Tekniset tiedot

POLY-GPG
General Purpose Resin Mortar

Chemical anchor for use in concrete and masonry. Specially formulated for light or medium duty fixing into hollow or solid base materials. It can be used indoor (COV A+) and can be thrown with standard waste

Ominaisuudet

Material

- Styrene free polyester
- Use with Simpson Strong-Tie threaded rod (LMAS) : galvanised steel and stainless A4-70

Benefits

- Peeler cardridge: quick and simple use
- Hazardless components, styren free and odorless,
- Can be stock with non-flammable goods,
- The cardridge can be thrown (used or not) with standard goods
- Exists in several colors: beige, grey and white.

Sovellus

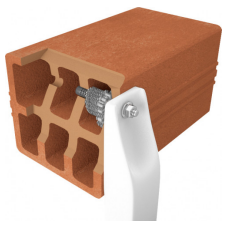
Suitable on

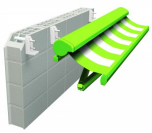
- Brick.
- Hollow or solid masonry..
- Cellular concrete

When to use

- Blinds
- Hinges
- Air conditioners
- Satellite Dishes
- Boilers

Fixation d'une rampe d'escalier





Fixation d'un store

Technical Data

Références

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Design resistance – Tension – NRd [kN] – Carbon steel 5.8

Tuotenro	Design resistance – N_{Rd} – Carbon steel 5.8 [kN]							
	Non-cracked concrete							
	h_{ef} = 8d				h_{ef} = 12d			
	C20/25	C30/37	C40/50	C50/60	C20/25	C30/37	C40/50	C50/60
POLY-GPG + LMAS M8	6.3	6.3	6.3	6.3	9.4	9.4	9.4	9.4
POLY-GPG + LMAS M10	9.8	9.8	9.8	9.8	14.7	14.7	14.7	14.7
POLY-GPG + LMAS M12	13.1	13.1	13.1	13.1	19.6	19.6	19.6	19.6
POLY-GPG + LMAS M16	19.9	19.9	19.9	19.9	29.9	29.9	29.9	29.9
POLY-GPG + LMAS M20	28.7	28.7	28.7	28.7	43.1	43.1	43.1	43.1
POLY-GPG + LMAS M24	37.9	37.9	37.9	37.9	56.8	56.8	56.8	56.8

Concrete :
1. The design loads have been calculated using the partial safety factors for resistances stated in ETA-approval(s). The loading figures are valid for unreinforced concrete and reinforced concrete with a rebar spacing s ≥ 15 cm (any diameter) or with a rebar spacing s ≥ 10 cm, if the rebar diameter is 10mm or smaller.
2. The figures for shear are based on a single anchor without influence of concrete edges. For anchorages close to edges (c ≤ max [10 hef; 60d]) the concrete edge failure shall be checked per ETAG 001, Annex C, design method A.
3. Concrete is considered non-cracked when the tensile stress within the concrete is\sigmaL +\sigmaR ≤ 0. In the absence of detailed verification\sigmaR = 3 N/mm² can be assumed (\sigmaL equals the tensile stress within the concrete induced by external loads, anchors loads included).

POLY-GPG
General Purpose Resin Mortar

Design resistance – Tension – NRd [kN] – Stainless steel A4-70

Tuotenro	Design resistance – N_{Rd} – Stainless steel A4-70 [kN]							
	Non-cracked concrete							
	h_{ef} = 8d				h_{ef} = 12d			
	C20/25	C30/37	C40/50	C50/60	C20/25	C30/37	C40/50	C50/60
POLY-GPG + LMAS M8	6.3	6.3	6.3	6.3	9.4	9.4	9.4	9.4
POLY-GPG + LMAS M10	9.8	9.8	9.8	9.8	14.7	14.7	14.7	14.7
POLY-GPG + LMAS M12	13.1	13.1	13.1	13.1	19.6	19.6	19.6	19.6
POLY-GPG + LMAS M16	19.9	19.9	19.9	19.9	29.9	29.9	29.9	29.9
POLY-GPG + LMAS M20	28.7	28.7	28.7	28.7	43.1	43.1	43.1	43.1
POLY-GPG + LMAS M24	37.9	37.9	37.9	37.9	56.8	56.8	56.8	56.8

Concrete :
1. The design loads have been calculated using the partial safety factors for resistances stated in ETA-approval(s). The loading figures are valid for unreinforced concrete and reinforced concrete with a rebar spacing s ≥ 15 cm (any diameter) or with a rebar spacing s ≥ 10 cm, if the rebar diameter is 10mm or smaller.
2. The figures for shear are based on a single anchor without influence of concrete edges. For anchorages close to edges (c ≤ max [10 hef; 60d]) the concrete edge failure shall be checked per ETAG 001, Annex C, design method A.
3. Concrete is considered non-cracked when the tensile stress within the concrete is\sigmaL +\sigmaR ≤ 0. In the absence of detailed verification\sigmaR = 3 N/mm² can be assumed (\sigmaL equals the tensile stress within the concrete induced by external loads, anchors loads included).

Design resistance – Shear – VRd [kN] – Carbon steel 5.8

Tuotenro	Design resistance – V_{Rd} – Carbon steel 5.8 [kN]							
	Non-cracked concrete							
	h_{ef} = 8d				h_{ef} = 12d			
	C20/25	C30/37	C40/50	C50/60	C20/25	C30/37	C40/50	C50/60
POLY-GPG + LMAS M8	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2
POLY-GPG + LMAS M10	12	12	12	12	12	12	12	12
POLY-GPG + LMAS M12	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8
POLY-GPG + LMAS M16	31.2	31.2	31.2	31.2	31.2	31.2	31.2	31.2
POLY-GPG + LMAS M20	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8
POLY-GPG + LMAS M24	70.4	70.4	70.4	70.4	70.4	70.4	70.4	70.4

Concrete :
1. The design loads have been calculated using the partial safety factors for resistances stated in ETA-approval(s). The loading figures are valid for unreinforced concrete and reinforced concrete with a rebar spacing s ≥ 15 cm (any diameter) or with a rebar spacing s ≥ 10 cm, if the rebar diameter is 10mm or smaller.
2. The figures for shear are based on a single anchor without influence of concrete edges. For anchorages close to edges (c ≤ max [10 hef; 60d]) the concrete edge failure shall be checked per ETAG 001, Annex C, design method A.
3. Concrete is considered non-cracked when the tensile stress within the concrete is\sigmaL +\sigmaR ≤ 0. In the absence of detailed verification\sigmaR = 3 N/mm² can be assumed (\sigmaL equals the tensile stress within the concrete induced by external loads, anchors loads included).

Design resistance – Shear – VRd [kN] – Stainless steel A4-70

Tuotenro	Design resistance – V_{Rd} – Stainless steel A4-70 [kN]							
	Non-cracked concrete							
	h_{ef} = 8d				h_{ef} = 12d			
	C20/25	C30/37	C40/50	C50/60	C20/25	C30/37	C40/50	C50/60
POLY-GPG + LMAS M8	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3
POLY-GPG + LMAS M10	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8
POLY-GPG + LMAS M12	19.2	19.2	19.2	19.2	19.2	19.2	19.2	19.2
POLY-GPG + LMAS M16	35.3	35.3	35.3	35.3	35.3	35.3	35.3	35.3
POLY-GPG + LMAS M20	55.1	55.1	55.1	55.1	55.1	55.1	55.1	55.1
POLY-GPG + LMAS M24	79.5	79.5	79.5	79.5	79.5	79.5	79.5	79.5

Concrete :
1. The design loads have been calculated using the partial safety factors for resistances stated in ETA-approval(s). The loading figures are valid for unreinforced concrete and reinforced concrete with a rebar spacing s ≥ 15 cm (any diameter) or with a rebar spacing s ≥ 10 cm, if the rebar diameter is 10mm or smaller.
2. The figures for shear are based on a single anchor without influence of concrete edges. For anchorages close to edges (c ≤ max [10 hef; 60d]) the concrete edge failure shall be checked per ETAG 001, Annex C, design method A.
3. Concrete is considered non-cracked when the tensile stress within the concrete is\sigmaL +\sigmaR ≤ 0. In the absence of detailed verification\sigmaR = 3 N/mm² can be assumed (\sigmaL equals the tensile stress within the concrete induced by external loads, anchors loads included).

Design resistance – Bending moment – MRd [Nm] – Concrete

Tuotenro	Design resistance – Bending moment – M_{Rd} - Concrete [Nm]	
	Carbon steel 5.8	Stainless steel A4-70
POLY-GPG + LMAS M8	15.2	16.7
POLY-GPG + LMAS M10	29.6	33.3
POLY-GPG + LMAS M12	52	60.9
POLY-GPG + LMAS M16	132.8	148.7
POLY-GPG + LMAS M20	259.2	291
POLY-GPG + LMAS M24	448	502.6

Concrete :
1. The design loads have been calculated using the partial safety factors for resistances stated in ETA-approval(s). The loading figures are valid for unreinforced concrete and reinforced concrete with a rebar spacing s ≥ 15 cm (any diameter) or with a rebar spacing s ≥ 10 cm, if the rebar diameter is 10mm or smaller.
2. The figures for shear are based on a single anchor without influence of concrete edges. For anchorages close to edges (c ≤ max [10 hef; 60d]) the concrete edge failure shall be checked per ETAG 001, Annex C, design method A.
3. Concrete is considered non-cracked when the tensile stress within the concrete is\sigmaL +\sigmaR ≤ 0. In the absence of detailed verification\sigmaR = 3 N/mm² can be assumed (\sigmaL equals the tensile stress within the concrete induced by external loads, anchors loads included).

POLY-GPG
General Purpose Resin Mortar

Design resistance – hef = 80 mm (≤ M8) or 85 mm (≥ M10) – Carbon steel ≥ 4.6 / Stainless steel ≥ A2-70

Tuotenro	Design resistance – Carbon steel ≥ 4.6 / stainless steel ≥ A2-70			
	h_{ef} = 80 mm (≤ M8) or 85 mm (≥ M10)			
	Tension - N_{Rd} [kN]		Shear - V_{Rd} [kN]	
	Solid Clay Masonry	Hollow Masonry	Solid Clay Masonry	Hollow Masonry
POLY-GPG + LMAS M8	1.6	0.3	0.8	0.6
POLY-GPG + LMAS M10	2	0.6	2.4	0.6
POLY-GPG + LMAS M12	2	0.6	2.4	0.6
POLY-GPG + LMAS M16	-	-	-	-
POLY-GPG + LMAS M20	-	-	-	-
POLY-GPG + LMAS M24	-	-	-	-

Masonry :

	Compressive strength f_b [N/mm²]	Bulk density ρ [kg/m^3]
Solid clay masonry	≥ 18	≥ 1600
Hollow masonry	≥ 6	≥ 900

1. The design resistances have been calculated using the partial safety factors for resistances stated in ETA-approval(s).
2. The recommended loads have been calculated using the partial safety factors for resistances stated in ETA-approval(s) and with a partial safety factor for actions of γF=1.4.
3. For combined tension and shear loads or anchor groups and/or in case of edge influence, a calculation acc. TR 054, design method A shall be performed. For details see ETA - assessment(s)
4. Temperature range: -40°C/+40°C (Tmlp = +24°C)
5. Coefficiant factor β for in situ tests acc. ETAG 029 see ETA-19/XXXX; Annex C2
6. Displacements under service load see ETA-19/0420; Annex C2 & C3

Design resistance – Bending moment – MRd [Nm] – Masonry

Tuotenro	Design resistance – Bending moment – M_{Rd} - Masonry [Nm]		
	Carbon steel 5.8	Carbon steel 8.8	Stainless steel ≥ A2-70
POLY-GPG + LMAS M6	6.4	9.6	7.1
POLY-GPG + LMAS M8	15.2	24	16.7
POLY-GPG + LMAS M10	29.6	48	33.3
POLY-GPG + LMAS M12	52.8	84	59
POLY-GPG + LMAS M16	-	-	-
POLY-GPG + LMAS M20	-	-	-
POLY-GPG + LMAS M24	-	-	-
POLY-GPG + Ø8	-	-	-
POLY-GPG + Ø10	-	-	-
POLY-GPG + Ø12	-	-	-
POLY-GPG + Ø16	-	-	-
POLY-GPG + Ø20	-	-	-
POLY-GPG + Ø25	-	-	-
POLYGPG300BG-SE	-	-	-

Masonry :

	Compressive strength f_b [N/mm²]	Bulk density ρ [kg/m^3]
Solid clay masonry	≥ 18	≥ 1600
Hollow masonry	≥ 6	≥ 900

1. The design resistances have been calculated using the partial safety factors for resistances stated in ETA-approval(s).
2. The recommended loads have been calculated using the partial safety factors for resistances stated in ETA-approval(s) and with a partial safety factor for actions of γF=1.4.
3. For combined tension and shear loads or anchor groups and/or in case of edge influence, a calculation acc. TR 054, design method A shall be performed. For details see ETA - assessment(s)
4. Temperature range: -40°C/+40°C (Tmlp = +24°C)
5. Coefficiant factor β for in situ tests acc. ETAG 029 see ETA-19/XXXX; Annex C2
6. Displacements under service load see ETA-19/0420; Annex C2 & C3

Design resistance – Tension – NRd [kN] – Rebar

Tuotenro	Design resistance – N_{Rd} – Rebar [kN]							
	Non-cracked concrete							
	h_{ef} = 8d				h_{ef} = 12d			
	C20/25	C30/37	C40/50	C50/60	C20/25	C30/37	C40/50	C50/60
POLY-GPG + Ø8	4.9	4.9	4.9	4.9	7.4	7.4	7.4	7.4
POLY-GPG + Ø10	7.7	7.7	8.4	8.4	11.5	11.5	12.7	12.7
POLY-GPG + Ø12	11.1	12.2	12.2	13.3	16.6	18.2	18.2	19.9
POLY-GPG + Ø16	15.3	16.8	16.8	18.4	23	25.3	25.3	27.6
POLY-GPG + Ø20	23.9	26.3	26.3	28.7	35.9	39.5	39.5	43.1
POLY-GPG + Ø25	37.4	41.1	44.9	48.6	53.8	59.2	64.6	70

POLY-GPG
General Purpose Resin Mortar

Design resistance – Shear – VRd [kN] – Rebar

Tuotenro	Design resistance – V_{Rd} – Rebar [kN]							
	Non-cracked concrete							
	h_{ef} = 8d				h_{ef} = 12d			
	C20/25	C30/37	C40/50	C50/60	C20/25	C30/37	C40/50	C50/60
POLY-GPG + Ø8	9	9	9	9	9	9	9	9
POLY-GPG + Ø10	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2
POLY-GPG + Ø12	20.3	20.3	20.3	20.3	20.3	20.3	20.3	20.3
POLY-GPG + Ø16	36.2	36.2	36.2	36.2	36.2	36.2	36.2	36.2
POLY-GPG + Ø20	56.5	56.5	56.5	56.5	56.5	56.5	56.5	56.5
POLY-GPG + Ø25	88.4	88.4	88.4	88.4	88.4	88.4	88.4	88.4

Design resistance – Bending moment – MRd [Nm] – Rebar

Tuotenro	Design resistance – Bending moment – M_{Rd} – Rebar [Nm]
POLY-GPG + Ø8	21.6
POLY-GPG + Ø10	42.3
POLY-GPG + Ø12	73.5
POLY-GPG + Ø16	173.7
POLY-GPG + Ø20	339.1
POLY-GPG + Ø25	662.7

Asennus

Curing Schedule

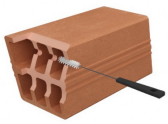
Temperature of the anchorage base $T_{base\ material}$	Working time (Gel time) t_{gel}	Curing time (in dry concrete) $t_{cure,\ dry}$	Curing time (in wet concrete) $t_{cure,\ wet}$
0°C ≤ $T_{base\ material}$ < +10°C	20 min	90 min	3:00 h
+10°C ≤ $T_{base\ material}$ < +20°C	9 min	60 min	2:00 h
+20°C ≤ $T_{base\ material}$ < +30°C	5 min	30 min	1:00 h
+30°C ≤ $T_{base\ material}$ ≤ 40°C	3 min	20 min	40 min

- **Manual Air Cleaning (MAC) for all drill hole diameters d0 ≤ 24 mm and drill holl depth h0 ≤ 10d :**
  - **4x blowing (hand pump)**
  - **4x brushing**
  - **4x blowing (Hand pump)**
- **Compressed Air Cleaning (CAC) for all drill hole diameters d_0 and drill hole depths :**
  - **2x blowing (min. 6 bar - oil free compressed air)**
  - **2x brushing**
  - **2x blowing (min. 6 bar - oil free compressed air)**
- **Cartridge temperature (Bond material) : ≥ +20°C**

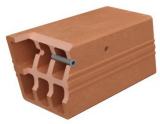
Tekniset tiedot

POLY-GPG
General Purpose Resin Mortar

Poraa.

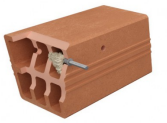


Harjaa.



Asenna reikähylsy.

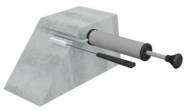
Injektoi injektointimassa.



Asenna kierretanko hitaasti pyörittäen.

Kovettumisen jälkeen liitoksella on täysi kestävyys.

Poraa.



Poista pöly harjaamalla ja puhaltamalla.

Täytä reiästä puolet tai kaksi kolmasosaa, vedä sekoitusputkea ulospäin jokaisella painalluksella.

Asenna LMAS-kierretanko hitaasti pyörittäen.

Kovettumisen jälkeen liitoksella on täysi kestävyys.

Installation parameters – Concrete

Tuotenro	Installation parameters - Concrete					
	Ø drilling [d_0] [mm]	Max. fixture hole Ø [d_f] [mm]	Drilling depth (8d) [h_0=h_{ef}=8d] [mm]	Drilling depth (12d) [h_0=h_{ef}=12d] [mm]	Wrench size [SW]	Installation torque [T_{inst}] [Nm]
POLY-GPG + LMAS M8	10	9	64	96	13	10
POLY-GPG + LMAS M10	12	12	80	120	17	12
POLY-GPG + LMAS M12	14	14	96	144	19	20
POLY-GPG + LMAS M16	18	18	128	196	24	40
POLY-GPG + LMAS M20	24	22	160	240	30	70
POLY-GPG + LMAS M24	28	26	192	288	36	90

POLY-GPG
General Purpose Resin Mortar

Spacing, edge distances and member thickness – Concrete

Tuotenro	Spacing, edge distance and member thickness - Concrete									
	Effective embedment depth (8d) [$h_{ef,8d}$] [mm]	Characteristic spacing for $h_{ef,8d}$ [$S_{cr,N}$] [mm]	Characteristic edge distance for $h_{ef,8d}$ [$c_{cr,N}$] [mm]	Min. member thickness for $h_{ef,8d}$ [h_{min}] [mm]	Effective embedment depth (12d) [$h_{ef,12d}$] [mm]	Characteristic spacing for $h_{ef,12d}$ [$S_{cr,N}$] [mm]	Characteristic edge distance for $h_{ef,12d}$ [$c_{cr,N}$] [mm]	Min. member thickness for $h_{ef,12d}$ [h_{min}] [mm]	Min. spacing [S_{min}] [mm]	Min. edge distance [C_{min}] [mm]
POLY-GPG + LMAS M8	64	192	96	100	96	288	144	126	40	40
POLY-GPG + LMAS M10	80	240	120	110	120	360	180	150	50	50
POLY-GPG + LMAS M12	96	288	144	126	144	432	216	174	60	60
POLY-GPG + LMAS M16	128	384	192	158	196	588	294	226	80	80
POLY-GPG + LMAS M20	160	480	240	190	240	720	360	270	100	100
POLY-GPG + LMAS M24	192	576	288	222	288	864	432	318	120	120

Installation parameters – Masonry – Solid clay masonry

Tuotenro	Installation parameters - Solid clay masonry				
	Ø drilling [d_0] [mm]	Max. fixture hole Ø [d_f] [mm]	Drilling depth [h_1] [mm]	Embedment depth [h_{ef}] [mm]	Installation torque [T_{inst}] [Nm]
POLY-GPG + LMAS M6	8	7	85	80	1
POLY-GPG + LMAS M8	10	9	85	80	1
POLY-GPG + LMAS M10	12	12	90	85	1
POLY-GPG + LMAS M12	14	14	90	85	1

Installation parameters – Masonry – Hollow masonry

Tuotenro	Installation parameters - Hollow masonry				
	Ø drilling [d_0] [mm]	Max. fixture hole Ø [d_f] [mm]	Drilling depth [h_1] [mm]	Embedment depth [h_{ef}] [mm]	Installation torque [T_{inst}] [Nm]
POLY-GPG + LMAS M6	12	7	85	80	2
POLY-GPG + LMAS M8	12	9	85	80	2
POLY-GPG + LMAS M10	16	12	90	85	2
POLY-GPG + LMAS M12	16	14	90	85	2

Spacing, edge distances and member thickness – Masonry – Solid clay masonry

Tuotenro	Spacing, edge distance and member thickness - Solid clay masonry			
	Min. spacing [s_{min}] [mm]			Min. edge distance [c_{min}] [mm]
	$s_{cr,N} = s_{min}$ [mm]	$s_{cr,N} \parallel = s_{min} \parallel$ [mm]	$s_{cr,N}^{T} = s_{min}^{T}$ [mm]	$c_{cr,N} = c_{min}$ [mm]
POLY-GPG + LMAS M6	240	-	-	120
POLY-GPG + LMAS M8	240	-	-	120
POLY-GPG + LMAS M10	255	-	-	127.5
POLY-GPG + LMAS M12	255	-	-	127.5

Spacing, edge distances and member thickness – Masonry – Hollow masonry

Tuotenro	Spacing, edge distance and member thickness - Hollow masonry			
	Min. spacing [s_{min}] [mm]			Min. edge distance [c_{min}] [mm]
	$s_{cr,N} = s_{min}$ [mm]	$s_{cr,N} \parallel = s_{min} \parallel$ [mm]	$s_{cr,N}^{T} = s_{min}^{T}$ [mm]	$c_{cr,N} = c_{min}$ [mm]
POLY-GPG + LMAS M6	-	250	120	100
POLY-GPG + LMAS M8	-	250	120	100
POLY-GPG + LMAS M10	-	250	120	100
POLY-GPG + LMAS M12	-	250	120	100

Installation parameters – Rebar

Tuotenro	Installation parameters – Rebar		
	Ø drilling [d_0] [mm]	Drilling depth (8d) [$h_0=h_{ef}=8d$] [mm]	Drilling depth (12d) [$h_0=h_{ef}=12d$] [mm]
POLY-GPG + Ø8	12	64	96
POLY-GPG + Ø10	14	80	120
POLY-GPG + Ø12	16	96	144
POLY-GPG + Ø16	20	128	192
POLY-GPG + Ø20	25	160	240
POLY-GPG + Ø25	32	200	288

Spacing, edge distances and member thickness – Rebar

Tuotenro	Spacing, edge distance and member thickness – Rebar									
	Effective embedment depth (8d) [$h_{ef,8d}$] [mm]	Characteristic spacing for $h_{ef,8d}$ [$S_{cr,N}$] [mm]	Characteristic edge distance for $h_{ef,8d}$ [$c_{cr,N}$] [mm]	Min. member thickness for $h_{ef,8d}$ [h_{min}] [mm]	Effective embedment depth (12d) [$h_{ef,12d}$] [mm]	Characteristic spacing for $h_{ef,12d}$ [$S_{cr,N}$] [mm]	Characteristic edge distance for $h_{ef,12d}$ [$c_{cr,N}$] [mm]	Min. member thickness for $h_{ef,12d}$ [h_{min}] [mm]	Min. spacing [S_{min}] [mm]	Min. edge distance [C_{min}] [mm]
POLY-GPG + Ø8	64	192	96	100	96	288	144	126	40	40
POLY-GPG + Ø10	80	240	120	110	120	360	180	150	50	50
POLY-GPG + Ø12	96	288	144	126	144	432	216	174	60	60
POLY-GPG + Ø16	128	384	192	168	192	576	288	232	80	80
POLY-GPG + Ø20	160	480	240	210	240	720	360	290	100	100
POLY-GPG + Ø25	200	600	300	264	288	864	432	352	120	120

Simpson Strong-Tie / Gbo Fastening Systems AB
Bruksvägen 2, 593 75 Gunnebo
tel: 0490-300 00
fax : 0490-233 00

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