

File E466141
Project 4786190420

June 27, 2014

REPORT

On

Cabinets and Cutout Boxes

BOCCHIOTTI SPA
Milano, MI, Italy

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DESCRIPTION

PRODUCT COVERED:

USL, CNL Enclosures for Industrial Control Panels, Polymeric enclosure Series VTR, models VTR 01, VTR 02, VTR 03, VTR 04, VTR 05, VTR 06, VTR 07.

Inner accessories: Cat. Nos. COPRIMOD 6M GRI, CP 02, CP 03, CP 04, CP 05, CP 06, CP 07, GUIDA 12, GUIDA 18, GUIDA 24, GUIDA 28, GUIDA 38, MONT 02, MONT 03, MONT 04-05, MONT 06, MONT 07, PC VTR 12, PC VTR 18, PC VTR 24, PC VTR 28, PC VTR 38, PC VTR 12 DOPPIO, PC VTR 18 DOPPIO, PC VTR 24 DOPPIO, PC VTR 28 DOPPIO, PC VTR 38PF PERFO 01, PF PERFO 02, PF PERFO 03, PF PERFO 04, PF PERFO 05, PF PERFO 06, PF PERFO 07, PF PERFO QUICK 01, PF PERFO QUICK 02, PF PERFO QUICK 03, PF PERFO QUICK 04, PF PERFO QUICK 05, PF PERFO QUICK 06, PF PERFO QUICK 07, PF VTR 01, PF VTR 02, PF VTR 03, PF VTR 04, PF VTR 05, PF VTR 06, PF VTR 07, PF VTR 01 ISOL, PF VTR 02 ISOL, PF VTR 03 ISOL, PF VTR 04 ISOL, PF VTR 05 ISOL, PF VTR 06 ISOL, PF VTR 07 ISOL, PS VTR 12, PS VTR 18, PS VTR 24, PS VTR 28, PS VTR 38, SCOR PF.

Outer accessories: Cat. Nos. FIAP 1 inox, FIAP 2 inox, FIAP 3-4 inox, FIAP 5 inox, FIAP 6 inox, FIAP 7 inox, ST VTR inox, **LOCK U**.

GENERAL:

These enclosures are polymeric enclosures with single door that have been evaluated for industrial control applications. They shall be constructed in accordance with the Standards below indicated and with the construction as described pertaining to the particular type of the enclosure in this Report.

These enclosures are intended for indoor use, to provide a degree of protection to personnel against incidental contact with the enclosed equipment and to provide a degree protection against falling dirt.

These enclosures are intended for either indoor or outdoor use to provide a degree of protection to personnel against incidental contact with the enclosed equipment; to provide a degree of protection against falling dirt, rain, sleet, snow, windblown dust, splashing water and hose-directed water; and that will be undamaged by the external information of ice on the enclosure.

These enclosures are intended for either indoor or outdoor use to provide a degree of protection to personnel against incidental contact with the enclosed equipment; to provide a degree of protection against falling dirt, rain, sleet, snow, windblown dust, splashing water, hose-directed water and corrosion; and that will be undamaged by the external information of ice on the enclosure.

These enclosures are intended for indoor use, primarily to provide a degree of protection against dust, falling dirt and dripping non-corrosive liquids.

TECHNICAL CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE'S USE):

USL - Products designated USL have been investigated using requirements contained in the Standards for "Enclosures for Electrical Equipment, Non-Environmental Considerations" UL 50 and for "Enclosures for Electrical Equipment, Environmental Considerations" UL 50E.

CNL - Products designated CNL have been investigated using requirements contained in the Standards for "Enclosures for Electrical Equipment, Non-Environmental Considerations" CAN CSA C22.2 No. 94.1.07 and for "Enclosures for Electrical Equipment, Environmental Considerations" CAN CSA C22.2 No. 94.2.

ENVIRONMENTAL TYPE RATINGS:

Enclosures Series	Door(s)	Type
VTR 01, VTR 02, VTR 03, VTR 04, VTR 05, VTR 06, VTR 07	Single door	1, 4, 4X, 12, 12K

*

ENCLOSURE DIMENSIONS:

Enclosures Model	Height (mm)	Width (mm)	Depth (mm)	Door
VTR 01	300	265	165	1
VTR 02	425	325	180	1
VTR 03	500	430	210	1
VTR 04	650	430	210	1
VTR 05	650	540	260	1
VTR 06	805	615	315	1
VTR 07	1080	810	355	1

MARKING:

Each enclosure shall be marked with the Listee's name, or trademark (if authorized on the Section General) or file number, and series designation. If the front is shipped separately from the body of the enclosure, then both the front and the body shall bear this marking.

If an enclosure is not shipped complete such as multi-door enclosure, the parts of the enclosure shall be marked with the following marking on each section, "Section ___ of ___, see instruction for interconnections" or equivalent wording, so that they can be readily assembled. An enclosure is intended to be constructed as described in this report.

An enclosure shall be marked with a type number, "Type 1 Enclosure", "Type 4 Enclosure", "Type 4X Enclosure", "Type 12 Enclosure", "Type 12K Enclosure", indicating the external conditions for which it is acceptable.

Following marking need not be permanent and could be provided on instruction sheet:

Type 1: Indoor use primarily to provide a degree of protection against limited amounts of falling dirt.

Type 4: Indoor or outdoor use to provide a degree of protection to personnel against falling dirt, rain, sleet, snow, windblow dust, splashing water and hose-directed water; and that will be undamaged by the external information of ice on the enclosure. Enclosures marked with a Type 4 may also be marked "Raintight" and "Watertight".

Type 4X: Indoor or outdoor use to provide a degree of protection to personnel against falling dirt, rain, sleet, snow, windblow dust, splashing water, hose-directed water and corrosion; and that will be undamaged by the external information of ice on the enclosure. Enclosures marked with a Type 4 may also be marked "Raintight" and "Watertight".

Type 12, 12K: Indoor use primarily to provide a degree of protection against circulating dust, falling dirt, and dripping non-corrosive liquids. The marking may be on the inside or outside surface but shall be visible after installation. Enclosures marked with a Type 12 may also be marked "driptight". An enclosure maintains the type number only if it is provided with all parts which maintain the environmental integrity. Enclosures marked "Type 12" includes both single and multi-doors enclosures.

An enclosure maintains the type number only if it is provided with all parts which maintain the environmental integrity.

MARKING (CONT'D):

Any environmental type enclosure intended for use with conduit hubs, closure plates and/or other field installed equipment (such as push-button, door latches, and the like), but shipped from the factory without them, shall be marked or provided with instructions that identifies the type of the equipment that shall be used to maintain the environmental type designation of the enclosure.

Any marking that is required to be permanent shall be molded, die-stamped, paint-stenciled, stamped or etched metal that is permanently secured, or indelibly stamped lettering on a pressure-sensitive label secured by adhesive.

The Marking and Labeling shall be R/C Marking and Labeling Systems (PGDQ2) or Printing Materials (PGJI2). The marking labels are outdoor or indoor type.

Following marking need not be permanent and could be provided on instruction sheet:

For Canadian specification required by clauses 4.2.5.11 and consequently 5.42, Equipment shall be marked with the following or equivalent wording:

"WARNING: When mounting on or over a combustible surface, a floor plate of at least 1.43 mm galvanized or 1.6 mm uncoated steel extended at least 150 mm beyond the equipment on all sides must be installed."

For enclosures shipped with unfilled opens - "In order to maintain the environmental integrity of the enclosure, devices with the same environmental ratings shall be used to close openings in the enclosure."

CONSTRUCTION DETAILS:

Products covered by this report shall comply with applicable component, construction rating and marking requirements contained in the Standards UL 50 "Enclosures for Electrical Equipment, Non-Environmental Considerations" and UL 50E "Enclosures for Electrical Equipment, Environmental Considerations" and any additional information contained in this Procedure.

Some details of construction are covered in the following photographs and accompanying descriptive pages.

Gaskets - Bicomponent. Manufactured by Sonderhoff GmbH, designated Fermapor K31-A-9675-11 + Fermapor K31-B-81. See ill. 2 for dimensions.

Latch - Each enclosure door or cover shall be provided with latches for firmly securing it in place. The means shall be positive in action and of substantial design and construction. See ill. 3 for the number and position of latches for each box.

Series VTR

FIG. 1

1. Body - Polymeric Material manufactured by Menzolit Srl, designated Menzolit SMC **0190 (f1)**, at minimum thickness 2.5 mm. See ill. 1 for enclosures shape, details and dimensions.
2. Hinged door - Polymeric Material manufactured by Menzolit Srl, designated Menzolit SMC **0190 (f1)**, at minimum thickness 2.5 mm. Left or right hinges. See ill. 3 for details and dimensions.
3. Door Gasket - Manufactured by Sonderhoff GmbH, Bicomponent designated Fermapor K31-A-9675-11 + Fermapor K31-B-81. for dimensions. See ill. 2 for dimensions.
4. Vertical Frame - steel made, see ill. 5 for shape and dimensions. Cat. Nos. MONT 02, MONT 03, MONT 04-05, MONT 06, MONT 07, made of Galvanized Steel.
5. Hinge - Any R/C (QMFZ2) Plastic Material with minimum RTI 60°C and Flame V0. See ill. 3 for details and position of all the parts.
- 5a. Pin of the hinge - made of stainless steel AISI 304 or 316 **or 303**.
- 5b. Reinforcement of the hinge - made of stainless steel AISI 304 or 316 **or 303**.
- 6a. Latch, part inside the box - Any R/C (QMFZ2) Plastic Material with minimum RTI 60°C and Flame V0. See Ill. 8 for details.
- 6b. Latch, part outside the box - made of both stainless steel and any R/C (QMFZ2) Plastic Material with minimum RTI 60°C, Flame V0 and suitable for outdoor exposure (f1 or f2). See Ill. 8 for details.

Alternate construction - it can be provided with the key. See ill. 8 for details.
- 6c. O-ring of the latch - made of NBR 70SH or NBR 70 manufactured by Guarni.Med. See ill. 8 for details.
7. Locking door Bracket - only for models VTR07 and VTR06, made of stainless steel. Two possible versions: see Ills. 9, 10 for VTR07; see Ills. 11, 11A for VTR06.

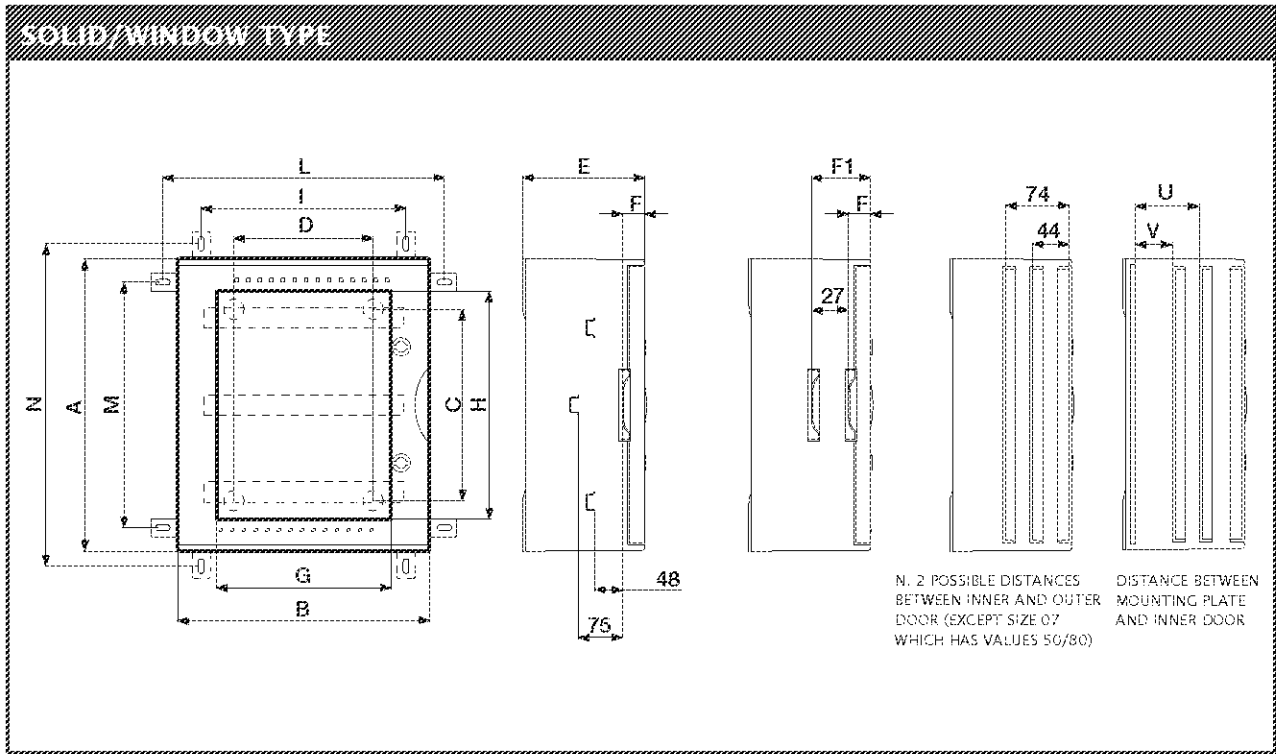
Accessories of Series VTR:

1. Module Cover (optional) - Cat. No. COPRIMOD 6M GRI, made of any polymeric material R/C (QMFZ2).
2. Inner Door (optional) - Cat. Nos. CP 02, CP 03, CP 04, CP 05, CP 06, CP 07, made of any R/C (QMFZ2) Plastic Material with minimum RTI 60°C and Flame V0, may be provided with ergonomic handle. See Ill. 4 for shape and dimension.
3. Din Rail (optional) - Cat. nos. GUIDA 12, GUIDA 18, GUIDA 24, GUIDA 28, GUIDA 32, made of galvanized steel or any polymeric material R/C (QMFZ2). See Ill. 6 for shape and dimension.
- *4. **Reserved for future use.**
5. Blank cover panel (optional) - Single cover panel, Cat. Nos. PC VTR 12, PC VTR 18, PC VTR 24, PC VTR 28, PC VTR 38, made of any polymeric material R/C (QMFZ2).
Double cover panel, Cat. No. PC VTR 12 DOPPIO, PC VTR 18 DOPPIO, PC VTR 24 DOPPIO, PC VTR 28 DOPPIO, PC VTR 38 DOPPIO, made of any polymeric material R/C (QMFZ2).
6. Back Mounting Plate (optional) - Cat. nos. PF VTR 01, PF VTR 02, PF VTR 03, PF VTR 04, PF VTR 05, PF VTR 06, PF VTR 07, made of galvanized steel.
Cat. nos. PF PERFO 01, PF PERFO 02, PF PERFO 03, PF PERFO 04, PF PERFO 05, PF PERFO 06, PF PERFO 07, provided with holes and made of galvanized steel;
Cat. nos. PF VTR 01 ISOL, PF VTR 02 ISOL, PF VTR 03 ISOL, PF VTR 04 ISOL, PF VTR 05 ISOL, PF VTR 06 ISOL, PF VTR 07 ISOL, made of any polymeric material R/C (QMFZ2).
See. Ill. 4 for shape and dimension.
7. Cover panels with window (optional) - Cat. Nos. PS VTR 12, PS VTR 18, PS VTR 24, PS VTR 28, PS VTR 38, made of any polymeric material R/C (QMFZ2).
8. Back-mounting plate support (optional) - Cat. No. SCOR PF, made of any polymeric material R/C (QMFZ2).
9. Pole mounting kit (optional) - Cat. nos. FIAP 1 inox, FIAP 2 inox, FIAP 3-4 inox, FIAP 5 inox, FIAP 6 inox, FIAP 7 inox, made of stainless steel AISI 304 or 316.
10. Fixing Wall Bracket (optional) - Cat. no. ST VTR inox, made of stainless steel AISI 304 or 316. See. Ill. 7 for shape and dimension.
11. Locking with key (optional) - Cat. no. LOCK U, made of both stainless steel and any R/C (QMFZ2) Plastic Material with minimum RTI 60°C, Flame V0 and suitable for outdoor exposure (f1 or f2). See Ill. 8 for details.

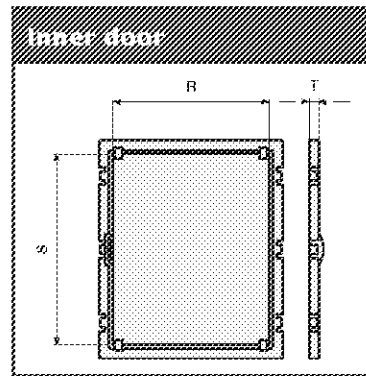
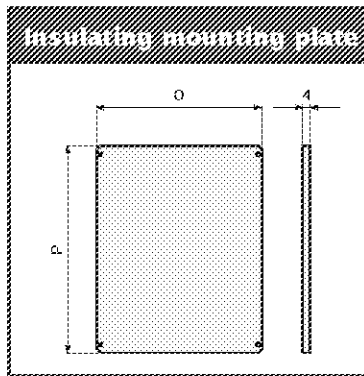
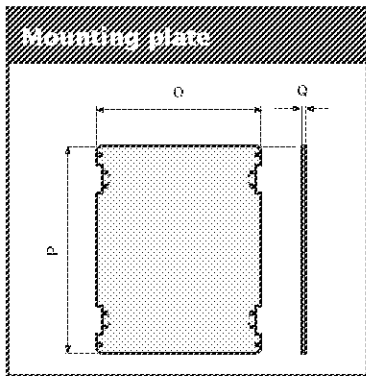


FIBREGLASS ENCLOSURES

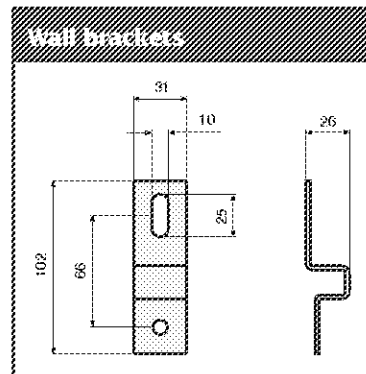
Dimensional drawings



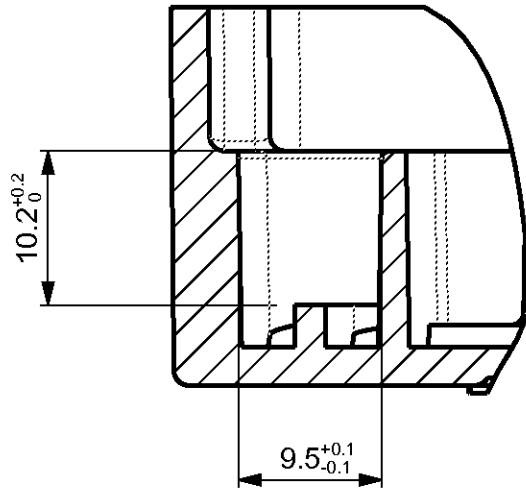
SIZE/DESCRIPTION	DIMENSIONS														MODULES			
	A	B	C	D	E	F	F1			G	H	I	L	M	N	U	V	
1 VTR 01	303	265	150	110	167	-	-	-	-	161	215	184	316	222	354	-	-	-
2 VTR 02	428	325	255	132	183	40	67			193	319	245	377	348	480	108	78	35 (3x12)
3 VTR 03	504	434	330	249	210	40	67 - 94			300	393	353	485	423	555	135	105	54 (3x18)
4 VTR 04	654	434	480	240	210	40	67 - 94			300	544	353	485	573	705	135	105	72 (4x18)
5 VTR 05	654	543	480	348	265	40	67 - 94 - 121 - 148			405	544	462	594	573	705	188	158	96 (4x24)
6 VTR 06	806	616	630	420	319	40	67 - 94 - 121 - 148 - 175 - 202			480	694	533	665	723	855	243	213	140 (5x28)
7 VTR 07	1056	810	885	600	355	54	81 - 108 - 135 - 162 - 189 - 216			639	875	713	845	974	1105	273	243	190 (5x36)



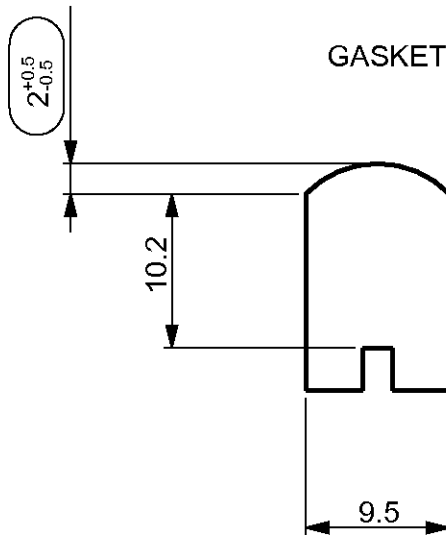
SIZE/DESCRIPTION	DIMENSIONS				
	O	P	Q	R	T
1 VTR01	199	240	1,5	-	-
2 VTR02	242	365	1,5	210	314
3 VTR03	350	440	1,5	318	389
4 VTR04	350	590	2	318	539
5 VTR05	458	590	2	425	539
6 VTR06	530	740	2	498	689
7 VTR07	710	990	2	677	938



GASKET SEAT



GASKET



N.°	MODIFICA					DATA	FIRMA
LAVORAZIONE	TRATTAMENTO/FINITURA	GRADO	MATERIALE	VOLUME (cm ³ /m)	MASSA (g/m)	RAGGI/SMUSSI NON QUOTATI 0,2 — 0,4	
			polyurethane foam				

PRO-E	DISEGNATO	CONTROLLATO	VERIFICATO NORME	APPROVATO	QUOTE SENZA INDICAZIONE DI TOLLERANZA	SCALA	
DATA	17-Feb-14				Classe di tolleranza UNI EN 22768-1 ISO 2768 -	2:1	
FIRMA	M.Calcagno						



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DESCRIZIONE

Gasket VTR PEDRO

DISEGNO

GASKET_QUADRI_PEDRO

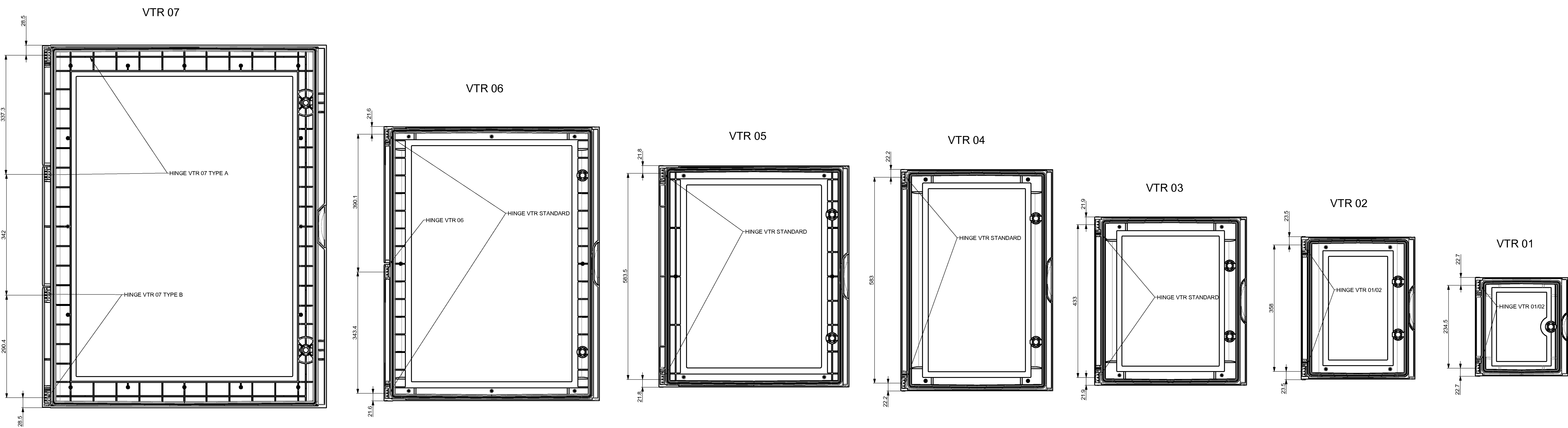
MODIFICA

FILE 3D

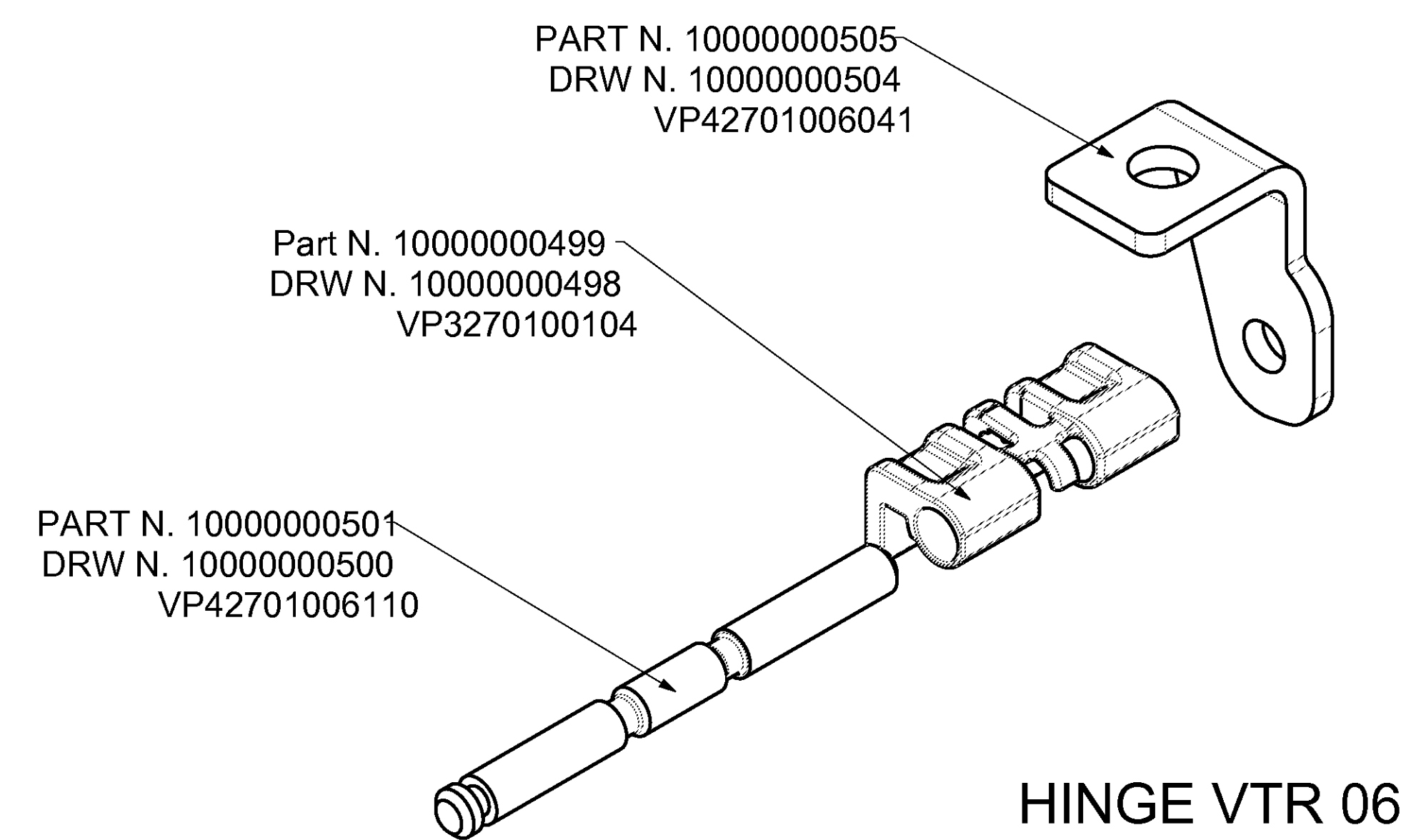
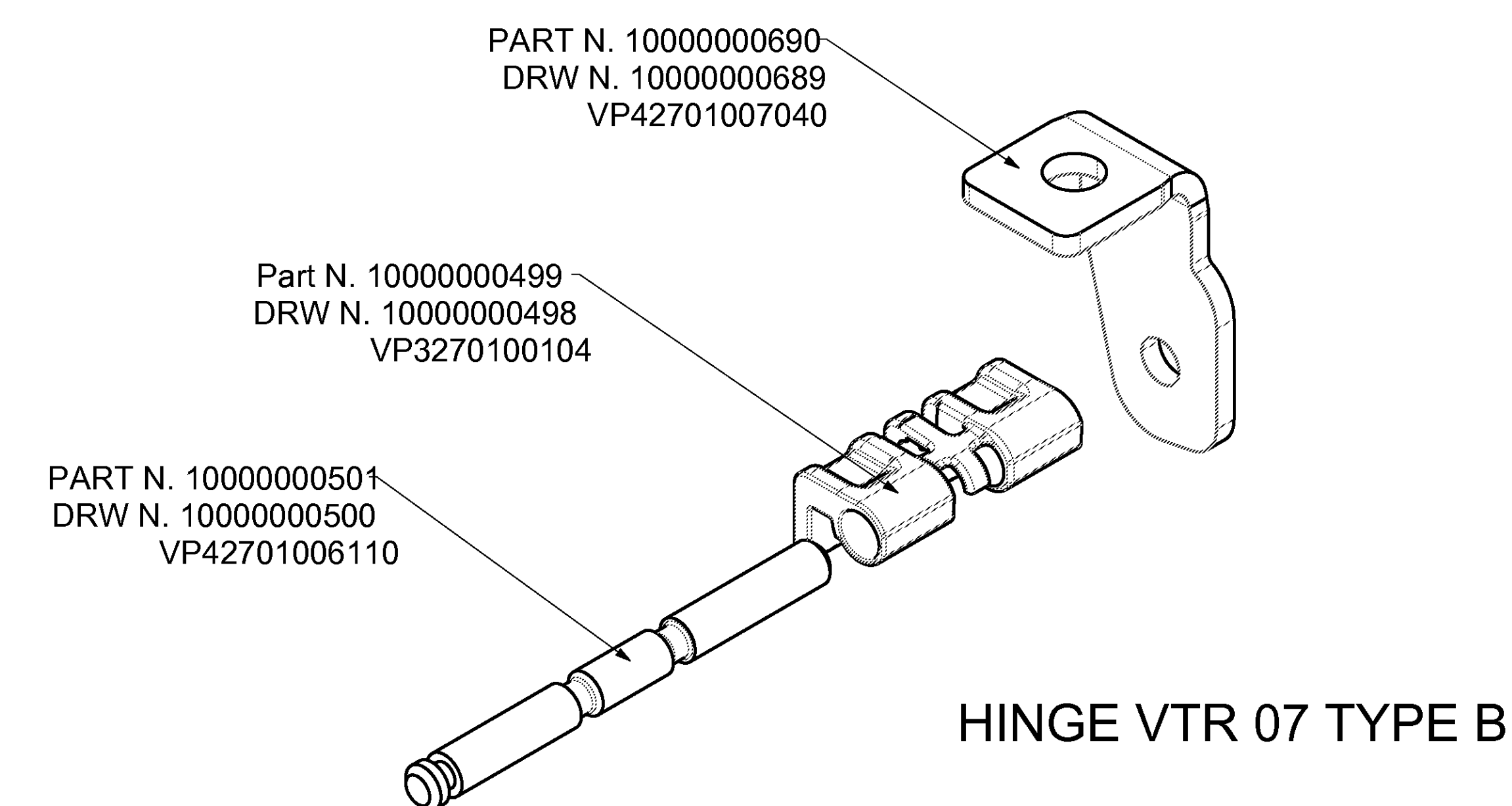
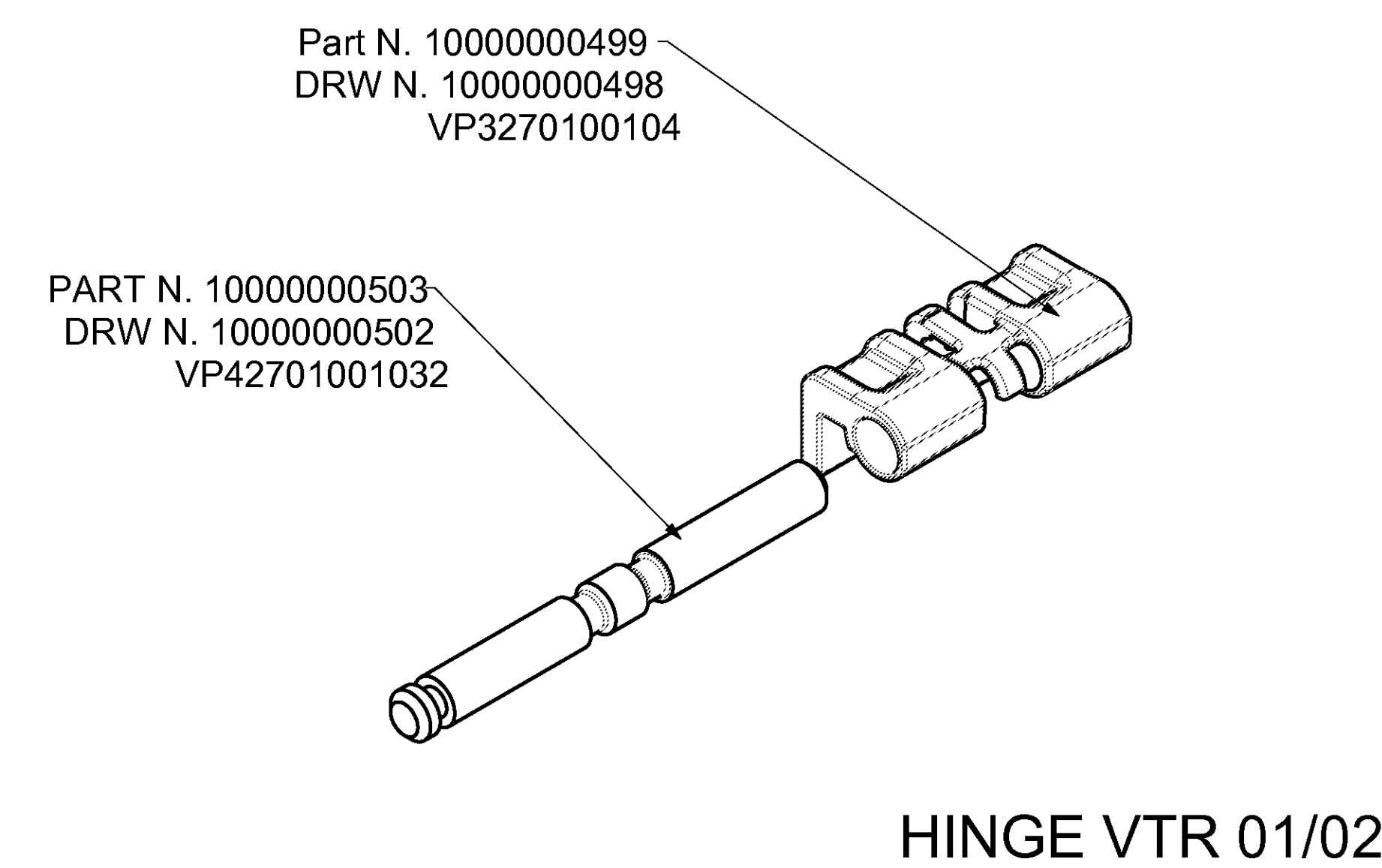
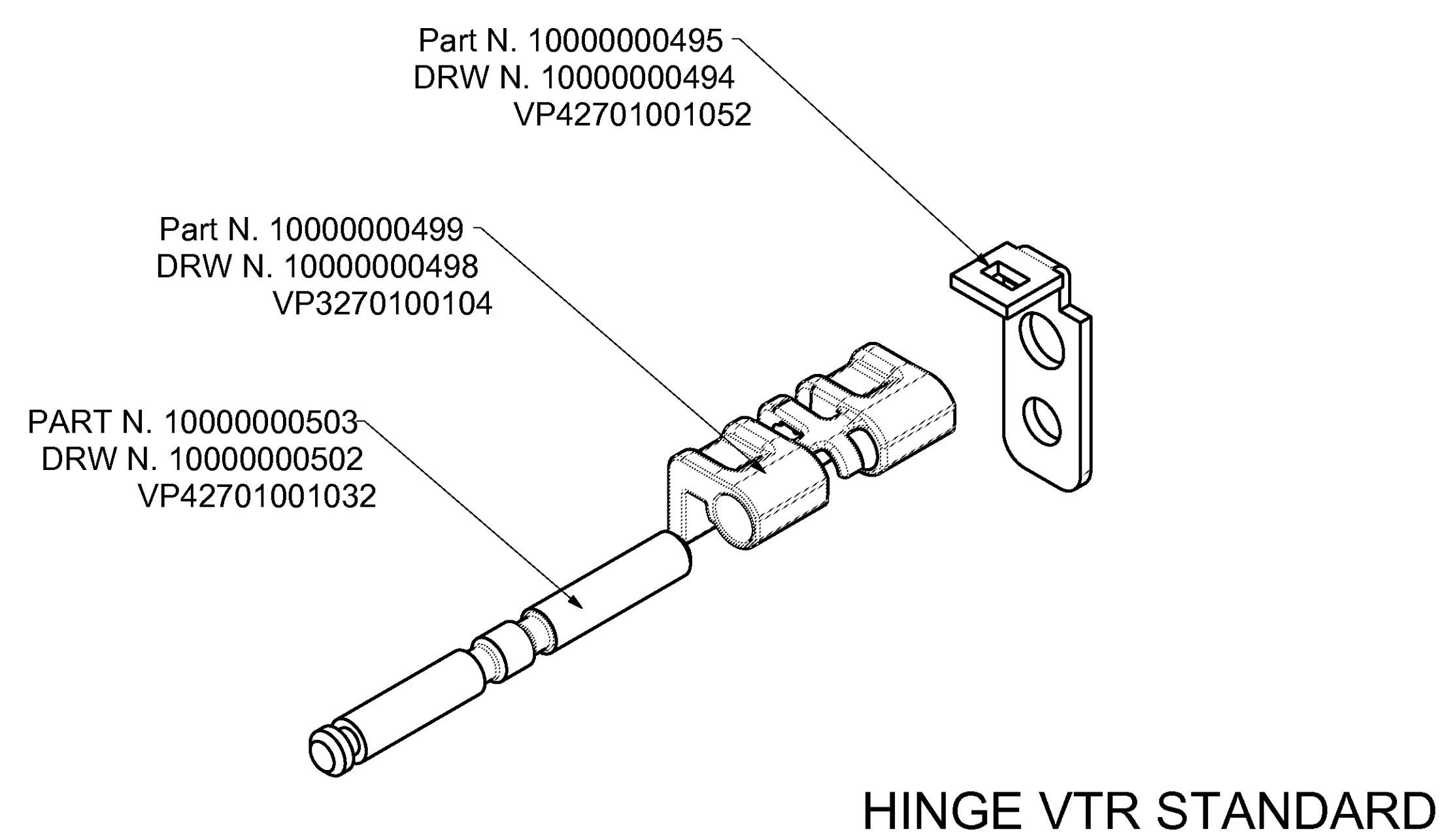
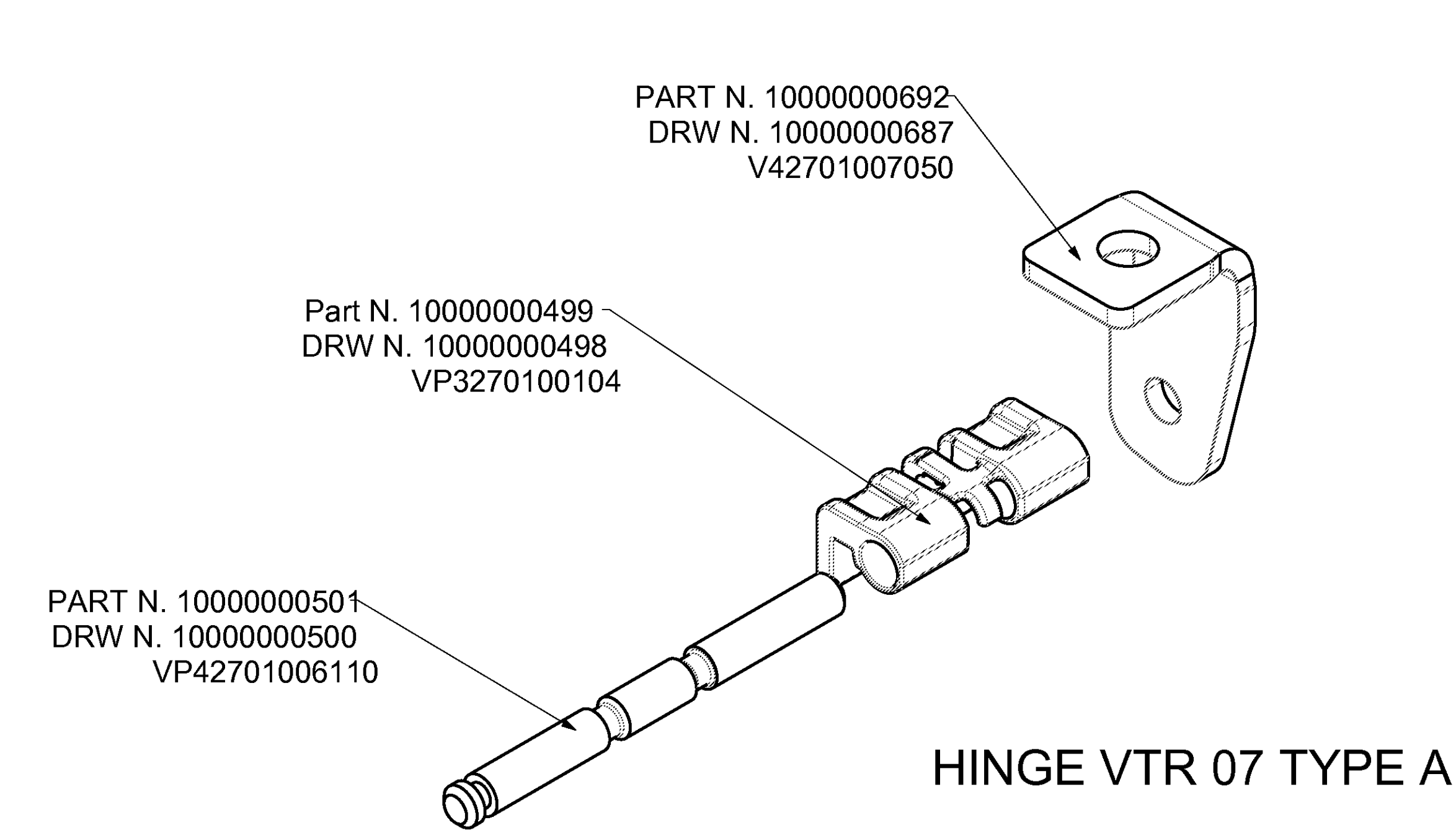
GASKET_QUADRI_PEDRO/

FOGLIO 1 di 1
FORMATO A4

ALL POSITIONS OF HINGE

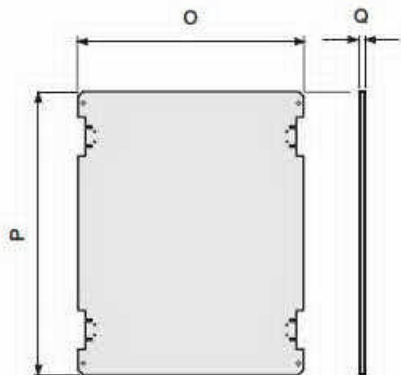


ALL HINGE TYPES

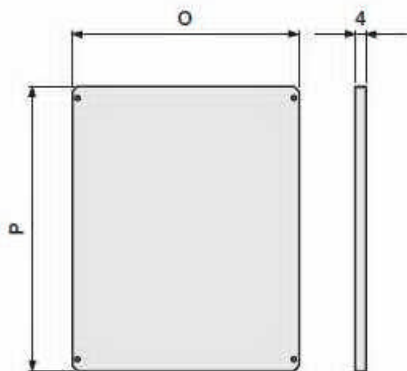


LAVORAZIONE		MODIFICA		DATA	FIRMA
TRATTAMENTO FINITURA	GRADO	MATERIALE	VOLUME (cm ³)	MASSE (g)	NON QUANTITARI
INDEFINITO			2737,359	3,011	13/02/14
PRO-E	DESIGNATO	CONTROLLATO	VERIFICATO NORME	APPROVATO	SCALA
DATA	18-Feb-14				1:4
FIRMA	M. Calcagno				1:4
SOCIETA' PER L'INDUSTRIA ELETTRONICA BOCCONOTTI Proprietà di Bocconotti S.p.A. con sede legale: e in direzione, via Salaria, 1000 - 00198 Roma (RM) Proprietà di Bocconotti S.p.A. con sede legale: e in direzione, via Salaria, 1000 - 00198 Roma (RM)					HINGES Positions and type HINGE
					1 dt1 A0 10000000698.00

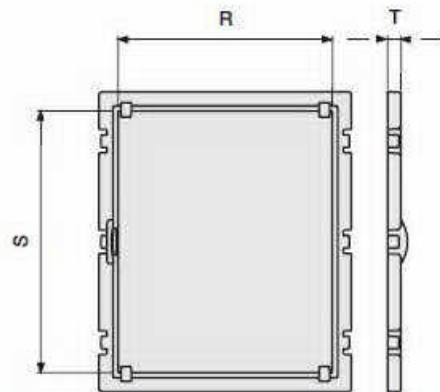
Mounting plate



Insulating mounting plate



Inner door



SIZE/DESCRIPTION

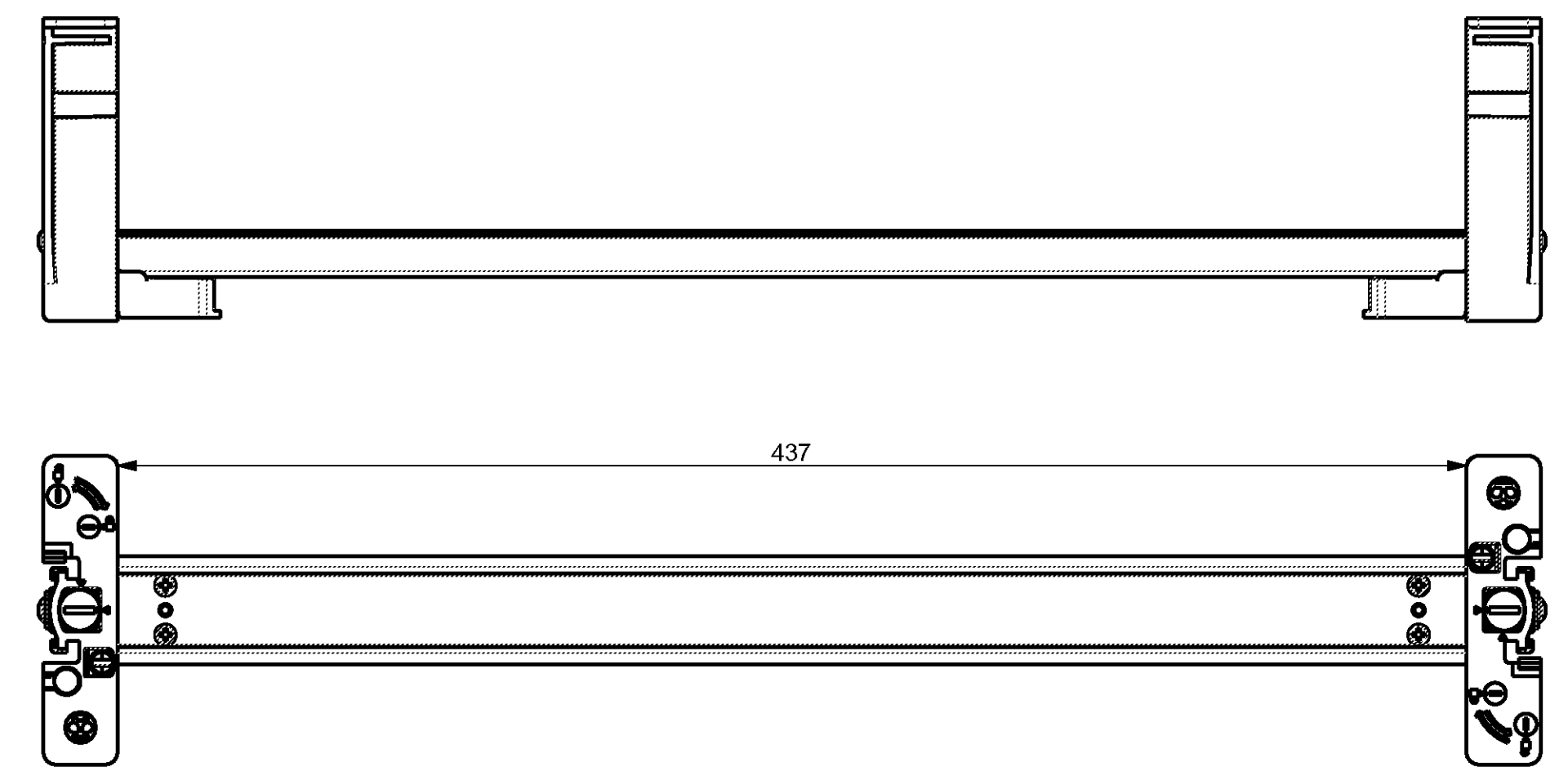
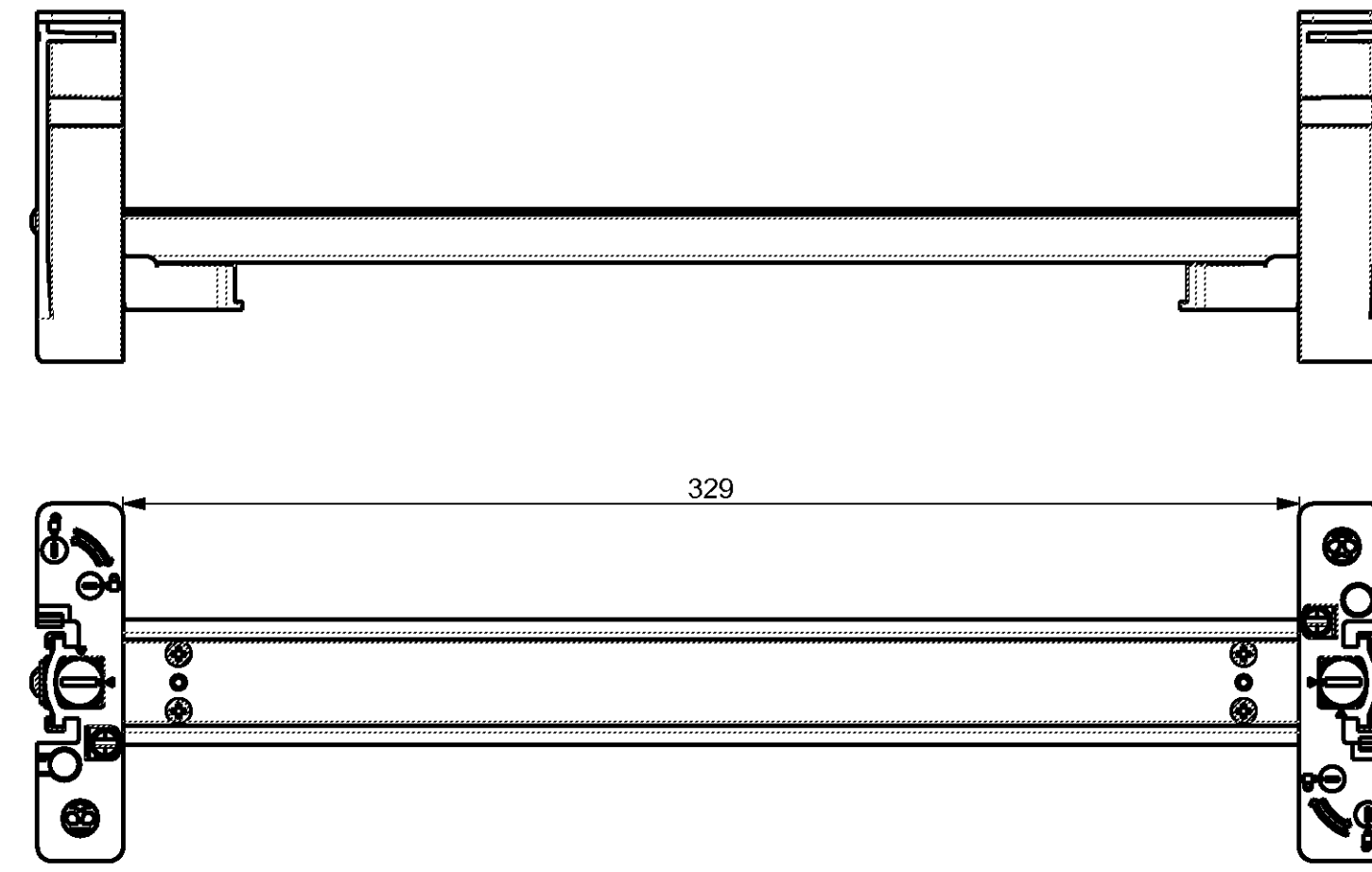
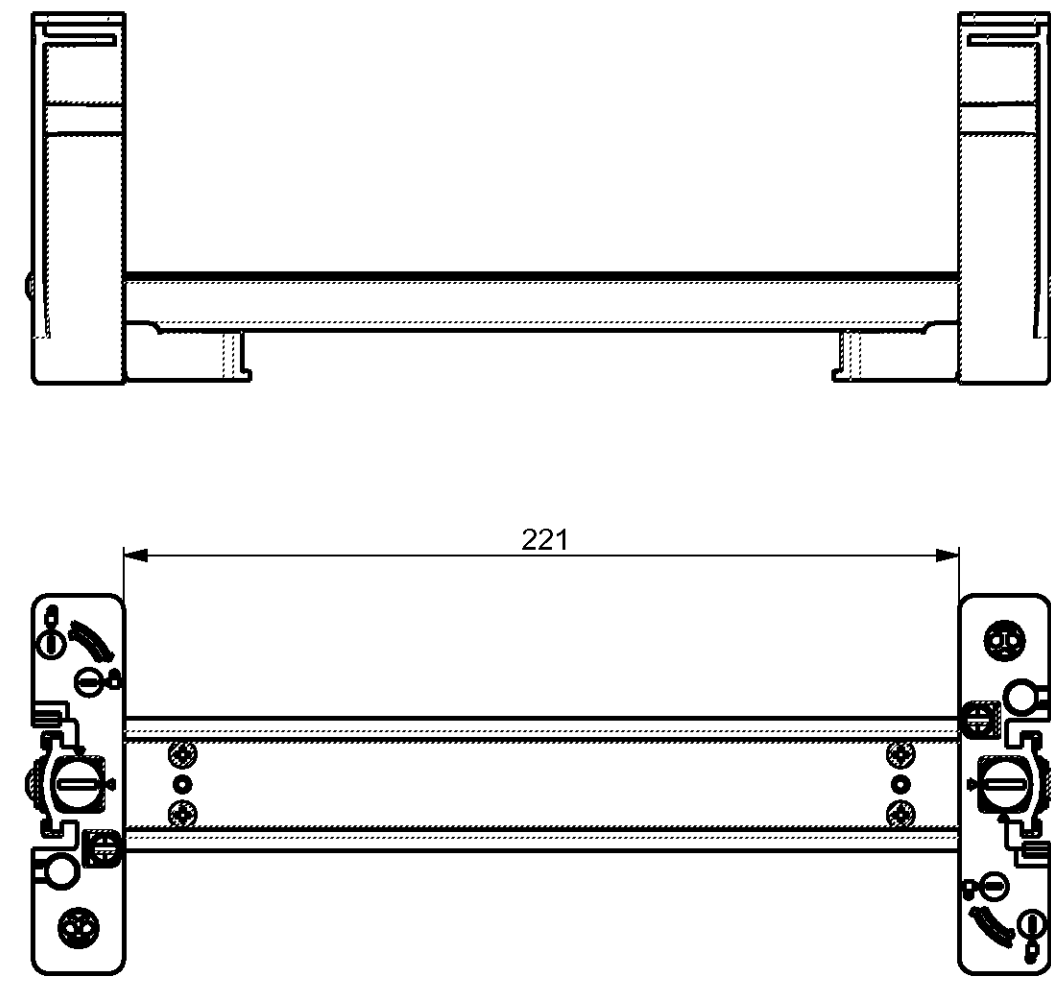
DIMENSIONS

	O	P	Q	R	S	T
1 VTR01	199	240	1,5	-	-	-
2 VTR02	242	365	1,5	210	314	20
3 VTR03	350	440	1,5	318	389	20
4 VTR04	350	590	2	318	539	20
5 VTR05	458	590	2	425	539	20
6 VTR06	530	740	2	498	689	20
7 VTR07	710	990	2	677	938	25

DIN RAIL 12 M

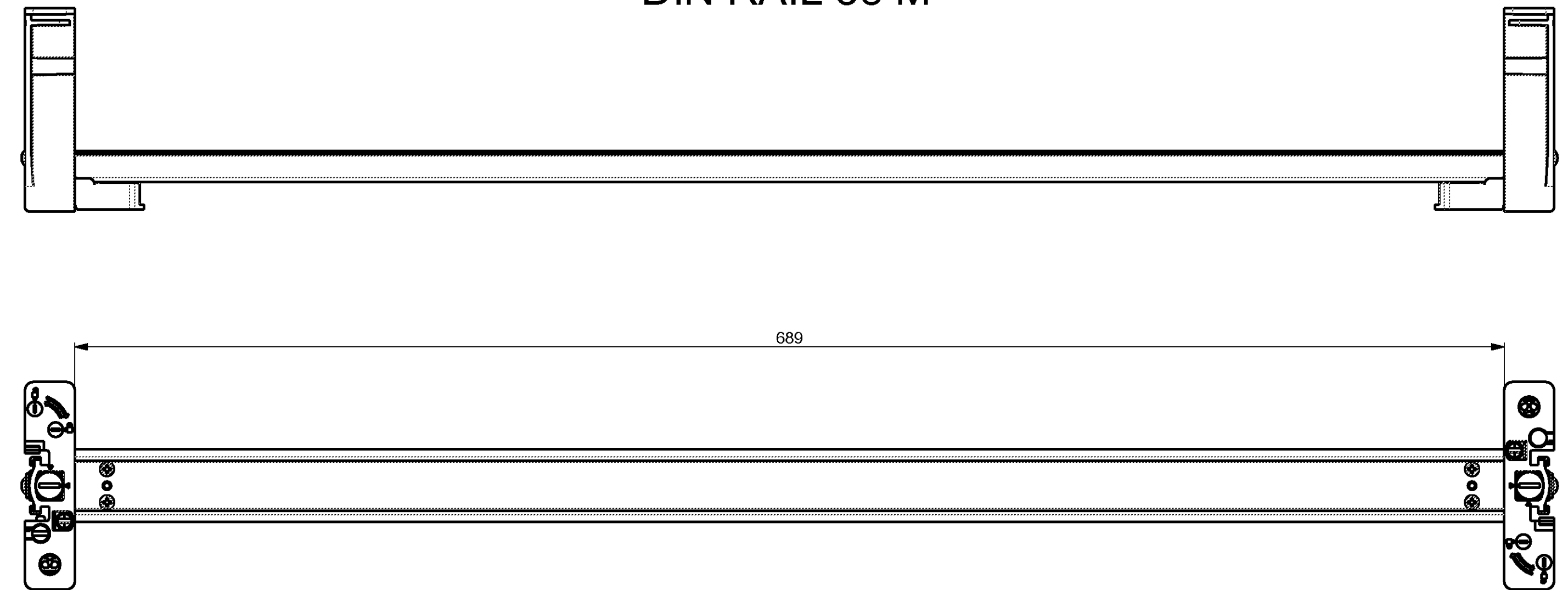
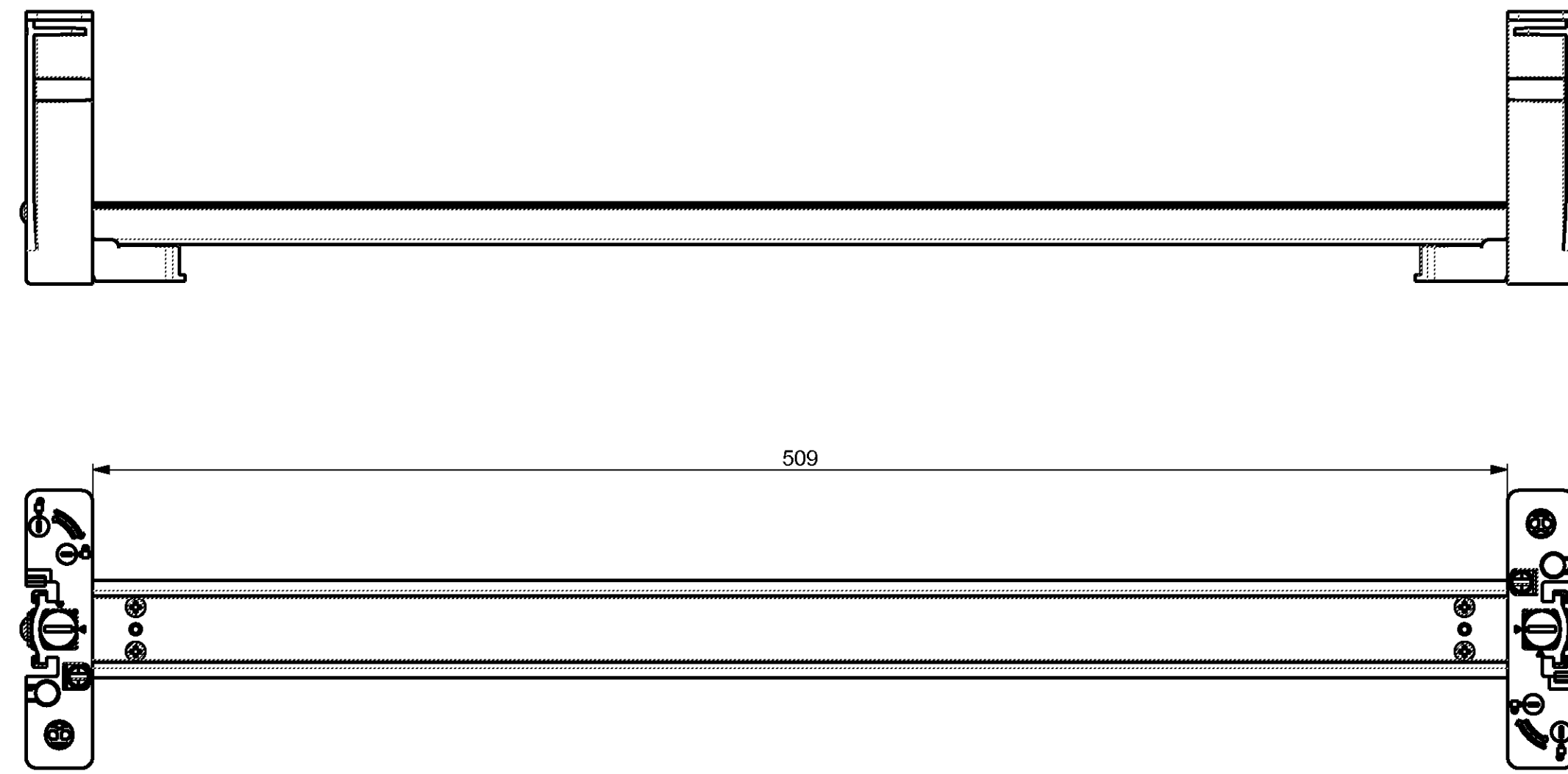
DIN RAIL 18 M

DIN RAIL 24 M

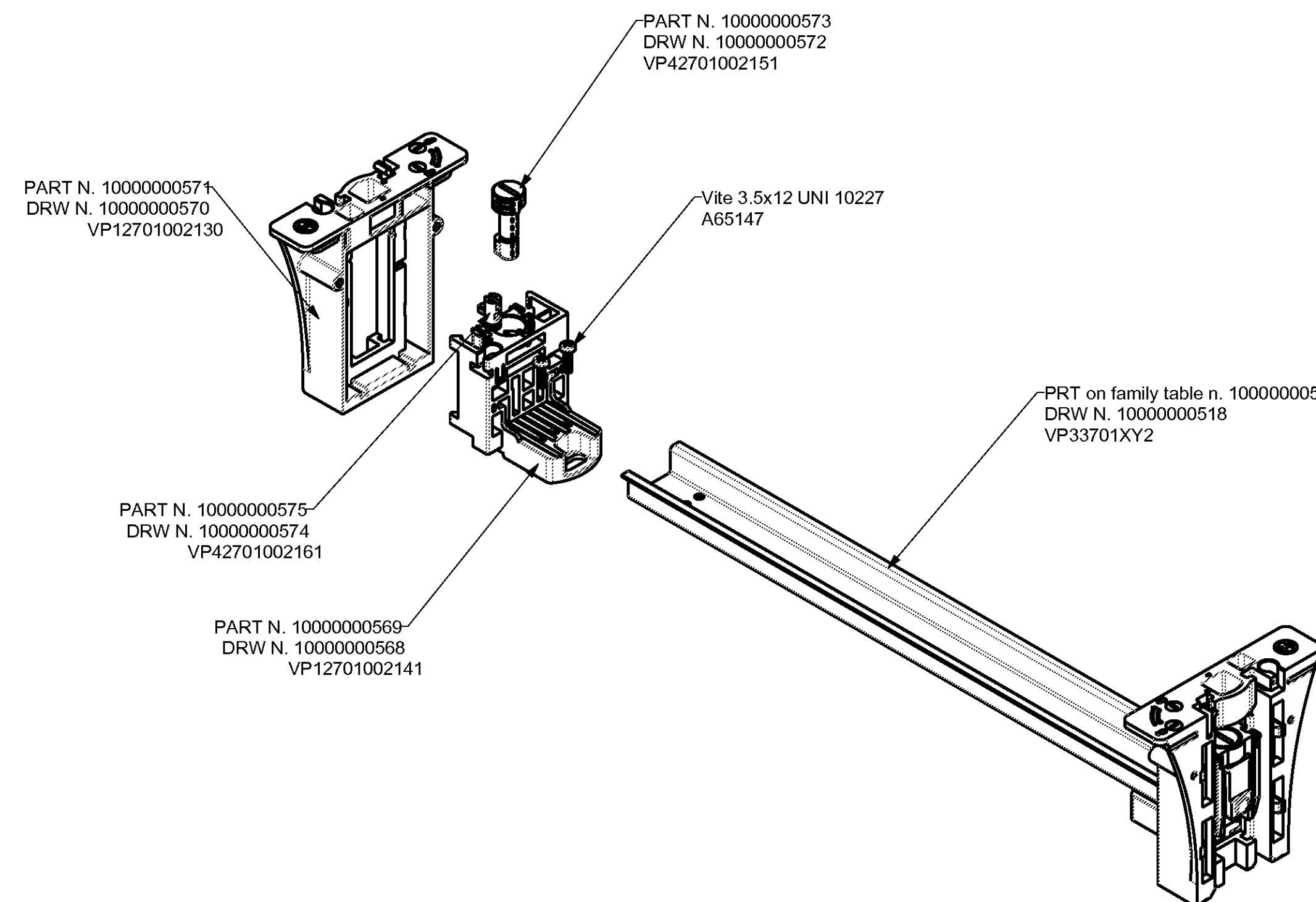


DIN RAIL 28 M

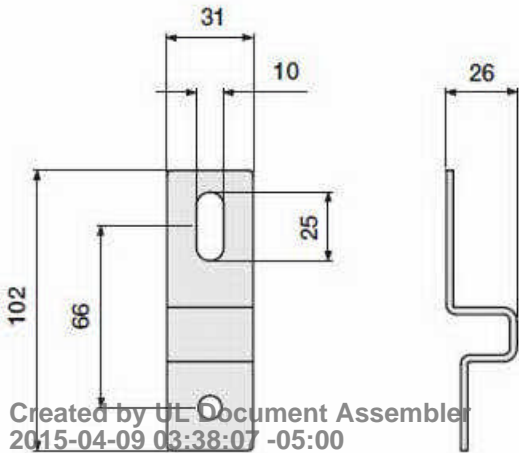
DIN RAIL 38 M

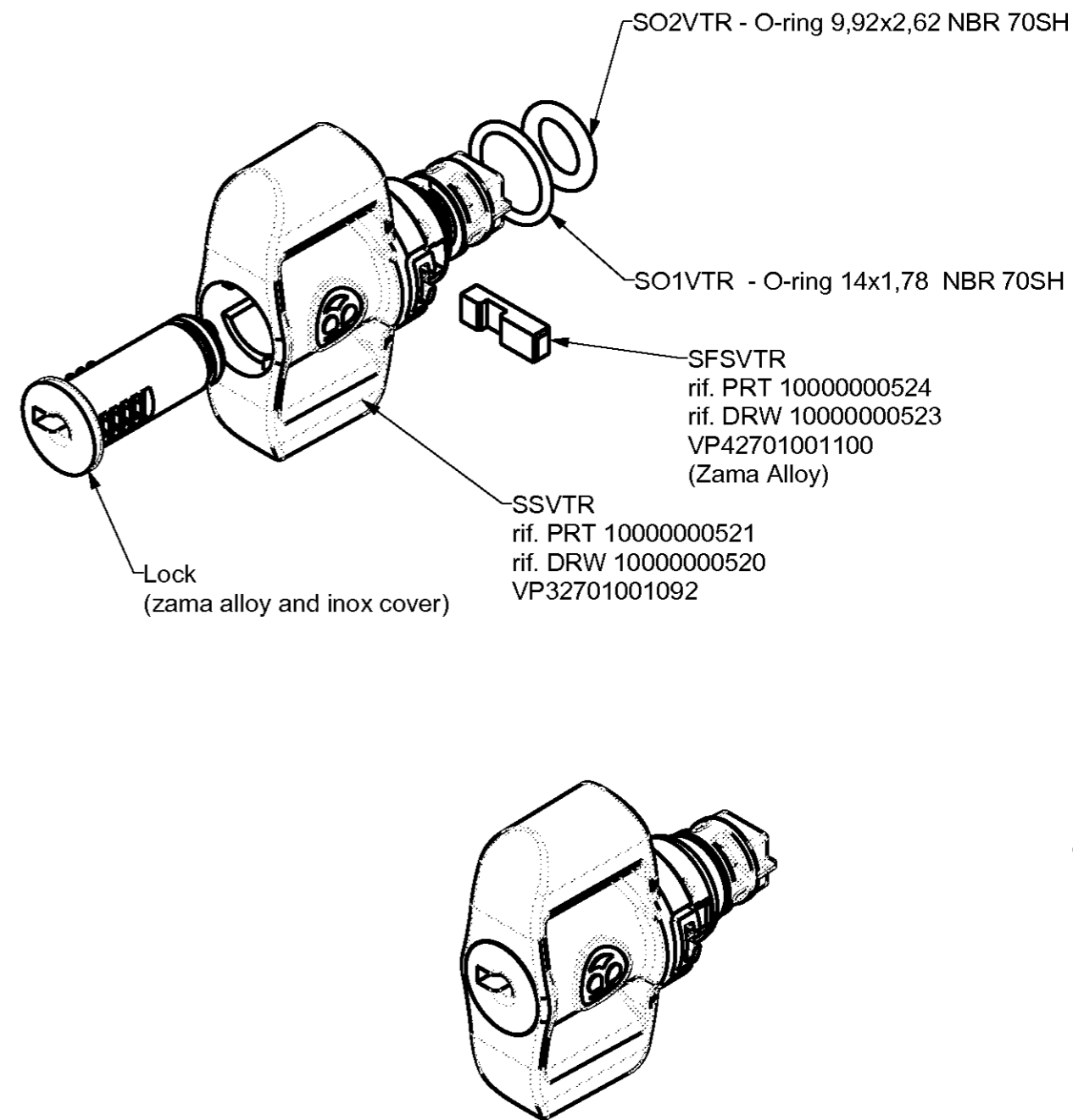
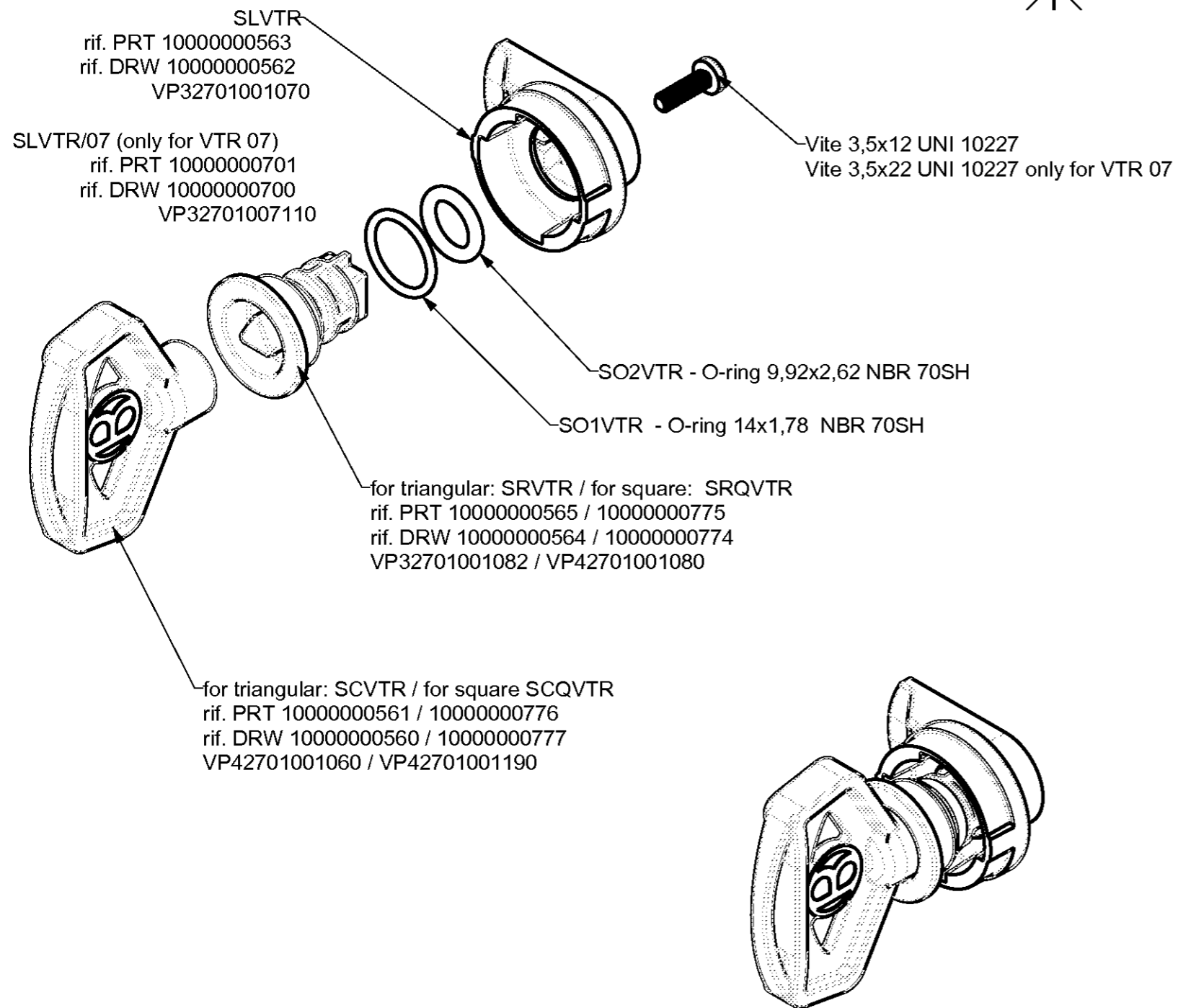


VTR	DIN RAIL	N°
01	-	-
02	12	3
03	18	3
04	18	4
05	24	4
06	28	5
07	38	5

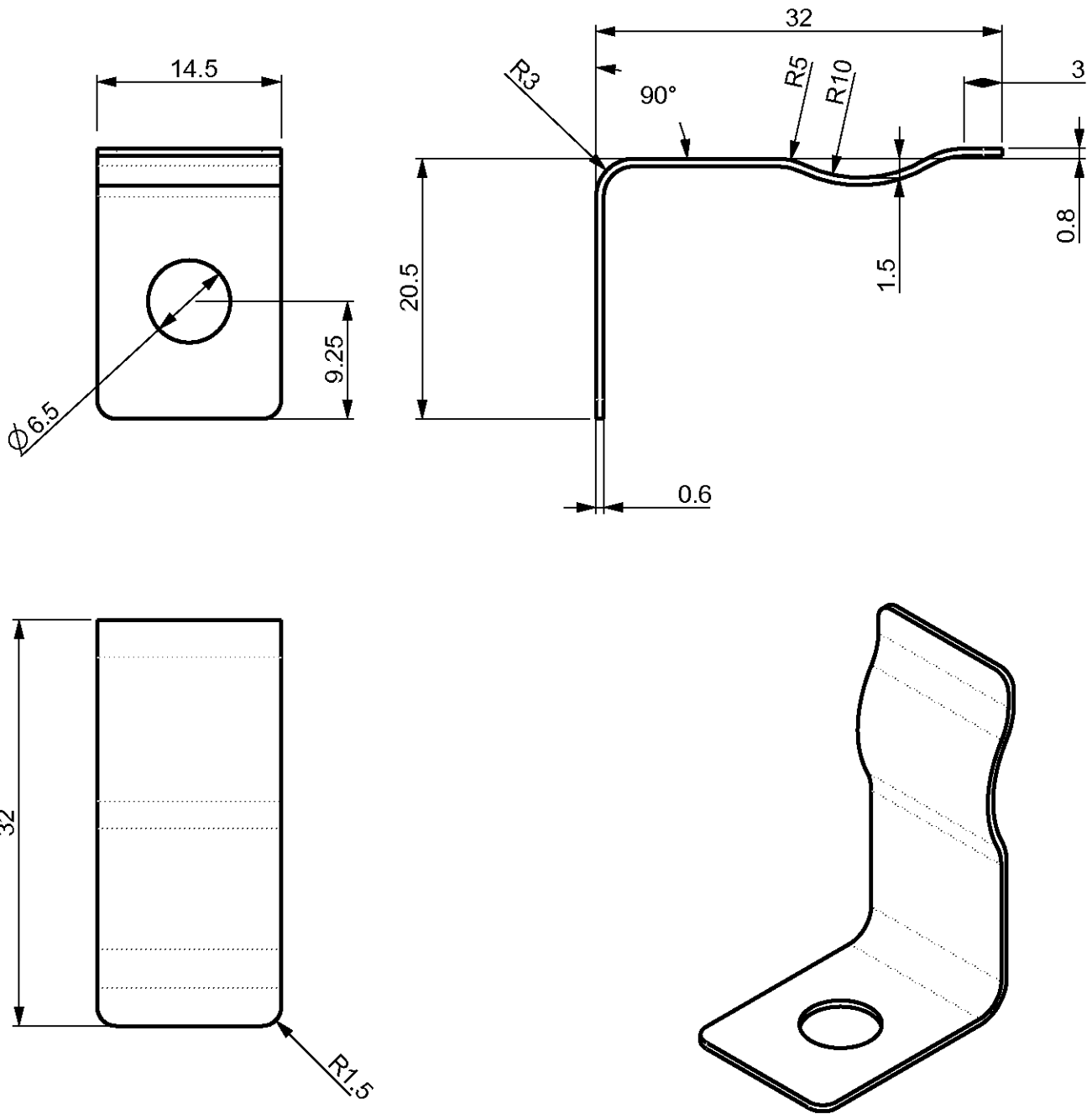


MODIFICA					DATA	FIRMA
LAVORAZIONE	TRATTAMENTO/FINITURA	GRADO	MATERIALE	VOLUME (cm3)	MASSA (g)	RAGGIUNTI NON QUOTATI ISO 2768-1
PRO-E	DISEGNATO	CONTROLLATO	VERIFICATO NORME	APPROVATO	QUOTE SENZA INDICAZIONE DI TOLLERANZA	
DATA	19-Feb-14				Classe di tolleranza UNI EN 22768-1 ISO 2768 -	SCALA 1:2
FIRMA	M. Calcagno					1 di 1
					DIN RAIL VTR PEDRO	
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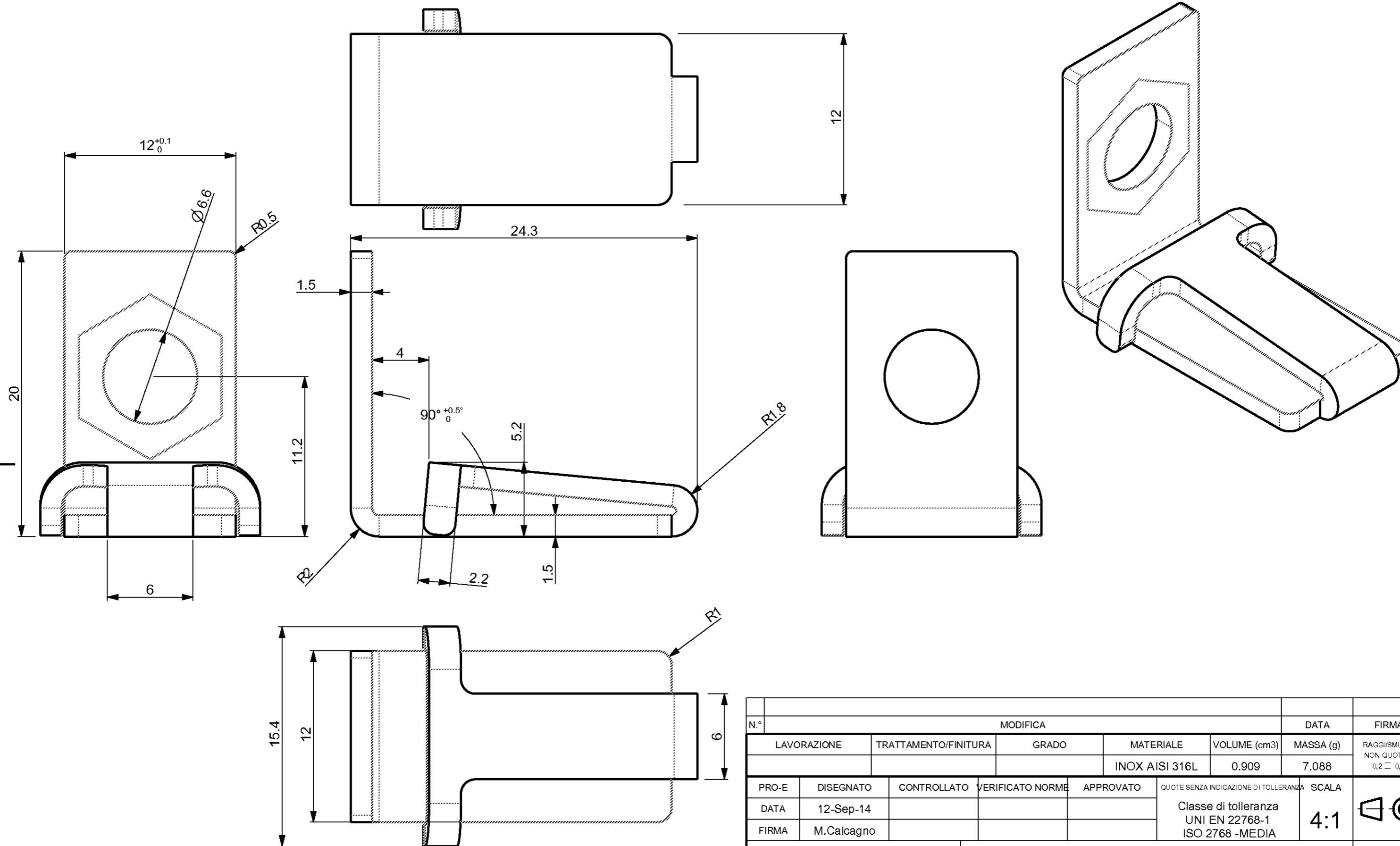




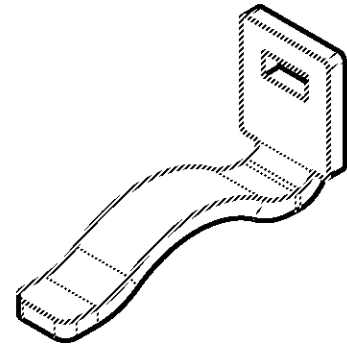
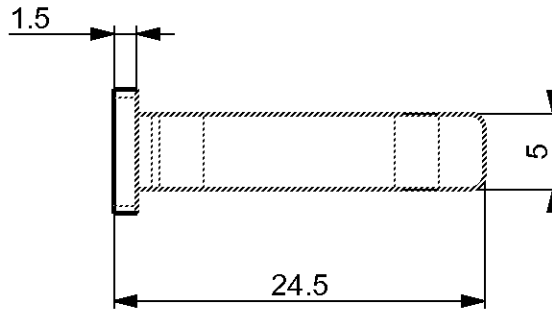
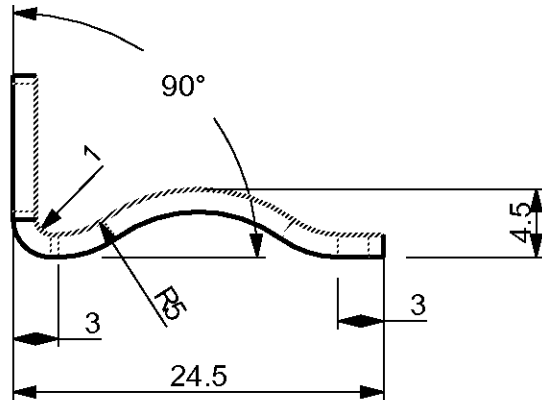
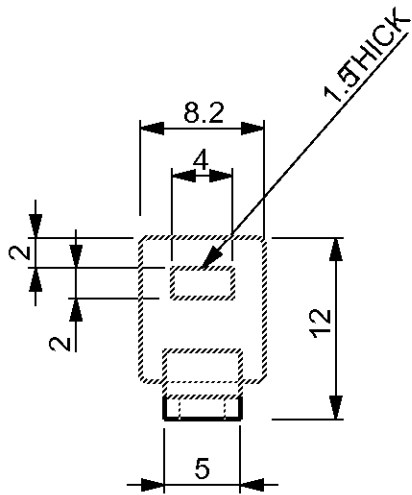
N.°					MODIFICA		DATA	FIRMA		
LAVORAZIONE	TRATTAMENTO/FINITURA	GRADO	MATERIALE	VOLUME (cm3)	MASSA (g)	RAGGI/SMUSSI NON QUOTATI 0,2 - 0,4				
PRO-E	DISEGNATO	CONTROLLATO	VERIFICATO NORME	APPROVATO	QUOTE SENZA INDICAZIONE DI TOLLERANZA		SCALA			
DATA	04-Mar-14				Classe di tolleranza UNI EN 22768-1 ISO 2768 -		1:1			
FIRMA	M.Calcagno							FOGLIO 1 di 1 FORMATO A3		
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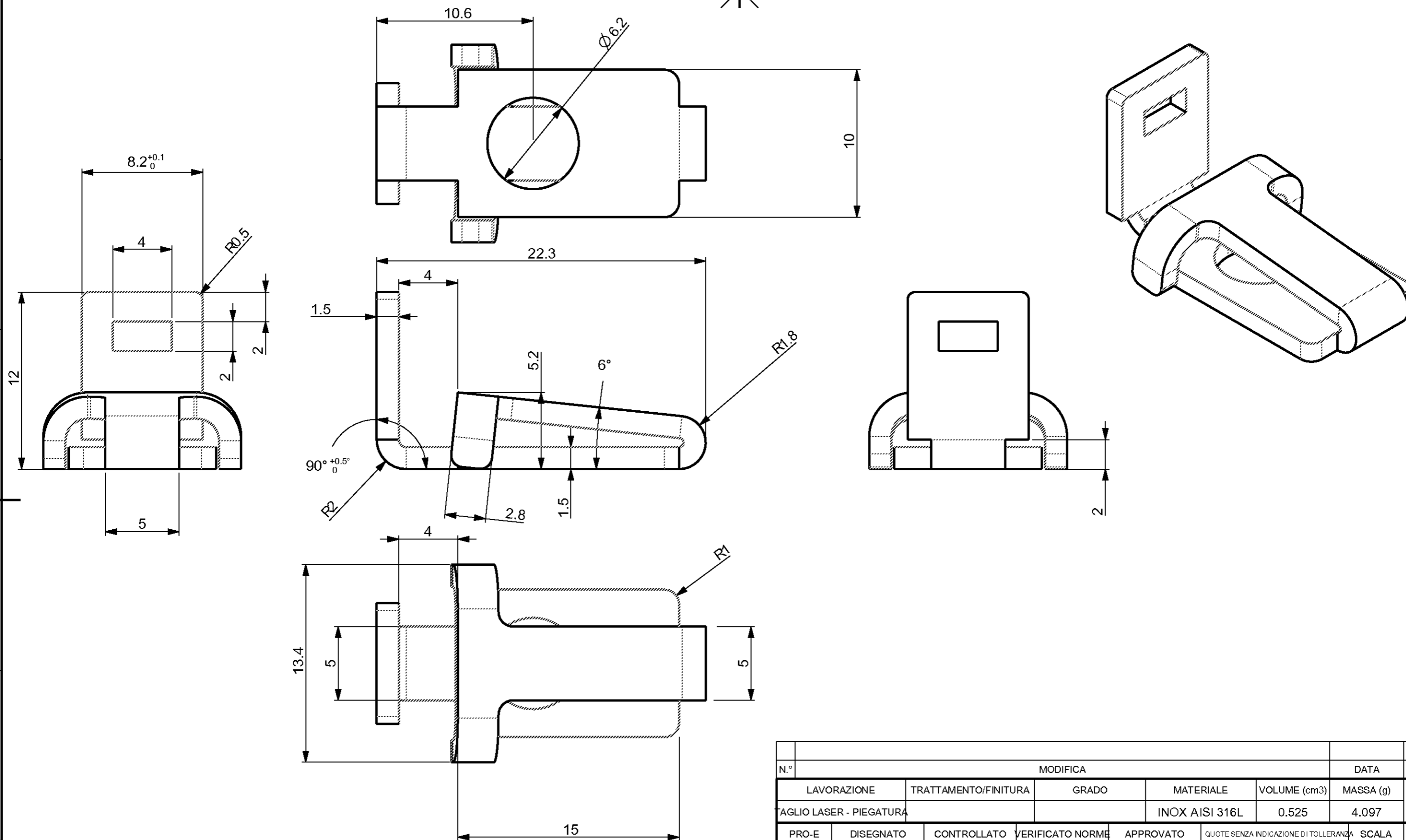
N.°					MODIFICA		DATA	FIRMA	
LAVORAZIONE	TRATTAMENTO/FINITURA	GRADO	MATERIALE	VOLUME (cm3)	MASSA (g)	RAGGI/SMUSSI NON QUOTATI 0,2 - 0,4			
			INOX AISI 316L	0.496	0.496				
PRO-E	DISEGNATO	CONTROLLATO	VERIFICATO NORME	APPROVATO	QUOTE SENZA INDICAZIONE DI TOLLERANZA	SCALA			
DATA	14-Jul-14				Classe di tolleranza UNI EN 22768-1 ISO 2768 -	2:1			
FIRMA	M.Calcagno								
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BLOCCO_PORTA					MODIFICA	FILE 3D	BLOCCO_PORTA/		



N.°					MODIFICA		DATA	FIRMA
LAVORAZIONE	TRATTAMENTO/FINITURA	GRADO	MATERIALE	VOLUME (cm3)	MASSA (g)	RAGGI SMUSSI NON QUOTATI 0,2 - 0,4		
			INOX AISI 316L	0.909	7.088			
PRO-E	DISEGNATO	CONTROLLATO	VERIFICATO NORME	APPROVATO	QUOTE SENZA INDICAZIONE DI TOLLERANZA		SCALA	
DATA	12-Sep-14				Classe di tolleranza UNI EN 22768-1 ISO 2768 -MEDIA		4:1	
FIRMA	M.Calcagno							
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			DISEGNO		10000003875	MODIFICA 00	FILE 3D 10000003876.00	FORMATO A3



N.°						MODIFICA		DATA	FIRMA	
LAVORAZIONE	TRATTAMENTO/FINITURA	GRADO	MATERIALE	VOLUME (cm3)	MASSA (g)	RAGGI/SMUSSI NON QUOTATI 0,2 - 0,4				
TAGLIO LASER - PIEGATURA			INOX 316L	0.299	0.000					
PRO-E	DISEGNATO	CONTROLLATO	VERIFICATO NORME	APPROVATO	QUOTE SENZA INDICAZIONE DI TOLLERANZA	SCALA				
DATA	15-Sep-14				Classe di tolleranza UNI EN 22768-1 ISO 2768 - MEDIA	2:1				
FIRMA	M.Calcagno									
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DISEGNO		10000003877		MODIFICA	00	FILE 3D	10000003878.00			FORMATO A4



N.°					MODIFICA		DATA	FIRMA
LAVORAZIONE	TRATTAMENTO/FINITURA	GRADO	MATERIALE	VOLUME (cm3)	MASSA (g)	RAGGI/SMUSI NON QUOTATI 0,2 ≡ 0,4		
TAGLIO LASER - PIEGATURA			INOX AISI 316L	0.525	4.097			
PRO-E	DISEGNATO	CONTROLLATO	VERIFICATO NORME	APPROVATO	QUOTE SENZA INDICAZIONE DI TOLLERANZA	SCALA		
DATA	12-Sep-14				Classe di tolleranza UNI EN 22768-1 ISO 2768 -MEDIA	4:1		
FIRMA	M.Calcagno						FOGLIO 1 di 1 FORMATO A3	
BOCCHIOTTI SOCIETA' PER L'INDUSTRIA ELETTROTECNICA GENOVA Proprieta' di Bocchiotti S.p.A.; sono vietati l'utilizzo e la riproduzione, anche parziale, senza autorizzazione Property of Bocchiotti S.p.A.; use and reproduction, even if partial, without authorization are forbidden			DESCRIZIONE		P VTR 06 NEMA4 R1 Piastrina VTR 06 NEMA 4			
			DISEGNC		10000003871	MODIFICA	00	FILE 3D 10000003872.00

TEST RECORD NO. 1

SAMPLES:

*Sample of the **cabinets and cutout boxes**, polymeric enclosure Series VTR as indicated below and constructed as described herein, were submitted by the manufacturer for examination and test.

Cat. No. VTR 07, molded of Menzolit SMC 0190 GY(f1), single door with dimensions 1080x810x355mm. Type ratings 1, 12, 12K.
Cat. No. VTR 05, molded of Menzolit SMC 0190 GY(f1), single door with dimensions 650x540x260mm. Type ratings 1, 4, 4X, 12, 12K.

The Models indicated here above were used for test purposes and considered representative of the entire series VTR.

GENERAL:

Test results relate only to the items tested.
The following tests were conducted.

Hosedown Test	UL 50E, Sec. 8.6
Atomized Water Test - Method A:	UL 50E, Sec. 8.4.2.1.2
Misalignment Test	UL 50E, Sec. 8.15 (C22.2 No. 94.2, Cl. 8.15)
Gasket Test - Tensile Strength And Elongation:	UL 50E, Sec. 8.13.2
Compression Test Part I - Compression At Room Temperature Can/Csa-C22.2 No. 94 UL50e / Can/Csa-C22.2 No. 94.2-07	UL 50E, Sec. 8.13.3, 8.13.3.2 (Sec. 6.2.5.1)
Compression Test Part II - Compression After Aging In An Air Oven Can/Csa-C22.2 No. 94 UL50e / Can/Csa-C22.2 No. 94.2-07	UL 50E, Sec. 8.13.3, 8.13.3.3 (Sec. 6.2.5.2)
Compression Test Part IIIi - Compression After Cold Impact Can/Csa-C22.2 No. 94 UL50e / Can/Csa-C22.2 No. 94.2-07	UL 50E, Sec. 8.13.3, 8.13.3.4 (Sec. 6.2.5.3)
Gasket Oil Immersion Test:	UL 50E, Sec. 8.13.4

(Cont'd)

Mold Stress-Relief Distortion Test	UL 50, Sec. 8.11
Crushing Resistance Test	UL 50, Sec. 8.10
Pull Out Test for Polymeric Enclosures:	UL50, Sec. 8.6.2
Torque Test for Polymeric Enclosures:	UL50, Sec. 8.6.3.
Bending Test for Polymeric Enclosures:	UL50, Sec. 8.6.4.
Resistance to Impact Test	UL 746C, Clause 22
Flammability - 127 MM (5 Inch) Flame Test	UL 746C, Section 17

The following tests were waived:

- Corrosion Protection Test due to polymeric enclosure.

The test methods and results of the above tests have been reviewed and found in accordance with the requirements in the following Standards:

- *
- UL 50, the Standard for Enclosures for Electrical Equipment, Non-Environmental considerations, Edition 12th, revision date April 27th, 2012;
- UL 50E, the Standard for Enclosures for Electrical Equipment, Environmental considerations, Edition 1st, revision date April 27th, 2012;

Test Record Summary:

* The results of this investigation indicate that the products evaluated comply with the applicable requirements in the **following Standards** ,

- **"Enclosures for Electrical Equipment, Non-Environmental Considerations" UL 50, Edition 1st, revision date April 27th, 2012**
- **"Enclosures for Electrical Equipment, Environmental Considerations" UL 50E, Edition 1st, revision date April 27th, 2012**
- **"Enclosures for Electrical Equipment, Non-Environmental Considerations" CAN CSA C22.2 No. 94.1, Edition 1st, revision date July 01st, 2008**
- **"Enclosures for Electrical Equipment, Environmental Considerations" CAN CSA C22.2 No. 94.2, Edition 1st, revision date July 01st, 2008**

and, therefore, such products are judged eligible to bear UL's Mark as described on the Conclusion Page of this Report.

Any information and documentation involving UL Mark services are provided on behalf of UL LLC, (UL) or any authorized licensee of UL.

TEST RECORD NO. 2

SAMPLES:

* Sample of the **cabinets and cutout boxes**, polymeric enclosure Series VTR as indicated below and constructed as described herein, were submitted by the manufacturer for examination and test.

Cat. No. VTR 07, molded of Menzolit SMC 0190 GY(f1), single door provided with the Locking door Bracket. Dimensions 1080x810x355mm. Type ratings 1, 4, 4X, 12, 12K.

The Model indicated above was used for test purposes and considered representative of Cat. No. VTR 06 provided with the Locking door Bracket.

GENERAL:

Test results relate only to the items tested.

The following tests were conducted with the results indicated.

The following tests were conducted.

Hosedown Test	(UL50E, Sec. 8.6)
---------------	-------------------

The following tests were considered covered as follow due to same construction and materials already tested:

Test	File	Report Date	Test Record No.
Misalignment Test	E466141	2014-06-27	1
Gasket Test - Tensile Strength And Elongation:	E466141	2014-06-27	1
Compression Test Part I - Compression At Room Temperature Can/Csa-C22.2 No. 94 UL50e / Can/Csa-C22.2 No. 94.2-07	E466141	2014-06-27	1
Compression Test Part II - Compression After Aging In An Air Oven Can/Csa-C22.2 No. 94 UL50e / Can/Csa-C22.2 No. 94.2-07	E466141	2014-06-27	1
Compression Test Part IIIi - Compression After Cold Impact Can/Csa-C22.2 No. 94 UL50e / Can/Csa-C22.2 No. 94.2-07	E466141	2014-06-27	1
Gasket Oil Immersion Test:	E466141	2014-06-27	1
Mold Stress-Relief Distortion Test	E466141	2014-06-27	1
Crushing Resistance Test	E466141	2014-06-27	1
Pull Out Test for Polymeric Enclosures:	E466141	2014-06-27	1
Torque Test for Polymeric Enclosures:	E466141	2014-06-27	1
Bending Test for Polymeric Enclosures:	E466141	2014-06-27	1
Resistance to Impact Test	E466141	2014-06-27	1
Flammability - 127 MM (5 Inch) Flame Test	E466141	2014-06-27	1

The following tests were waived:

- Corrosion Protection Test due to polymeric enclosure.

The test methods and results of the above tests have been reviewed and found in accordance with the requirements in:

- *- the Standard for Enclosures For Electrical Equipment, Non-Environmental Considerations UL 50 - Edition 12, Revision Date April 27th, 2012;
- the Standard for Enclosures For Electrical Equipment, Environmental Considerations UL 50E - Edition 1, Revision Date April 27th, 2012;
- *

Test Record Summary:

*Test Record Summary - The results of the investigation indicate that the samples evaluated comply with the applicable requirements in the **following standards:**

- **"Enclosures for Electrical Equipment, Non-Environmental Considerations" UL 50, Edition 1st, revision date April 27th, 2012**
- **"Enclosures for Electrical Equipment, Environmental Considerations" UL 50E, Edition 1st, revision date April 27th, 2012**
- **"Enclosures for Electrical Equipment, Non-Environmental Considerations" CAN CSA C22.2 No. 94.1, Edition 1st, revision date July 01st, 2008**
- **"Enclosures for Electrical Equipment, Environmental Considerations" CAN CSA C22.2 No. 94.2, Edition 1st, revision date July 01st, 2008**

and therefore, such products are judged eligible to bear UL's Mark as described on the Conclusion Page of this Report.

Test Record by:
ROBERTA VILLA
Engineering Project Handler
UL International Italia Srl

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TEST RECORD NO. 3

SAMPLES:

No Samples of the polymeric enclosure Series VTR were needed to be submitted by the manufacturer for examination.

Paper revision only for the following revisions:

- Update of codes for locking with key.
- Update of technical drawings for the Locking door brackets needed for VTR06 and VTR07 series

GENERAL:

No tests were deemed necessary due to alternate construction of Locking door brackets that does not impact on the safety and integrity of the enclosures. The revision is also for review the right standards.

Test Record Summary:

The results of the investigation indicate that the samples evaluated comply with the applicable requirements in the following standards:

- "Enclosures for Electrical Equipment, Non-Environmental Considerations" UL 50, Edition 1st, revision date April 27th, 2012
- "Enclosures for Electrical Equipment, Environmental Considerations" UL 50E, Edition 1st, revision date April 27th, 2012
- "Enclosures for Electrical Equipment, Non-Environmental Considerations" CAN CSA C22.2 No. 94.1, Edition 1st, revision date July 01st, 2008
- "Enclosures for Electrical Equipment, Environmental Considerations" CAN CSA C22.2 No. 94.2, Edition 1st, revision date July 01st, 2008

and therefore, such products are judged eligible to bear UL's Mark as described on the Conclusion Page of this Report.

Test Record by:
ROBERTA VILLA
Engineering Project Handler
UL International Italia Srl

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TEST RECORD NO. 4

SAMPLES:

No Samples of the polymeric enclosure Series VTR were needed to be submitted by the manufacturer for examination.

Paper revision to add the designation NBR 70 as alternative of the designation NBR 70SH already existing. It is the same o-ring material already tested and evaluated manufactured by Guarni.Med.

GENERAL:

No tests were deemed necessary due to an alternate designation only of the same o-ring material.

Test Record Summary:

The results of the investigation indicate that the samples evaluated comply with the applicable requirements in the following standards:

- "Enclosures for Electrical Equipment, Non-Environmental Considerations" UL 50, Edition 1st, revision date April 27th, 2012
- "Enclosures for Electrical Equipment, Environmental Considerations" UL 50E, Edition 1st, revision date April 27th, 2012
- "Enclosures for Electrical Equipment, Non-Environmental Considerations" CAN CSA C22.2 No. 94.1, Edition 1st, revision date July 01st, 2008
- "Enclosures for Electrical Equipment, Environmental Considerations" CAN CSA C22.2 No. 94.2, Edition 1st, revision date July 01st, 2008

and therefore, such products are judged eligible to bear UL's Mark as described on the Conclusion Page of this Report.

Test Record by:
ROBERTA VILLA
Engineering Project Handler
UL International Italia Srl

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TEST RECORD NO. 5

SAMPLES:

Samples of series VTR, as indicated below and constructed as described herein, were submitted by the manufacturer for examination and test.

Series VTR, Pin and reinforcement of the hinges made of AISI 303.
Type ratings 1, 4, 4X, 12, 12K.

GENERAL:

Test results relate only to the items tested.
The following tests were conducted with the results indicated.

ADDITIONAL CORROSION PROTECTION - TYPE 4X AND 6P (UL50E, Sec. 8.9)

The test methods and results of the above tests have been reviewed and found in accordance with the requirements in:

- the Standard for Enclosures For Electrical Equipment, Non-Environmental Considerations UL 50 - Edition 12, Revision Date April 27th, 2012;
- the Standard for Enclosures For Electrical Equipment, Environmental Considerations UL 50E - Edition 1, Revision Date April 27th, 2012;

Test Record Summary:

The results of the investigation indicate that the samples evaluated comply with the applicable requirements in the following standards and therefore, such products are judged eligible to bear UL's Mark as described on the Conclusion Page of this Report:

- "Enclosures for Electrical Equipment, Non-Environmental Considerations" UL 50, Edition 1st, revision date April 27th, 2012
- "Enclosures for Electrical Equipment, Environmental Considerations" UL 50E, Edition 1st, revision date April 27th, 2012
- "Enclosures for Electrical Equipment, Non-Environmental Considerations" CAN CSA C22.2 No. 94.1, Edition 1st, revision date July 01st, 2008
- "Enclosures for Electrical Equipment, Environmental Considerations" CAN CSA C22.2 No. 94.2, Edition 1st, revision date July 01st, 2008

Test Record by:
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CONCLUSION

Samples of the products covered by this Report have been found to comply with the requirements covering the category and the products are found to comply with UL's applicable requirements. The description and test result in this Report are only applicable to the sample(s) investigated by UL and does not signify UL certification or that the product(s) described are covered under UL's Follow-Up Service Program. When covered under UL's Follow-Up Service Program, the manufacturer is authorized to use the UL Listing Mark on such products which comply with UL's Follow-Up Service Procedure and any other applicable requirements of UL LLC. The Listing Mark of UL LLC on the product, or the UL symbol on the product and the Listing Mark on the smallest unit container in which the product is packaged, is the only method to identify products investigated by UL to published requirements and manufactured under UL's Listing and Follow-Up Service.

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