TECHNICAL DATA SHEET n° 4332

Manufacturer: ETANCO (FRANCE)
Parc les Erables – Bât 1 – 66 route de Sartrouville – BP 49 – 78231 LE PECQ Cedex
Tel. : +33 (0)1 34 80 52 00 – Fax : +33 (0)1 30 71 01 89

Product name:

LR IT-FIX DYNAMIK CM – M10 / M12 THERMAL BREAK POINT

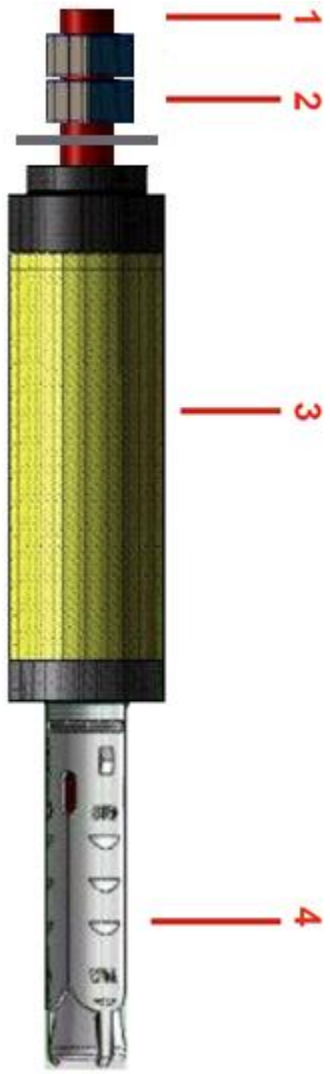
Application:
Thermal break point for medium load
Fastening of reported elements on façade with external thermal insulation such as blinds, awnings, separating from balconies, return railing façade, …
Non-structural loads

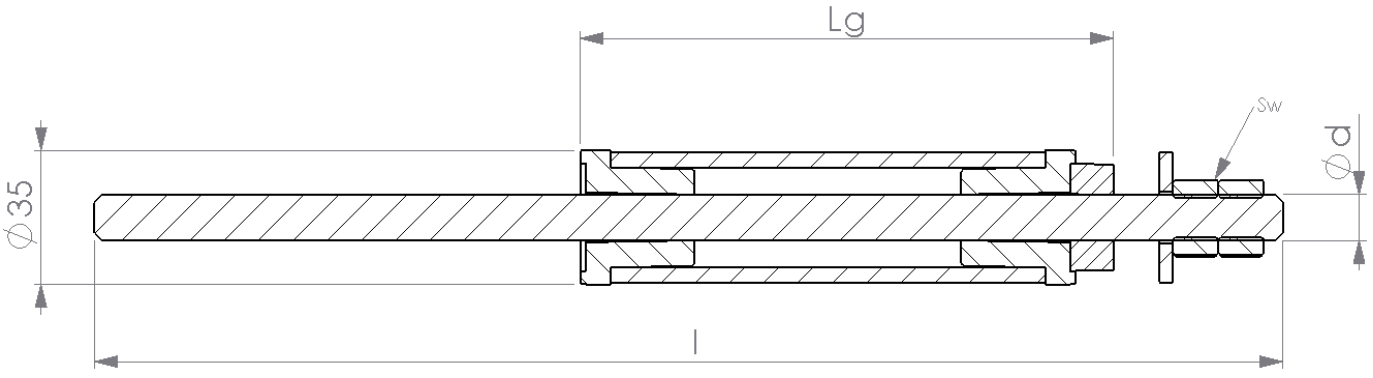
Description:
Thermal break solution for fixing elements on constructions equipped with external thermal insulation
LR IT-FIX DYNAMIK is constituted of 4 elements: 1 – Threaded rod / 2 – Nuts + washer / 3 – Spacer / 4 – Anchor.

Material:
Threaded rod: Epoxy 80% fiberglass reinforced or stainless steel A4 (AISI 316)
Nut : Stainless steel A4 (AISI 316)
Washer : Stainless steel A4 (AISI 316)
Spacer : Polyester 70% fiberglass reinforced
Anchor : Galvanized steel 5µm or stainless steel A4 (AISI 316)

Characteristics:
Threaded rod: M10 to M12 – Length: 210 to 350 mm
Nut: DIN934
Washer: Series M – NFE 25-513
Spacer: Ø 35 mm – Length: 120 to 240 mm
Anchor: M10 to M12 mm

Product benefits:
Suitable to external and international thermal insulation
Demountable and guilty on site
Guarantees the continuity of the insulation
Remove all point thermal bridges
High thermal performance thanks to composite materials used
No formation of condensation in the construction
Provides a robust connection between constructions equipped with external thermal insulation and the reported elements
Installation after the external thermal insulation
Installation easy and fast





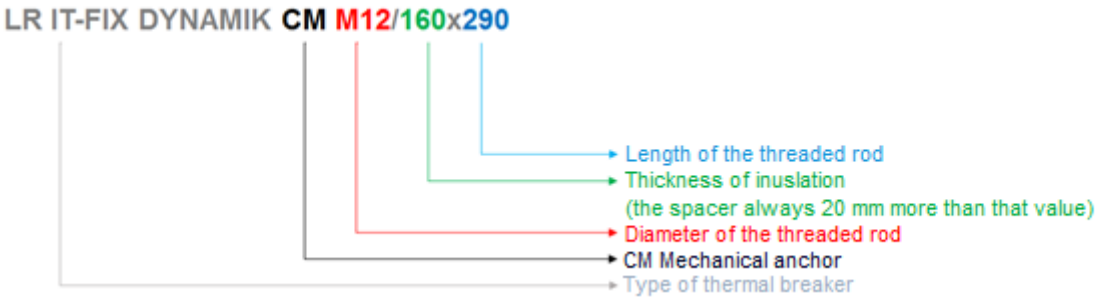
References LR IT-FIX DYNAMIK CM :

LR IT-FIX DYNAMIK CM	d	Insulation thickness (mm)	Spacer length (mm)	Spacer Ø (mm)	l (mm)	S_w (mm)	T_{inst} (N.m)	Cond.	Code Composite rod	Code Stainless steel rod
M10/100x210	**10**	100	**120**	35	210	17	6	12	364 340	364 940
M10/120x230	**10**	120	**140**	35	230	17	6	12	364 341	364 941
M10/140x250	**10**	140	**160**	35	250	17	6	12	364 342	364 942
M10/160x270	**10**	160	**180**	35	270	17	6	12	364 343	364 943
M10/180x290	**10**	180	**200**	35	290	17	6	12	364 344	364 944
M10/200x310	**10**	200	**220**	35	210	17	6	12	364 345	364 945
M10/220x330	**10**	220	**240**	35	330	17	6	12	364 346	364 946
M12/100x230	**12**	100	**120**	35	230	19	8	12	364 347	364 947
M12/120x250	**12**	120	**140**	35	250	19	8	12	364 348	364 948
M12/140x270	**12**	140	**160**	35	270	19	8	12	364 349	364 949
M12/160x290	**12**	160	**180**	35	290	19	8	12	364 350	364 950
M12/180x310	**12**	180	**200**	35	310	19	8	12	364 351	364 951
M12/200x330	**12**	200	**220**	35	330	19	8	12	364 352	364 952
M12/220x350	**12**	220	**240**	35	350	19	8	12	364 353	364 953

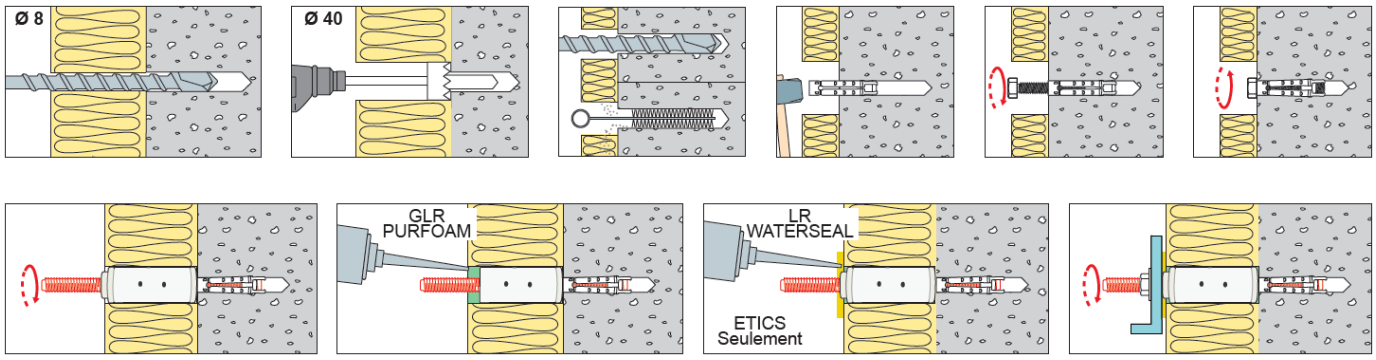
MP3	d (mm)	L (mm)	d_0 (mm)	h_{min} (mm)	S_{min} (mm)	C_{min} (mm)	T_{inst} (N.m)	Cond.	Code
M10x60	**10**	**60**	15	100	50	50	30	25	359 506
M12x80	**12**	**80**	18	100	75	75	50	20	359 508
For the installation of the anchor, see technical data sheet n° 2105									

d : diameter of threaded rod – l : length of threaded rod – S_w : hexagonal head – T_{inst} : tightening torque – L : length of anchor – h_1 : drilling depth – d_0 : drilling diameter – S_{min} : minimum spacing – C_{min} : minimum edge distance – h_{min} : minimum thickness of support material.

Interpretation of designations:



Installation:



MS polymeric sealant LR WATERSEAL according to CSTB 3035 v2 of July 2013.

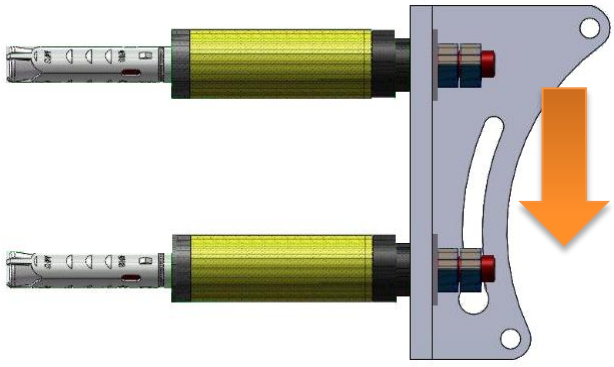
Thermal performances:

Coefficient of punctual thermal loss χ for one LR IT-FIX DYNAMIK CM (W/K)				
Reference LR IT-FIX DYNAMIK	Thermal conductivity of insulation λ (W/m.K) (1)	Thickness of insulation (mm) (2)		
		100	200	300
All Ø of composite rods	0,025	0,0045	0,0026	0,0018
	0,035	0,0042	0,0024	0,0017
	0,050	0,0037	0,0022	0,0016
(1) Linear interpolation is permitted for intermediate values of the thermal conductivity of the insulation.				
(2) Linear interpolation is permitted for intermediate values of insulation thickness.				

Mechanical performances:

Admissible load in tension and shear of one LR IT-FIX DYNAMIK CM with composite rod (daN) **Anchor MP3 in concrete C20/25**			
Rod Ø LR IT-FIX DYNAMIK CM		Tension - $T_{Rd,s}$	Shear - $V_{Rd,s}$
1 nut	M10	129	52
	M12	170	77
2 nuts	M10	379	52
	M12	500	77

Admissible load in extremity of a pair LR IT-FIX DYNAMIK CM with composite load (daN)								
		Admissible load in extremity - $R_{Rd,s}$						
Length of spacer		120	140	160	180	200	220	240
Pair of LR IT-FIX DYNAMIK	M10	153	139	122	103	81	53	26
	M12	206	187	164	138	109	72	35
Values given for a gap at 1 mm and vertical spacing between two LR IT-FIX DYNAMIK equal to 100 mm								



Ultimate load for dimensioning at the ULS : Take admissible load x 1,4

The installation in others materials and the utilisation of others anchors are possible. In that case, Tests on site are necessary to valid the mechanical performances of the thermal break solution LR IT-FIX SHUTTER.

According to French standard:

NF EN ISO 10211 – Thermal bridge in the construction

Recommended tools:

Hammer drill
Concrete bit Ø 8 mm and length following application
Drill set LR IT-FIX Ø42x150 – Code : 364 400 000
Concrete bit : Ø following anchor and length following application
Polyurethane foam type GLR PURFOAM
MS polymeric sealant type LR WATER SEAL or LR WATER JOINT

Labelling:

On packaging: LR IT-FIX DYNAMIK CM – Ø threaded rod / Insulation thickness x Length threaded rod – Code

Quality control:

ISO 9001 : 2015