

Freyssinet670-E



FREYSSINET
SUSTAINABLE TECHNOLOGY

- Continuous thread
- Rugged
- Weldable
- High strength

Anchors, reinforcement, fixing

Technical data sheet reference n°: FT En C IX 2 2 1

The system

The Freyssinet670-E system consists of a range of bars and adapted accessories, allowing its use in several areas of activity.

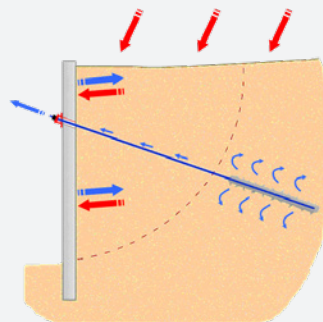
The combination of mechanical accessories enables many solutions like anchorages (nut + plate) or coupling (coupler with or without lock nut).

Other accessories facilitating the installation, like spring baskets, sheathing, injection systems are also available.

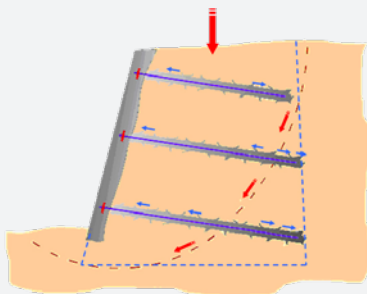
Applications: Geotechnics

Installed in a bore hole, the Freyssinet670-E system is perfectly suited to creating anchoring solutions in natural soils, like ground anchors, soil nails, anchor tie rods and micropiles.

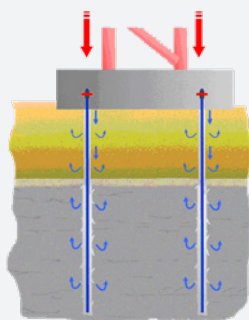
Spring baskets and injection pipes are generally used for this application.



Ground anchors



Soil nails



Micropiles

Reinforcement

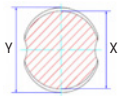
The bar Freyssinet670-E is a hot laminated bar. It includes ribs forming a thread on the whole length, which enables the screwability of the accessories at any point. The bar Freyssinet670-E is weldable like reinforcement bars.

The right hand thread is characteristic of the Freyssinet670-E bar.

The high strength of the Freyssinet670-E system enables to create reinforced connection or anchoring in small areas.



Freyssinet670-E



Cross section of the Freyssinet670-E

Nominal diameter (mm)	Grade (MPa/MPa)	Weight (kg/m)	Cross section (mm ²)	Nominal X (mm)	Nominal Y (mm)	Yield load (kN)	Ultimate load (kN)	Elongation mini Agt (%)	Elongation mini A10d (%)
18	St 670/800 (classe 97)	1.96	250	17.3	20.0	168	200	5	7
22		2.94	375	21.5	23.8	251	300	5	7
25		3.85	491	24.2	27.3	329	393	5	7
28		4.83	616	27.0	30.6	413	493	5	7
30		5.55	707	29.2	33.0	474	566	5	7
35		7.55	962	34.2	38.3	645	770	5	7
43		11.4	1452	42.3	46.8	973	1162	5	7
57.5		20.38	2597	55.9	61.5	1740	2078	5	7
63.5		24.86	3167	62.1	67.8	2122	2534	5	7
75		34.6	4418	73.7	81.5	2960	3534	5	7

Technical characteristics of the Freyssinet670-E

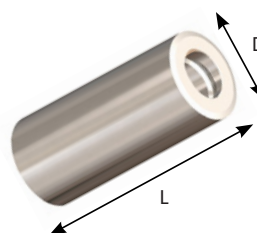
The bars of the Freyssinet670-E system are manufactured in 12, 15 and 18 meters long. They can be cut at any required length. They are delivered in bundles of approximately 2.5 tons weight.



Stock of bars

Couplers

The couplers enable an easy and safe connection of the bars together. They are produced in two versions, machined steel and cast steel. Both ranges can be used without distinction.

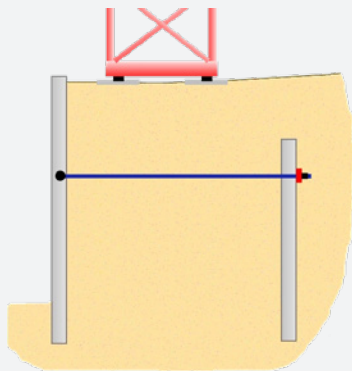


Machined steel	Nominal diameter (mm)									
	18	22	25	28	30	35	43	57.5	63.5	75
L (mm)	100	110	120	140	150	170	200	250	300	320
D (mm)	36	40	45	50	55	65	80	102	114	140
Weight (kg)	0.56	0.71	0.94	1.36	1.84	2.95	5.42	10.31	14.48	27.5

Cast steel	Diamètre nominal (mm)									
	18	22	25	28	30	35	43	57.5	63.5	
L (mm)	90	105	120	130	140	170	200	250	300	
D (mm)	33	40	45	50	55	62	75	100	110	
Weight (kg)	0.39	0.67	0.94	1.28	1.71	2.56	4.32	9.79	13.67	

Applications: quay walls

The Freyssi670-E system can also be used as tie rods for building quay walls and sheet pile walls.



Tie rods

Applications: fixing

The Freyssi670-E system can be used to connect together two elements (formworks, pylons...).

Corrosion protection

On demand, the bars and the accessories can be covered with a corrosion protection system (galvanization, paint, double corrosion protection with cement grout and sheath).

Quality management

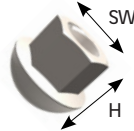
A mill certificate 3.1 can be delivered upon request.



Nailed wall

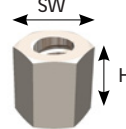
Anchoring accessories

Spherical nut



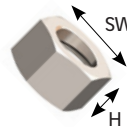
	Nominal diameter (mm)									
	18	22	25	28	30	35	43	57.5	63.5	75
H (mm)	34	41	48	55	58	74	87	116	127	174
SW (mm)	30	36	41	46	50	60	70	90	100	120
Weight (kg)	0.16	0.25	0.38	0.55	0.68	1.39	2.25	4.49	6.23	11.9

Hexagonal nut



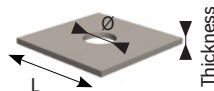
	Nominal diameter (mm)									
	18	22	25	28	30	35	43	57.5	63.5	75
H (mm)	45	50	55	60	65	70	90	120	165	150
SW (mm)	36	41	46	50	55	65	80	90	100	110
Weight (kg)	0.29	0.39	0.53	0.67	0.9	1.37	2.62	4.42	8.05	7.88

Lock nut



	Nominal diameter (mm)									
	18	22	25	28	30	35	43	57.5	63.5	75
H (mm)	22	22	22	30	30	40	50	60	70	80
SW (mm)	30	36	41	46	50	55	70	90	100	110
Weight (kg)	0.1	0.12	0.15	0.26	0.31	0.47	1.00	1.93	3.03	4.53

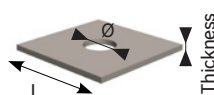
Flat plate for spherical nut



	Nominal diameter (mm)									
	18	22	25	28	30	35	43	57.5	63.5	75
LxL (mm)	150	200	200	250	250	250	300	300	300	350
Thickness (mm)	12	20	25	25	30	35	35	50	55	60
Ø (mm)	36	39	44.3	50.3	53.4	64	80	101.5	145	186
Weight (kg)	2	6	7.5	11.8	14	16	23	31.5	31.7	49.5

Anchorage plates dimensions listed in the table are frequently used. Design calculation to ensure their proper fitting and strength according to project dispositions shall be verified by project design office

Flat plate



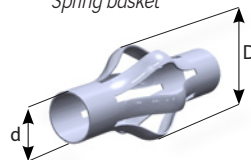
	Nominal diameter (mm)									
	18	22	25	28	30	35	43	57.5	63.5	75
LxL (mm)	100	110	120	125	130	150	185	245	270	325
Thickness (mm)	25	30	30	30	35	40	55	65	70	70
Ø (mm)	24	34	34	34	41	46	58	70	87	100
Weight (kg)	1.9	2.7	3.2	3.5	5.4	8.5	16.3	33.5	43.2	54.9

Anchorage plates dimensions listed in the table are frequently used. Design calculation to ensure their proper fitting and strength according to project dispositions shall be verified by project design office

On demand, other accessories are available or can be developed for specific applications.

Other standard accessories

Spring basket



	Nominal diameter (mm)									
	18	22	25	28	30	35	43	57.5	63.5	75
d (mm)	21	26	26	34	34	34	44	57	69	80
D (mm)	65	100	100	110	110	110	110	125	120	125
Weight (kg)	0.04	0.07	0.07	0.08	0.08	0.08	0.10	0.14	0.18	0.19

Injection pipe



dxD (mm)	12x16	16x20	165x19
Packaging	500m roll	500m roll	500m roll
Weight (kg/m)	0.08	0.09	0.06