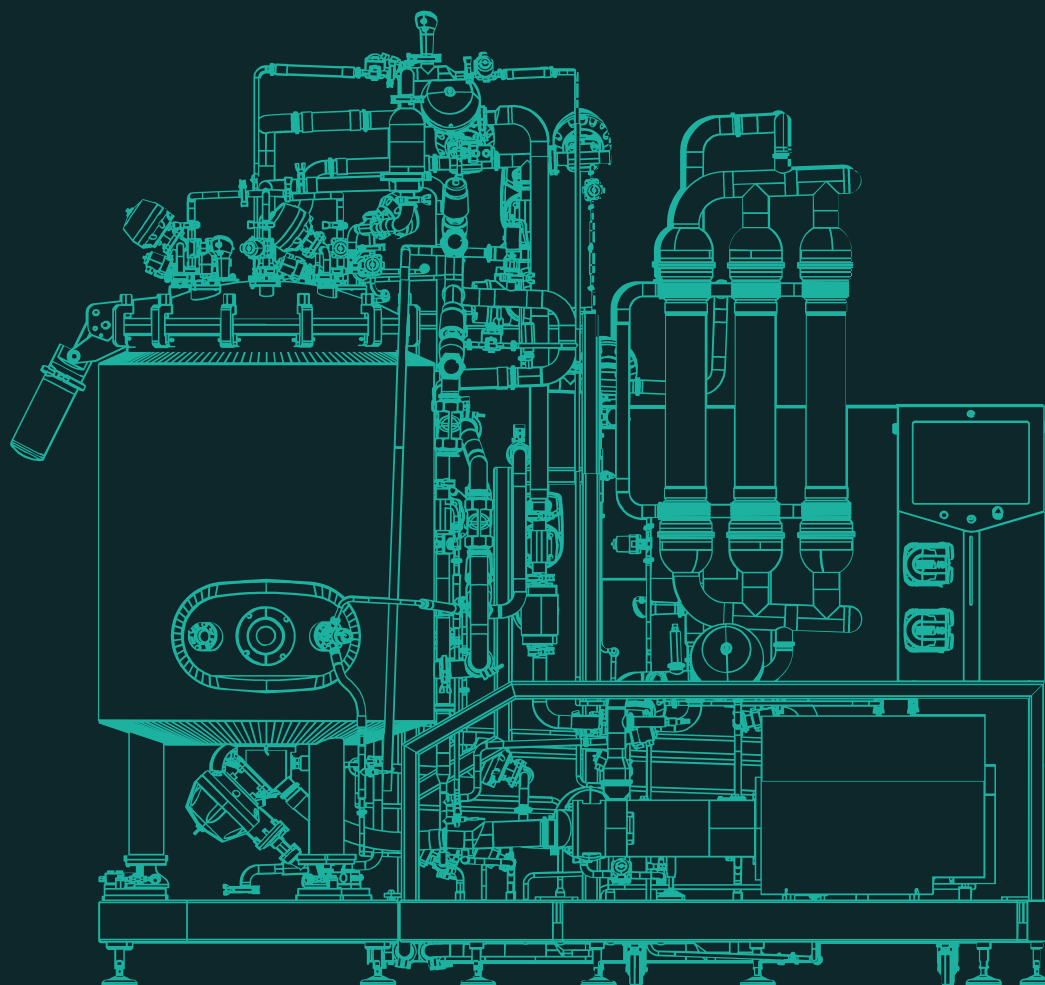


eProd[®]

tangential flow filtration

Enhancing Efficiency and
Growth Optimization



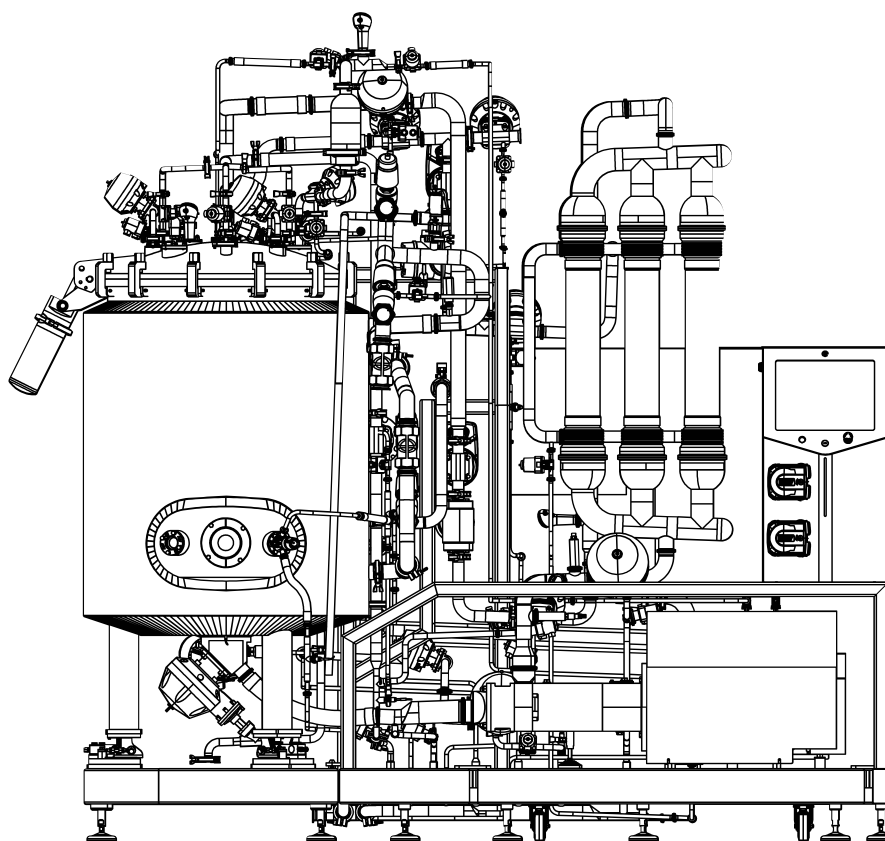
ePROD® TFF

ePROD® Tangential Flow Filtration is a fully automated TFF system designed to meet the demands of your production scale, providing a reliable and efficient solution for media concentration and diafiltration. This tangential flow filtration equipment represents a cutting-edge approach to filtration, offering benefits that range from high solute retention to continuous, clog-free operation.

With a double control box and a durable stainless steel vessel as standard features, this tangential filtration system is built to last. Whether you're dealing with high-volume production or need a more streamlined single use TFF system for your lab, this tangential flow filtration equipment is scalable to meet your specific needs.

The ePROD® TFF system is designed for ease of use, simplifying the filtration process and allowing you to focus on other aspects of your production. This automated TFF system enhances process efficiency by offering advanced control and monitoring capabilities. It's suitable for various applications, providing the flexibility and adaptability your operation requires.

Invest in the ePROD® tangential flow filtration equipment for a versatile and adaptable solution to your filtration needs. This TFF filtration system will deliver robust performance, whether you're involved in biopharmaceutical production, food and beverage processing, or other fields that require reliable and efficient tangential flow filtration.



Basic configuration

Control modules	
TMP configuration	Included
Concentration mode	Included
Diafiltration mode	Included
Water flux test mode	Included
Filling mode	Included
Level control	Included
CIP mode	Included
SIP mode	Included
eSCADA Advanced	Included
OPC server	Included
User's management	Included
Recipe's management	Included
Reporting	Included
21CFR Part 11 Compliant	Included
PAT	Optional
Equipment	
Pressure measurement in feeding line	Included
Pressure measurement in retentate line	Included
Pressure measurement in permeate line	Included
Pressure measurement in the reservoir vessel	Included
Temperature measurement in the reservoir vessel	Included
Mass flow meter in the permeate	Included
Magnetic flow meter in the retentate	Included
Regulation diaphragm valve in the retentate	Included
Regulation diaphragm valve in the permeate	Included
Twin screw pump	Included
Peristaltic pump for diafiltration	Included
Peristaltic pump for permeate control	Included
Load cell for level measurement	Included
Holder for membrane cassettes	Included in cassette version
Holder for hollow fiber	Included in hollow fiber
500L stainless steel vessel	Included
3x CIP ball for vessel cleaning	Included
Magnetic agitation in the tank	Included
SIP equipped	Included
Double wall jacket	Included
Burst disk	Included
Rotary lobe pump	Optional
Conductivity sensor in the feeding line	Optional
pH sensor in the feeding line	Optional
High flow permeate / feeding pump	Optional (depending on the required filtration flux LMH)
Certificate 3.1	Optional
Electropolishing	Optional

Technical specifications

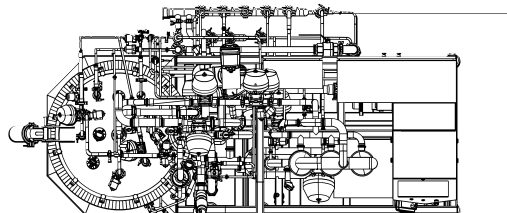
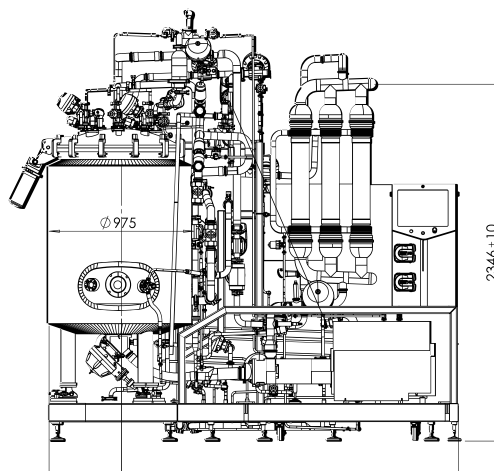
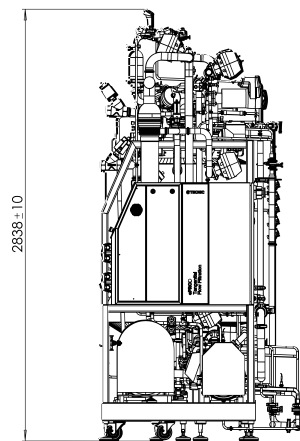
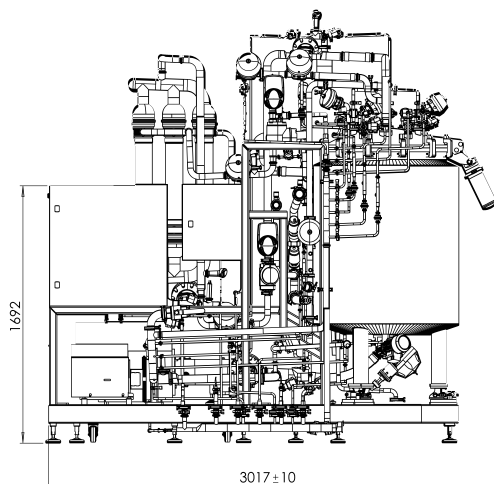
	Membrane cassette 6.84 - 34.2 m ²	Hollow-Fiber 12.1 - 36.3 m ²
Overall dimensions (skid dimension) (WxHxD) (mm)	3017x2840x1353	
Tolerance in overall dimensions (mm)	± 10	
Weight approx reservoir tank (kg)	520	
Weight approx secondary skid (kg)	380	
Power supply	3xphase, 1xneutral, 1xground 400V AC 50Hz 53 A	
Product contact material	Stainless steel AISI 316L	
Non-product contact material	Stainless steel AISI 304 or higher	
Controller type	Industrial PLC	
Operation / HMI Interface	Intouch Screen 15" / eSCADA	
Electrical interfaces	1x ethernet 1x WLAN 2x USB	
TFF vessel features		
Vessel working volume (L)	500	
Vessel total volume (L)	563	
Jacketed	Double wall vessel for temperature management	
Top connections	1x 1-1/2" TC retentate deep tube 1x 1-1/2" TC permeate deep tube 3x 3/4" TC for CIP ball 1x 1-1/2" TC connection for venting / venting filter 1x 1/2" TC connection for steam entrance 1x 1" TC connection for pressure indicator 2x 3/4" TC connection for addition solution (deep tube) 1x 1" TC connection for manometer 1x 1/2" TC connection for addition solution	
Bottom connections	1x 2" TC liquid outlet 1x thermowell 1x coupling for magnetic stirrer 1x sampling valve	
Jacketed connections	2x 2" TC connections for water recirculation	
Advanced software	Compatible with Qubicon and Lucullus	
Functional specifications		
Pumping system for recirculation	Twin screw pump	
Pumping capacity (m ³ /h) @ 2 barg	Up to 30	
Pumping system for CIP	Centrifugal pump Speed range: ≤ 4000 rpm Maximum flow: 5 m ³ /h @ 3.6 barg	
Load cell	3x Load Cell Capacity: 550 kg Sensitivity: 2.000 ± 0.1%	
pH sensor	Biocompatible (FDA) electrolyte filled 0 -14 pH	
Conductivity sensor	4-pole contacting Range: 1 µS/cm to 300 mS/cm	
Temperature sensor	Pt100 -50 - +250°C	
Mass flowmeter	0 - 7.2 m ³ /h	
Electromagnetic flowmeter	0 - 22.6 m ³ /h	
Stirring speed	85 - 450 rpm (17 - 90 Hz)	
Peristaltic pumps		
Pump type	1x integrated variable speed pump 1x integrated fixed speed pump	
Pump head	For 2.4 mm wall thickness tubing Bore: ID 0.8-9.6 mm	
Max speed	Variable: 190 rpm Fixed: 230 rpm	

Max flow rate (ml/min)	Variable	Fixed:
	ID 0.5 mm - 7.8 ml/min	ID 0.5 mm - 9.4 ml/min
	ID 0.8 mm - 20 ml/min	ID 0.8 mm - 24 ml/min
	ID 1.6 mm - 79 ml/min	ID 1.6 mm - 96 ml/min
	ID 3.2 mm - 320 ml/min	ID 3.2 mm - 390 ml/min
	ID 4.8 mm - 720 ml/min	ID 4.8 mm - 870 ml/min
	ID 6.4 mm - 1295 ml/min	ID 6.4 mm - 1570 ml/min
	ID 8.0 mm - 1980 ml/min	ID 8.0 mm - 2400 ml/min
	ID 9.6 mm - 2850 ml/min	ID 9.6 mm - 3450 ml/min

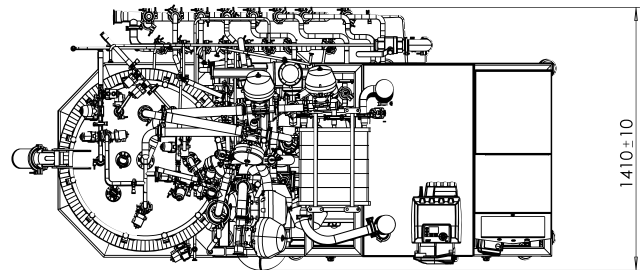
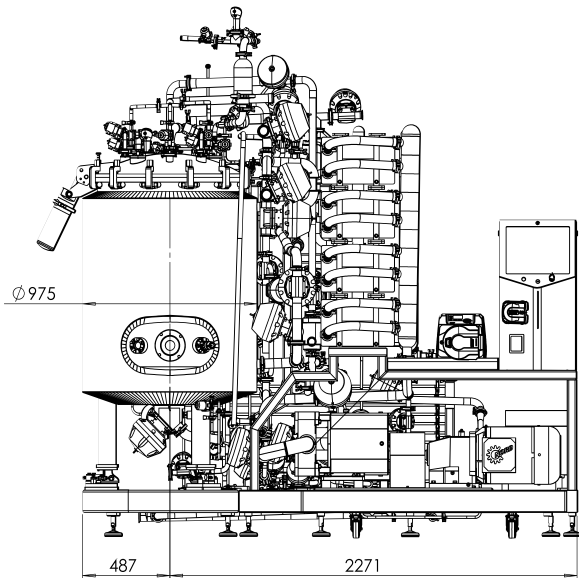
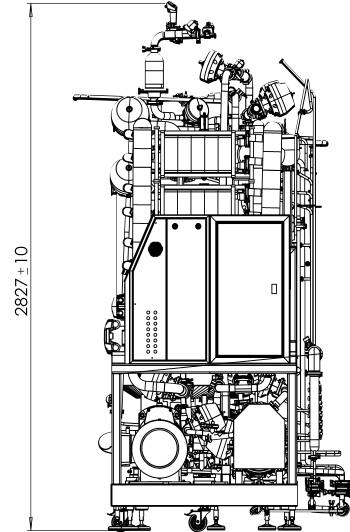
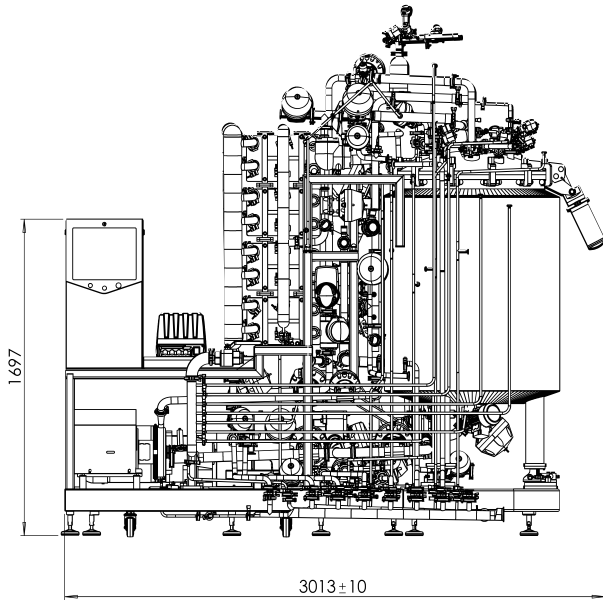
External high flow pump

Pump type	Variable speed pump
Pump head	For 3.2 mm wall thickness tubing
Speed	265 rpm
Flow rate (ml/min)	ID 12 mm - 10 L/min ID 17 mm - 16 L/min

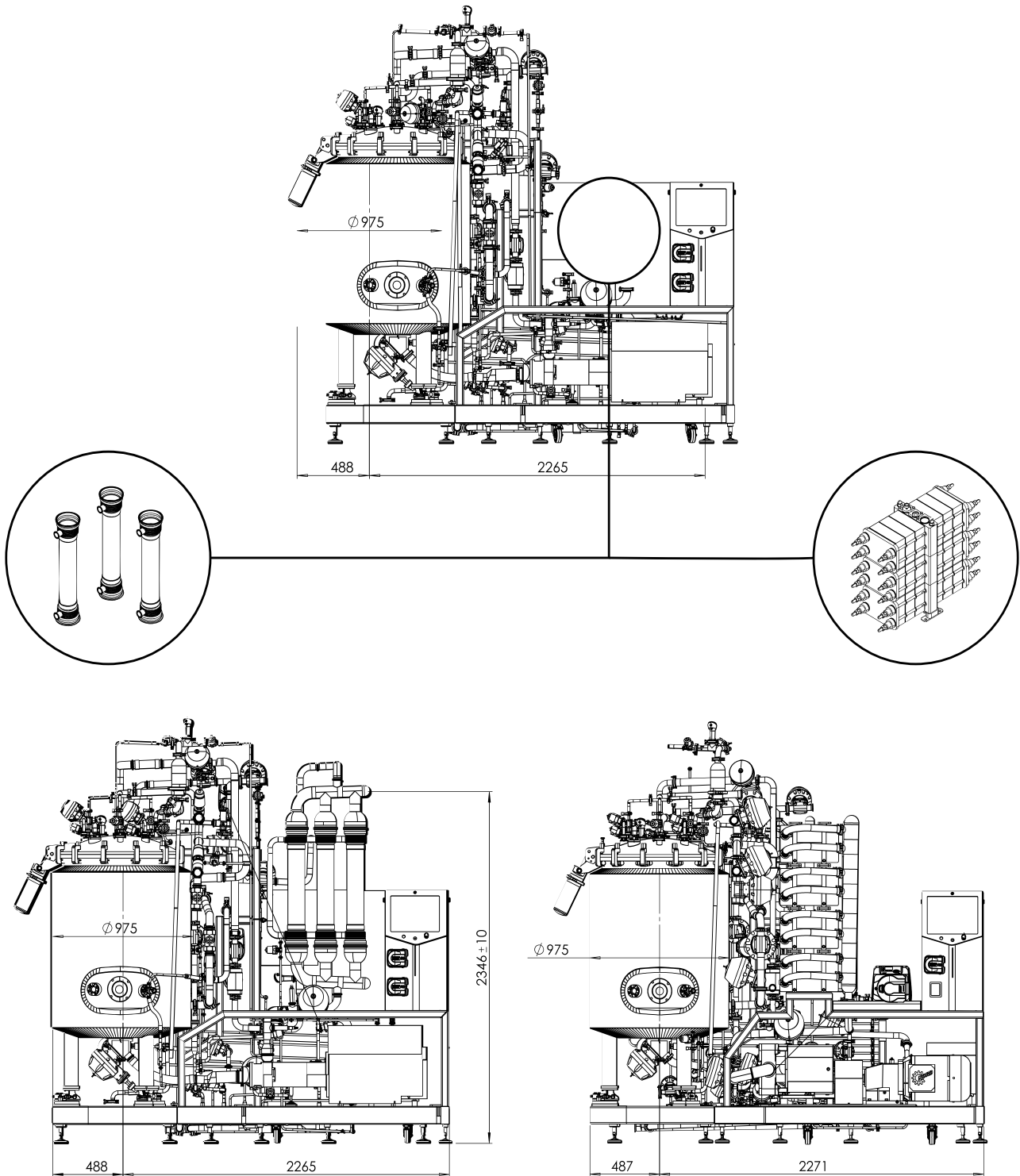
500L hollow fiber (measurements in mm)



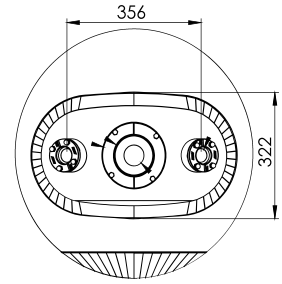
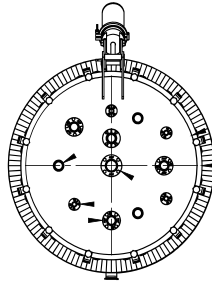
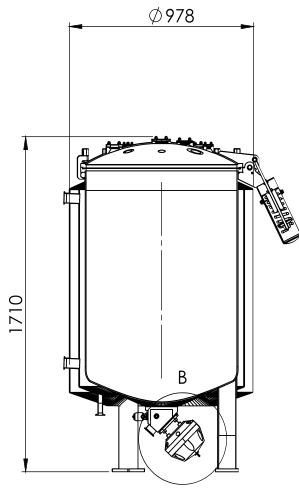
500L cassette (measurements in mm)



500L hybrid (measurements in mm)



500L (measurements in mm)



Partnerships



Regulation



Do you need more information?
We are here to help you

Headquarters, Riudarenes -Spain

sales@tecnic.eu
+34 972 877 327
tecnic.eu



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sales@tecnic.eu · +34 972 877 327 · tecnic.eu