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SOCIÉTÉ D'UTILITÉ PUBLIQUE POUR LE CONTRÔLE DE LA QUALITÉ ET L'INNOVATION DU BÂTIMENT
NON-PROFIT COMPANY FOR QUALITY CONTROL AND INNOVATION IN BUILDING
GEMEINNÜTZIGE GESELLSCHAFT FÜR QUALITÄTSKONTROLLE UND INNOVATION IM BAUWESEN

A-132/2008

ÉME
TECHNICAL APPROVAL

Name of products:	**CELO APOLO fastening products:** - fire resistant metal clamps (round threaded clamp, Grapatrak metal arch type clip) - fire resistant accessories (AMX drop-in anchor, threaded accessory, Trakit nails, Torab screw, thread rod and hexagon connecting nut, screw, nut, washer, trapezoid fixing accessory) - EKA fire resistant wedge anchor - non fire resistant plastic clamps (Grapatrak single and double plastic clip, Abranyl and Multiclip clamps) - non fire resistant accessories (particleboard screw, nylon plug)
Field of application of the products:	**Fire resistant clamps and their accessories:** fixing pipes (fire-extinguishing water or sprinkler) and fire resistant electric cables which preserve their functions in case of fire occurs to reinforced concrete or lightweight aerated concrete walls, reinforced concrete ceilings or on steel structures covered by fireproof coverings **Fire resistant and non fire resistant clamps and their accessories:** fixing pipes and electric cables which lose their functions in case of fire occurs to reinforced concrete, solid or hollow clay masonry, wood-based or lightweight aerated concrete walls, reinforced concrete ceilings or on steel structures **EKA wedge anchors:** expansion anchor for high strength fixings which either preserve or lose their functions in case of fire occurs to reinforced concrete walls or ceilings
Customer (as the party entitled to the ÉME):	**CELO Hungária Csavar-kereskedelmi Kft.** **Budai utca 1/C., H-2851 Környe, Hungary**
Manufacturer of the products:	**CELO** **Roselló, 7 - Pol. Ind. La Bruguera** **08211 Castellar del Vallès, Barcelona, Spain** **CELO CHINA** **166#Ningbo Road, Taicang - Zip.215400 (China)**
Identification of the products according to the classification system of ÉMI Kht. (SZRJ):	1.11.9.
Valid until:	**28th February 2014**

Dated at Budapest, 17th February 2009

(HORVÁTH Sándor)
deputy of chief executive officer
quality and marketing manager

The Technical Approval contains 16 pages and 1 annex.

I. LEGAL BASES AND GENERAL CONDITIONS

1. The Technical Approval is issued by ÉMI Kht. Non-Profit Company for Quality Control and Innovation in Building in accordance with:
   - BM-GKM-KvVM Common Decree no. 3/2003 (dated 25th January) about the detailed regulations of technical requirements, attestation of conformity, distribution and appropriation of building products,
   - the designation in IKIM official statement no. 16/1998. (IKK.8.),
   - the evaluation of test results detailed in the Conformity Test Report, issued to the customer with the same ID no. and issuing date.

2. The responsibility for the conformity of the products to the Technical Approval, for their fitness for the intended use and for that the user should get all information, what is necessary for the application of product in the proposed function remains with the holder – the natural person or legal entity who has requested for the Technical Approval directly or through its representative, and for whom the Technical Approval has been issued by ÉMI Kht. – of the Technical Approval.

3. ÉMI Kht. - as approval body – is authorised to check whether the provisions of this Technical Approval are met and the product conforms to the technical specification. The Follow-up Inspection and the tests may take place in our laboratory, at the manufacturing place, at the site of the Customer and/or at a reference building place at the expense of the Customer.

4. The Technical Approval can be used only by its holder as technical specification for the attestation of conformity. The party entitled to the Technical Approval cannot assign it to any other party. The Technical Approval is valid only to the products manufactured in the plants indicated in the Technical Approval.

5. If a nationalised harmonised European standard concerning to the product subject of this Technical Approval has been issued within the validity period of the approval, ÉMI Kht. has to withdraw the Technical Approval within one year from the publication date of the standard according to BM-GKM-KvVM Common Decree no. 3/2003 (dated 25th January) unless the product differs in at least one of the relevant properties from the standard.

6. ÉMI Kht. can withdraw the Technical Approval concerning to the product, if there is no possibility to perform the Follow-up Inspection or the result of the inspection does not conforms or if it is cleared up that the product is not suited to its proposed function. The party entitled to the Technical Approval is liable to notify to ÉMI Kht. if the product characteristics or the conditions of manufacturing has changed. Following that, ÉMI Kht. decides, whether the Technical Approval remains valid henceforward or it has to be withdrawn and a new procedure has to be initiated. If tests are necessary for this decision, ÉMI Kht. can suspend the validity of the Technical Approval during these tests.

7. ÉMI Kht. issues the Technical Approval in Hungarian language and – if the Customer requests it – in English, in German, in French or in a translation of other language also. In legal dispute, the Hungarian document and its interpretation shall govern.

8. Reproduction of this Technical Approval including transmission by electronic means shall be in full volume. However, partial reproduction can be made with the written consent of ÉMI Kht. In this case partial reproduction has to be designated as such. Texts and drawings of advertising brochures shall not contradict or misuse the Technical Approval.

9. Technical Approval, as technical specification does not replace the permissions (e. g. of health services or of building authorities) or certificates (e. g. about reaction to fire or of product conformity) necessary for the distribution, appropriation, building-in, and use of the product.

10. The declaration of conformity issued in accordance with the Technical Approval does not give right neither to the manufacturer, nor to the distributor to place CE mark to the product or to its packing.

II. SPECIFIC CONDITIONS OF THE TECHNICAL APPROVAL

1. DATA REPORTED BY CUSTOMER

1.1. Manufacturing place(s)

CELO
Roselló, 7 - Pol. Ind. La Bruguera
08211 Castellar del Vallès, Barcelona, Spain

CELO CHINA
166#Ningbo Road, Taicang - Zip.215400 (China)

1.2.1. Products

- fire resistant metal clamps (round threaded clamp, Grapatrak metal arch type clip)
- fire resistant accessories (AMX drop-in anchor, threaded accessory, Trakit nails, Torab screw, thread rod and hexagon connecting nut, screw, nut, washer, trapezoid fixing accessory)
- EKA fire resistant wedge anchor
- non fire resistant plastic clamps (Grapatrak single and double plastic clip, Abranyl and Multiclip clamps)
- non fire resistant accessories (particleboard screw, nylon plug)

The itemised list of products with catalogue numbers (product codes), furthermore the product groups compiled with products to be build-in together are given in the Annex 1. of this approval.

1.2.2. Intended use:

Fire resistant clamps and their accessories:

fixing pipes (fire-extinguishing water or sprinkler) and fire resistant electric cables which preserve their functions in case of fire occurs to reinforced concrete or lightweight aerated concrete walls, reinforced concrete ceilings or on steel structures covered by fireproof coverings

Fire resistant and non fire resistant clamps and their accessories:

fixing pipes and electric cables which lose their functions in case of fire occurs to reinforced concrete, solid or hollow clay masonry, wood-based or lightweight aerated concrete walls, reinforced concrete ceilings or on steel structures

EKA wedge anchors:

expansion anchor for high strength fixings which either preserve or lose their functions in case of fire occurs to reinforced concrete walls or ceilings

2. CHARACTERISTICS OF THE PRODUCTS AND METHODS OF VERIFICATION

Suitability, attestation of conformity and type testing characteristics

Table 1

Product properties and their units	Requirements	Testing/evaluating method
Fastener	**Grapatrak fire resistant metal clip with Trakit nail**	
Intended use	Fixing pipes or cables, for all purposes	
Product identification mark (with size code): **(catalogue numbers: Annex 1)**	FT-16 (916FT), FT-18 (918FT), FT-20 (920FT), FT-22 (922FT), FT-25 (925FT), FT-28 (928FT), FT-32 (932FT)	EN ISO 15480 EN ISO 1479 EN ISO 1478 EN ISO 2702 EN ISO 6507-1 EN ISO 4042 MSZ 14800-1:1989 EN 1363-1:2000 EN 13501-2:2008
Fastening: **(catalogue numbers: Annex 1)**	For steel structures: TK13 (9131000PW), C3-17XH (9B171000XHPW) For reinforced concrete[1] structures: TK17 (9171000PW), C3-17XH (9B171000XHPW) TK19 (9191000PW) C3-22XH (9B221000XHPW) For aerated concrete[2] structures: TK25 (9251000PW) TK32 (9321000PW)	
Base material – thickness of zinc layer [µm] – fire resistance classification	Galvanised steel ≥ 7 A1 (acc. to EN 13501-2)	
Surface treatment, corrosion protection	galvanisation	
Load bearing in longitudinal direction (fastening to ceiling) **- fire resistant to 90 minutes (R90)** **- fire resistant to 60 minutes (R60)** **- non-fire resistant** **(catalogue numbers: Annex 1)**	On steel structures: **50** N / **50** N (with C3-17XH nails) **50** N (with TK13 nails) On reinforced concrete[1] structures: **20** N (with TK17 nails) **20** N (with C3-17XH nails) **50** N (with TK19 nails) **50** N / **50** N (with C3-22XH nails) On aerated concrete[2] structures: **30** N (with TK25, TK32 nails)	
Load bearing in transverse direction (fastening to wall structure) **- fire resistant to 120 minutes (R120)** **- fire resistant to 90 minutes (R90)** **- fire resistant to 60 minutes (R60)** **- non-fire resistant** **(catalogue numbers: Annex 1)**	On steel structures: **50** N / **60** N (with C3-17XH nails) **60** N (with TK13 nails) On reinforced concrete[1] structures: **20** N (with TK17 nails) **20** N (with C3-17XH nails) **60** N (with TK19 nails) **50** N / **60** N (with C3-22XH nails) On aerated concrete[2] structures: **50** N / **60** N (with TK25, TK32 nails)	
Safety factor[3] **- fire resistant to 120 minutes (R120)** **- fire resistant to 90 minutes (R90)** **- fire resistant to 60 minutes (R60)** **- non-fire resistant**	 **Specific load limit[4]** **Specific load limit[4]** **Specific load limit[4]** **5.0**	

[1] for concrete with min. C-16/20 strength, for weaker concrete the TK25 or TK32 nails shall be used!
[2] usable on structure built from lightweight aerated concrete with minimum 400-500 kg/m^3 density and with minimum 3 N/mm^2 declared compression strength!
[3] The ratio of the minimum break strength and the permitted working load (prescribed in the table), the same for transversal and longitudinal direction.
[4] For fire resistant load bearing there is no real safety factor, the load bearing capacities are obtained directly from the results of itemised tests.

Table 2

Product properties and their units	Requirements	Testing/evaluating method
Fastener	**Fire resistant metal clamp with M6 threaded accessory and Trakit nails**	
Intended use	Fixing pipes or cables, for all purposes	
Product identification mark (with size code): **(catalogue numbers: Annex 1)**	L-6, L-8, L-10, L-12, L-14, L-15, L-16, L-18, L-20, L-22, L-25, L-26, L-28, L-32, L-35, L-40, L-42, L-50, L-55, L-60, L-63	
Fastening: with M6 threaded accessory (9TR6) **(catalogue numbers: Annex 1)**	For steel structures: TK13 (9131000PW), C3-17XH (9B171000XHPW) For reinforced concrete[1] structures: TK17 (9171000PW), C3-17XH (9B171000XHPW) TK19 (9191000PW) C3-22XH (9B221000XHPW) For aerated concrete[2] structures: TK25 (9251000PW) TK32 (9321000PW)	
Base material – thickness of zinc layer [µm] – fire resistance classification	Galvanised steel ≥ 7 A1 (acc. to EN 13501-2)	EN ISO 15480 EN ISO 1479
Surface treatment, corrosion protection	galvanisation	EN ISO 1478
Load bearing in longitudinal direction (fastening to ceiling) **- fire resistant to 90 minutes (R90)** **- fire resistant to 60 minutes (R60)** **- non-fire resistant** **(catalogue numbers: Annex 1)**	On steel structures: **20** N / **100** N / **160** N (with C3-17XH nails) **160** N (with TK13 nails) On reinforced concrete[1] structures: **80** N (with TK17 nails) **80** N (with C3-17XH nails) **160** N (with TK19 nails) **20** N / **50** N / **160** N(with C3-22XH nails) On aerated concrete[2] structures: **50** N (with TK25, TK32 nails)	EN ISO 2702 EN ISO 6507-1 EN ISO 4042 14800-1: 1989 EN 1363-1: 2000 EN 13501-2: 2008
Load bearing in transverse direction (fastening to wall structure) **- fire resistant to 90 minutes (R90)** **- fire resistant to 60 minutes (R60)** **- non-fire resistant** **(catalogue numbers: Annex 1)**	On steel structures: **160** N (with C3-17XH nails) On reinforced concrete1 structures: **80** N (with TK17 nails) **80** N (with C3-17XH nails) **160** N (with TK19 nails) **20** N / **50** N / **160** N (with C3-22XH nails) On aerated concrete[2] structures: **50** N / **60** N (with TK25, TK32 nails)	
Safety factor[3] **- fire resistant to 90 minutes (R90)** **- fire resistant to 60 minutes (R60)** **- non-fire resistant**	 **Specific load limit[4]** **Specific load limit[4]** **5.0**	
[1-4] Identical with the specific footnotes of Table 1		

Table 3

Product properties and their units	Requirements	Testing/evaluating method
Fastener	**Fire resistant metal clamp with M6 EKA wedge anchor**	
Intended use	Fixing pipes or cables, for all purposes	
Product identification mark (with size code): **(catalogue numbers: Annex 1)**	L-6, L-8, L-10, L-12, L-14, L-15, L-16, L-18, L-20, L-22, L-25, L-26, L-28, L-32, L-35, L-40, L-42, L-50, L-55, L-60, L-63	ETAG 001-1:1997 ETAG 001-4:1998 MSZ 14800-1: 1989 EN 1363-1: 2000 EN 13501-2: 2008
Fastening: **(catalogue numbers: Annex 1)**	For reinforced concrete[1]-structures: M6 × 40 (9640EKA) M6 × 55 (9655EKA) M6 × 70 (9670EKA) M6 × 95 (9695EKA)	
Base material – thickness of zinc layer [µm] – fire resistance classification	Galvanised steel ≥ 7 A1 (acc. to EN 13501-2)	
Surface treatment, corrosion protection	galvanisation	
Load bearing in longitudinal direction (fastening to ceiling) **- fire resistant to 120 minutes (R120)** **- fire resistant to 90 minutes (R90)** **- non-fire resistant**	For reinforced concrete[1]-structures: **50** N / **100** N / **240** N	
Load bearing in transverse direction (fastening to wall structure) **- non-fire resistant**	For reinforced concrete[1]-structures: **120** N	
Safety factor[3] **- fire resistant to 120 minutes (R120)** **- fire resistant to 90 minutes (R90)** **- non-fire resistant**	 **Specific load limit[4]** **Specific load limit[4]** **5.0**	
[1, 3, 4] Identical with the specific footnotes of Table 1		

Table 4

Product properties and their units	Requirements	Testing/evaluating method
Fastener	**Fire resistant metal clamp with M6 Torab screw**	
Intended use	Fixing pipes or cables, for all purposes	
Product identification mark (with size code): **(catalogue numbers: Annex 1)**	L-6, L-8, L-10, L-12, L-14, L-15, L-16, L-18, L-20, L-22, L-25, L-26, L-28, L-32, L-35, L-40, L-42, L-50, L-55, L-60, L-63	EN ISO 15480 EN ISO 1479 EN ISO 1478 EN ISO 2702 EN ISO 6507-1 EN ISO 4042 MSZ 14800-1: 1989 EN 1363-1: 2000 EN 13501-2: 2008
Fastening: **(catalogue numbers: Annex 1)**	For steel structures: Torab M6 × 6 (9B6319M6TRB)	
Base material – thickness of zinc layer [µm] – fire resistance classification	Galvanised steel ≥ 7 A1 (acc. to EN 13501-2)	
Surface treatment, corrosion protection	galvanisation	
Load bearing in longitudinal direction (fastening to ceiling) **- fire resistant to 120 minutes (R120)** **- fire resistant to 90 minutes (R90)** **- non-fire resistant**	On steel structures (d ≥ 3 mm): **100** N / **120** N On steel structures (d ≥ 0,7 mm): **50** N / **100** N	
Load bearing in transverse direction (fastening to wall structure) **- non-fire resistant**	On steel structures (d ≥ 3 mm): **120** N On steel structures (d ≥ 0,7 mm): **100** N	
Safety factor[3] **- fire resistant to 120 minutes (R120)** **- fire resistant to 90 minutes (R90)** **- non-fire resistant**	**Specific load limit[4]** **Specific load limit[4]** **5.0**	
[3-4] Identical with the specific footnotes of Table 1		

Table 5

Product properties and their units	Requirements	Testing/evaluating method
Fastener	**EKA wedge anchor**	
Intended use	high strength fixings on reinforced steel structures	
Product identification mark (with size code): **(catalogue numbers: Annex 1)**	M6 × 40 (9640EKA) M6 × 55 (9655EKA) M6 × 70 (9670EKA) M6 × 95 (9655EKA) M8 × 50 (9850EKA) M8 × 65 (9865EKA) M8 × 80 (9880EKA) M8 × 95 (9895EKA) M8 × 105 (98105EKA) M10 × 65 (91065EKA) M10 × 80 (91080EKA) M10 × 95 (91095EKA) M10 × 115 (910115EKA) M10 × 130 (910130EKA) M12 × 80 (91280EKA) M12 × 120 (912120EKA) M12 × 150 (912150EKA) M16 × 140 (916140EKA) M16 × 180 (916180EKA) M16 × 220 (916220EKA) M20 × 125 (920125EKA) M20 × 160 (920160EKA) M20 × 200 (920200EKA) M20 × 300 (920200EKA)	ETAG 001-1:1997 ETAG 001-4:1998
Base material – thickness of zinc layer [µm] – fire resistance classification	Galvanised steel ≥ 7 A1 (acc. to EN 13501-2)	MSZ 14800-1: 1989
Surface treatment, corrosion protection	galvanisation	
Load bearing in longitudinal direction (fastening to ceiling) **- fire resistant to 120 minutes (R120)** **- fire resistant to 90 minutes (R90)** **- non-fire resistant**	On reinforced concrete structures: M6×40: C-20/25: **0,05** kN / **0,1** kN / **0,8** kN M6×55 and longer: C-20/25: **0,05** kN / **0,1** kN / **1,4** kN M6: C-50/60: **0,05** kN / **0,1** kN / **1,6** kN M8: C-20/25: **0,1** kN / **2,0** kN C-50/60: **0,1** kN / **3,2** kN M10: C-20/25: **0,1** kN / **2,6** kN C-50/60: **0,1** kN / **4,0** kN M12, M16: C-20/25: **0,1** kN / **3,2** kN C-50/60: **0,1** kN / **5,0** kN M20: C-20/25: **0,1** kN / **8,8** kN C-50/60: **0,1** kN / **14,0** kN	EN 1363-1: 2000 EN 13501-2: 2008
Safety factor[3] **- fire resistant to 120 minutes (R120)** **- fire resistant to 90 minutes (R90)** **- non-fire resistant**	 **Specific load limit[4]** **Specific load limit[4]** **5.0**	
[3-4] Identical with the specific footnotes of Table 1		

Table 6

Product properties and their units	Requirements	Testing/evaluating method
Fastener	**Trapezoid fixing accessory with screw**	
Intended use	Fastenings on fire resistant trapezoidal sheets	
Product identification mark (with size code): **(catalogue numbers: Annex 1)**	M8 (98TPZ), M10 (910TPZ), M12 (912TPZ)	EN ISO 15480 EN ISO 1479 EN ISO 1478 EN ISO 2702 EN ISO 6507-1 EN ISO 4042 MSZ 14800-1: 1989 EN 1363-1: 2000 EN 13501-2: 2008
Fastening: **(catalogue numbers: Annex 1)**	For trapezoidal sheets: M8 screw (DIN 933), M8 nut (DIN 934) (catalogue numbers: Annex 1)	
Base material – thickness of zinc layer [µm] – fire resistance classification	Galvanised steel ≥ 7 A1 (acc. to EN 13501-2)	
Surface treatment, corrosion protection	galvanisation	
Load bearing in longitudinal direction (fastening to ceiling) **- fire resistant to 120 minutes (R120)** **- non-fire resistant**	On trapezoidal sheet (d ≥ 0,7 mm): **0,1** kN / **1** kN	
Safety factor[3] **- fire resistant to 120 minutes (R120)** **- non-fire resistant**	**Specific load limit[4]** **5.0**	
[3-4] Identical with the specific footnotes of Table 1		

Table 7

Product properties and their units	Requirements	Testing/evaluating method
Fastener	**AMX drop-in anchor, threaded accessory, thread rod and hexagon connecting nut, screw, nut, washer**	
Intended use	Build fastening structures	
Product identification mark (with size code): **(catalogue numbers: Annex 1, "OTHER ACCESSORIES")**	AMX drop-in anchor: M8, M10 9TR threaded accessory: M6, M8 Torab screw: M6, M8 Trak-it nails Thread rod: M8, M10 Hexagon connecting nut: M8, M10 Spacers: M6 Nut and washer: M8, M10 Eye nut: M8, M10	
Base material – thickness of zinc layer [µm] – fire resistance classification	Galvanised steel ≥ 7 A1 (acc. to EN 13501-2)	
Surface treatment, corrosion protection	galvanisation	
Load bearing in longitudinal direction (fastening to ceiling) **- fire resistant to 120 minutes (R120)** **- fire resistant to 90 minutes (R90)** **- fire resistant to 60 minutes (R60)** **- non-fire resistant** **(catalogue numbers: Annex 1, "OTHER ACCESSORIES")**	On reinforced concrete structures: AMX drop-in anchor (M6, M8): **0,1** kN / **1,0** kN 9TR6 threaded accessory (M6): **20** N / **50** N / **160** N 9TR8L threaded accessory (M8): **100** N / **200** N On steel structures: Torab screw (M6, M8): **0,1** kN / **0,2** kN 9TR6 threaded accessory (M6): **20** N / **100** N / **160** N 9TR8L threaded accessory (M8): **100** N / **300** N General: Trak-it nails: **20** N / **50** N / **160** N M8 thread rod, hexagon connecting nut, nut, washer, eye nut: **0,1** kN / **4** kN M10 thread rod, hexagon connecting nut, nut, washer, eye nut: **0,1** kN / **6** kN	ETAG 001-1:1997 ETAG 001-4:1998 MSZ 14800-1: 1989 EN 1363-1: 2000 EN 13501-2: 2008
Load bearing in transverse direction (fastening to wall structure) **- fire resistant to 120 minutes (R120)** **- fire resistant to 90 minutes (R90)** **- fire resistant to 60 minutes (R60)** **- non-fire resistant** **(catalogue numbers: Annex 1, "OTHER ACCESSORIES")**	On reinforced concrete structures: 9TR6 threaded accessory (M6): **20** N / **50** N / **160** N On aerated concrete[2] structures: 9TR6 threaded accessory (M6): **50** N / **60** N (with TK25, TK32 nails) General: Trak-it nails: **50** N / **160** N	
Safety factor[3] **- fire resistant to 120 minutes (R120)** **- fire resistant to 90 minutes (R90)** **- fire resistant to 60 minutes (R60)** **- non-fire resistant**	**Specific load limit[4]** **Specific load limit[4]** **Specific load limit[4]** **5.0**	
[1-4] Identical with the specific footnotes of Table 1		

Table 8

Product properties and their units	Requirements	Testing/evaluating method
Fastener	**Grapatrak plastic clips with Trakit nails**	
Intended use	Fixing pipes or cables, for non fire resistant purposes	
Product identification mark (with size code): **(catalogue numbers: Annex 1)**	Grapatrak single clip: FP-16 (916FP), FP-18 (918FP), FP-20 (920FP), FP-22 (922FP), FP-25 (925FP), FP-28 (928FP), FP-32 (932FP) Grapatrak double clip: FPD-16 (916FPD), FPD-20 (920FPD), FPD-25 (925FPD)	
Fastening: **(catalogue numbers: Annex 1)**	For steel structures: TK13 (9131000PW), C3-17XH (9B171000XHPW) For reinforced concrete[1]-structures: TK17 (9171000PW), C3-17XH (9B171000XHPW) TK19 (9191000PW) C3-22XH (9B221000XHPW) For aerated concrete[2] structures: TK25 (9251000PW) TK32 (9321000PW)	EN ISO 15480 EN ISO 1479 EN ISO 1478 EN ISO 2702 EN ISO 6507-1
Base material (clip):	Plastic	EN ISO 4042
Load bearing in longitudinal direction (fastening to ceiling) **- non-fire resistant**	General: Grapatrak single clip: **15** N Grapatrak double clip: **10** N	
Load bearing in transverse direction (fastening to wall structure) **- non-fire resistant**	General: Grapatrak single clip: **15** N Grapatrak double clip: **10** N	
Safety factor[3] **- non-fire resistant**	**5.0**	
[1-3] Identical with the specific footnotes of Table 1		

Table 9

Product properties and their units	Requirements	Testing/evaluating method
Fastener	**Abranyl Trak plastic clamp with Trakit nails**	
Intended use	Fixing pipes or cables, for non fire resistant purposes	
Product identification mark (with size code): **(catalogue numbers: Annex 1)**	ABT-14/18 (918ABT), ABT-20/25 (925ABT), ABT-26/32 (932ABT), ABT-35/42 (942ABT),	EN ISO 15480 EN ISO 1479 EN ISO 1478 EN ISO 2702 EN ISO 6507-1 EN ISO 4042
Fastening: **(catalogue numbers: Annex 1)**	For steel structures: TK13 (9131000PW), C3-17XH (9B171000XHPW) For reinforced concrete[1]-structures: TK17 (9171000PW), C3-17XH (9B171000XHPW) TK19 (9191000PW) C3-22XH (9B221000XHPW) For aerated concrete[2] structures: TK25 (9251000PW) TK32 (9321000PW)	
Base material (clamp):	Plastic	
Load bearing in longitudinal direction (fastening to ceiling) **- non-fire resistant** **(catalogue numbers: Annex 1)**	On steel structures: **160** N (with TK13, C3-17XH nails) On reinforced concrete[1]-structures: **80** N (with TK17 nails) **80** N (with C3-17XH nails) **160** N (with TK19 nails) **160** N (with C3-22XH nails) On aerated concrete[2] structures: **50** N (with TK25, TK32 nails)	
Load bearing in transverse direction (fastening to wall structure) **- non-fire resistant** **(catalogue numbers: Annex 1)**	On steel structures: **160** N (with TK13, C3-17XH nails) On reinforced concrete[1]-structures: **80** N (with TK17 nails) **80** N (with C3-17XH nails) **160** N (with TK19 nails) **160** N (with C3-22XH nails) On aerated concrete[2] structures: **60** N (with TK25, TK32 nails)	
Safety factor[3] **- non-fire resistant**	**5.0**	
[1-3] Identical with the specific footnotes of Table 1		

Table 10

Product properties and their units	Requirements	Testing/evaluating method
Fastener	**Abranyl Classic and Multiclip plastic clamps**	
Intended use	Fixing pipes or cables, for non fire resistant purposes	
Product identification mark (with size code): **(catalogue numbers: Annex 1)**	Abranyl Classic clamps: ABT-14/18 (9118ABT), ABT-20/25 (9125ABT), ABT-26/32 (9132ABT), ABT-35/42 (9142ABT) Multiclip clamps: MC-16 (9416MC), MC-18 (9418MC), MC-20 (9420MC), MC-25 (9425MC), MC-32 (9432MC), MC-40 (9440MC)	
Fastening: **(catalogue numbers: Annex 1)**	VELOX particleboard screw: 4,0x40 (9B4040VLOX), 4,0x50 (9B4050VLOX), 4,0x60 (9B4060VLOX), 4,5x40 (9B4540VLOX), 4,5x50 (9B4550VLOX), 4,5x60 (9B4560VLOX), 5,0x50 (9B5050VLOX), 5,0x60 (9B5060VLOX) Standard nylon plug with collar: NV-6 (9630TNV), NV-8 (9840TNV)	EN ISO 15480
Base material (clamp): Base material (particleboard screw) – thickness of zinc layer [µm]	Plastic Galvanised steel ≥ 7	EN ISO 1479 EN ISO 1478
Surface treatment, corrosion protection	Galvanisation (VELOX screw)	EN ISO 2702
Load bearing in longitudinal direction (fastening to ceiling) **- non-fire resistant**	<u>On reinforced concrete structures:</u> Abranyl Classic: **70** N Multiclip: **20** N <u>On solid clay masonry structure:</u> Abranyl Classic: **120** N Multiclip: **20** N <u>On particleboard plate (without plug):</u> Abranyl Classic: **120** N Multiclip: **20** N	EN ISO 6507-1 EN ISO 4042
Load bearing in transverse direction (fastening to wall structure) **- non-fire resistant**	<u>On reinforced concrete structures:</u> Abranyl Classic: **70** N Multiclip: **20** N <u>On solid clay masonry structure:</u> Abranyl Classic: **120** N Multiclip: **20** N <u>On particleboard plate (without plug):</u> Abranyl Classic: **120** N Multiclip: **20** N	
Safety factor[3] **- non-fire resistant**	**5.0**	

[3] Identical with the specific footnote of Table 1

3. EVALUATION AND ATTESTATION OF CONFORMITY

3.1 Attestation of conformity system(s):

According to Annex III. of directive 89/106/EEC (CPD) and Annex 4 of 3/2003 (I. 25.) Common Decree of BM-GKM-KvVM, on the basis of Commission Decision no. 97/808/EC:

ii) Declaration of Conformity, CPD Annex III.2. (ii), (3)

3.2. Tasks for the manufacturer/distributor

3.2.1. Factory production control:

Manufacturer has to introduce, maintain and document a Factory Production Control system in order to maintain the tested properties on a constant level of the products placed on the market. The Factory Production Control system has to contain procedures, continuous and systematic inspections, tests and/or evaluations as well as has to contain actions performed by the results of inspection of incoming materials, part units, measuring tools and instruments, manufacturing procedure and finished products.

The required inspections, test results of the tests or the evaluations and the performed actions have to be documented. It has to develop the actions to be followed in the case of nonconformities of inspected results.

3.2.2. Placing on the market

If product complies to all requirements stated in chapter 2 of this technical specification, manufacturer has to issue a Declaration of Conformity according to the relevant ministerial decree including the following:

- name and address of the manufacturer and/or distributor;
- name and address of the assigned testing laboratory;
- description of the product (type, identification, use, etc.), and information about product marking/labelling;
- provisions to which the product conforms;
- particular conditions applicable to the use of the product (e.g. provisions for use under certain conditions in compliance with this Technical Approval, etc.);
- the number of the relevant technical specification (Technical Approval no. A-132/2008)
- the ID number of the Initial Type Test performed by the assigned testing laboratory;
- name of, and position held by, the person empowered to sign the Declaration of Conformity on behalf of the manufacturer or of his authorised representative.

3.3. Tasks for the assigned testing laboratory

3.3.1. Initial Type test of the product

3.3.1.1. Sampling

The samples shall be taken as random samples from the production material presented for testing. Care shall be taken to ensure that the samples genuinely reflect the properties of the material to be tested.

3.3.1.2. Tests

For every product families it is necessary to test different number (determined by the testing laboratory) of different products which covers the product family range evenly, on minimum 3-3 similar samples per each product type. Tests of the properties given in chapter 2 shall be performed. Tests performed by assigned testing laboratories and are in accordance with the requirements given in this Technical Approval may be used for the Initial type test of the products.

4. ASSUMPTIONS FOR THE FITTNESS OF THE PRODUCTS AND PROPOSALS

4.1. Product

The fasteners covered by this Technical Approval can be used only in the intended fields of use given by the manufacturer and stated in this Technical Approval.

The *fire resistant CELO APOLO fasteners* in structural mount according to Tables 1-7 of chapter 2 *can be used as fastening for systems accentuated in respect of fire service* by taking into account their maximum axial or shear load bearing (**20 N**, **50 N** or **100 N**) and their fire resistance threshold limit (**R 60**, **R 90** or **R 120**).

The *CELO APOLO fasteners* in application fields marked with „**non fire resistant**" in Tables 1-10 *are prohibited to use as fastening for systems accentuated in respect of fire service.*

4.2. Production

The packing units have to be labelled with manufacturer's ID label. The ID label has to contain the name (identification mark and catalogue number) and amount of the product, the name and address of the manufacturer, furthermore the ID no. of the documentation on which the attestation of conformity is based (Technical Approval (ÉME) no. A-132/2008).

4.3. Distribution

Products have to be distributed with the Attestation of Conformity documentation and with product information sheet and application guide attached.

4.4. Design, Installation

The allocation of fasteners has to be designed statically in respect of the values given in chapter 2, by that the maximum axial and shear load affecting the fastener during the whole designed lifetime of the structure shall not reach the approved limit values given in the tables of chapter 2. The preparation of structural drawings and control calculations is required in respect with the partial load affecting each fastener.

At the mounting of **fire-proof cables** the distance of two adjacent clamps must not be higher that of 300 mm; furthermore the determination of the fire resistance threshold limit (on the basis of either the results of the model tests or model calculations for the whole structure or by the minimum of the individual threshold limits of the independent components) for the whole structure (mounting, clamp and cable) are the task and the responsibility of the building services (heating, ventilation, air-conditioning, refrigeration and plumbing) engineer or the contractor!

When the structure to be mounted **shall not preserve its function in case of fire occurs**, the load limits determined by safety factor of **5.0** and given in Tables 1-10 has to be taken into account.

When the structure to be mounted **have to preserve its function until 60 (R 60), 90 (R 90) or 120 (R 120) minutes in case of fire occurs**, the load limits and threshold values determined individually for the specific fastener and given in Tables 1-7 has to be taken into account.

For the fastening of Grapatrak metal and plastic clip, Abranyl Trak plastic clamp and threaded accessory M6 and M8 only gas nailer approved by the manufacturer can be used with Trakit nails prescribed in Tables 1-10, by choosing them in accordance with the field of application (whether is fire resistant or not) and the type of the supporting structure. Further requirement for the sale of the fasteners to be mounted with Trakit nails that the manufacturer shall give free run of the proposed gas nailer(s) for mounting with User's guide written in Hungarian continuously.

For fastening on autoclave aerated concrete (AAC) structures the Trakit nails with minimum 25 mm length shall be used. Further minimum requirement of the application on AAC structures is that the AAC elements shall have a minimum density of 400-500 kg/m^3 and a minimum declared compressive strength of 3 N/mm^2!

For fastening on concrete structures with minimum strength class of C-16/20 the Trakit nails with 17 – 22 mm length shall be used; on concrete structures with lower strength the TK25 or TK32 Trakit nails shall be used!

For fastening on steel structures the Trakit nails with 13-17 mm length shall be used. The supporting steel structure shall have a minimum thickness of 3 mm. For structures with smaller thickness only the Torab M6 screw can be used for fastening of fire resistant clamps. When the structure to be mounted **have to preserve its function until 60 (R 60), 90 (R 90) or 120 (R 120) minutes in case of fire occurs**, the supporting steel structure shall have fire resistant covering (fire resistant painting) which gives fire resistance to the steel structure for minimum the same time interval that of the mounted structure have. For steel structures without fire resistant covering only structure which **shall not preserve its function in case of fire occurs** can be mounted.

For fastenings with EKA wedge anchors the strength of the concrete of the supporting reinforced concrete structure shall be determined, independently from that the anchor is used either for fastening of fire resistant clamp or other structure. The concrete of the supporting structure shall have a minimum strength of C-20/25 and a maximum strength of C-50/60 according to standard no. EN 206:2000. The thickness of the structure must be higher with minimum of 60 mm than the length of the wedge anchor.

The Abranyl Classic and Multiclip claps shall be mounted with the particleboard screw given by the manufacturer and prescribed in Table 10; on concrete or solid clay masonry structures by using the standard nylon plug with collar given in Table 10 also; on particleboard walls without the plug.

5. FOLLOW-UP INSPECTIONS AND OTHER ASSUMPTIONS

Follow-up Inspections during the validity period of the ÉME:

once per year

The order for the performance of the follow-up inspection has to be sent to ÉMI Kht. first time until **15th December 2009**. In case of omission of the ordering liability of follow-up inspection the Technical Approval will be invalidated, and ÉMI Kht. deletes it from the database of valid Technical Approvals.

6. ANNEX

The catalogue numbers (product codes) determined by the manufacturer/distributor of products covered by this Technical Approval

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