



Industrial Electric Supply



### • Isolatori Passanti immersi per esterno

Sono isolatori nei quali una delle due estremità è prevista per restare in aria ambiente esposta alle condizioni atmosferiche mentre l'altra per rimanere immersa in un mezzo isolante diverso dall'aria (es. olio o gas).

### • Linea di fuga - distanza superficiale

Distanza più breve lungo la superficie di un isolatore passante tra due parti conduttrici.

### • Valori nominali e determinazione della linea di fuga

La linea di fuga è determinata da:  $U_r(KV) \times d_{cs} (mm/KV) \times K_D$  dove:

$U_r$  : Valore della tensione nominale

$d_{cs}$  : Valore nominale minimo della linea di fuga specifica i cui valori per i diversi livelli di contaminazione sono:

I contaminazione leggera 16mm/Kv

II contaminazione media 20mm/Kv

III contaminazione forte 25mm/Kv

IV contaminazione molto forte 31mm/Kv

$K_D$  fattore di correzione che dipende dal diametro medio ( $D_m$ ) dell'isolatore passante, le cui classi sono:

< 300 mm

$K_D = 1$

da 300 a 500 mm

$K_D = 1.1$

> 500 mm

$K_D = 1.2$

### • Distanza di arco (solo parti metalliche)

E' la distanza più breve nell'aria all'esterno dell'isolatore passante tra le parti metalliche sulle quali si applica normalmente la tensione di esercizio.

• **Altitudine:** Sebbene il livello di isolamento si riferisca al livello del mare, gli isolatori passanti corrispondenti alla presente norma sono dichiarati idonei per essere utilizzati ad un'altitudine non superiore a 1000 metri. Per garantire che le tensioni di tenuta eterna siano sufficienti per altitudini superiori a 1000 m. è necessario aumentare adeguatamente la distanza di arco rispetto a quella prevista normalmente. Non è necessario modificare lo spessore radiale dell'isolamento, nè la dimensione dell'estremità immersa. La tensione di perforazione e la tensione di scarica nel mezzo di immersione di un isolatore passante non sono influenzate dall'altitudine. A causa delle limitazioni imposte dalla tensione di perforazione e di scarica nel mezzo di immersione, non è sempre possibile verificare l'efficacia dell'aumento della distanza di arco effettuando prove a un'altitudine inferiore a quella di esercizio. In tale caso, il fornitore deve dimostrare che, con l'aumento della distanza d' arco, l'isolatore passante è idoneo. Come regola generale, a partire da 1000 m. sopra il livello del mare fino ad un massimo di 3000 m, la distanza d'arco necessaria al livello del mare può essere incrementata dell'1,0 % ogni 100 m.

Esempio: altitudine del luogo di installazione 2800m, incremento della distanza d'arco:

$$1 \% \times \frac{2800 \text{ m} - 1000 \text{ m}}{100 \text{ m}} = 18\%$$

• **Materiale:** Porcellana conforme alla serie C 100 o un materiale equivalente.

• **Colore:** Marrone (sono ammessi altri colori, previo accordo).

• **Superficie:** Smaltata eccetto le superfici lavorate, le superfici a terra.

• **A richiesta: isolatori con linea di fuga superiore alla norma.**

### • Outdoor-immersed bushing

Bushing, one end of which is intended to be in ambient air and exposed to outdoor atmospheric conditions and the other end to be immersed in an insulating medium other than ambient air (e.g. oil or gas).

### • Creepage distance

Shortest distance along the surface of an insulator between two conductive parts.

### • Minimum nominal creepage distance

Unless otherwise agreed between purchaser and supplier, or demonstrated by a test, the creepage distance in accordance with IEC 815 is determined by  $U_r(KV) \times d_{cs} (mm/KV) \times K_D$  where:

$U_r$  = rate voltage valve

$d_{cs}$  = is the minimum nominal specific creepage distance, the values of which for the various pollution levels are:

I light: 16 mm/Kv

II medium: 20 mm/Kv

III heavy: 25 mm/Kv

IV very heavy: 31 mm/Kv

$K_D$  = is the correction factor depending on the averaged diameter  $D_m$  of the insulator, the classes of which are:

< 300 mm:

$K_D = 1$

300 to 500 mm:

$K_D = 1.1$

> 500mm:

$K_D = 1.2$

$D_m$  = shall be determined in accordance with IEC 815.

If artificial pollutions test are required they shall be performed in accordance with IEC 507

### • Arcing distance

Shortest distance in air external to the insulator between metallic parts which normally have the operating voltage between them.

### • Altitude

Although the insulation level refers to sea level, bushings corresponding to this standard are declared suitable for operation at any altitude not exceeding 1000 m. In order to ensure that the external withstand voltages of the bushing are sufficient at altitudes exceeding 1000 m, the arcing distance normally required shall be increased by a suitable amount. It is not necessary to adjust the radial thickness of insulation or the clearance of the immersed end. The puncture strength and the flashover voltage in the immersion medium of a bushing are not affected by altitude.

to the limitations of puncture strength and flashover voltage in the immersion medium it may not always be possible to check the adequacy of the increased arcing distance by actual test at any altitude lower than that of operation. In such a case the supplier shall demonstrate by the amount of increase of the arcing distance, that the bushing is adequate.

For general guidance an increase of 1,0% of the arcing distance necessary at sea level for each 100 m in excess of 1000 m up to a maximum of 3000 m above sea level should be applied.

EXAMPLE Altitude of installation 2800 m:

Increase in arcing distance.

$$1 \% \times \frac{2800 \text{ m} - 1000 \text{ m}}{100 \text{ m}} = 18\%$$

• **Material :** porcelain in accordance group C100 or equivalent material.

• **Colour :** brown (other materials are allow by previous agreement)

• **Surface :** glazed excepting for the worked surfaces.

• **At request: insulators with creepage beyond the standard.**

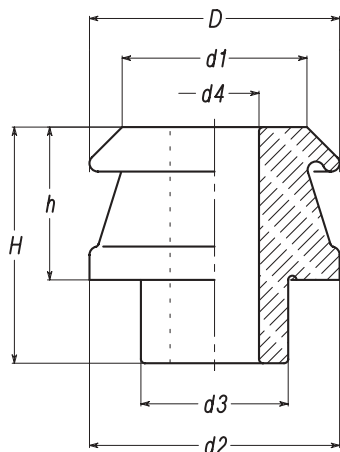
# 710

**Isolatori passanti per trasformatori UNEL 38129-38130 DIN 42530 • 1 KV - 250 ÷ 3150 A**

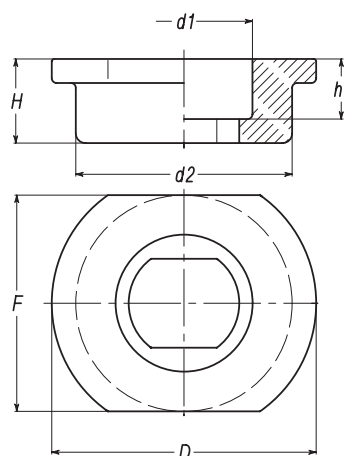
Isolateurs passants pour transformateurs DIN 42530 • 1 KV - 250 ÷ 3150 A

Transformer bushing insulators DIN 42530 • 1 KV - 250 ÷ 3150 A

Transformator Durchführungisolatoren DIN 42530 • 1 KV - 250 ÷ 3150 A



**A**



**B**

Dimensioni - Dimensions : mm

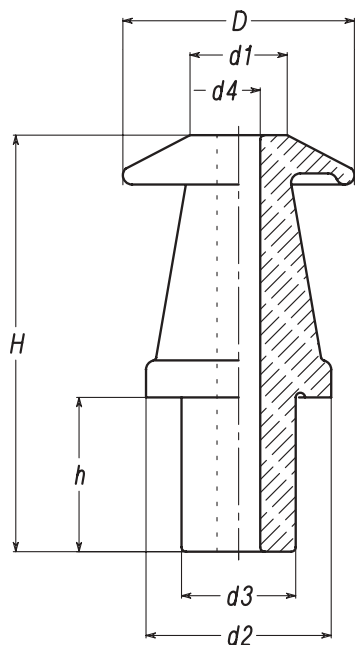
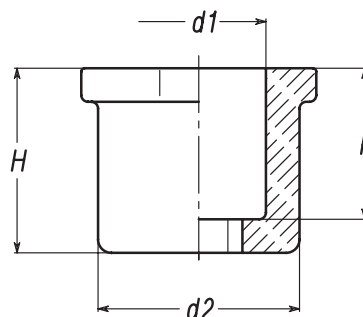
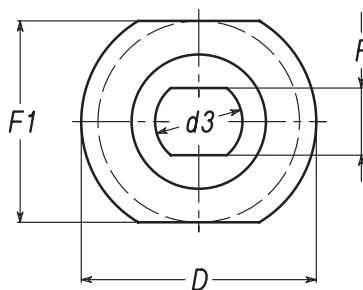
CODICE	A50012000		A50020000		A50030000		A50042000		A50048000	
CLASSE	1/250		1/630		1/1000		1/2000		1/3150	
Ref. Dis.	A	B	A	B	A	B	A	B	A	B
<b>H</b>	70	30	80	30	85	35	85	35	85	35
<b>D</b>	50	60	70	85	90	110	104	125	125	150
<b>d1</b>	32	30	47	46	65	57	80	70	100	90
<b>d2</b>	50	50	70	70	90	90	104	104	125	125
<b>d3</b>	27	26	43	41	53	46	66	64	86	80
<b>d4</b>	14	-	22	-	32	-	44	-	50	-
<b>h</b>	25	20	25	20	30	25	30	25	30	25
<b>F</b>	-	20	-	28	-	37	-	51	-	61
<b>F1</b>	-	50	-	70	-	90	-	104	-	125
Linea di fuga nom. / Creepage distance	50	-	75	-	75	-	75	-	75	-
Distanza d'arco / Arcing distance	50	-	60	-	60	-	60	-	60	-
Tensione nominale / Rated voltage <b>Ur</b> Kv	1	1	1	1	1	1	1	1	1	1
Peso / Weight gr.~	160	100	380	190	640	400	820	470	1350	700

**Isolatori passanti per trasformatori DIN 42539 • 3 KV - 250 ÷ 3150 A**

Isolateurs passants pour transformateurs DIN 42539 • 3 KV - 250 ÷ 3150 A

Transformer bushing insulators DIN 42539 • 3 KV - 250 ÷ 3150 A

Transformator Durchführungsisolatoren DIN 42539 • 3 KV - 250 ÷ 3150 A


**A**

**B**


Dimensioni - Dimensions : mm

CODICE	A55012000		A55020000		A55030000		A55042000		A55048000	
CLASSE	3/250		3/630		3/1000		3/2000		3/3150	
Ref. Dis.	A	B	A	B	A	B	A	B	A	B
<b>H</b>	135	55	135	55	135	55	135	55	135	55
<b>D</b>	75	70	90	85	110	110	125	125	145	150
<b>d1</b>	32	40	47	46	65	57	80	70	100	90
<b>d2</b>	60	60	70	70	90	90	105	105	125	125
<b>d3</b>	37	26	43	41	53	46	66	64	86	80
<b>d4</b>	14	-	22	-	32	-	44	-	50	-
<b>h</b>	50	45	50	45	50	45	50	45	50	45
<b>F</b>	-	20	-	28	-	37	-	51	-	61
<b>F1</b>	-	60	-	70	-	90	-	105	-	125
Linea di fuga nom. / Creepage distance	120	-	120	-	125	-	125	-	125	-
Distanza d'arco / Arcing distance	100	-	100	-	100	-	100	-	100	-
Tensione nominale / Rated voltage <b>Ur</b> Kv	3	3	3	3	3	3	3	3	3	3
Tensione di tenuta all'impulso atmosferico Lightning impulse withstand voltage	40	40	40	40	40	40	40	40	40	40
Tensione di tenuta a freq. ind. sotto pioggia Power frequency withstand voltage, wet	10	10	10	10	10	10	10	10	10	10
Tensione di tenuta a frequenza ind. a secco Lightning impulse withstand voltage, dry	14	14	14	14	14	14	14	14	14	14
<b>Peso / Weight gr. ~</b>	510	250	680	330	1130	580	1380	700	2050	900

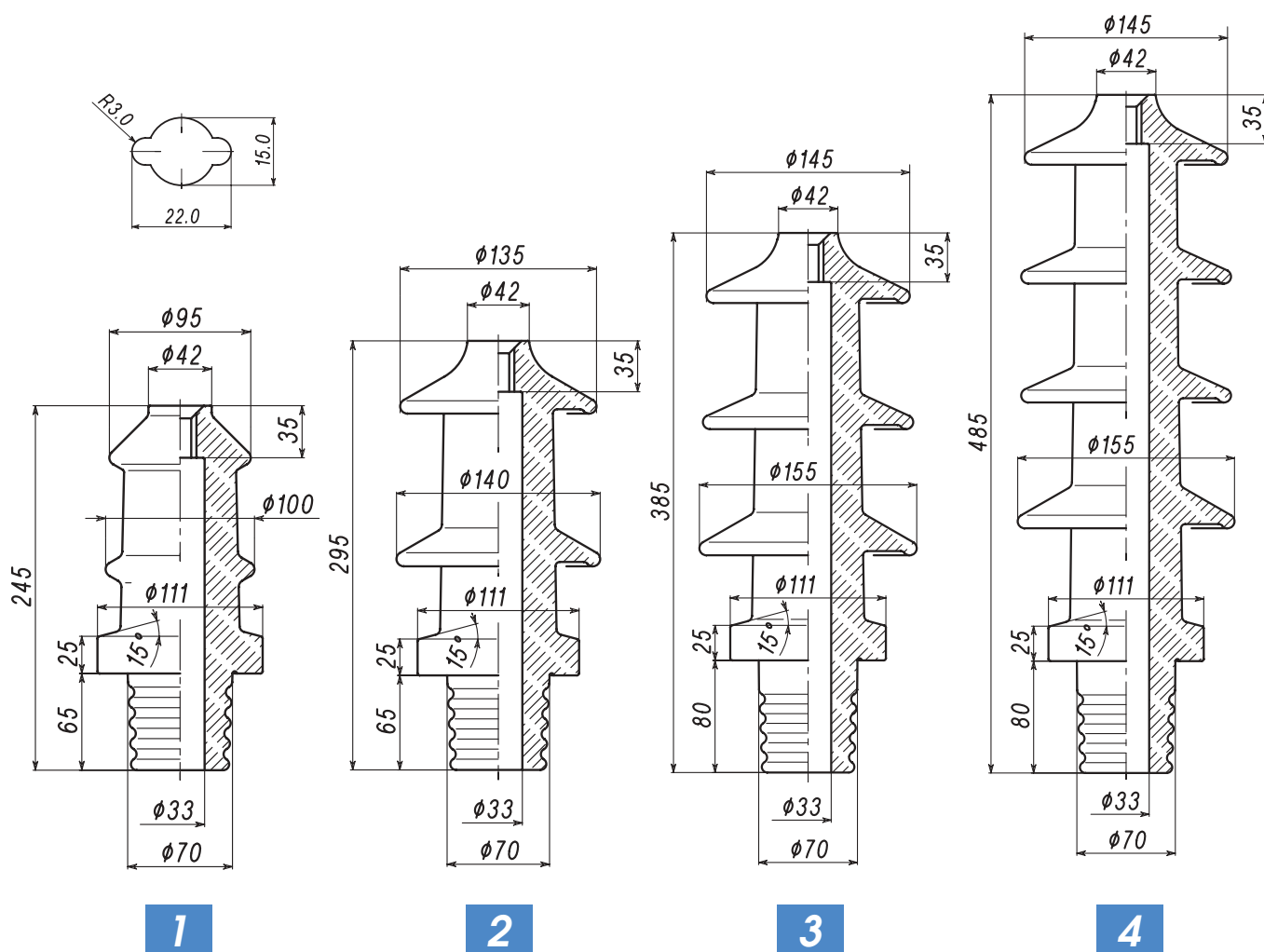
740

**Isolatori passanti per trasformatori UNEL 38145 DIN 42531 • 10-20-30 KV - 250 A**

Isolateurs passants pour transformateurs DIN 42531 • 10-20-30 KV - 250 A

Transformer bushing insulators DIN 42531 • 10-20-30 KV - 250 A

Transformator Durchführungisolatoren DIN 42531 • 10-20-30 KV - 250 A



Dimensioni - Dimensions : mm

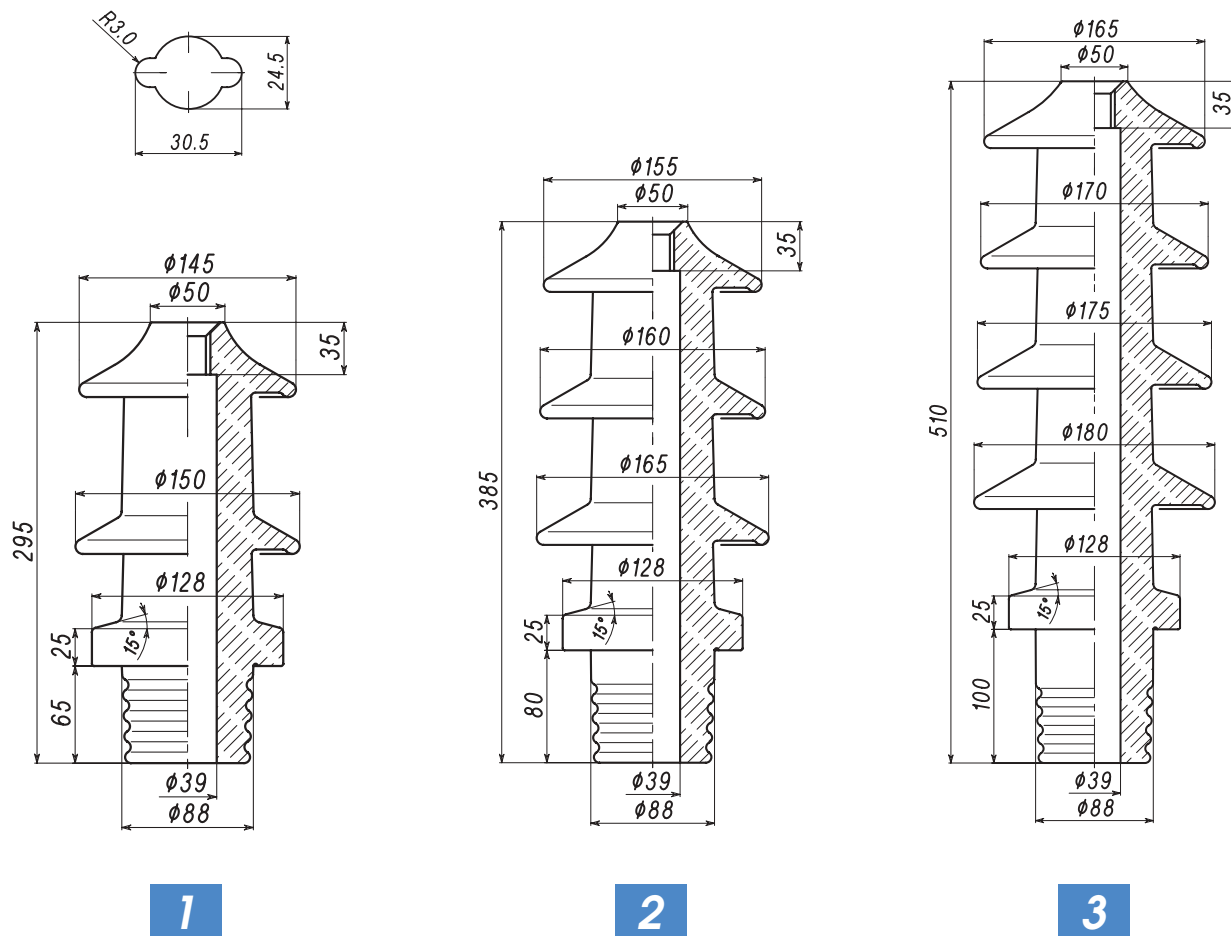
CODICE	A51005000	A51010000	A51020000	A51030000
CLASSE	10 NI 250	10 NF 250	20 NF 250	30 NF 250
Ref. Dis.	1	2	3	4
Linea di fuga nom. / Creepage distance	170	295	445	600
Distanza d'arco / Arcing distance	85	85	155	220
Tensione nominale / Rated voltage Ur	Kv 10÷12	10÷12	20÷24	30÷36
Tensione di tenuta all'impulso atmosferico Lightning impulse withstand voltage	Kv 75	75	125	170
Tensione di tenuta a freq. ind. sotto pioggia Power frequency withstand voltage, wet	Kv -	28	50	70
Tensione di tenuta a frequenza ind. a secco Lightning impulse withstand voltage, dry	Kv 28	-	-	-
Peso / Weight gr.~	2500	3200	4700	6100

**Isolatori passanti per trasformatori UNEL 38160 - DIN 42532 • 10-20-30 KV - 630 A**

Isolateurs passants pour transformateurs DIN 42532 • 10-20-30 KV - 630 A

Transformer bushing insulators DIN 42532 • 10-20-30 KV - 630 A

Transformator Durchführungsisolatoren DIN 42532 • 10-20-30 KV - 630 A



Dimensioni - Dimensions : mm

CODICE	A60010000	A60020000	A60030000
CLASSE	10 NF 630	20 NF 630	30 NF 630
Ref. Dis.	1	2	3
Linea di fuga nom / Creepage distance	295	445	635
Distanza d'arco / Arcing distance	85	155	220
Tensione nominale / Rated voltage <i>Ur</i>	Kv 10 ÷ 12	20 ÷ 24	30 ÷ 36
Tensione di tenuta all'impulso atmosferico Lightning impulse withstand voltage	Kv 75	125	170
Tensione di tenuta a freq. ind. sotto pioggia Power frequency withstand voltage, wet	Kv 28	50	70
Peso / Weight gr. ~	4300	6100	8500



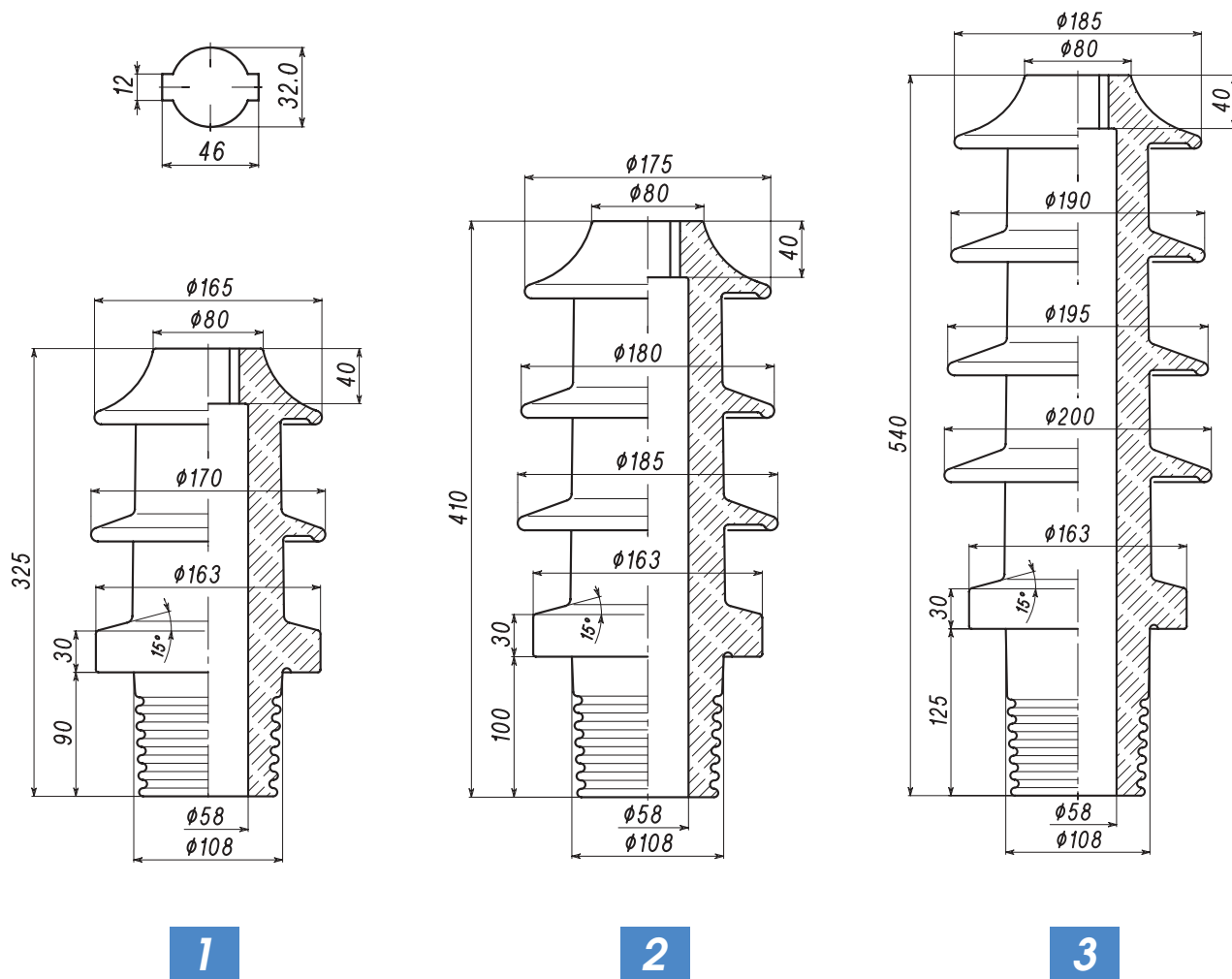
# 760

**Isolatori passanti per trasformatori UNEL 38175 DIN 42533 • 10-20-30 KV - 1000 A**

Isolateurs passants pour transformateurs DIN 42533 • 10-20-30 KV - 1000 A

Transformer bushing insulators DIN 42533 • 10-20-30 KV - 1000 A

Transformator Durchführungsisolatoren DIN 42533 • 10-20-30 KV - 1000 A



1

2

3

Dimensioni - Dimensions : mm

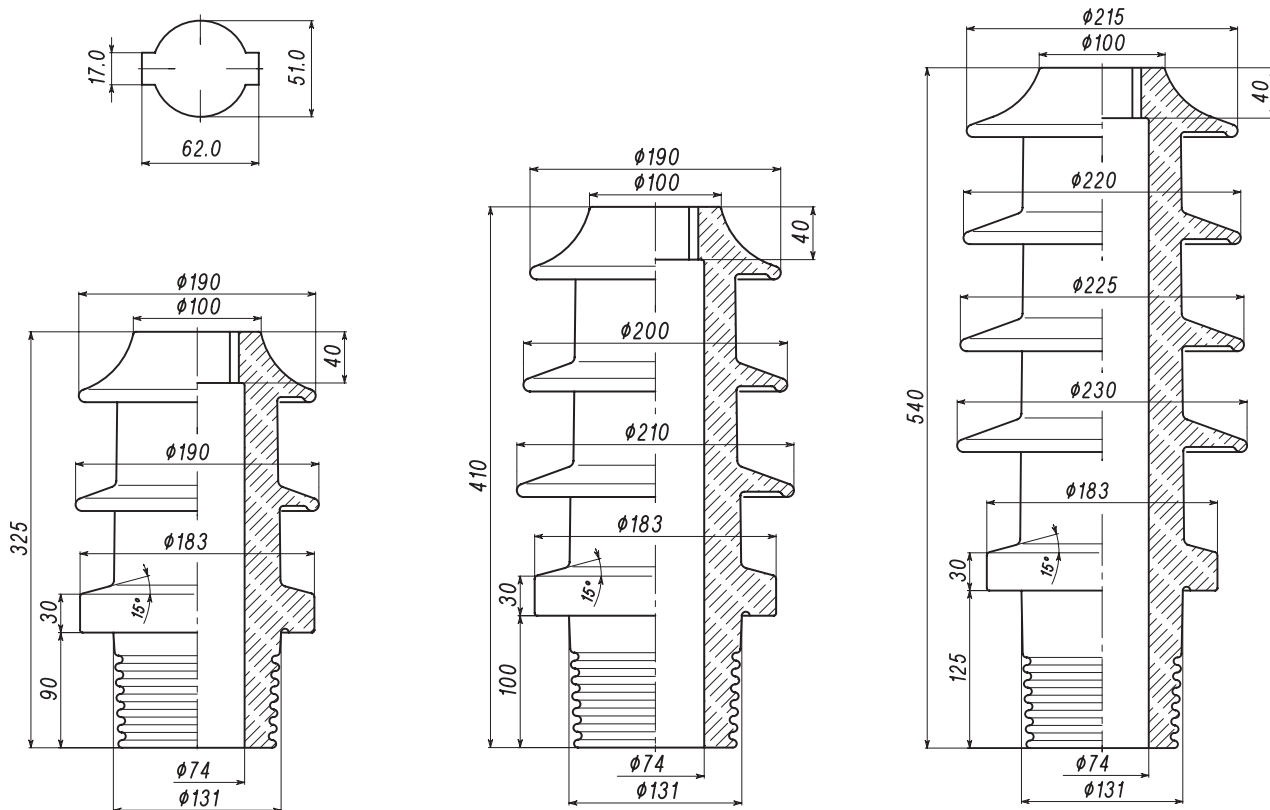
CODICE	A61010000	A61020000	A61030000
CLASSE	10 NF 1000	20 NF 1000	30 NF 1000
Ref. Dis.	1	2	3
Linea di fuga nom / Creepage distance	295	445	635
Distanza d'arco / Arcing distance	85	155	220
Tensione nominale / Rated voltage <b>Ur</b>	Kv 10 ÷ 12	20 ÷ 24	30 ÷ 36
Tensione di tenuta all'impulso atmosferico / Lightning impulse withstand voltage	Kv 75	125	170
Tensione di tenuta a freq. ind. sotto pioggia / Power frequency withstand voltage, wet	Kv 28	50	70
Peso / Weight gr.~	6300	8500	11400

**Isolatori passanti per trasformatori UNEL 38175 - DIN 42533 • 10-20-30 KV - 3150 A**

Isolateurs passants pour transformateurs DIN 42533 • 10-20-30 KV - 3150 A

Transformer bushing insulators DIN 42533 • 10-20-30 KV - 3150 A

Transformator Durchführungsisolatoren DIN 42533 • 10-20-30 KV - 3150 A


**1**
**2**
**3**

Dimensioni - Dimensions : mm

CODICE	A62010000	A62020000	A62030000
CLASSE	10 NF 3150	20 NF 3150	30 NF 3150
Ref. Dis.	1	2	3
Linea di fuga nom / Creepage distance	295	445	680
Distanza d'arco / Arcing distance	85	155	220
Tensione nominale / Rated voltage Ur	Kv 10 ÷ 12	20 ÷ 24	30 ÷ 36
Tensione di tenuta all'impulso atmosferico Lightning impulse withstand voltage	Kv 75	125	170
Tensione di tenuta a freq. ind. sotto pioggia Power frequency withstand voltage, wet	Kv 28	50	70
Peso / Weight gr. ~	8000	10800	15000



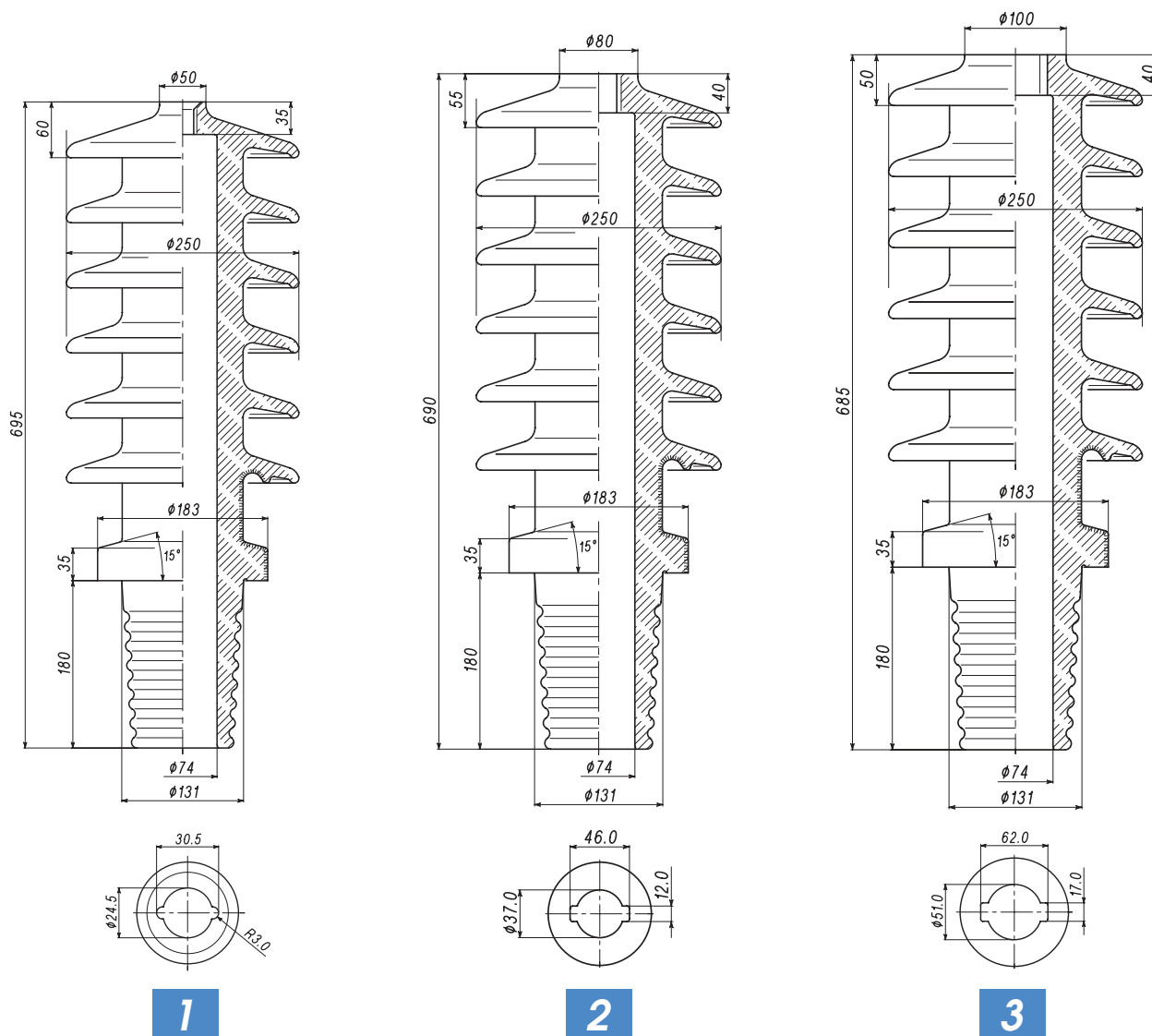
# 780

**Isolatori passanti per trasformatori DIN 42534 • 52 KV - 250 ÷ 3150 A**

Isolateurs passants pour transformateurs DIN 42534 • 52 KV - 250 ÷ 3150 A

Transformer bushing insulators DIN 42534 • 52 KV - 250 ÷ 3150 A

Transformator Durchführungisolatoren DIN 42534 • 52 KV - 250 ÷ 3150 A



Dimensioni - Dimensions : mm

CODICE	A69020000	A69030000	A69048000
CLASSE	250 A - 630 A	1000 A	2000 A - 3150 A
Ref. Dis.	1	2	3
Linea di fuga nom / Creepage distance	1040	1025	1010
Distanza d'arco / Arcing distance	510	500	490
Tensione nominale / Rated voltage <i>Ur</i>	Kv 52	52	52
Tensione di tenuta all'impulso atmosferico / Lightning impulse withstand voltage	Kv 250	250	250
Tensione di tenuta a freq. ind. sotto pioggia / Power frequency withstand voltage, wet	Kv 95	95	95
Peso / Weight gr.~	23000	23000	23000



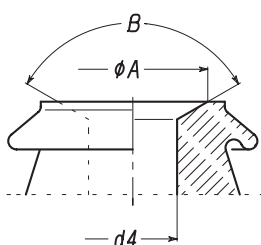
# EN

**800****Isolatori passanti per trasformatori - EN 50386**

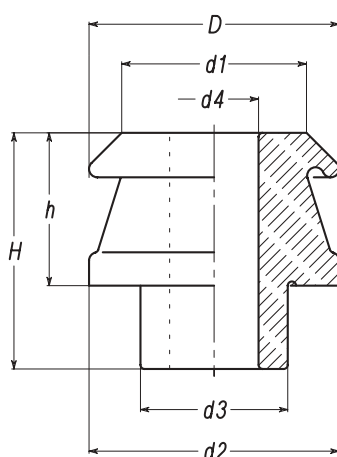
Isolateurs passants pour transformateurs - EN 50386

Transformers bushing insulators - EN 50386

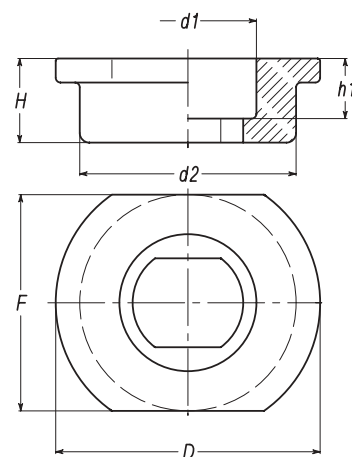
Transformator Durchführungsisolatoren - EN 50386

**A**

CLASSE 1/250 ÷ 1/630A

**A**

CLASSE 1/1250 ÷ 1/5000A

**B**

CLASSE 1/250 ÷ 1/5000A

CODICE	A50012000E	A50012000EL	A50020000E	A50030000	A50042000	A50048000	A50055000	A50064000								
CLASSE	1/250	1/250	1/630	1/1250	1/2000	1/3150	1/4000	1/5000								
Ref. Dis.	A	B	A	B	A	B	A	B								
<b>H</b>	70	30	93	30	80	30	85	35	85	35	85	35	90	40	90	40
<b>h</b>	45	-	68	-	55	-	55	-	55	-	55	-	55	-	55	-
<b>h1</b>	-	20	-	20	-	20	-	25	-	25	-	25	-	30	-	30
<b>D</b>	56	60	70	60	70	85	90	110	104	125	125	150	180	180	180	180
<b>d1</b>	-	30	-	30	-	45	-	57	-	70	-	90	-	110	-	110
<b>d2</b>	56	50	56	50	70	70	90	90	104	104	125	125	160	160	160	160
<b>d3</b>	27	-	27	-	43	-	53	-	66	-	86	-	105	-	105	-
<b>d4</b>	14	-	14	-	22	-	32	-	44	-	50	-	58	-	67	-
<b>F</b>	-	50	-	50	-	70	-	90	-	104	-	125	-	160	-	160
<b>ø A</b>	22	-	22	-	32	-	-	-	-	-	-	-	-	-	-	-
<b>B</b>	120°	-	120°	-	120°	-	-	-	-	-	-	-	-	-	-	-
<i>Linea di fuga nom. Creepage distance</i>	50	-	115	-	70	-	75	-	75	-	75	-	85	-	85	-
<b>Ur</b>	<b>250</b>	<b>250</b>	<b>250</b>	<b>250</b>	<b>630</b>	<b>630</b>	<b>1250</b>	<b>1250</b>	<b>2000</b>	<b>2000</b>	<b>3150</b>	<b>3150</b>	<b>4000</b>	<b>4000</b>	<b>5000</b>	<b>5000</b>
<b>Peso / Weight gr. -</b>	160	100	335	175	380	190	640	400	820	470	1350	700	-	-	-	-

Dimensioni - Dimensions : mm



# 810

**Isolatori passanti per trasformatori - EN 50180 - Classe 12-24-36 KV - 250A**

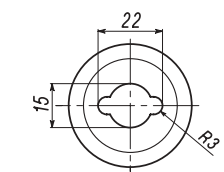
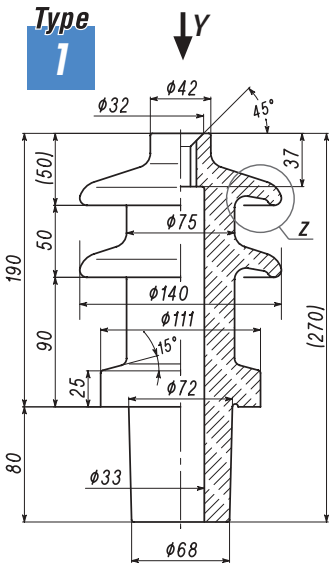
Isolateurs passants pour transformateurs - EN 50180 - Classe 12-24-36 KV - 250A

Transformer bushing insulators - EN 50180 - Classe 12-24-36 KV - 250A

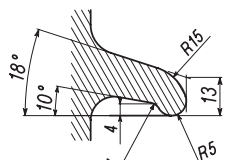
Transformator Durchführungsisolatoren - EN 50180 - Classe 12-24-36 KV - 250A

Designazione Designation	Ur (KV)	Valore nominale min. della linea di fuga Min. nominal creepage distance				Tipo di Isolatore Insulator type		Linea di fuga Creepage distance	Distanza d'arco Arcing distance
		I	II	III	IV	CODICE	Type		
12-250/P1	12	192	-	-	-	N31001260	1	260	145
12-250/P2	12	-	240	-	-				
12-250/P4	12	-	-	300	372	N31002490	2	490	260
24-250/P2	24	384	480	-	-				
24-250/P3	24	-	-	600	-	N31003605	3	605	315
36-250/P1	36	576	-	-	-				
24-250/P4	24	-	-	-	744	N31004935	4	935	465
36-250/P3	36	-	720	900	-				
36-250/P4	36	-	-	-	1116	N310051165	5	1165	485

\* Disponibile isolatore con linea di fuga: 1320  
Available insulator with creepage distance: 1320

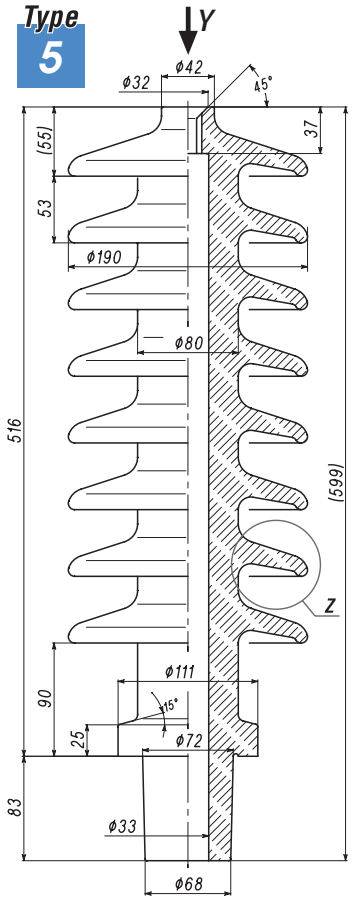
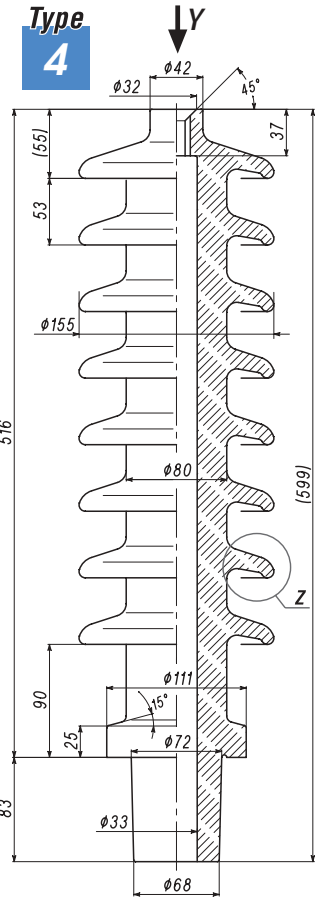
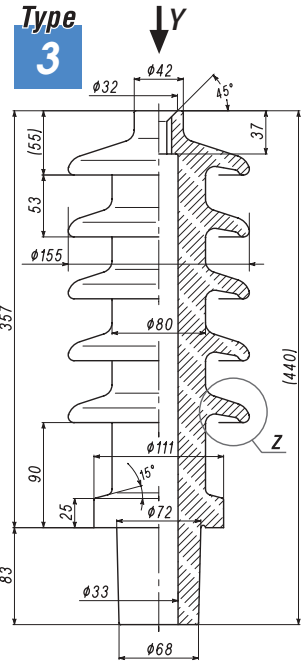
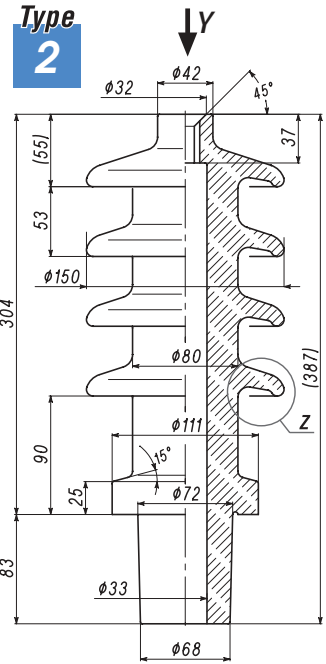


Vista Y



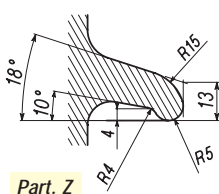
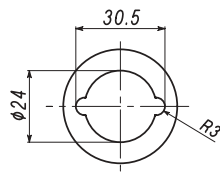
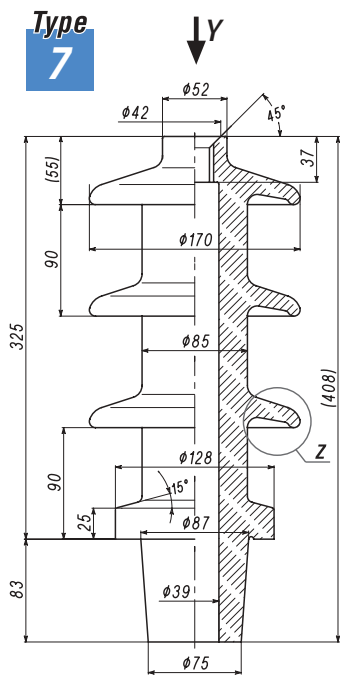
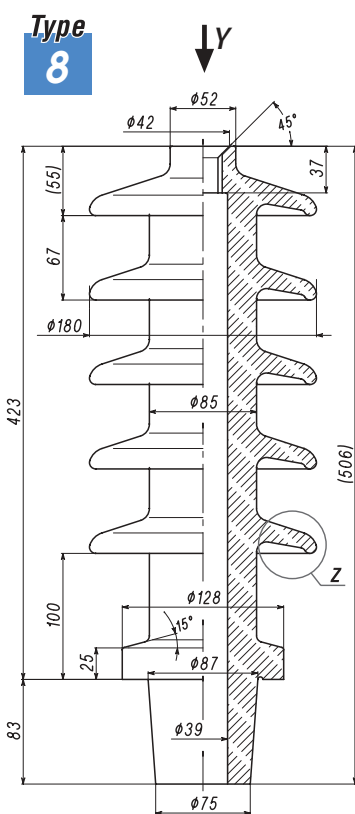
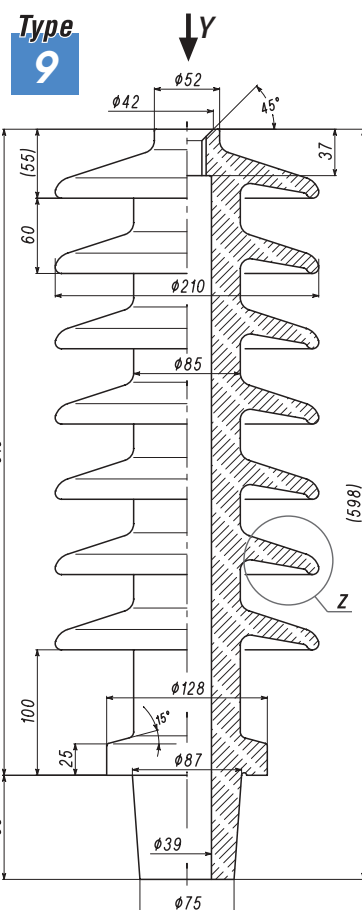
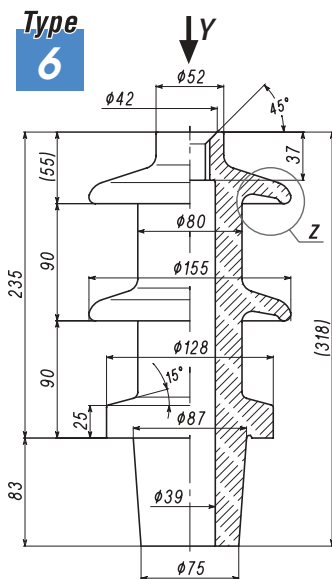
Part. Z

Dimensioni - Dimensions : mm



**Isolatori passanti per trasformatori - EN 50180 - Classe 12-24-36 KV - 630A**  
 Isolateurs passants pour transformateurs - EN 50180 - Classe 12-24-36 KV - 630A  
 Transformer bushing insulators - EN 50180 - Classe 12-24-36 KV - 630A  
 Transformator Durchführungsisolatoren - EN 50180 - Classe 12-24-36 KV - 630A

Designazione Designation	Ur (KV)	Valore nominale min. della linea di fuga Min. nominal creepage distance				Tipo di Isolatore Insulator type		Linea di fuga Creepage distance	Distanza d'arco Arcing distance
		I	II	III	IV	CODICE	Type		
12-630/P3	12	192	240	300	-	N31006315	6	315	190
12-630/P4	12	-	-	-	372	N31007490	7	490	285
24-630/P2	24	384	480	-	-	N31008760	8	760	375
24-630/P4	24	-	-	600	744	N310091155	9	1155	475
36-630/P2	36	576	720	-	-				
36-630/P4	36	-	-	900	1116				



Vista Y

Part. Z

Dimensioni - Dimensions : mm



# 820

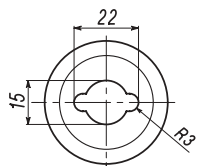
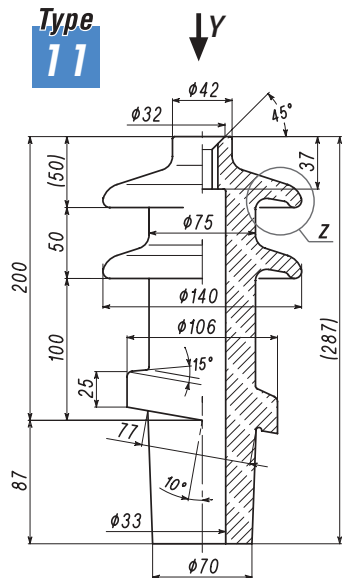
## Isolatori passanti inclinati per trasformatori - EN 50180 - Classe 12-24-36 KV - 250A

Isolateurs passants pour transformateurs - EN 50180 - Classe 12-24-36 KV - 250A

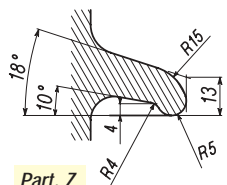
Transformer bushing insulators - EN 50180 - Classe 12-24-36 KV - 250A

Transformator Durchführungsisolatoren - EN 50180 - Classe 12-24-36 KV - 250A

Designazione Designation	Ur (KV)	Valore nominale min. della linea di fuga Min. nominal creepage distance				Tipo di Isolatore Insulator type		Linea di fuga Creepage distance	Distanza d'arco Arcing distance
		I	II	III	IV	CODICE	Type		
I-12-250/P1	12	192	-	-	-	N32011265	11	265	150
I-12-250/P2	12	-	240	-	-				
I-12-250/P4	12	-	-	300	372	N32012495	12	495	265
I-24-250/P2	24	384	480	-	-				
I-24-250/P3	24	-	-	600	-	N32013610	13	610	315
I-36-250/P1	36	576	-	-	-				
I-24-250/P4	24	-	-	-	744	N32014940	14	940	470
I-36-250/P3	36	-	720	900	-				
I-36-250/P4	36	-	-	-	1116	N320151170	15	1170	490

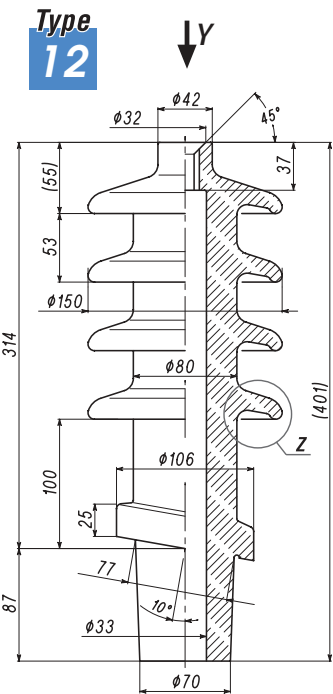


Vista Y

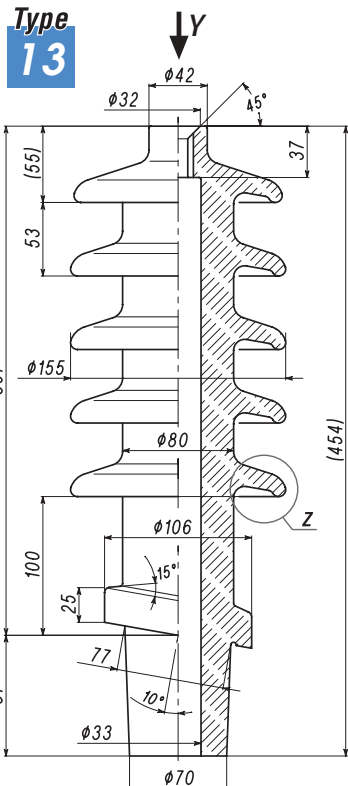


Part. Z

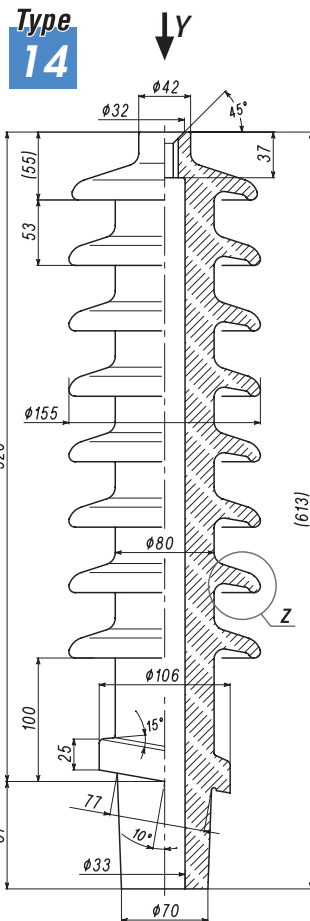
Dimensioni - Dimensions : mm



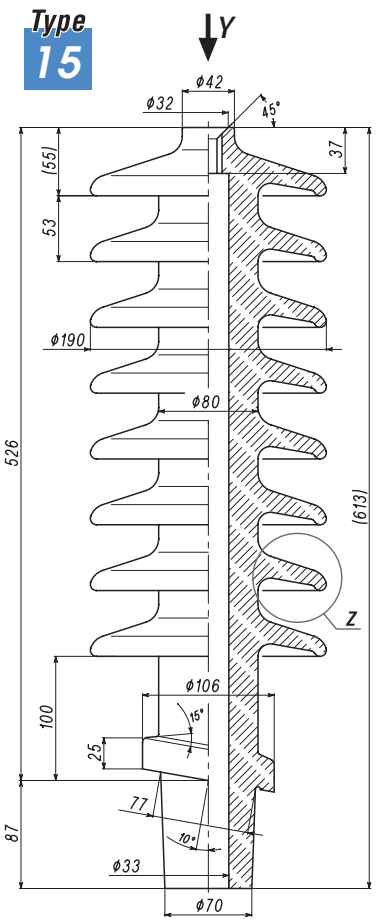
Type 12



Type 13



Type 14



Type 15

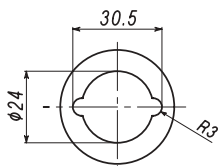
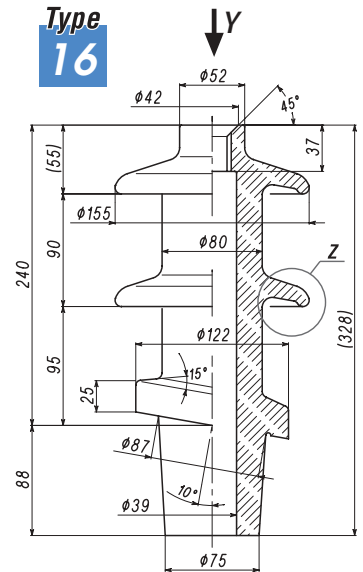
**Isolatori passanti inclinati per trasformatori - EN 50180 - Classe 12-24-36 KV - 630A**

Isolateurs passants pour transformateurs - EN 50180 - Classe 12-24-36 KV - 630A

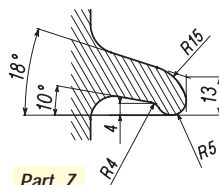
Transformer bushing insulators - EN 50180 - Classe 12-24-36 KV - 630A

Transformator Durchführungisolatoren - EN 50180 - Classe 12-24-36 KV - 630A

Designazione Designation	Ur (KV)	Valore nominale min. della linea di fuga Min. nominal creepage distance				Tipo di Isolatore Insulator type		Linea di fuga Creepage distance	Distanza d'arco Arcing distance
		Livello di inquinamento / Pollution level				CODICE	Type		
		I	II	III	IV				
I-12-630/P3	12	192	240	300	-	N32016315	16	315	190
I-12-630/P4	12	-	-	-	372	N32017490	17	490	285
I-24-630/P2	24	384	480	-	-	N32018760	18	760	375
I-24-630/P4	24	-	-	600	744	N320191155	19	1155	475
I-36-630/P2	36	576	720	-	-				
I-36-630/P4	36	-	-	900	1116				

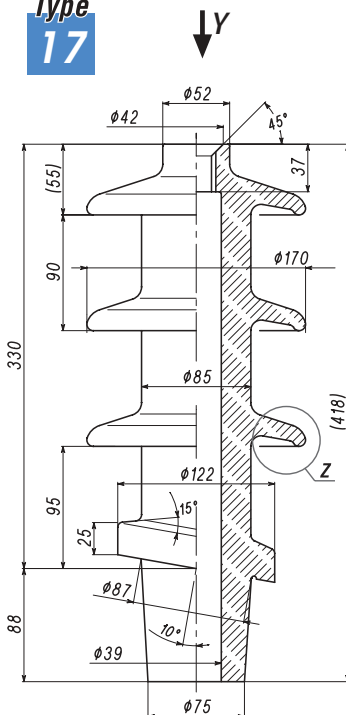
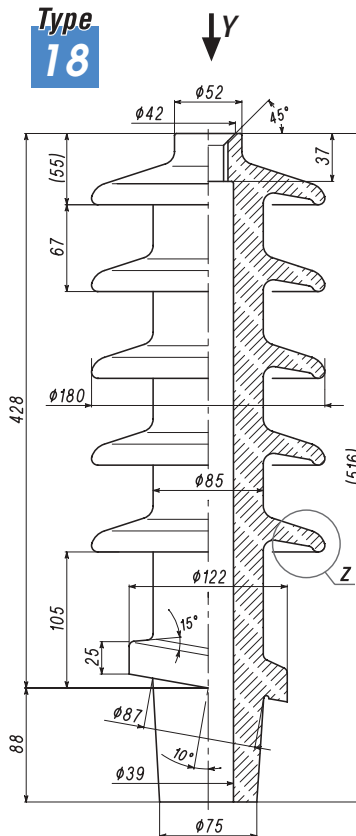
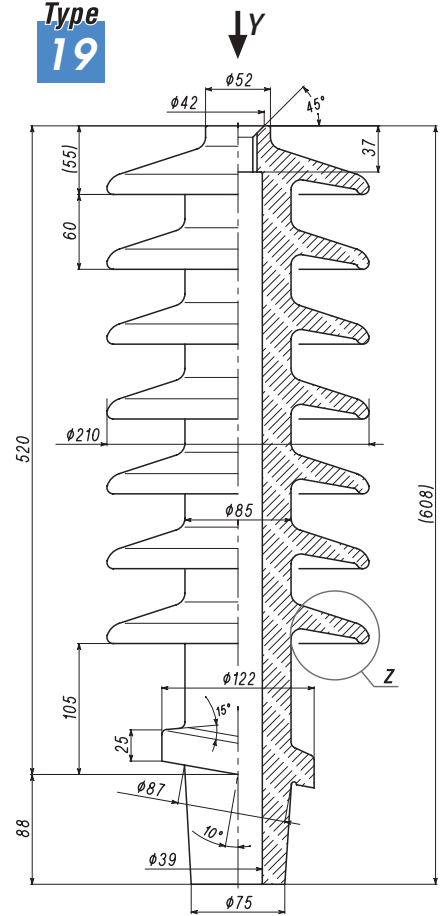
**Type 16**


Vista Y



Part. Z

Dimensioni - Dimensions : mm

**Type 17**

**Type 18**

**Type 19**






# 840

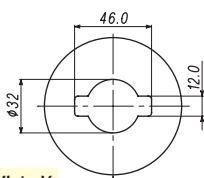
## Isolatori passanti inclinati per trasformatori - EN 50180 - Classe 12-24-36 KV - 1250A

Isolateurs passants pour transformateurs - EN 50180 - Classe 12-24-36 KV - 1250A

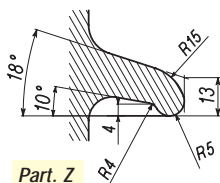
Transformer bushing insulators - EN 50180 - Classe 12-24-36 KV - 1250A

Transformator Durchführungsisolatoren - EN 50180 - Classe 12-24-36 KV - 1250A

Designazione Designation	Ur (KV)	Valore nominale min. della linea di fuga Min. nominal creepage distance				Tipo di Isolatore Insulator type		Linea di fuga Creepage distance	Distanza d'arco Arcing distance
		Livello di inquinamento / Pollution level				CODICE	Type		
		I	II	III	IV				
12-1250/P4	12	192	240	300	372	N31021385	21	385	215
24-1250/P3	24	384	480	600	-	N31022620	22	620	280
24-1250/P4	24	-	-	-	744	N31023930	23	930	385
36-1250/P3	36	576	720	600	-				
36-1250/P4	36	-	-	-	1116	N310241145	24	1145	500



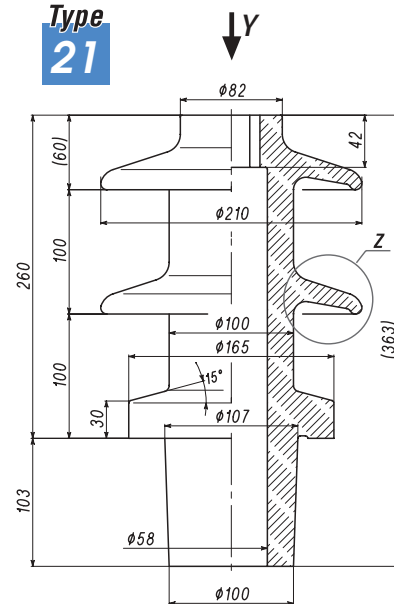
Vista Y



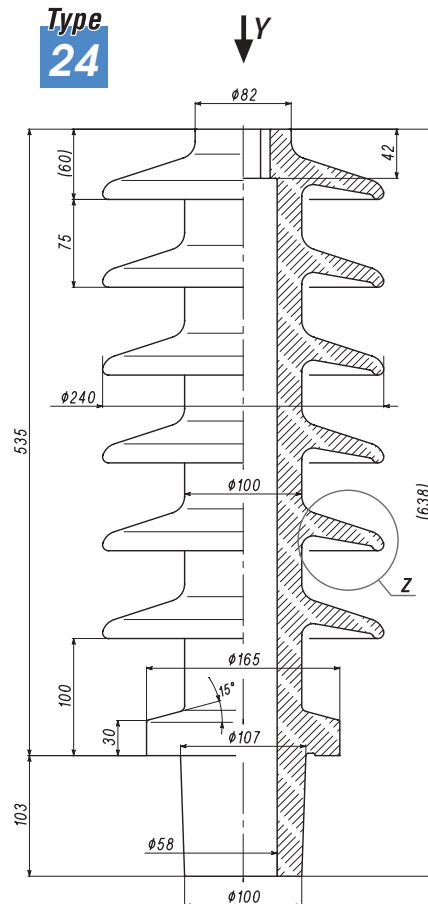
Part. Z

Dimensioni - Dimensions : mm

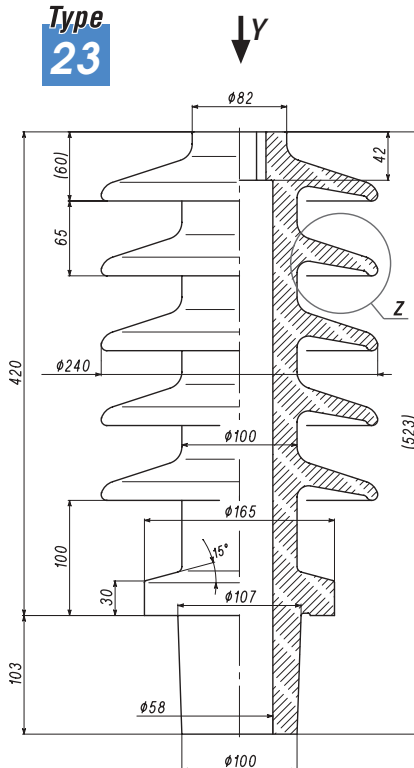
### Type 21



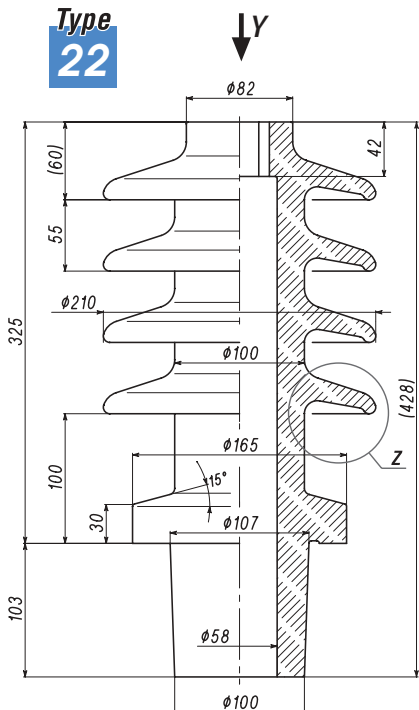
### Type 24



### Type 23



### Type 22





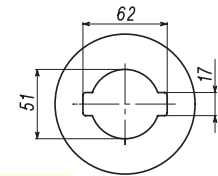
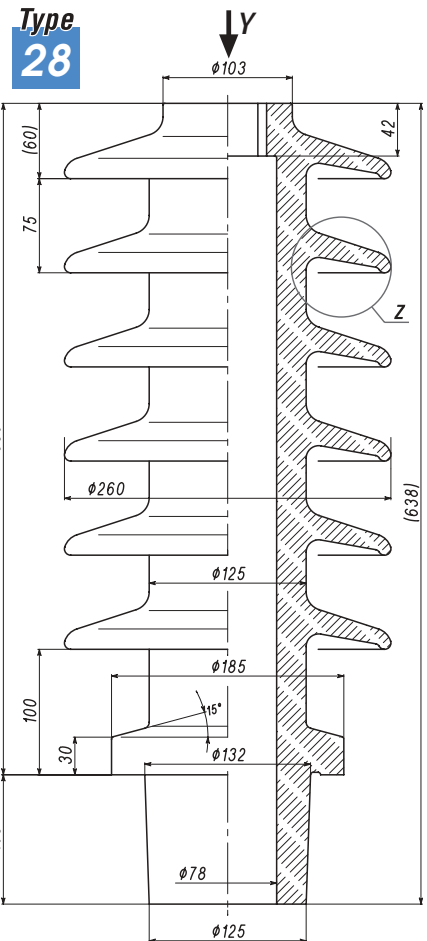
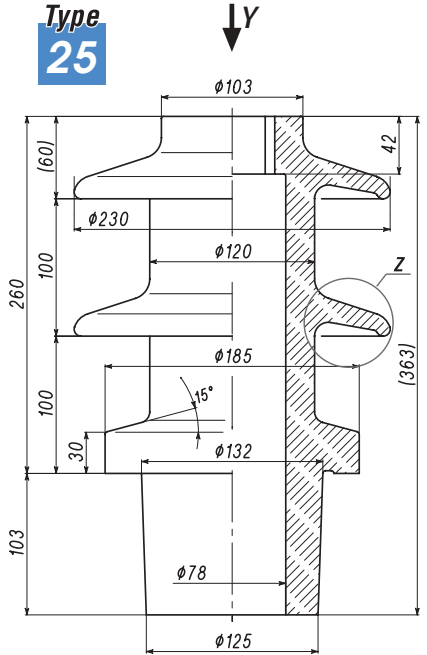
**Isolatori passanti inclinati per trasformatori - EN 50180 - Classe 12-24-36 KV - 2000-3150A**

Isolateurs passants pour transformateurs - EN 50180 - Classe 12-24-36 KV - 2000-3150A

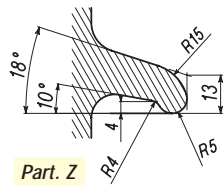
Transformer bushing insulators - EN 50180 - Classe 12-24-36 KV - 2000-3150A

Transformator Durchführungsisolatoren - EN 50180 - Classe 12-24-36 KV - 2000-3150A

Designazione Designation	Ur (KV)	Valore nominale min. della linea di fuga Min. nominal creepage distance				Tipo di Isolatore Insulator type		Linea di fuga Creepage distance	Distanza d'arco Arcing distance
		I	II	III	IV	CODICE	Type		
12-2000/P4 12	12	192	240	300	372	N31025385	25	385	210
12-3150/P4 12	12	192	240	300	372				
24-2000/P3 24	24	384	480	600	-	N31026620	26	620	275
24-3150/P3 24	24	384	480	600	-				
24-2000/P4 24	24	-	-	-	744	N31027920	27	920	385
24-3150/P4 24	24	-	-	-	744				
36-2000/P3 36	36	576	70	900	-	N310281135	28	1135	495
36-3150/P3 36	36	576	70	900	-				
36-2000/P4 36	36	-	-	-	1116				
36-3150/P4 36	36	-	-	-	1116				

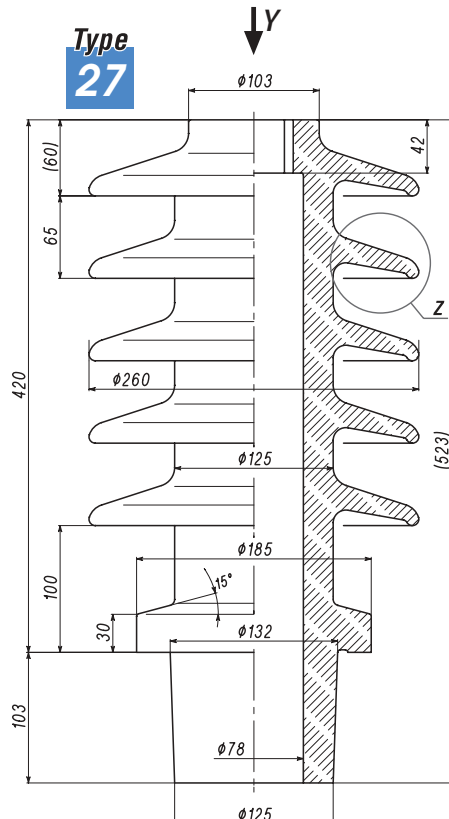
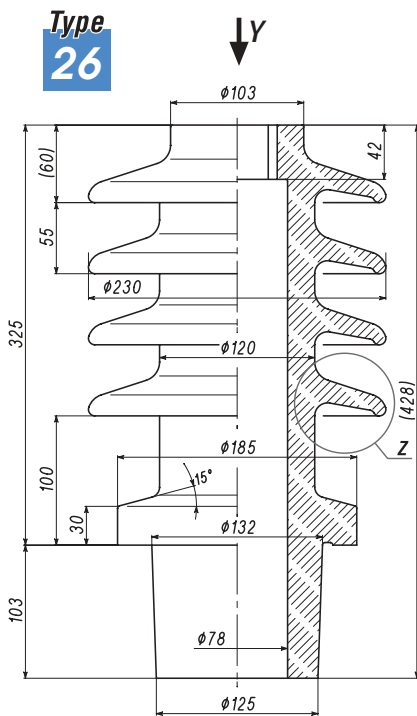


Vista Y



Part. Z

Dimensioni - Dimensions : mm

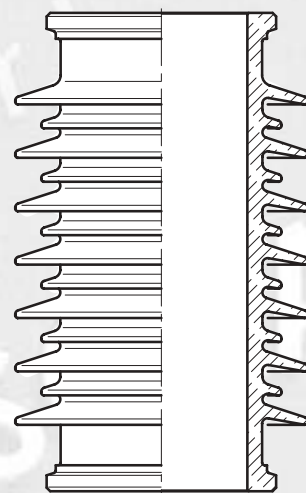
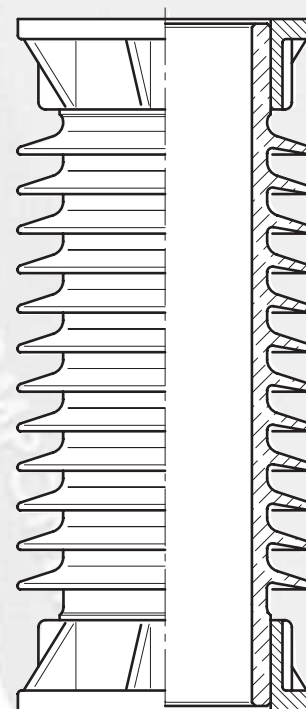
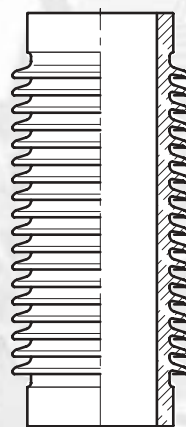
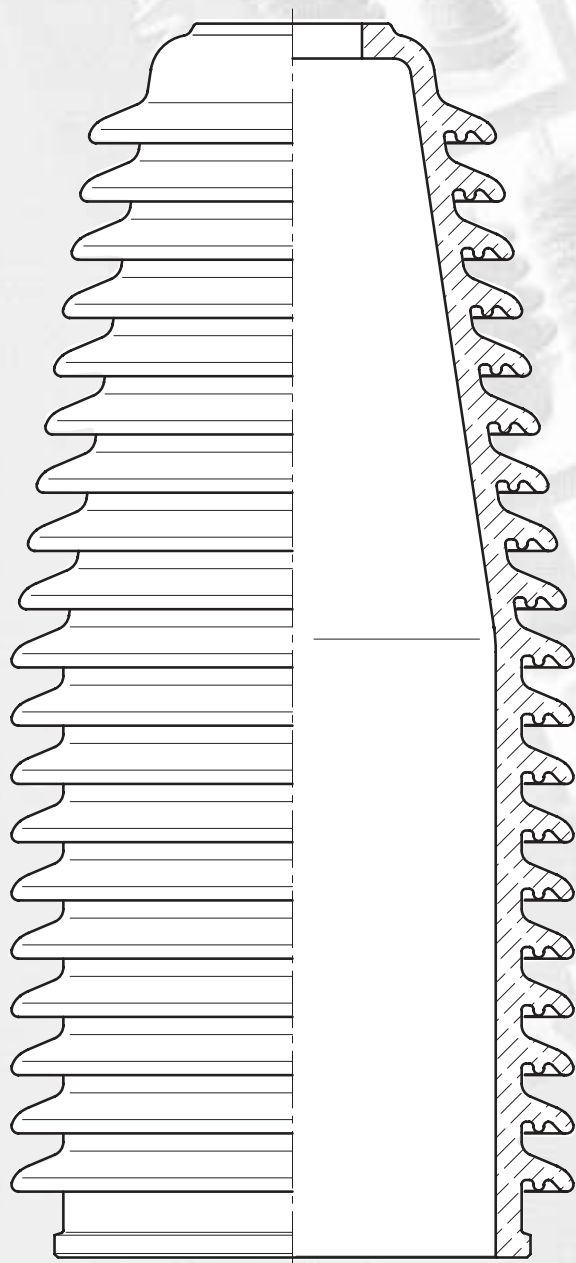


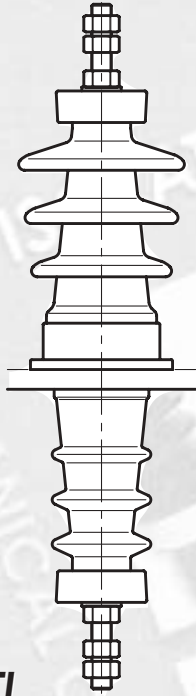
**INVOLUCRI**

HOLLOW INSULATORS

$\varnothing$  est. max = 1090 mm

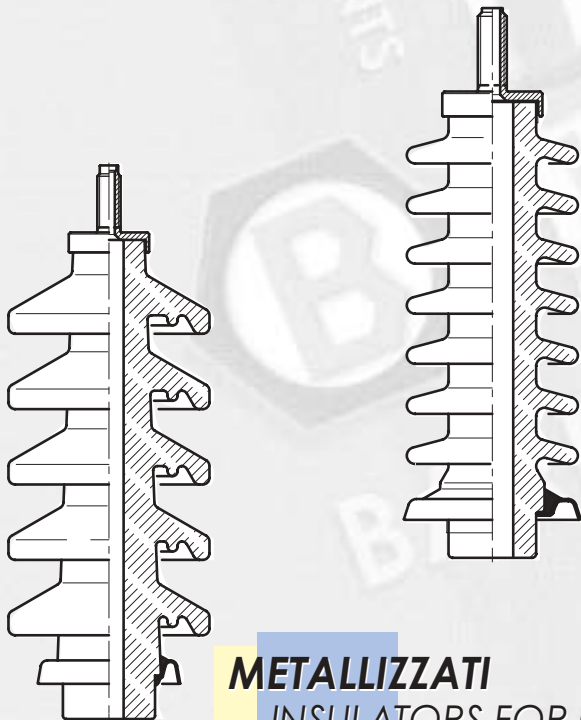
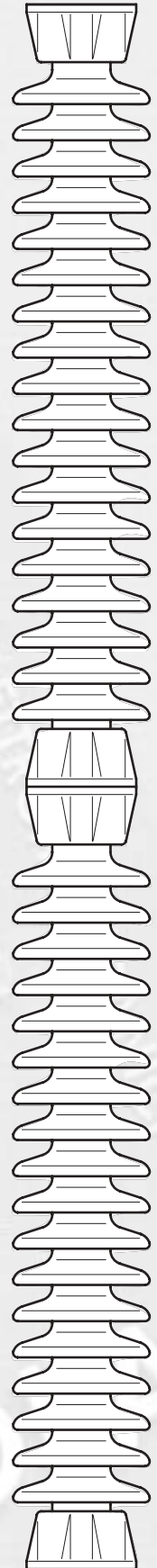
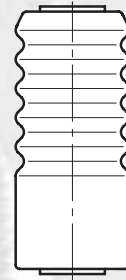
H max = 4150 mm





**PASSANTI**  
BUSHING INSULATORS

**PORTANTI**  
POST INSULATORS



**METALLIZZATI**  
INSULATORS FOR CAPACITORS

