

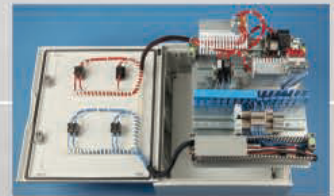


IBOCO®

MODULAR FIBERGLASS
ENCLOSURE CATALOG



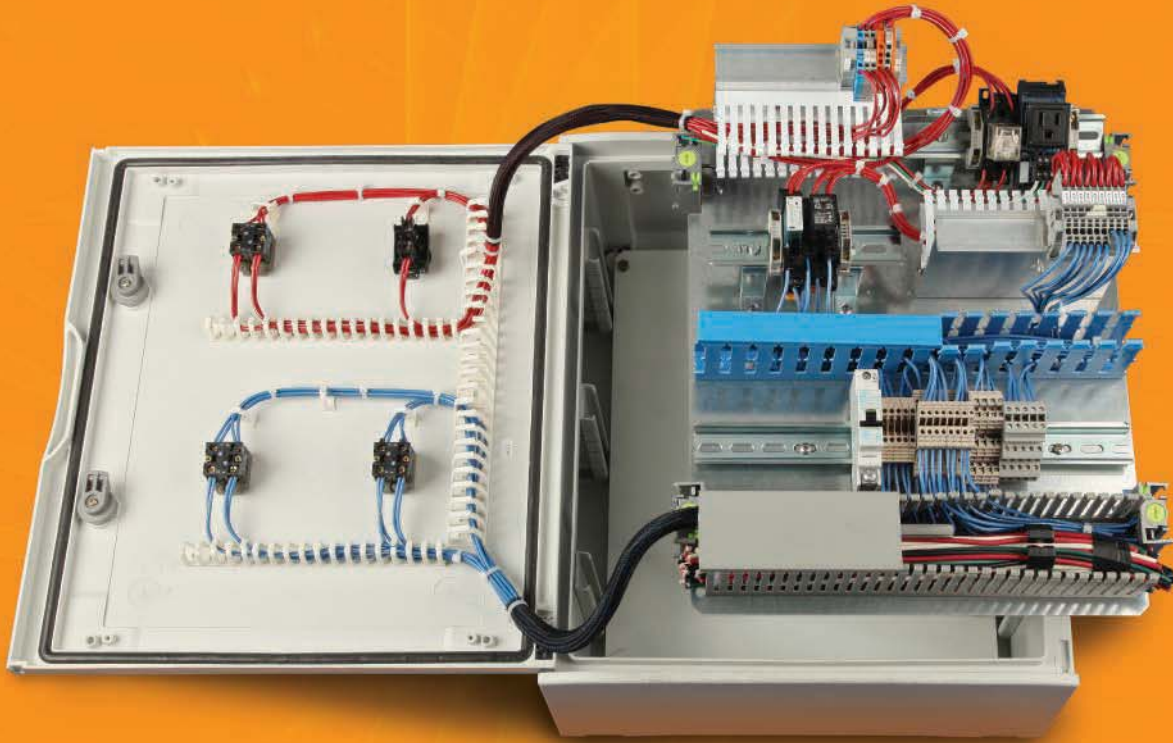
DEMAND INNOVATION



NEMA/UL Type 4X

IBOCO's New Modular Fiberglass Enclosures allow you to

~~WORK~~ OUTSIDE THE BOX



THE MODULAR FIBERGLASS ENCLOSURE

An innovator in the area of wire management for over 30 years, IBOCO continues its rich tradition in offering the market a comprehensive range of products that provide effective, efficient installations.

IBOCO's New line of Fiberglass enclosures are manufactured and designed to provide the installer an "ease of use" not found with any enclosure in the marketplace.

The 14 sizes offered, and their modular accessories, provides the OEM the competitive advantage. Labor, time and budgetary concerns are alleviated.

The Modular adjustable frame allows adjustment of din rail mounting components, modular panels and inner doors to desired heights, virtually utilizing a quick quarter turn lock-in method.

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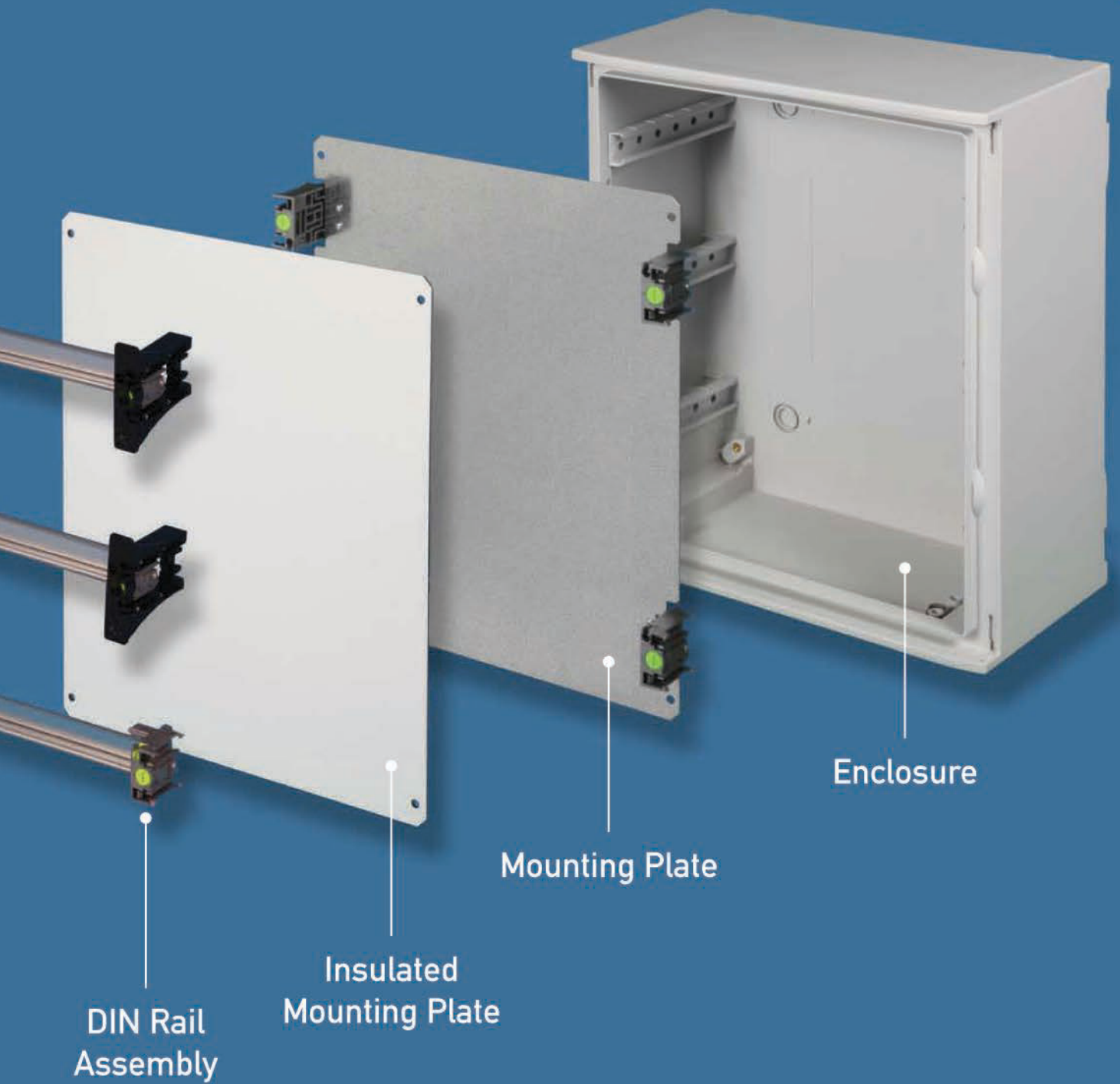
Enclosure Door

Inner Door

Modular Frames

DIN Rail
Assembly Blocks



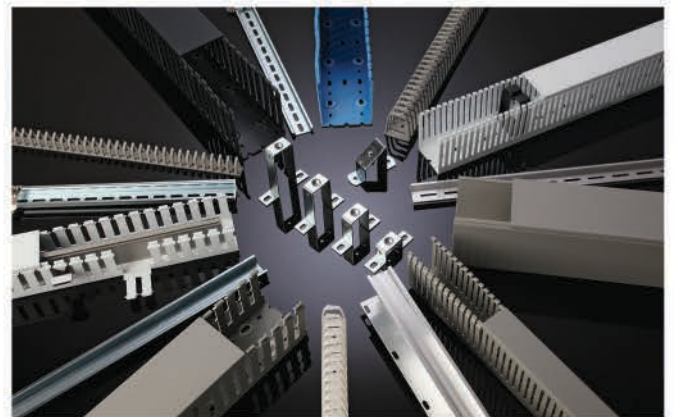


Product Overview

As control panels grow increasingly complex and crowded, schedules become tighter and budgets shrink, more engineers are realizing the advantage of IBOCO's innovative wire management system. IBOCO has always offered a comprehensive range of products that provide faster, effective, efficient installations.

IBOCO has developed a comprehensive wiring duct system that organizes, retains, separates, identifies and handles even the toughest panel wiring challenges.

As with all of our products, the VTR series provides simple resolutions via the quick "quarter turn" modular accessories. Lower costs, superior features and quicker installations.



Wire duct



Din Rail



Dinosaur

IBOCO's reputation for unique, labor saving products has been well documented. Our commitment to value via outside sales support, highly trained customer service representatives, end-user sample support, as well as the largest inventory in North America, and unprecedented service record, has made IBOCO unique in the industry.

IBOCO's constant development and implementation of new products distinguishes and defines our customer requirements. We will continue to define and anticipate the evolving market needs of our valued partners and customers, while offering a multitude of marketing and sales strategies.

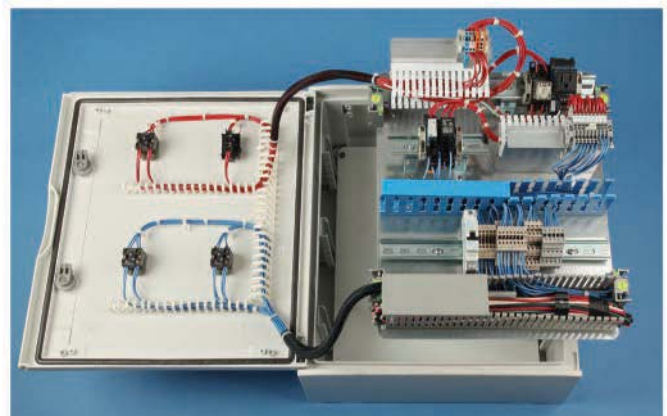
IBOCO is enthusiastic about its new family of fiberglass enclosures, and accessories, and guarantees all of the services and support that the market has grown accustomed to with our wire duct, din rail and wire management products.

The VTR fiberglass enclosures are manufactured strictly from our proprietary formulation. Our line of maintenance free, corrosion resistant fiberglass enclosures provide optimum protection in the harshest environments, from water treatment facilities to chemical processing and oil refineries.

The gasket is poured polyurethane and provides a watertight, dust-tight seal.

It is designed for installations at -25 through +60C (-13 through +140F).

**IBOCO, The World leader
in Panel Management,
presents its new family of
fiberglass enclosures.**





FIBERGLASS ENCLOSURES **SOLID DOOR**

PART NUMBER	VTR01C	VTR02C	VTR03C	VTR04C	VTR05C	VTR06C	VTR07C
SIZE	11.8" x 9.2" x 6.5"	16.7" x 12.8" x 7.1"	19.7" x 16.9" x 8.3"	25.6" x 16.9" x 8.3"	25.6" x 21.3" x 10.2"	31.7" x 24.2" x 12.4"	41.8" x 31.9" x 14.0"
MM	303 x 265 x 167	428 x 325 x 183	504 x 434 x 210	654 x 434 x 210	654 x 543 x 265	806 x 816 x 319	1056 x 810 x 355
MODULES		36 (12x3)	54 (18x3)	72 (18x4)	96 (24x4)	140 (28x5)	190 (38x5)
DISSIPATED POWER (WATT)	1	35	72	81	93	136	232
	2	34	61	111	122	132	215
EMP Steel Mounting Plate	PFVTR01	PFVTR02	PFVTR03	PFVTR04	PFVTR05	PFVTR06	PFVTR07
EPP Insulated Mounting Plate	PFVTR01IS	PFVTR02IS	PFVTR03IS	PFVTR04IS	PFVTR05IS	PFVTR06IS	
EID Inner Door		CP02	CP03	CP04	CP05	CP06	CP07
EMF Module Frame*		PSVTR12	PSVTR18	PSVTR18	PSVTR24	PSVTR28	PSVTR38
EBP Blank Panel		PCVTR12	PCVTR18	PCVTR18	PCVTR24	PCVTR28	PCVTR38
EBPD Double Blank Panel		PCVTR12DO	PCVTR18DO	PCVTR18DO	PCVTR24DO	PCVTR28DO	PCVTR38DO
EDR DIN Rail Assembly		GUIDA12	GUIDA18	GUIDA18	GUIDA24	GUIDA28	GUIDA38
EVF Vertical Frame		MONT02	MONT03	MONT04		MONT06	MONT07
EMB Wall Bracket Stainless Steel Galvanized	STVTR 04680	STVTR 04680	STVTR 04680	STVTR 04680	STVTR 04680	STVTR 04680	STVTR 04680
EPAB Adjustable Mounting Plate Block		SCORPF	SCORPF	SCORPF	SCORPF	SCORPF	SCORPF

* Includes DIN Rail Assembly Blocks for Optional Mountings



NEMA/UL Type 4X

COLOR
GREY
RAL 7035

CEI 23-68/23-49
EN62208

ACCORDING TO
IECEE CB SCHEME
IEC 60670-24
EXCEPT SIZE 7

66
PROTECTION
IP

20J
SHOCK
RESISTANCE

Lock U





WINDOW DOOR

FIBERGLASS ENCLOSURES

PART NUMBER	VTR010	VTR020	VTR030	VTR040	VTR050	VTR060	VTR070
SIZE	11.8" x 9.2" x 6.5"	16.7" x 12.8" x 7.1"	19.7" x 16.9" x 8.3"	25.6" x 16.9" x 8.3"	25.6" x 21.3" x 10.2"	31.7" x 24.2" x 12.4"	41.8" x 31.9" x 14.0"
MM	303 x 265 x 167	428 x 325 x 183	504 x 434 x 210	654 x 434 x 210	654 x 543 x 265	806 x 816 x 319	1056 x 810 x 355
MODULES		36 (12x3)	54 (18x3)	72 (18x4)	96 (24x4)	140 (28x5)	190 (38x5)
DISSIPATED POWER (WATT)	1	35	72	81	93	136	232
	2	34	61	111	122	132	215
EMP Steel Mounting Plate	PFVTR01	PFVTR02	PFVTR03	PFVTR04	PFVTR05	PFVTR06	PFVTR07
EPP Insulated Mounting Plate	PFVTR01IS	PFVTR02IS	PFVTR03IS	PFVTR04IS	PFVTR05IS	PFVTR06IS	
EID Inner Door		CP02	CP03	CP04	CP05	CP06	CP07
EMF Module Frame*		PSVTR12	PSVTR18	PSVTR18	PSVTR24	PSVTR28	PSVTR38
EBP Blank Panel		PCVTR12	PCVTR18	PCVTR18	PCVTR24	PCVTR28	PCVTR38
EBPD Double Blank Panel		PCVTR12D0	PCVTR18D0	PCVTR18D0	PCVTR24D0	PCVTR28D0	PCVTR38D0
EDR DIN Rail Assembly		GUIDA12	GUIDA18	GUIDA18	GUIDA24	GUIDA28	GUIDA38
EVF Vertical Frame		MONT02	MONT03	MONT04		MONT06	MONT07
EMB Wall Bracket Stainless Steel Galvanized	STVTR 04680	STVTR 04680	STVTR 04680	STVTR 04680	STVTR 04680	STVTR 04680	STVTR 04680
EPAB Adjustable Mounting Plate Block		SCORPF	SCORPF	SCORPF	SCORPF	SCORPF	SCORPF

* Includes DIN Rail Assembly Blocks for Optional Mountings



UL NEMA 4X
on solid door only

COLOR
GREY
RAL 7035

CEI 23-48/23-49
EN62208

ACCORDING TO
IECEE CB SCHEME
IEC 60670-24
EXCEPT SIZE 7

66
PROTECTION
IP

20J
SHOCK
RESISTANCE

Lock U



All Enclosure's include removable channel guides for back panel, din rail, and additional accessory mounting.



Enclosure and Accessories

Removable door pin allows for left or right hinging in the field.



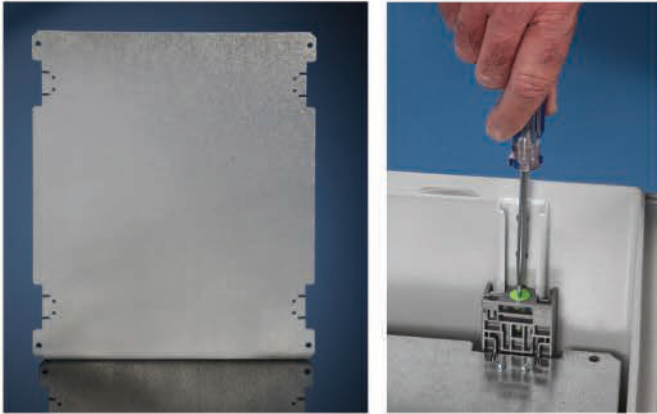
Threaded inset on back of the enclosures for wall bracket mounting.



Includes standard lock, optional locks are available for increased security.



Steel mounting plate may be quickly installed onto the channel guides, at desired height, utilizing the adjustable mounting plate blocks, by literally using a quick quarter turn lock-in method.



Insulated Mounting plate is an environmental insulated back panel which allows additional mounting options.

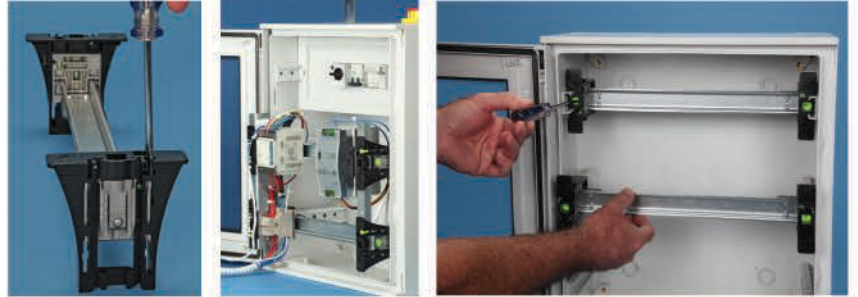


Din Rail Assembly. This innovative adjustable height din rail assembly is designed to enable the installer to adjust the rail to any height within the enclosure.



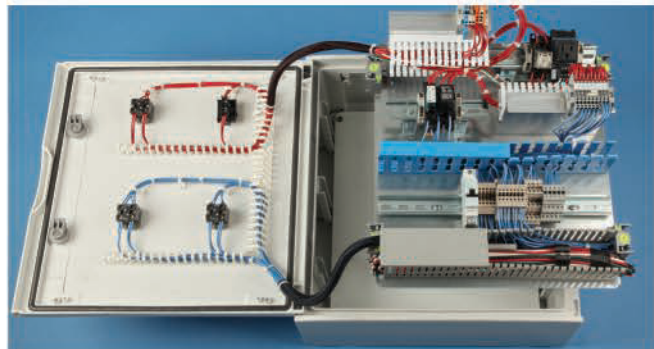
Enclosure and Accessories

For additional mounting options, you may utilize the din rail that has the din rail assembly blocks, which is included in the optional module frame. DIN Rail Assembly Blocks can be adjusted to a depth of 48mm or 75mm.



Enclosure and Accessories

IBOCO's wire duct may be fastened directly onto the din rail rail assembly block utilizing the ZP-1 mounting insert, capturing the complete rail, or back panel structure. The entire panel may be quickly unlocked and entirely removed from the enclosure in order to provide maintenance "outside of the box."



Module Frames with breakout shields for device spacing. May be installed on either the channel guides, or the din rail assembly blocks, by securing push-in tabs with a screwdriver.



Blank panel/Double Blank panel are adjustable for customized installations and modifications.



Inner Door. The swing out inner door for enclosure security and device protection. Allows for right or left hinging. May be installed once placement of inner door pin is set. Inner door tab is fixed with a simple push in on the 4 tabs that are molded in the door.



The fiberglass enclosure series is available with both solid and window doors. Removable door pin allows for left or right hinging.



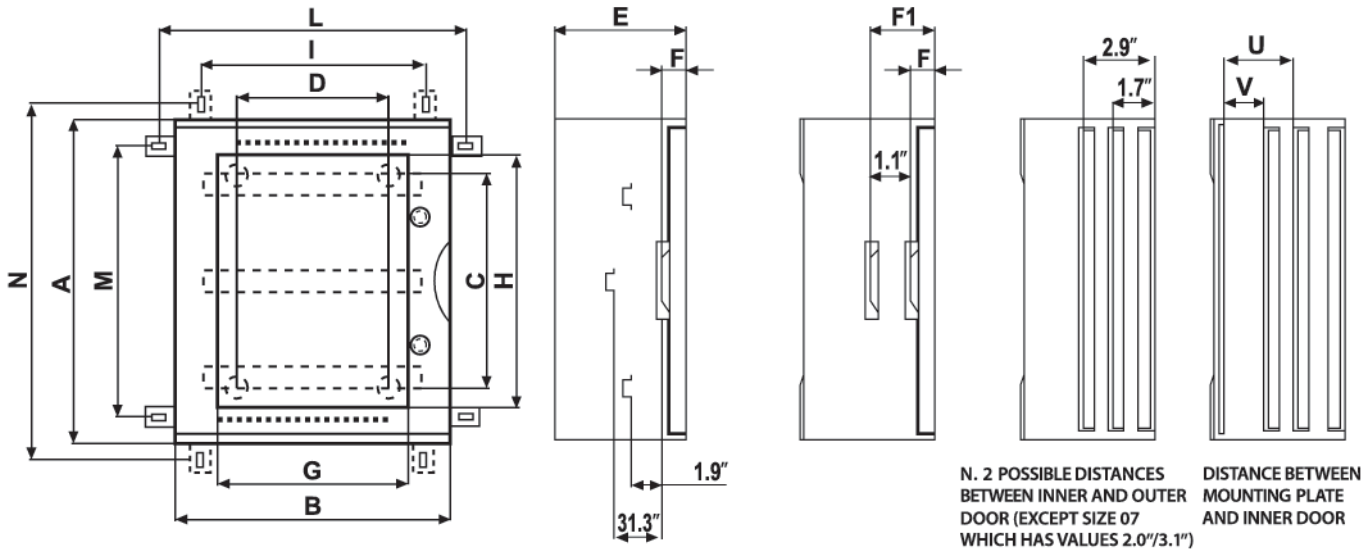
A pole mounting kit is also available. Please contact IBOCO for additional information.

Enclosure and Accessories

FIBERGLASS ENCLOSURES

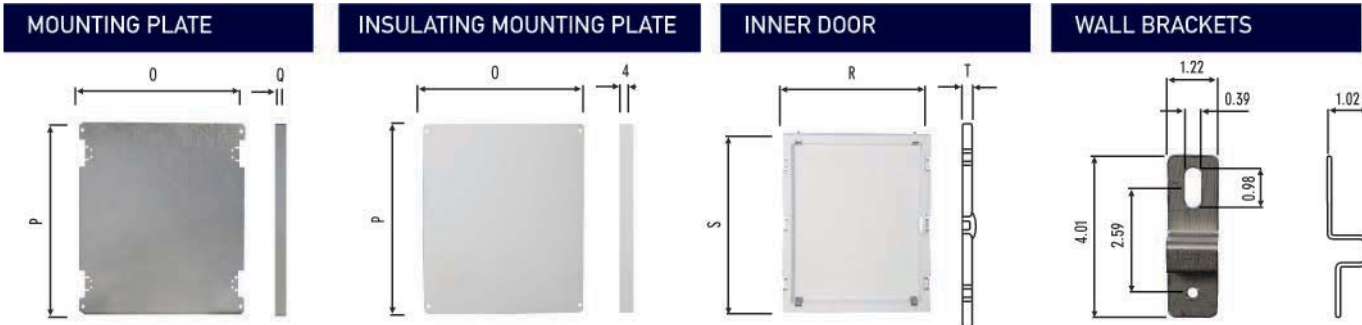
DIMENSIONAL DRAWINGS

SOLID/WINDOW TYPE



SIZE/DESCRIPTION	DIMENSIONS																	
	MM	INCHES	MM	INCHES	MM	INCHES	MM	INCHES	MM	INCHES	MM	INCHES						
	A	B	C	D	E	F		F1		G	H							
1 VTR 01	303	12.4	265	10.8	150	6.1	110	4.3	167	6.6	-	-	161	6.3	215	8.5		
2 VTR 02	428	17.5	325	15.5	255	10.4	132	5.2	183	7.2	40	1.6	67	2.6	193	7.6	319	12.6
3 VTR 03	504	20.6	434	17.7	330	13.5	240	9.4	210	8.3	40	1.6	67 - 94	2.6 - 3.7	300	11.8	393	15.5
4 VTR 04	654	26.7	434	17.7	480	19.6	240	9.4	210	8.3	40	1.6	67 - 94	2.6 - 3.8	300	11.8	544	21.4
5 VTR 05	654	26.7	543	22.2	480	19.6	348	13.7	265	10.4	40	1.6	67 - 94 - 121 - 148	2.6 - 3.7 - 4.8 - 5.8	405	15.9	544	21.4
6 VTR 06	806	32.9	616	25.1	630	25.7	420	16.5	319	12.6	40	1.6	67 - 94 - 121 - 148 - 175 - 202	2.6 - 3.7 - 4.8 - 5.8 - 6.9 - 8.0	480	18.9	694	27.3
7 VTR 07	1056	43.1	810	33.1	885	36.1	600	23.6	355	14.0	54	2.1	81 - 108 - 135 - 162 - 189 - 216	3.2 - 4.3 - 5.3 - 6.4 - 7.4 - 8.5	639	25.2	875	34.4

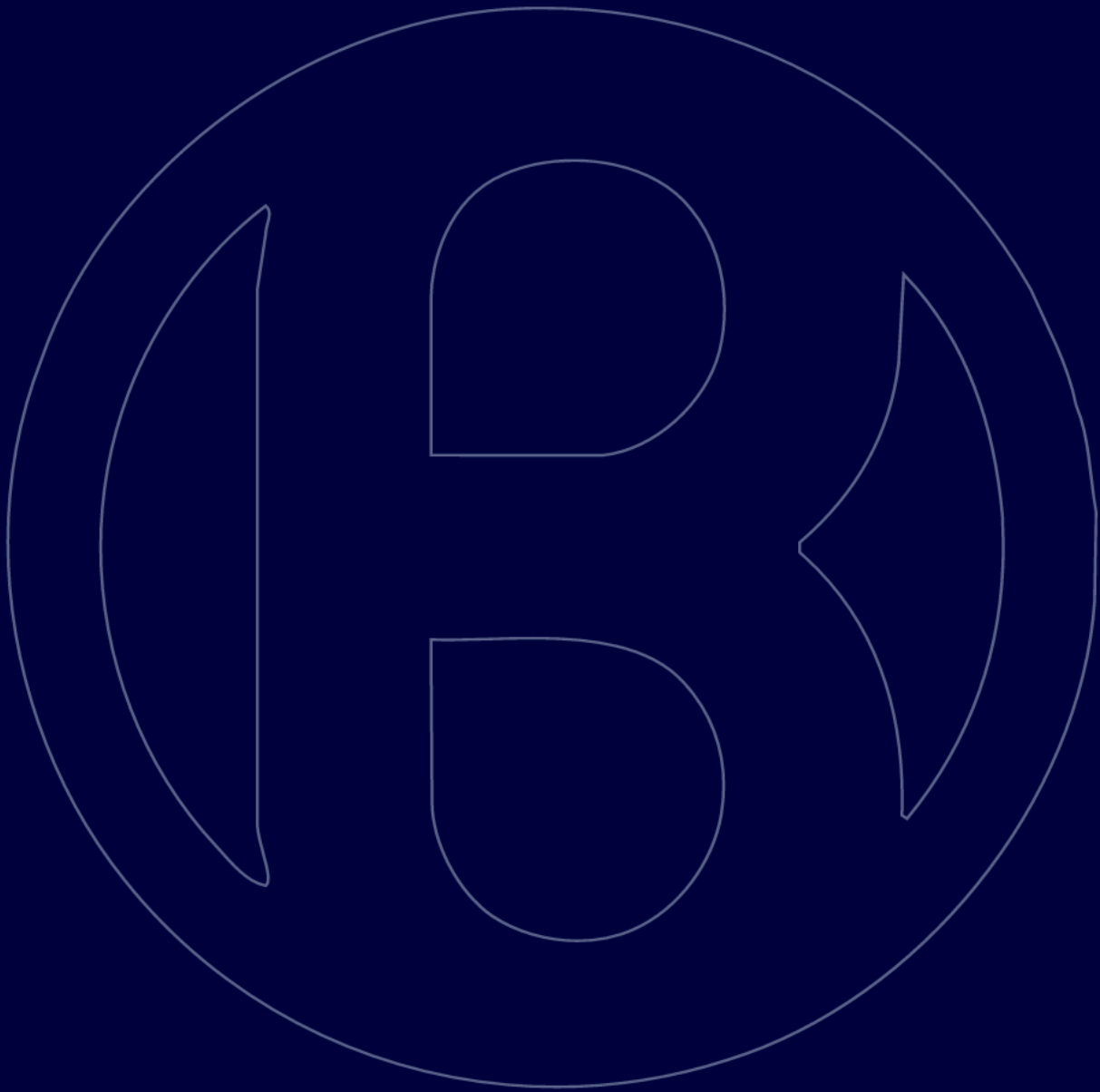
SIZE/DESCRIPTION	DIMENSIONS																							
	MM	INCHES	MM	INCHES	MM	INCHES	MM	INCHES	MM	INCHES	MM	INCHES	MM	INCHES	MM	INCHES								
	I	L	M	N	U	V	O	P	Q	R	S	T												
1 VTR 01	184	7.2	316	12.4	222	8.7	354	15.9	-	-	-	-	199	7.8	240	9.4	1.5	0.06	-	-	-	-		
2 VTR 02	245	9.6	377	14.8	348	13.7	480	18.9	108	4.3	78	3.1	242	9.5	365	14.4	1.5	0.06	210	8.3	314	12.4	20	0.8
3 VTR 03	353	13.9	485	19.1	423	16.7	555	21.9	135	5.3	105	4.1	350	13.8	440	17.3	1.5	0.06	318	12.5	389	15.3	20	0.8
4 VTR 04	353	13.9	485	19.1	573	22.6	705	27.8	135	5.3	105	4.1	350	13.8	590	23.2	2.0	0.08	318	12.5	539	21.2	20	0.8
5 VTR 05	462	18.2	594	23.4	573	22.6	705	27.8	188	7.4	158	6.2	458	18.0	590	23.2	2.0	0.08	425	16.7	539	21.2	20	0.8
6 VTR 06	533	21.0	665	26.2	723	28.5	855	33.7	243	9.6	215	8.4	530	20.9	740	29.1	2.0	0.08	498	19.6	689	27.1	20	0.8
7 VTR 07	713	28.1	845	33.3	974	38.3	1105	43.5	273	10.7	243	9.6	710	28.0	990	39.0	2.0	0.08	677	26.7	938	36.9	25	1.0



TECHNICAL SPECIFICATIONS

MATERIALS

Technical Characteristics	Unit of Measure	Fiberglass	
		Value	Standard
CHEMICAL-PHYSICAL PROPERTIES			
Specific Gravity	g/cm ³	1.70	UNI 7092
H2O 23°C Absorption	%	< 0,2	ISO 62
Formaldehyde	ppm	not present	-
Cadmium	ppm	not present	-
MECHANICAL PROPERTIES			
Tensile stress at break	Mpa	200	ISO 527
Traction Strength	Mpa	-	-
Elongation at break	%	-	-
Modulus of elasticity at traction	Mpa	-	-
Modulus of elasticity at flexion	Mpa	9000	UNI EN63
THERMAL PROPERTIES			
Temperature VICAT	°C	> 200	ISO 306
HDT	°C	> 200	UNI 5641
Coefficient of expansion	K ⁻¹	-	-
Specific heat	kJ/kgK	-	-
Thermal conductivity	W/mK	-	-
ELECTRICAL PROPERTIES			
Dielectric constant	Adim.	5,5	VDE 0303
Dielectric strength	kV/mm	30	IEC 243
Surface resistance	Ohm	10 ¹³	IEC 93
SELF-EXTINGUISHING PROPERTIES			
Self-extinguishing 1,6 mm	Adim.	-	-
Self-extinguishing 3,2 mm	Adim.	V0	UL 94
Glow wire test (2mm)	°C	960	IEC 60695-2-12
Oxygen Number	%	-	-



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