1NC	FX 520-XM2	1NO+1NC	FX 525-XM2	1NO+1NC
6	L	FX 615-XM2	1NO+1NC	/	/	FX 630-XM2V38	1NO+1NC
9	L	FX 915-XM2	2NC	/	/	FX 930-XM2V38	2NC
20	L	FX 2015-XM2	1NO+2NC	FX 2020-XM2	1NO+2NC	FX 2025-XM2	1NO+2NC
Max. speed		page 231 - type 2		1 m/s		1 m/s	
Actuating force		8 N (25 N ⊕)		0.07 Nm		0.12 Nm	
Travel diagrams		page 232 - group 1		page 232 - group 4		page 232 - group 4	
						page 231 - type 1	
						0.06 Nm (0.25 Nm ⊕)	
						page 232 - group 5	

Contact type							
R = snap action							
L = slow action							
Contact block							
2	R	FX 231-XM2V38	2x(1NO-1NC)	FX 251-XM2V38	2x(1NO-1NC)	FX 254-XM2V38	2x(1NO-1NC)
5	R	FX 531-XM2V38	1NO+1NC	FX 551-XM2V38	1NO+1NC	FX 554-XM2V38	1NO+1NC
6	L	FX 631-XM2V38	1NO+1NC	FX 651-XM2V38	1NO+1NC	FX 654-XM2V38	1NO+1NC
9	L	FX 931-XM2V38	2NC	FX 951-XM2V38	2NC	FX 954-XM2V38	2NC
20	L	FX 2031-XM2V38	1NO+2NC	FX 2051-XM2V38	1NO+2NC	FX 2054-XM2V38	1NO+2NC
Max. speed		page 231 - type 1		page 231 - type 1		page 231 - type 1	
Actuating force		0.06 Nm (0.25 Nm ⊕)		0.06 Nm (0.25 Nm ⊕)		0.06 Nm (0.25 Nm ⊕)	
Travel diagrams		page 232 - group 5		page 232 - group 5		page 232 - group 5	
						page 232 - group 5	

All values in the drawings are in mm

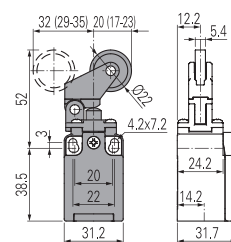
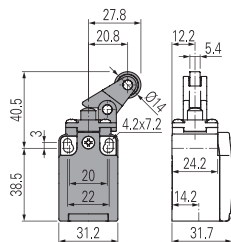
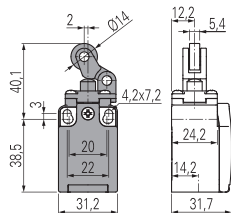
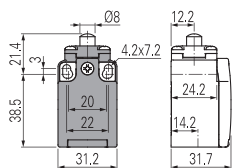
Accessories See page 207

→ The 2D and 3D files are available at www.pizzato.com



Contact type

R = snap action
L = slow action

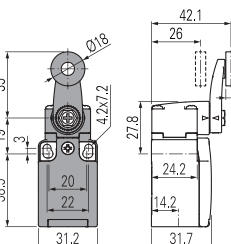
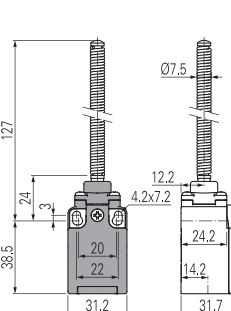
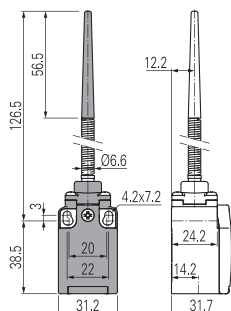
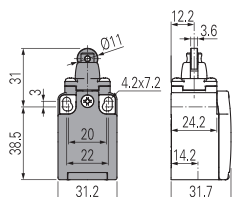


Contact block

3	R	FK 301-XM2	1NO+1NC	FK 302-XM2	1NO+1NC	FK 305-XM2	1NO+1NC	FK 307-XM2	1NO+1NC
33	L	FK 3301-XM2	1NO+1NC	FK 3302-XM2	1NO+1NC	FK 3305-XM2	1NO+1NC	FK 3307-XM2	1NO+1NC
34	L	FK 3401-XM2	2NC	FK 3402-XM2	2NC	FK 3405-XM2	2NC	FK 3407-XM2	2NC
Max. speed		page 231 - type 4		page 231 - type 3		page 231 - type 3		page 231 - type 3	
Actuating force		8 N (25 N)		6 N (25 N)		6 N (25 N)		4 N (25 N)	
Travel diagrams		page 232 - group 1		page 232 - group 2		page 232 - group 2		page 232 - group 3	

Contact type

R = snap action
L = slow action

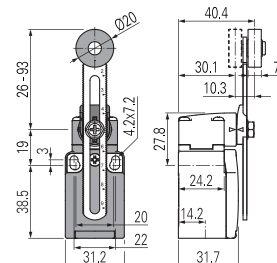
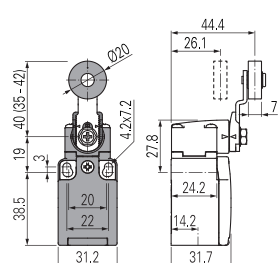
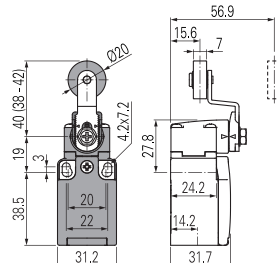
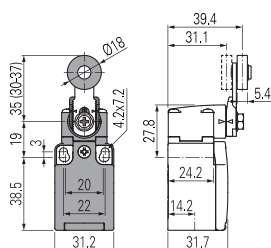


Contact block

3	R	FK 315-XM2	1NO+1NC	FK 320-XM2	1NO-1NC	FK 325-XM2	1NO-1NC	FK 330-XM2V38	1NO+1NC
33	L	FK 3315-XM2	1NO+1NC	FK 3320-XM2	1NO+1NC	FK 3325-XM2	1NO+1NC	FK 3330-XM2V38	1NO+1NC
34	L	FK 3415-XM2	2NC	FK 3420-XM2	2NC	FK 3425-XM2	2NC	FK 3430-XM2V38	2NC
Max. speed		page 231 - type 2		1 m/s		1 m/s		page 231 - type 1	
Actuating force		8 N (25 N)		0.05 Nm		0.1 Nm		0.06 Nm (0.25 Nm)	
Travel diagrams		page 232 - group 1		page 232 - group 4		page 232 - group 4		page 232 - group 5	

Contact type

R = snap action
L = slow action



Contact block

3	R	FK 331-XM2V38	1NO+1NC	FK 351-XM2V38	1NO+1NC	FK 354-XM2V38	1NO+1NC	FK 356-XM2V38	1NO+1NC
33	L	FK 3331-XM2V38	1NO+1NC	FK 3351-XM2V38	1NO+1NC	FK 3354-XM2V38	1NO+1NC	FK 3356-XM2V38	1NO+1NC
34	L	FK 3431-XM2V38	2NC	FK 3451-XM2V38	2NC	FK 3454-XM2V38	2NC	FK 3456-XM2V38	2NC
Max. speed		page 231 - type 1		page 231 - type 1		page 231 - type 1		page 231 - type 1	
Actuating force		0.06 Nm (0.25 Nm)		0.06 Nm (0.25 Nm)		0.06 Nm (0.25 Nm)		0.06 Nm (0.25 Nm)	
Travel diagrams		page 232 - group 5		page 232 - group 5		page 232 - group 5		page 232 - group 5	

All values in the drawings are in mm

Accessories See page 207

The 2D and 3D files are available at www.pizzato.com

Contact type
R = snap action
L = slow action

Contact block

2	R	FP 201-XM2	2x(1NO-1NC)	FP 202-XM2	2x(1NO-1NC)	FP 205-XM2	2x(1NO-1NC)	FP 208-XM2	2x(1NO-1NC)
5	R	FP 501-XM2	⊕ 1NO+1NC	FP 502-XM2	⊕ 1NO+1NC	FP 505-XM2	⊕ 1NO+1NC	FP 508-XM2	⊕ 1NO+1NC
6	L	FP 601-XM2	⊕ 1NO+1NC	FP 602-XM2	⊕ 1NO+1NC	FP 605-XM2	⊕ 1NO+1NC	FP 608-XM2	⊕ 1NO+1NC
9	L	FP 901-XM2	⊕ 2NC	FP 902-XM2	⊕ 2NC	FP 905-XM2	⊕ 2NC	FP 908-XM2	⊕ 2NC
20	L	FP 2001-XM2	⊕ 1NO+2NC	FP 2002-XM2	⊕ 1NO+2NC	FP 2005-XM2	⊕ 1NO+2NC	FP 2008-XM2	⊕ 1NO+2NC
Max. speed		page 229 - type 4		page 229 - type 3		page 229 - type 3		page 229 - type 4	
Actuating force		8 N (25 N ⊕)		6 N (25 N ⊕)		6 N (25 N ⊕)		8 N (25 N ⊕)	
Travel diagrams		page 230 - group 1		page 230 - group 2		page 230 - group 2		page 230 - group 1	

Contact type
R = snap action
L = slow action

External gasket

Contact block

2	R	FP 210-XM2	2x(1NO-1NC)	FP 211-XM2	2x(1NO-1NC)	FP 216-XM2	2x(1NO-1NC)
5	R	FP 510-XM2	⊕ 1NO+1NC	FP 511-XM2	⊕ 1NO+1NC	FP 516-XM2	⊕ 1NO+1NC
6	L	FP 610-XM2	⊕ 1NO+1NC	FP 611-XM2	⊕ 1NO+1NC	FP 616-XM2	⊕ 1NO+1NC
9	L	FP 910-XM2	⊕ 2NC	FP 911-XM2	⊕ 2NC	FP 916-XM2	⊕ 2NC
20	L	FP 2010-XM2	⊕ 1NO+2NC	FP 2011-XM2	⊕ 1NO+2NC	FP 2016-XM2	⊕ 1NO+2NC
Max. speed		page 229 - type 4		page 229 - type 4		page 229 - type 2	
Actuating force		11 N (25 N ⊕)		8 N (25 N ⊕)		8 N (25 N ⊕)	
Travel diagrams		page 230 - group 1		page 230 - group 1		page 230 - group 1	

Safety switches for hinges

Contact type
L = slow action

Contact block

9	L	FR 996-XM2	⊕ 2NC	FX 996-XM2	⊕ 2NC	/	
18	L	FR 1896-XM2	⊕ 1NO+1NC	FX 1896-XM2	⊕ 1NO+1NC	/	
20	L	FR 2096-XM2	⊕ 1NO+2NC	FX 2096-XM2	⊕ 1NO+2NC	/	
33	L	/	/	/	/	FK 3396-XM2	⊕ 1NO+1NC
34	L	/	/	/	/	FK 3496-XM2	⊕ 2NC
Actuating force		0.15 Nm (0.4 Nm ⊕)		0.15 Nm (0.4 Nm ⊕)		0.15 Nm (0.4 Nm ⊕)	
Travel diagrams		page 234 - group 9		page 234 - group 9		page 234 - group 9	

⚠ If not expressly indicated in this chapter, for correct installation and utilization of all articles see the instructions given on pages 227 to 242.

Safety switches with separate actuator

Contact type		Without actuator		Without actuator		Without actuator		Without actuator	
= slow action									
Contact block		6	9	20	33	34	/	/	/
		FR 693-XM2	FR 993-XM2	FR 2093-XM2	/	/	/	FK 3393-XM2	FK 3493-XM2
		1NO+1NC	2NC	1NO+2NC	/	/	/	1NO+1NC	2NC
		10 N (18 N)	10 N (18 N)	10 N (18 N)	10 N (18 N)	10 N (18 N)	10 N (18 N)	10 N (18 N)	10 N (18 N)
		page 234 - group 8		page 234 - group 8		page 234 - group 8		page 234 - group 8	

Stainless steel actuators

IMPORTANT: These actuators can be used only with items of the FR, FX, FK and FW series (e.g. FR 693-XM2).
Low level of coding acc. to EN ISO 14119.

Article	Description	Article	Description
VF KEYD	Straight actuator	VF KEYD1	Angled actuator
VF KEYD5	Extended actuator	VF KEYD6	Extended actuator, angled
VF KEYD8	Universal actuator	VF KEYD10	Profiled actuator

SR series magnetic safety sensors



See
General Catalogue Safety 2023-2024

ST series RFID safety sensors



See
General Catalogue Safety 2023-2024

HX series stainless steel safety switches



See
General Catalogue Safety 2023-2024

All values in the drawings are in mm

Accessories See page 207

→ The 2D and 3D files are available at www.pizzato.com