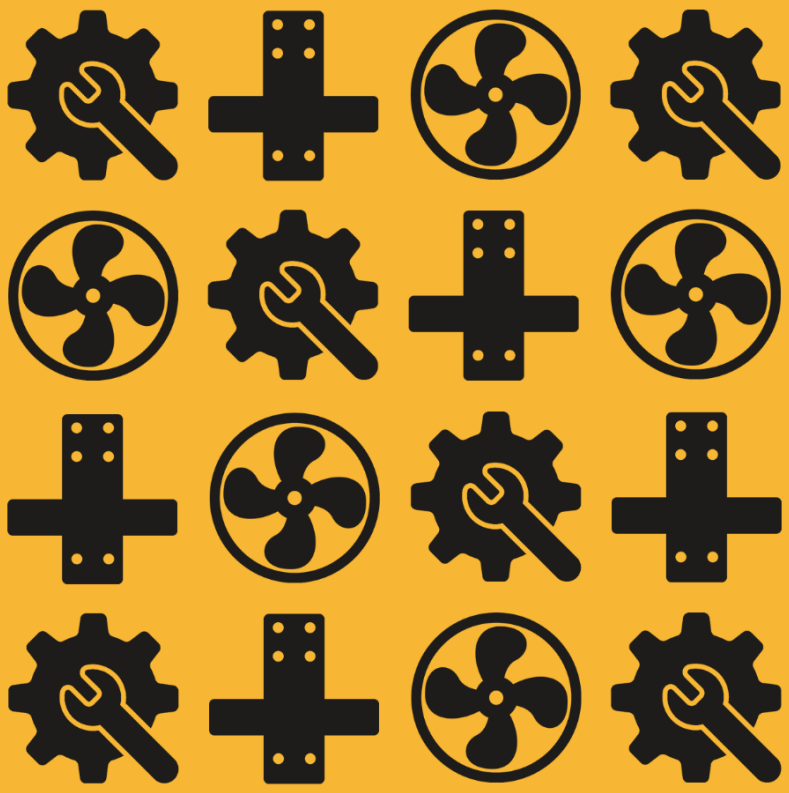
CATÁLOGO
DE PRODUCTOS



electrotrans

TURNED PARTS & BUSHINGS

ÍNDICE INDEX

ACCESORIOS / *ACCESORIES*

BORNAS ENCHUFABLES Y PASABARRAS / *PLUG IN BUSHINGS AND MONOBLOCKS*

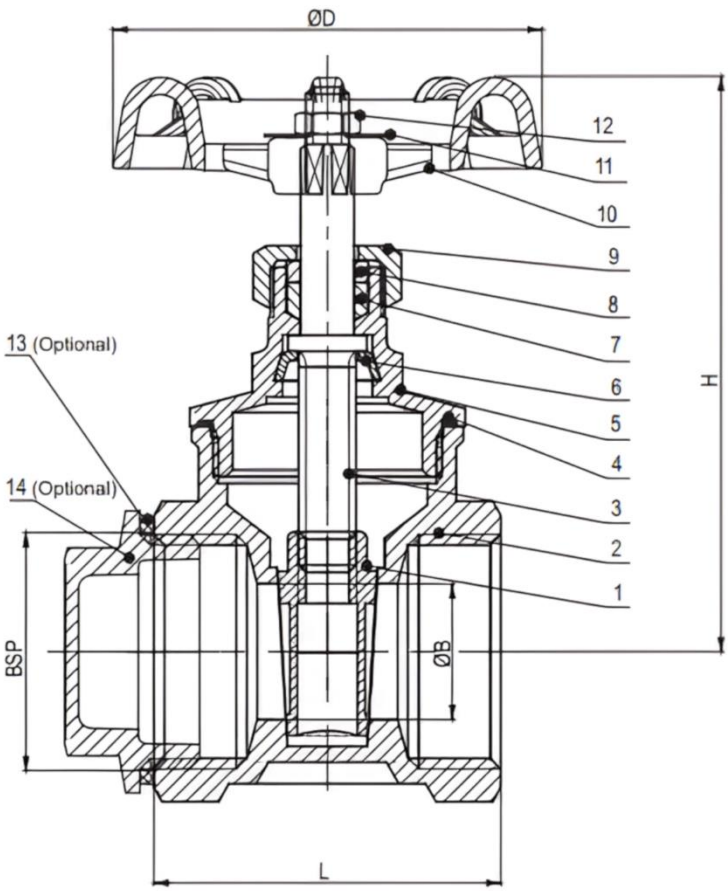
VENTILADORES / FANS

ACCESORIOS

ACCESSORIES

VÁLVULA DE COMPUERTA ROSCADA CON TAPA /

SCREWED GATE VALVE WITH CAP



Technical Features	
Nominal pressure	PN16
Working Medium	Transformer Oil
Working Temperature	-20 +120

Materials List

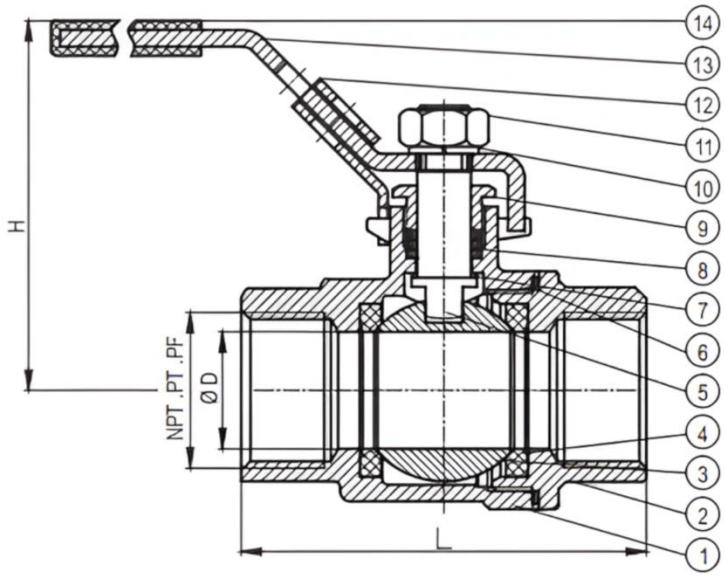
NO	DESCRİPTİON	MATERIAL
1	Disc	HPb59-2RA
2	Valve body	HPb59-2RA
3	Stem	CW617N
4	Washer ring	PTFE
5	Bonnet	HPb59-2RA
6	Lock nut	HPb59-2RA
7	Packing	PTFE
8	Gland	Brass HPb59-2RA
9	Packing nut	Brass HPb59-2RA
10	Hand Wheel	Steel Zinc plated
11	Nameplate	Aluminum
12	Hex nut	Aluminum
13	Gasket (Optional)	PTFE
14	Plug (Optional)	Brass HPb59-2RA

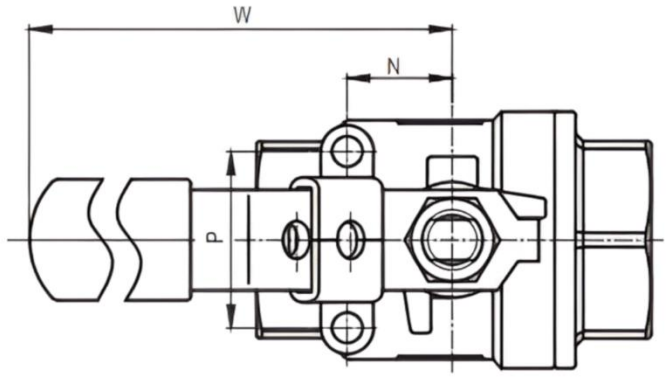
Dimensions in mm

Size	1/2"	3/4"	1"	11/4"	11/2"	2"
L	42.5	45.5	48.5	56	58	62.5
H	71.5	74	80.5	93.5	108	122
D	55	55	60	72	72	80
B	13	16	19	25	32	39

VÁLVULA DE BOLA ROSCADA BLOQUEABLE DE ACERO INOXIDABLE /

THREADED BALL VALVE LOCKABLE STAINLESS STEEL





FEATURES:

- PIPE THREAD IN ACCORDANCE: NPT, BSPT, DIN259,DIN2999,ISO 228 CLASS A
- FACE TO FACE: DIN-3202-M3
- BLOW-OUT PROOF STEM / FULL PORT
- INVESTMENT CASTING BODY
- 1000PSI(PN63)W.O.G.
- LOCKING DEVICE

Materials List

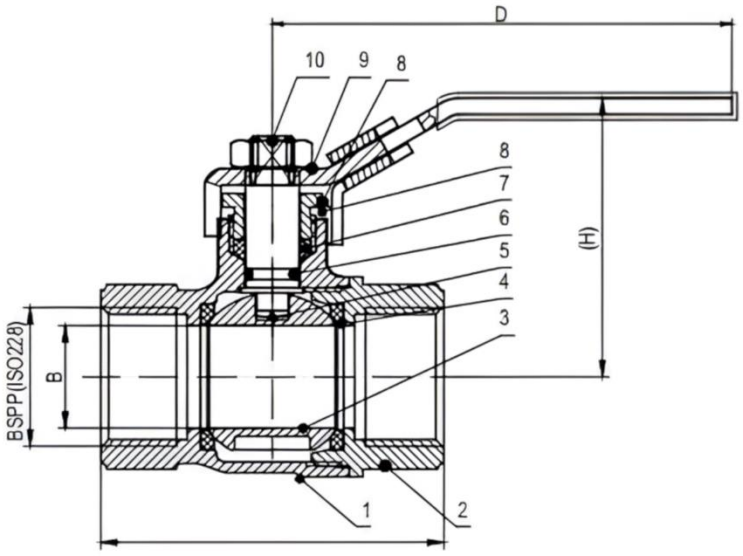
NO	PART NAME	MATERIAL	
1	BODY	SS304	SS3016
2	CAP	SS304	SS3016
3	BALL	CF8	CF8M
4	SEAT	PTFE	
5	STEM	SUS304	SUS316
6	GASKET	PTFE	
7	THRUST WASHER	PTFE	
8	PACKING	PTFE	
9	GLAND	SUS304	
10	SPRING WASHER	SUS304	
11	STEM NUT	SUS304	
12	LOCKING DEVICE	SUS304	
13	HANDLE	SUS304	
14	PLASTIC COVER	PLASTIC	

DIMENSIONS:

Size		d	L	H	W	N	P
DN	NPS						
8	1/4"	11.6	50	56	102	12.7	28.5
10	3/8"	12.7	60	56	102	12.7	28.5
15	1/2"	15	75	65	123	12.7	28.5
20	3/4"	20	80	68	123	21	35
25	1"	25	90	79	153	21	35
32	1 1/4"	32	110	84	153	23.5	38
40	1 1/2"	40	120	94	183	23.5	38
50	2"	50	140	100	183	23.5	38
65	2 1/2"	65	185	135	246	35	54
80	3"	80	205	145	246	35	54

VÁLVULA DE BOLA ROSCADA BLOQUEABLE DE LATÓN / BRONCE /

THREADED BALL VALVE LOCKABLE BRASS / BRONZE



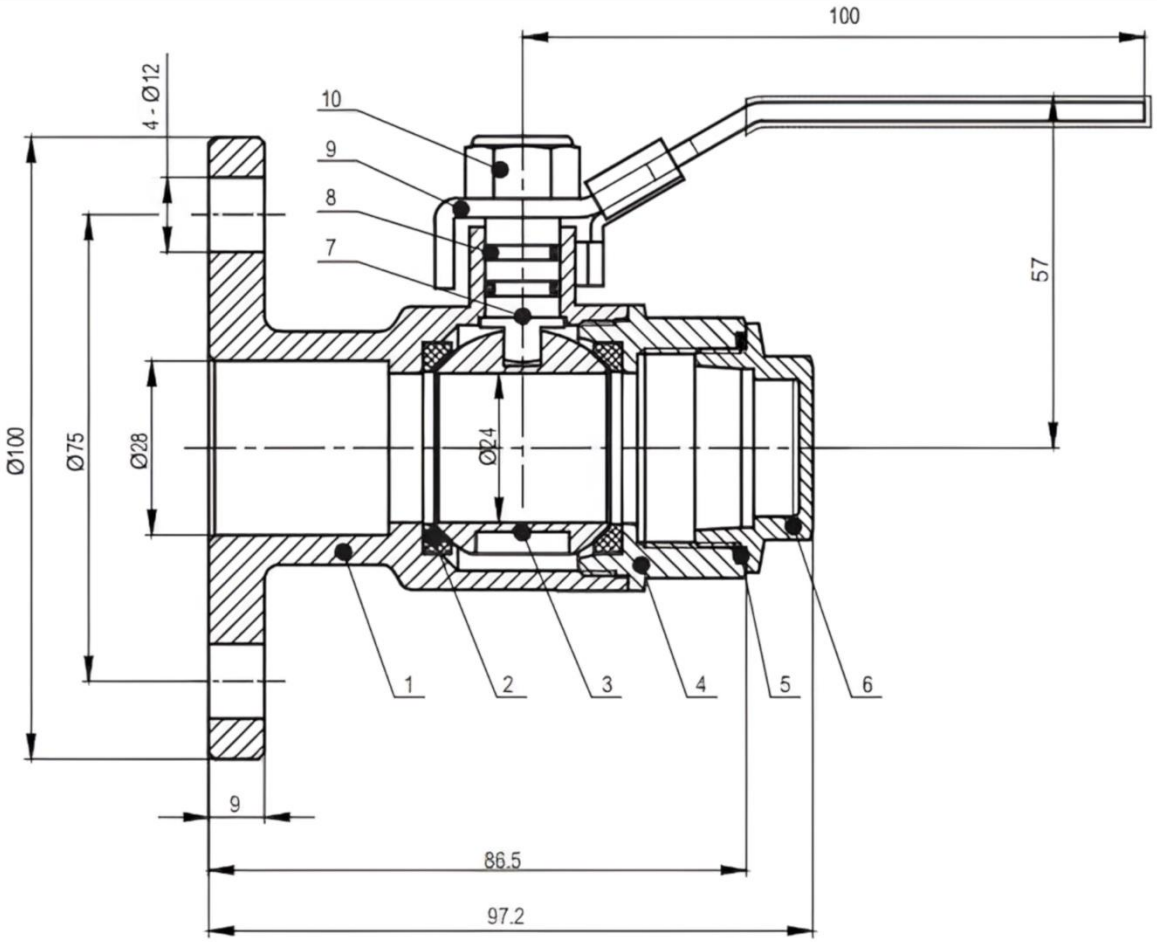
TECHNICAL FEATURES	
Nominal pressure	600WOG
Shell Test Pressure	4.2MPa
Air Test Pressure	1.31MPa
Working Medium	Transformer Oil
Working Temperature	-20 / +120

Dimensions in mm						
Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
L	56	63	75	85	92.5	110
H	46	51	56	57	73	81
D	95	115	115	145	145	165
B	14	19	24	31	31	49

MATERIALS LIST		
NO	DESCRIPTION	MATERIAL
1	VALVE BODY	CW617N
2	BONNET	CW617N
3	BALL	BRASS CHROMED PLATİNG
4	SEAT	PTFE
5	STEM	CW617N
6	O-RING	NBR
7	PACKING	PTFE
8	PACKING NUT	BRASS
9	LOCKING HANDLE	S.S.304
10	HEX NUT	S.S. 304

VÁLVULA DE BOLA ROSCADA BLOQUEABLE DE ACERO INOXIDABLE /

THREADED BALL VALVE LOCKABLE STAINLESS STEEL

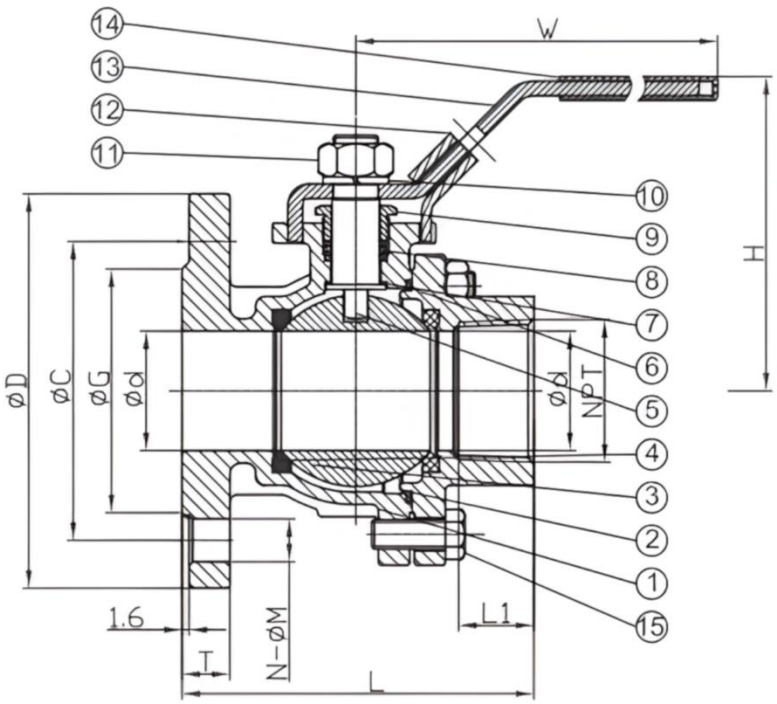


One Piece Body

Materials List			
NO	DESCRIPTION	QTY.	MATERIAL
1	Valve body	1	Brass CW617N
2	Valve seat	2	PTFE
3	Ball	1	Brass HPb58-2
4	Bonnet	1	CW617N
5	Gasket	1	PTFE
6	Cap	1	Brass CW617N
7	Stem	1	Brass CW617N
8	O-ring	2	EPDM
9	Handle with locking device	1	SS304
10	Hex nut	1	SS304

VÁLVULA DE BOLA DE DOS PIEZAS 150LB CON EXTREMO BRIDA / EXTREMO ROSCADO /

TWO-PIECE BALL VALVE 150LB FLANGE END / SCREWED END

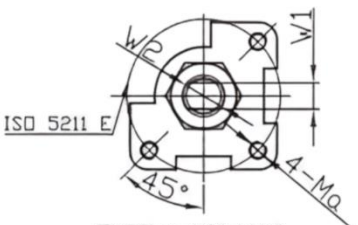


FEATURES:

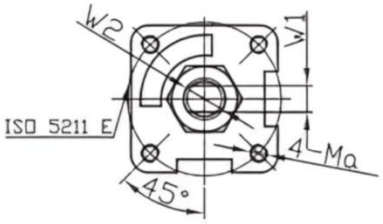
- End Flange Dimension: Asme B16.5
- Design:Asme B16.34
- Test: API 598
- With ISO 5211 Mounting Pad
- Investment Casting Body
- Blow-Out Proof Stem / Full Port
- Lever Operated / Locking Device

MATERIALS LIST

NO	PART NAME	MATERIAL
1	BODY	CF8M
2	CAP	CF8M
3	BALL	CF8M
4	SEAT	PTFE
5	STEM	SUS316
6	GASKET	PTFE
7	THRUST WASHER	PTFE
8	PACKING	PTFE
9	GLAND	SUS304
10	SPRING WASHER	SUS304
11	STEM NUT	SUS304
12	LOCKING DEVICE	SUS304
13	HANDLE	SUS304
14	PLASTIC COVER	PLASTIC
15	BOLT	SUS304



TYPE 1: 1/2"-11/4"



TYPE 2: 11/2"-4"

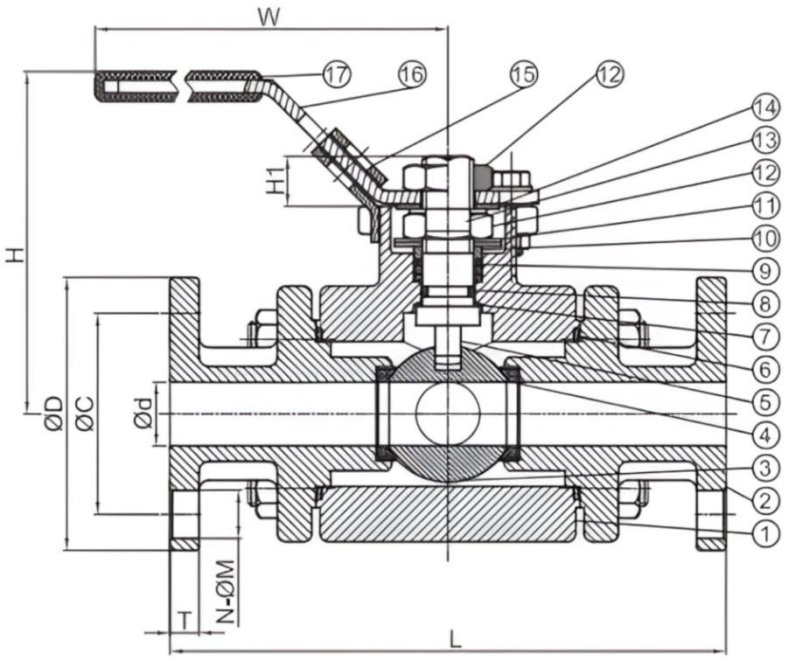
TEST PRESSURE:		
SHELL(BY WATER)		450PSI
		32kg/cm²
SEAT	BY WATER	315PSI
		22kg/cm²
	BY AIR	85PSI
		6kg/cm²

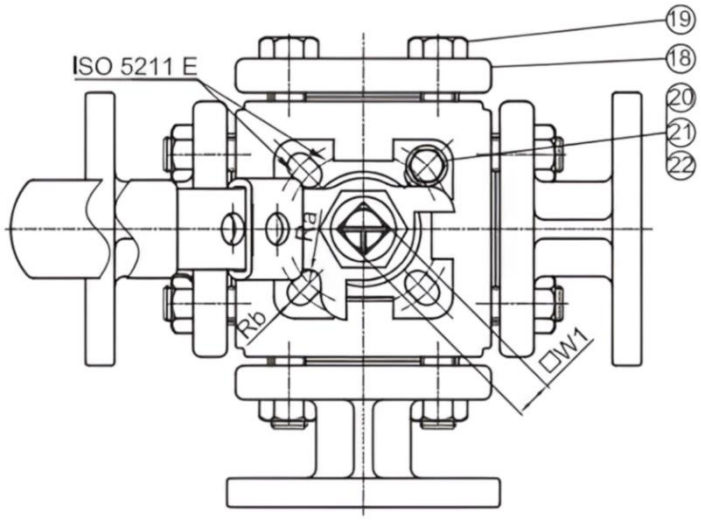
DIMENSIONS:

SIZE	d	D	C	G	T	N-□M	L	L1	H	W	W1	W2	ISO 5211	E	Ma	NPT
1"	25	108	79.5	51	11.1	4-□16	95	17.5	92	188	9.5	14.5	F05	50	M6	1"NPT
11/2"	40	127	98.5	73	14.3	4-□16	123	18.5	126	245	12	19.0	F07	70	M8	11/2"NPT
2"	50	152	120.5	92	15.9	4-□19	137	19.5	132	245	12	19.0	F07	70	M8	2"NPT

VÁLVULA DE BOLA DE ACERO INOXIDABLE DE 3 VÍAS DN 25 CON EXTREMO BRIDA BLOQUEABLE DIN PN16 /

3-WAY STAINLESS STEEL BALL VALVE DN 25 FLANGED ENDS LOCKABLE DIN PN16





FEATURES:
- TEST: EN 12266-1:2003
- INVESTMENT CASTING BODY
- WITH ISO 5211 MOUNTING PAD
- LOCKING DEVICE
- THERE ARE FOUR SEATS
- L-PORT OR T-PORT AVAILABLE / 360°PAD

MATERIALS LIST

NO	PART NAME	MATERIAL
1	BODY	SS304 SS316
2	CAP	SS304 SS316
3	BALL	SS304 SS316
4	SEAT	PTFE
5	STEM	SS316
6	GASKET	PTFE
7	THRUST WASHER	PTFE
8	O-RING	VITON
9	PACKING	PTFE
10	GLAND	SS304
11	SPRING WASHER	SS304
12	STEM NUT	SS304
13	STOP WASHER	SS304
14	HANDLE HEAD	SS304
15	LOCKING DEVICE	SS304
16	HANDLE	SS304
17	PLASTIC COVER	PLASTIC
18	CAP-A	SS316
19	BOLT	SS304
20	STOP PIN	SS304
21	BOLT	SS304
22	NUT	SS304

FLOW PATTERN:

PORT / TYPE	1	2	3	4
T	1 2 3	1 2 3	1 2 3	1 2 3

DIMENSIONS:

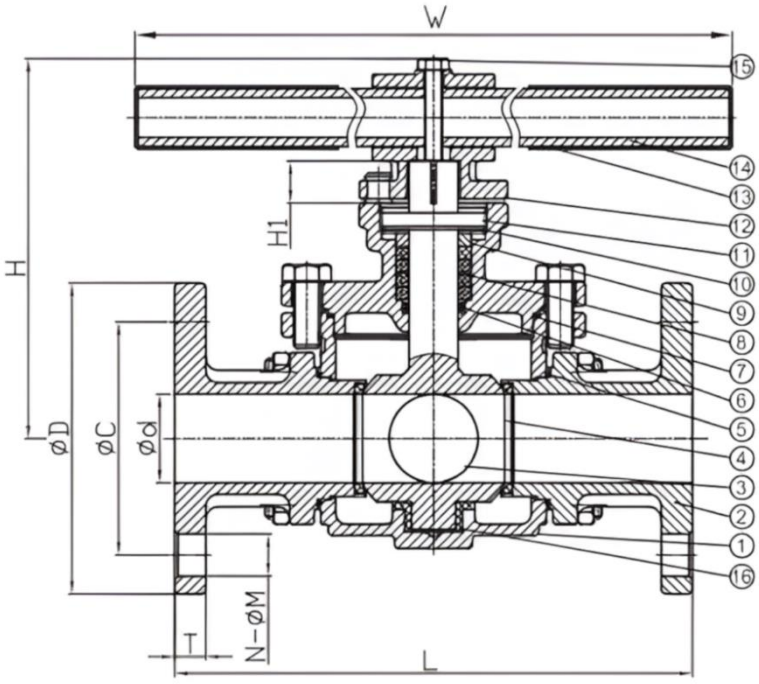
SİZE DN	SİZE NPS	d	D	C	T	N	M	L	H	W	ISO 5211	E	H1	W1	Ra	Rb
25	1"	25	108	85	12.1	4	4	165	96	153	F04-F05	42-50	11	11	R3	R3.5

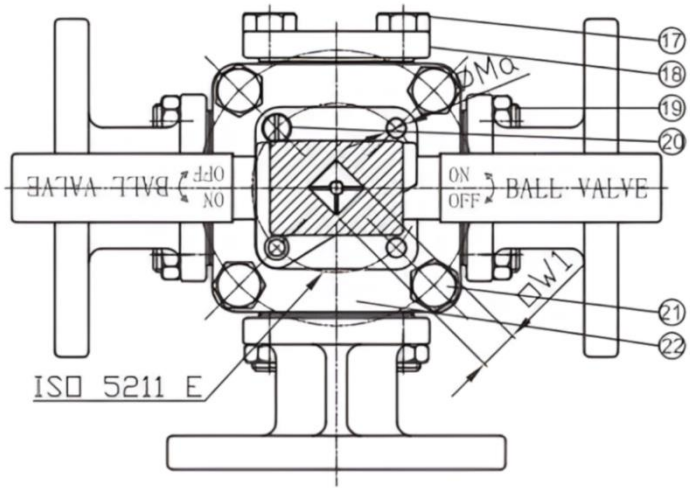
TEST PRESSURE:

SHELL(BY WATER)		EN 12266-1
		450PSI
		32kg/cm²
SEAT	BY WATER	315PSI
		22kg/cm²
	BY AIR	85PSI
		6kg/cm²

VÁLVULA DE BOLA DE ACERO INOXIDABLE DE 3 VÍAS DN 80 CON EXTREMO BRIDA BLOQUEABLE DIN PN16 /

3-WAY STAINLESS STEEL BALL VALVE DN 80 FLANGED ENDS LOCKABLE DIN PN16





FEATURES:

- END FLANGE DIMENSION: DIN2633
- TEST:EN 12266-1:2003
- INVESTMENT CASTING BODY
- FIXED BALL / FULL PORT
- WITH ISO 5211 MOUNTING PAD
- THERE ARE FOUR SEATS
- L-PORT OR T-PORT AVAILABLE / 360°PAD

NO	PART NAME	MATERIAL	
1	BODY	SS304	SS316
2	CAP	SS304	SS316
3	BALL	SS304	SS316
4	SEAT	R-PTFE	
5	GASKET	R-PTFE	
6	O-RING	VITON	
7	GASKET	R-PTFE	
8	PACKING	R-PTFE	
9	GLAND	SUS304	
10	SPRING WASHER	SUS301	
11	CAP-C	1.4308 (SS304)	
12	HANDLE HEAD	1.4308 (SS304)	
13	PLASTIC COVER	PLASTIC	
14	HANDLE POLE	GALVANIZED PIPE	
15	HANDLE BOLT	SUS304	
16	SLEEVE	R-PTFE	
17	CAP-B BOLT	SUS304	
18	CAP-B	1.4308	
19	BOLD	SUS304	
20	STOP PIN	SUS304	
21	CAP-A BOLT	SUS304	
22	CAP-A	1.4308	

FLOW PATTERN:

PORT / TYPE	1	2	3	4
L				
T				

TEST PRESSURE:

SHELL(BY WATER)		345PSI
		24kg/cm²
SEAT	BY WATER	250PSI
		17.5kg/cm²
	BY AIR	85PSI
		6kg/cm²

DIMENSIONS:

Size DN	NPS	d	D	C	T	N	M	L	H	W	ISO 5211	E	H1	W1	Ma
80	3"	76	200	160	20	8	18	305	216	504	F10	102	24	22	□12

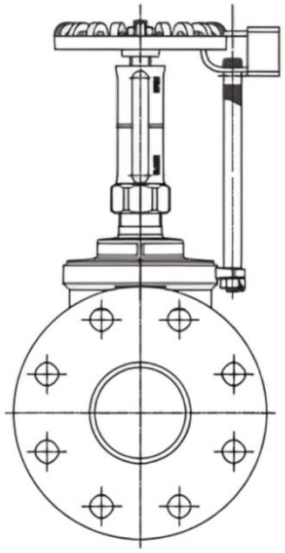
VÁLVULA DE COMPUERTA CON BRIDA E INDICADOR DE POSICIÓN DIN EN 12228 (BLOQUEABLE) PARA TRANSFORMADORES /

FLANGED GATE VALVE WITH POSITION INDICATOR DIN EN 12228 (LOCKABE) FOR TRANSFORMERS

Flanged Gate Valves,
PN16 nominal pressure,
DIN EN 12288
Body and all parts made of brass Ms 58 or RG 5 Bronze (red brass)
with maintenance-free gland packing (PTFE)
and non rising stem,
flanged connection acc. to DIN EN 1092-1

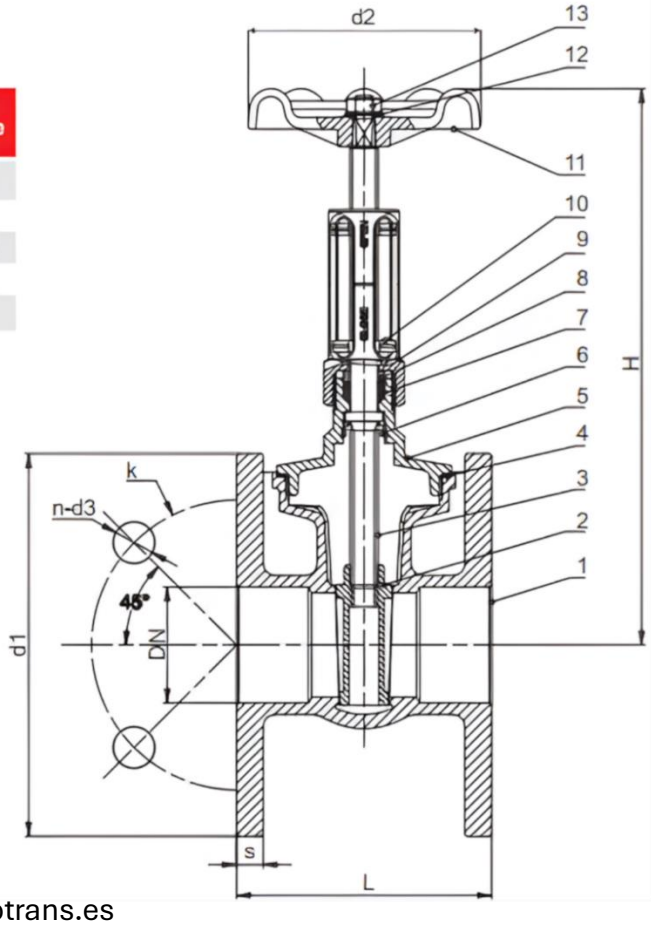
Specifications	
Material	: Brass Ms 58 (CuZn40Pb2) or bronze RG 5 (CuSn5ZnPb)
Handwheel	: Brass (Red painted)
Wedge,cap,stem	: Brass Ms 58 (CuZn40Pb2) or bronze RG 5 (CuSn5ZnPb)
Other assembly components	: A2-70 Stainless Steel
Gaskets	: Resistant to Transformer Oil
Temperature	: -25℃, +120 ℃
Flange dimensions	: EN 1092-1
Stem	: Moving inner

DN	L	d1	H	d2	s	Holes			W(kg.)	Pressure
						k	n	d3		
25	80	115	80	60	10	85		14	2,3	
40	100	150	100	80	10,5	110	4	18	4,2	
50	110	165	110	100	11,5	125		18	4,8	PN 16
65	130	185	130	120	14	145		18	8.9	
80	150	200	150	140	14	160	8	18	11.4	



Padlock (Optional)

Locking Pin (Optional)

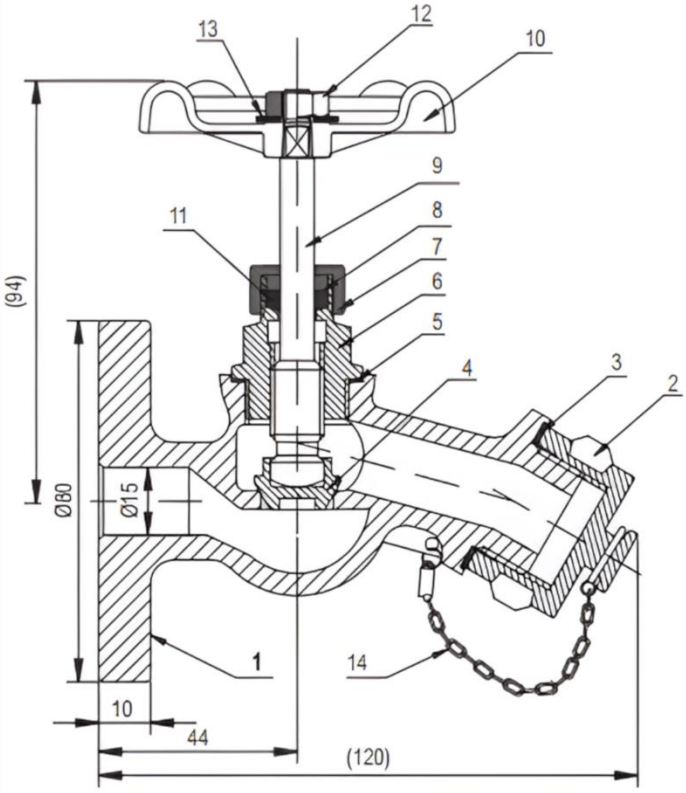


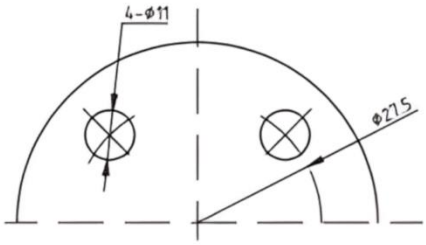
VÁLVULA DE MUESTREO DE ACEITE DIN 42568 DN 15 O ½ '' /

OIL SAMPLING VALVE DIN 42568 DN 15 OR ½ ''

Brass Ms 58 (CuZN40Pb2)
Bronze RG 5 (CuSn5ZnPb)

Body : Ms 58 or Bronze
Valve stem seal : PTFE gland packing
Seat packing : Metal
Flange connection : Acc. to DIN2501





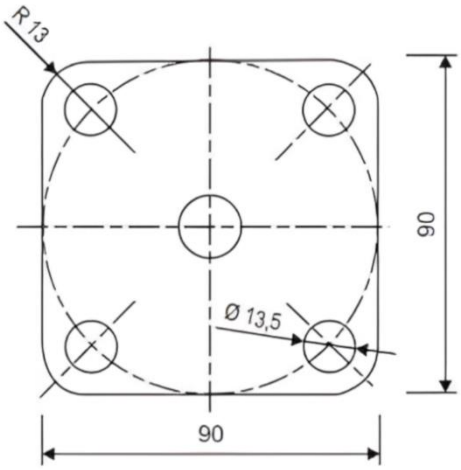
NO	PART NAME	MATERIAL
1	Body	Ms 58 (CuZn40Pb2) or RG 5
2	Closing cap	Ms 58 (CuZn40Pb2) or RG 5
3	Gasket	Teflon
4	Seat	Ms 58 (CuZn40Pb2) or RG 5
5	Gasket	PTFE
6	Upper Cap	Ms 58 (CuZn40Pb2) or RG 5
7	Nut	Ms 58 (CuZn40Pb2) or RG 5
8	Gland	Ms 58
9	Stem	Ms 58
10	Hand wheel	Bakalite or Aluminium casting
11	Packing	PTFE
12	Nut	SS 316
13	Washer	SS 316
14	Chain	SS 316

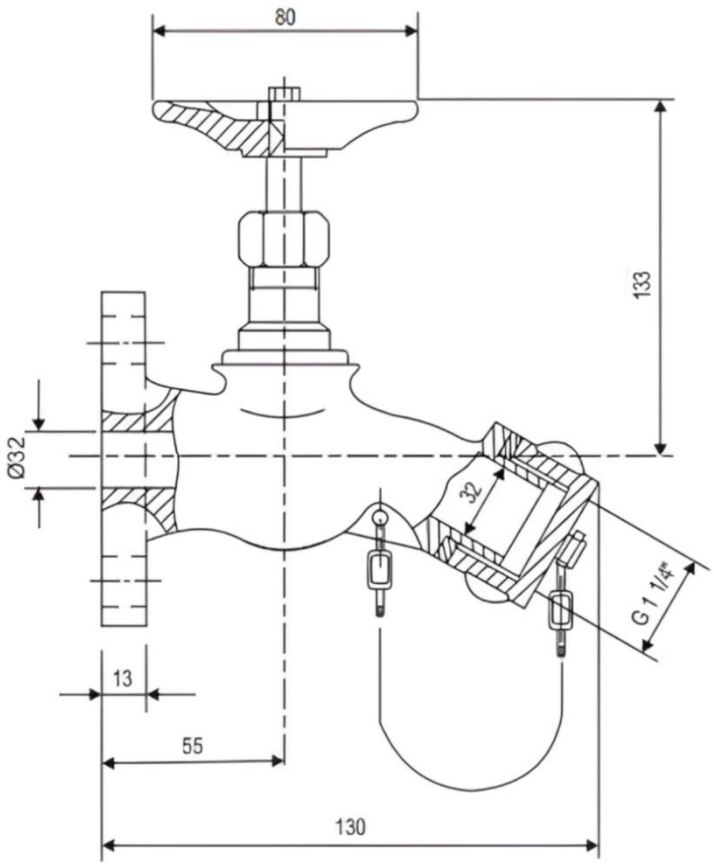
VÁLVULA DE MUESTREO DE ACEITE DIN 42568 DN 32 /

OIL DRAIN & SAMPLING VALVE DIN 42568 DN 32

Brass Ms 58 (CuZN40Pb2)
Bronze RG 5 (CuSn5ZnPb)

Body : Ms 58 or Bronze
Valve stem seal : PTFE gland packing
Seat packing : Metal
Flange connection : Acc. to DIN2501

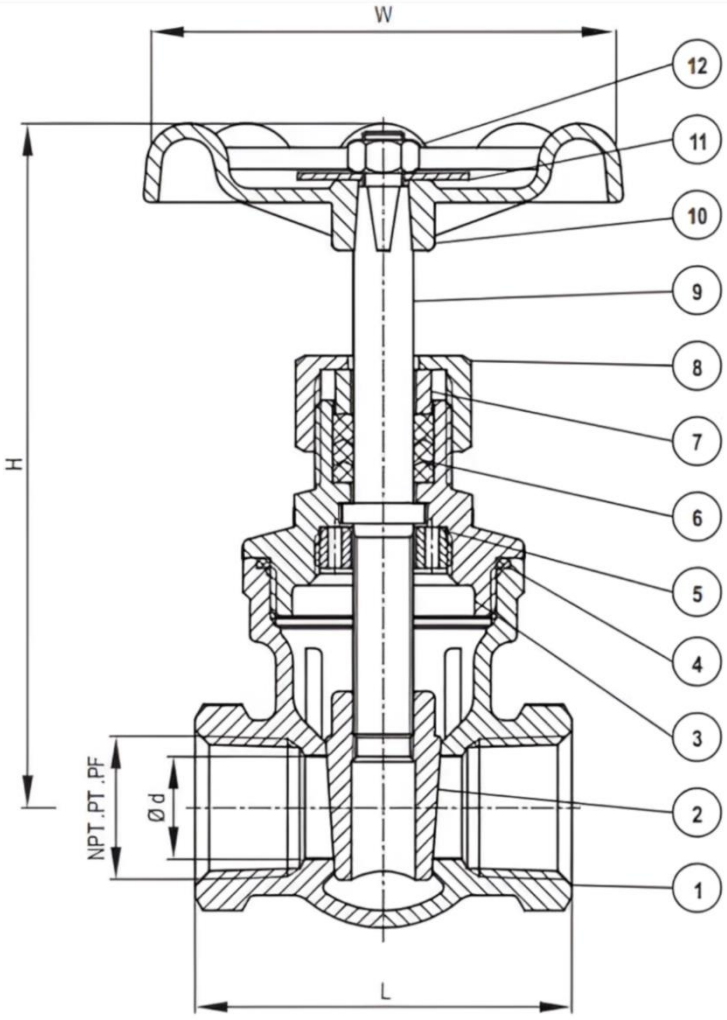




NO	PART NAME	MATERIAL
1	Body	Ms 58 (CuZn40Pb2) or RG 5
2	Closing cap	Ms 58 (CuZn40Pb2) or RG 5
3	Gasket	Teflon
4	Seat	Ms 58 (CuZn40Pb2) or RG 5
5	Gasket	PTFE
6	Upper Cap	Ms 58 (CuZn40Pb2) or RG 5
7	Nut	Ms 58 (CuZn40Pb2) or RG 5
8	Gland	Ms 58
9	Stem	Ms 58
10	Hand wheel	Bakalite or Aluminium casting
11	Packing	PTFE
12	Nut	SS 316
13	Washer	SS 316
14	Chain	SS 316

VÁLVULA DE COMPUERTA CLASE 200 CON EXTREMO ROSCADO DE ACERO INOXIDABLE /

GATE VALVE CLASS 200 SCREWED END STAINLESS STEEL



TC311 SUSU316 A351 Gr-CF8M DIN1.4408

FEATURES:

- PIPE THREAD IN ACCORDANCE: NPT, BSPT, DIN259, DIN2999, ISO 228 CLASS A
- INVESTMENT CASTING BODY
- NON-RISING STEM
- 200 W.O.G.
- MATERIAL:

SUS316/ ASTM A351 Gr-CF8M/DIN1.4408

MATERIALS LIST

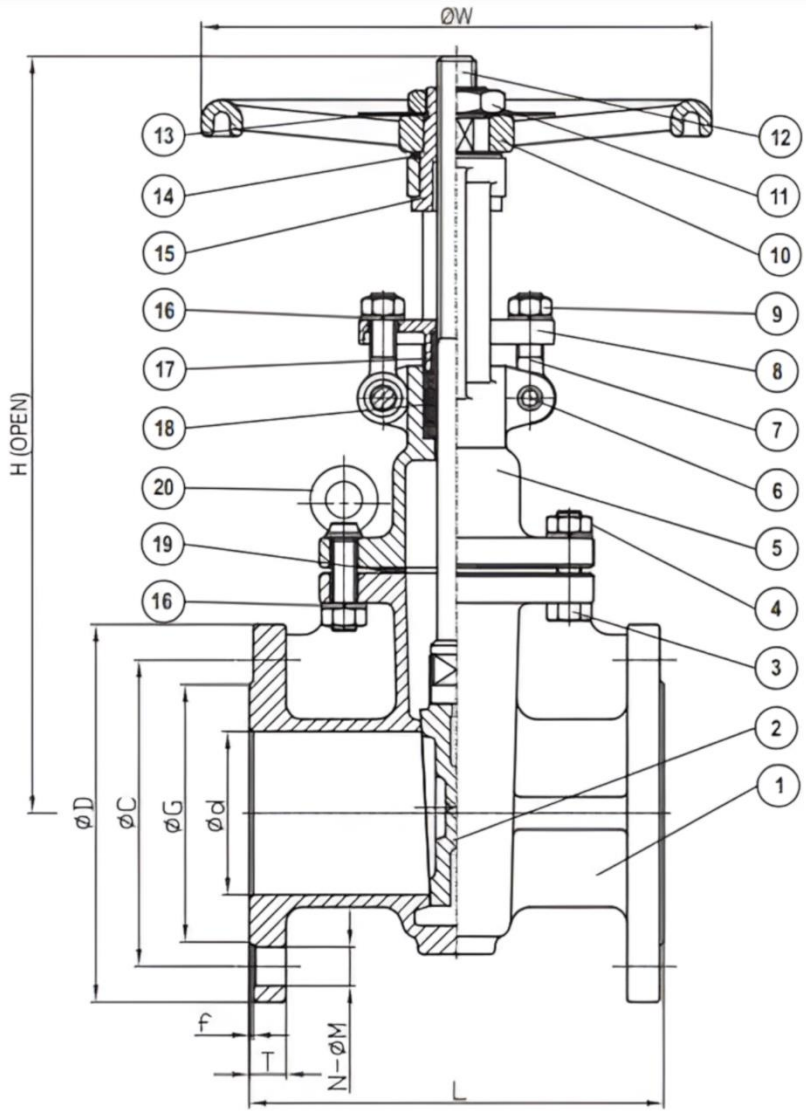
NO	PART NAME	MATERIAL	
1	BODY	SS304	SS316
2	DISC	SS304	SS316
3	BONNET	SS304	SS316
4	GASKET	PTFE	
5	WHORL GASKET	SUS304	
6	PACKING	PTFE	
7	GLAND	SUS304	
8	CAP NUT	CF8M	
9	STEM	SUS316	
10	HANDLE	ALUMINUM	
11	NAMEPLATE	ALUMINUM	
12	NUT	SUS304	

DIMENSIONS:

Size DN	Size NPS	d	L	H	W	WEIGHT KG
15	1/2"	15	55	101	70	0.42
20	3/4"	20	60	108	70	0.52
25	1"	25	65	115	80	0.70
32	11/4"	32	75	132	80	1.01
40	11/2"	38	85	149	90	1.54
50	2"	50	95	175	100	2.06
65	21/2"	65	116	213	140	5.56
80	3"	80	130	241	140	8.63

VÁLVULA DE COMPUERTA DIN-PN16 CON EXTREMO DE BRIDA DE ACERO INOXIDABLE /

GATE VALVE DIN-PN16 FLANGE END STAINLESS STEEL



FEATURES:

- FACE TO FACE DIMENSION: DIN3202-F4
- END FLANGE DIMENSIONS: DIN2633
- DESING: ASME B16.34
- TEST: EN 12266-1
- INVESTMENT CASTING BODY

MATERIALS LIST

NO	PART NAME	MATERIAL	
1	BODY	1.4308	1.4408
2	DISC	1.4308	1.4408
3	BOLT	SUS304	
4	NUT	SUS304	
5	CAP	1.4308	1.4408
6	HINGE PIN	SUS304	
7	EYE BOLT	SUS304	
8	GLAND	1.4308	
9	EYE NUT	SUS304	
10	HAND WHEEL	FCD	
11	NUT	BRONZE	
12	STEM	SUS304	SUS316
13	NAME PLATE	SUS304	
14	GASKET	BRONZE	
15	YOKE SLEEVE	BRONZE	
16	SPRING WASHERS	SUS304	
17	STEM BUSHING	PTFE	
18	GLAND PACKING	PTFE	
19	GASKET	*PTFE / 304+GRAPHITE	
20	LIFTING RING	SUS304	

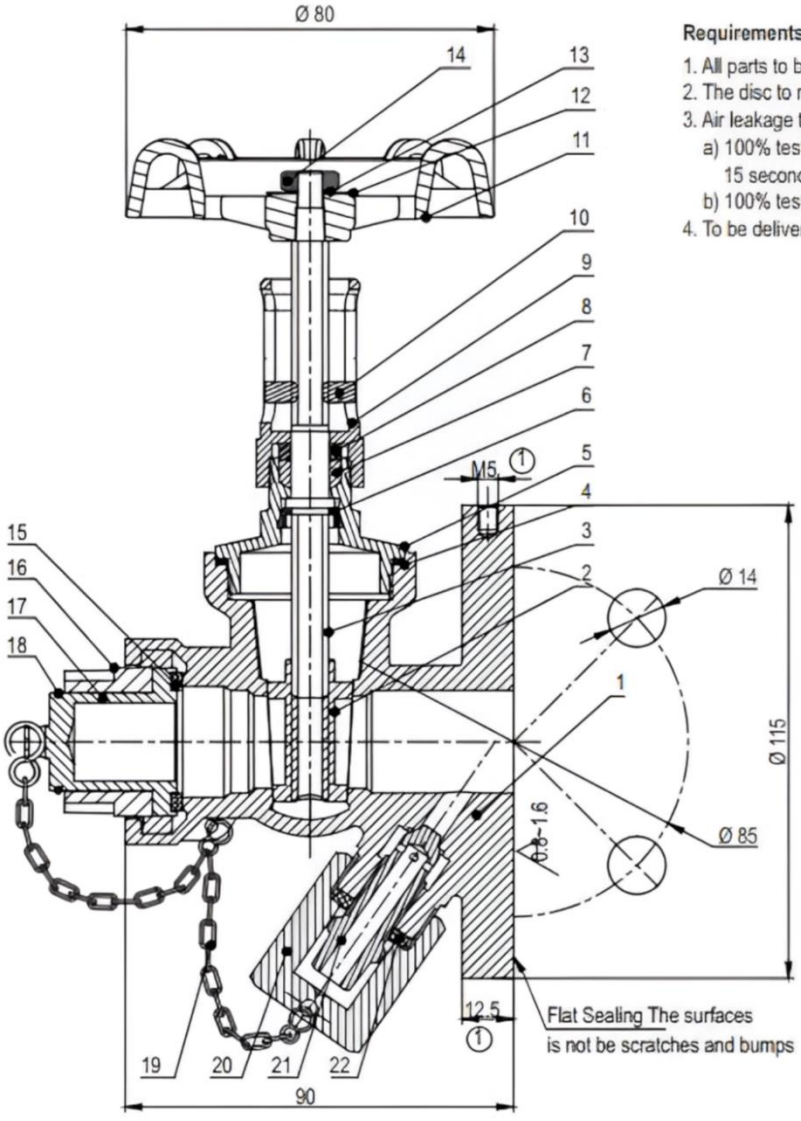
* 5"UP GASKET: SS304+GRAPHITE

DIMENSIONS:

Size	d	L	H	W	D	C	G	f	T	N-ØM
2"	50	150	331	200	165	125	102	3	18	4-Ø18
21/2"	65	170	393	200	185	145	122	3	18	4-Ø18
3"	80	180	470	250	200	160	138	3	20	8-Ø18
4"	100	190	545	250	220	180	158	3	20	8-Ø18
5"	125	200	640	300	250	210	188	3	22	8-Ø18
6"	150	210	740	300	285	240	212	3	22	8-Ø22
8"	200	230	910	350	340	295	268	3	24	8-Ø22

VÁLVULA DE COMPUERTA DE BRONCE DN25 CON INDICADOR DE POSICIÓN, MUESTREO EN LA PARTE INFERIOR Y TAPA DN 25 /

DN 25 BRONZE GATE VALVE WITH POSITION INDICATOR BOTTOM SAMPLING AND CAP



Requirements

1. All parts to be clean and free of oil and other impurities before assembling.
2. The disc to move up and down smoothly with opening and closing the valves
3. Air leakage test according to below
   a) 100% testing of the external leakage, pressure (air) to be 6bar for min. 15 seconds.
   b) 100% testing of internal leakage: Pressure (air) to be 6 bar for min. seconds.
4. To be delivered in the closed position.

Materials List

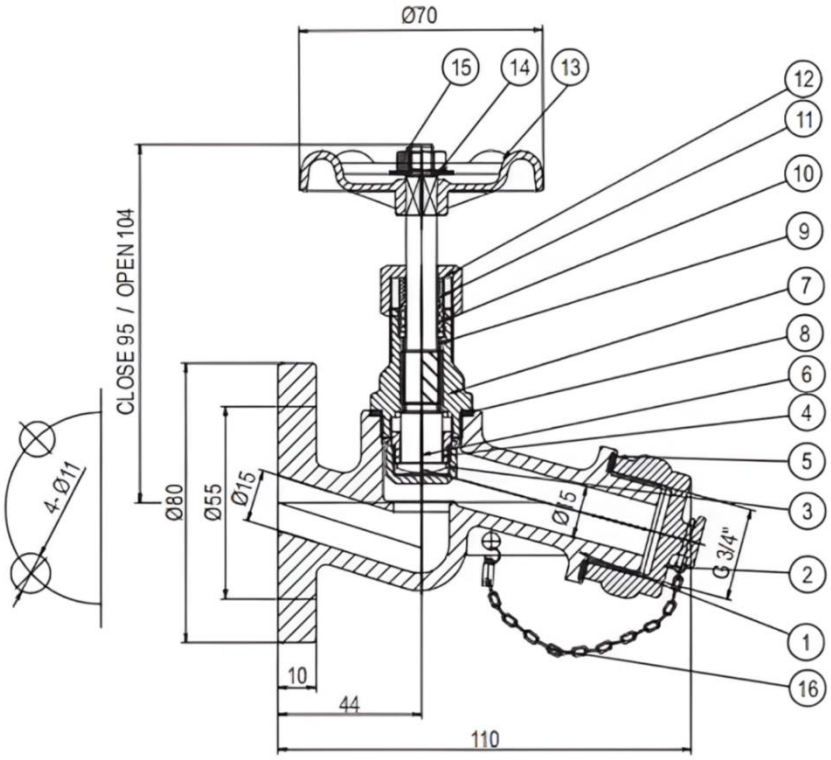
NO	DESCRIPTION	QTY.	MATERIAL
1	Valve body	1	Bronze C83600
2	Disc	1	Bronze C83600
3	Stem	1	Brass CW617N
4	Washer ring	1	PTFE
5	Bonnet	1	Bronze C83600
6	Tightening Ring	1	Brass HPb58-2
7	Sealing Ring	1	PTFE
8	Clamping Nut	1	Brass HPb58-2
9	Guiding holder	1	Bronze C83600
10	Across Slider	1	Bronze C83600
11	Handlewhell	1	BRASS
12	Nameplate	1	Aluminum
13	Gasket	1	SUS 304
14	Hex Nut	1	SUS 304 M6
15	Seal ring	1	NBR
16	Sealing holder	1	Brass CW617N
17	Clamping fitting	1	Bronze C83600
18	Chain	1	Brass
19	Hex cap	1	Brass CW617N
20	Drain disc	1	Brass CW617N
21	Sealing washer	1	PTFE

VÁLVULA DE MUESTREO DE ACEITE DIN 42568 DN 15 OR ½ /

OIL SAMPLING VALVE DIN 42568 DN 15 OR ½

Stainless Steel 316/1.4408
Stainless Steel 304/1.4308

Body : Stainless steel
Valve stem seal : PTFE gland packing
Seat packing : Metal
Flange connection : Acc. to DIN2501



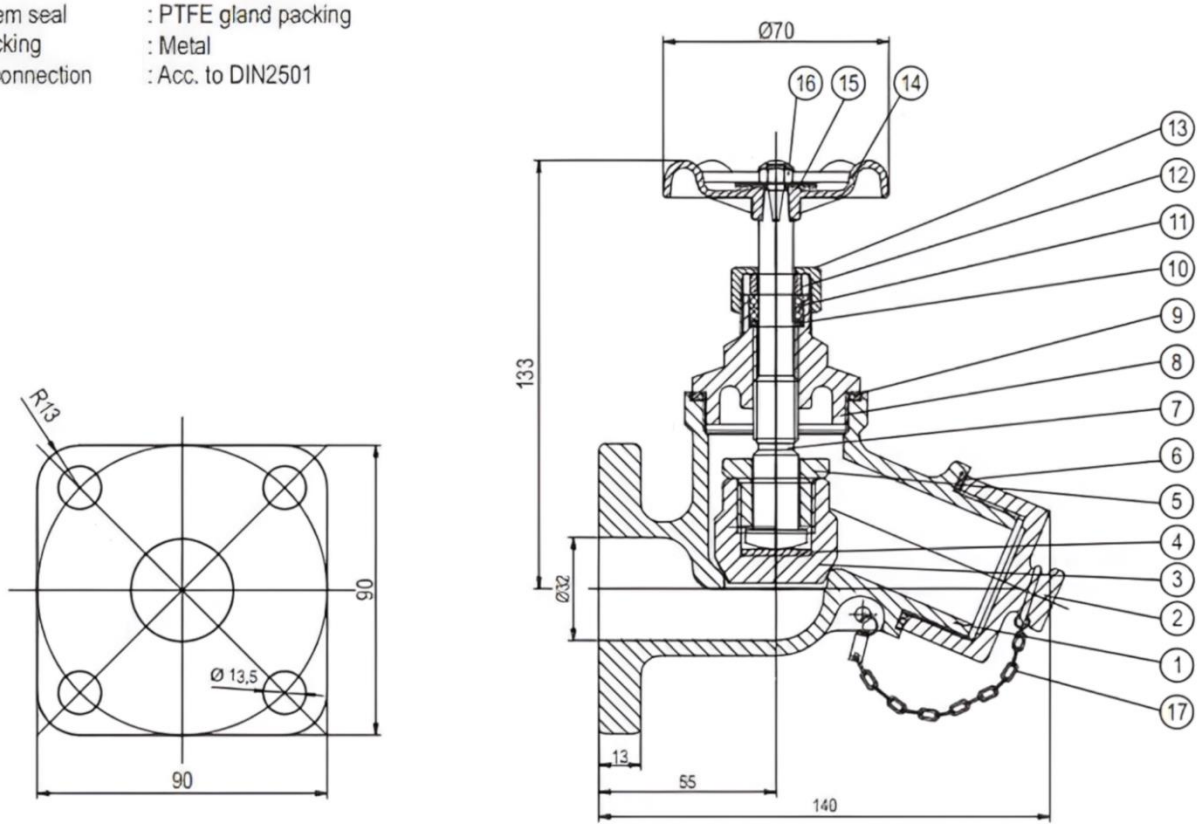
NO	PART NAME	MATERIAL
1	Body	1.4308 - 1.4408
2	Closing cap	1.4308 - 1.4408
3	Disc	SS 304
4	Disc cover	SS 304
5	Gasket	PTFE
6	Stem	SS 304
7	Upper Cap	1.4308 - 1.4408
8	Gasket	PTFE
9	Washer	SS 304
10	Packing	PTFE
11	Gland	SS 304
12	Nut	1.4308 - 1.4408
13	Handle	AL or Bakelite
14	Nut	SS 304
15	Washer	SS 304
16	Chain	SS 304

VÁLVULA DE MUESTREO Y DRENAJE DE ACEITE DIN 42568 DN 32 /

OIL DRAIN & SAMPLING VALVE DIN 42568 DN 32

Stainless Steel 316/1.4408
Stainless Steel 304/1.4308

Body	: Stainless steel
Valve stem seal	: PTFE gland packing
Seat packing	: Metal
Flange connection	: Acc. to DIN2501

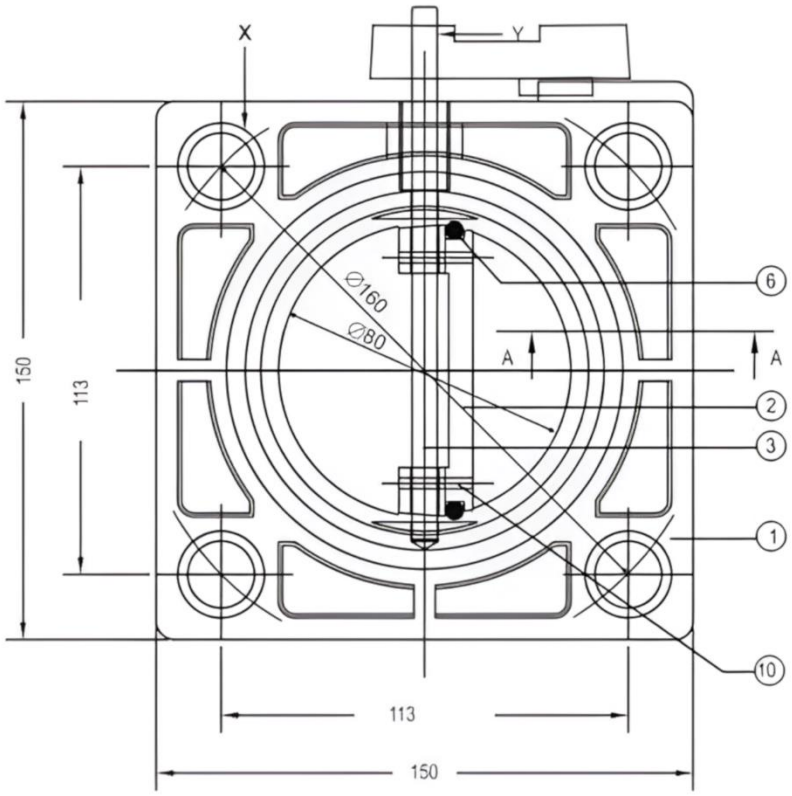


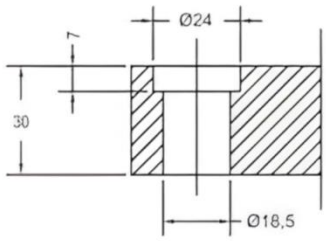
NO	PART NAME	MATERIAL
1	Body	1.4308 - 1.4408
2	Closing cap	1.4308 - 1.4408
3	Disc	SS 304
4	Washer	SS 304
5	Disc cover	SS 304
6	Gasket	PTFE
7	Stem	SS 304
8	Upper Cap	1.4308 - 1.4408
9	Gasket	PTFE
10	Washer	SS 304
11	Packing	PTFE
12	Gland	SS 304
13	Nut	1.4308 - 1.4408
14	Handle	AL or Bakelite
15	Washer	SS 304
16	Nut	SS 304
17	Chain	SS 304

VÁLVULA DE ALUMINIO M1 PARA RADIADOR NW 80 DIN42560 /

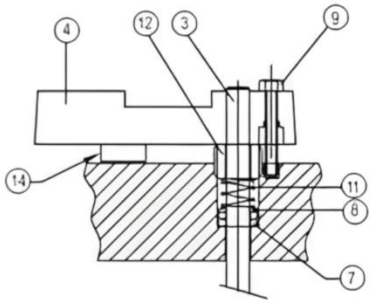
ALUMINIUM BUTTERFLY VALVE M1 FOR RADIATOR NW 80 DIN42560

The aluminium die casted valve body, flap and handle. Availible for mounting between flanges (wafer type) of transformer tank and radiator. Absolute Zero leakage when valve is closed. Material of sealing O-rings VITON or NBR.The valve can be fixed to the transformer-flange with help of 4 special M 16 bolts.

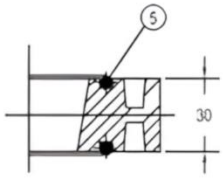




DETAIL - X

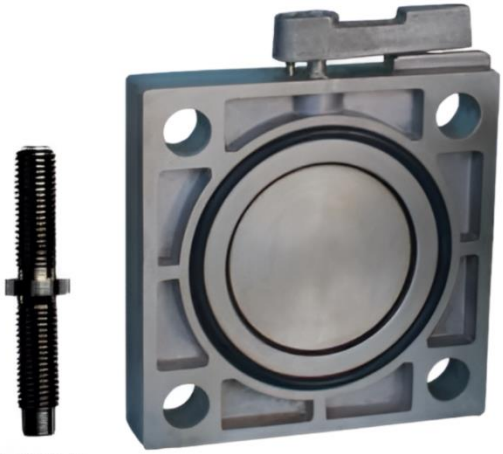


DETAIL - Y



SECT. - AA

No:	Description	Material
1	Body	Aluminium
2	Flap	Aluminium
3	Shaft	St. Steel
4	Latch	Aluminium
5	O-Ring	NBR
6	O-Ring	NBR
7	O-Ring	NBR
8	Washer	A2-70
9	Screw M5x30	A2-70
10	Pin	A2-70
11	Spring	A2-70
12	Prets Screw	A2-70

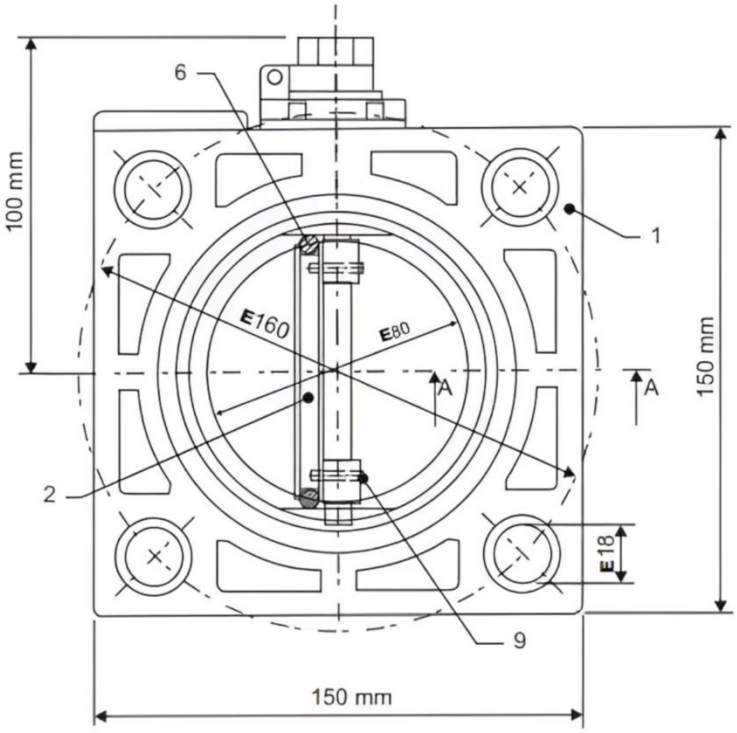


M16x101Bolt
Stainless or St37 zinc
(Optional) Required 4 Pcs for Each Valve

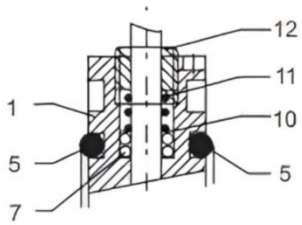
VÁLVULA DE ALUMINIO M2 PARA RADIADOR NW 80 DIN42560 /

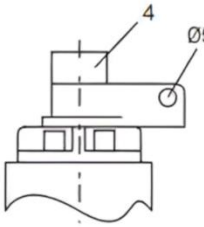
ALUMINIUM BUTTERFLY VALVE M2 FOR RADIATOR NW 80 DIN42560

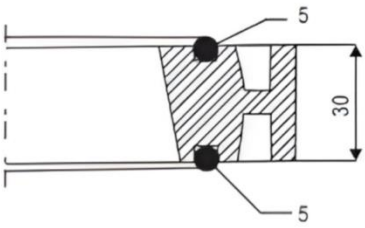
The aluminium die casted valve body, flap and handle. Availible for mounting between flanges (wafer type) of transformer tank and radiator. Absolute Zero leakage when valve is closed. Material of sealing O-rings VITON or NBR.The valve can be fixed to the transformer-flange with help of 4 special M 16 bolts.



Dimensions in mm.







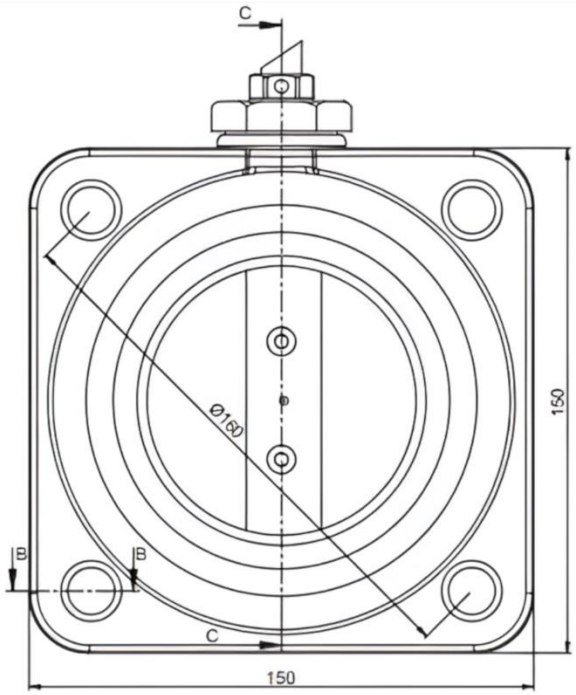
available
to use pad lock

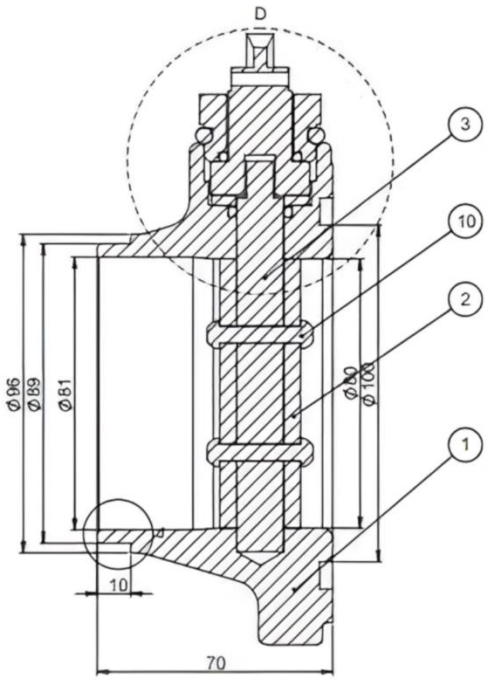
No:	Description	Material
1	Body	Aluminium
2	Flap	Aluminium
3	Shaft	St. Steel
4	Latch	Aluminium
5	O-Ring	NBR
6	O-Ring	NBR
7	O-Ring	NBR
8	Washer	A2-70
9	Screw M5x30	A2-70
10	Pin	A2-70
11	Spring	A2-70
12	Prets Screw	A2-70

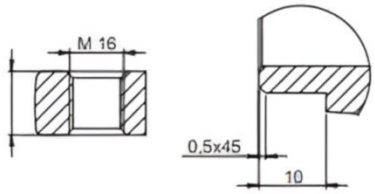
M16x101Bolt
Stainless or St37 zinc
(Optional) Required 4 Pcs for Each Valve

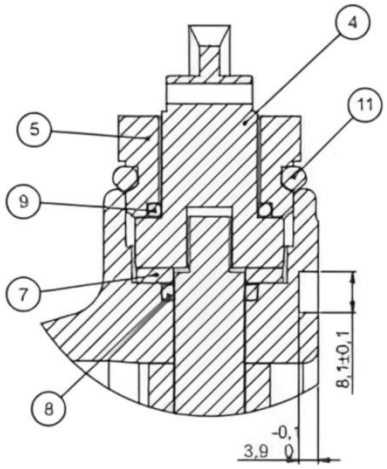
VÁLVULA MARIPOSA CON CUELLO DE SOLDADURA, FORMA A, DIN 42560 /

DIN 42560 FORM A WELDING NECK BUTTERFLY VALVE





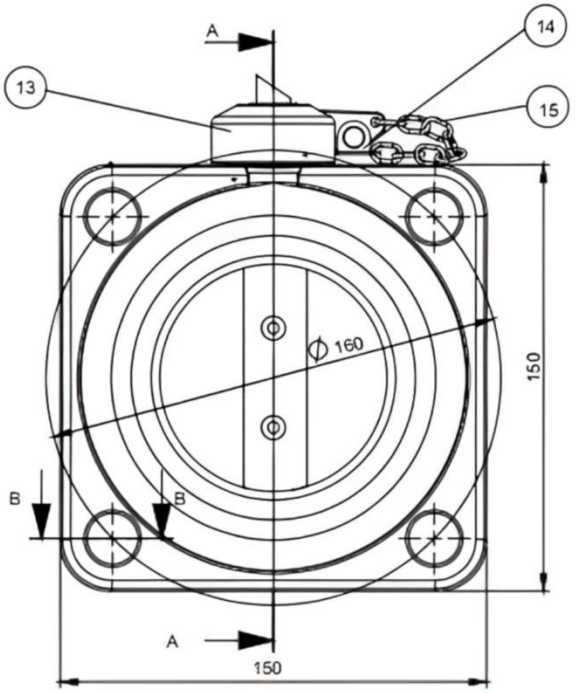


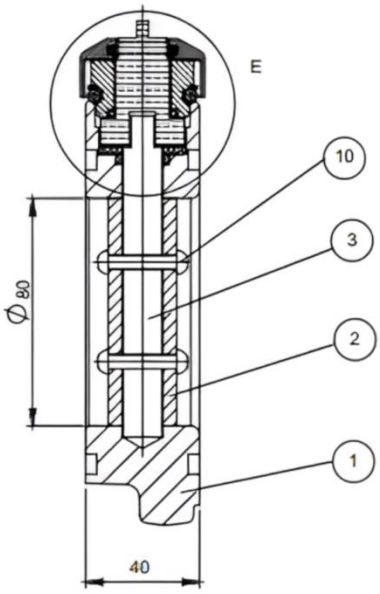


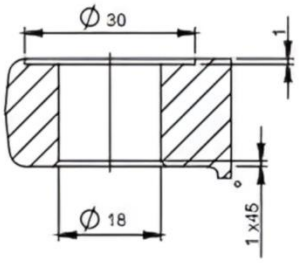
Item	Description	Material	Qty
1	Flange 42560	S355J2G3	1
2	Clap 42560	GG20	1
3	Spindle	11SMnPb30	1
4	Thrust member	Ms58	1
5	Thrust screw	Ms58	1
7	Gasket DIN 42560	AFM 39,29x14,5x3	1
8	O-ring DIN 42560	14x3 NBR	1
9	O-ring	19x3 VITON	1
10	Pin	S235JR,5x28	2
11	O-ring	28x5 VITON	1

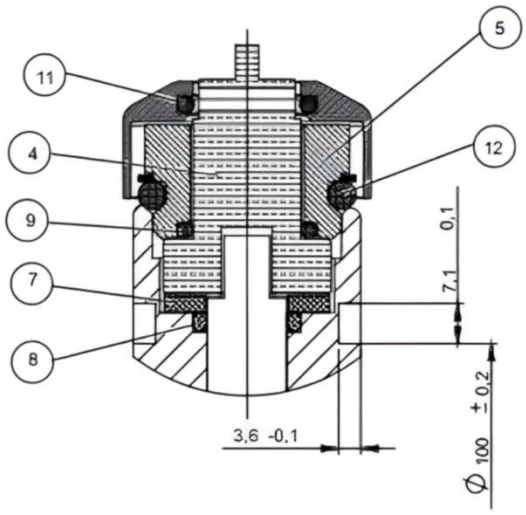
VÁLVULA MARIPOSA CON FORMA B DIN 42560 /

DIN 42560 FORM B BUTTERFLY VALVE







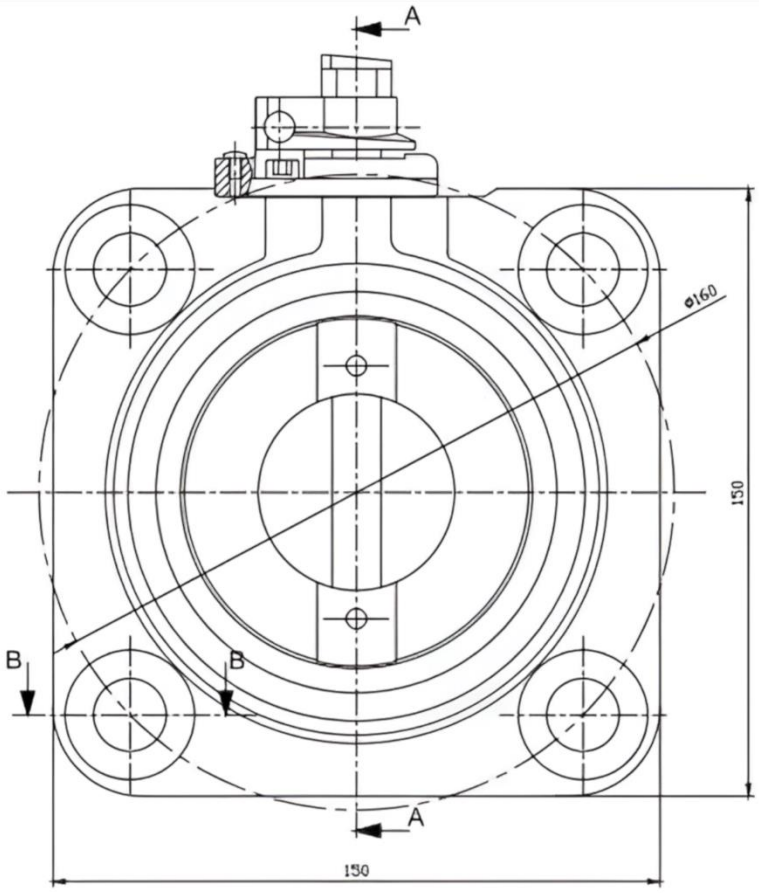


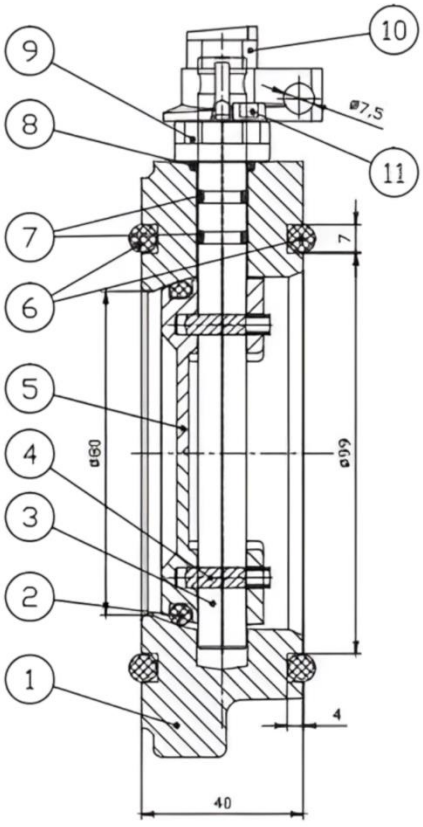
Item	Description	Material	Qty
1	Flange 42560	S355J2G3	1
2	Clap 42560	GG20	1
3	Spindle	11SMnPb30	1
4	Thrust member	Ms58	1
5	Thrust screw	Ms58	1
7	Gasket DIN 42560	AFM 39,29x14,5x3	1
8	O-ring DIN 42560	14x3 NBR	1
9	O-ring	19x3 VITON	1
10	Pin	S235JR,5x28	2
11	O-ring	19x3 VITON	1
12	O-ring (Optional)	28x5 VITON	1
13	Cap (Optional)	MS 58	1
14	Locking-ring (Optional)	Stainless Steel	1
15	Chain (Optional)	Stainless Steel	1

Items 11 - 13 - 14 - 15 - are optional

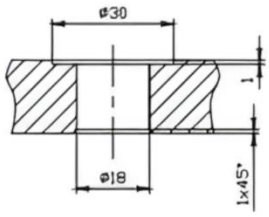
VÁLVULA MARIPOSA DE ACERO INOXIDABLE SS316 CON FORMA B DIN 42560 /

DIN 42560 FORM B BUTTERFLY VALVE STAINLESS STEEL SS316





A-A SECTION



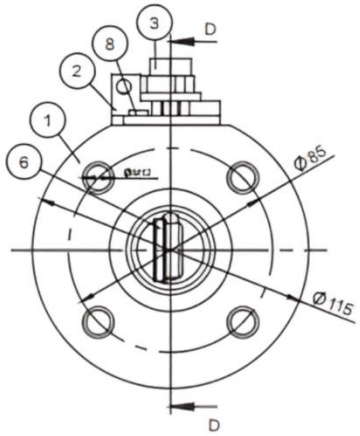
B - B SECTION

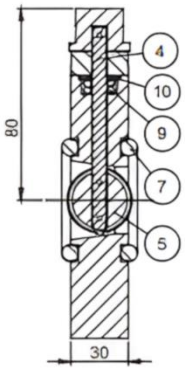
Completly Stainless Steel

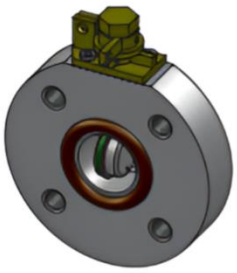
VÁLVULA MARIPOSA PARA BUCHHOLZ PN6 Y PN10 /

BUTTERFLY VALVE FOR BUCHHOLZ PN6 & PN10

DN 25

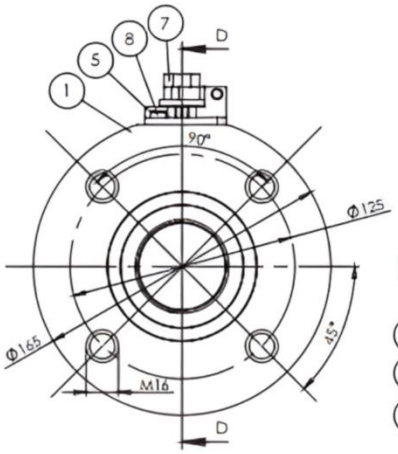


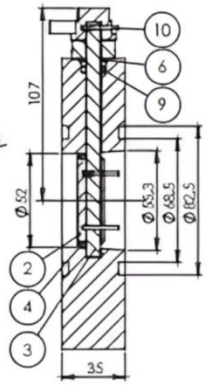


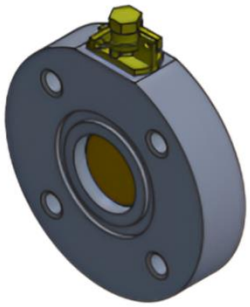


Item	Description	Material	Qty
1	Body	St37☐ SS316☐ ☐ Aluminium	1
2	Gland	Brass	1
3	Drive	Brass	1
4	Spindle	A2-70	1
5	Throttle Clap	Brass	1
6	O-ring	NBR ☐ Viton ☐	1
7	O-ring	NBR ☐ Viton ☐	2
8	Bolt	A2-70	2
9	O-ring	NBR ☐ Viton ☐	2
10	Washer	A2-70	1

DN 50

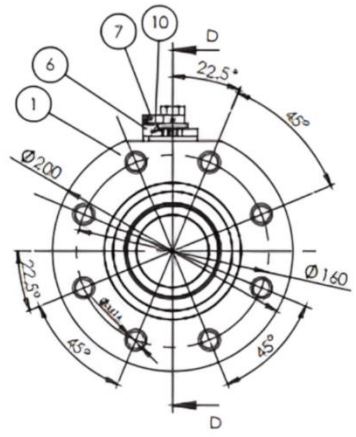


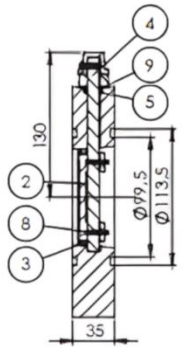


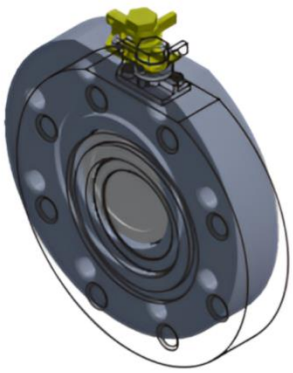


Item	Description	Material	Qty
1	Body	St37☐ SS316☐ ☐ Aluminium	1
2	Throttle Clap	Brass	1
3	Spindle	A2-70	1
4	O-ring	NBR ☐ Viton ☐	1
5	Gland	Brass	1
6	Washer	A2-70	1
7	Drive	Brass	1
8	Bolt	A2-70	2
9	O-ring	NBR ☐ Viton ☐	2
10	Spring Pin	A2-70	3

DN 80



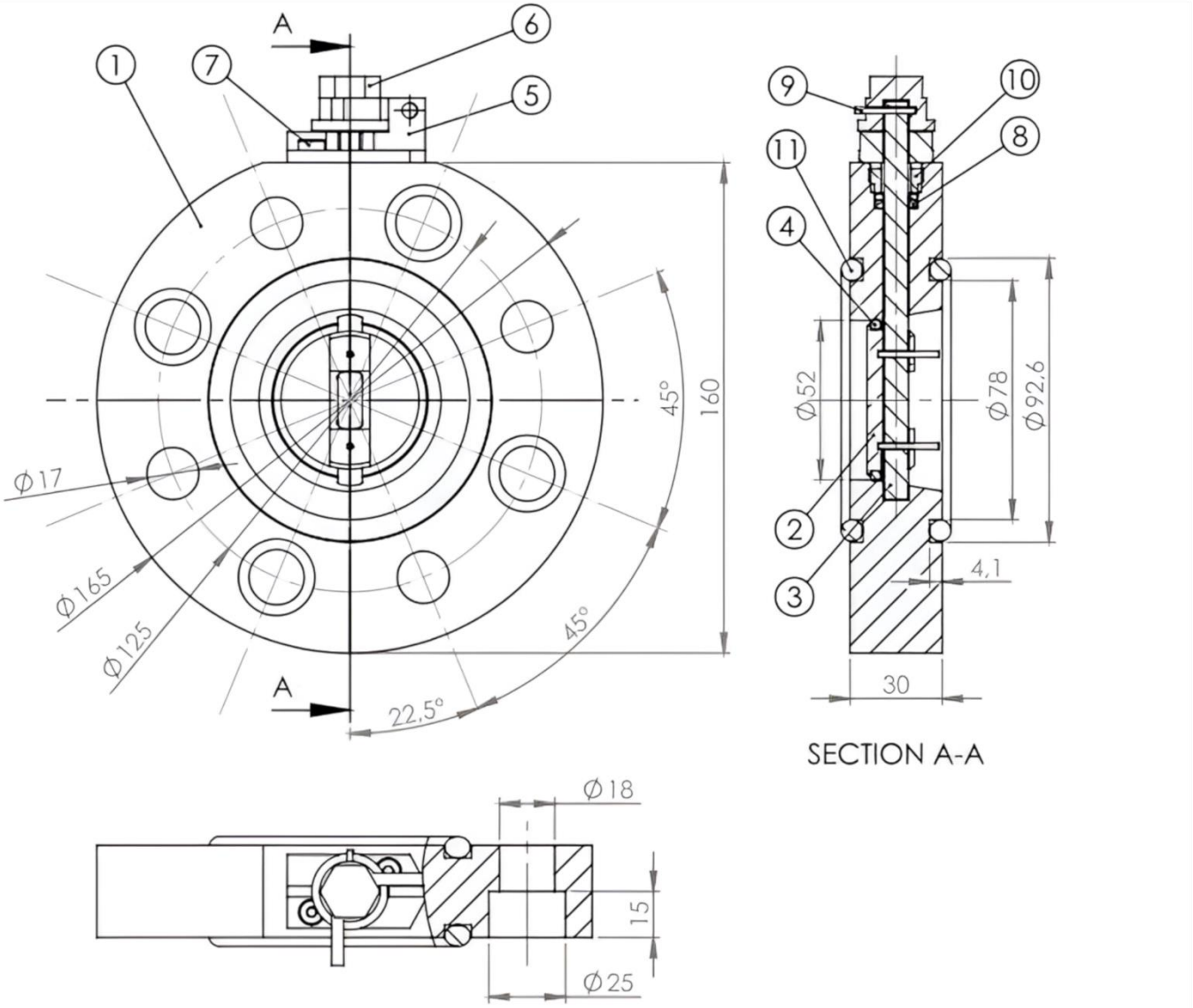


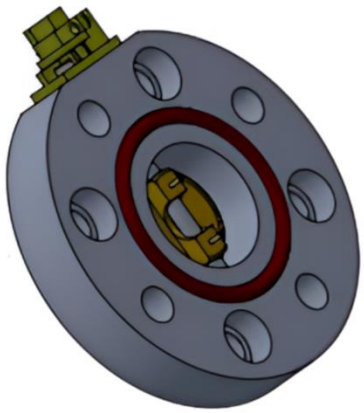


Item	Description	Material	Qty
1	Flange Body	St37☐SS316☐ ☐ Aluminium	1
2	Throttle Clap	Brass	1
3	O-ring	NBR ☐ Viton ☐	1
4	Spindle	A2-70	1
5	O-ring	NBR ☐ Viton ☐	2
6	Gland	Brass	1
7	Drive	Brass	1
8	Spring Pin	A2-70	3
9	Washer	A2-70	1
10	Bolt	A2-70	2

VÁLVULA DE ESTRANGULACIÓN DN 50 /

DN 50 THROTTLE VALVE

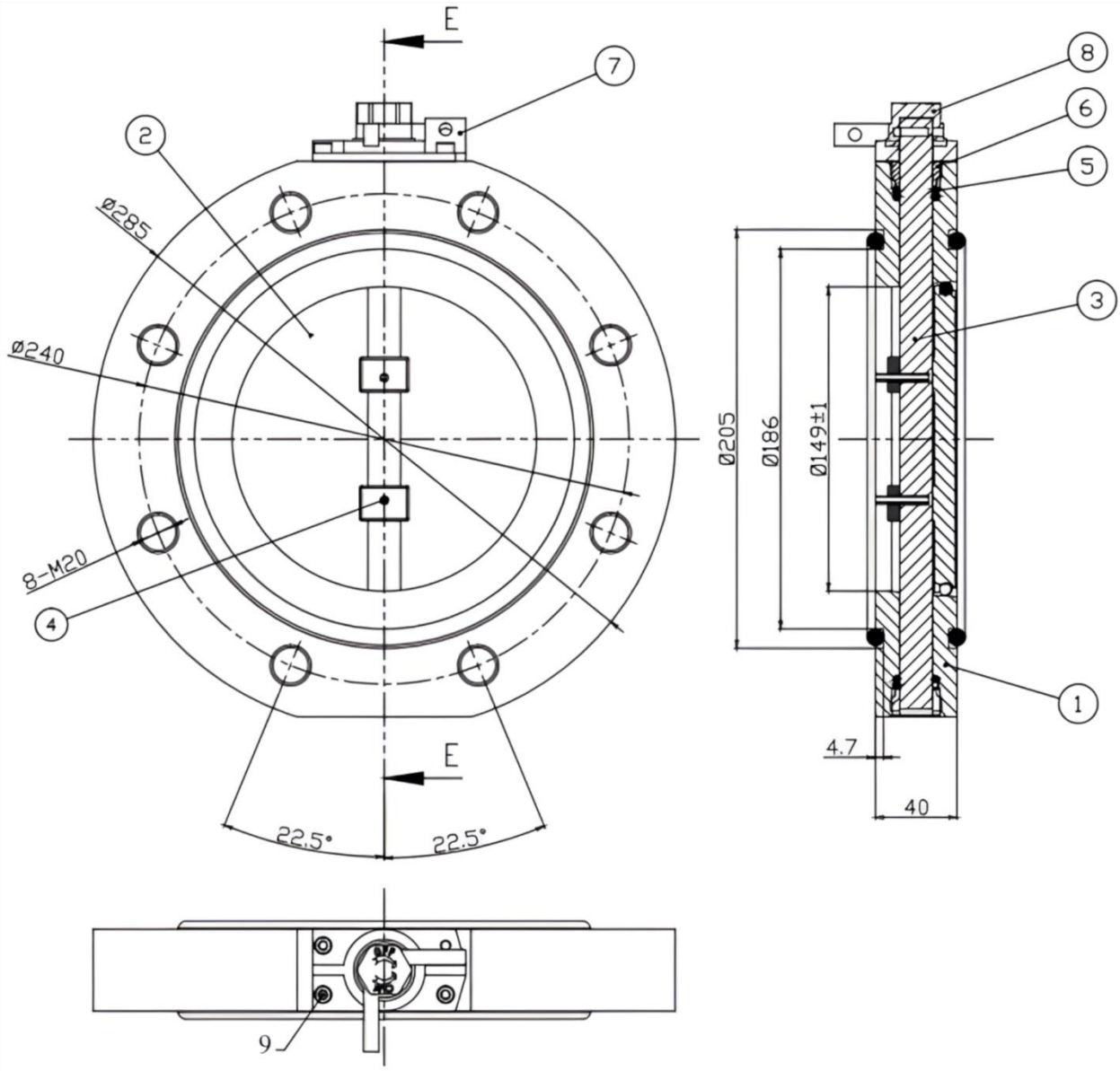


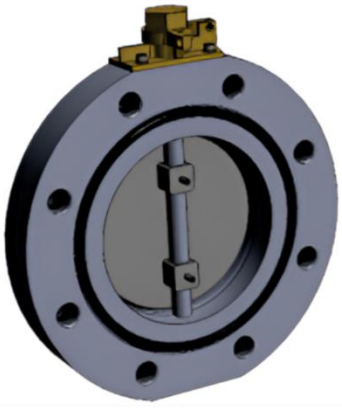


NO	DESCRIPTION	MATERIAL	QTY
1	Flange Body	St37☐SS316☐ ☐ Aluminium	1
2	Throttle Clap	Aluminium	1
3	Sheft Ø 8	SS316	1
4	O-Ring 44x3,5	NBR / Viton / FVMQ	1
5	Gland	BRASS	1
6	Drive	BRASS	1
7	DIN 7984 - M5 x20	A2-70	2
8	O-Ring 8x3	NBR / Viton / FVMQ	2
9	Pin	A2-70	3
10	Clap O-Ring Nut	BRASS	1
11	O-Ring 78x7	NBR / Viton / FVMQ	2

VÁLVULA DE ESTRANGULACIÓN DN 150 /

DN 150 THROTTLE VALVE

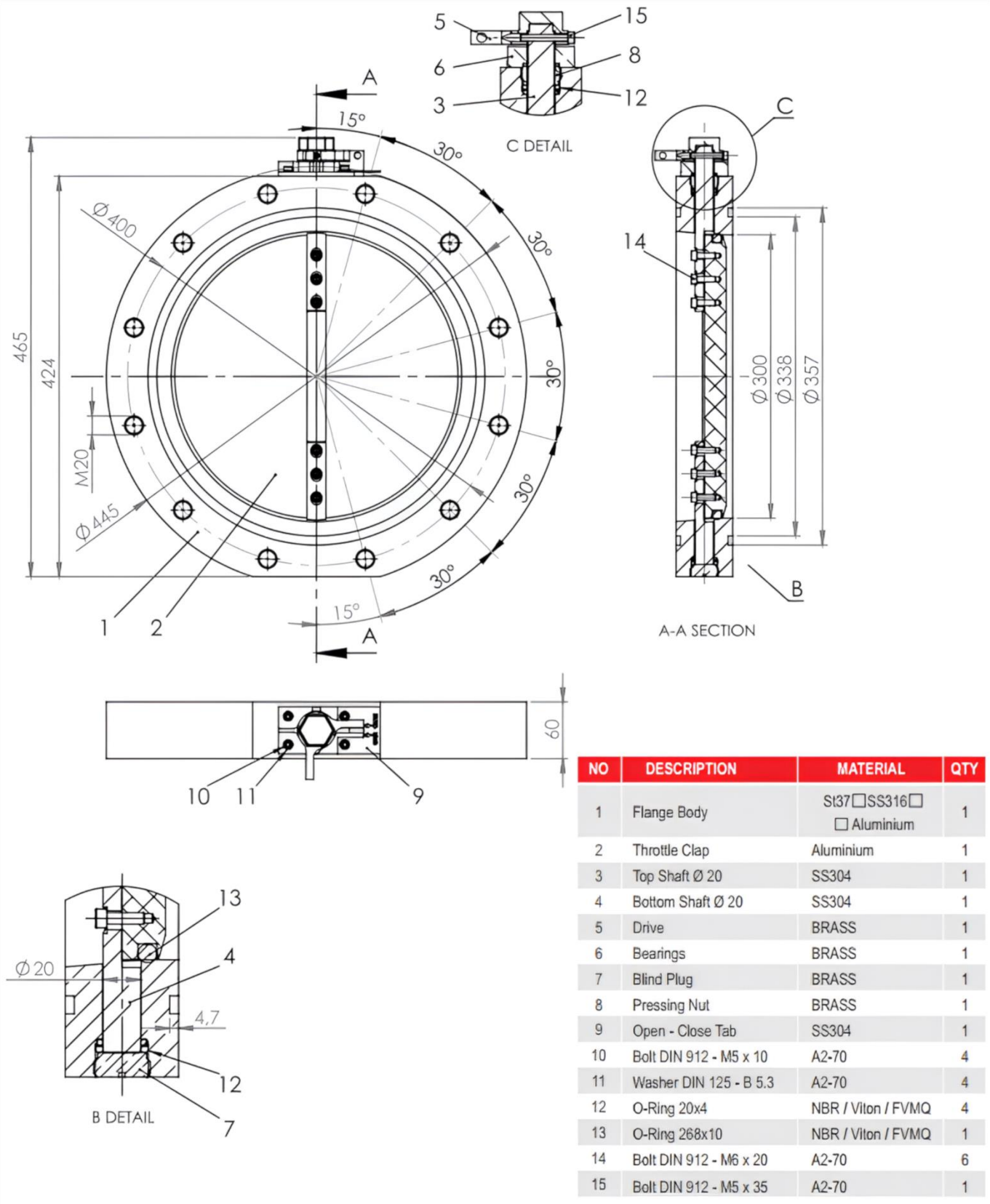




NO	DESCRIPTION	MATERIAL	QTY
1	Throttle Clap	St37☐SS316☐ ☐ Aluminium	1
2	Clap	Aluminium	1
3	Shaft Ø16	A-70 Stainles Steel	1
4	Ø 5 Spring Pin	Stainles Steel	2
5	O-Ring Ø 16x3	NBR / Viton / FVMQ	1
6	Pressing Ring	Brass	2
7	Gland	Brass	1
8	Drive	Brass	1
9	Screw M5x10	Stainles Steel	4

VÁLVULA DE ESTRANGULACIÓN DN 300 /

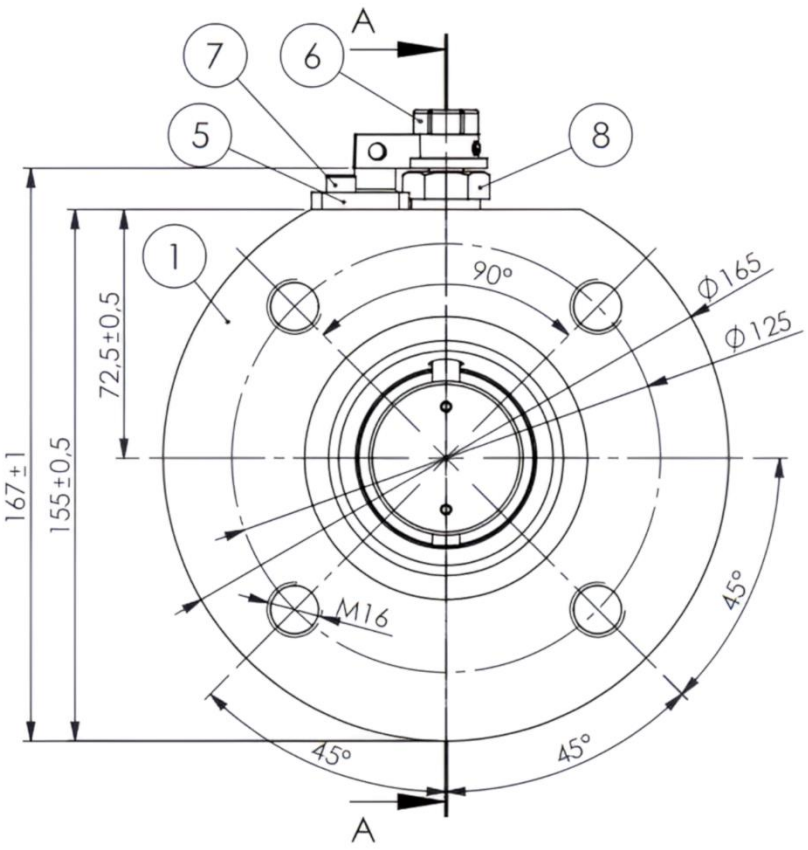
DN 300 THROTTLE VALVE

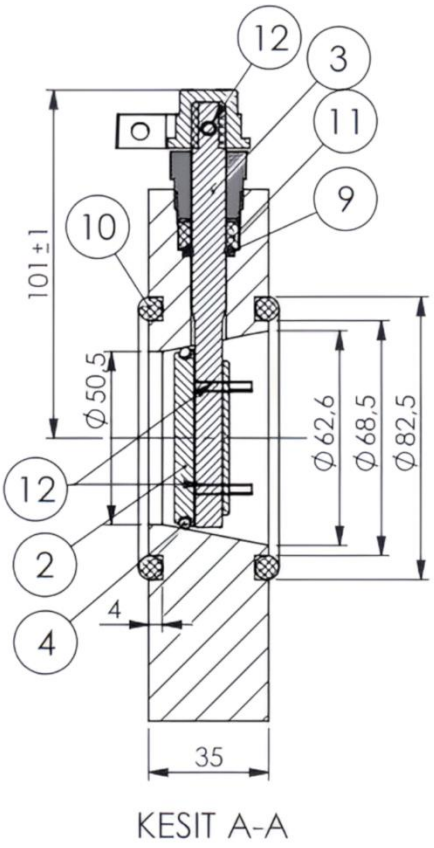


NO	DESCRIPTION	MATERIAL	QTY
1	Flange Body	St37☐SS316☐ ☐ Aluminium	1
2	Throttle Clap	Aluminium	1
3	Top Shaft Ø 20	SS304	1
4	Bottom Shaft Ø 20	SS304	1
5	Drive	BRASS	1
6	Bearings	BRASS	1
7	Blind Plug	BRASS	1
8	Pressing Nut	BRASS	1
9	Open - Close Tab	SS304	1
10	Bolt DIN 912 - M5 x 10	A2-70	4
11	Washer DIN 125 - B 5.3	A2-70	4
12	O-Ring 20x4	NBR / Viton / FVMQ	4
13	O-Ring 268x10	NBR / Viton / FVMQ	1
14	Bolt DIN 912 - M6 x 20	A2-70	6
15	Bolt DIN 912 - M5 x 35	A2-70	1

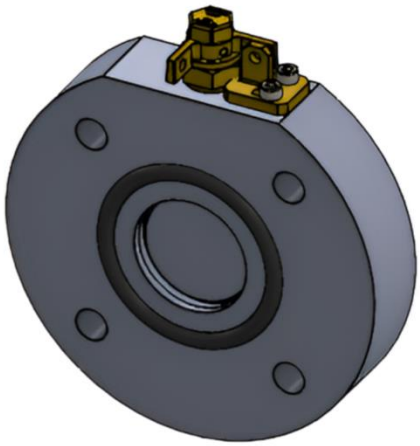
VÁLVULA BUCHHOLZ DN50 PN 10 /

DN50 PN 10 BUCHHOLZ VALVE





KESIT A-A

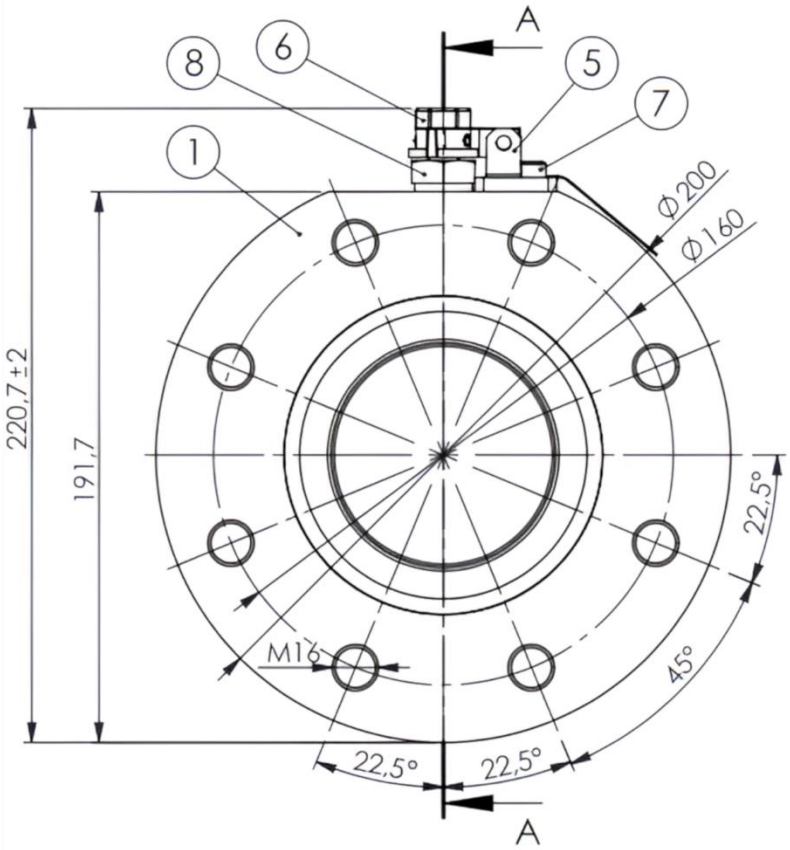


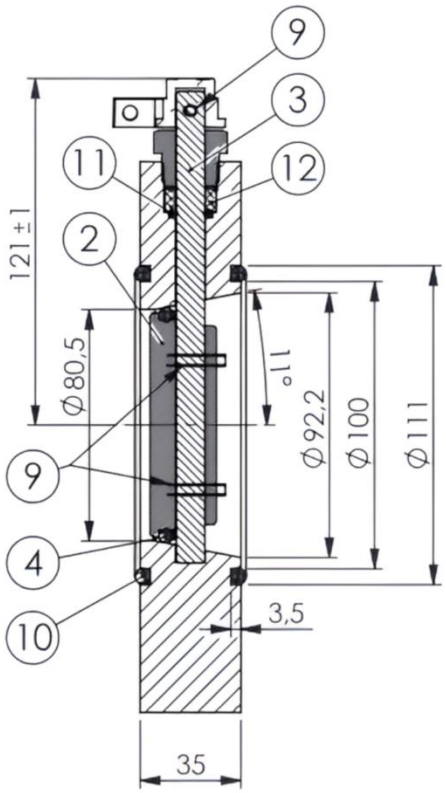
ZINC PLATED +
RAL 7033 PAINTED

ITEM	DESCRIPTION	CODE NO	MATERIAL	QTY
1	FLANGE BODY	02.33.DN50.02.03	ST-37	1
2	THROTTLE CLAP	02.33.DN50.01.01	ALUMINIUM	1
3	SHAFT Ø10	02.33.DN50.01.04	A2-70	1
4	O-RING 40X3,5	02.01.40X3,5.V	VITON	1
5	GLAND	02.33.DN25-100.03.02	BRASS	1
6	DRIVE	02.33.DN25-100.03.01	BRASS	1
7	EN ISO 4762 M5X10	02.03.M5X10.05	A2-70	2
8	ADJUSTING BOLT	02.33.DN50.03.04	BRASS	1
9	O-RING 9X3	02.01.9X3.V	VITON	1
10	O-RING 68.5X6	02.01.68,5X6.N	NBR	2
11	TEFLON GASKET	02.01.DN50.PTFE	PTFE	1
12	Spring Pin ISO 13337-3x20	03.10.3X20.01	A2-70	3

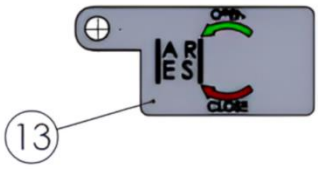
VÁLVULA BUCHHOLZ DN50 PN 80 /

DN50 PN 80 BUCHHOLZ VALVE

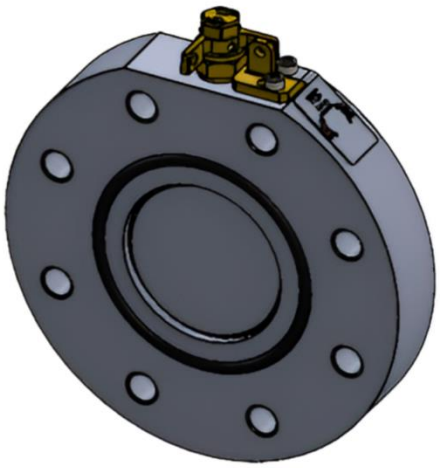




KESIT A-A



ZINC PLATED
+
RAL 7033 PAINED



ITEM	DESCRIPTION	CODE NO	MATERIAL	QTY
1	FLANGE BODY	02.33.DN80.02.03	ST-37	1
2	THROTTLE CLAP	02.33.DN80.01.01	ALUMINIUM	1
3	SHAFT Ø10	02.33.DN80.01.04	A2-70	1
4	O-RING 63X5	02.01.63X5.V	VITON	1
5	GLAND	02.33.DN25-100.03.02	BRASS	1
6	DRIVE	02.33.DN25-100.03.01	BRASS	1
7	ISO 4762 M5X10	02.03.M5X10.05	A2-70	2
8	ADJUSTING BOLT	02.33.DN80.03.04	BRASS	1
9	DIN EN 13337- 4X20	03.10.4X20.01	A2-70	3
10	O-RING 100X5,33	02.01.100X5,33.N	NBR	2
11	O-RING 9X3	02.01.9X3.V	VITON	1
12	TEFLON GASKET	02.01.DN80.PTFE	PTFE	1
13	TICKET	B0777	ALUMINIUM	1

VÁLVULA DE PRESIÓN DE SEGURIDAD /

PRESSURE SAFETY VALVE

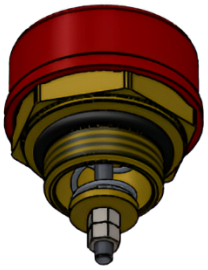
NOTE:

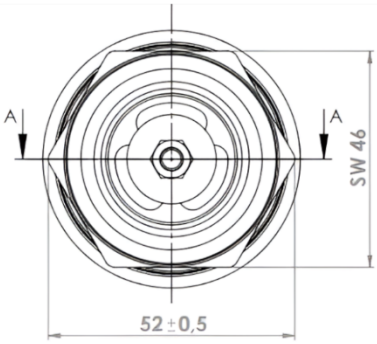
Short Type (Kısa Tip)

Set Pressure (Basınç Ayarı):

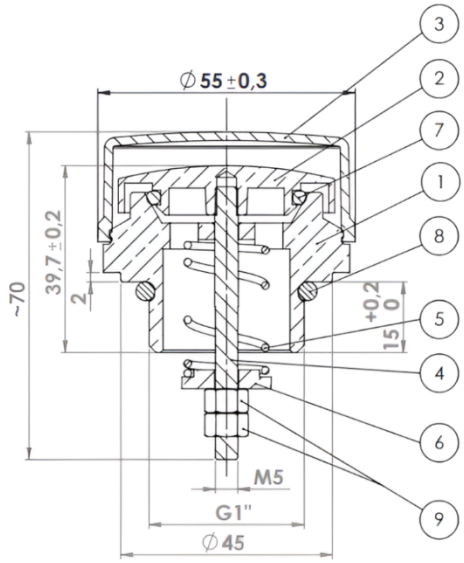
Written by laser (Lazer yazılı)

Order no	KPa	Bar	
PSV-20	20	0.20	☐
PSV-25	25	0.25	☐
PSV-30	30	0.30	☐
PSV-35	35	0.35	☐
PSV-40	40	0.40	☐
PSV-45	45	0.45	■
PSV-50	50	0.50	☐
PSV-70	70	0.70	☐
PSV-75	75	0.75	☐





BOTTOM VIEW

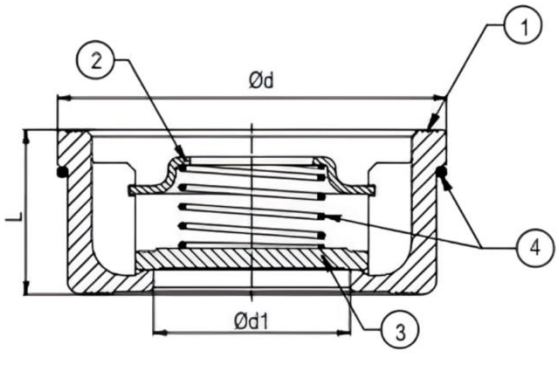


A-A SECTION

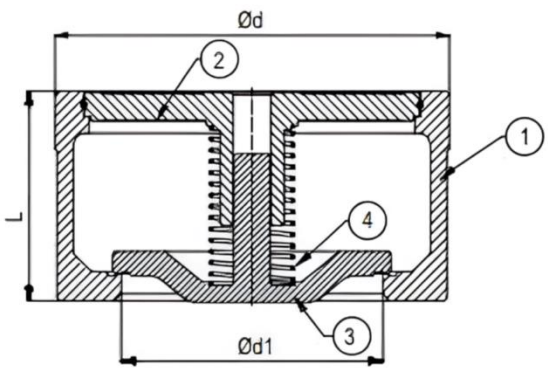
SIRA NO ITEM NO	PARÇA ADI DESCRIPTION	KODU CODE	RESİM NO DRAWING NO	MALZEME MATERIAL	ADET QTY
9	M5 NUT	02.12.M5.02	934.M5-01	A2-70	2
8	O-ring 30,5x4	02.01.30,5X4.N	ORG.30,5X4	NBR	1
7	O-ring 27x3	02.01.27X3.N	ORG.27X3	NBR	1
6	Washer For M5	02.34.PSV.R1.07	PSV.R1-06	MS58	1
5	Spring 1,6x17,8x34,5	02.34.PSV.R1.06	PSV.R1-05	AISI 302	1
4	Stud M5x58	02.34.PSV.R1.05	PSV.R1-04	AISI 303	1
3	Protection Cap	02.34.PSV.R1.04	PSV.R1-03	PA6,6 BLACK ☐	1
		02.34.PSV.R1.03		PA6,6 RED ■	
2	Cap Of Valve	02.34.PSV.R1.02.01	PSV.R1-02	MS58	1
1	Body Of Valve	02.34.PSV.R1.01.01	PSV.R1-01.1	MS58	1

VÁLVULA ANTIRRETORNO TIPO WAFER /

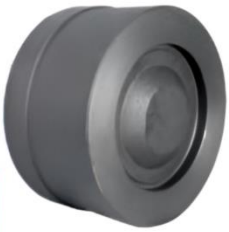
NON RETURN WAFER VALVE



DN15.....100



DN125.....200



Size		Dimensions %±15			Minimum Opening Pressure mBar Flow Direction With Spring			With Spring	Working Temperature		
NO	DN	Ød	Ød1	L	→ ←	↓	↑	↓	°C	PN	Weight -kg
1	15	40	15	16		17					0.09
2	20	47	20	19			23	2.6			0.13
3	25	56	25	22		18.3					0.20
4	32	72	31.5	28		16.3		3.9			0.46
5	40	82	39	31.5	21	16.2	24	4			0.60
6	50	95	48	40		16.1		4.2	-10		0.97
7	65	115	64	46		15	25	5.1	+120	16	1.36
8	80	132	74	50		13.7	26	5.6			2.07
9	100	152	89	60		12.5	26.5	7.4			3.00
10	125	184	112	90	22	12	30	15			6.80
11	150	209	132	106	23.5	13	32.5	17			10.00
12	200	264	175	140	26	14.5	35	18.5			20.00

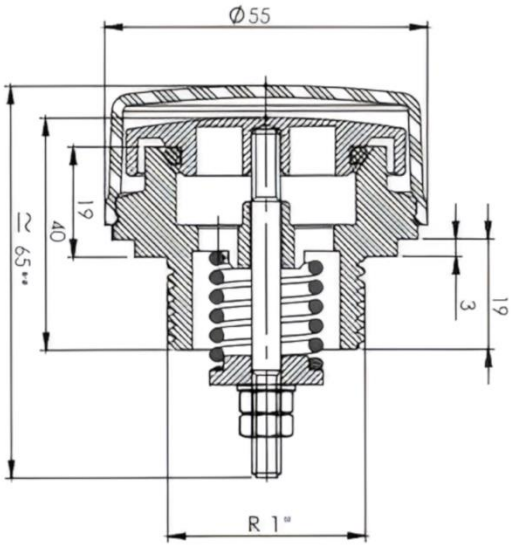
		DN15...100	DN125...200
NO	Description	Material	Material
1	Body	Brass (CuZn40Pb2)	Steel
2	Centering	AISI 316	Steel
3	Throttle	AISI 316	Steel
4	Spring	AISI 316	AISI 316

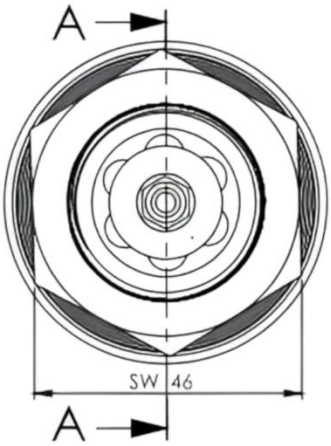
Final Paint : RAL 9006 White alu

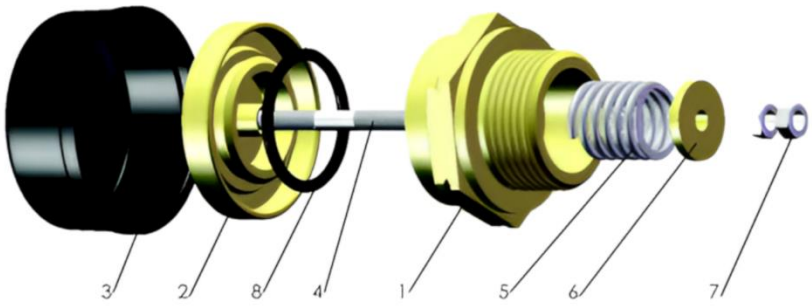
VALVULA DE PRESIÓN DE SEGURIDAD R 1" /

PRESSURE SAFETY VALVE R 1"

The pressure safety valve is used as a safety element in distribution transformers but it is also suitable for hermetically sealed type transformers.







Order No	Set Pressure
PSV-20	20
PSV-25	25
PSV-30	30
PSV-35	35
PSV-40	40
PSV-45	45
PSV-50	50
PSV-70	70
PSV-75	75

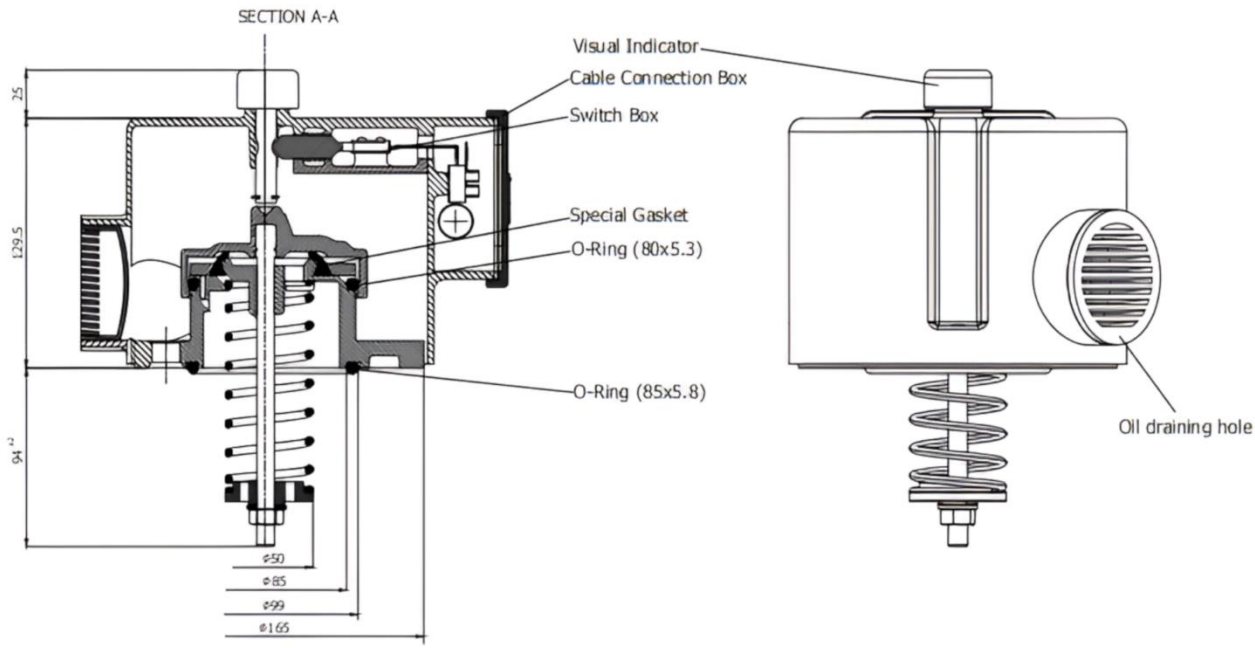
Pos. No.	Qty.	Description	Material
1	1	Body of valve	Cu Zn39 Pb3
2	1	Cap of valve	Cu Zn39 Pb3
3	1	Protection cap	Plastic- Pa6
4	1	Stud bolt	M 5x60 A2
5	1	Spring	Ø19x2x24
6	1	Washer	Cu Zn39 Pb3
7	2	Nut	M5-A2 DIN 934
8	1	O-Ring	NBR70

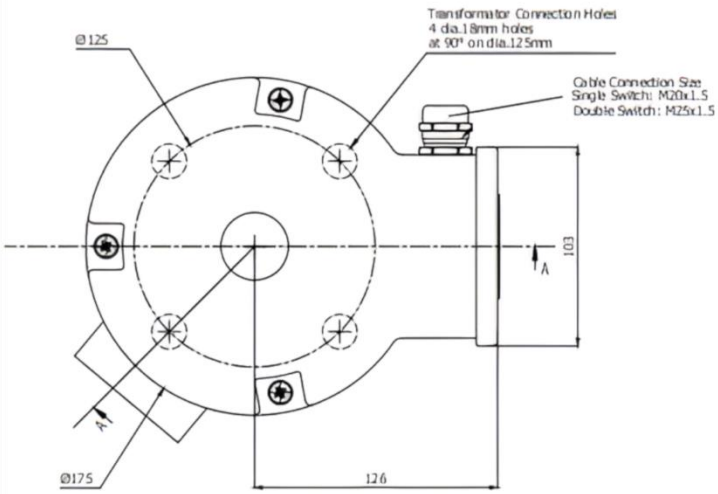
These pressure safety valves are available from operating pressure of 0.2 bar to 0.7 bar. Non-standard pressure setting can also be provided on request. The long type pressure safety valve can also be manufactured with a long coil spring as the customer request.

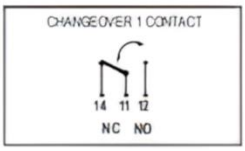
When pressure rises beyond the preset limit in the transformer tank the shutter moves up with the '0' ring, thus releasing the excess pressure. When the pressure falls to allowable values, the spring forces the shutter back to its position automatically. The excess pressure must be relieved immediately in order to avoid damage to the transformer tank.

VÁLVULA DE SEGURIDAD DE PRESIÓN TIPO MPRV 50 /

PRESSURE SAFETY VALVE TYPE MPRV 50







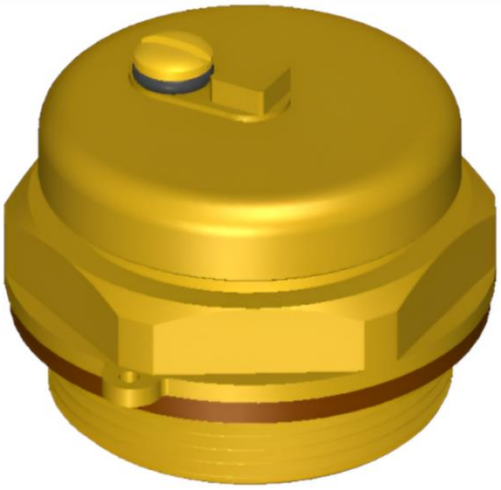
CODE NO	PRESSURE SETTING Bar	COLOR (RAL)
MP260550B	0.50	7033

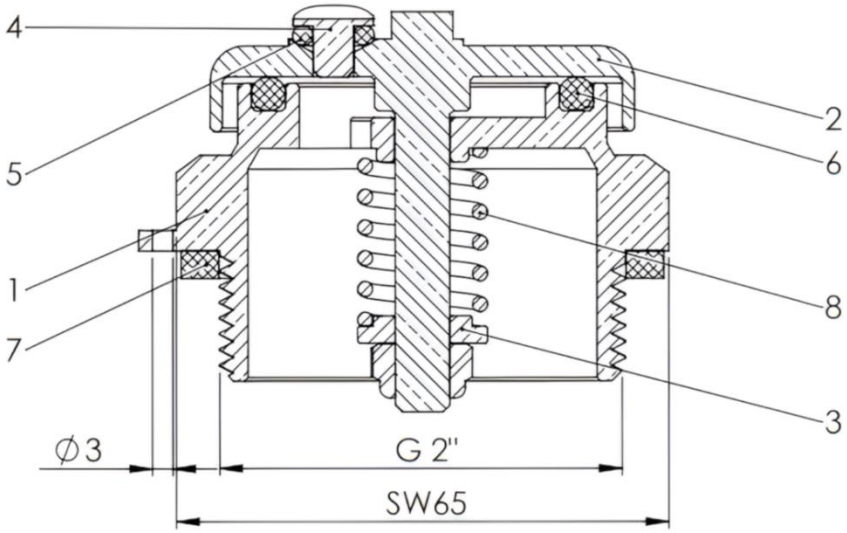
Switching Capacity per Load

Voltage	SS5GL-2			
	Inductive Load			
	Inductive Load		Motor Load	
	NC	NO	NC	NO
125 VAC	3A		2.5A	1.3A
250 VAC	2A		1.5A	0.8A
8 VDC	5A	4A	3A	
125 VDC	4A	4A	3A	
125 VDC	3A	3A	3A	
125 VDC	0.4A	0.4A	0.05A	
125 VDC	0.2A	0.2A	0.03A	

VÁLVULA DE SEGURIDAD DE PRESIÓN PRD G2" /

PRESSURE SAFETY VALVE PRD G2"

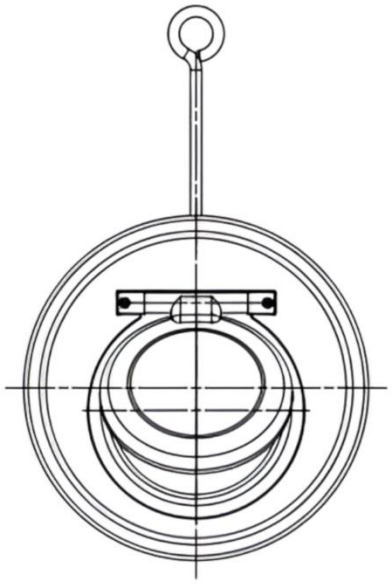


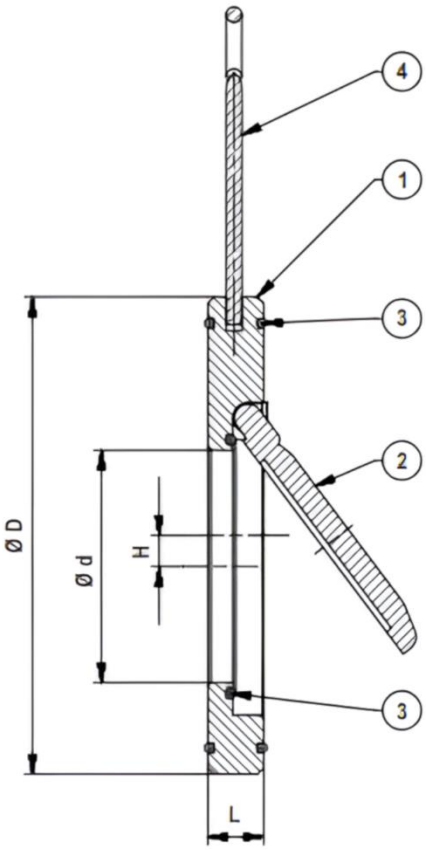


Num./ No.	Adet/ Q'ty	Tanımlama/Description	Açıklama/Explanation
1	1	Cuerpo/Body of valve	Latón
2	1	Tapa /Cap of valve	Latón
3	1	Arandela/Washer	Latón
4	1	Tornillo/Screw of valve	M6 / Latón
5	1	Junta/Gasket of screw	Viton
6	1	Junta tórica/O-ring	NBR70
7	1	Junta/Gasket	NBR70
8	1	Muelle/Spring	ACERO INOXIDABLE/STAINLES STEEL

VÁLVULA ANTIRRETORNO DE DISCO TIPO WAFER /

WAFER SWING CHECK VALVE





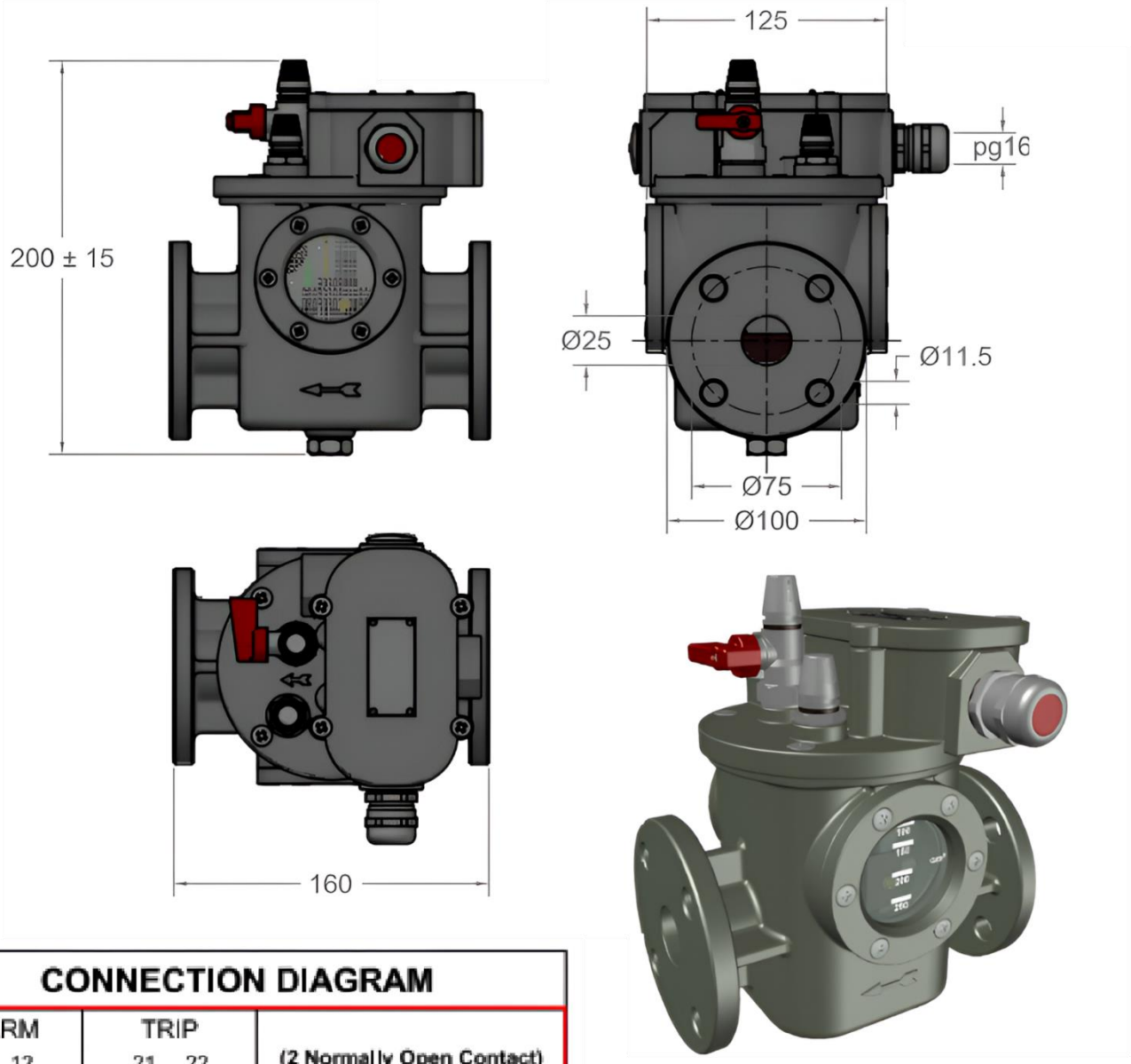
MATERIALS (GS-C 25 - GP240GH)		
Parça No	Part Name	Material
1	Body	Cast Carbon Steel + Nickel Plated (T-0430)
2	Disk	Cast Carbon Steel + Nickel Plated (T-0430)
3	O-Ring	EPDM - NBR
4	Eye Bolt	Steel + Nickel Plated

MATERIALS (G-X6CrNi - AISI303)		
Parça No	Part Name	Material
1	Body	G-X6CrNi 18 9 - Cast Stainless Steel (T-0450)
2	Disk	G-X6CrNi 18 9 - Cast Stainless Steel (T-0450)
3	O-Ring	EPDM - NBR
4	Eye Bolt	Steel + Nickel Plated

Dimensions															
Nominal Pressure	16 Bar														
Nominal Diameter	DN	40	50	65	80	100	125	150	200	250	300	350	400	500	600
Valve Dimensions	ØD	92	107	127	142	162	192	218	273	329	384	444	491	610	724
	Ød	22	32	40	54	70	92	114	154	200	235	280	316	405	486
	L	14				18		20	22	26	28	38	44	56	62
	H	0		2	3	4	5	6	8	9	10	11	12	13	15
Weight	kg	0,,7	0.8	1.2	1.5	2.3	4.1	4.1	7	12	18	22	25	30	40

RELÉ BUCHHOLZ BR25 /

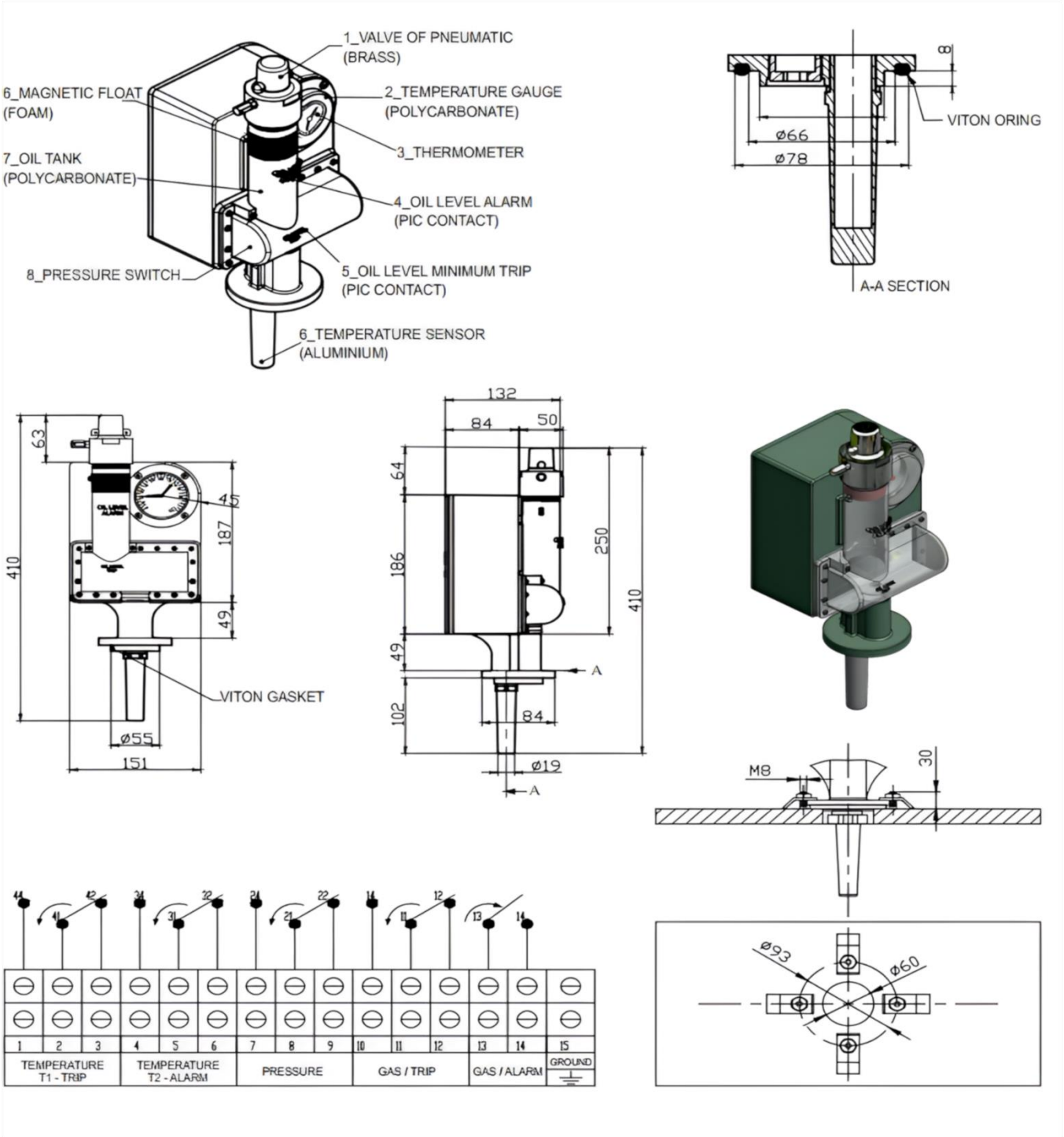
BUCHHOLZ RELAY BR25



CONNECTION DIAGRAM		
ALARM 11 12	TRIP 21 22	**(2 Normally Open Contact)** 1 Normally Open Contact Alarm 1 Normally Open Contact Trip
ALARM 14 11 12	TRIP 24 21 22	**(2 Changeover Open Contact)** 1 Changeover Open Contact Alarm 1 Changeover Open Contact Trip

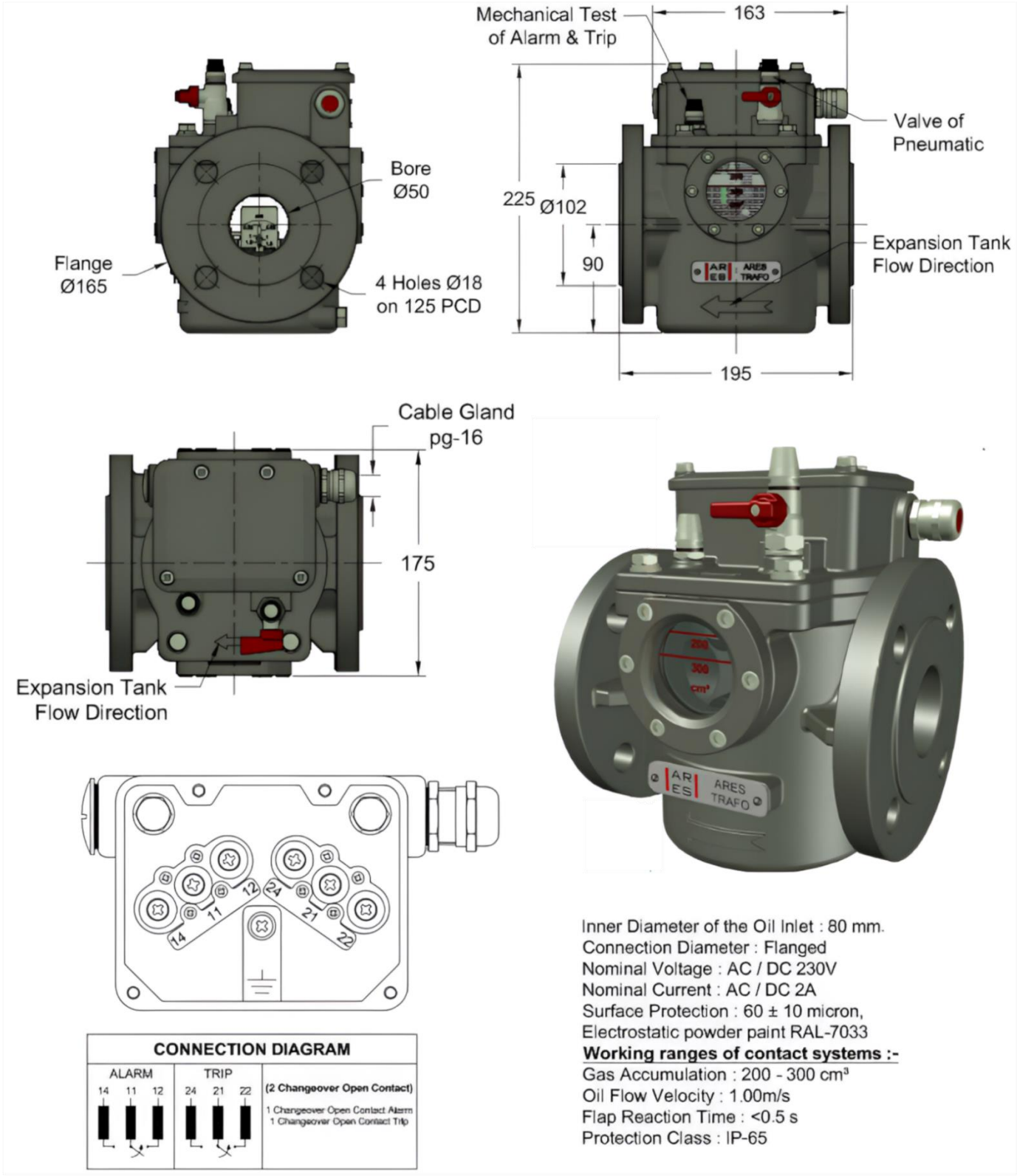
RELÉ DE PROTECCIÓN HERMÉTICA /

HERMETIC PROTECTION RELAY



RELÉ BUCHHOLZ BR50 /

BUCHHOLZ RELAY BR50



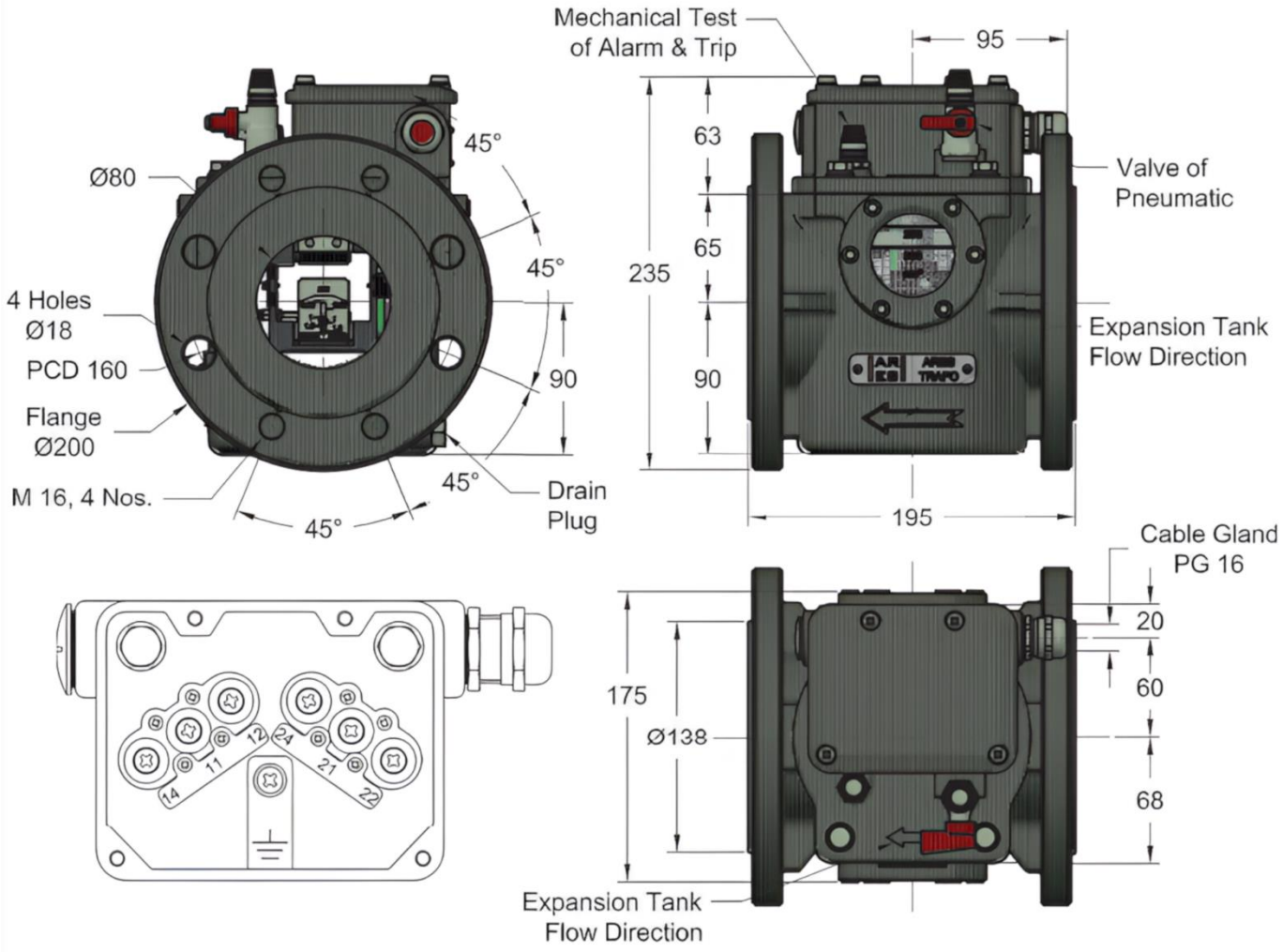
Inner Diameter of the Oil Inlet : 80 mm.
Connection Diameter : Flanged
Nominal Voltage : AC / DC 230V
Nominal Current : AC / DC 2A
Surface Protection : 60 ± 10 micron,
Electrostatic powder paint RAL-7033

Working ranges of contact systems :-

Gas Accumulation : 200 - 300 cm^3
Oil Flow Velocity : 1.00m/s
Flap Reaction Time : <0.5 s
Protection Class : IP-65

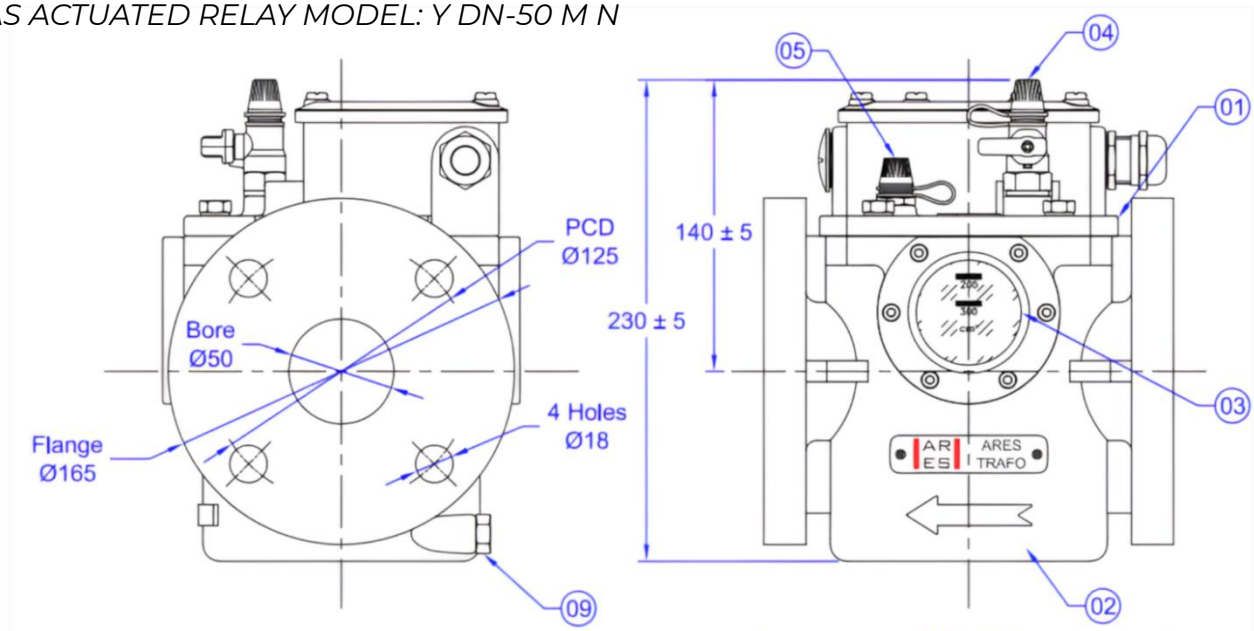
Relé Buchholz BR80 /

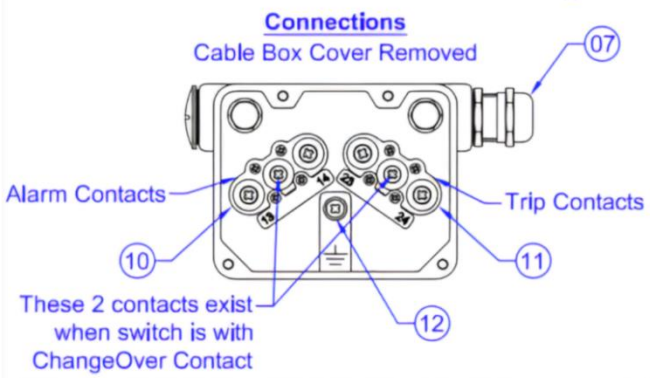
BUCHHOLZ RELAY BR80

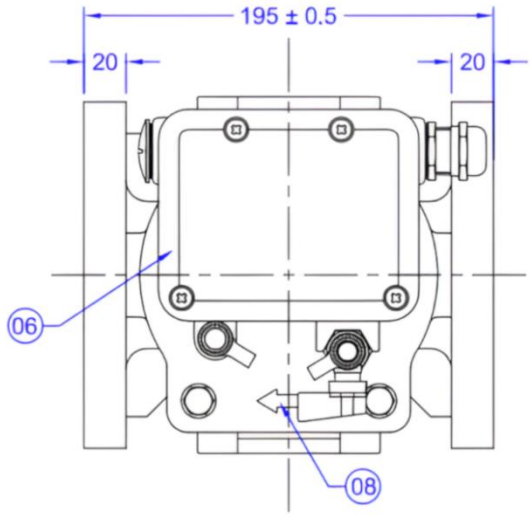


MODELO DE RELÉ ACTIVADO POR GAS: Y DN-50 M N /

GAS ACTUATED RELAY MODEL: Y DN-50 M N

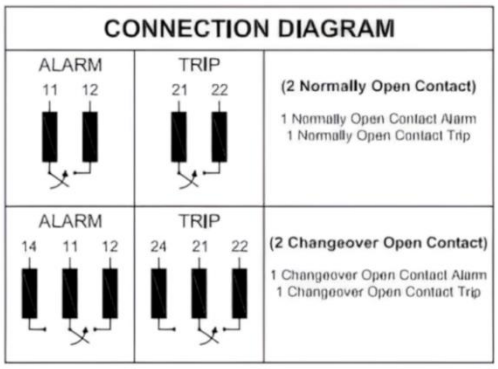






BILL OF MATERIAL			
S. NO.	DESCRIPTION	MATERIAL	QTY.
01	Top Cover	Al. Die Cast	01
02	Bottom Body	Al. Die Cast	01
03	Glass Inspection Window	Glass Toughened	02
04	Gas Release Cock	Brass	01
05	Push Button for Checking Circuit	Brass	01
06	Cable Box	Cast Al.	01
07	Cable Gland PG-16	Brass	01
08	Oil Flow Direction	Cast Al.	02
09	Oil Drain Plug	Brass	01
10	Alarm Terminals	Brass	02
11	Trip Terminals	Brass	02
12	Ground Terminal Screw	Stainless Steel	01

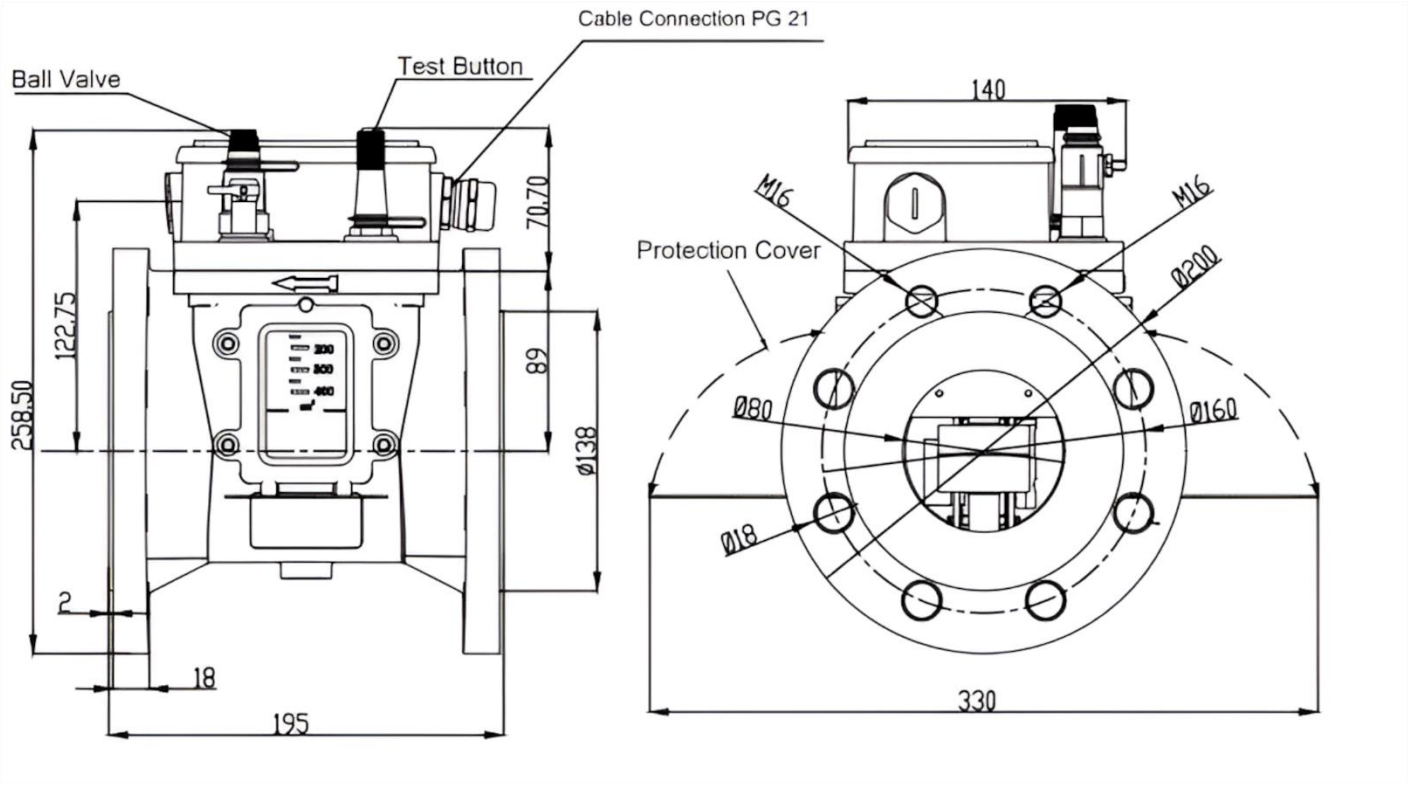
Note :
1). Paint Shade : RAL-7033.
2). Gas Volume : 200 - 300 cm³.
3). Oil Flow Speed (oil temperature 20°C) : 1.00 ± 0.15 m/s.
4). Degree of Protection : IP65
5). Reed Switches : German Brand.
6). Gasket Material : NBR

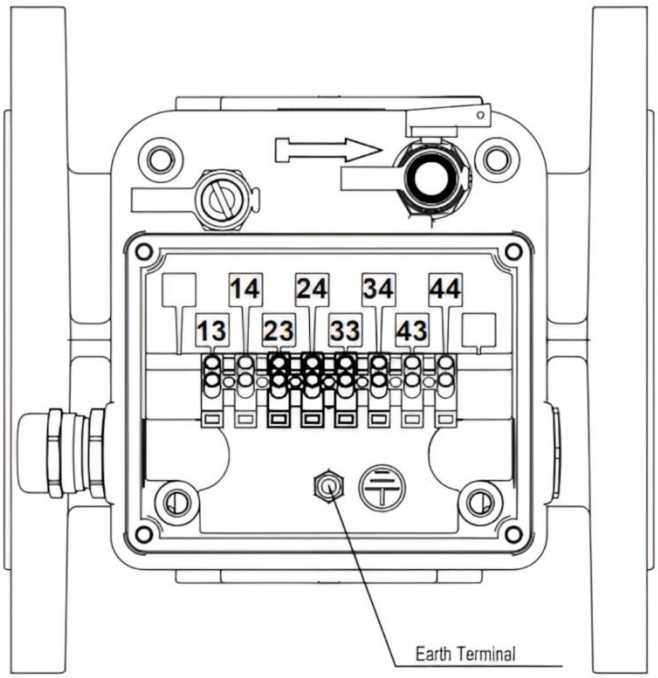


Switch Rating		
Parameters	Normally Open	Changeover NO
Switching Voltage (ac/dc max.)	250V	230V
Carrying Current (max.)	2.0A	2.0A
Switching Current (max.)	5.0A	1.0A
Switching Capacity (max.)	250VA	60VA

RELÉ BUCHHLZ MBP80-F100 (DR-80) EN 50216-2 /

BUCHHLZ RELAY MBP80-F100 (DR-80) EN 50216-2



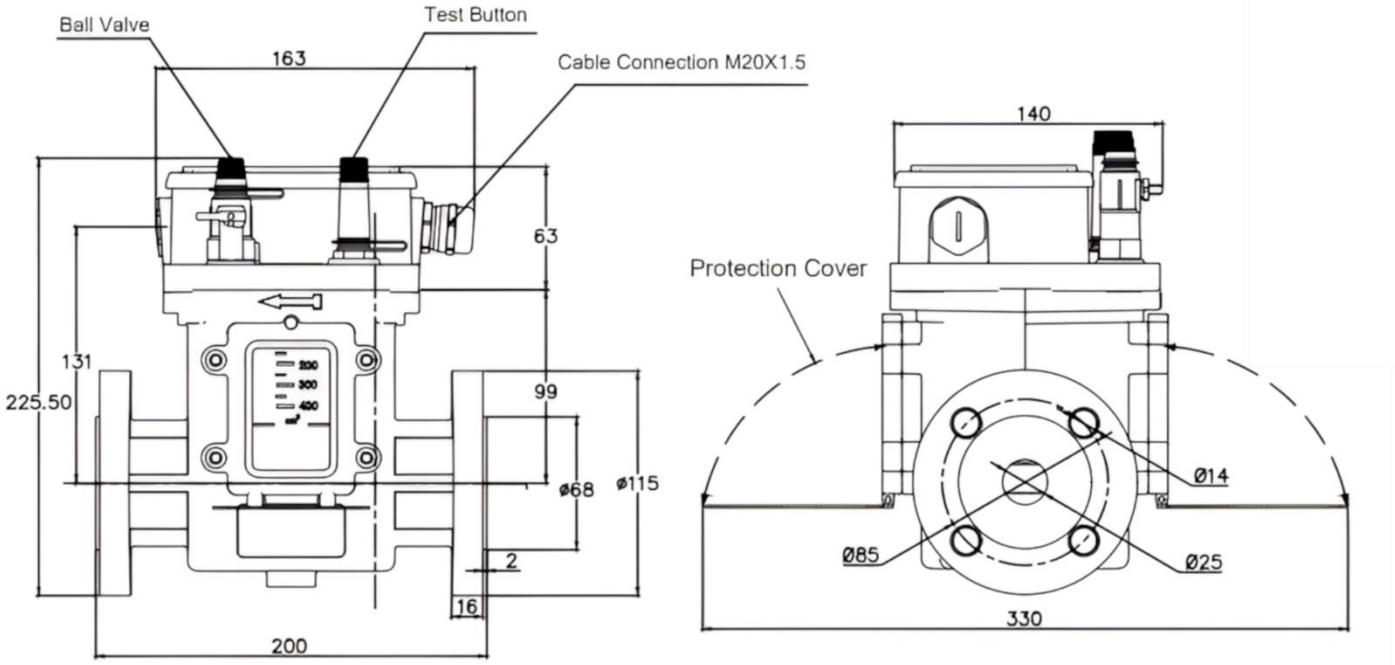


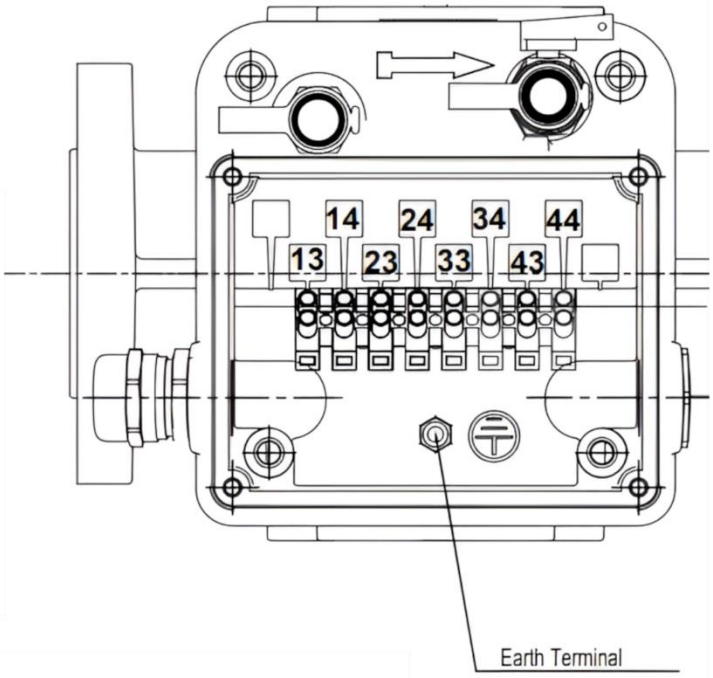
(4 Normally Open)			
Yellow	Blue	Red	Green
1314	3334	2324	4344
Lower	Lower	Upper	Upper

Inner diameter of the oil inlet : 80 mm
Switch capacity : 24–220 V DC/AC
Surface protection : 60 $^{\pm 10}$ micron Electrostatic power point
Working ranges of contacts systems
Gas accumulation 200cm³-300cm³
Oil flow velocity 1.00 m/s
Flap reaction time<0.5 s

RELÉ BUCHHLZ MBP25-F50 (DR-25) EN 50216-2 RAL: 7033 /

BUCHHLZ RELAY MBP25-F50 (DR-25) EN 50216-2 RAL: 7033





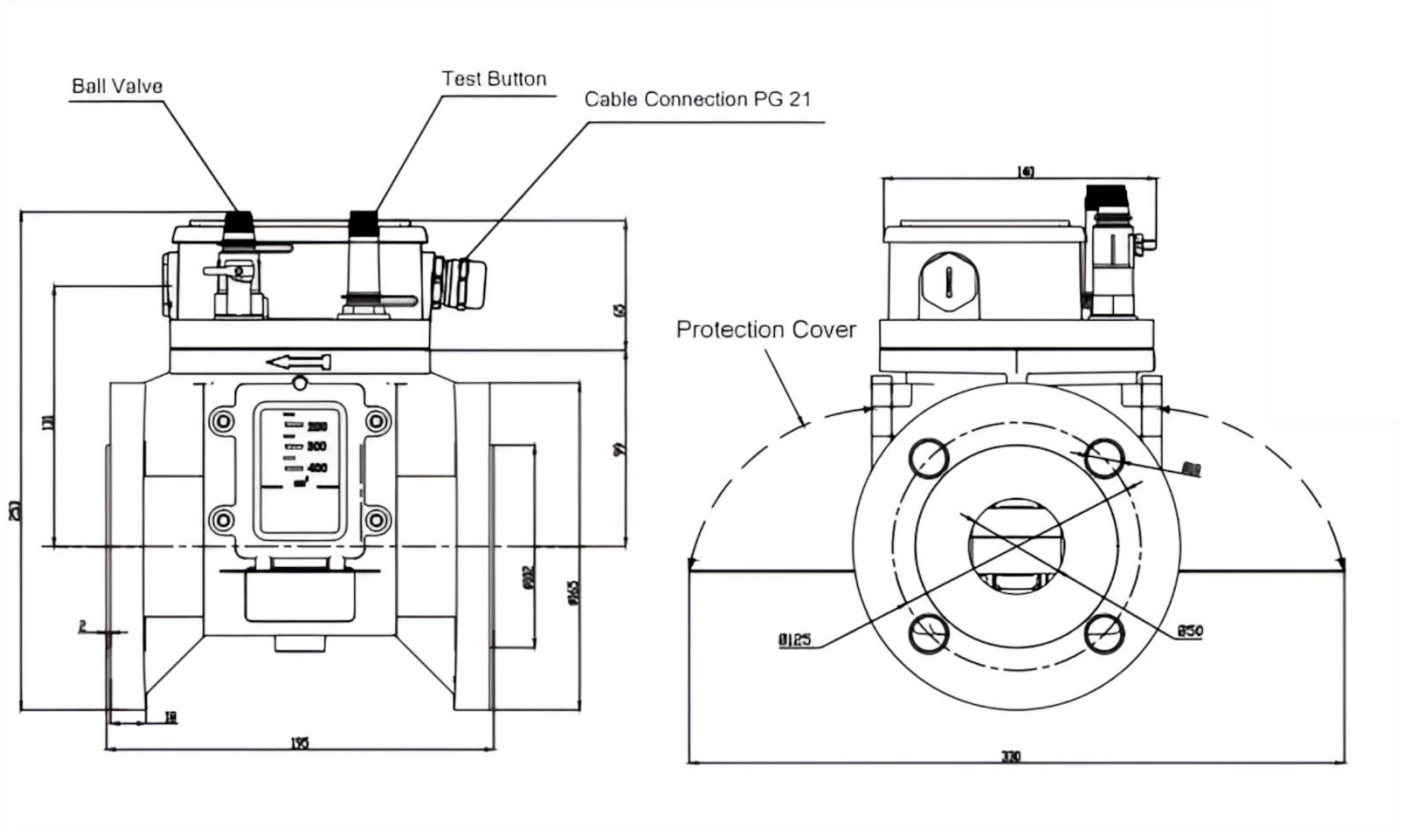
(4 Normally Open Contact)

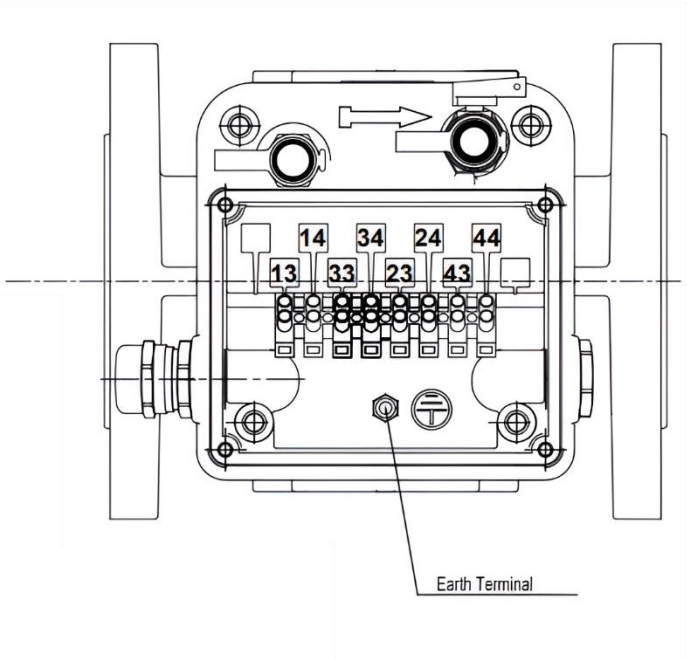
Yellow	RED	Blue	Green
1314	2324	3334	4344
Upper	Upper	Lower	Lower

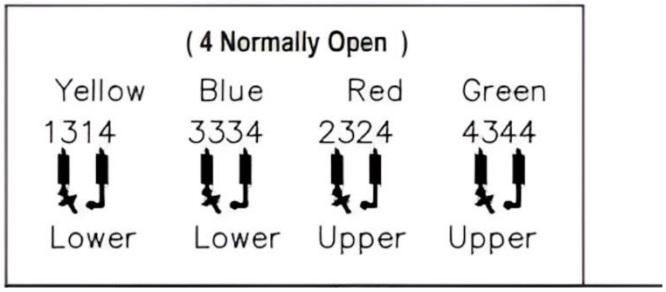
Inner diameter of the oil inlet : 25 mm
Switch capacity : 24–220 V DC/AC
Surface protection : 60 $^{\pm 10}$ micron Electrostatic power point
Working ranges of contacts systems
Gas accumulation 200cm³-300cm³
Oil flow velocity 1 m/s
Flap reaction time<0.5 s

RELÉ BUCHHLZ MBP50-F100 (DR-50) EN 50216-2 RAL: 7033 /

BUCHHLZ RELAY MBP50-F100 (DR-50) EN 50216-2 RAL: 7033





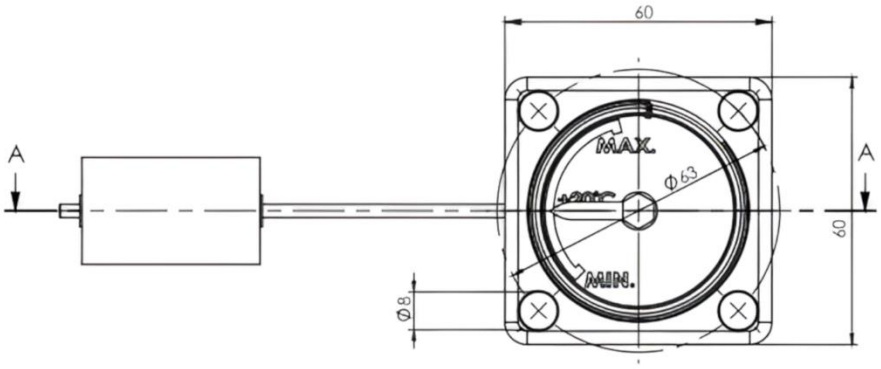


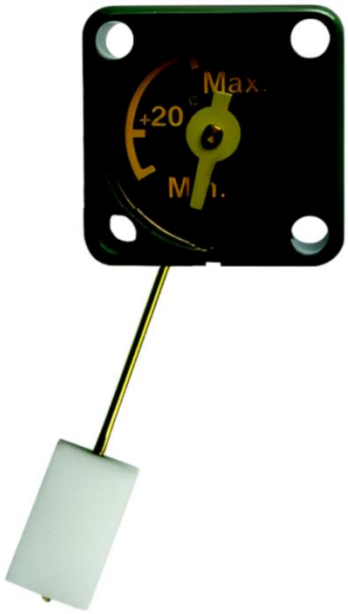
Inner diameter of the oil inlet : 50 mm
Switch capacity : 24–220 V DC/AC
Surface protection : 60 $^{\pm 10}$ micron Electrostatic power point
Working ranges of contacts systems
Gas accumulation 200cm³-300cm³
Oil flow velocity 1.00 m/s
Flap reaction time<0.5 s

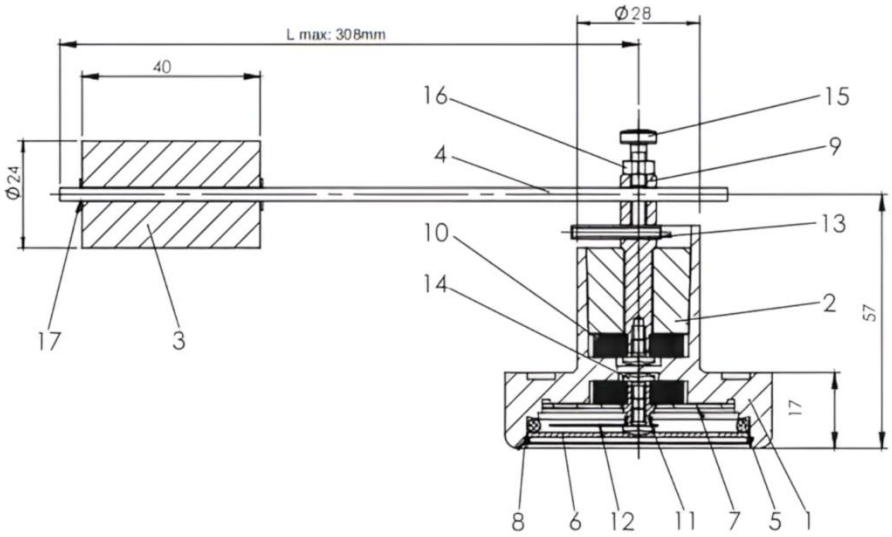
INDICADOR DE NIVEL DE ACEITE MAGNÉTICO DIN 42569 A /

MAGNETIC OIL LEVEL INDICATOR DIN 42569 A

The radial movement of the float is transmitted magnetically to the pointer. The magnet connected to the float-lever mechanism, drives the polarized indicator magnet connected to the pointer.







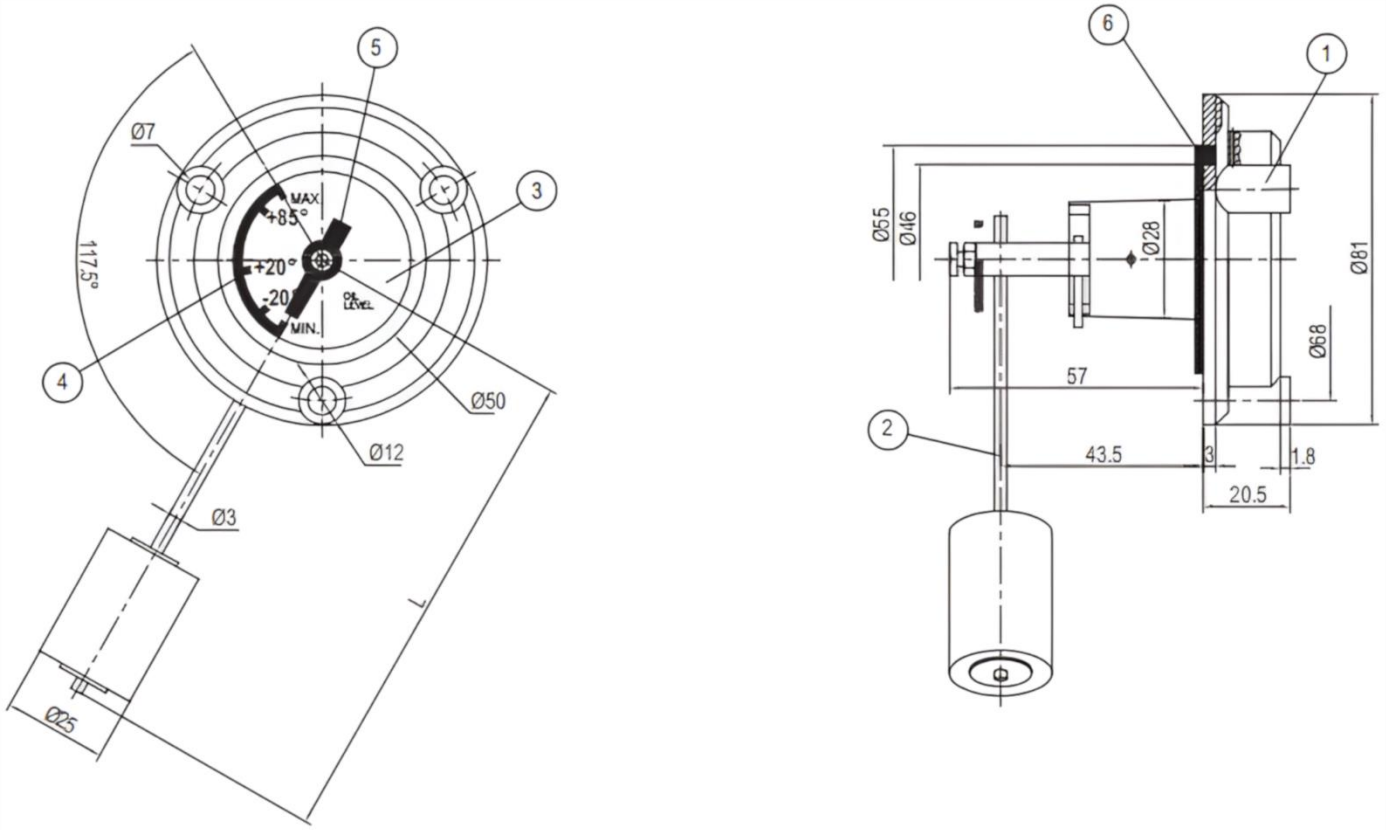
The float lever is delivered with 308 mm lenght as standard. It's lenght can be freely adjusted by the customer.

Case	Injected aluminium RAL 7033
Indicator dial	Aluminium sheet
Pointer	Brass
Indicator glass	Policarbonate
Joint glass	Nitrile rubber
Float	Cellular type plastic foam

Nr	Part Name	Part Number	Material	Qty
1	Body	DIN 42569 A-1	GD-AL lack. RAL 7033	1
2	Roll	DIN 42569 A-2	PA 6	1
3	Fleat	DIN 42569 A-3	Rohacell 51 IG	1
4	Handle for Fleat	DIN 42569 A-4	Ms 70	1

INDICADOR DE NIVEL DE ACEITE MAGNÉTICO /

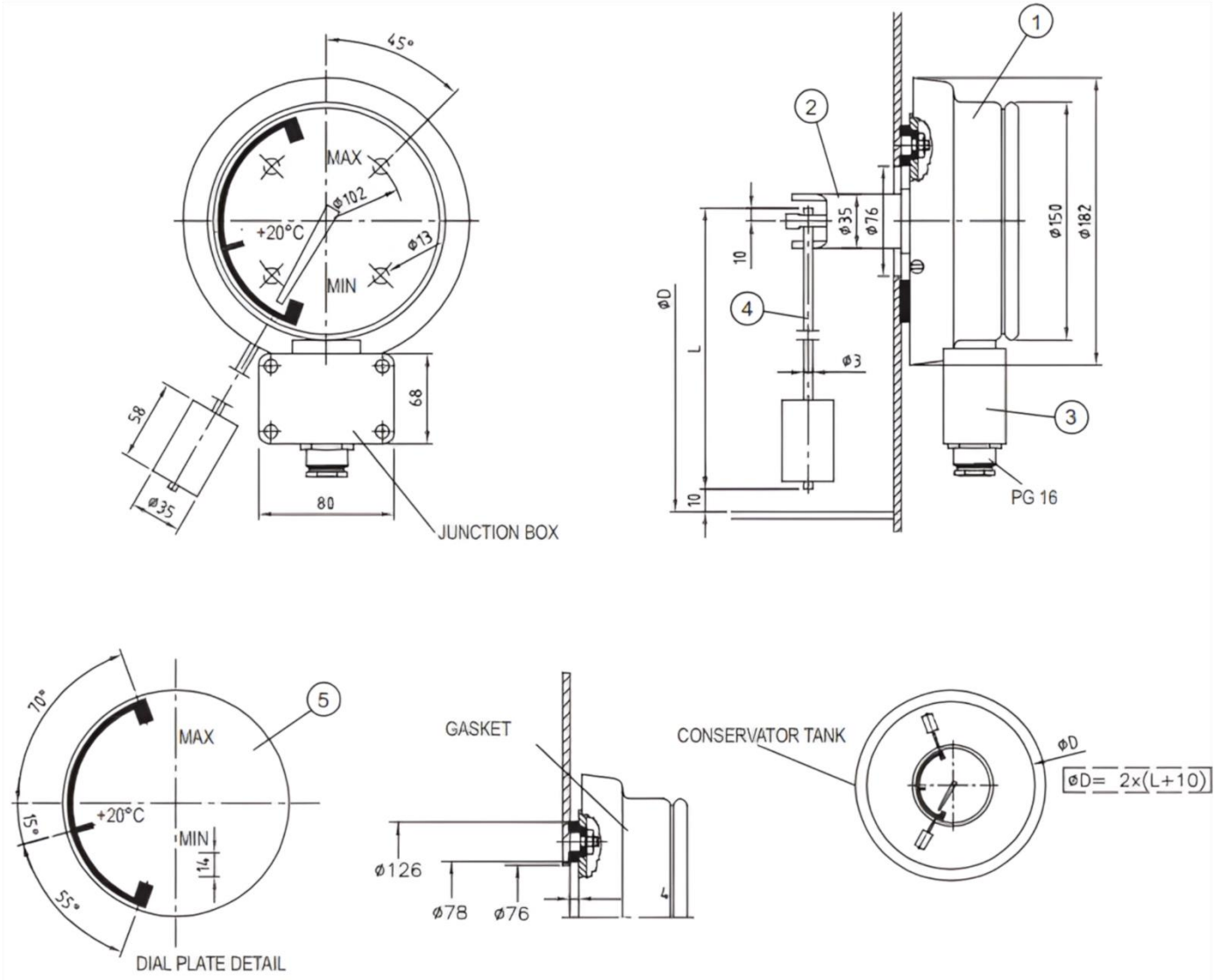
MAGNETIC OIL LEVEL INDICATOR



Item	Qty	Description	Technical Date / Designation
6	1	FLAT GASKET	NBR LP 1100
5	1	ARROW	Brass Ms58
4	1	DIAL PLATE	ALUMINIUM
3	1	FRONT GLASS	Polycarbonate 143 R
2	1	FLOAT LEVER	Brass Ms 70
1	1	MAIN BODY	ALUMINIUM

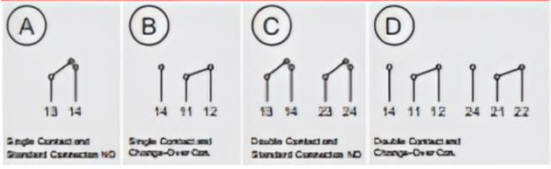
INDICADOR DE NIVEL DE ACEITE MAGNÉTICO CON CONTACTO /

MAGNETIC OIL LEVEL INDICATOR WITH CONTACT



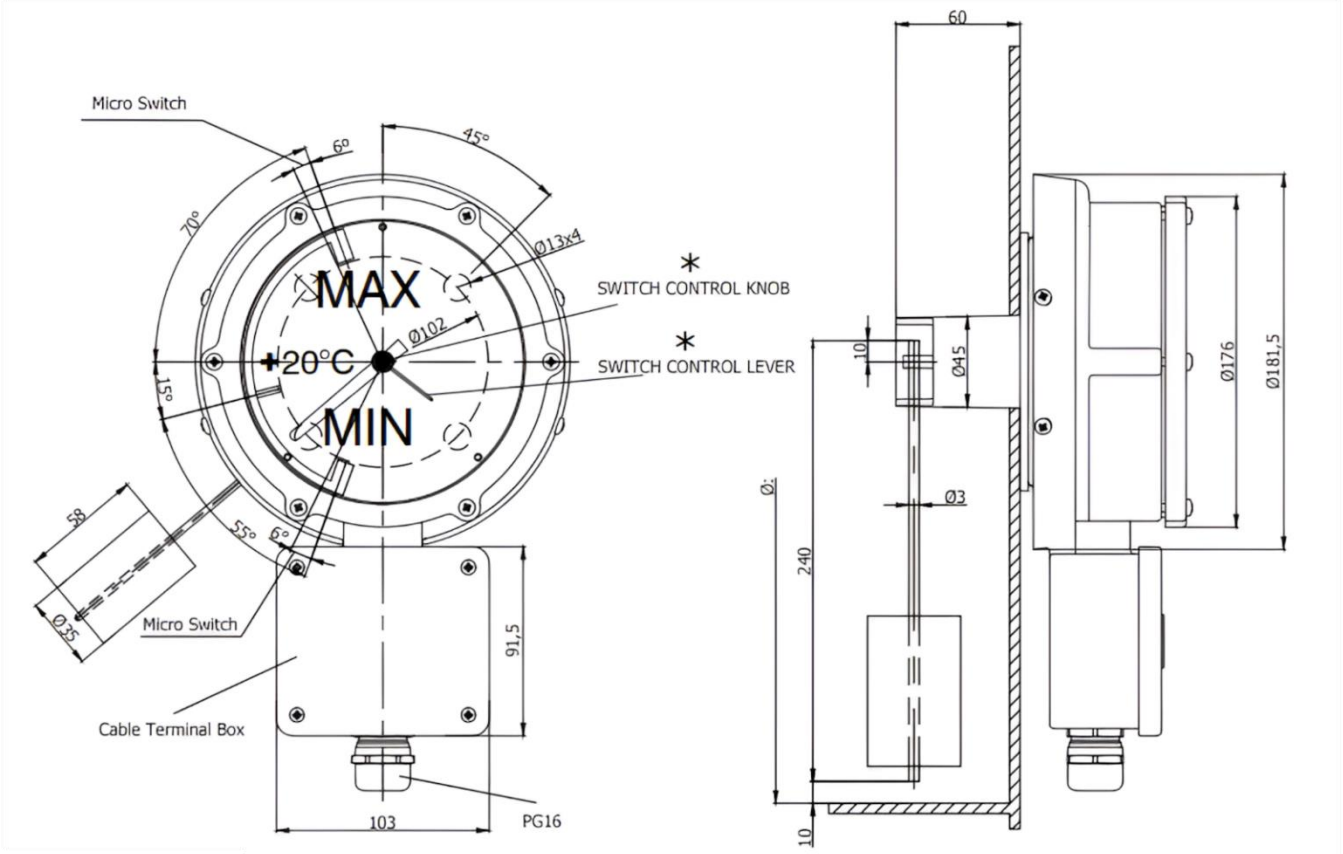
Item	Qty	Description	Technical Date / Designation
6	1	FLAT GASKET	NBR LP 1100
5	1	ARROW	Brass Ms58
4	1	DIAL PLATE	ALUMINIUM
3	1	FRONT GLASS	Polycarbonate 143 R
2	1	FLOAT LEVER	Brass Ms 70
1	1	MAIN BODY	ALUMINIUM

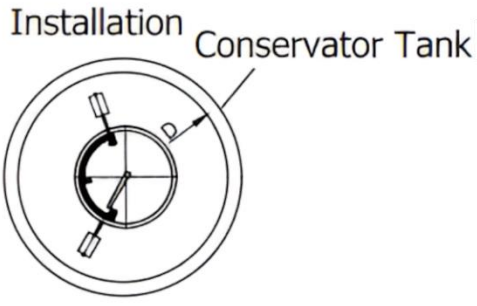
CONNECTION DIAGRAM Acc. to EN 50005



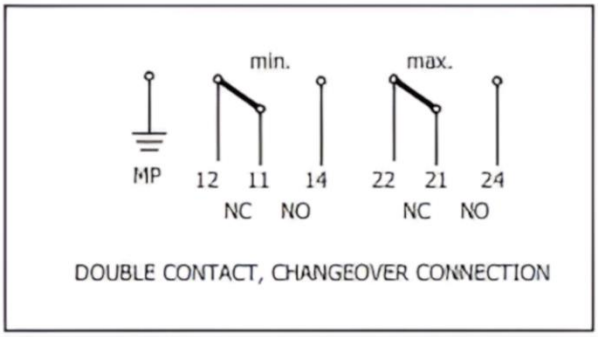
INDICADOR DE NIVEL DE ACEITE MAGNÉTICO PARA TRANSFORMADORES (FORM B) RADIAL RAL 7033 /

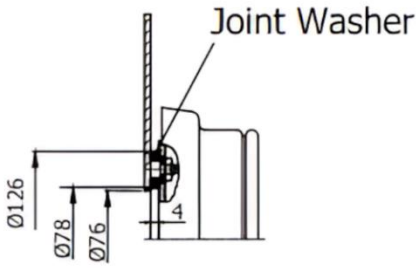
MAGNETIC OIL LEVEL INDICATOR FOR TRANSFORMERS (FORM B) RADIAL RAL 7033





Installation measure acc.with DIN 42569

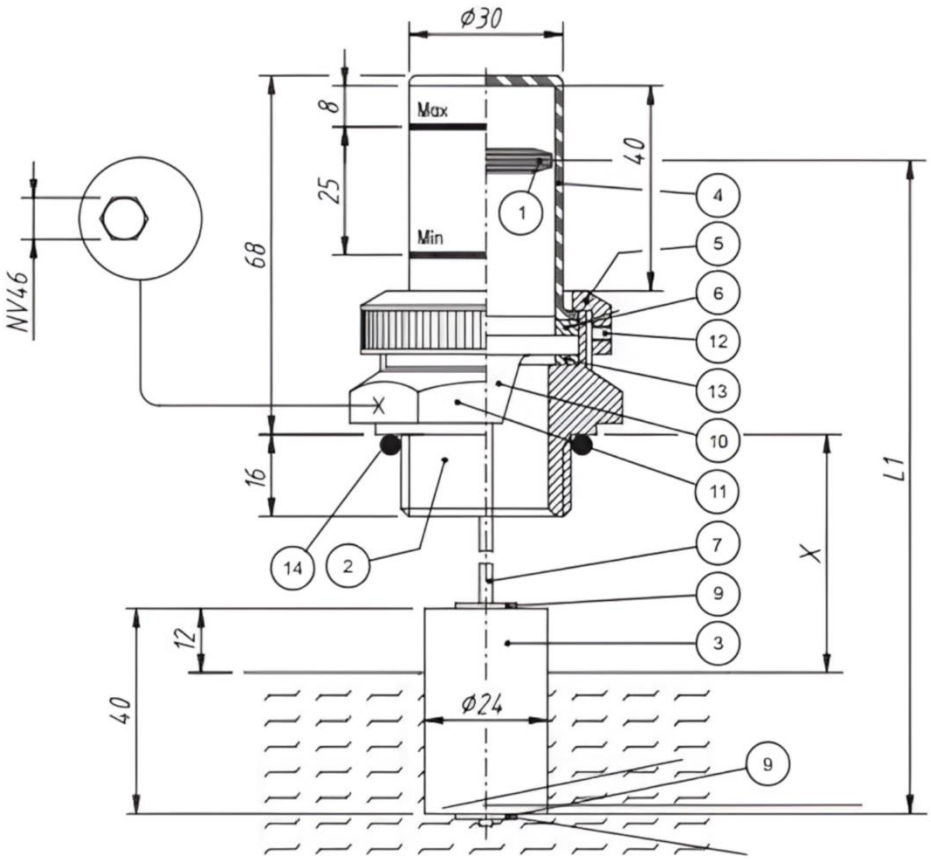




INDICADOR DE NIVEL DE ACEITE VERTICAL R 1" /

OIL LEVEL INDICATOR VERTICAL R 1"

This type of oil level indicator is used in hermatically sealed transformers.The oil level gauge is screwed into the tank without gas cushion. It shows the level of the oil in the filling pipe and thus offers the possibility to monitor for; Gas formation in the transformer, accumulation of air pockets in the tank, indicator of large leaks from the tank. Highly visible red indicator for oil level and each completely assembled unit, pressure tested.

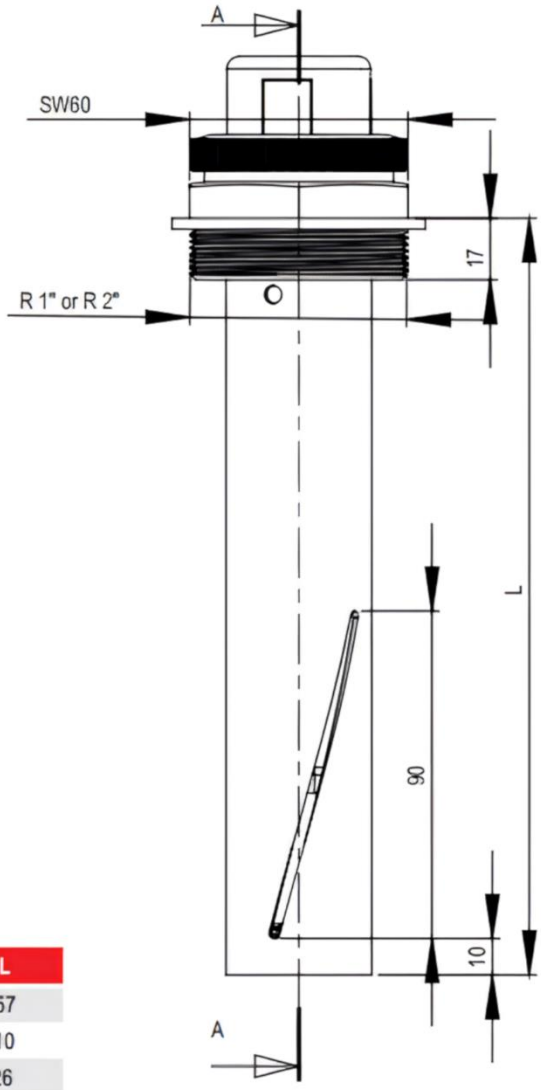


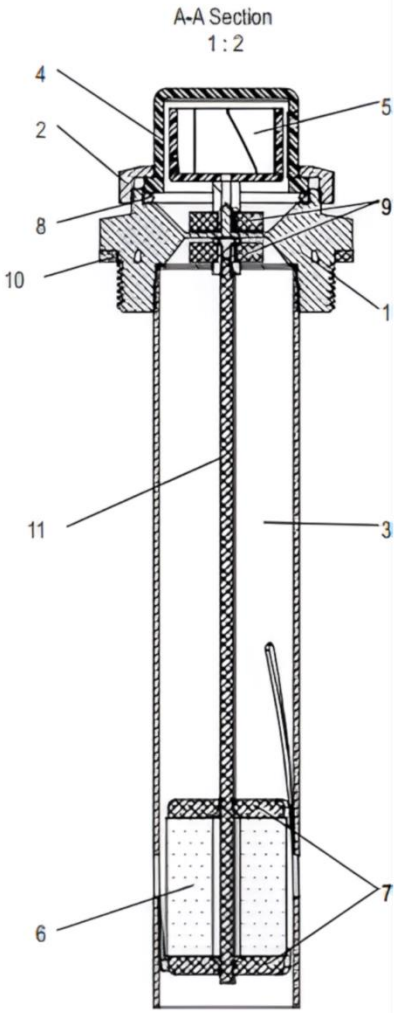
Nr	Part Name
1	Max Pointer
2	Brass Body
3	Float
4	Screen
5	Brass Ring
6	Sealing Or
7	Float Shaft
9	Ring Stopper
10	Center Ring
11	Brass Body
12	Lock Screw
13	Nbr Gasket
14	O-ring or Flat Gasket

Please inform us about required L1 dimension on order

INDICADOR MAGNÉTICO DE NIVEL DE ACEITE CON FLOTADOR VERTICAL /

MAGNETIC OIL LEVEL INDICATOR VERTICAL FLOAT





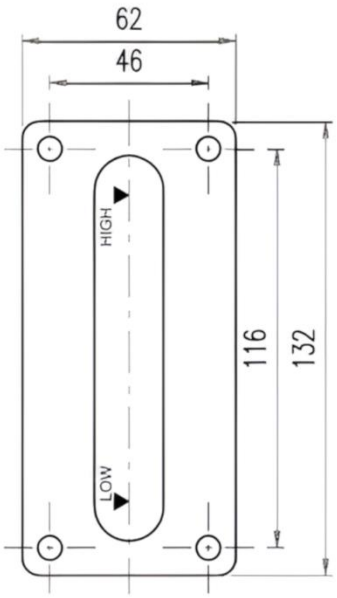
TYPE	L
L1	157
L2	210
L3	226

No.	Q'ty	Description	Explanation
1	1	Body	MS58
2	1	Press Nut	MS58
3	1	Tube	MS58
4	1	Cap	POLIKARBON
5	1	Scale	PA6
6	1	Float	ROHACELL
7	2	Float Handle	Aluminium
8	1	O-ring	NBR70
9	2	Magnet	—
10	1	Flat Gasket	NBR70
11	1	Float Lever	Aluminium

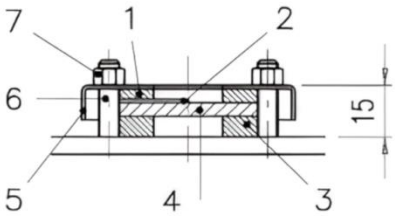
INDICADOR DE NIVEL DE ACEITE /

OIL LEVEL INDICATOR

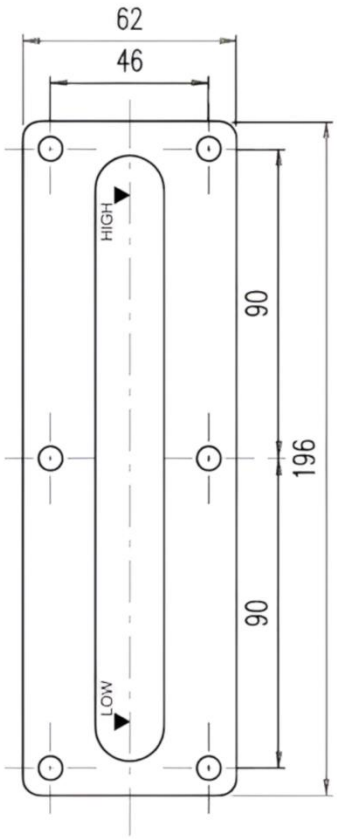
Small



Dimensions in mm.

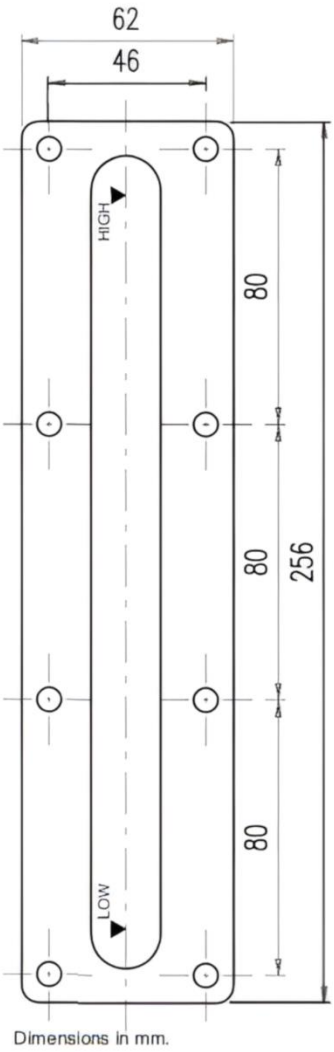


Medium



Dimensions in mm.

Large



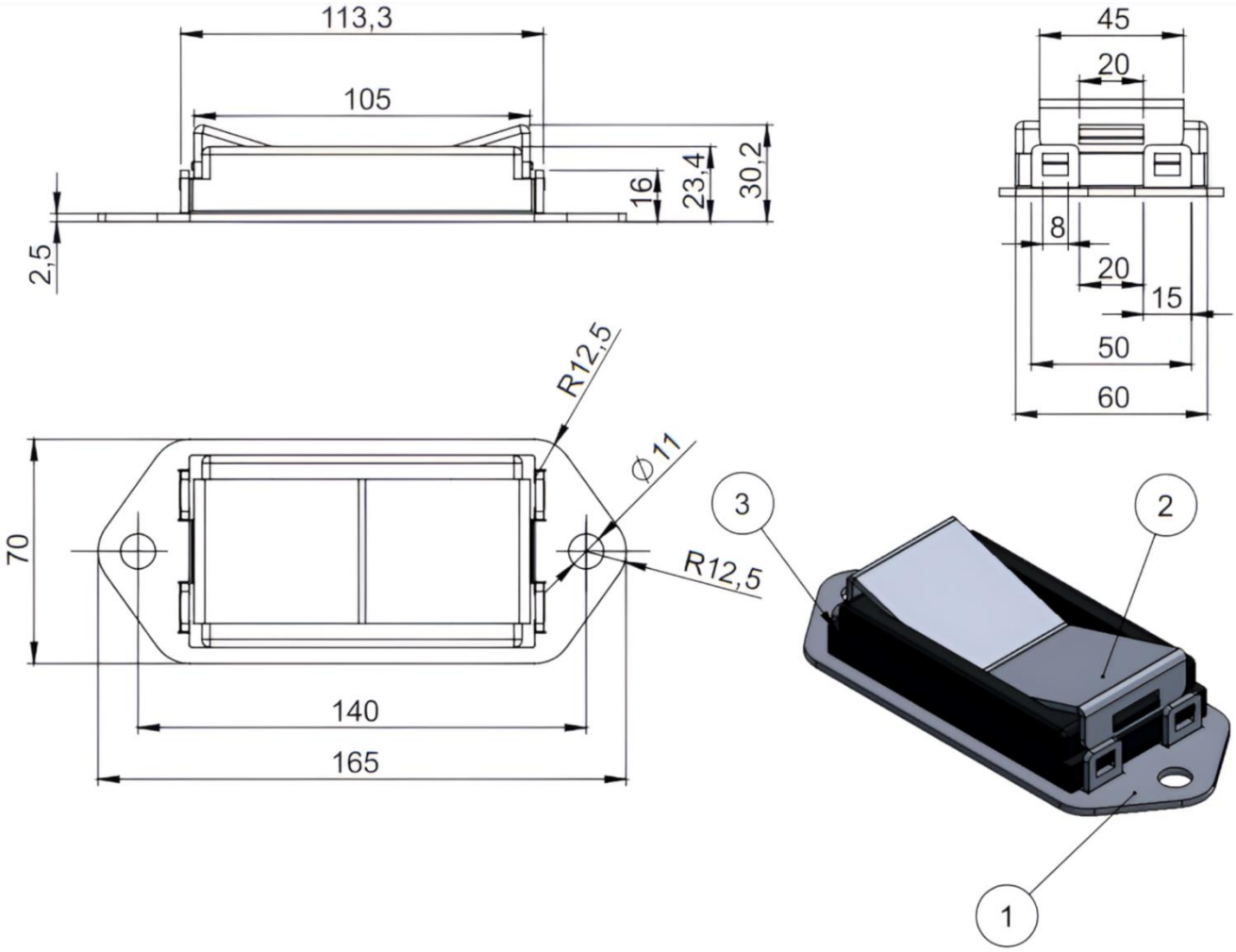
Dimensions in mm.

They give an optic indication of the oil level inside a transformer tank or inside a conservator. The steel frame must be bolted to the wall of an hermatic transformer or to the end of a conservator of a conventional transformer.

No:	Description	Material
1	Gasket outer	NBR
2	Sighting plate	Aluminium
3	Gasket inner	NBR
4	Window plex	Plexiglass
5	Window frame	Cr-Ni 1.5mm
6	Stud M6	(not supplied)
7	Nut M6	(not supplied)

COJINETE ANTIVIBRACIÓN PARA RUEDAS DE Ø125 Y Ø160 /

VIBRATION PAD FOR Ø125 AND Ø160 WHEELS

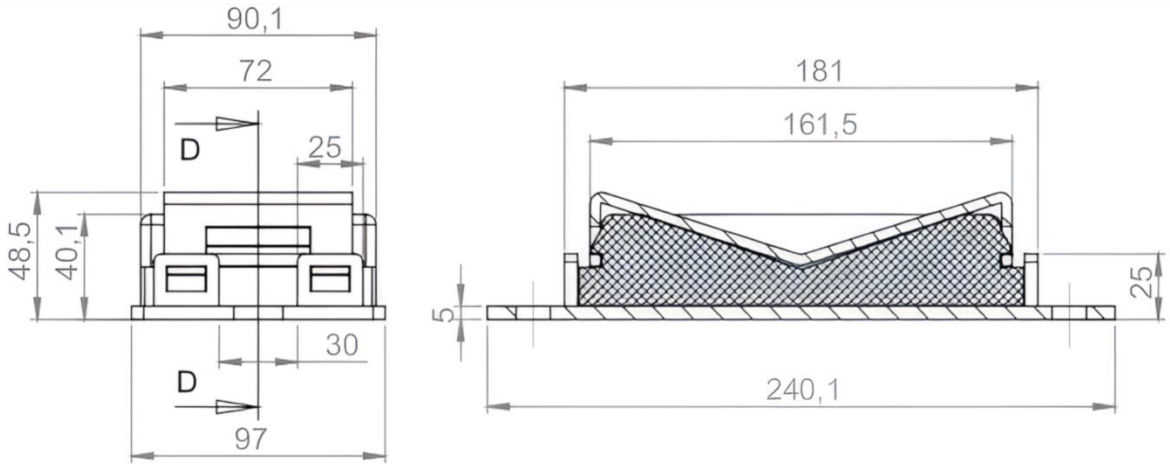


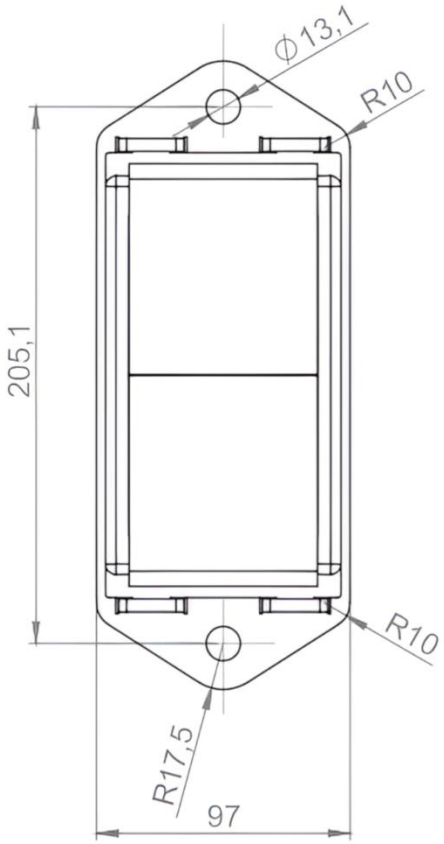
L (mm)	W (mm)	H (mm)	l1 (mm)	w1 (mm)	ØD (mm)	thk (mm)	Weight (mm)	Max load (mm)	Max compression (mm)
165	70	30	140	45	11	3	0,5	800	2

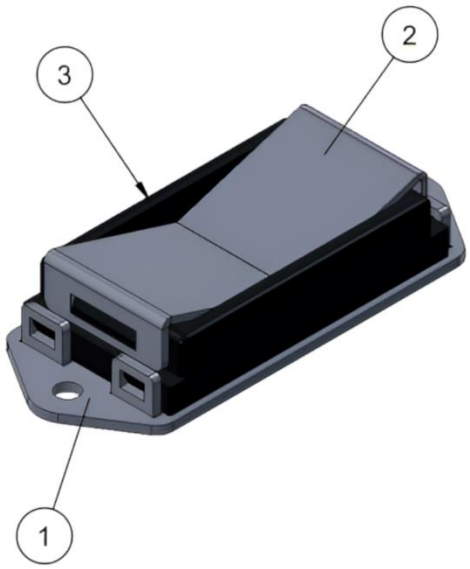
NO	DESCRIPTION	MATERIAL	QTY
1	BOTTOM PART	STEEL	1
2	TOP PART	STEEL	1
3	PAD	HARD RUBBER	1

COJINETE ANTIVIBRACIÓN PARA RUEDAS DE Ø200 /

VIBRATION PAD FOR Ø200 WHEELS





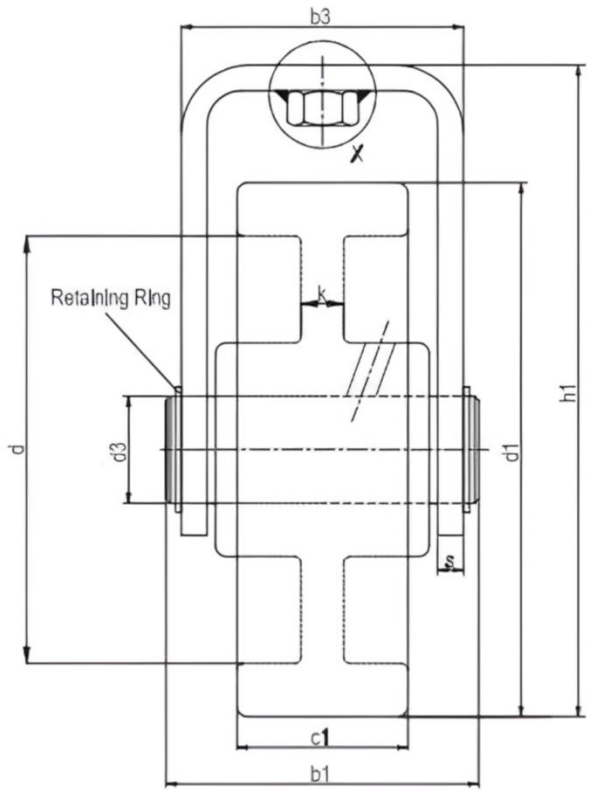


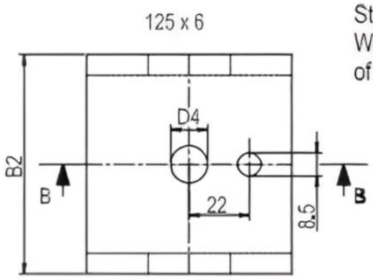
L (mm)	W (mm)	H (mm)	l1 (mm)	w1 (mm)	ØD (mm)	thk (mm)	Weight (mm)	Max load (mm)	Max compression (mm)
240	97	50	205	72	13	5	1,8	1900	3

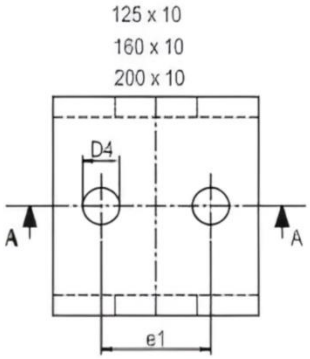
NO	DESCRIPTION	MATERIAL	QTY
1	BOTTOM PART	STEEL	1
2	TOP PART	STEEL	1
3	RUBBER PAD	HARD RUBBER	1

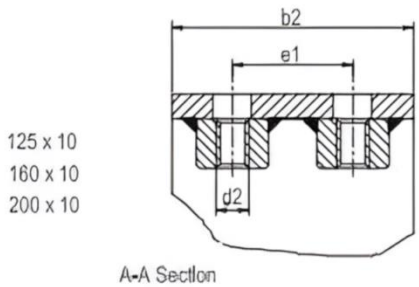
RUEDA DE TRANSFORMADOR DIN 42561 /

TRANSFORMER WHEEL DIN 42561

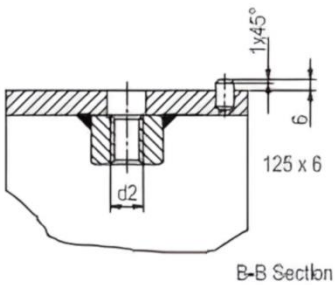








A-A Section



B-B Section

Parts

Wheel Housing	Steel (St-37)
Wheel	Cast Iron (GG-20)
Axle	St-37 or St. Steel

Stainless steel retaining ring is possible.
We can manufacture your specials designs of wheels with your sample or drawing.

Surface options

Zinc Plating / Hot dipped galvanizing / Wet or Electrostatic powder painting (RAL 7033)

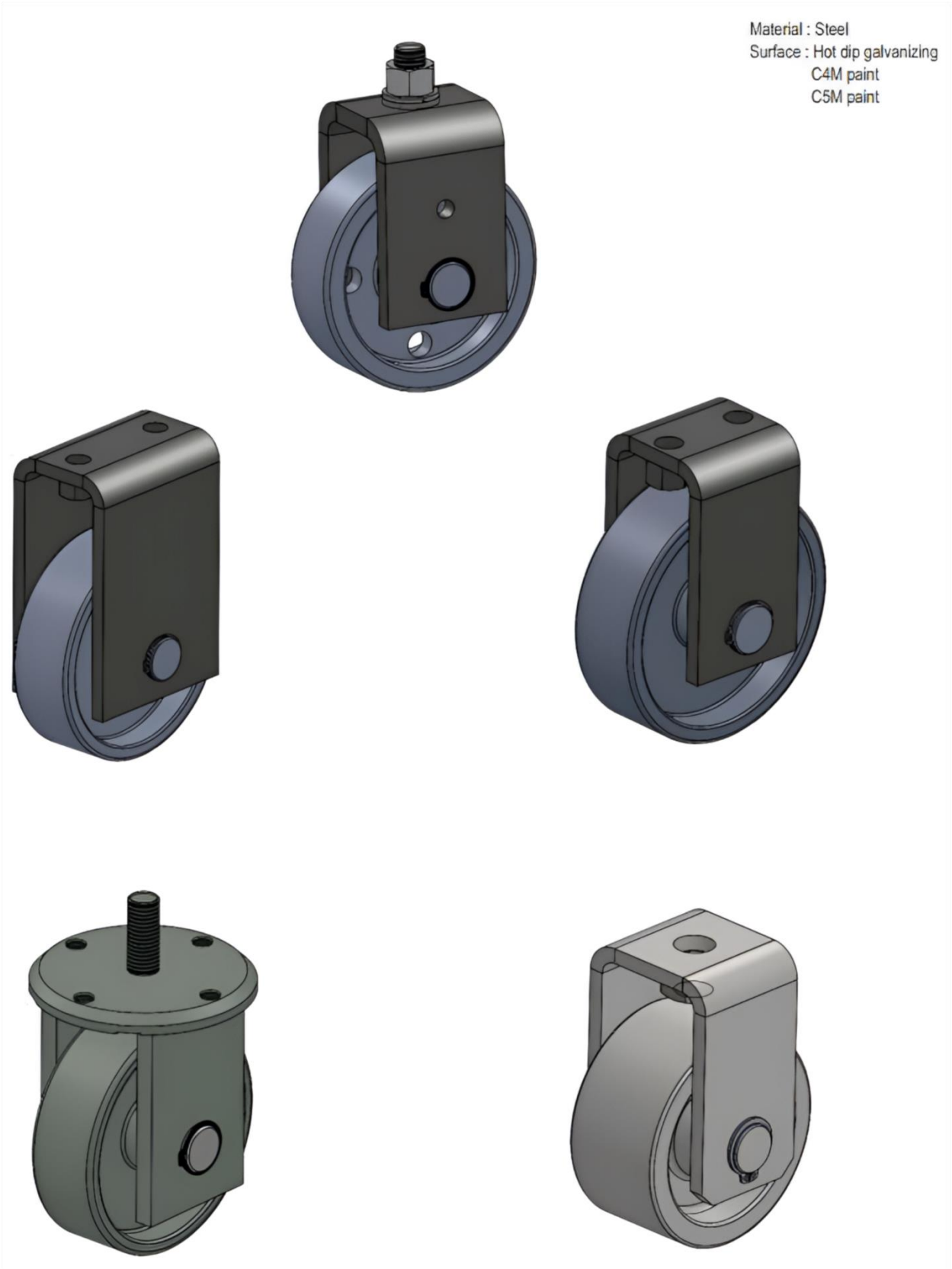
Note: DIN type 125x10 and 160x10 has only 1 nut at center
Different designs are possible to produce

d1	Ød	k	s	b1	b2	b3	c1	d2	d3	e1	h1	capacity	weight
125	100	10	6	75	60	66	40	M12	25	-	152	1200 (kg)	3.20
125	100	10	10	83	70	74	40	M12	25	46	152	2500 (kg)	3.90
160	135	15	10	95	80	84	50	M12	32	56	195	3500 (kg)	6.70
200	160	17.5	10	132	120	105	70	M12	50	80	230	6000 (kg)	15.75

THIN TYPE			
d1	Ød	k	weight
125	109	6	2.50
125	109	6	3.15
160	138	8	5.40
200	175	8	12.00

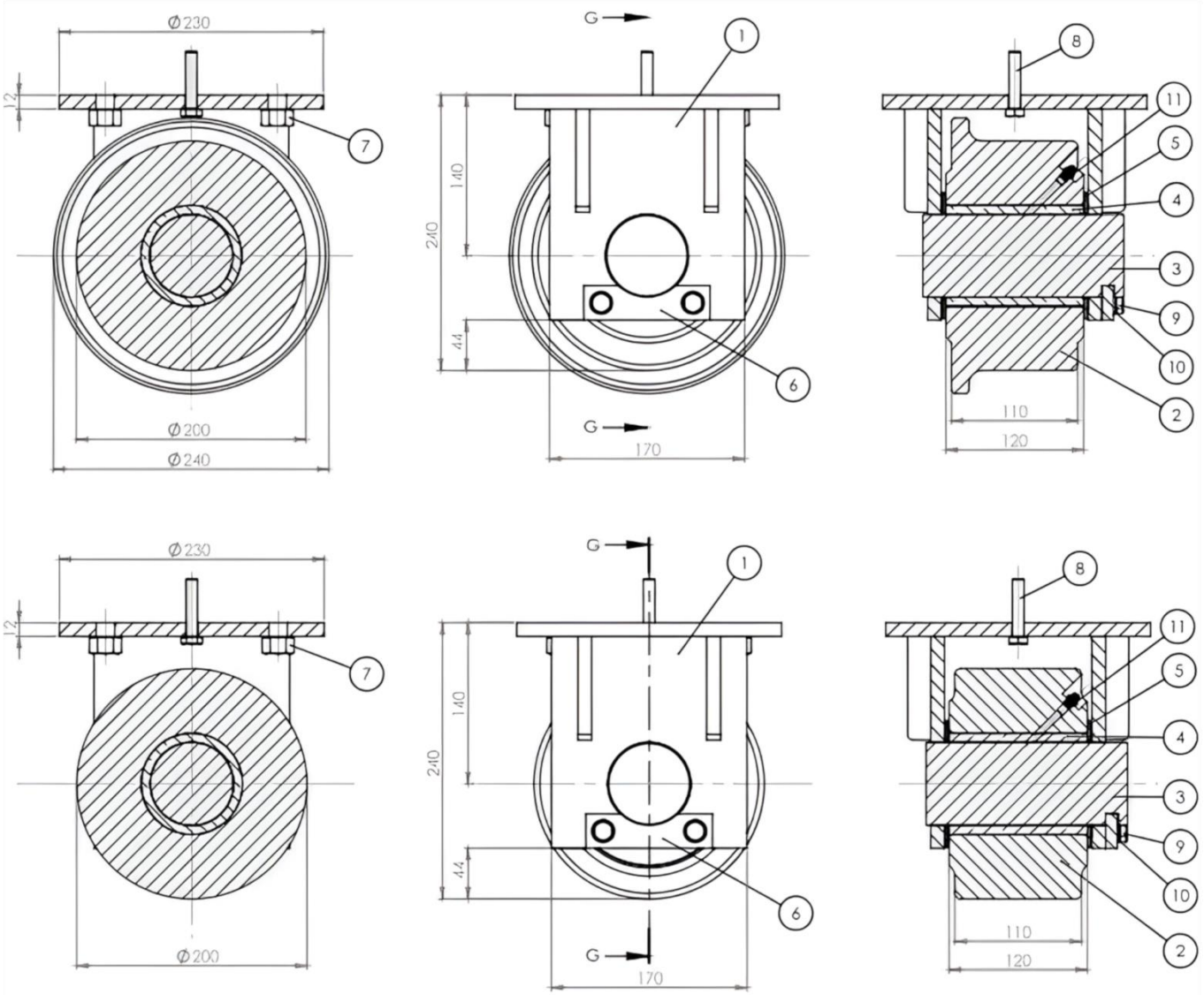
RUEDAS ESEPECIALES BAJO SOLICITUD /

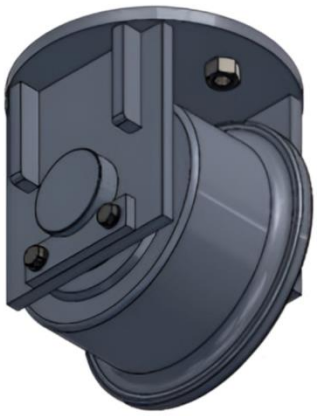
SPECIAL WHEELS ON REQUEST



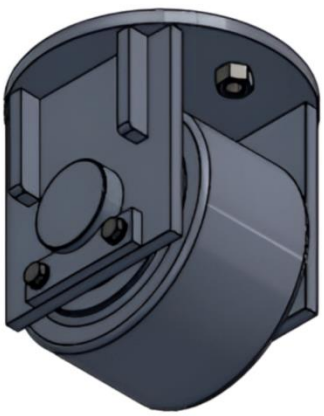
RUEDA DE 10 TONELADAS TIPO RIEL /

10 TONNES WHEEL RAIL TYPE





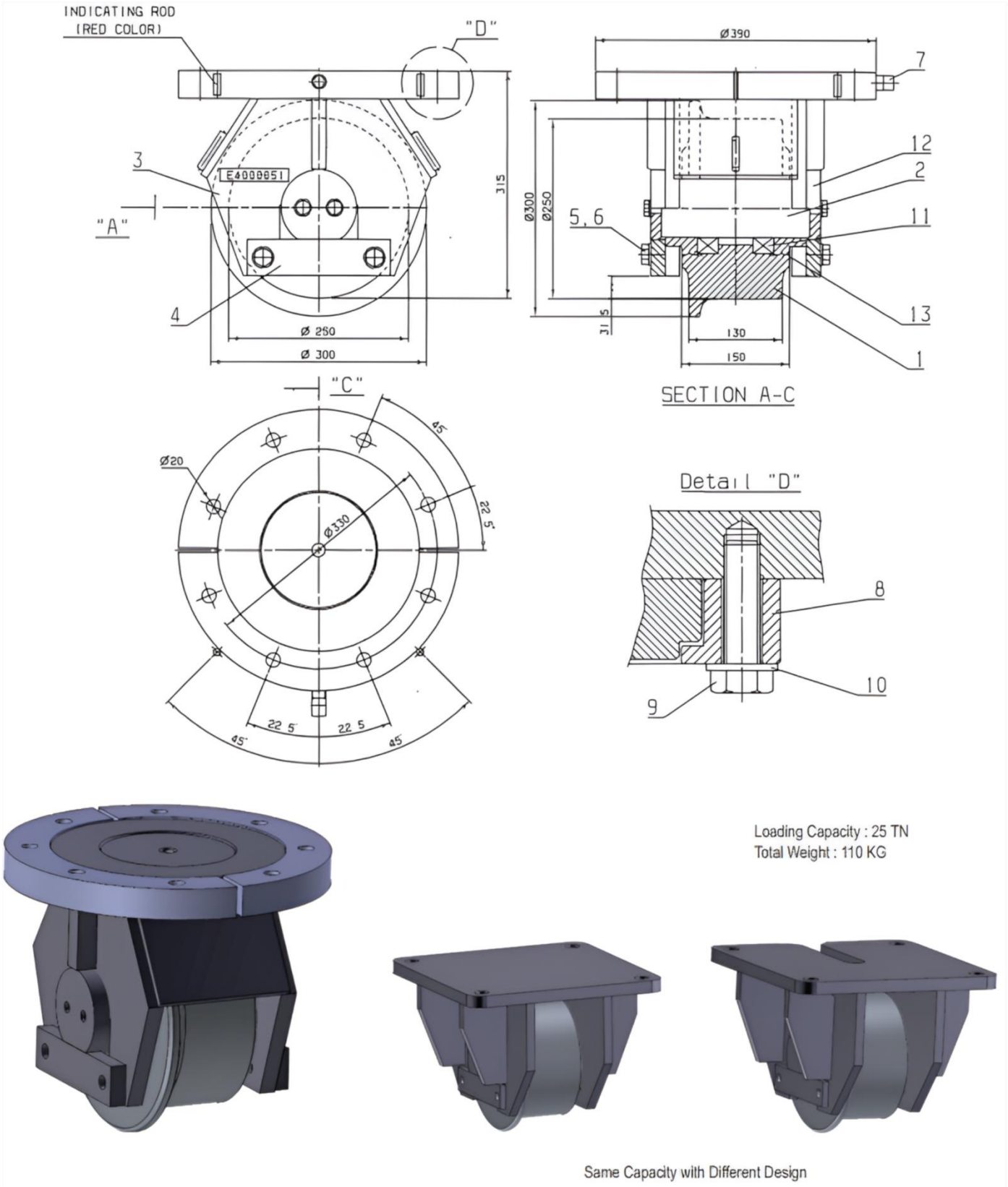
Wheel with Rail



Flat Wheel

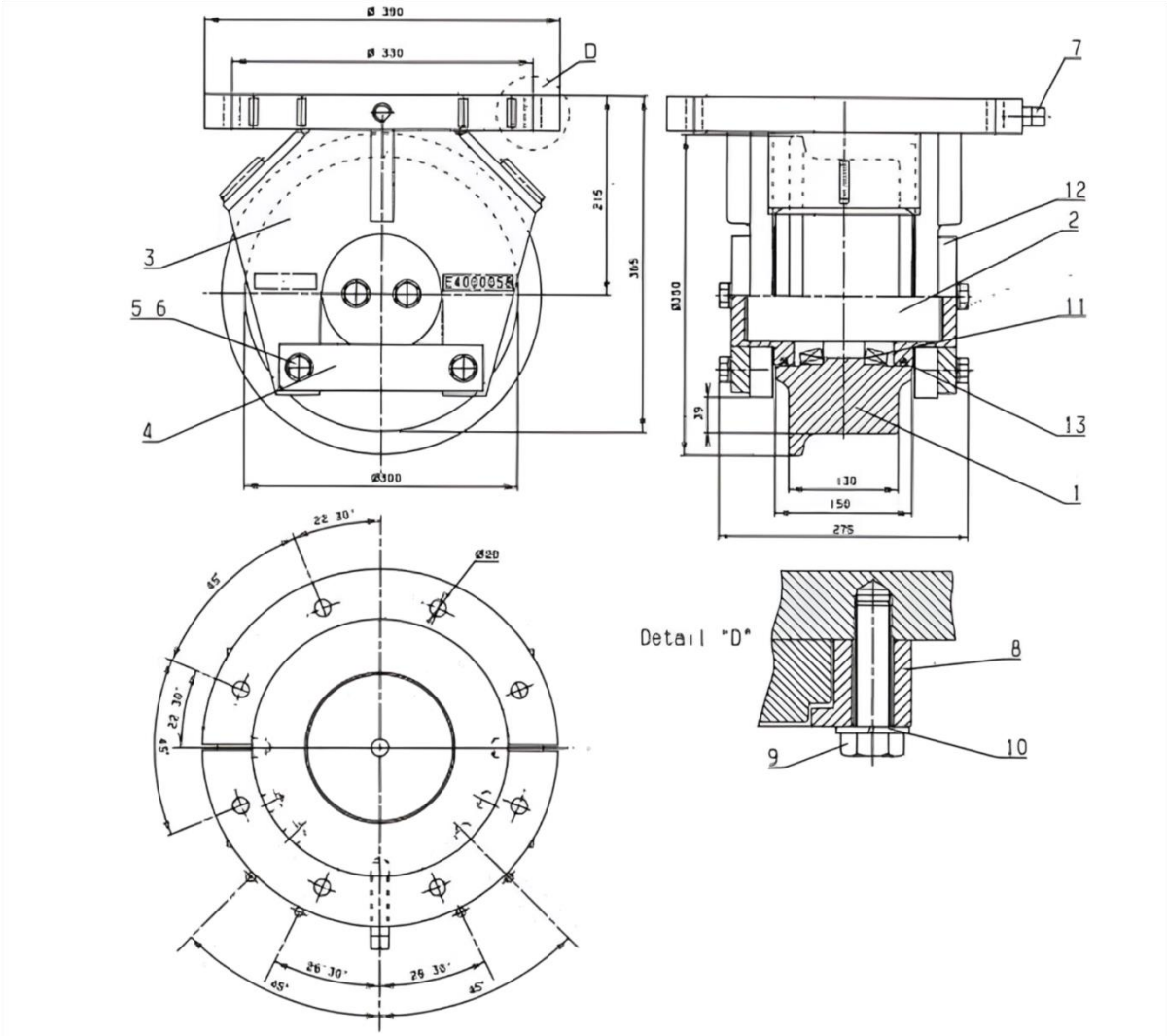
RUEDA DE 25 TONELADAS TIPO RIEL /

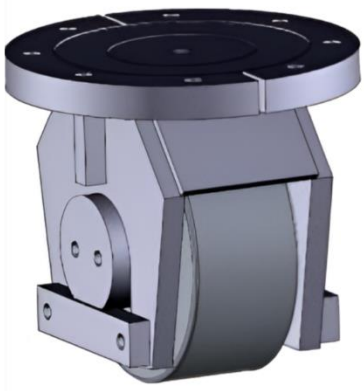
25 TONNES WHEEL RAIL TYPE



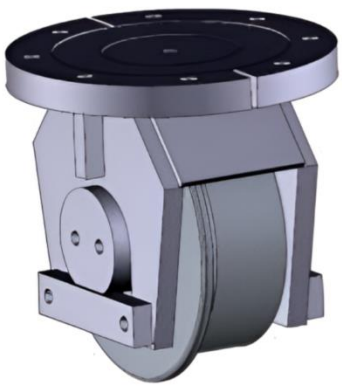
RUEDA DE 32 TONELADAS TIPO RIEL /

32 TONNES WHEEL RAIL TYPE





Flat Wheel

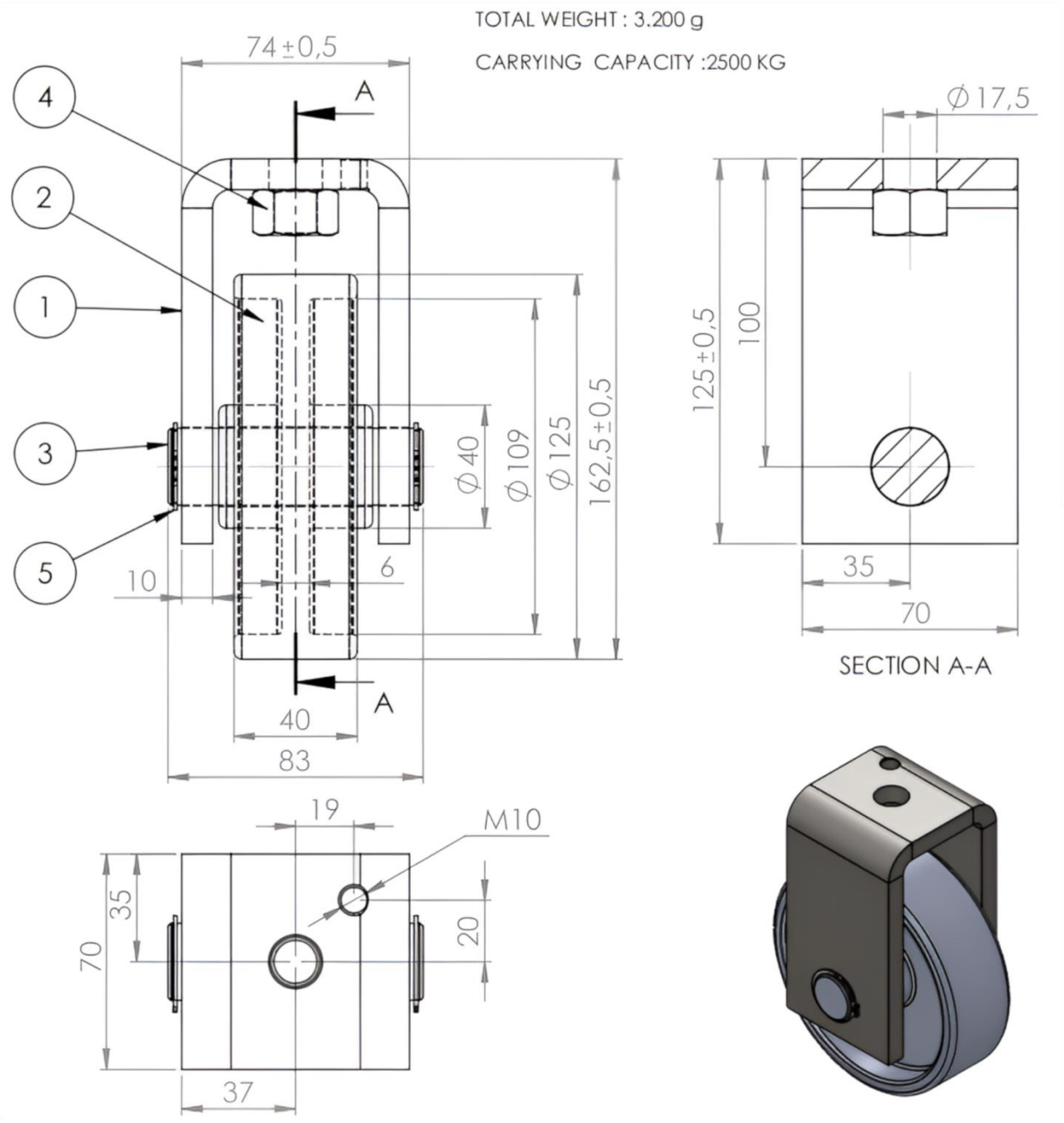


Rail Wheel

Loading Capacity : 32 TN
Total Weight : 163 KG

RUEDA ESPECIAL PARA TRANSFORMADORES Ø125 /

Ø125 SPECIAL TRANSFORMER WHEEL



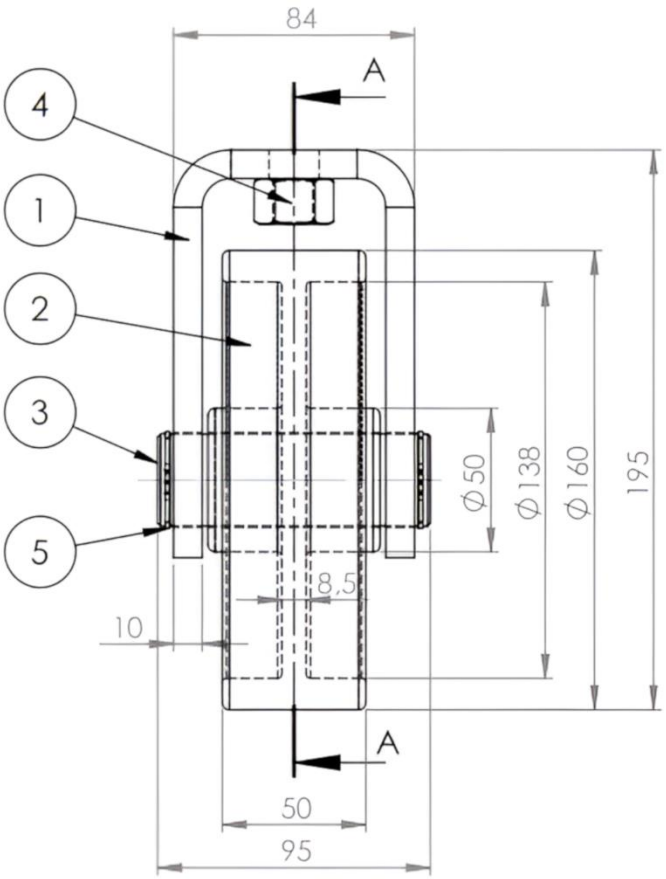
SIRA NO ITEM NO	PARÇA ADI DESCRIPTION	KOD NO CODE NO	RESIM NO DRAWING NO	AGIRLIK WEIGHT	ADET QUANTITY	MALZEME MATERIAL
5	RETAINING RING	02.29.25.03	471.25-01		2	25x1.2 DIN 471-ST
4	NUT	02.12.M16.09	934.M16-01		1	M16 ISO 4032 STEEL
3	SHAFT	02.25.125.01	42561.125M-01		1	Ø25x83 ST 37 ZINC
2	Ø125 THIN WHEEL	02.17.125.01.01	42561.125T-01		1	GG 20
1	WHEEL CAGE	02.18.125.10	01050-01		1	ST-37

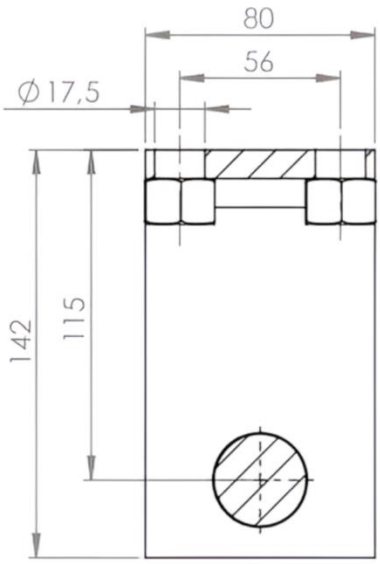
RUEDA PARA TRANSFORMADORES Ø160 /

Ø160 TRANSFORMER WHEEL

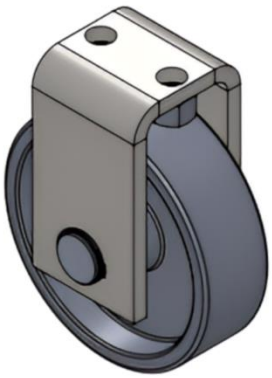
TOTAL WEIGHT : 5350 gr.

CARRYING CAPACITY: 3600 kg





SECTION A-A



ELEKTROSTATIC POWDER PAINT: RAL 7033 min. 55 MICRON

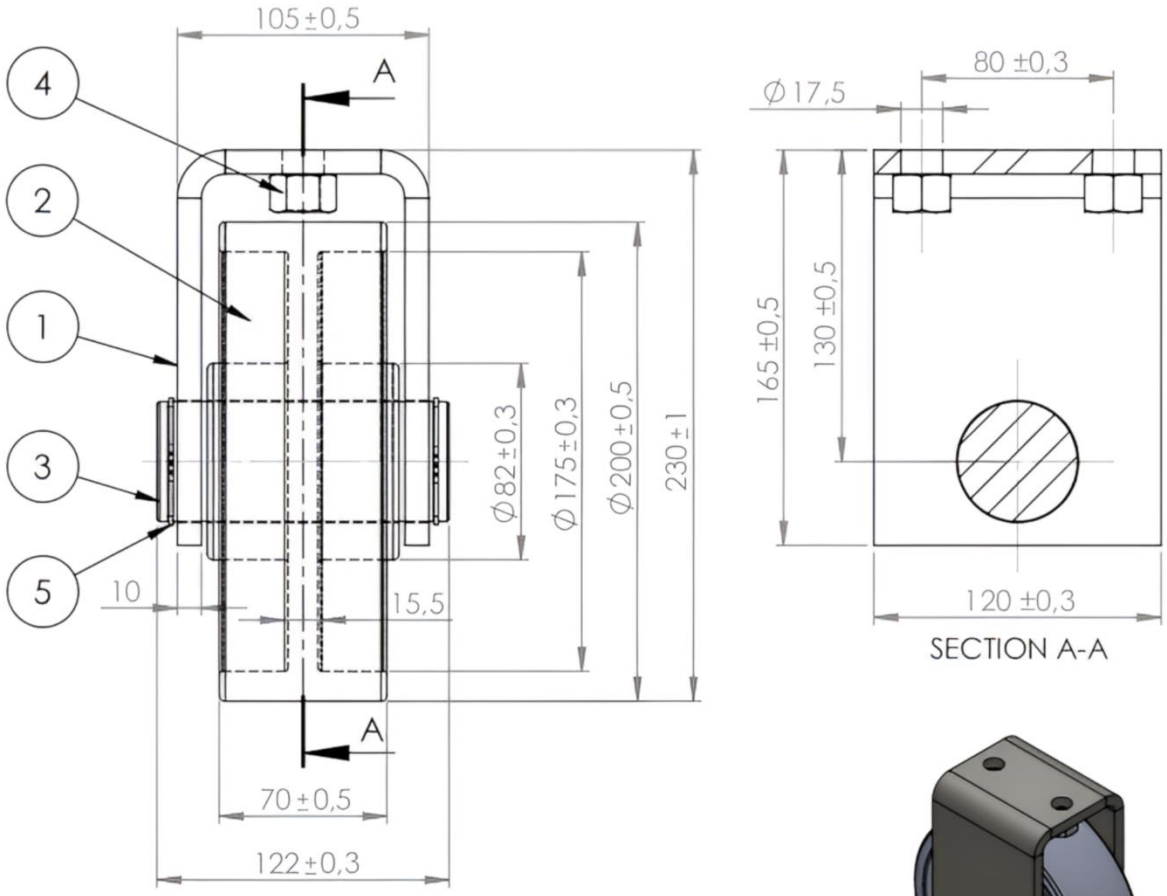
5	RETAINING RING	02.29.32.03	471.32-01		2	Ø32X1,5 DIN471 - ST ZINC
4	NUT	02.12.M16.03	934.M16-01		2	M16 ISO 4032 - ST
3	SHAFT	02.25.160.01	42561.160M-01		1	Ø32X95 ST. ZINC
2	WHEEL THIN	02.17.160.01.01	42561.160T-01		1	GG 20
1	WHEEL CAGE	02.18.160.02	42561.160K-02		1	STEEL
SIRA NO ITEM NO	PARÇA ADI DESCRIPTION	KOD NO CODE NO	RESİM NO DRAWING NO	AĞIRLIK WEIGHT	ADET QUANTITY	MALZEME MATERIAL

RUEDA ESPECIAL PARA TRANSFORMADORES Ø200 /

Ø200 SPECIAL TRANSFORMER WHEEL

TOTAL WEIGHT : 11600 gr.

CARRYING CAPACITY : 6300 kg.

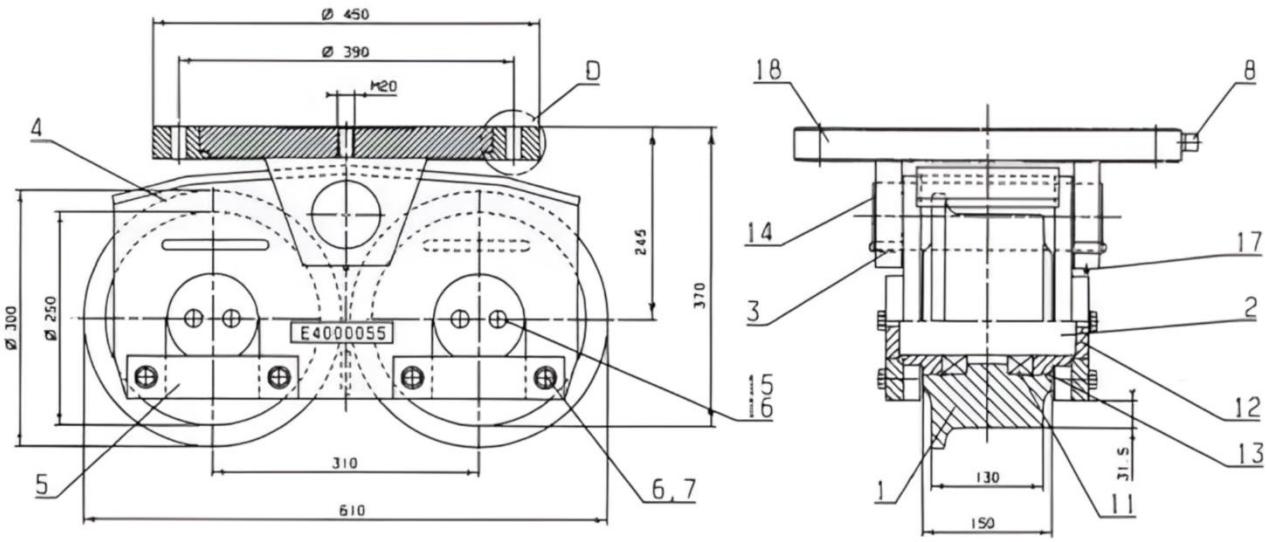


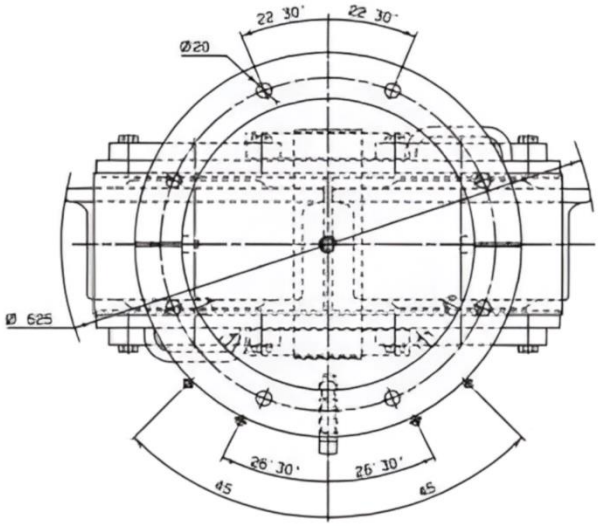
ELECTROSTATIC POWDER PAINT: RAL 7033, min. 55 MICRON

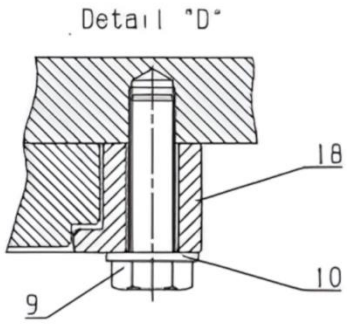
SIRA NO ITEM NO	PARCA ADI DESCRIPTION	KOD NO CODE NO	RESIM NO DRAWING NO	AGIRLIK WEIGHT	ADET QTY	MALZEME MATERIAL
5	RETAINING RING	02.29.50.03	471.50-01		2	Ø50x2 DIN471 ST. ZINC
4	NUT	02.12.M16.03	934.M16-01		2	M16 ISO4032 STEEL
3	SHAFT	02.25.200.01	42561.200M-01		1	Ø50x122 ST. ZINC
2	WHEEL THIN	02.17.200.01.01	42561.200T-01		1	GG20
1	WHEEL CAGE	02.18.200.02	42561.200K-02		1	STEEL

RUEDA DE 50 TONELADAS TIPO RIEL /

50 TONNES WHEEL RAIL TYPE



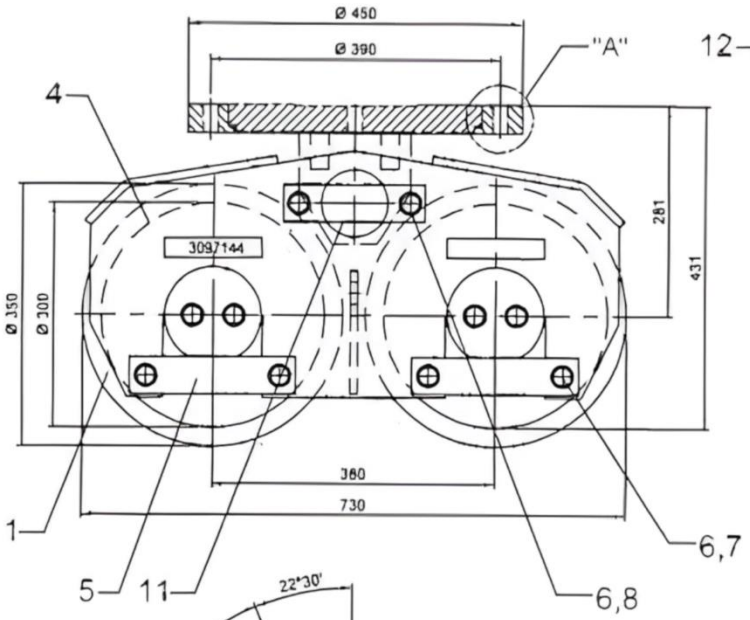


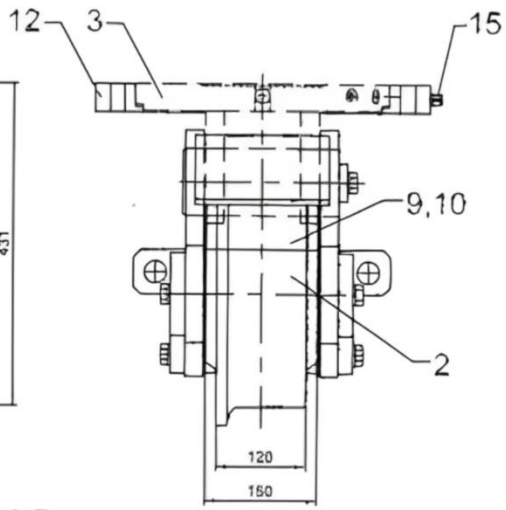


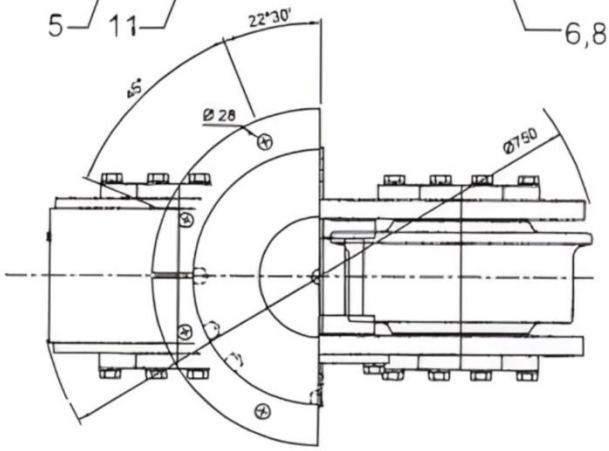
Loading Capacity : 50 TN
Total Weight : 235 KG

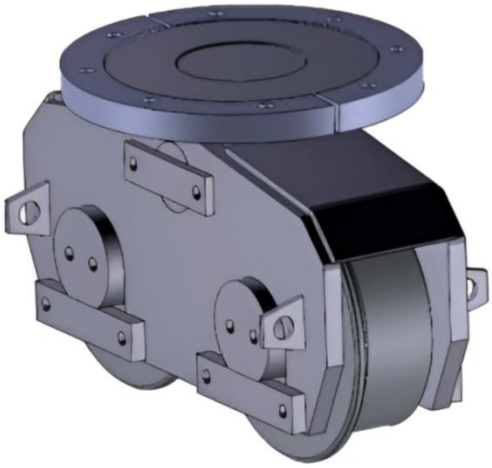
RUEDA DE 70 TONELADAS TIPO RIEL /

70 TONNES WHEEL RAIL TYPE

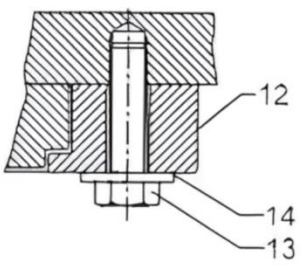






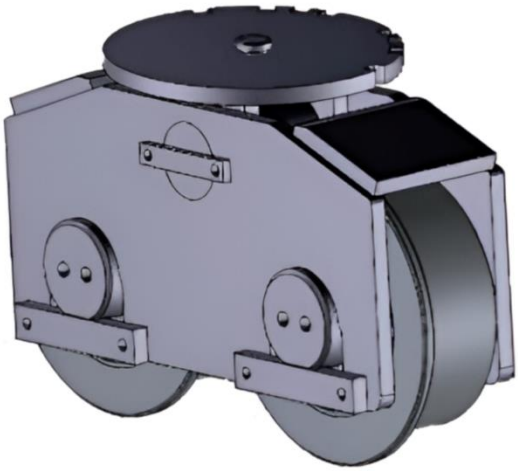


"A" DETAIL



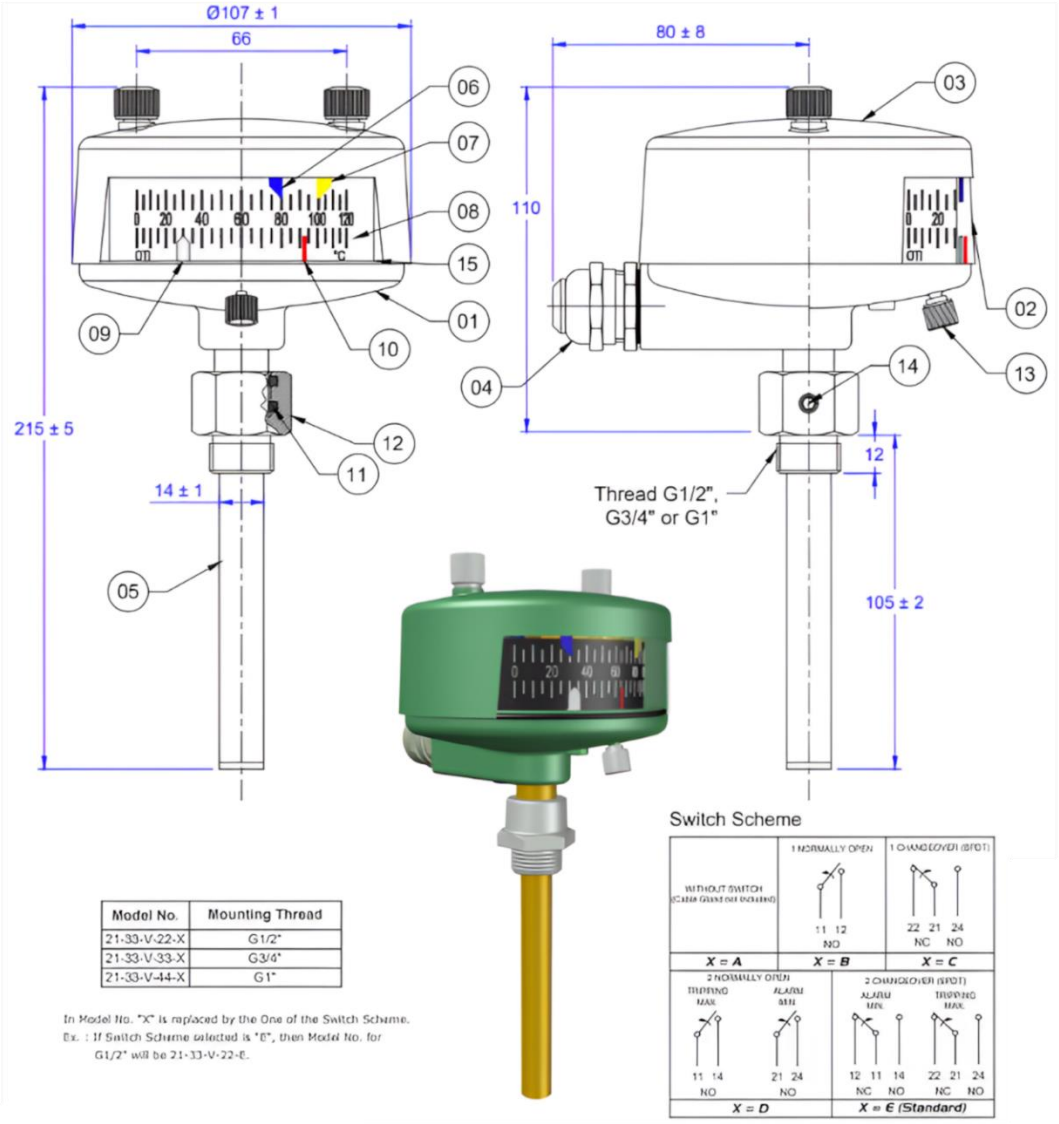
Different Top Flange
Acc. to Customer Design

Loading Capacity : 70 TN
Total Weight : 322 KG



TERMÓMETRO BIMETAL /

BIMETAL THERMOMETER



Model No.	Mounting Thread
21-33-V-22-X	G1/2"
21-33-V-33-X	G3/4"
21-33-V-44-X	G1"

In Model No. "X" is replaced by the One of the Switch Scheme.
Ex. : If Switch Scheme selected is "E", then Model No. for G1/2" will be 21-33-V-22-E.

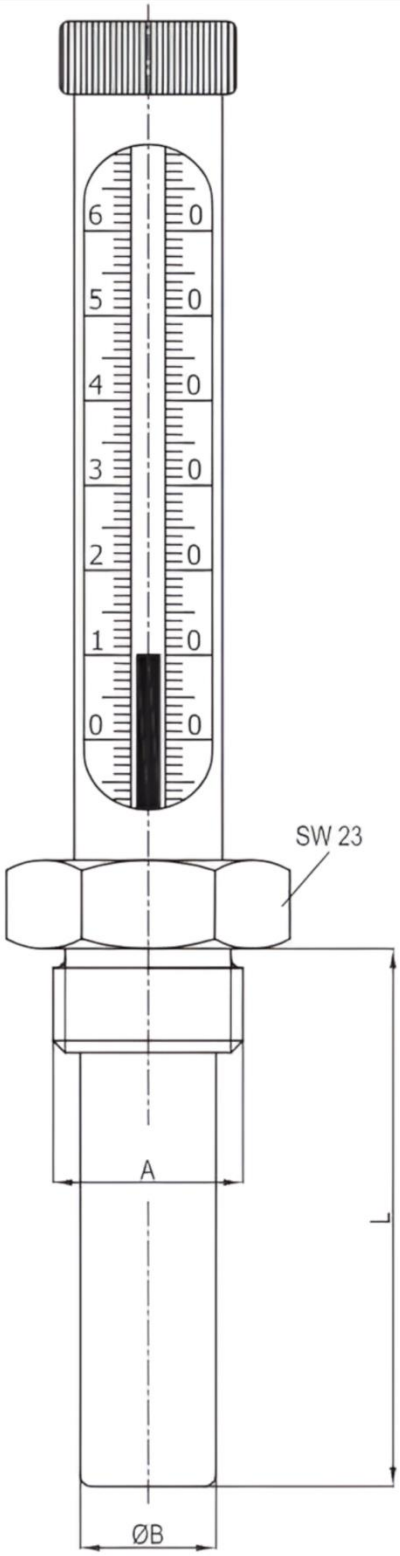
Bill of Material			
Part No.	Description	Qty.	Material
01	Body	01	Aluminium PDC
02	Window	01	Polycarbonate
03	Case	01	Aluminium
04	Cable Gland (PG 16)	01	Brass
05	Stem	01	Brass
06	Min. Temp. Set Pointer (Blue)	01	Nylon
07	Max. Temp. Set Pointer (Yellow)	01	Nylon
08	Indicating Scale (Silver on Black)	01	Aluminium
09	Temp. Indicating Pointer (White)	01	Nylon
10	Max. Indicating Pointer (Red)	01	Stainless Steel
11	'O' Ring	02	Silicon
12	Hex. Adaptor	01	Aluminium
13	Set Knob	01	Brass
14	Grub Screw	02	Stainless Steel
15	Cover 'O' Ring	01	Silicon

Note :
1). All Aluminium Parts are Shot Blasted and Powder Coated to RAL-7033.
2). Scale Markings are Silver Color on Black Background.
3). Window is U/V Stabilized Polycarbonate and Unbreakable.
4). All Nylon Items are U/V Stabilized.

Technical Specifications :
1). Operating Range : 0° to 120°C. Other Range on Request.
2). Mounting : G1/2", G3/4" or G1" (Vertical Type).
3). Accuracy : ±5°C
4). Switch Rating : 5A 250V AC and 5A 24V DC.
5). Protection Class : IP 55
6). Insulation : 2KV for 1 Minute.

TERMÓMETRO DE CRISTAL DIN 16160 /

GLASS THERMOMETER DIN 16160



MACHINE - GLASS THERMOMETER	
Working liquid	Alcohol
Working limit (C)	0-130°C
Immersion length (L)	63-100mm
Connection diameter (A)	R½"
Bulb diameter (B)	dia.:12

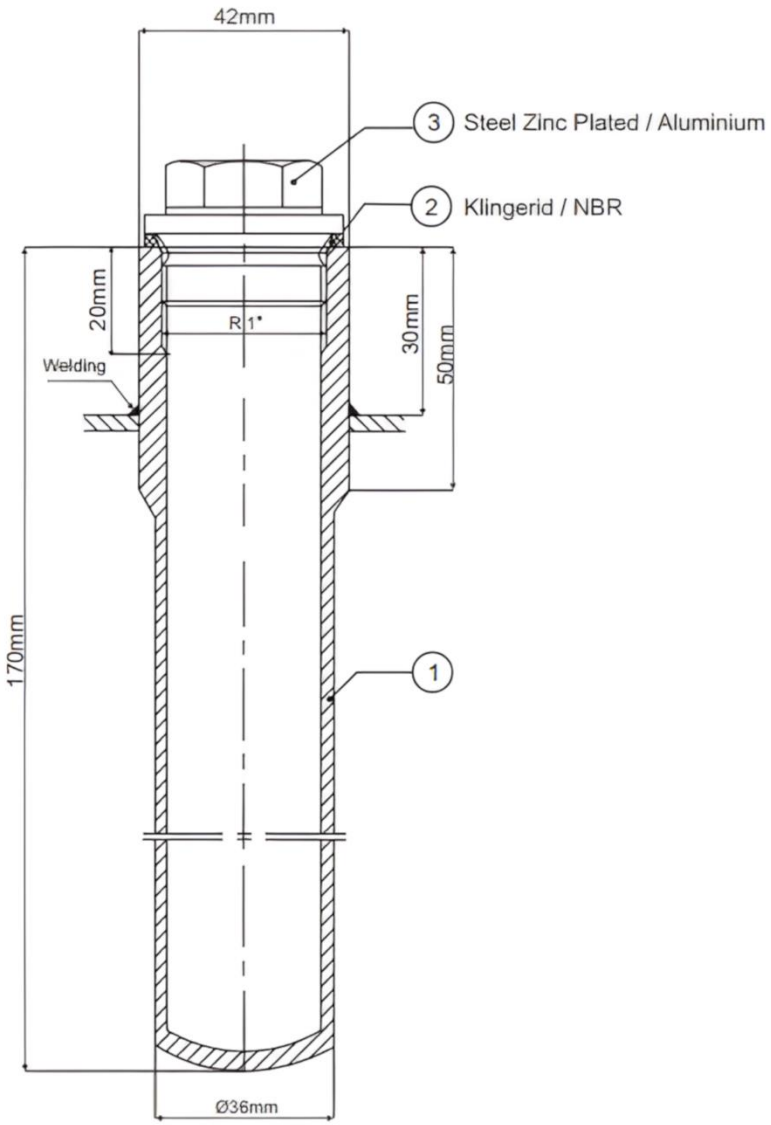
- These thermometers are for indoor use.

VAINA DE TERMÓMETRO DIN 42554 /

THERMOMETER POCKET DIN 42554

Features

The thermometer pocket is designed to be welded in the top of oil immersed transformers. The pocket is manufactured out of one metal-piece according to DIN 42554. This secured absolute oil-tightness.



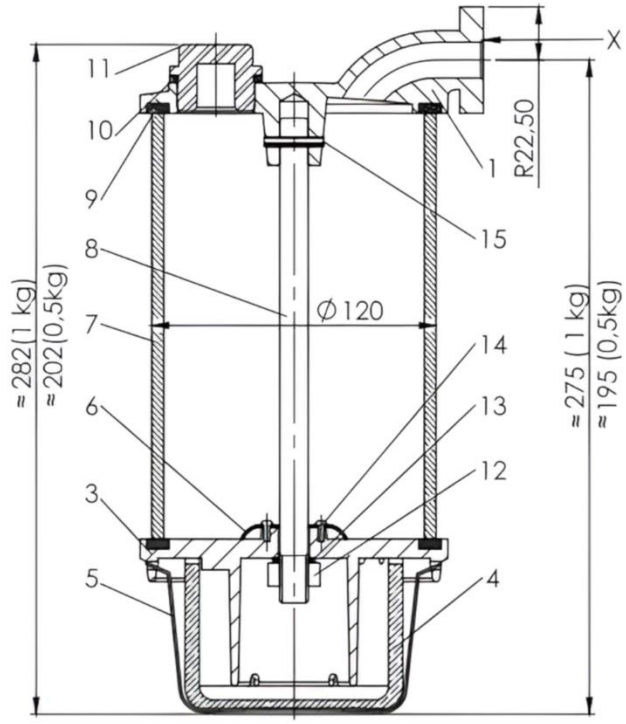
No:	Designation	Remarks	Material
1	Thermometer Pocket	DIN 42554	St 37-2
2	Gasket	39x29x3	Klingerit
3	Plug	R 1" DIN 910	Gal Zn

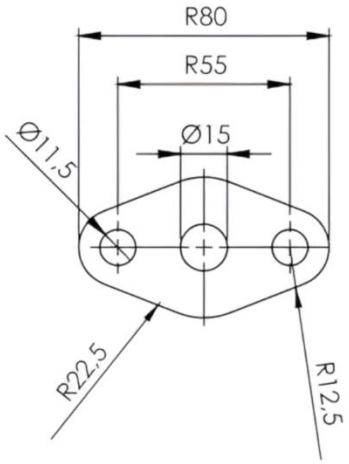
DESHUMIFICADOR DIN 42567 FORM A /

BREATHER DIN 42567 FORM A

Silicagel Capacity	Form	Application	Transformer Oil Capacity
0.5 kg.	A	250 kVA	1800 kg.
1.0 kg.	A	250-5000 kVA	3600 kg.

The top and the bottom sections : Casted aluminium
Paint : RAL 7033 electrostatic powder
Shafts : Nickel plated steel
Container : Glass oil bowl polycarbonate
Bowl holder : CrNi





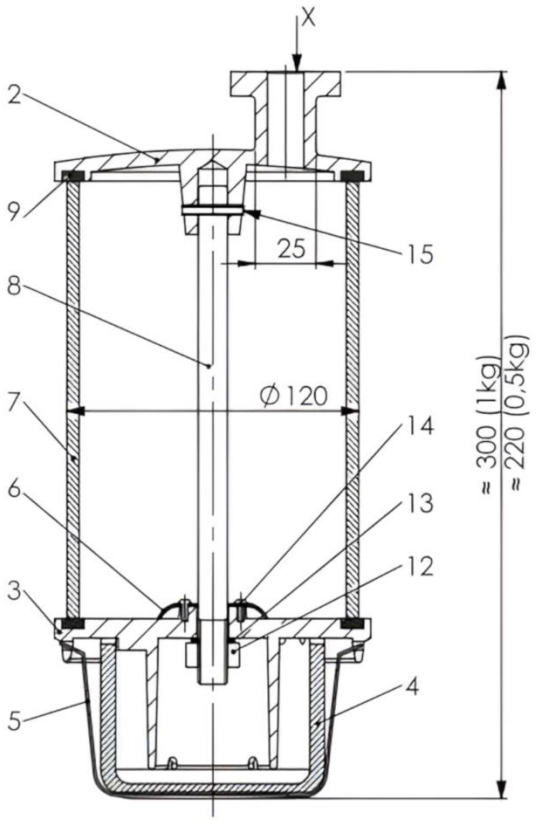
Pos. No.	Qty.	Description	Material
1	1	Top section	GD - AL lack RAL 7033
3	1	Bottom section	GD - AL lack RAL 7033
4	1	Oil bowl	Plexiges, klar
5	1	Holder	X 12 CrNi 177
6	1	Sieve	AL 1.5 Ø
7	1	Glass cylinder	Glass 120x5x100/180
8	1	Bridging plug	St 33 galv. zn M12x125/250
9	2	Gasket	NBR 70
10	1	Gasket	Asbestos free
11	1	Plug	GD - AL lack RAL 7033
12	1	Nut	M12 DIN 934 - 4D
13	1	Spring washer	B12 DIN 127
14	2	Rivet	2,5x4 Alu DIN 1476
15	1	Pin	4x24 DIN 1471

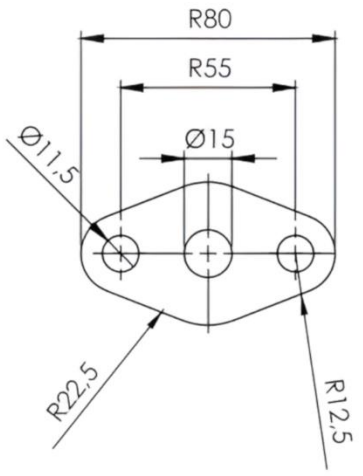
DESHUMIFICADOR DIN 42567 FORM C /

BREATHER DIN 42567 FORM B

Silicagel Capacity	Form	Application	Transformer Oil Capacity
0.5 kg.	B	250 kVA	1800 kg.
1.0 kg.	B	250-5000 kVA	3600 kg.

The top and the bottom sections : Casted aluminium
Paint : RAL 7033 electrostatic powder
Shafts : Nickel plated steel
Container : Glass oil bowl polycarbonate
Bowl holder : CrNi





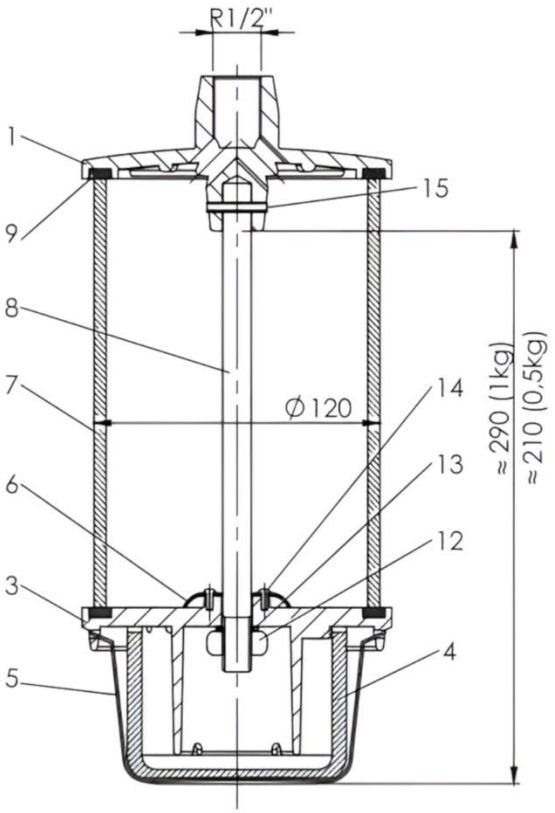
Pos. No.	Qty.	Description	Material
2	1	Top section	GD - AL lack RAL 7033
3	1	Bottom section	GD - AL lack RAL 7033
4	1	Oil bowl	Plexiges, klar
5	1	Holder	X 12 CrNi 177
6	1	Sieve	AL 1.5 Ø
7	1	Glass cylinder	Glass 120x5x100/180
8	1	Bridging plug	St 33 galv. zn M12x125/250
9	2	Gasket	NBR 70
12	1	Nut	M12 DIN 934 - 4D Galv. Zn
13	1	Spring washer	B12 DIN 127 - Galv. Zn
14	2	Rivet	2,5x4 Alu DIN 1476
15	1	Pin	4x24 DIN 1471

DESHUMIFICADOR DIN 42567 CON FORMA C /

BREATHER DIN 42567 FORM C

Silicagel Capacity	Form	R diameter			Application	Transformer Oil Capacity
0.5 kg.	C	R 1/2"	R 3/4"	R 1"	250 kVA	1800 kg.
1.0 kg.	C	R 1/2"	R 3/4"	R 1"	250-5000 kVA	3600 kg.

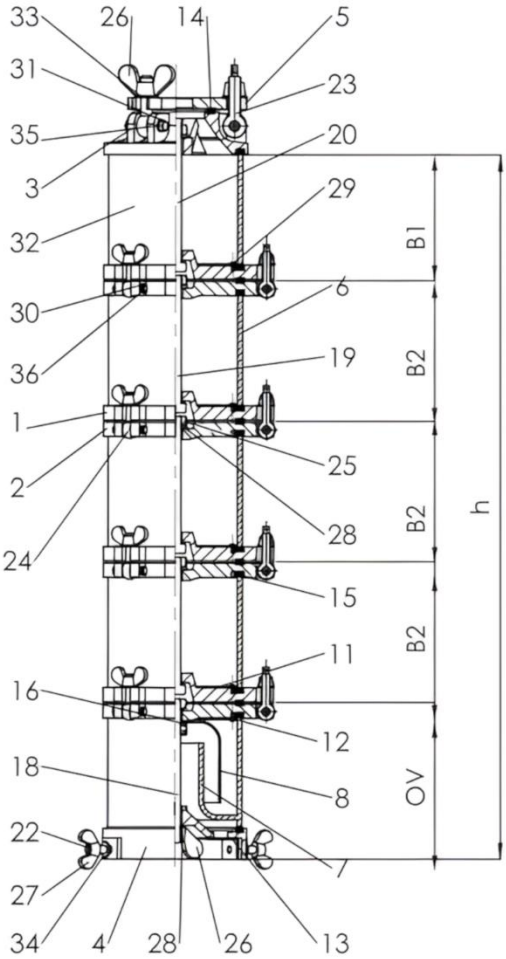
The top and the bottom sections : Casted aluminium
Paint : RAL 7033 electrostatic powder
Shafts : Nickel plated steel
Container : Glass oil bowl polycarbonate
Bowl holder : CrNi



Pos. No.	Qty.	Description	Material
1	1	Top section	GD - AL lack RAL 7033
3	1	Bottom section	GD - AL lack RAL 7033
4	1	Oil bowl	Plexiges, klar
5	1	Holder	X 12 CrNi 177
6	1	Sieve	AL 1.5 Ø
7	1	Glass cylinder	Glass 120x5x100/180
8	1	Bridging plug	St 33 galv. zn M12x125/250
9	2	Gasket	NBR 70
12	1	Nut	M12 DIN 934 - 4D Galv. Zn
13	1	Spring washer	B12 DIN 127 - Galv. Zn
14	2	Rivet	2,3x5 DIN1476
15	1	Pin	4x24 DIN 1471

DESHUMIFICADOR DIN 42562 L1-L2-L3-L4 /

BREATHER DIN 42562 L1-L2-L3-L4



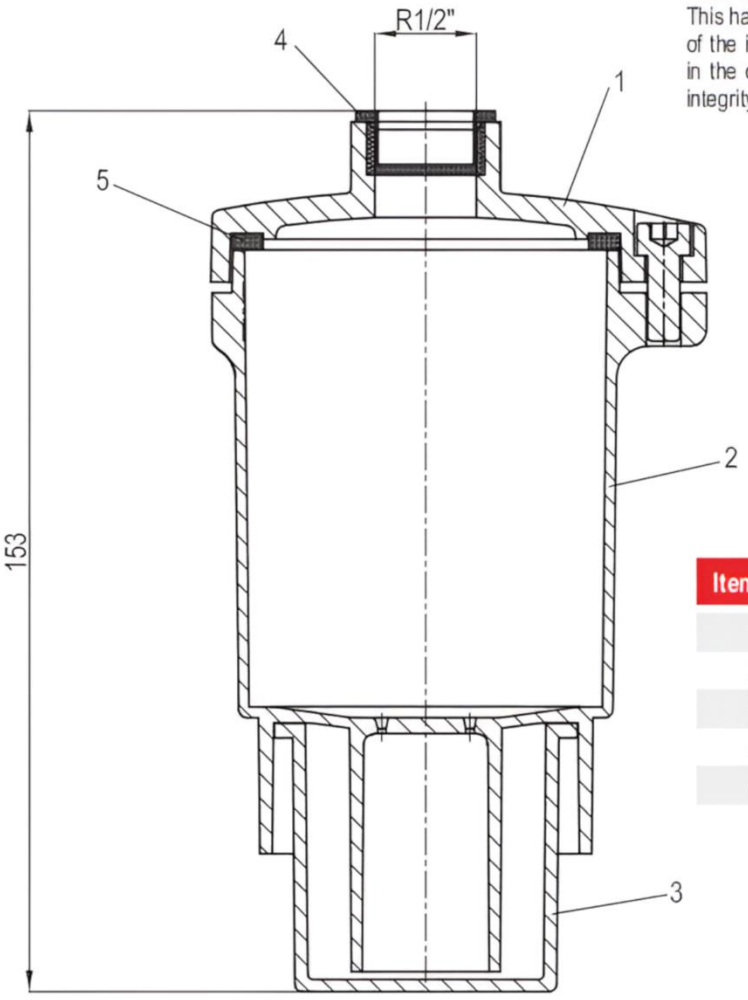
Pos. No.	Grouping B1	Grouping B2	Grouping OV	Description	Remarks
1	1	1	-	Partition plate	GG 20 gal. zn
2	-	1	1	Partition plate	GG 20 gal. zn
3	1	-	-	Top section	GG 20 gal. zn
4	-	-	1	Bottom section	GG 20 gal. zn
5	-	-	-	Flange	
6	1	1	1	Glass cylinder	Glass
7	-	-	1	Oil container	Glass
8	-	-	1	Dome	nrSt
11	1	-	-	Perforated plate	A1
12	-	-	1	Perforated plate	A1
13	-	-	1	Perforated plate	A1
14	1	-	-	Gasket	NBR 70
15	2	3	3	Gasket	NBR 70
16	-	-	2	Gasket	M1-250
18	-	-	1	Bolt	M12x150 - A2. 70
19	-	1	-	Bolt	M12x130 - A2 .70
20	1	-	-	Bolt	M12x140 - A2. 70
22	-	-	2	Stud bolt	M8x30 - A2. 70
23	3	-	-	Eyebolt	M12x55 A2. 70
24	-	3	3	Eyebolt	M8x40 A2. 70
25	1	1	2	Hexagon nut	M12 - A2. 70
26	3	-	1	Wing nut	M12-C - A2. 70
27	-	3	5	Wing nut	M8-C - A2. 70
28	1	1	2	Spring washer	12 CrN. - 177
29	3	3	7	Pin	2,5x5 Alu
30	-	6	6	Circlips	8x0,8 - nrSt
31	6	-	-	Circlips	10x1 - nrSt
32	*	*	-	Silicagel	*-1,200 gr.
33	3	-	-	Washer	B13 - nrSt
34	-	3	5	Washer	B8,4 - nrSt
35	3	-	-	Stud	1.4305 nrSt
36	-	3	3	Stud	1.4305 nrSt

Types of moisture holders		L1	L2	L3	L4
Silicagel amounth (kg.)		1,2	2,4	3,6	4,8
Height (h) (± 1)		342	489	636	783
Weight of moisture holders without silicagel (no filling) (kg.)		9,2	12,6	16,3	20
Assembly groups	B1	1	1	1	1
	B2	-	1	2	3
	OV	1	1	1	1

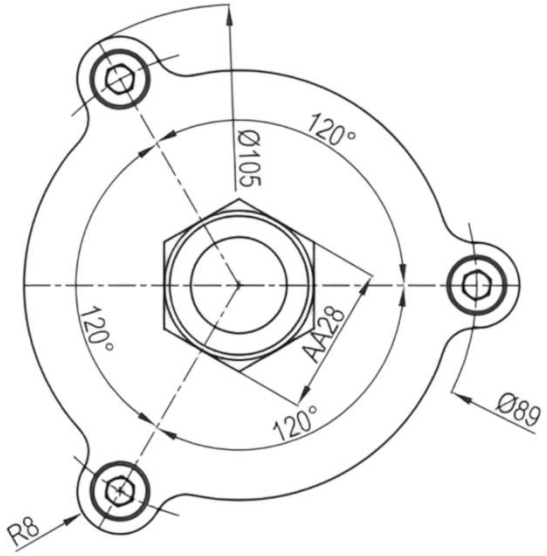
DESHUMIFICADOR DIN 42567 0,15KG R ½ '' /

BREATHER DIN 42567 0.15KG R 1/2 ''

The dehydrating breather removes practically all moisture from the air which flows through it into the conservator when the transformer is cooling down. This has the effect of largely preventing any reduction of the dielectric strength of the insulation due to moist ambient air and any formation of condensation in the conservator. Thus the dehydrating breather increases the operational integrity of the transformer.

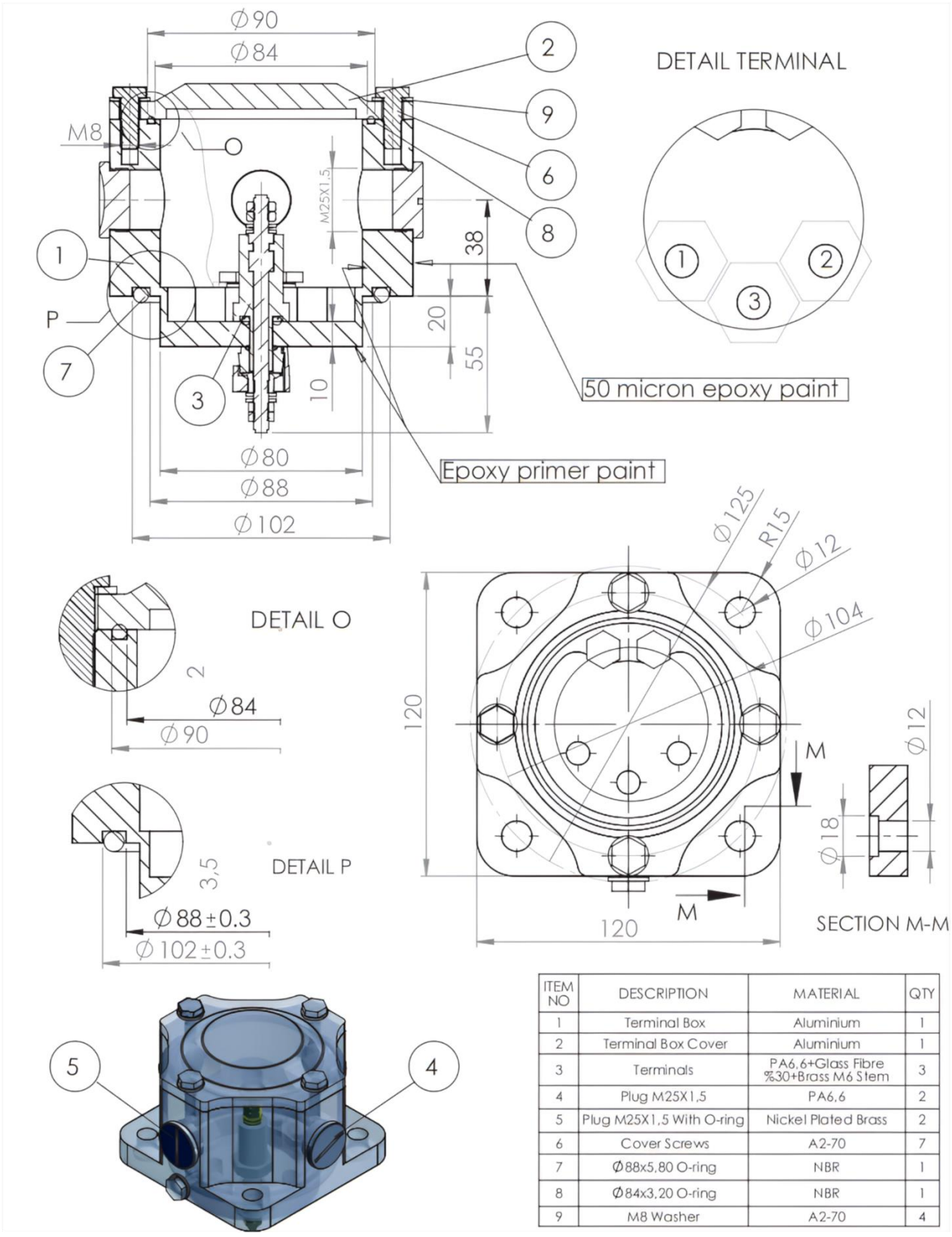


Item No.	Qty.	Description	Material
1	1	Top section	Aluminium, Powder painted
2	1	Cylinder	Polycarbonate
3	1	Oil Bowl	Polycarbonate
4	1	Plug	Polyethylene
5	1	Gasket	Nitrile rubber



CAJA TERMINAL CON 3 CONEXIONES /

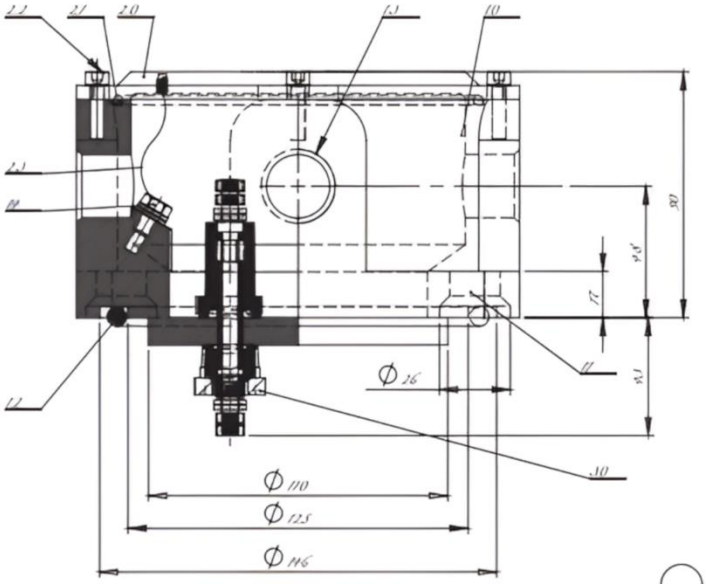
TERMINAL BOX WITH 3 CONNECTIONS

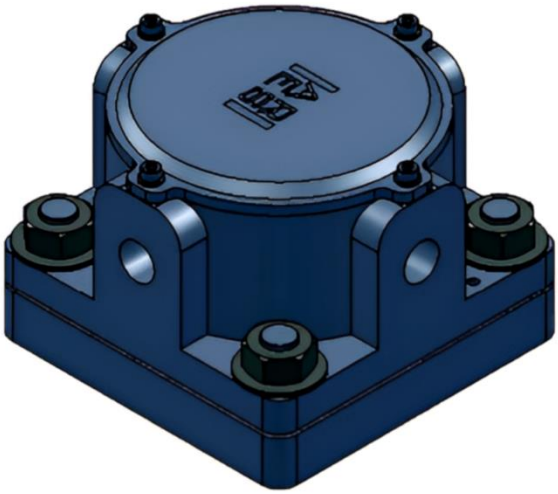


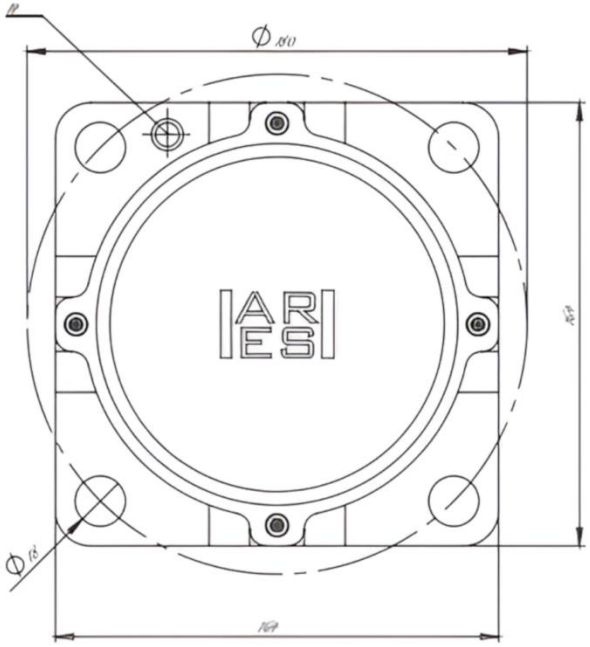
ITEM NO	DESCRIPTION	MATERIAL	QTY
1	Terminal Box	Aluminium	1
2	Terminal Box Cover	Aluminium	1
3	Terminals	PA6,6+Glass Fibre %30+Brass M6 Stem	3
4	Plug M25X1,5	PA6,6	2
5	Plug M25X1,5 With O-ring	Nickel Plated Brass	2
6	Cover Screws	A2-70	7
7	Ø88x5,80 O-ring	NBR	1
8	Ø84x3,20 O-ring	NBR	1
9	M8 Washer	A2-70	4

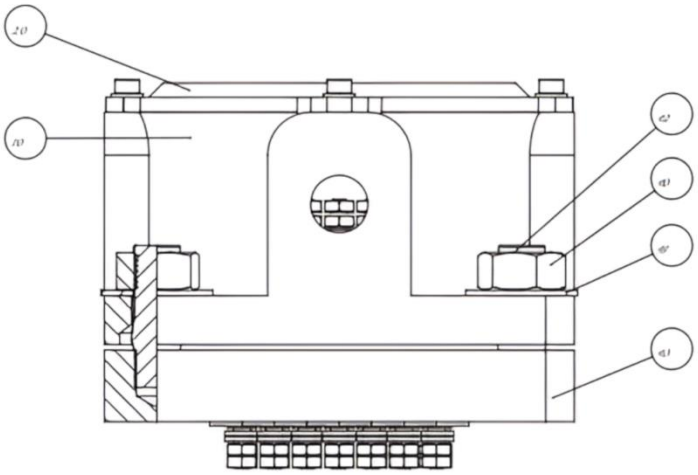
CAJA TERMINAL CON 6 HASTA 12 CONECTORES PARA UNA CONEXIÓN CT /

TERMINAL BOX WITH 6 TO 12 CONNECTORS FOR CT CONNECTION





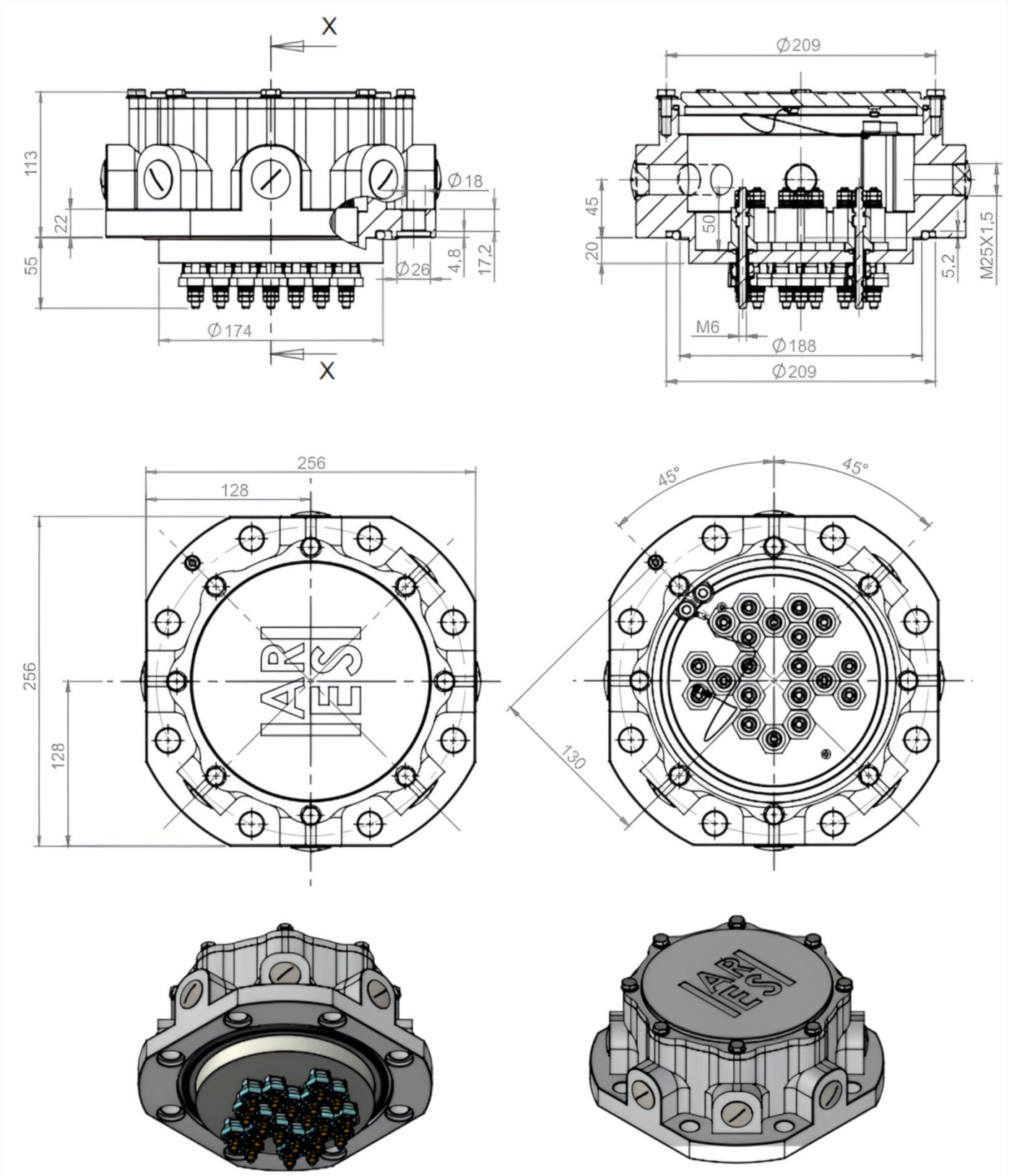




Pos	Description	Material	Qty.
1.0	Terminal box	Aluminium	1
1.1	Mounting flange		
1.2	O-ring Ø126,4x6,99	NBR	1
1.3	Cable Entry	1"/PG29/Ø40	
1.4	Earth Screws	A2-70	2
2.0	Terminal box cover	Aluminium	1
2.1	Cover O-ring	NBR	1
2.2	Cover Screws	A2-70	4
2.3	Cover holding string	Nylon	1
3.0	Terminals	Nylon + Glass fibre %30	12
4.0	M16-Hex nut	A2-70	4
4.1	M16 - Washer	A2-70	4
4.2	M16x25 DIN938	Ss304	4
4.3	Flange (not supplied)	S235JR	1

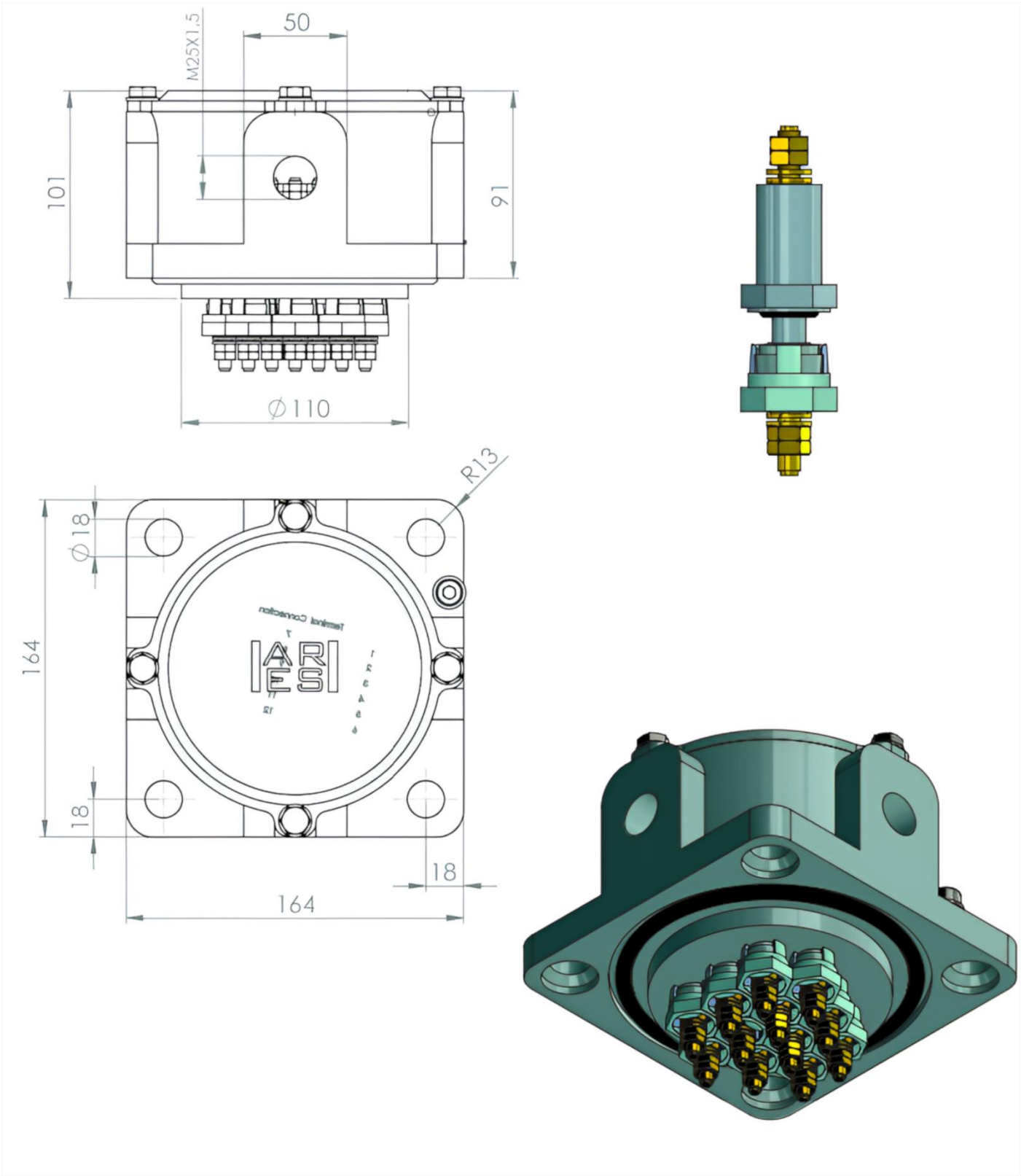
CAJA TERMINAL (CON 20 HASTA 36 TERMINALES) /

TERMINAL BOX (20 TERMINALS UP TO 36 TERMINALES)



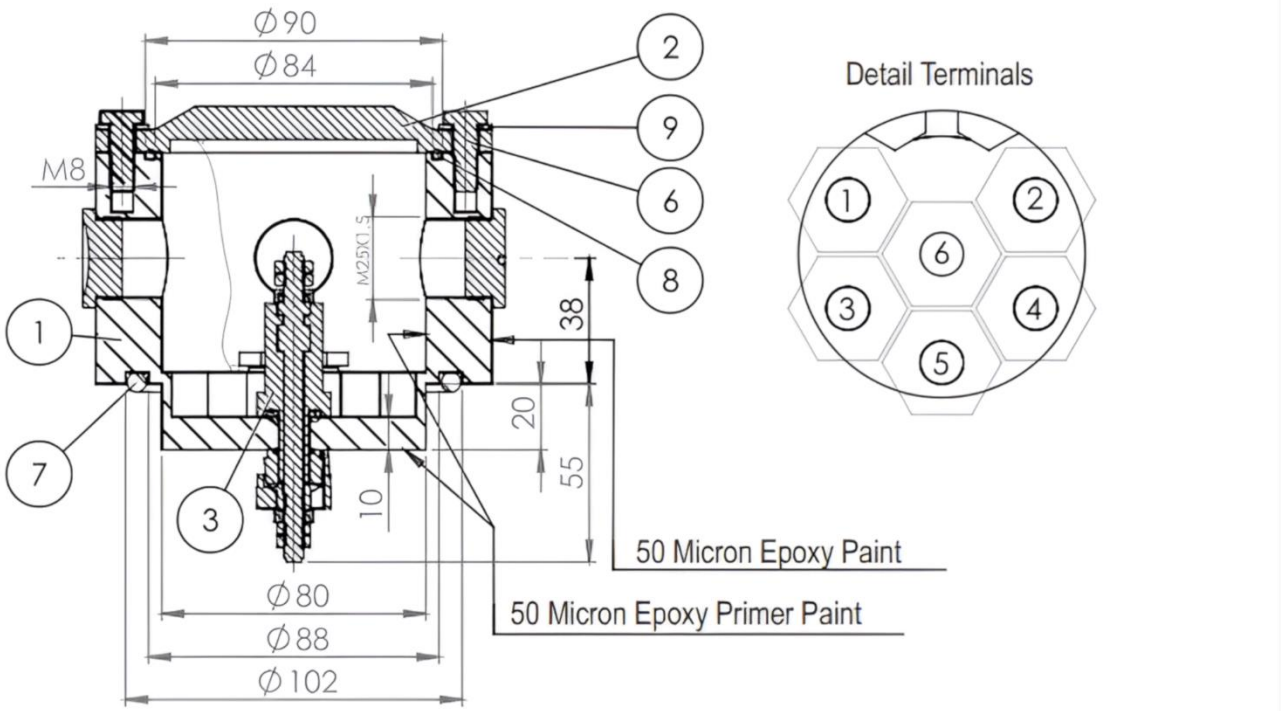
CAJA TERMINAL CON 6 HASTA 12 CONECTORES PARA UNA CONEXIÓN CT /

TERMINAL BOX WITH 6 TO 12 CONNECTORS FOR CT CONNECTION



CAJA TERMINAL S (CON 2 TERMINALES HASTA 6 TERMINALES) /

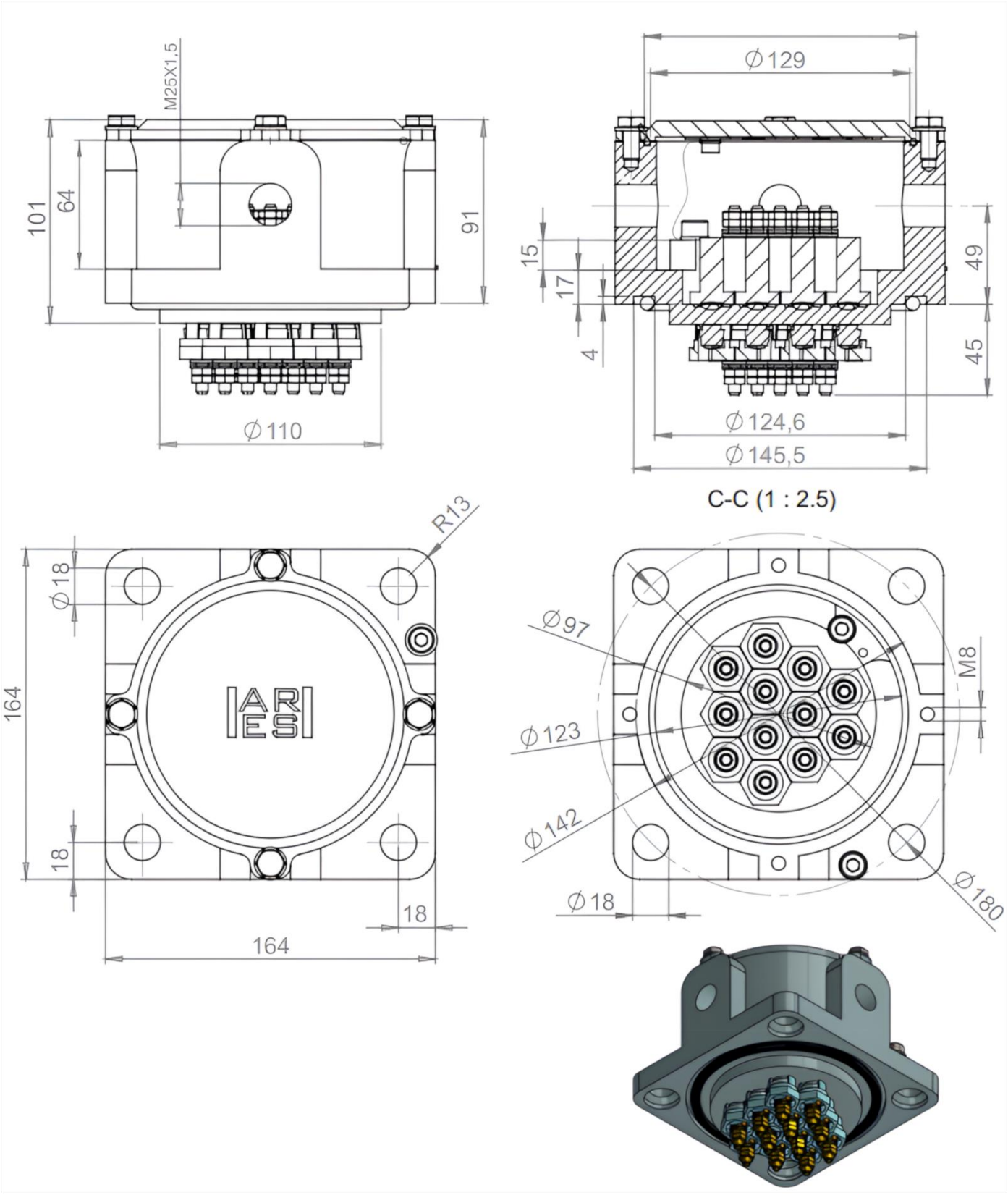
TERMINAL BOX S (2 TERMINALS UP TO 6 TERMINALS)



NO	DESCRIPTION	MATERIAL	QTY
1	Terminal Box	Aluminium	1
2	Terminal Box Cover	Aluminium	1
3	Terminals	PA6,6+Glass Fibre %30+Brass M6 Stem	6
4	Plug M25x1,5	PA6,6	2
5	Plug M25x1,5 With O-ring	Nickel Plated Brass	2
6	Cover Screws	A2-70	7
7	Ø 88x5,80 O-ring	NBR	1
8	Ø 84x3,20 O-ring	NBR	1
9	M8 Washer	A2-70	4

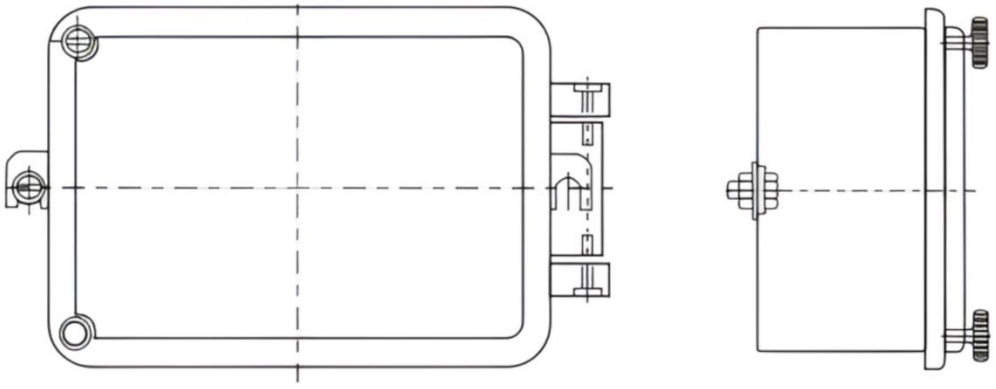
CAJA TERMINAL (6 TERMINALES HASTA 12 TERMINALES) /

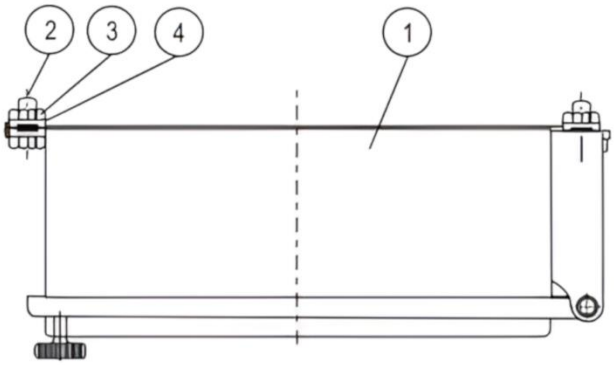
TERMINAL BOX (6 TERMINALS UP TO 12 TERMINALS)

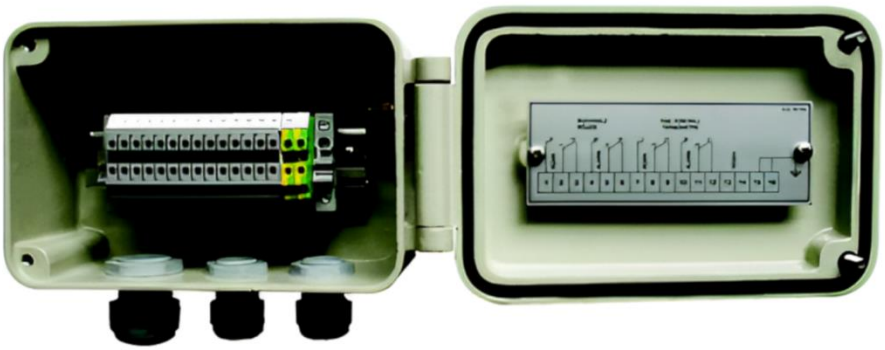


CAJA TERMINAL DE ALUMINIO /

ALUMINIUM TERMINAL BOX





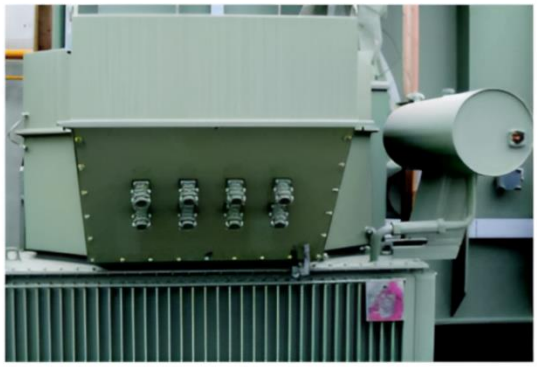


No.	Qty	Description	Remarks
1	1	Terminal Box	Aluminium casted
2	2	Bolt	M10x30
3	2	Nut	M10
4	2	Spring Washer	Ø 10.2

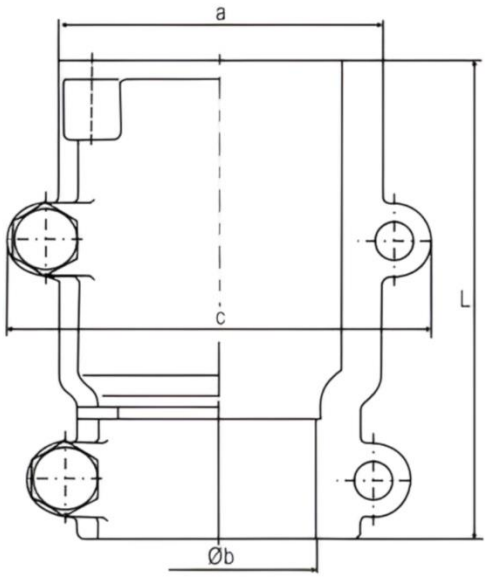
PASACABLES DE ALUMINIO PARA CAJA DE CABLES /

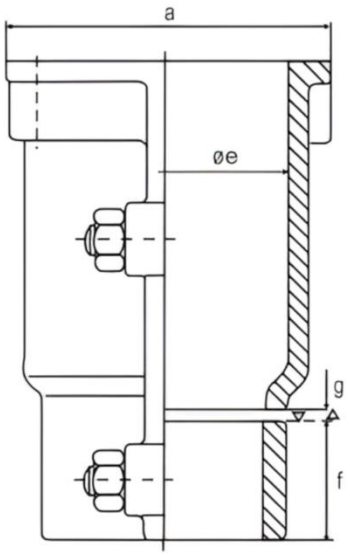
ALUMINIUM CABLE GLAND FOR CABLE BOX

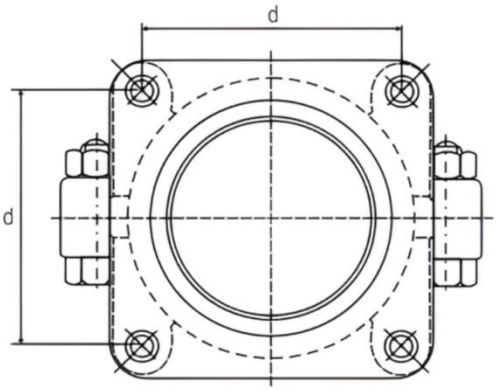
Aluminium injected body (not casted), A2-70 DIN 934 hexagonal nuts and DIN933 bolts 70µ RAL 7033 painted NBR gasket



Types	L	a	Øb	c	d	Øe	g	f
KB 32	75	52	32	65	40	35	2	17
KB 52	120	80	52	102	54	50	3	30
KB 85	200	125	85	150	100	105	5	50

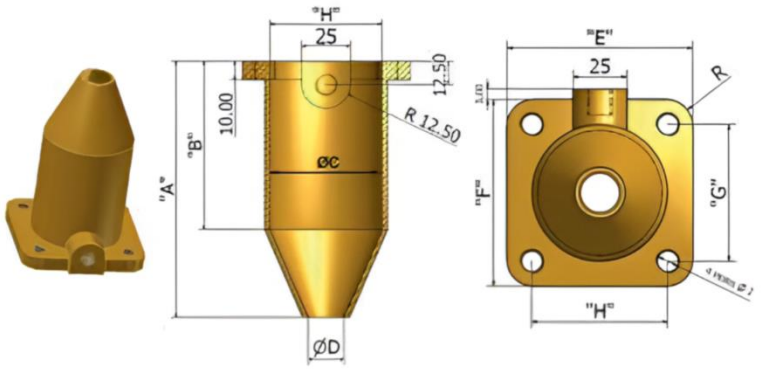




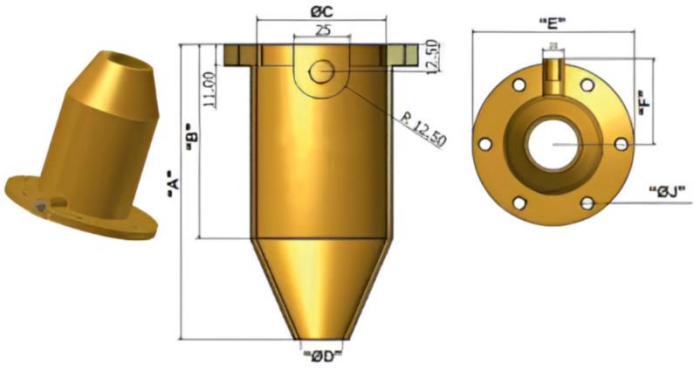


PASACABLES DE LATÓN PARA BARRIDO /

BRASS WIPING GLAND



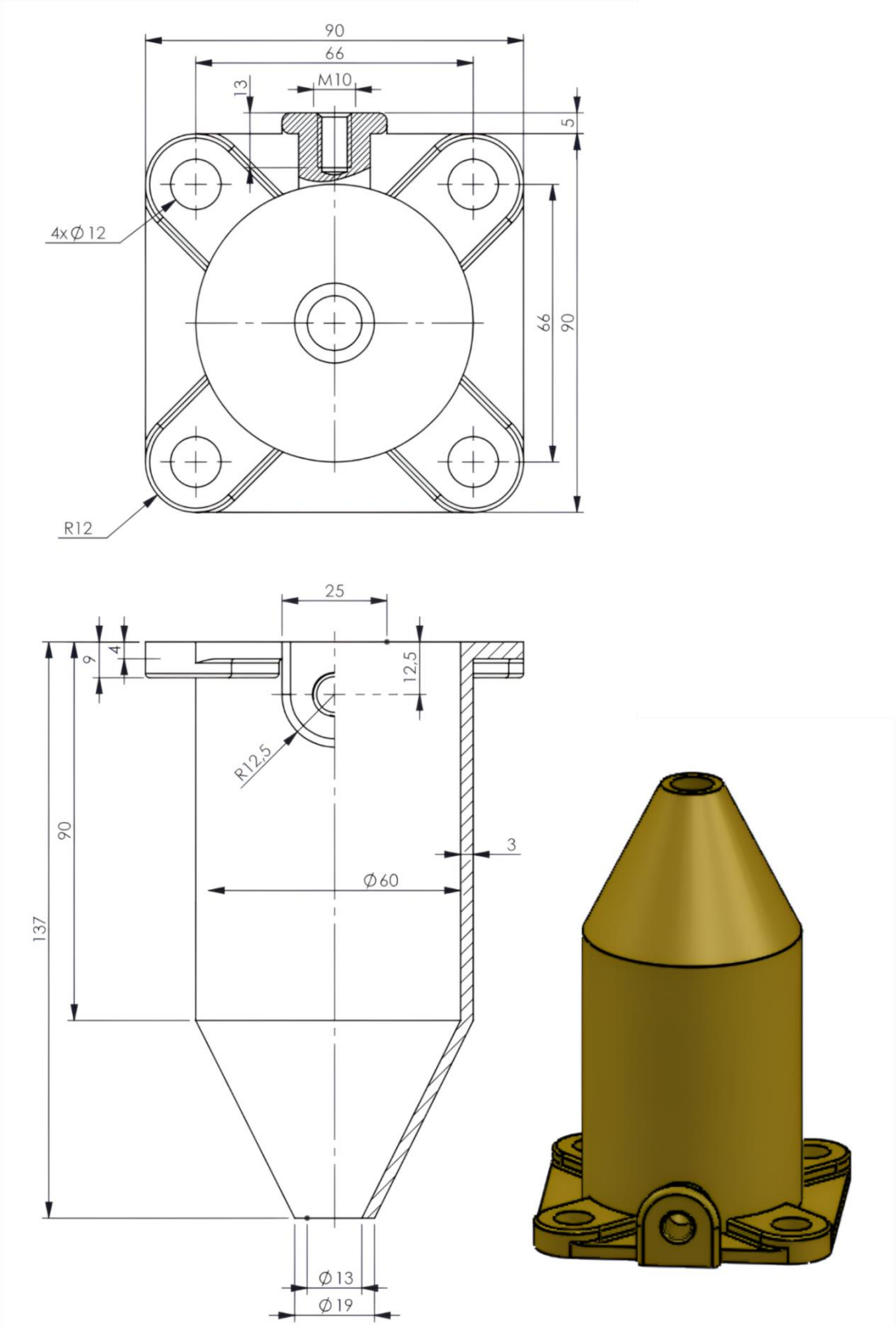
Type	Cable Ø	Dimensions									
		A	B	ØC	ØD	E	F	G	H	Ø1	R
X	12~51	137	90	60	19	90	90	66	66	12	12
Y	25~78	155	95	108	32	114	123	95	86	14	14



Type	Cable Ø	Dimensions						
		A	B	ØC	ØD	E	F	ØJ
Z	25~94	195	140	108	32	190	100	14

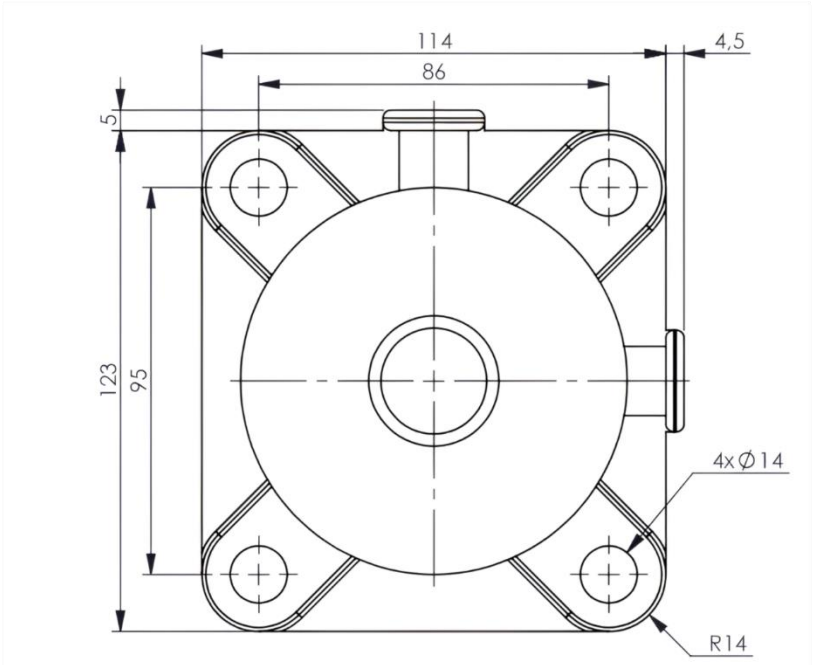
PASACABLES X /

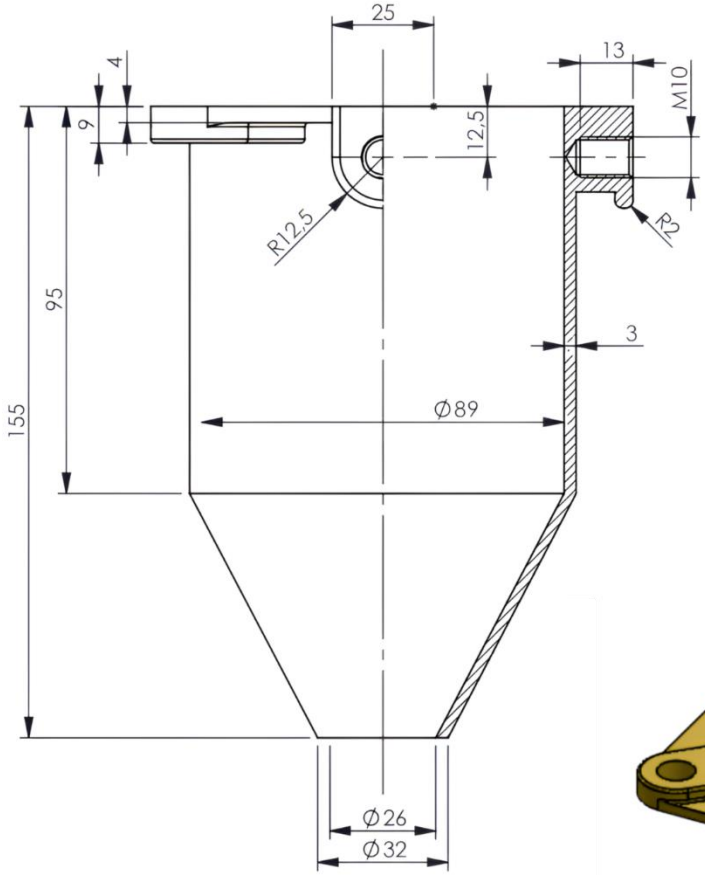
X GLAND

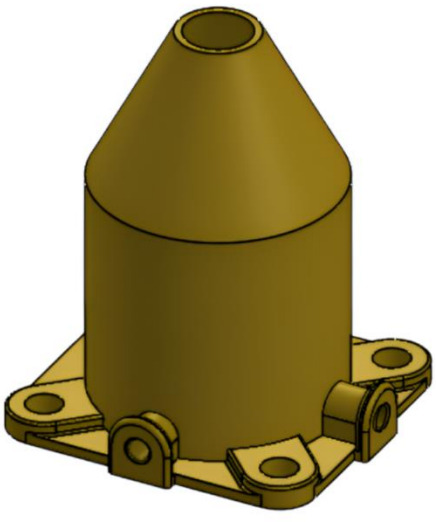


PASACABLES Y /

Y GLAND



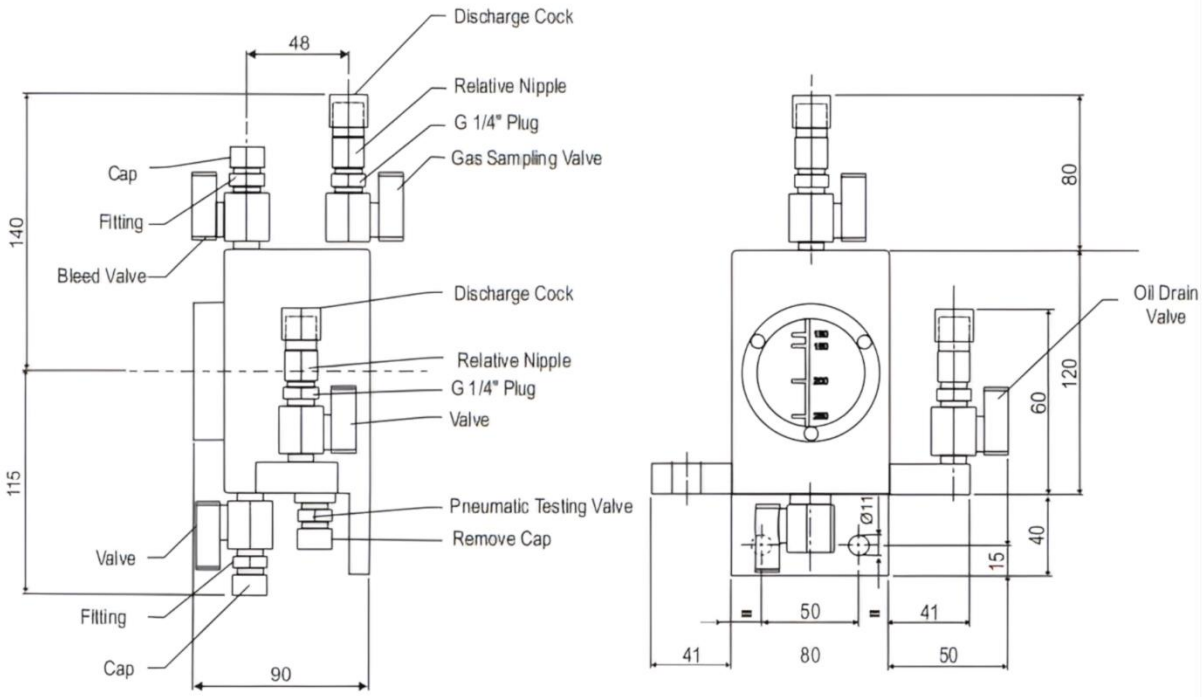


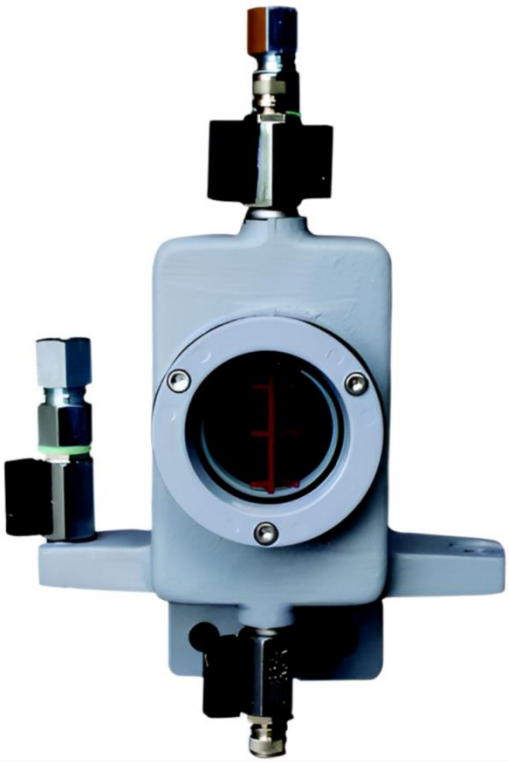


DISPOSITIVO DE MUESTREO DE GAS PARA UN RELÉ BUCHHOLZ /

GAS SAMPLING DEVICE FOR BUCHHOLZ RELAY

Aluminium alloy casting body with tempered glass inspection window

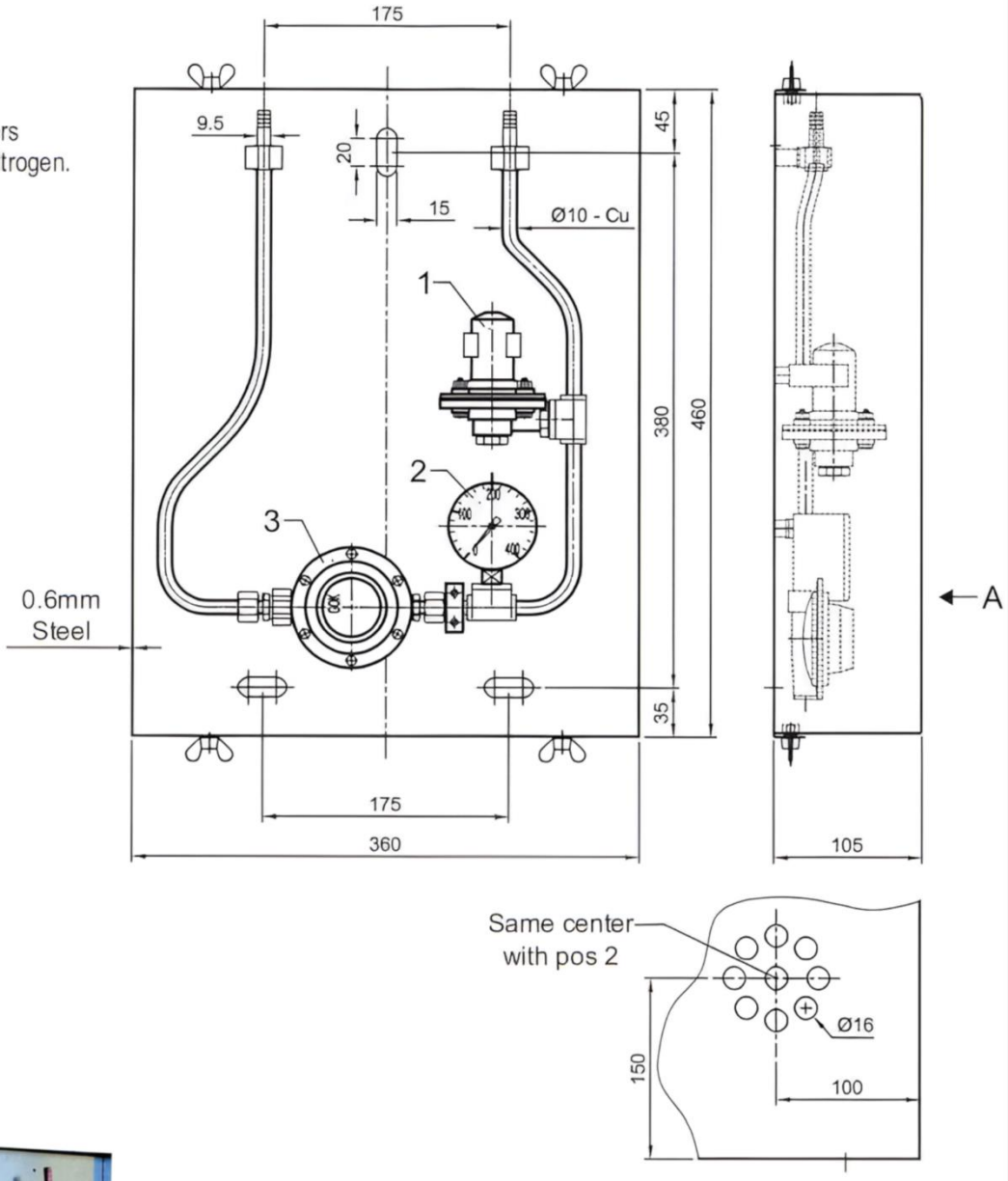


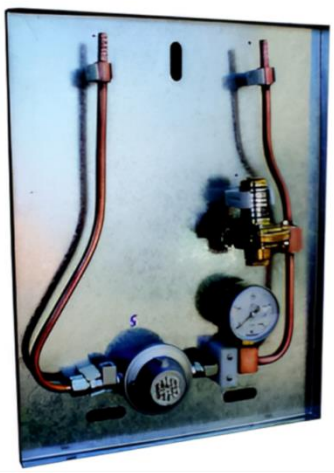


REGULADOR DE PRESIÓN DE NITRÓGENO /

NITROGEN PRESSURE REGULATOR

Air pressure Regulator for transportation of transformers without oil with Dry-Air or Nitrogen.





Pos 1 = Safety Valve 0.35 bar
5 N m^3/h

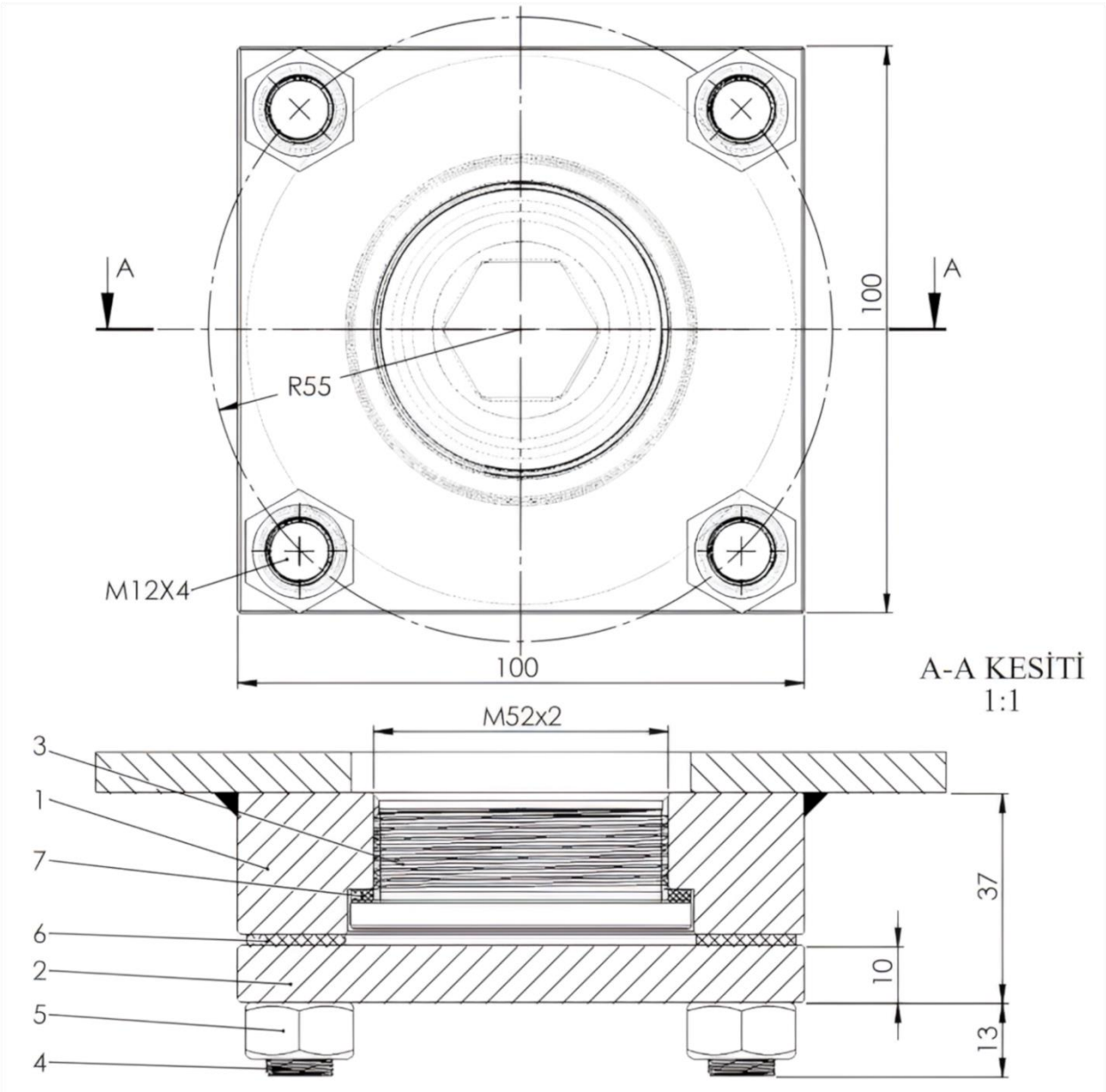
Pos 2 = Manometer
0 - 400 bar

Pos 3 = Pressure Regulator
PN/6 20L/h

Unit Weight: 4.90kg

DRENADOR DE ACEITE DIN 42548 /

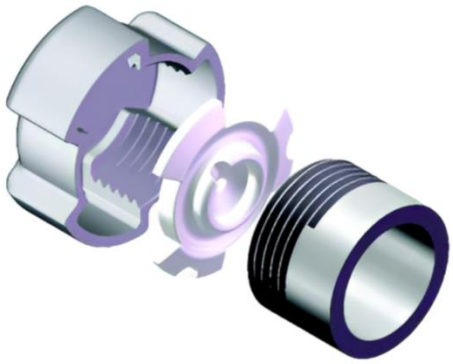
OIL DRAIN DIN 42548

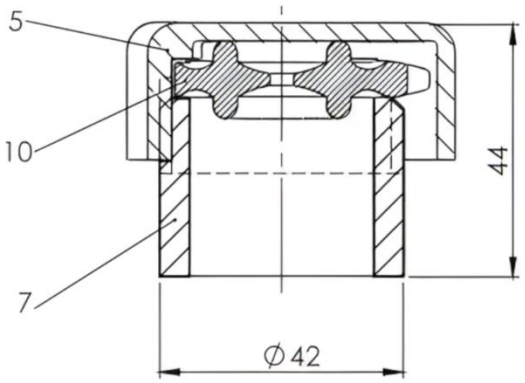


Num./ No.	Adet/ Q'ty	Tanımlama/Description	Açıklama/Explanation
1	1	Flanş/Upper Flange	St 37-2
2	1	Alt Flanş/Blind Flange	St 37-2 Galv. Zn
3	1	Kör Tapa/Blind Plug	11SMnPb30 Galv. Zn
4	4	Saplama/Stud	St37-2 Galv. Zn
5	4	Somun/Nut	Galv. Zn
6	1	Conta/Gasket	Asbestos free
7	1	Conta/Gasket	PA6 / 60x52x2

TAPA DE LLENADO DE ACEITE, FORMA E, DIN 42553 /

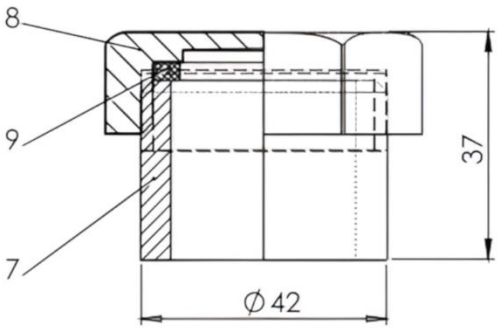
OIL FILLLING PLUG FORM E DIN 42553

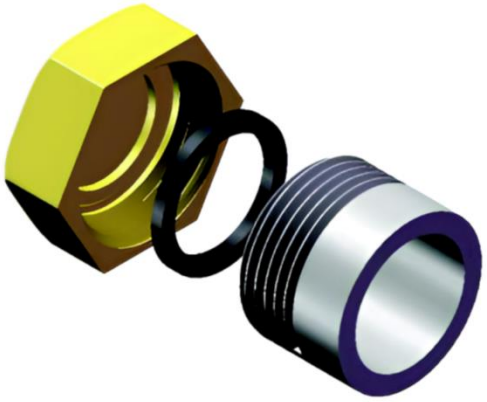




Item Nr.	Part Name	Part Number	Metarial
5	Cap	5 DIN 42 553	GD ZnA14
7	Socket	7 DIN 42 553	St 35
10	Labyrinth-disk	10 DIN 42 553	PA 6

FILLING NOZZLE DIN 42553 FORM D



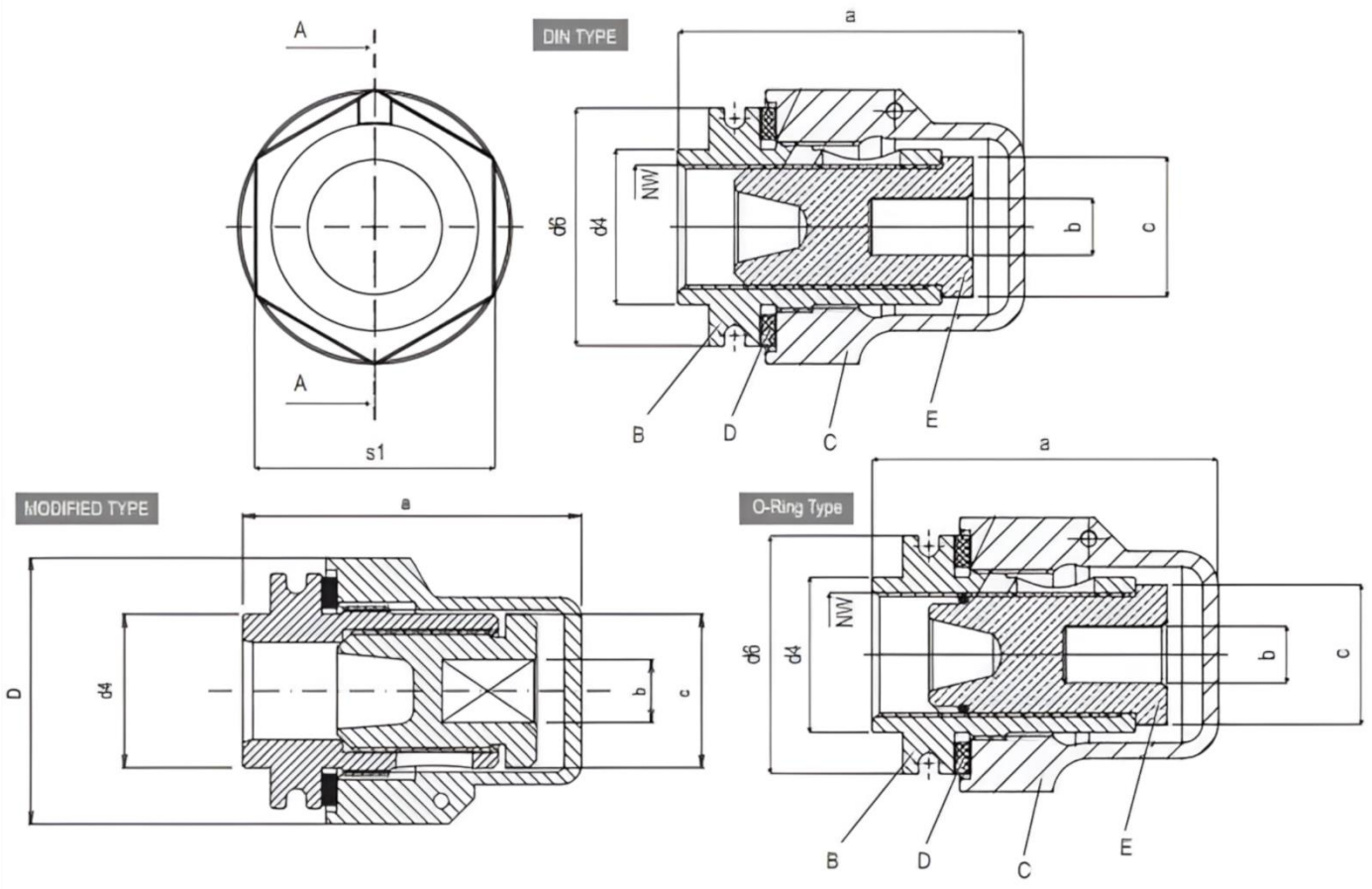


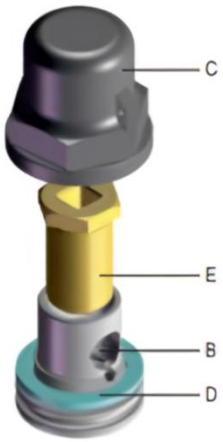
Item Nr.	Part Name	Part Number	Metarial
7	Socket	7 DIN 42 553	St 35
8	Cap	8 DIN 42 553	GD ZnA14 Galvzn.
9	Gasket	15 DIN2691	Asbestos free

DISPOSITIVO DE DRENAJE DE ACEITE DIN 42551 A /

OIL DRAINING DEVICE DIN 42551 A

The oil draining device is to be welded in the transformer case. The device is to be used together with the connection pipe F DIN 42551 for draining the transformer case for regeneration purpose of the oil. The oil drain device remains tight even if the oil temperature rises to 100° C (Temparature Resistance: up to 100° C)



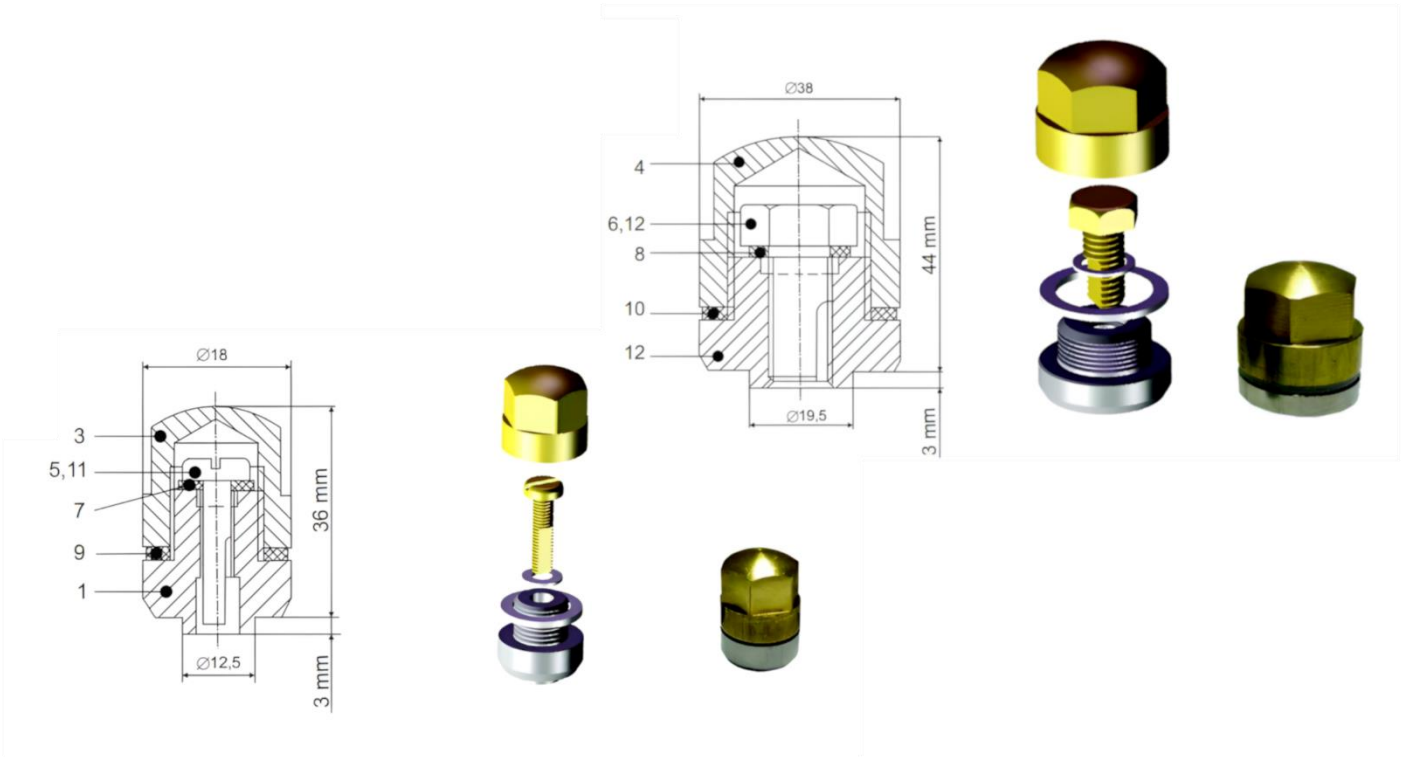


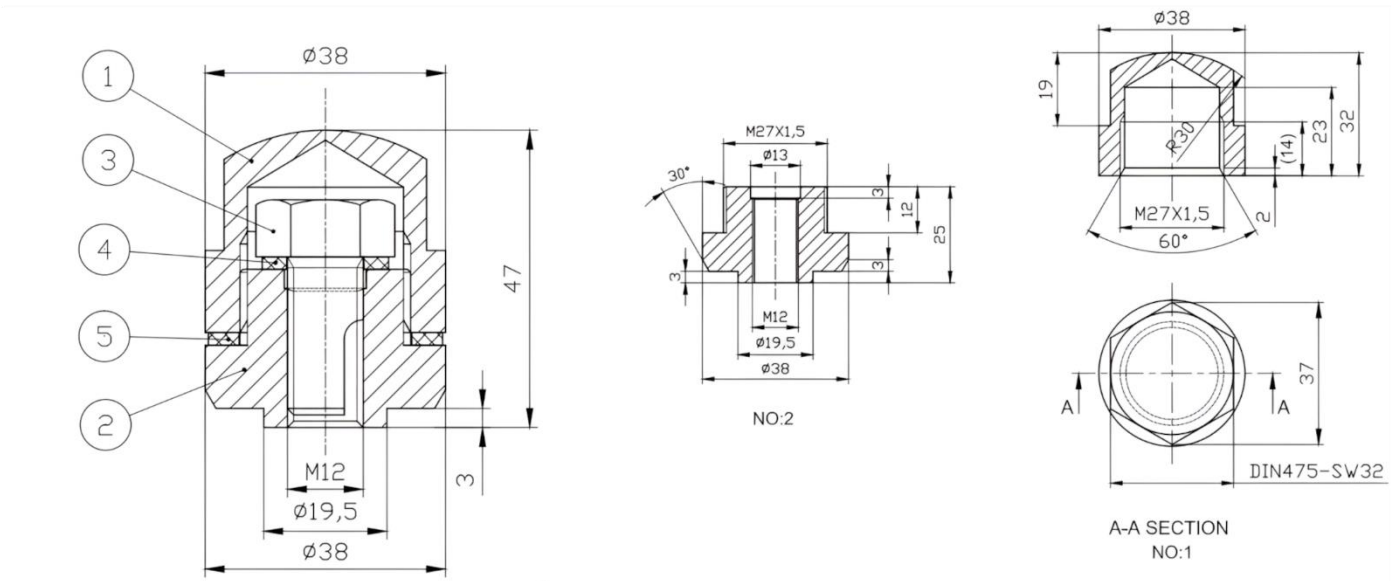
NW	a	d4	b	c	s1 / d6	Weight
NW22	67	30	11	SW27	SW46	0.56 kg.
NW31	93	40	17	SW36	SW65	1.29 kg.
NW40	112	52	17	SW46	SW80	2,25 kg.

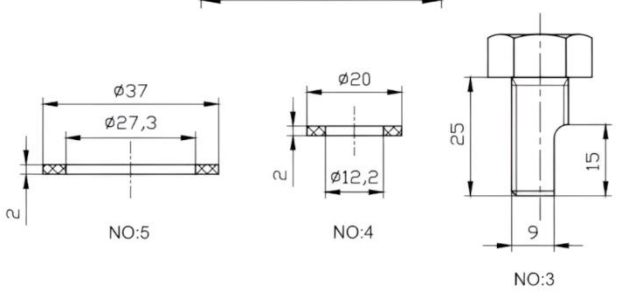
Qty	Code	Designation	Material
1	B	Drain Socket	S235JR
1	C	Stop Plug	Gg20
1	D	Gasket	Klingerid
1	E	Inner Bolt	Ms 58

TORNILLO DE DRENAJE DE ACEITE DIN 42558 A 12 /

OIL DRAIN PLUG DIN 42558 A 12



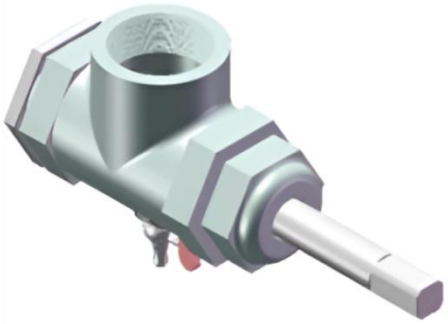




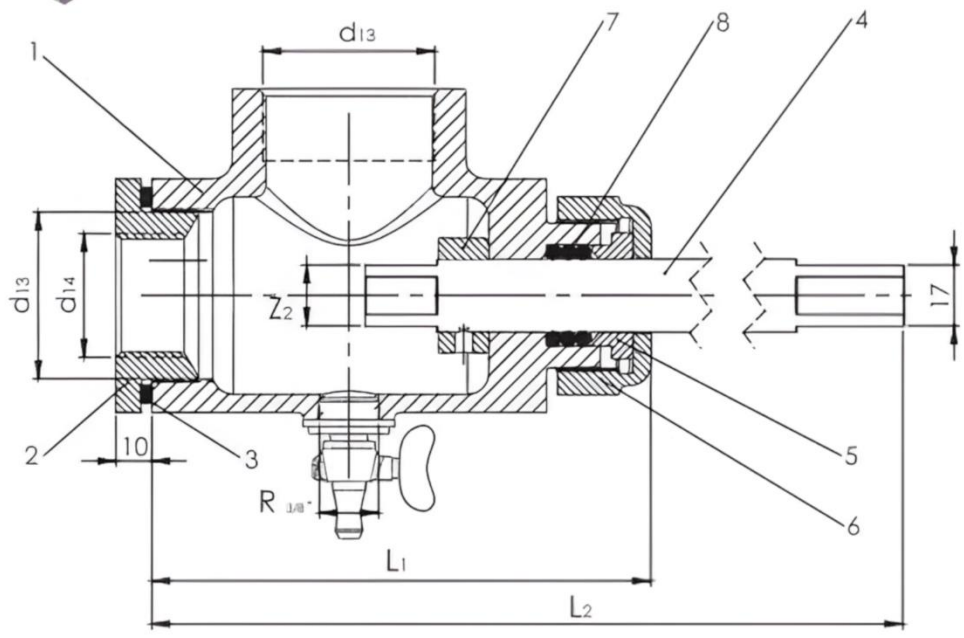
5	FLAT GASKET 37X27,3X2	02.01.37X27,3X2.PA	A12.S5-01		PA 6,6	1
4	FLAT GASKET 20X12,2X2	02.01.20X12X2.PA	A12.S4-01		PA 6,6	1
3	T BOLT M12X25	02.03.M12X25.04	A12.S3-01		A2-70	1
2	ADAPTER	02.36.NW12.04	A12.S2-01		SS303	1
1	CAP	02.36.NW12.02	A12.S1-01		SS304	1
SIRA NO *ITEM NO*	PARÇA ADI *DESCRIPTION*	KOD NO *CODE NO*	RESİM NO *DRAWING NO*	AĞIRLIK *WEIGHT*	MALZEME *MATERIAL*	ADET *QTY*

CONEXIÓN DE TUBERÍAS DIN 42551 F /

CONNECTION PIPE DIN 42551 F



Connection pipe is a tool to connect the oil drain valves A DIN 42551 to an extern oil-system. Connection pipe is manufactured in two sizes and can be reduced of nominal width NW 31 to NW 22 or NW 40 to NW 31

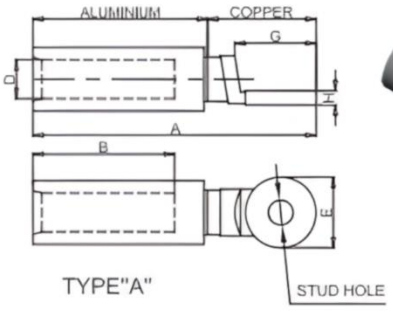


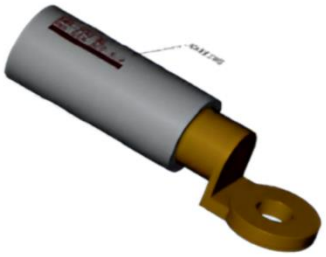
Connection Pipe	NW	d13	d14	Z2	L1	L2	Weight kg.
F22/31 DIN 42 551	22	M 48x1,5	M 33x1,5	11	145	260	2,6
F31/40 DIN 42 551	31	M 60x2	M 48x1,5	17	180	270	2,6
F31 DIN 42 551	31	M 48x1,5	———	17	148	260	2,4
F40 DIN 42 551	40	M 60x2	———	17	180	295	5,2

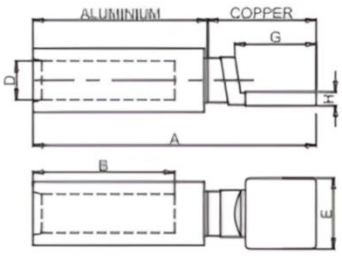
Part Nr.	Qty	Connection Pipe	F 22/31 DIN 42 551	F 31/40 DIN 42 551	F 31 DIN 42 551	F 40 DIN 42 551	Material
1	1	Housing	G65 DIN 42 551	G80 DIN 42 551	G65 DIN 42 551	G80 DIN 42 551	GG18
2	1	Reduction	H 22/31 DIN 42 551	H31/40 DIN 42 551	———	———	St 34
3	1	Gasket	D31 DIN 42 551	D40 DIN 42 551	———	———	
4	1	Spindle	K1 DIN 42 551	K2 DIN 42 551	K3 DIN 42 551	K3 DIN 42 551	St 34
5	1	Packing Box	L DIN 42 551				St 34
6	1	Srew Cap	N DIN 42 551 GG20				GG20
7	1	Stop Ring	B20 DIN 705 St34				St 34
8	1	Packing	4x4x320 Free of asbestos				

TERMINALES BIMETÁLICOS /

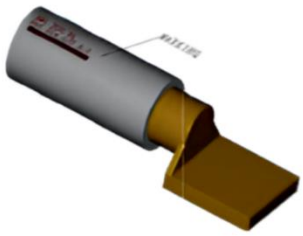
BI-METALIC LUGS







TYPE"B"



NOTES:

1. DIMENSIONS ARE IN MM
2. Technical Data;
   Conductive Material
   Aluminium Sleeve 99.6% pure
   Tensile Strength 110Mpa
   Ductile Rating 28%
   Final Metal State Fully Annealed inc.joint
   Joining Method Friction Welding (IEC std)

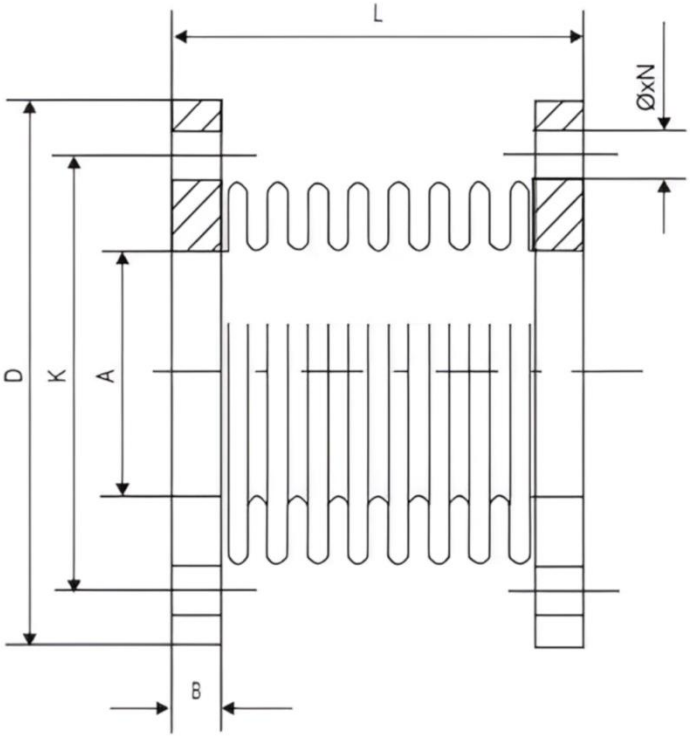
Electrical Properties

Resistivity 2.6 micro-ohm cm(max):aluminium
1.1738 micro-ohm cm:copper
Conductivity 61.8% IACS(min):aluminium
99.7% IACS: copper
Operating Temperature
-40°C to 100°C

CATLOGUE NO	NOMINAL CONDUCTOR	STUD SIZE	STUD HOLE	TYPES	DIMENSIONS (MM) A	B	D	E	G	H	NO. OF CRIMPS
BML16-8	16	8	8.5		75	32	5.5	20	24	4.5	1
BML16-10	16	10	10.5		75	32	5.5	20	24	4.5	1
BML25-10	25	10	10.5		75	32	7.5	20	24	4.5	1
BML25-12	25	12	12.5		75	32	7.5	20	24	4.5	1
BML35-10	35	10	10.5		75	32	8.5	20	24	4.5	1
BML35-12	35	12	12.5		75	32	8.5	20	24	4.5	1
BML50-10	50	10	10.5		75	32	9.5	24	26	4.5	1
BML50-12	50	12	12.5		75	32	9.5	24	26	4.5	1
BML70-10	70	10	10.5		75	32	11.5	24	26	4.5	1
BML70-12	70	12	12.5		75	32	11.5	24	26	4.5	1
BML95-10	95	10	10.5	"A"	115	60	13.5	24	26	6	2
BML95-12	95	12	12.5		115	60	.13.5	24	26	6	2
BML120-10	120	10	10.5		115	60	15.5	30	33	6	2
BML120-12	120	12	12.5		115	60	15.5	30	33	6	2
BML150-10	150	10	10.5		120	60	16.5	30	33	7	2
BML150-12	150	12	12.5		120	60	16.5	30	33	7	2
BML185-10	185	10	10.5		120	60	18.5	35	38	7	2
BML185-12	185	12	12.5		120	60	18.5	35	38	7	2
BML240-10	240	10	10.5		135	60	22	35	38	7	2
BML240-12	240	12	12.5		135	60	22	35	38	7	2
BML300-10	300	10	10.5		135	60	23.5	36	38	7	2
BML300-12	300	12	12.5		135	60	23.5	36	38	7	2
BML300BL	300				135	60	23.5	36	38	7	2
BML400BL	400			"B"	160	70	26.5	50	52	10	2
BML500BL	500				160	70	30	50	58	10.5	2

JUNTAS DE FUELLE DE EXPANSIÓN METÁLICA /

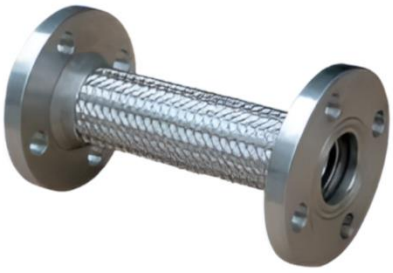
METAL EXPANSION BELLOW JOINTS



Stainless Steel AISI 304 Bellow
ST 32 Carbon Steel Flanges
Pn16 DN 25 - DN 150
Welding ends Floating Flanges
-196°C + 600°C

With O-ring Groove or Flat Flange

DN A	B	D	K	L	N	Ø	Ağırlık Kg/Unit
25	16	115	85	120	4	14	2,4
50	18	165	125	120	4	14	6,1
65	18	185	145	120	4	18	6,9
80	20	200	160	120	8	18	7,7
100	20	220	180	120	8	18	8,3
125	20	250	210	120	8	18	11,2
150	22	285	240	130	8	22	13,6

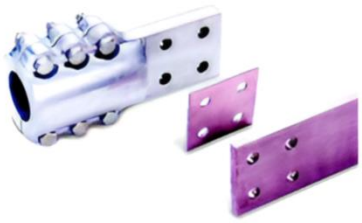


Stainless Braided

Square Flange

COMPONENTES BIMETÁLICOS DE ACOPLAMIENTO /

BIMETAL CUPAL COMPONENTS



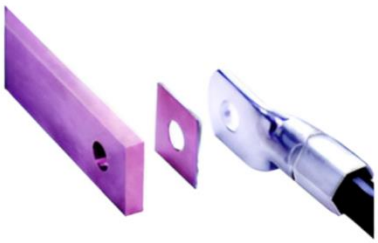
What is Cupal?
Cupal consists of copper sheet metal cladded on pure Aluminium (base metal), both metals being diffused together to form an inseparable whole by roll bonding process.

Why Cupal?
It is known that when the Aluminium Terminals are directly connected to Copper Terminals to carry current at a high voltage, a bimetallic galvanic corrosion occurs, resulting in a high resistance at the joint. The heated joints are oxidized and loses contact resulting in sparks, voltage dropout power losses and failure, damage to machinery.

When Cupal bimetal is placed between Aluminium Terminal and Copper Terminal at the joint (with Copper facing and Aluminium facing), bimetallic galvanic corrosion is averted due to absence of air in CUPAL bimetal. CUPAL is thus used at dissimilar metals joints of Aluminium and Copper to make similar metal's contact.

CUPAL has been successfully evaluated and used by many of the world's leading electrical equipment manufacturers.

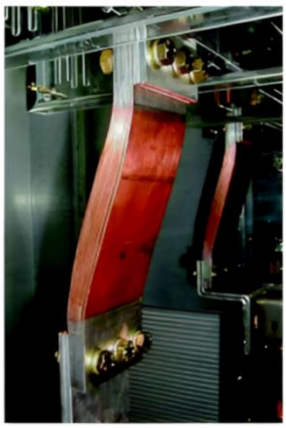
Applications:
- Substation accessories like Bimetalic clamp and connectors
- Flexible connectors
- Cable clamp and cable end connectors
- Distribution and panel boards
- Isolators and switchgears
- Circuit Breakers



Specifications	Aluminium	Copper
Purity	99.50%	99.90%
Standard Composition By Volume	80%	20%
Standard Composition By Weight	55%	45%
Density at 200C	3,95 gms/cm^3	
Max electrical resistivity at 20°C	2,6 µO/cm	
Min electrical conductivity at 20°C	65% IACS	

CONECTORES FLEXIBLES /

FLEXIBLE CONNECTORS

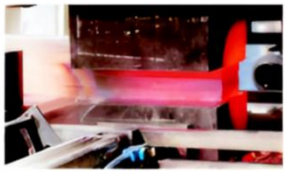


Range of application:
Press Welding provides the best mechanical & electrical properties at high temperatures. Moreover, the laminated flexibles take less cross section area than braided flexible. These are available in all sizes covering the desired cross section area. Slotted holes can be provided up on request. Our laminated flexible connectors are necessary everywhere where it is impossible to use solid bus bars to transfer the current.

Main applications are:
·Expansion-equilibration in bus bar-systems
·Expansion-equilibration to connect transformers and generators
·Vibration-equilibration
·Moveable current-transfer in machines and devices
·Switching elements in switches

Description:
Laminated flexible connectors are made out of copper in case of copper alternatively in tinned configuration. The foil-cutoffs will be stacked and after this united at the contact-areas by using a tuned process for the later application. For this we use foils from 0,05 up to 1 mm thickness. The width and thickness of the connector is chosen by the customers.

Please contact with us for detailed information. We also develop special-designs for your individual applications.



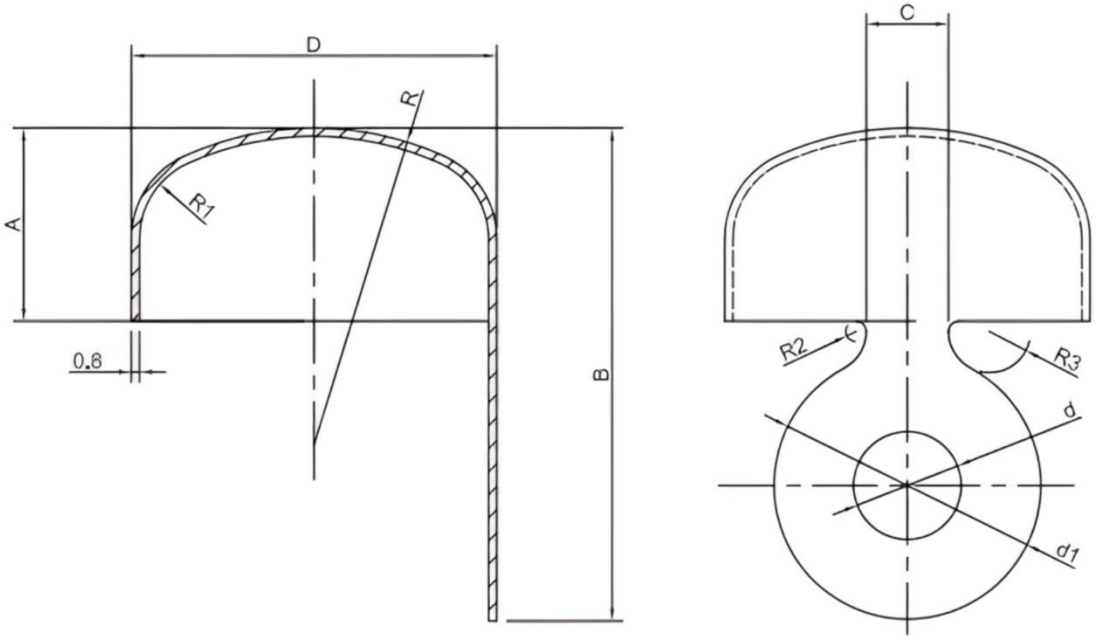
Procedure:
We use to produce laminated flexible copper connectors with Press welding

Materials:
In order to optimize the max. load and conductance of our connectors we use exclusively pure and extreme transmittable materials as foils and sheet metal covers.
For copper-connectors Cu-ETP (previously E-Cu) and Cu-HCP (previously SE-Cu) according DIN EN 13599

Form:
For different applications we offer a wide range of standard shapes and also special designs :
S, U and V Form

TAPA DE PROTECCIÓN /

SHIELDING CAP



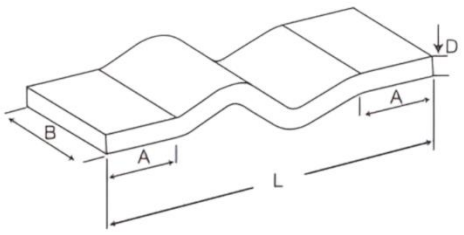
Material : Zinc Plated Steel / SS304

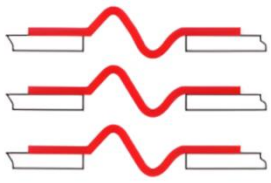
STANDARD DIMENSIONS												
Part Number	Size	Material	D	A	d1	B	C	R	R1	R2	R3	D
MEV0066-01	M10	ST-37 A3K	34	18	26	48	30	30	8	2	2	34
-02	M12	ST-37 A3K	34	18	26	48	30	30	8	2	2	34
-03	M16	ST-37 A3K	34	18	28	48	30	30	8	2	2	34
-04	M20	ST-37 A3K	58	27	50	83	60	60	10	2	8	58
-05	M24	ST-37 A3K	58	27	50	83	60	60	12	2	8	58
-11	M8 / M10	ST-37 CR-Plated	30	15	22	40	6	30	3	1	4	30

CONECTORES FLEXIBLES /

FLEXIBLE CONNECTORS

S FORM - Copper flexible, laminated, preswelded, undrilled

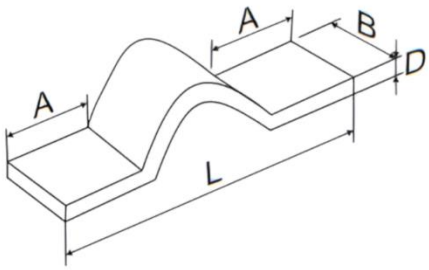


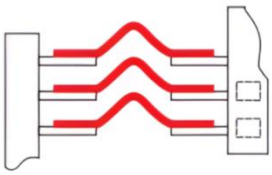


Expansion connectors inside of bus bar - systems S form

Part Name	B Width	D Thickness	A Terminal		Dilatation		Nominal Current 35C/65C	Cross Section mm²
			Lenght	L Length	Lenght	Form		
ARCU 38/5/60/220/S	38	5	60	220	+/- 25	S	490A	240
ARCU 48/5/60/220/S	48	5	60	220	+/- 25	S	590A	380
ARCU 38/10/60/250/S	38	10	60	250	+/- 25	S	720A	480
ARCU 48/10/60/250/S	48	10	60	250	+/- 25	S	860A	580
ARCU 58/10/80/310/S	58	10	80	310	+/- 25	S	990A	780
ARCU 78/10/80/310/S	78	10	80	310	+/- 25	S	1240A	980
ARCU 98/10/100/350/S	98	10	100	350	+/- 25	S	1490A	1180
ARCU 118/10/100/350/S	118	10	100	350	+/- 25	S	1710A	1200

V FORM - Copper flexible, laminated, preswelded, undrilled





Connections between switchgears, transformers or generators and prefabricated power networks V form

Part Name	B Width	D Thickness	A Terminal		Dilatation		Nominal Current 35C/65C	Cross Section mm²
			Lenght	L Length	Lenght	Form		
ARCU 38/5/50/180/V	38	5	50	180	+/- 20	V	490A	190
ARCU 38/5/50/220/V	38	5	50	220	+/- 20	V	490A	190
ARCU 38/5/80/280/V	38	5	80	280	+/- 20	V	490A	190
ARCU 38/10/50/180/V	38	10	50	180	+/- 20	V	720A	380
ARCU 38/10/50/220/V	38	10	50	220	+/- 20	V	720A	380
ARCU 38/10/80/280/V	38	10	80	280	+/- 20	V	720A	380
ARCU 48/5/50/220/V	48	5	50	220	+/- 20	V	590A	240
ARCU 48/10/80/280/V	48	10	80	280	+/- 20	V	860A	480
ARCU 58/10/70/240/V	58	10	70	240	+/- 20	V	990A	580
ARCU 58/10/80/280/V	58	10	80	280	+/- 20	V	990A	580
ARCU 78/10/90/280/V	78	10	90	280	+/- 20	V	1240A	780
ARCU 78/10/100/320/V	78	10	100	320	+/- 20	V	1240A	780
ARCU 98/10/100/300/V	98	10	100	300	+/- 20	V	1490A	980
ARCU 98/10/100/320/V	98	10	100	320	+/- 20	V	1490A	980
ARCU 98/10/110/360/V	98	10	110	360	+/- 20	V	1490A	980
ARCU 98/15/110/360/V	98	15	110	360	+/- 20	V	2050A	1470
ARCU 118/20/130/400/V	118	10	130	400	+/- 20	V	1710A	1180

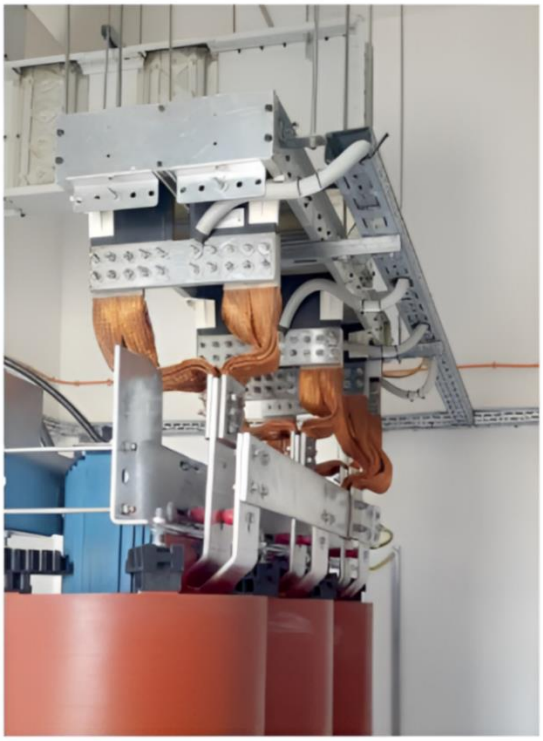
CINTAS FLEXIBLES DE PUESTA A TIERRA CON ÁREAS DE CONTACTO PRESIONADAS SIN SOLDADURA /

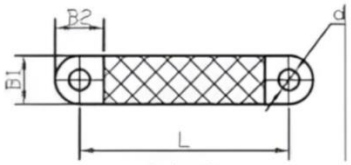
FLEXIBLE EARTHING TAPES WITH SOLDERLESS PRESSED CONTACT AREAS

Construction and application manufactured out of highly flexible braids with solderless pressed contact areas made out of seamless Cu-ETP-tubes. The crimping process is realized without using additives like tin or soldering and welding additives. We use exclusively materials of same analysis and same conductivity of 57 S (braids and tubes). Suitable as earthing tapes as well as components for current transfer. Everywhere applicable where components with high flexibility and an optimized contact resistance are needed.

Remark :
Manufacturing in large as well as small quantities in length acc. to your wishes. On request also with changed drilling deliverable. When placing an order please specify the wished changes.

Technical data :
Braidsmade out of annealed Cu-ETP wires surface uncoated or tinned.
wire-Ø 0,07 mm (10 mm2)
wire-Ø 0,16 mm (14 mm2)
wire-Ø 0,10 mm (16-70 mm2)
Contact areas :
Seamless copper tube made out of Cu-ETP material surface uncoated or tinned, ET10-100/T (tinned) ET10-100/U (uncoated)



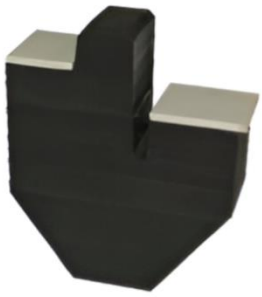


design A

Code	Cross-section mm²	L	B1xB2	d
ET10-100/T or U	10	100	15x15	6,5
ET10-150/T or U	10	150	15x15	6,5
ET10-200/T or U	10	200	15x15	6,5
ET10-250/T or U	10	250	15x15	6,5
ET10-300/T or U	10	300	15x15	6,5
ET14-100/T or U	14	100	20x20	9
ET14-150/T or U	14	150	20x20	9
ET14-200/T or U	14	200	20x20	9
ET14-250/T or U	14	250	20x20	9
ET14-300/T or U	14	300	20x20	9
ET16-100/T or U	16	100	20x20	9
ET16-150/T or U	16	150	20x20	9
ET16-200/T or U	16	200	20x20	9
ET16-250/T or U	16	250	20x20	9
ET16-300/T or U	16	300	20x20	9
ET25-100/T or U	25	100	25x25	9
ET25-150/T or U	25	150	25x25	9
ET25-200/T or U	25	200	25x25	9
ET25-250/T or U	25	250	25x25	9
ET25-300/T or U	25	300	25x25	9
ET35-100/T or U	35	100	30x30	9
ET35-150/T or U	35	150	30x30	9
ET35-200/T or U	35	200	30x30	9
ET35-250/T or U	35	250	30x30	9
ET35-300/T or U	35	300	30x30	9
ET50-100/T or U	50	100	30x30	9
ET50-150/T or U	50	150	30x30	9
ET50-200/T or U	50	200	30x30	9
ET50-250/T or U	50	250	30x30	9
ET50-300/T or U	50	300	30x30	9
ET70-100/T or U	70	100	40x40	11
ET70-150/T or U	70	150	40x40	11
ET70-200/T or U	70	200	40x40	11
ET70-250/T or U	70	250	40x40	11
ET70-300/T or U	70	300	40x40	11
ET95-100/T or U	95	100	30x30	12,5
ET95-150/T or U	95	150	30x30	12,5
ET95-200/T or U	95	200	30x30	12,5
ET95-250/T or U	95	250	30x30	12,5
ET95-300/T or U	95	300	30x30	12,5
ET185-100/T or U	185	100	30x30	12,5
ET185-150/T or U	185	150	30x30	12,5
ET185-200/T or U	185	200	30x30	12,5
ET185-250/T or U	185	250	30x30	12,5
ET185-300/T or U	185	300	30x30	12,5

SOPORTES DE BOBINA FABRICADOS EN POLIAMIDA FUNDIDA PA 6G /

COIL SUPPORTS FROM CAST POLYAMIDE PA 6G



For mechanical, electrical, physical and chemical endurance choose Cast polyamide.

A full range of Cast Polyamid Coil Support Blocks in various styles acording to customer request from Cast polyamide. Due to the wide number of patterns please let us have your requirements.

Tooling for special requirements is possible and PA 6G is cheaper instead of resin supports. Styles too numerous to mention so pleaseprovide us with your specific drawing.

Cast Polyamide PA 6G advantages:

- better mechanical stability
- lower water absorption
- better creep resistance
- better dimensional stability
- higher wear resistance

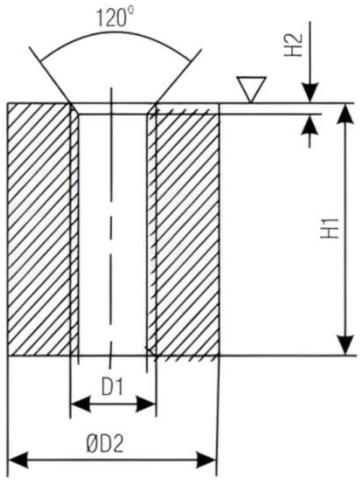
Properties	Value	
Density (g/cm3)	:1,13-1,15	DIN53479
Impact strenght J	:4-25	DIN53453
Hardness shore D	:D85-90	DIN53505
Tensile strenght (kg/cm3)	:600-980	
Dielectric strenght (kV/mm)	:30	DIN53455
Service temperature C	:+120/+160	DIN53481

Good damping properties
for the reduction of vibration and noise, PA 6G reduces vibration which is transferred from metallic parts. In the same way, PA 6 G allows reduction of the vibration affecting the machine frame. This way the life of transformers and their parts can be extended.

Good machining, dimensional stability, low residual stress
allow production of complex engineered components and application in transformer design areas. Machining can be performed with standard tools and conventional machines.

TETONES DE SOLDADURA PARA PUESTA A TIERRA /

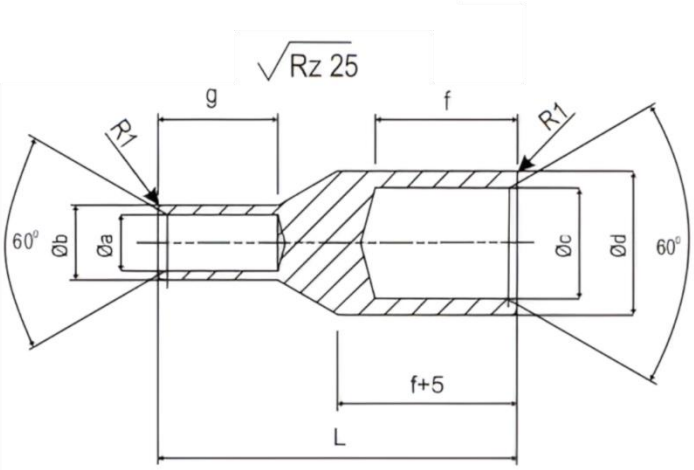
WELD BOSSSES FOR GROUNDING



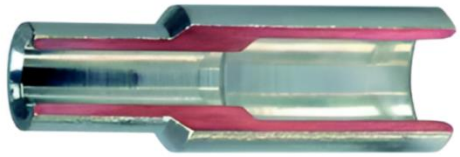
No	D1	ØD2	H1	H2	Weight (kg.)
31601	M4	10	15		0,006
31602	M6	10	20		0,012
31603	M8	16	20		0,031
31604	M10	20	15	0,5	0,026
31605	M12	30	25	1	0,120
31606	M12	25	25	2	0,120
31607	M12	20	20	2	0,035
31608	M8	16	20	2	0,029
31609	R1/2"	40	30	1	0,300
31610	R1"	45	50	-	0,220
31611	M16	40	30	1	0,300

CONECTORES REDUCTORES PARA CABLES DE COBRE MULTIFILARES /

REDUCING CONNECTORS FOR MULTI-WIRE COPPER CABLES



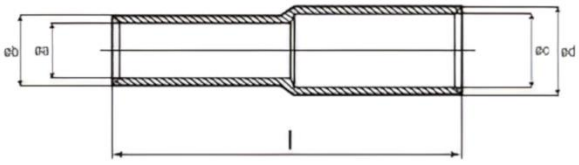
Material: copper, galvanically tinned.
withoutplating available



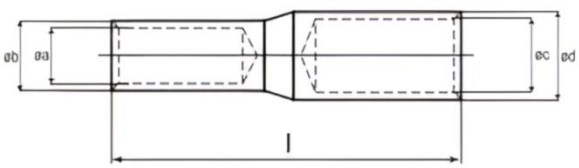
No	conductor diameter	braided section	braided diameter	ØA	ØB	ØC	ØD	F	G	L
A1	8	50	10	8,2	13,5	11,5	17,0	32	24	66
A2	10	70	12	10,2	15,5	13,5	19,0	32	32	74
A3	10	95	14	10,2	15,5	15,5	20,8	32	32	74
A4	12	120	16	12,2	17,5	17,0	23,2	40	32	82
A5	14	150	18	14,2	19,5	19,0	25,3	40	32	82
A6	16	185	20	16,2	21,5	21,5	28,5	40	32	82
A7	18	240	23	18,2	23,5	24,5	32,0	54	40	104
A8	20	300	26	20,2	25,5	27,5	38,0	65	40	115

Material: tin plated Cu-ETP DIN EN 13601

Design A



Design B

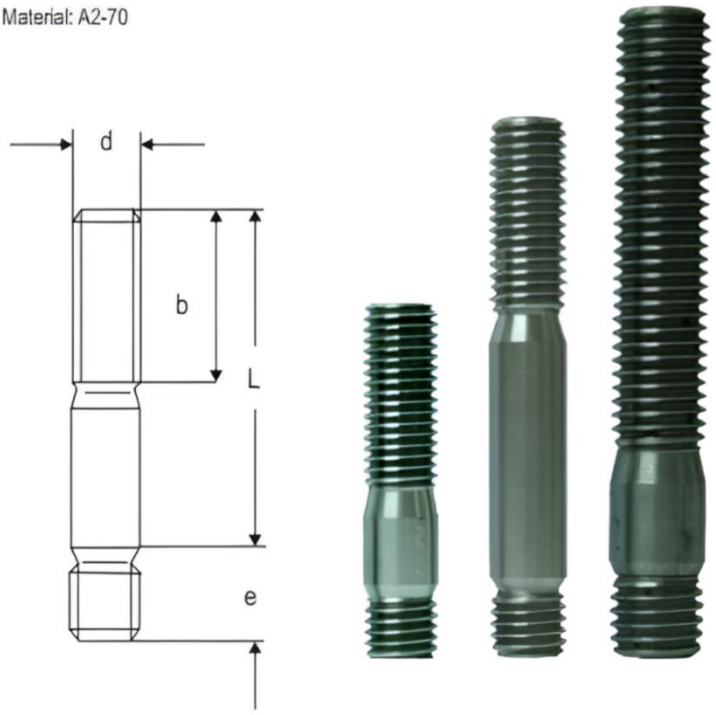


Any order dimensions are available according to individual arrangements

PERNOS DE CONEXIÓN DE ACERO INOXIDABLE (A2-70) DIN 938 /

STAINLESS STEEL CONNECTION STUDS (A2-70) DIN 938

Material: A2-70



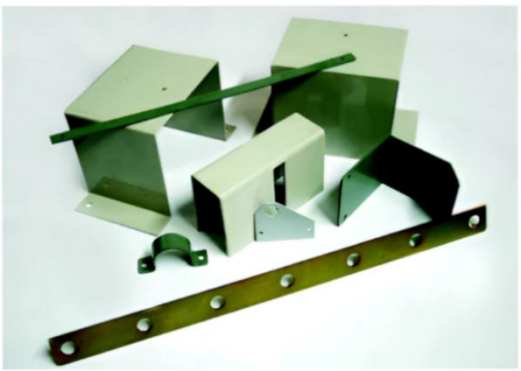
d	b	e	L
M5	16	5	acc. to customer request 20mm-220mm
M6	18	6	
M8	22	8	
M10	26	10	
M12	30	12	
M14	34	14	
M16	38	16	
M18	42	18	
M20	46	20	
M22	50	22	
M24	54	24	

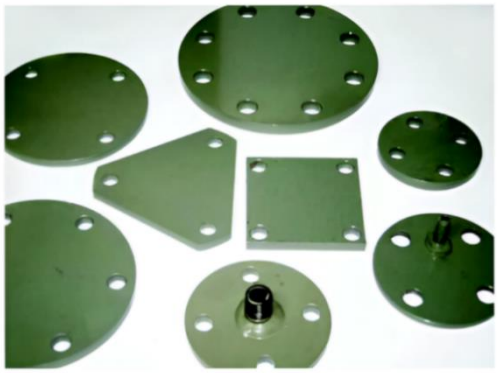
Stud Bolts

1520 different designs of stud bolts we manufacture (DIN 668/ DIN 938/ T0727 / T0729 with M6-M8-M10-M12-M16-M20-M24-M32-M36-M40-M42), We can machine as your specified dimensions for your stud bolts up to 3000 mm. Plating of electrogalvanize, silver, tin, nickel is possible.

BRIDAS, COMPONENTES DE LATÓN Y COBRE, TUERCAS; PIEZAS SOLDADAS, DOBLADAS Y PINTADAS /

FLANGES, BRASS AND COPPER COMPONENTS, NUTS; WELDED, BENDED AND PAINTED PARTS



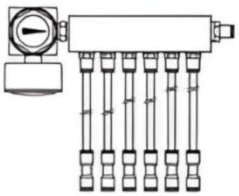


ELEVADORES DE PRONAL /

PRONAL LIFTING

PRONAL'S VTR LIFTING BAG ADVANTAGES

NBR coated fabric bags (oil resistant)
All dimensions possible (lifting height (stroke) will be app. Half the width of the bag).
Thickness deflated 3mm / 5mm
Inflation pressure up to 5 bar (under load)
Do not damage the insulation paper
Easy to install and to use: reduce costs !



GLOBAL OVERVIEW

PURPOSE OF PRONAL OIL TANK

PRONAL's VTR CUSHIONS are optimized solution to lift the core's windings while reducing stresses and damages on the insulation paper Lifting the winding to adjust / insert spacers
Repairing winding during maintenance operations

VTR

Pneumatic lifting bags are an alternative lifting method to insert/adjust spacers into the winding of the coil.

VTR are available in several sizes, thicknesses, working pressures. (Contact us for more technical info).

VTR are inserted between the winding and are then inflated. They smoothly lift the winding and allow the spacer insertion/adjustment.

Due to their special features, Pronal lifting bags prevent:

- Stress on the winding that could cause damage.
- Damages to the insulating paperboard.

BORNAS ENCHUFABLES Y PASABARRAS

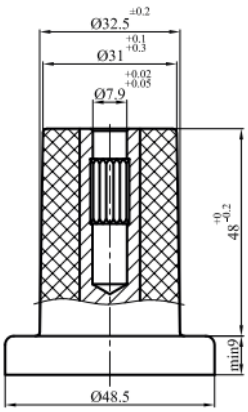
PLUG IN BUSHINGS AND MONOBLOCKS

BORNA ENCHUFABLE EPOXY /

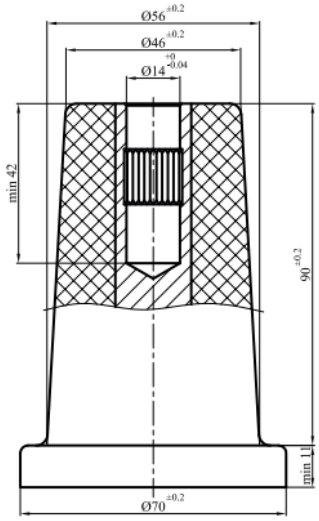
EPOXY RESIN BUSHING

DIMENSIONES DE LA CLASIFICACIÓN DE LAS INTERRELACIONES /
DIMENSIONS OF INTERFACE CLASSIFICATION

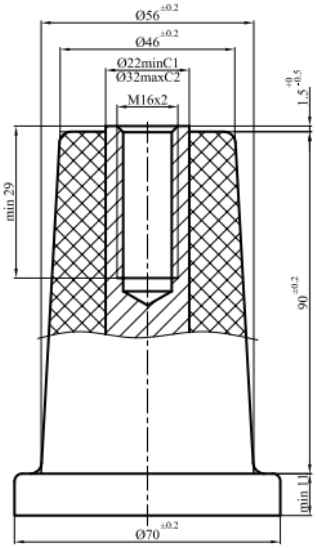
Interface classifications and dimensions stated by IEC/EN 50181.



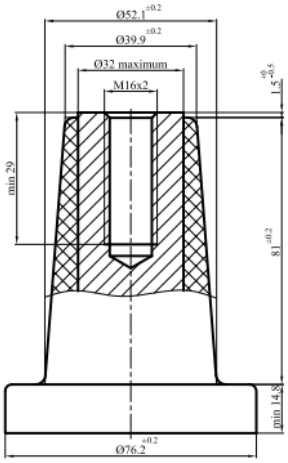
▪ Interface **A1**



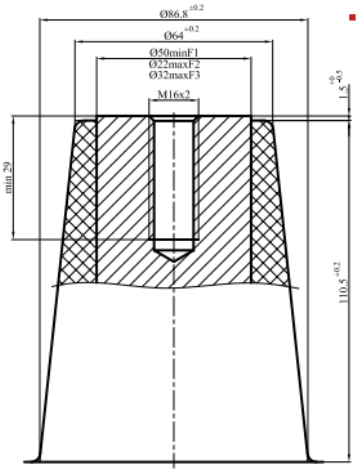
▪ Interface **B1, B2**



▪ Interface **C1, C2**



▪ Interface **D1, D2**



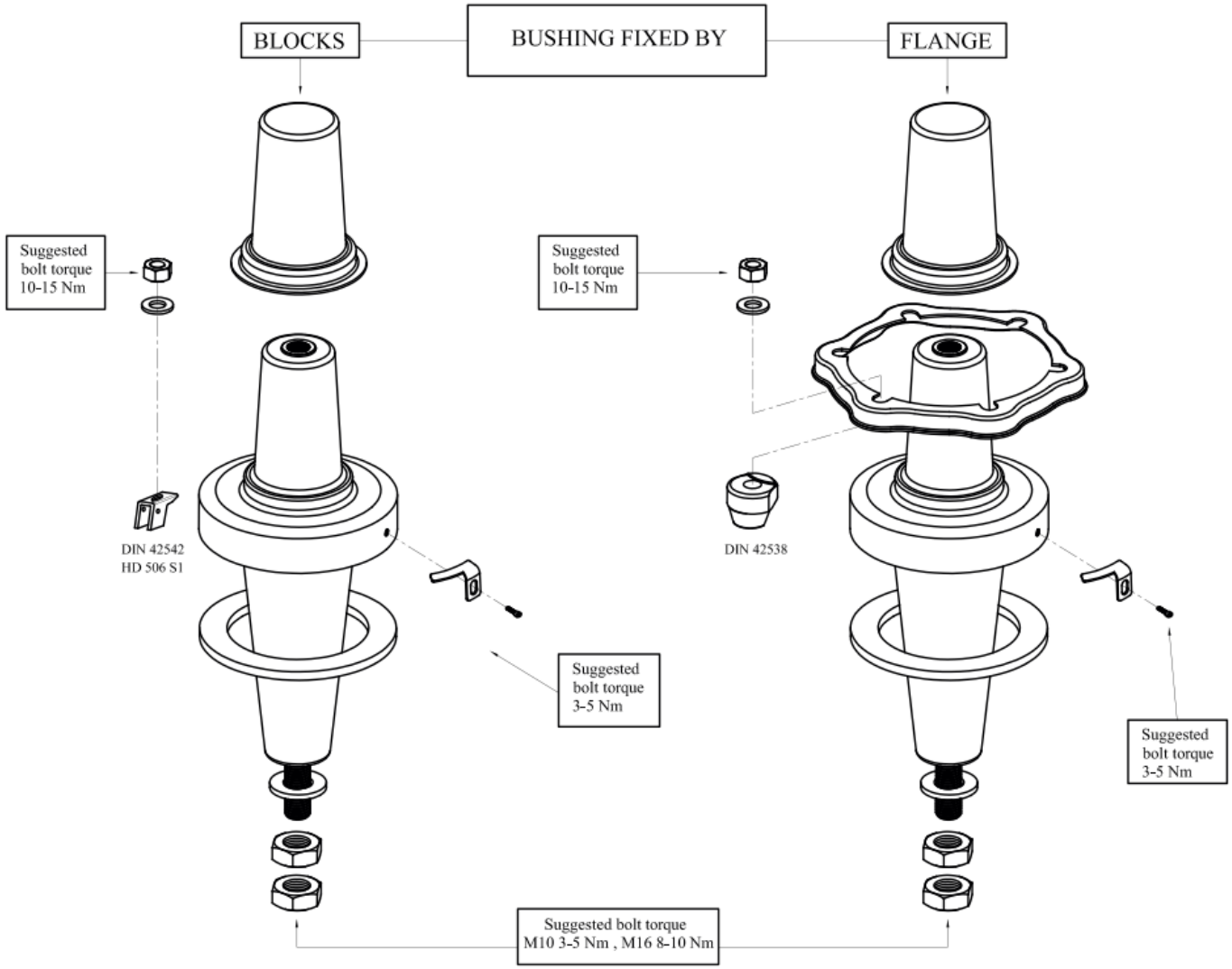
▪ Interface **F1, F2, F3**

SHORT CIRCUIT RATINGS

Interface type	Contact type	Current rating (A)	RMS symm (kA)			Peak symm (kA)
			1 sec.	2 sec.	3 sec.	
A1	Plug in socket	250	12.5	9.0	7.5	31
B1	Plug in socket	250	12.5	9.0	7.5	31
B2	Plug in socket	400	16.0	11.3	9.2	40
C1	Bolted	630	28.0	19.7	16.1	70
C2	Bolted	1250	75.0	53.0	43.3	>150
D1	Bolted	800	50.0	35.3	28.8	125
D2	Bolted	1250	75.0	53.0	43.3	>150
F1	Bolted	2500	-	-	-	-
F2	Bolted	630	28.0	19.7	16.1	70
F3	Bolted	1250	75.0	53.0	43.3	>150

FIJACIÓN PARA EL EQUIPO DE PASATAPAS /

FIXINGS FOR EQUIPMENT BUSHINGS

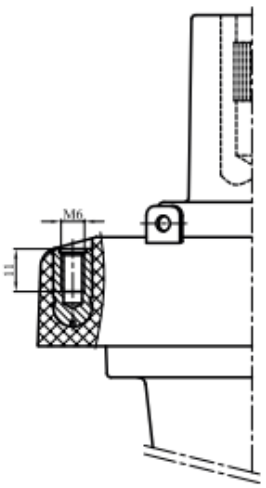


TK 394 – TK 395/03/P ; INTERFACE A1 ; Up to 24 kV - 250 A

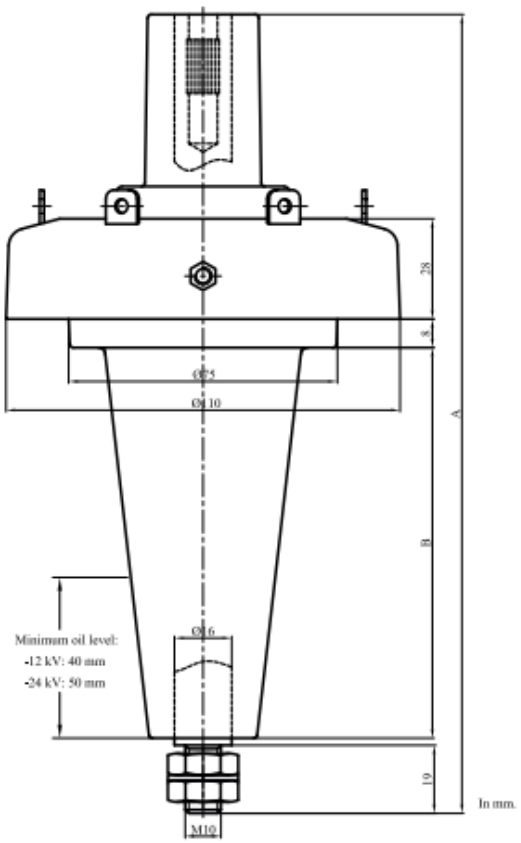
USING FOR

Plug in Bushing could use inside of distrubition Transformer with oil and other silicon cable connection using area.

• P- TYPE



• STANDART TYPE



STANDARTS

The plug in type bushings TK 394 –TK 395 /03/P was product the requirements of IEC TS EN 50180 ,IEC TS EN 50181, IEC 60137.

DESIGN

- The equipment bushings are moulded epoxy insulated parts in accordance with IEC EN 50180.
- The TK394-03/-P bushings has a length B outside this standard.
- The standard bushings, TK394/TK394-03/TK395/TK395-03, are equipped with 6 tabs for the bail restraint.
- The TK394-P /TK394-03-P /TK395-P/TK395-03-P are equipped with 4 tabs and 2 pins inserts M6 (-P version).

TESTING

All type bushings test by TAKFAN's Quality persons as %100 in TAKFAN Laboratory according to IEC 60137. Rank of tests as a belows;

- Dry power-Frequency voltage withstand test (55 kV/min.)
- Measurement of the partial discharge quantity
- Air leakage test (2 bars/min.)
- Cantilever load withstand test.
- Visual inspection and dimensional check

ORDERING INSTRUCTION

To order the equipment bushing, please inform us for type of bushings. The bushings are supplied with an earth cable or an earth plate . This earth connection must be specified when ordering.

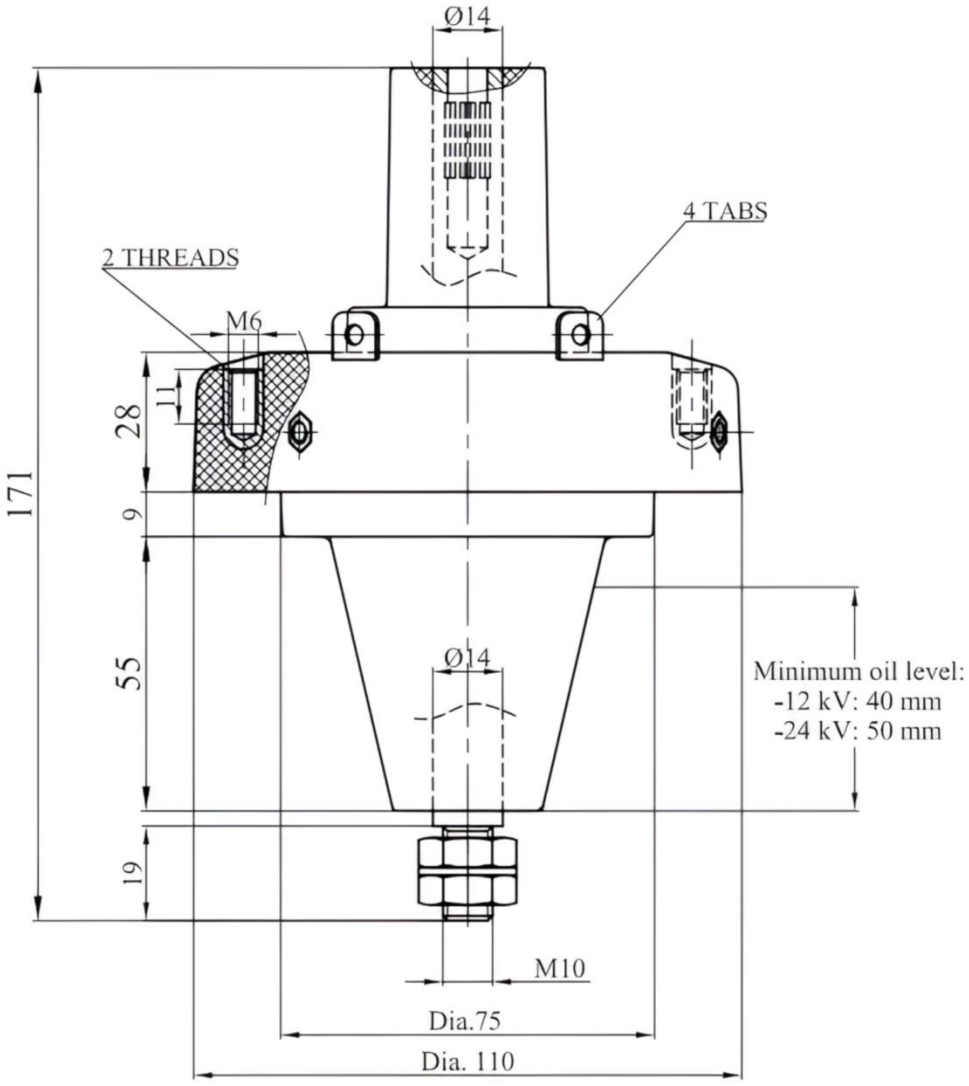
Product Code	Voltage Ur (kV)	Current Ir (A)	Dimensions (mm)	
			A	B
TK394	12 - 24	250	223	108,5
TK394 - P	12 - 24	250	223	108,5
TK394 - 03	12 - 24	250	284	168
TK394 - 03P	12 - 24	250	284	168
TK395	12 - 24	250	190	73,5
TK395 - P	12 - 24	250	190	73,5
TK395 - 03	12 - 24	250	171	55
TK395 - 03P	12 - 24	250	171	55

INTERFACE A ; Up to 12-24 kV - 250 A

ACC. CENELEC EN 50180/EN 50181
IEC 60137

Tkfn-K180AR-3

BIL kV 1.2x50 µs	125
P.F.WITHSTAND VOLTAGE 60s-kV	50



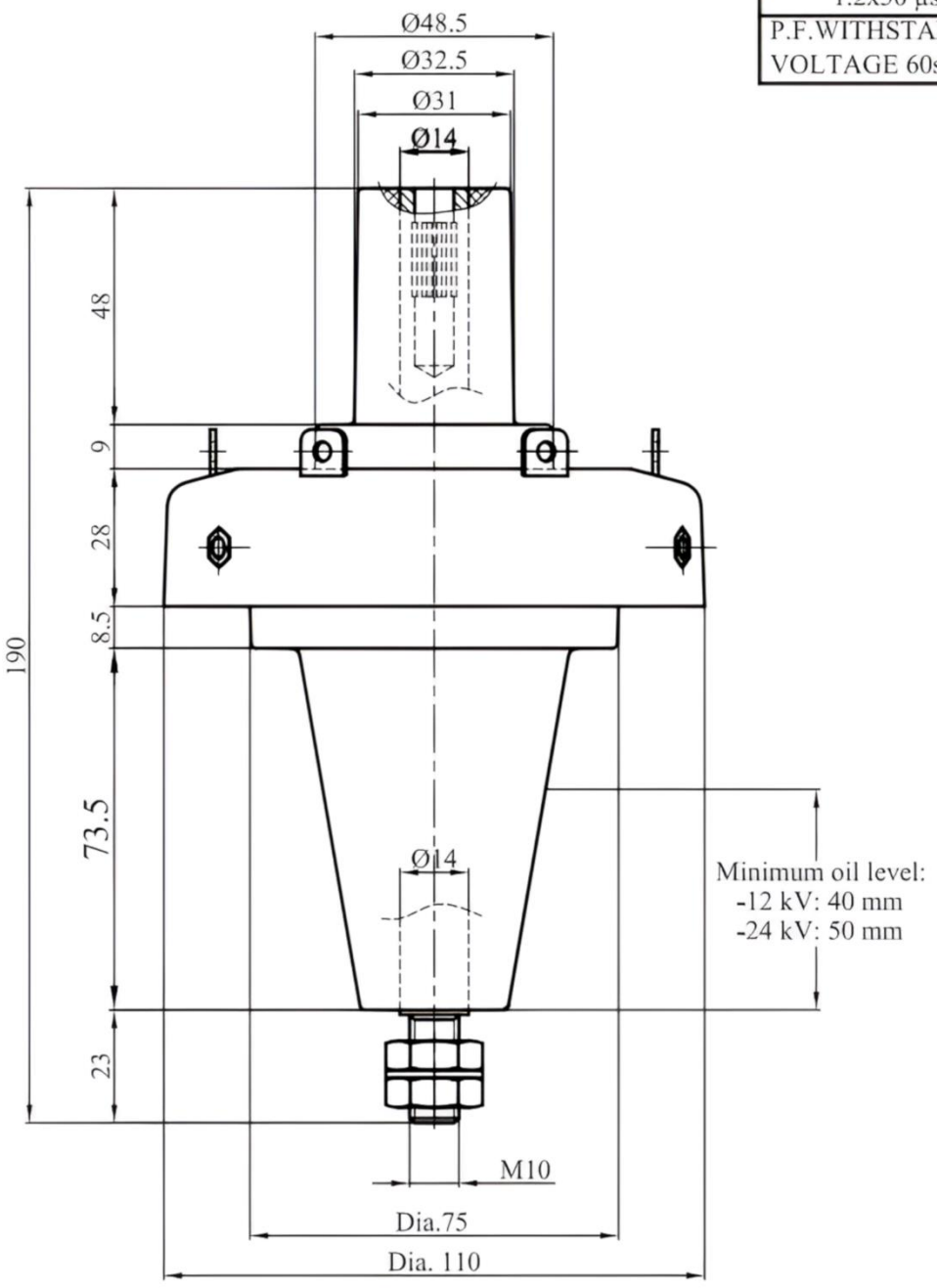
THREADED CONNECTIONS

In mm.

INTERFACE A ; Up to 24 kV - 250 A

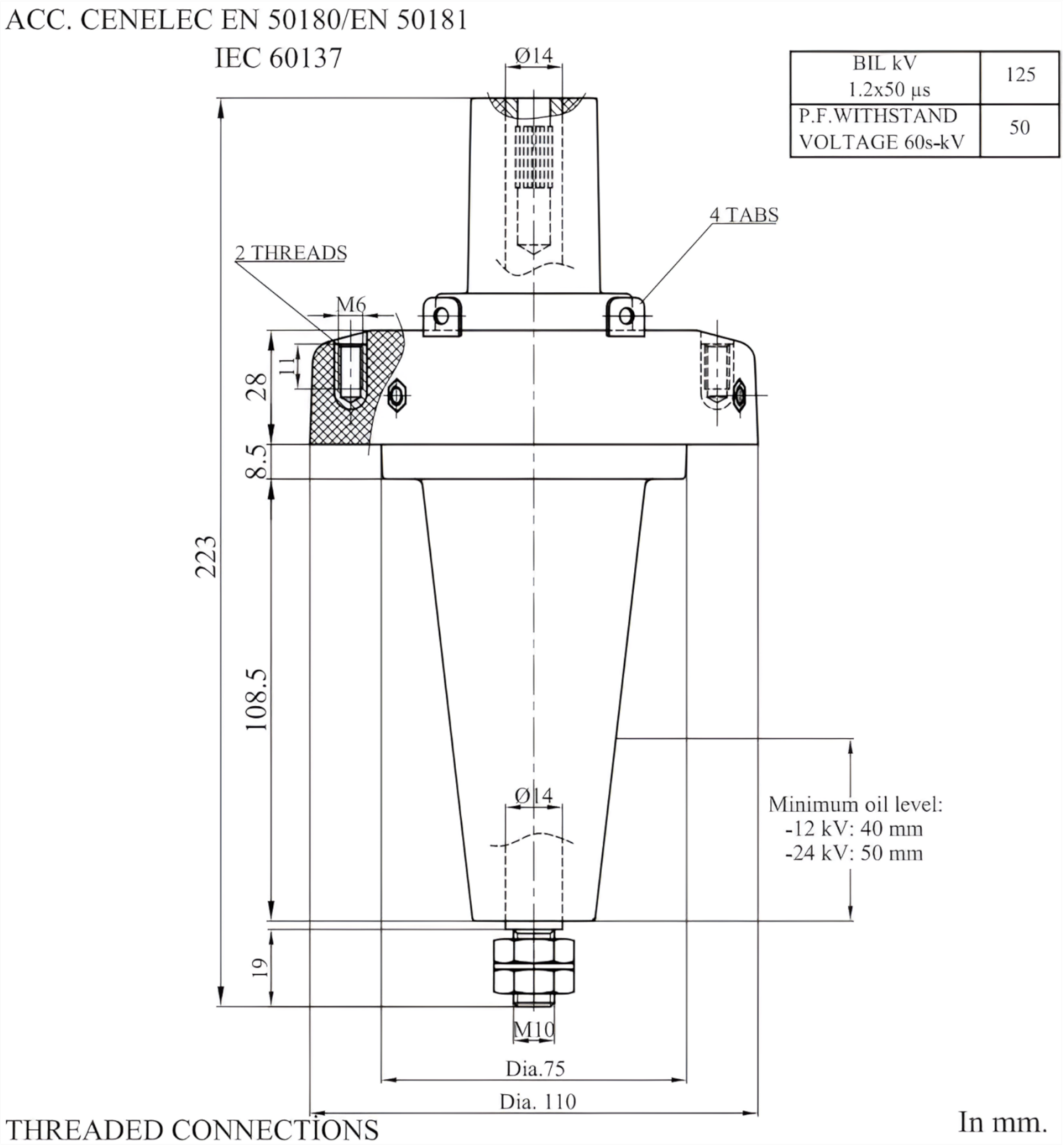
ACC. CENELEC EN 50180/EN 50181
IEC 60137

BIL kV 1.2x50 µs	125
P.F.WITHSTAND VOLTAGE 60s-kV	50

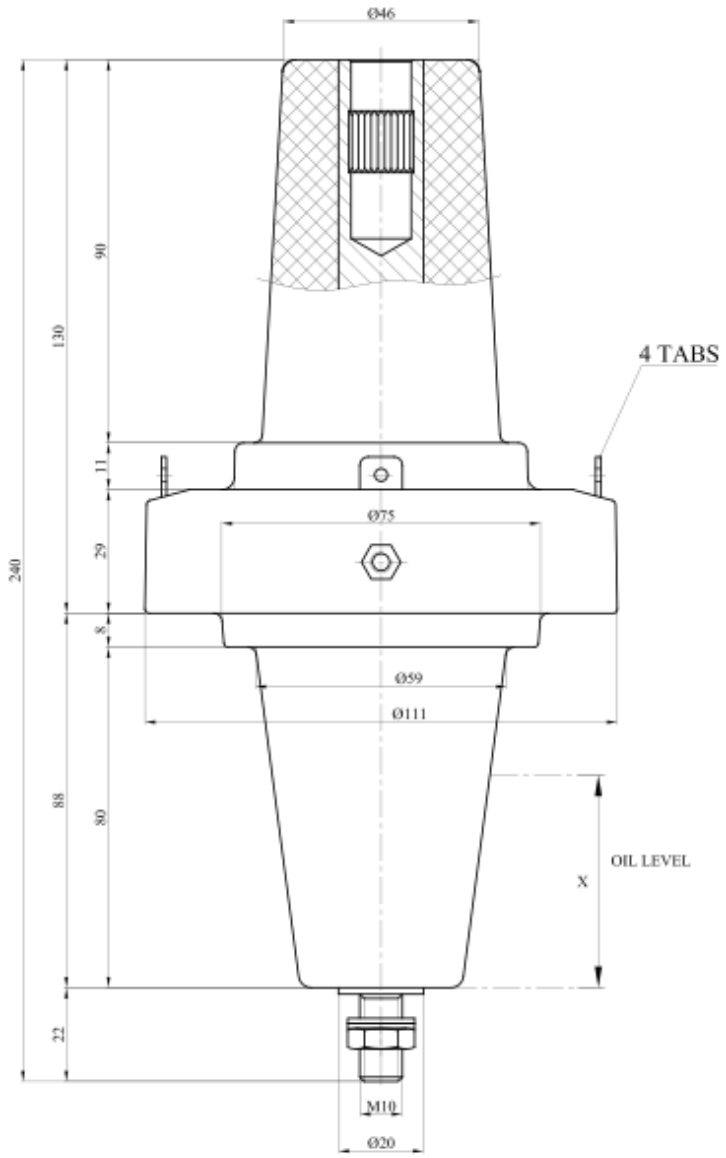


In mm.

INTERFACE A ; Up to 24 kV - 250 A



INTERFACE A ; Up to 24 kV - 250 A



USING FOR

Plug in type bushing and bolted type bushing could use inside of distrubition Transformer with oil immersed and other silicon cable connection using area.

STANDARTS

The plug in type bushings TK 975-1/TK 975-2/TK 975-3was product the requirements of IEC TS EN 50180 , IEC TS EN 50181, IEC 60137.

DESIGN

- The equipment bushings are moulded epoxy insulated parts in accordance with IEC EN 50180.
- The standard bushings TK 975-1/TK 975-2/TK 975-3 are equipped with 4 tabs for the bail restraint.

TESTING

All type bushings test by TAKFAN's Quality persons as %100 in TAKFAN Laboratory according to IEC 60137 . Rank of tests as a belows;

- Dry power-Frequency voltage withstand test (72kV/1min.)
- Measurement of the partial discharge quantity
- Air leakage test (2 bars/min.)
- Cantilever load withstand test.
- Visual inspection and dimensional check

ORDERING INSTRUCTION

To order the equipment bushing, please inform us for type of bushings. The bushings are supplied with an earth cable or an earth plate . This earth connection and bushing connection type must be specified when ordering.

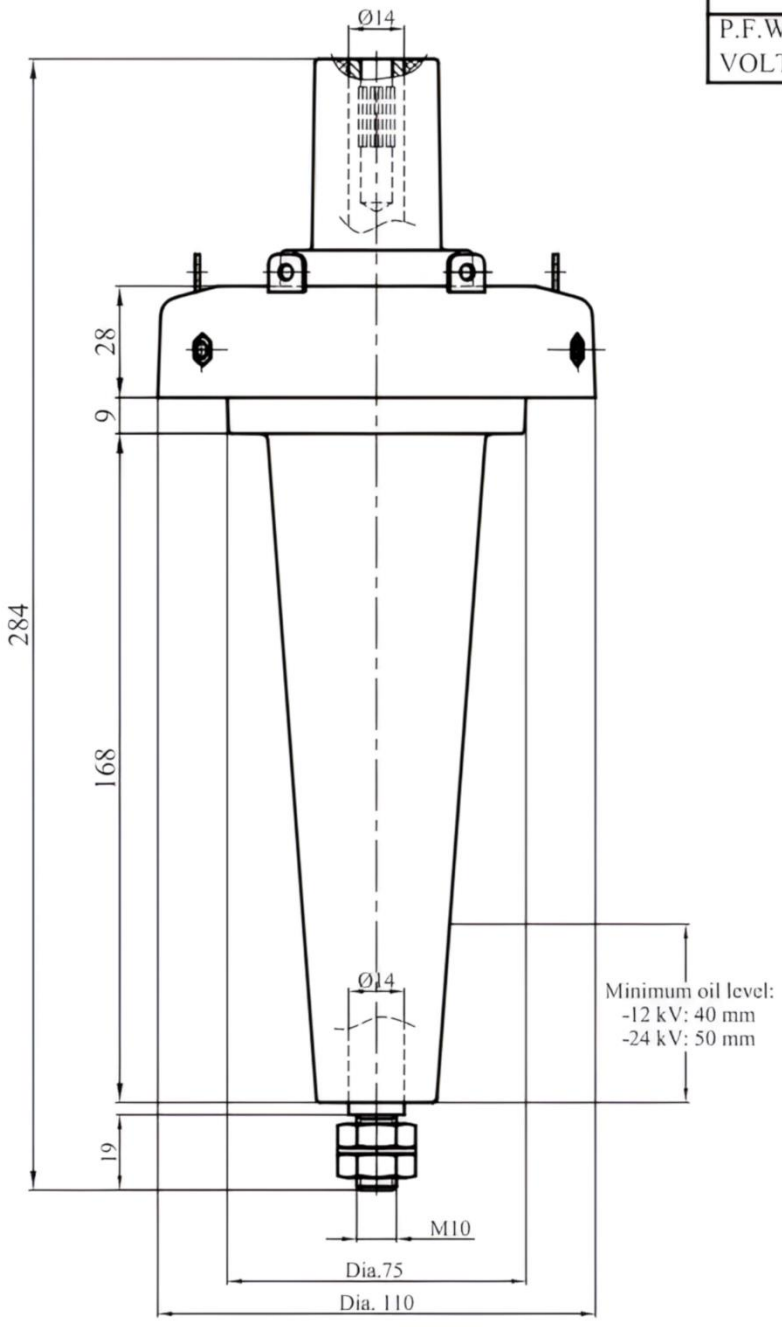
Product Code	Voltage Ur (kV)	Current Ir (A)	Contact Type	Interface
TK 975-1	36	250	Sliding	B
TK 975-2	36	400	Sliding	B
TK 975-3	36	400	Bolted	C

INTERFACE A ; UP TO 12-24 kV – 250 A

ACC. CENELEC EN 50180/EN 50181
IEC 60137

Tkfn-K180AR-2

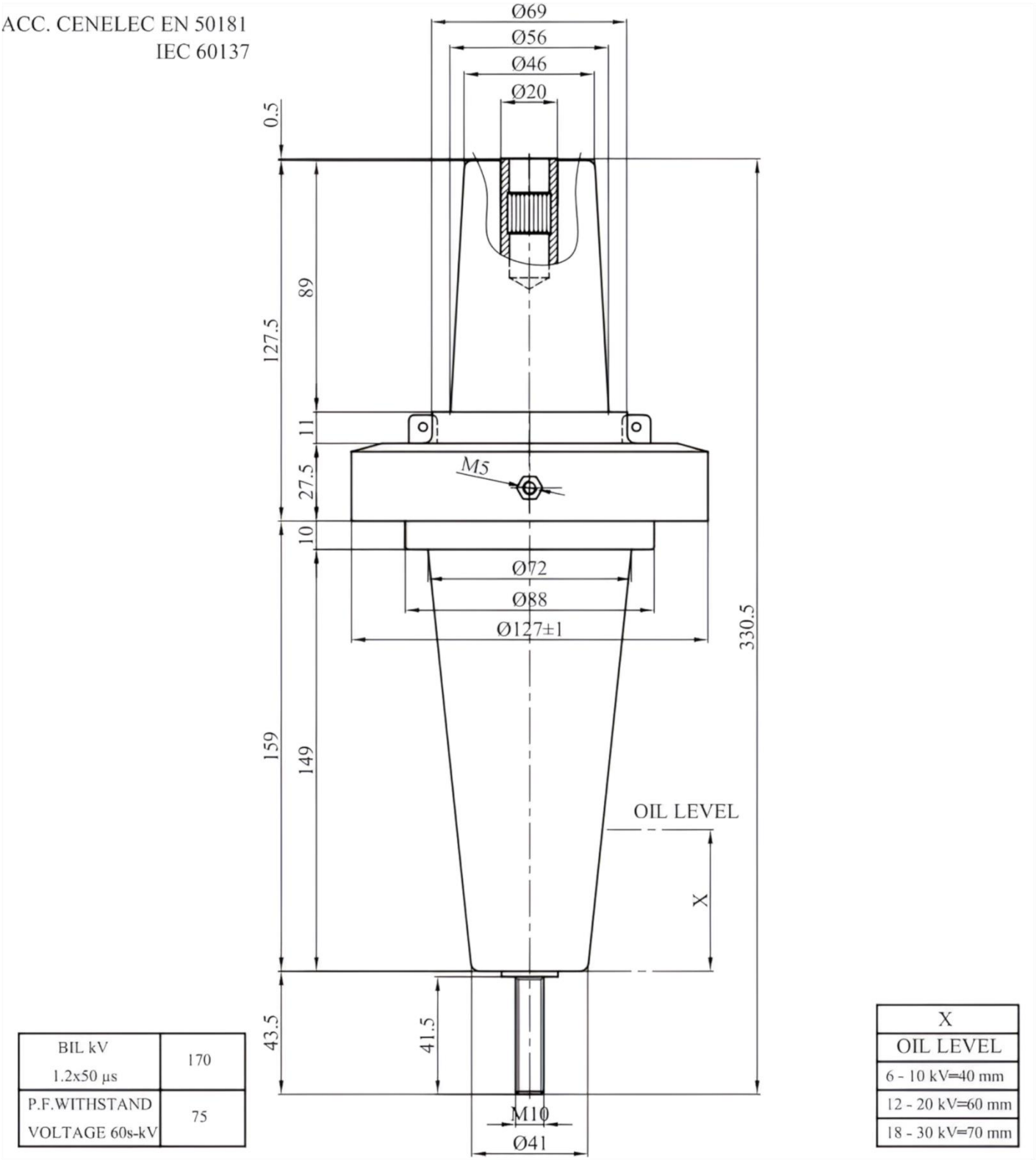
BIL kV 1.2x50 µs	125
P.F.WITHSTAND VOLTAGE 60s-kV	50



In mm.

INTERFACE B ; UP TO 12 – 24 – 36 kV – 250 A

ACC. CENELEC EN 50181
IEC 60137



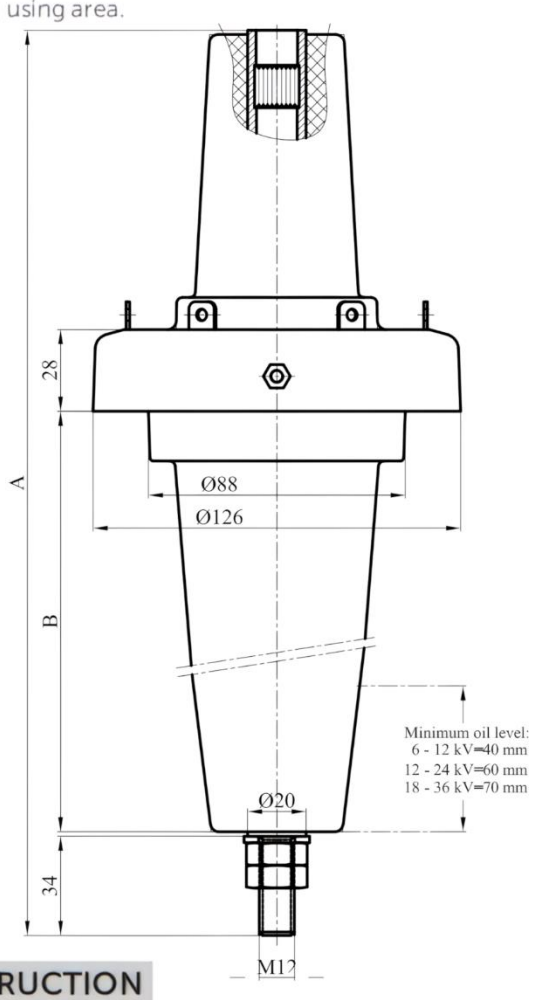
BIL kV 1.2x50 µs	170
P.F.WITHSTAND VOLTAGE 60s-kV	75

X
OIL LEVEL
6 - 10 kV=40 mm
12 - 20 kV=60 mm
18 - 30 kV=70 mm

TK 400-1, TK 400-2, TK 400-3, TK 400-4 ; INTERFACE B ; Up to 36 kV – 400 A

USING FOR

Plug in type bushing and bolted type bushing could use inside of distrubition Transformer with oil immersed and other silicon cable connection using area.



STANDARTS

The Plug in Bushings TK 400-1,TK 400-2, TK 400-3 and TK 400-4 was product the requirements of IEC TS EN 50180 , IEC TS EN 50181, IEC 60137.

DESIGN

- The equipment bushings are moulded epoxy insulated parts in accordance with IEC EN 50180.
- The standard bushings, TK 400-1,TK 400-2,TK 400-3 and TK 400-4 are equipped with 6 tabs for the bail restraint.

TESTING

All type bushings test by TAKFAN's Quality persons as %100 in TAKFAN Laboratory according to IEC 60137 . Rank of tests as a belows;

- Dry power-Frequency voltage withstand test (72kV/1min.)
- Measurement of the partial discharge quantity
- Air leakage test (2 bars/min.)
- Cantilever load withstand test.
- Visual inspection and dimensional check

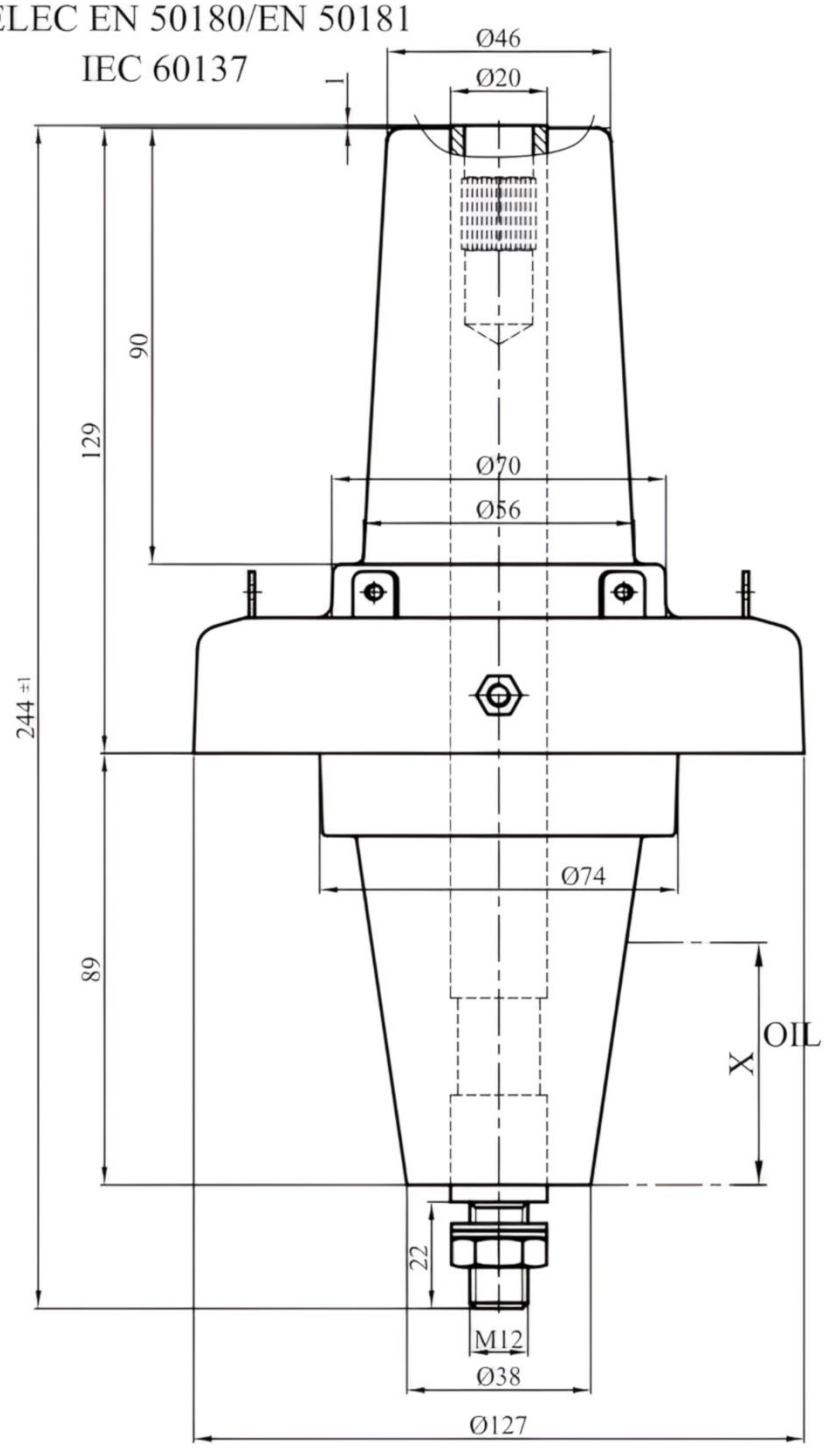
ORDERING INSTRUCTION

To order the equipment bushing, please inform us for type of bushings. The bushings are supplied with an earth cable or an earth plate. 36kV/400A bushings are exigible plug in type or bolted type. This earth connection and bushing connection type must be specified when ordering.

Product Code	Voltage Ur (kV)	Current Ir (A)	Dimensions (mm)	
			A	B
TK 400 - 1	12 - 24 - 36	400	244	89
TK 400 - 2	12 - 24 - 36	400	310	144
TK 400 - 3	12 - 24 - 36	400	332	159
TK 400 - 4	12 - 24 - 36	400	380	226

INTERFACE B ; UP TO 12-24-36 KV – 400 A

ACC. CENELEC EN 50180/EN 50181
IEC 60137



BIL kV 1.2x50 µs	170
P.F.WITHSTAND VOLTAGE 60s-kV	70

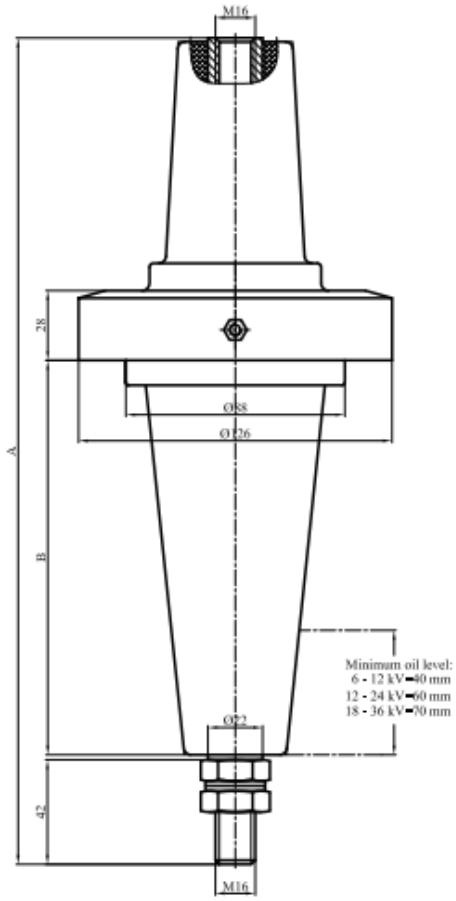
X
OIL LEVEL
6 - 10 kV=40 mm
12 - 20 kV=60 mm
18 - 30 kV=70 mm

In mm.

TK 630-1, TK 630-2, TK 630-3, TK 630-4 ; INTERFACE B ; Up to 36 kV – 630 A

USING FOR

Bolted type bushing could use inside of distrubition Transformer with oil immersed and other silicon cable connection using area.



STANDARTS

The Plug in Bushings TK 630-1,TK 630-2, TK 630-3 and TK 630-4 was product the requirements of IEC TS EN 50180 , IEC TS EN 50181, IEC 60137.

DESIGN

- The equipment bushings are moulded epoxy insulated parts in accordance with IEC EN 50180.
- The standard bushings, TK 630-1,TK 630-2 ,TK 630-3 and TK 630-4 are equipped without tab for the bail restraint.

TESTING

All type bushings test by TAKFAN's Quality persons as %100 in TAKFAN Laboratory according to IEC 60137 . Rank of tests as a belows;

- Dry power-Frequency voltage withstand test (72kV/1min.)
- Measurement of the partial discharge quantity
- Air leakage test (2 bars/min.)
- Cantilever load withstand test.
- Visual inspection and dimensional check

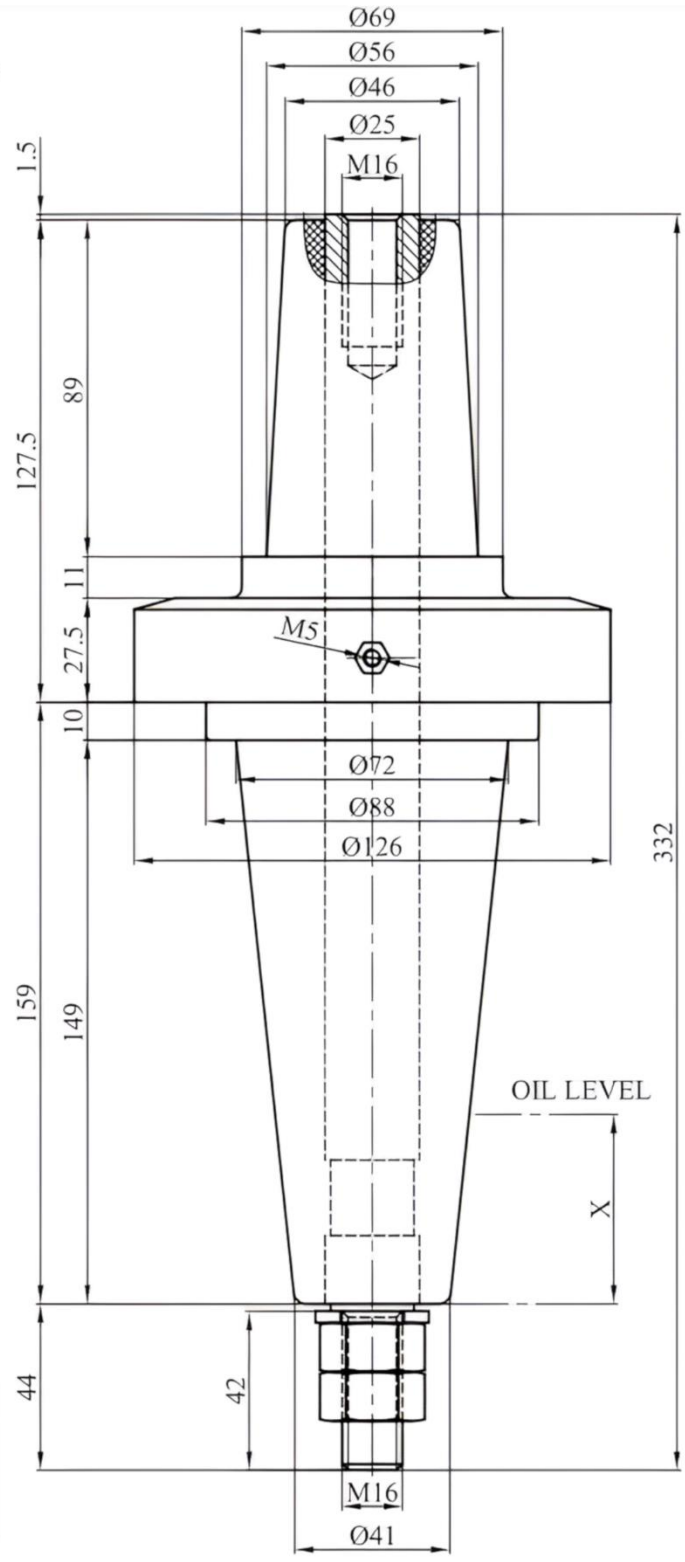
ORDERING INSTRUCTION

To order the equipment bushing, please inform us for type of bushings. The bushings are supplied with an earth cable or an earth plate . 36kV/630A bushings are exigible without tab or with 6 tabs for the bail restraint . This earth connection and bail restraint type must be specified when ordering.

Product Code	Voltage Ur (kV)	Current Ir (A)	Dimensions (mm)	
			A	B
TK 630 - 1	12 - 24 - 36	630	262	89
TK 630 - 2	12 - 24 - 36	630	332	159
TK 630 - 3	12 - 24 - 36	630	380	214
TK 630 - 4	12 - 24 - 36	630	398	223

INTERFACE B ; UP TO 12 – 24 - 36 KV – 630 A

ACC. CENELEC EN 50181
IEC 60137



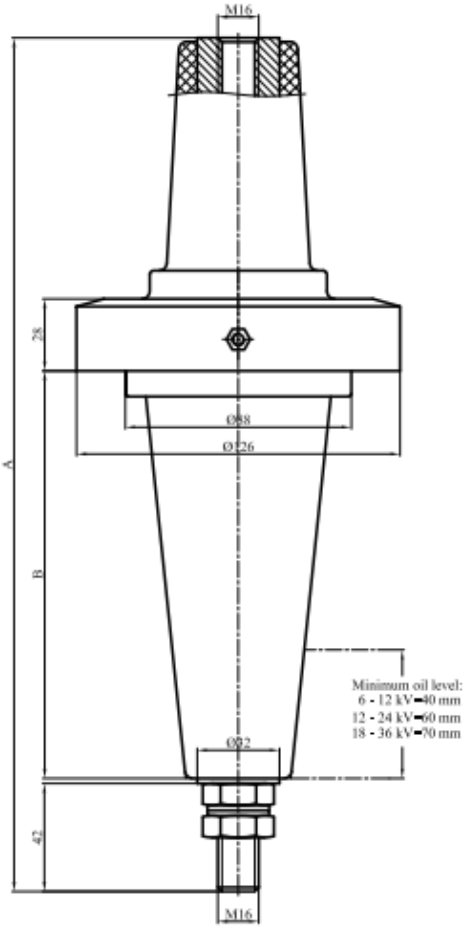
BIL kV 1.2x50 µs	170
P.F.WITHSTAND VOLTAGE 60s-kV	75

X
OIL LEVEL
6 - 10 kV=40 mm
12 - 20 kV=60 mm
18 - 30 kV=70 mm

TK 1250-1, TK 1250-2, TK 1250-3, TK 1250-4 ; INTERFACE C2 ; Up to 36 kV – 1250 A

USING FOR

Bolted type bushing could use inside of distrubition Transformer with oil immersed and other silicon cable connection using area.



STANDARTS

The Plug in Bushings TK 1250-1,TK 1250-2, TK 1250-3 and TK 1250-4 was product the requirements of IEC TS EN 50180 , IEC TS EN 50181, IEC 60137.

DESIGN

- The equipment bushings are moulded epoxy insulated parts in accordance with IEC EN 50180.
- The standard bushings, TK 1250-1,TK 1250-2 ,TK 1250-3 and TK 1250-4 are equipped without tab for the bail restraint.

TESTING

All type bushings test by TAKFAN's Quality persons as %100 in TAKFAN Laboratory according to IEC 60137 . Rank of tests as a belows;

- Dry power-Frequency voltage withstand test (72kV/1min.)
- Measurement of the partial discharge quantity
- Air leakage test (2 bars/min.)
- Cantilever load withstand test.
- Visual inspection and dimensional check

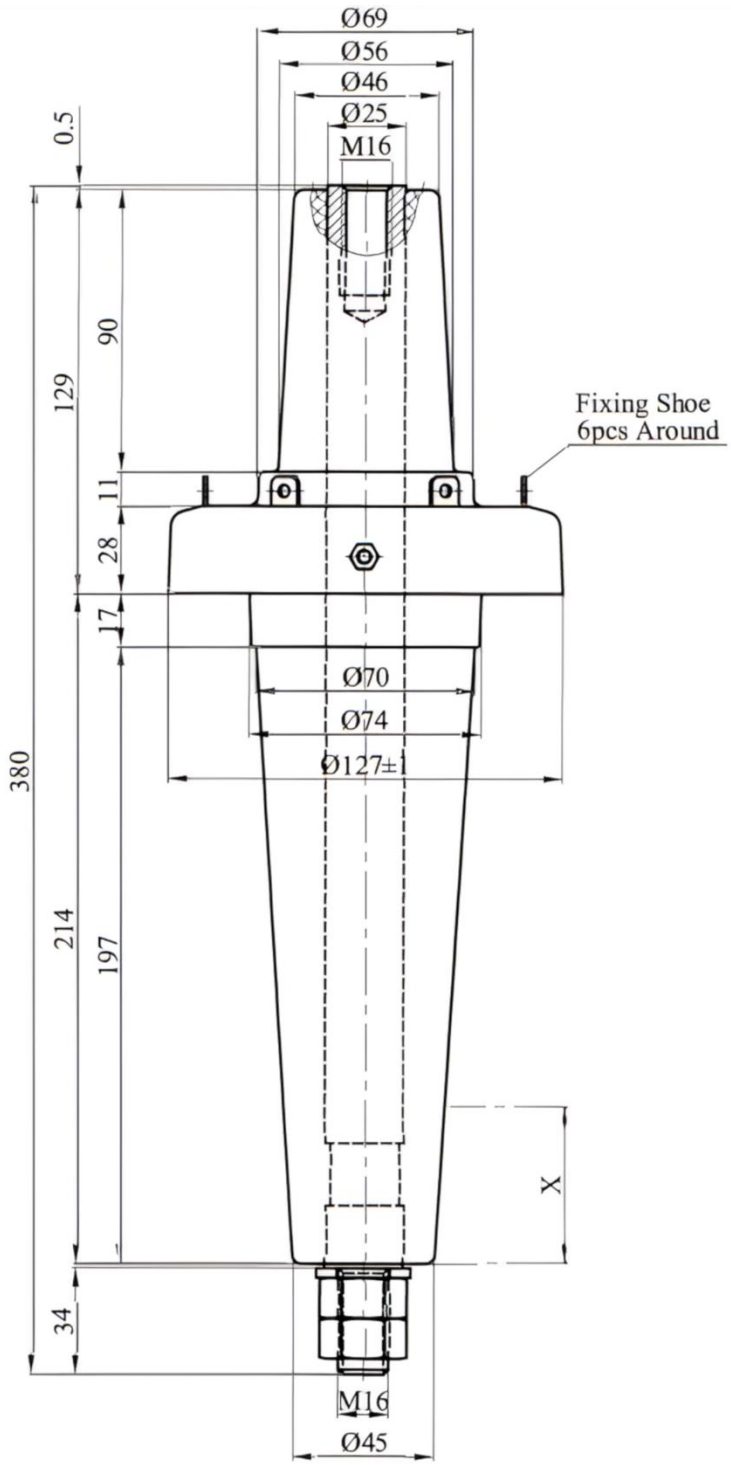
ORDERING INSTRUCTION

To order the equipment bushing, please inform us for type of bushings. The bushings are supplied with an earth cable or an earth plate . 36kV/1250A bushings are exigible without tab or with 6 tabs for the bail restraint . This earth connection and bail restraint type must be specified when ordering.

Product Code	Voltage Ur (kV)	Current Ir (A)	Dimensions (mm)	
			A	B
TK 1250 - 1	12 - 24 - 36	1250	262	89
TK 1250 - 2	12 - 24 - 36	1250	332	159
TK 1250 - 3	12 - 24 - 36	1250	380	214
TK 1250 - 4	12 - 24 - 36	1250	398	223

INTERFACE B ; UP TO 36 kV – 630 A

ACC. CENELEC EN 50181
IEC 60137

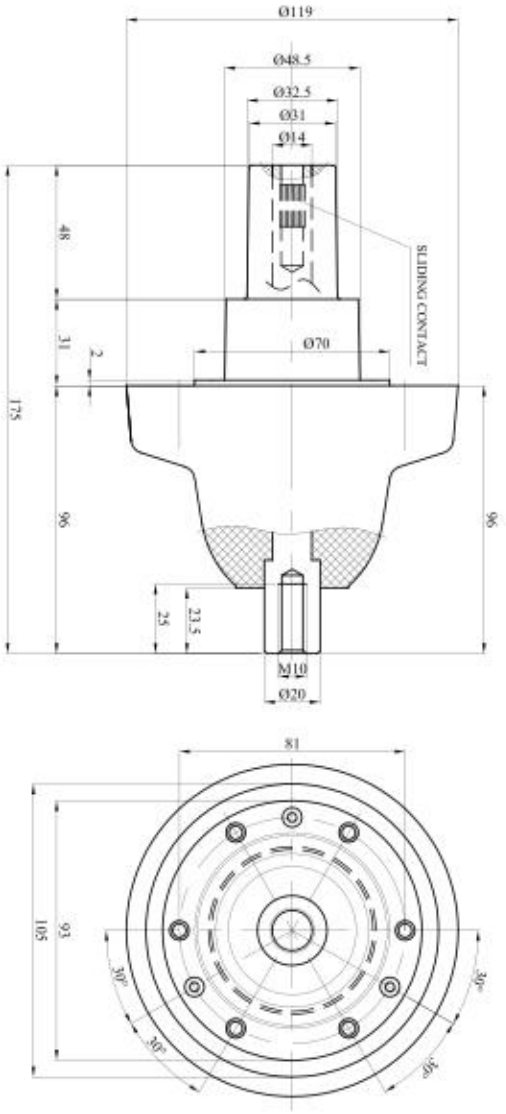


BIL kV 1.2x50 µs	170
P.F.WITHSTAND VOLTAGE 60s-kV	70

X
OIL LEVEL
6 - 10 kV=40 mm
12 - 20 kV=60 mm
18 - 30 kV=70 mm

COLOR: RAL3009 OXIDEROD
EPOXY: HUNTSMAN GERMANY CY5997/ HY918

TK – RMU250 ; INTERFACE A ; Up to 24 - 250 A



USING FOR

For use in equipment insulated with SF_6 gas.

STANDARTS

The plug in type bushings TK – RMU250 was product the requirements of IEC TS EN 50180 , IEC TS EN 50181, IEC 60137.

DESIGN

- The equipment bushings are moulded epoxy insulated parts in accordance with IEC EN 50180.
- The TK-RMU250 bushing has a shank outside this standard, adapted for use in SF_6 gas.

TESTING

All type bushings test by TAKFAN's Quality persons as %100 in TAKFAN Laboratory according to IEC 60137 . Rank of tests as a belows;

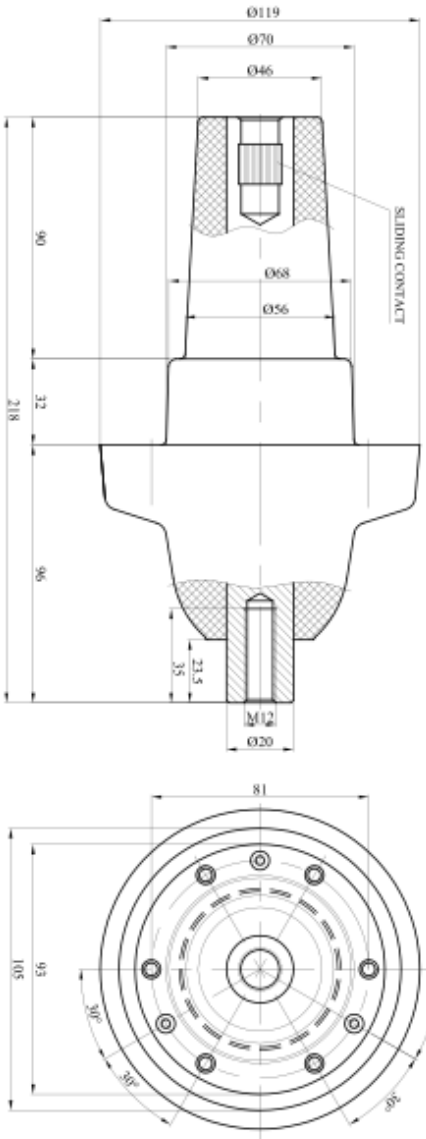
- Dry power-Frequency voltage withstand test
- Measurement of the partial discharge quantity
- Air leakage test (2 bars/min.)
- Cantilever load withstand test.
- Visual inspection and dimensional check

ORDERING INSTRUCTION

To order the product bushings, simply specify the type.

Product Code	Voltage Ur (kV)	Current Ir (A)
TK - RMU250	12 - 24	250

TK – RMU400/*TK – RMU250-1 ; INTERFACE B ; Up to 36 kV – 400 A*



USING FOR

For use in equipment insulated with SF_6 gas.

STANDARTS

The plug in type bushings TK – RMU400/TK – RMU250-1 was product the requirements of IEC TS EN 50180 , IEC TS EN 50181, IEC 60137.

DESIGN

- The equipment bushings are moulded epoxy insulated parts in accordance with IEC EN 50180.
- The TK – RMU400/TK – RMU250-1 bushing has a shank outside this standard, adapted for use in SF_6 gas.

TESTING

All type bushings test by TAKFAN's Quality persons as %100 in TAKFAN Laboratory according to IEC 60137 . Rank of tests as a belows;

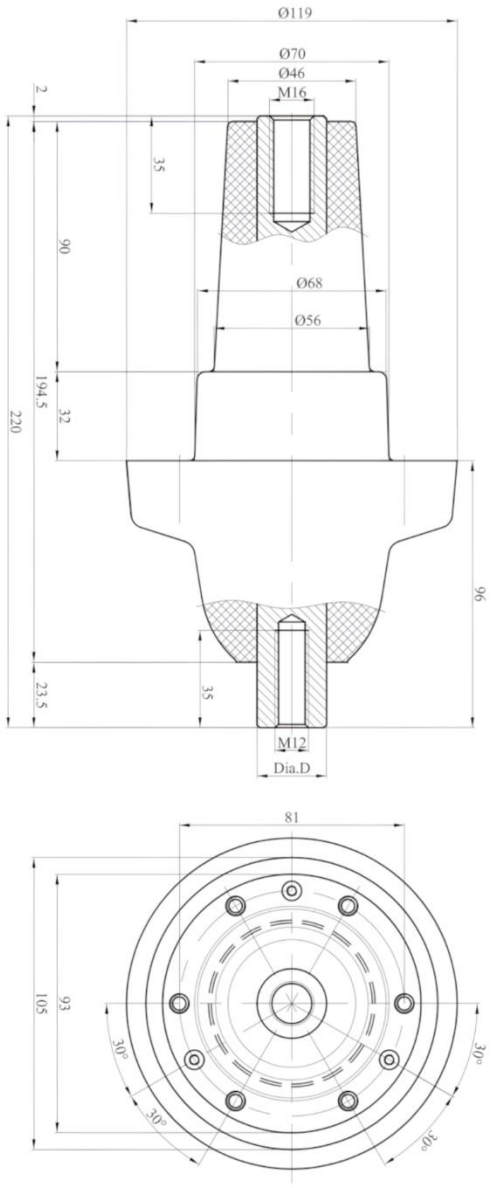
- Dry power-Frequency voltage withstand test
- Measurement of the partial discharge quantity
- Air leakage test (2 bars/min.)
- Cantilever load withstand test.
- Visual inspection and dimensional check

ORDERING INSTRUCTION

To order the product bushings, simply specify the type.

Product Code	Voltage Ur (kV)	Current Ir (A)
TK - RMU250-1	36	250
TK - RMU400	12 - 24 - 36	400

TK – RMU630 / *TK RMU1250 ; INTERFACE C ; Up to 36 kV – 1250 A*



USING FOR

For use in equipment insulated with SF_6 gas.

STANDARTS

The plug in type bushings TK – RMU630/TK – RMU1250 was product the requirements of IEC TS EN 50180 , IEC TS EN 50181, IEC 60137.

DESIGN

- The equipment bushings are moulded epoxy insulated parts in accordance with IEC EN 50180.
- The TK-RMU630/TK-RMU1250 bushing has a shank outside this standard, adapted for use in SF6 gas.

TESTING

All type bushings test by TAKFAN's Quality persons as %100 in TAKFAN Laboratory according to IEC 60137 . Rank of tests as a belows;

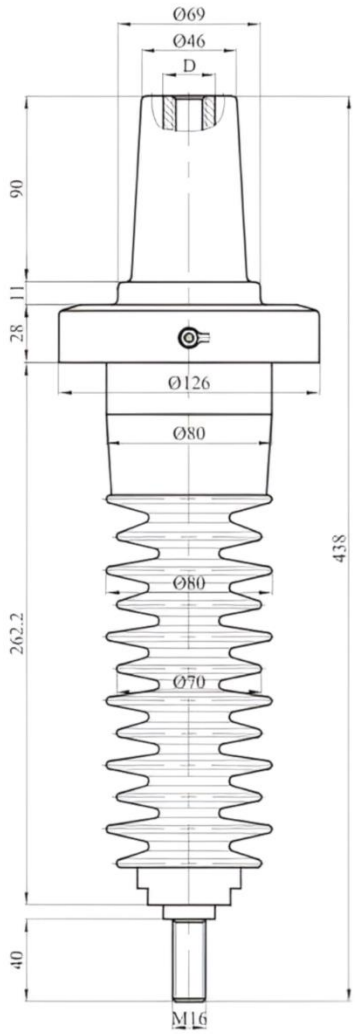
- Dry power-Frequency voltage withstand test
- Measurement of the partial discharge quantity
- Air leakage test (2 bars/min.)
- Cantilever load withstand test.
- Visual inspection and dimensional check

ORDERING INSTRUCTION

To order the product bushings, simply specify the type.

Product Code	Voltage Ur (kV)	Current Ir (A)	Dia.D (mm)
TK - RMU630	12 - 24 - 36	630	25
TK - RMU1250	12 - 24 - 36	1250	32

TK – A36-1/*TK-A36-2/TK-A36-3 ; INTERFACE B,C ; Up to 36 kV – 630 A*



USING FOR

For use in equipment insulated with air, typically for dry type transformers, motors, switchgear...

STANDARTS

The plug in type bushings TK – A36-1/TK-A36-2/TK-A36-3 was product the requirements of IEC TS EN 50180 , IEC TS EN 50181, IEC 60137.

DESIGN

• The equipment bushings are moulded epoxy insulated parts in accordance with IEC EN 50180.

TESTING

All type bushings test by TAKFAN's Quality persons as %100 in TAKFAN Laboratory according to IEC 60137 . Rank of tests as a belows;

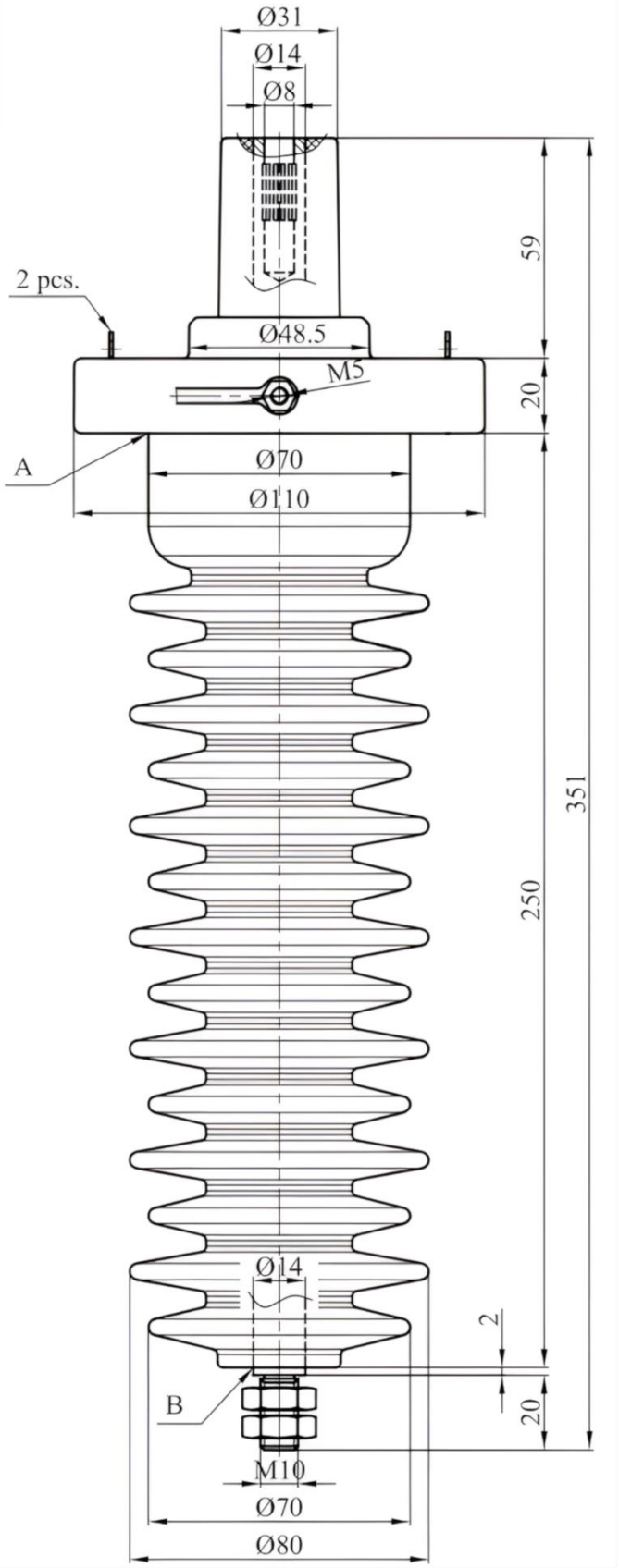
• Dry power-Frequency voltage withstand test
• Measurement of the partial discharge quantity
• Cantilever load withstand test
• Visual inspection and dimensional check

ORDERING INSTRUCTION

To order the equipment bushing, please inform us for type of bushings. The bushings are supplied with an earth cable or an earth plate . This earth connection must be specified when ordering.

Product Code	Voltage Ur (kV)	Current Ir (A)	D (mm)	Contact Type	Interface
TK - A36 - 1	36	250	250	Sliding	B
TK - A36 - 2	12 - 24 - 36	400	400	Sliding	B
TK - A36 - 3	12 - 24 - 36	630	630	Bolted	C

INTERFACE A1 ; UP TO 12 – 24 kV – 250 A

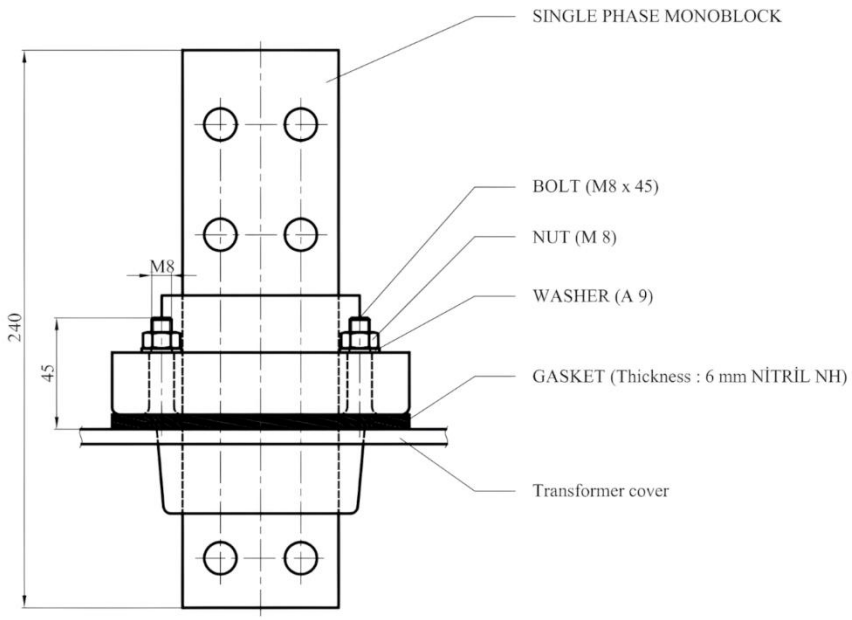


Linea de fuga (A-B) : 649 mm

PASABARRAS UNIPOLARES DE RESINA FUNDIDA /

CAST RESIN SINGLE PHASE MONOBLOCK

TK – SM 1 kV / *1250 A*

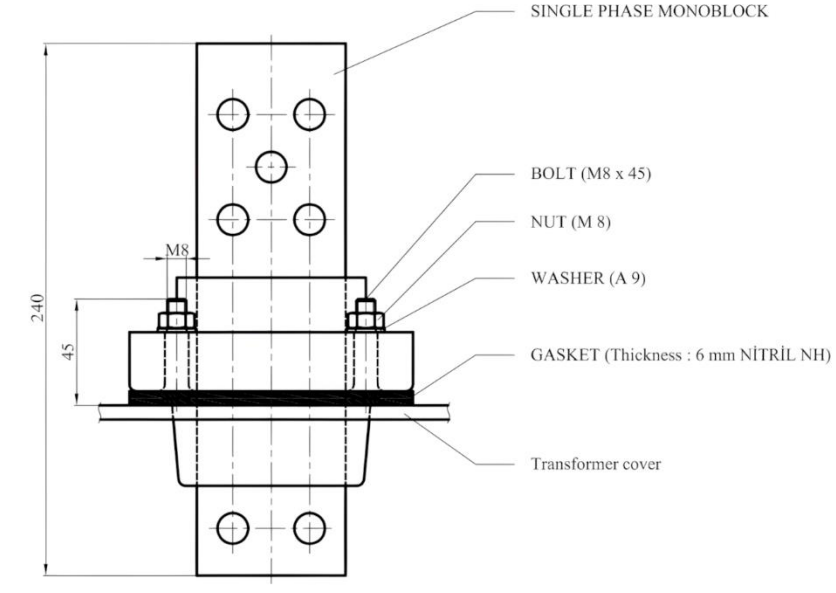


TECHNICAL SPECIFICATIONS

TK-SM 1kV/1250A

Nominal Current: 1250A
Nominal Voltage: 1 kV Dry Power
Frequency: 10 kV Dry Lighting Impuls
Withstand Voltage: 20kV Operating
Temperature: -20°C÷100°C

TK – SM 1 kV / *1600 A*

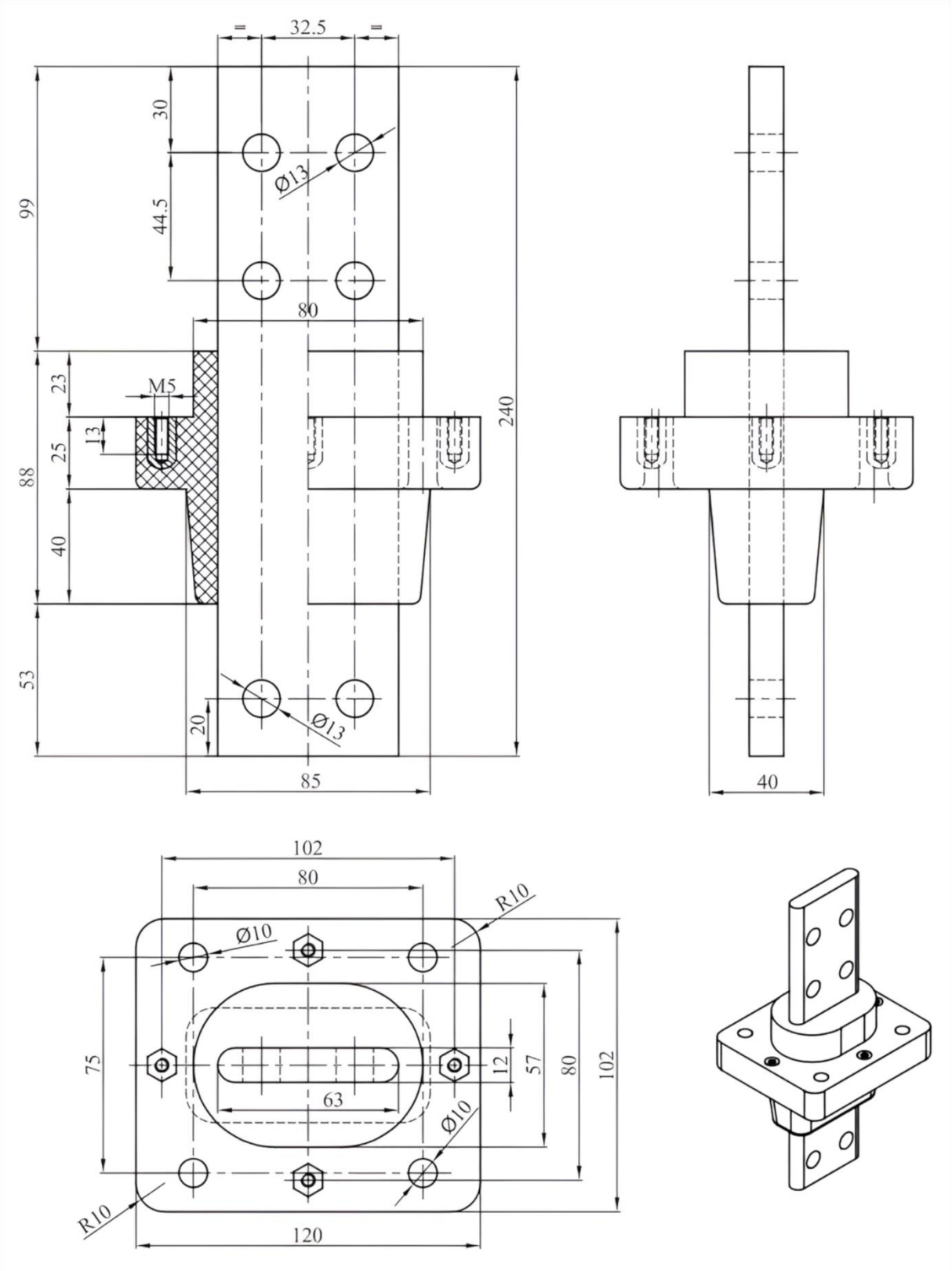


TECHNICAL SPECIFICATIONS

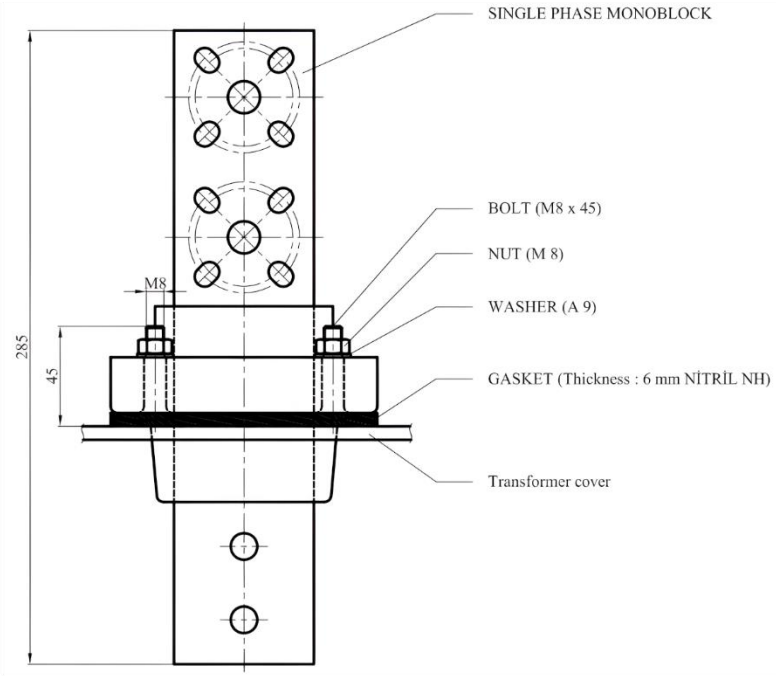
TK-SM 1kV/1600A

Nominal Current: 1600 A
Nominal Voltage: 1 kV
Dry Power Frequency: 10 kV
Dry Lighting Impulse Withstand Voltage: 20 kV Min Creepage
Distance: 55 mm Max Operating Cantilever Load: 625 N
Thermal Short Time Current Test: 16.5 kA
Dynamic Short Circuit Current Withstand Test: 41 kA
Operating temperature: -20°C÷100°C

SINGLE PHASE MONOBLOCK (1250 A)



TK – SM 1 kV / *2000 A*

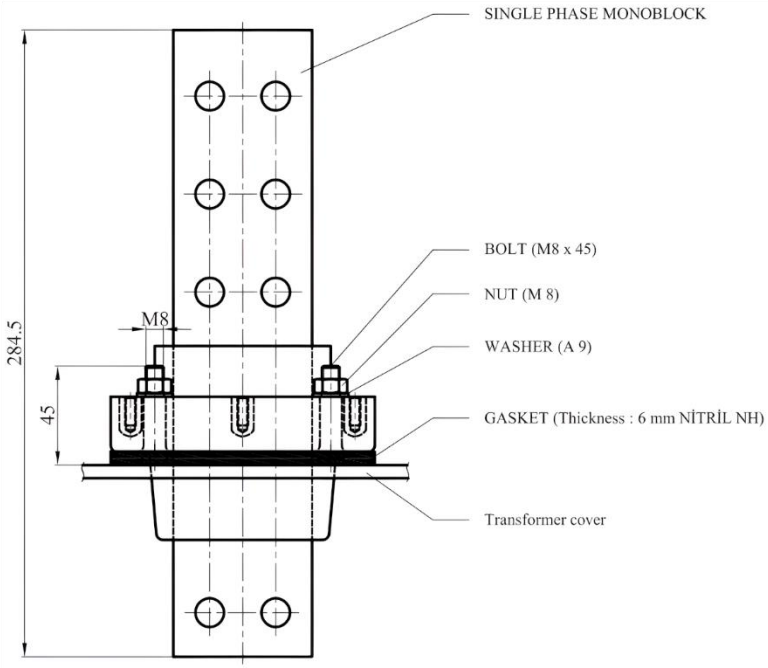


TECHNICAL SPECIFICATIONS

TK-SM 1kV/2000A

Nominal current: 2000 A
Nominal voltage: 1 kV
Dry power frequency: 10 kV
Dry lighting impulse withstand voltage: 20 kV
Min creepage distance: 55 mm
Max operating cantilever load: 1000 N
Thermal short time current withstand test: 29 kA
Dynamic short circuit current withstand test: 72.5 kA
Operating temperature: -20°C÷100°C

TK – SM 1 kV / *2500 A*

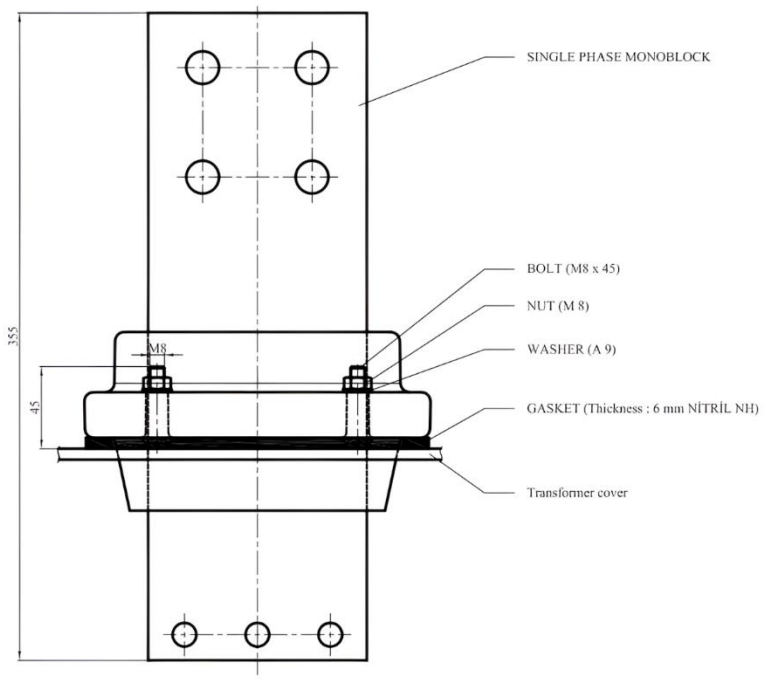


TECHNICAL SPECIFICATIONS

TK-SM 1kV/2500A

Nominal current: 2500 A
Nominal voltage: 1 kV
Dry power frequency: 10 kV
Dry lighting impulse withstand voltage: 20 kV
Min creepage distance: 55 mm
Max operating cantilever load: 1000 N
Thermal short time current withstand test: 36 kA
Dynamic short circuit current withstand test: 90 kA
Operating temperature: -20°C÷100°C

TK – SM 1 kV / *3150 A*



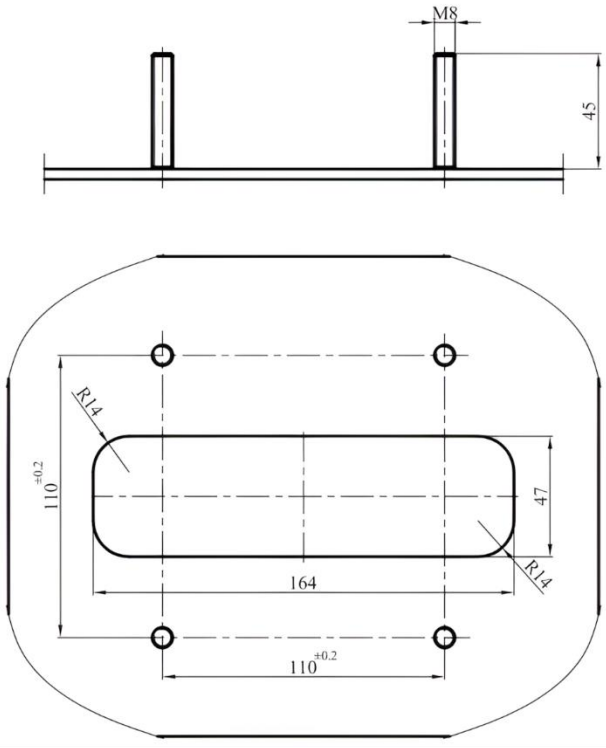
TECHNICAL SPECIFICATIONS

TK-SM 1kV/3150 A

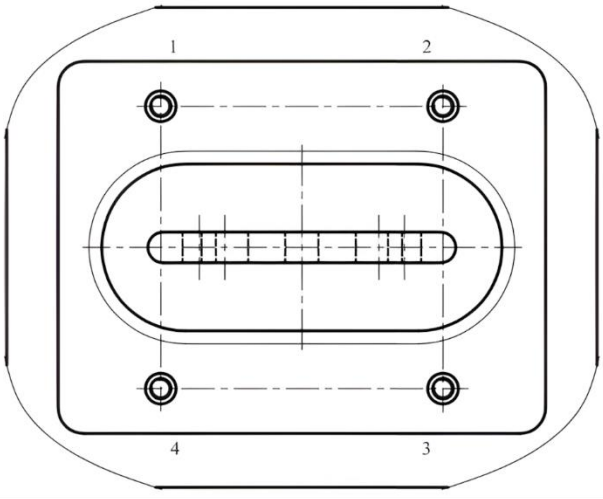
Nominal current: 3150 A
Nominal voltage: 1 kV
Dry power frequency: 10 kV
Dry lighting impulse withstand voltage: 20 kV
Operating temperature: -20°C÷100°C

INSTRUCCIONES DE MONTAJE /

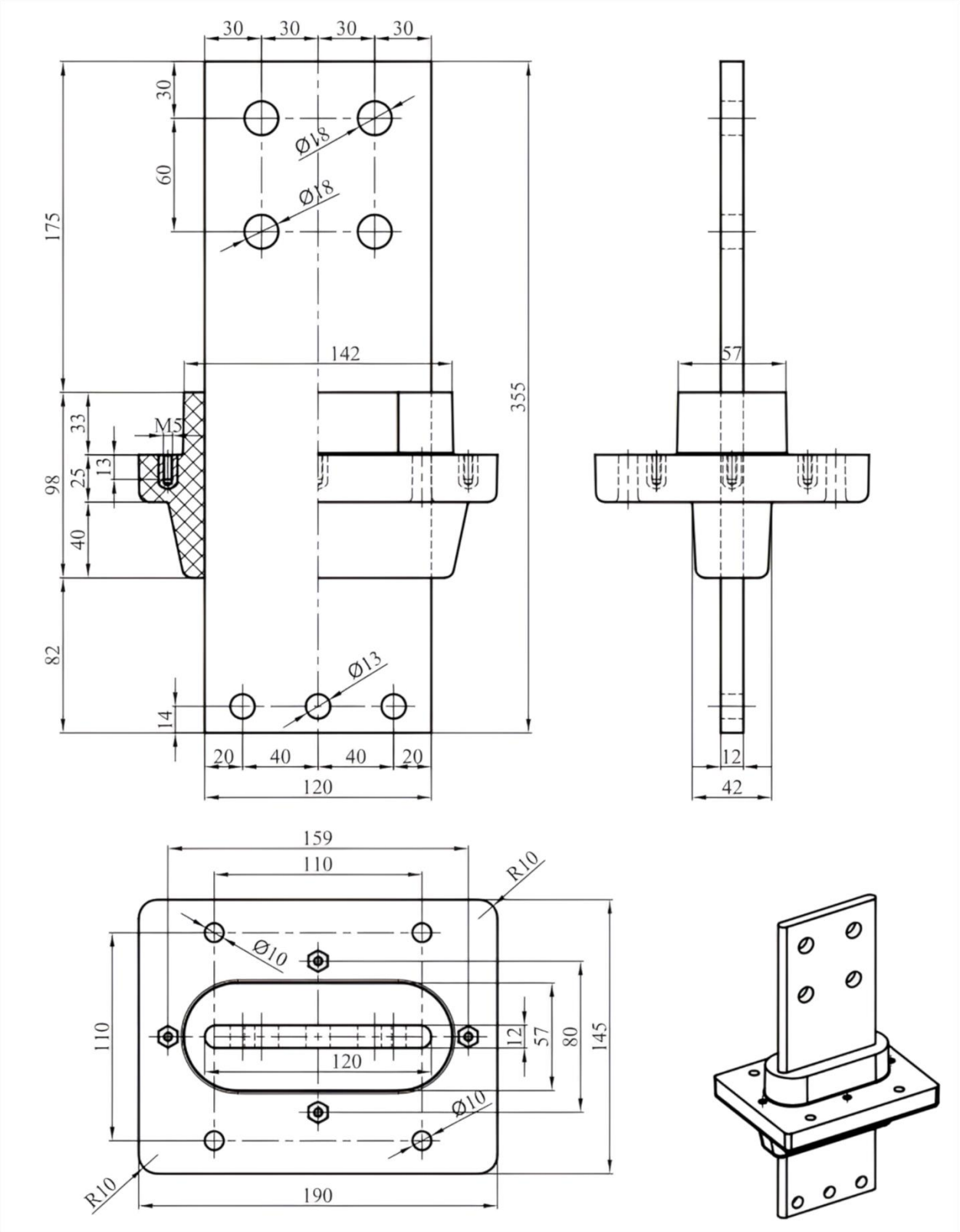
ASSEMBLING INSTRUCTIONS



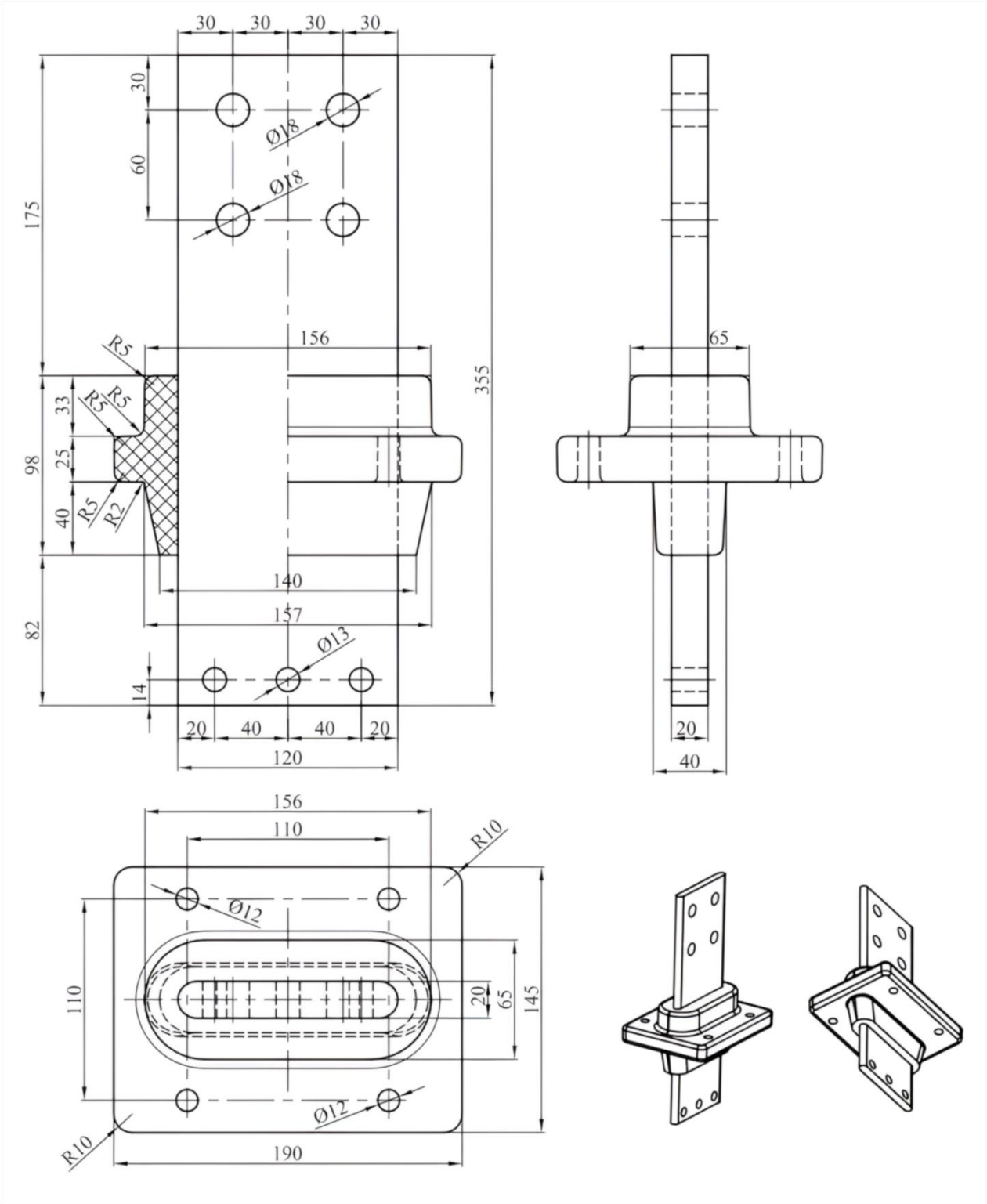
Assembling instructions:
Screw the 4xM8 nuts according to a cross sequence 1-3-4-2
1st step: 2 Nm
2nd step: 5 Nm
3rd step: 12 Nm (max)



SINGLE PHASE MONOBLOCK (1 kV / *3150 A*)



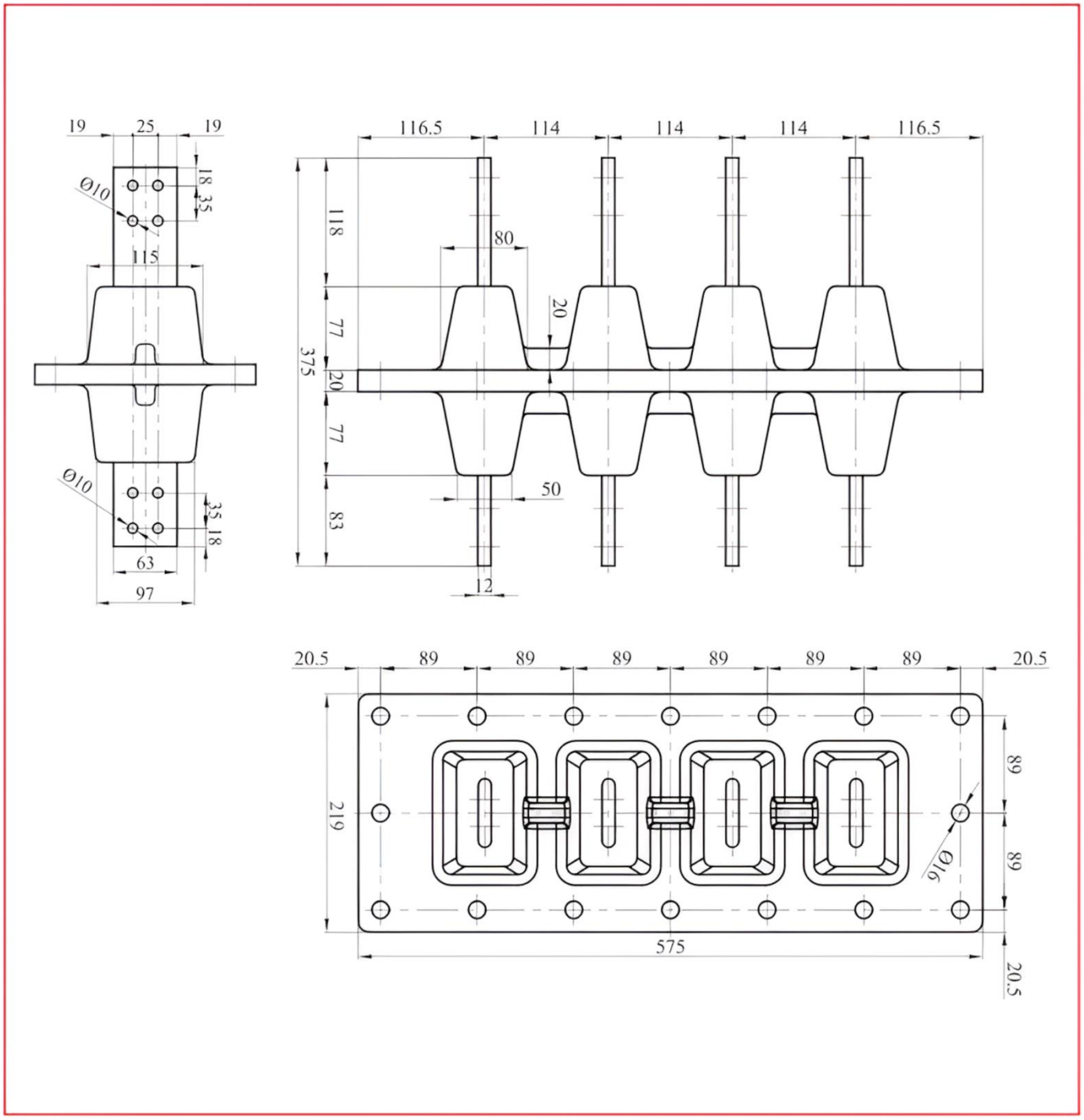
SINGLE PHASE MONOBLOCK (1 kV / *5000 A*)



PASABARRAS DE RESINA EPOXY MULTIPOLAR/

EPOXY RESIN MONOBLOCK

TK – MN 800 A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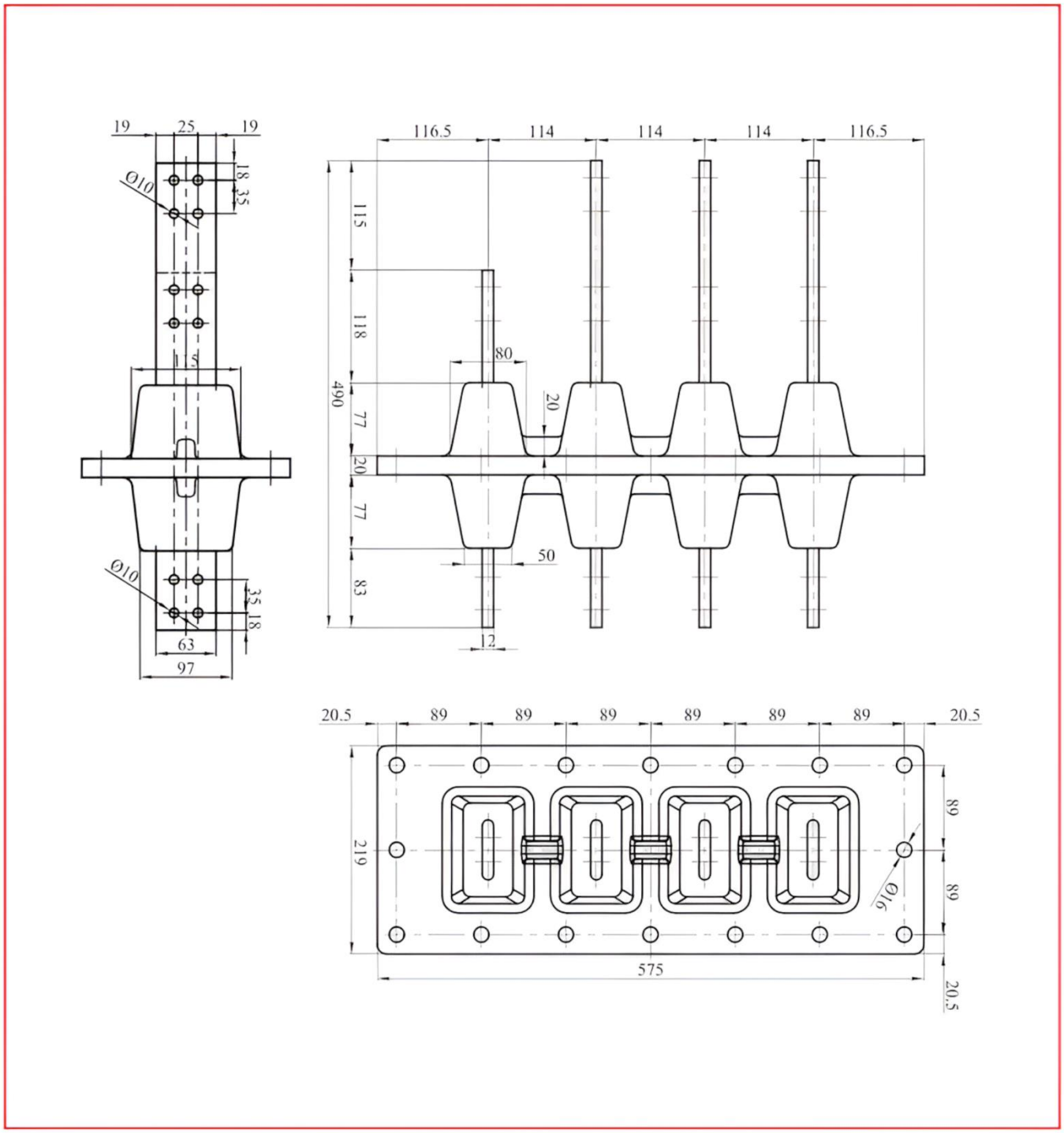
MN 1400 A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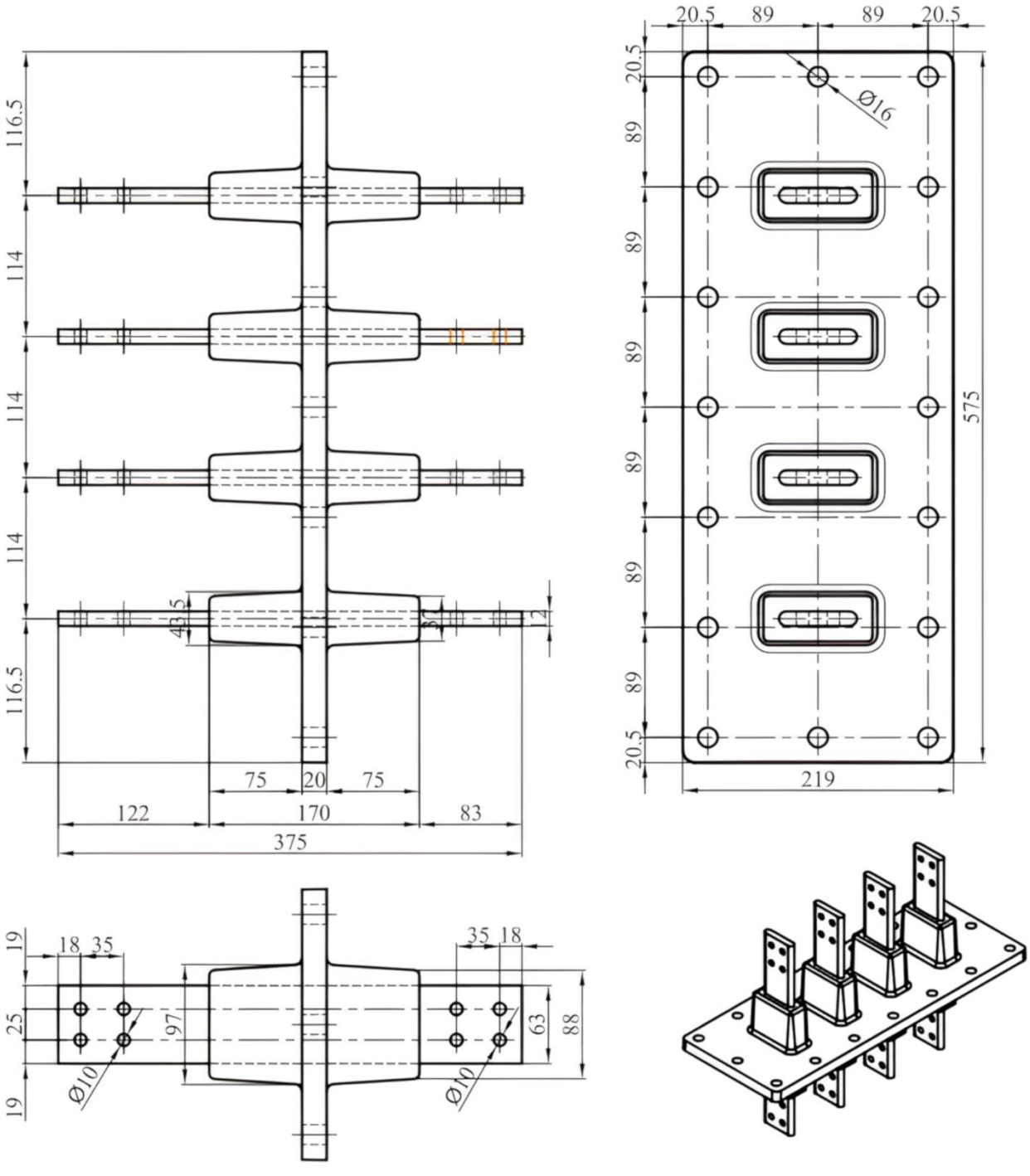
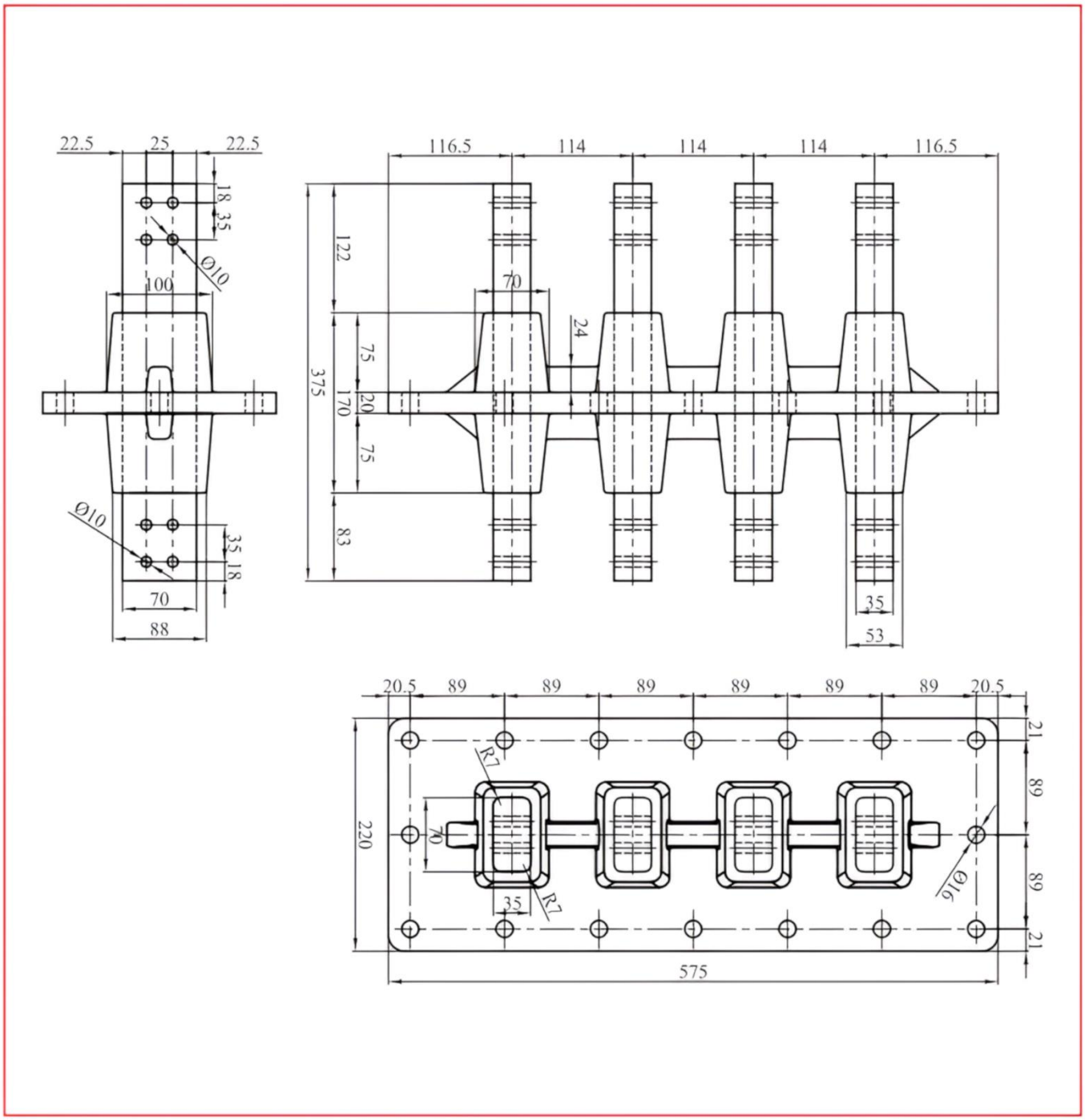
CAST RESIN MONOBLOCK (1400-1700 A)



AIR LEAKAGE TEST %100 Test Pressure : 1.5 bar Test time: 15 m
STANDARTS : BS 2562 / EN 50387
Conductor Material : El. Cu. (TIN Plated) EPOXY : HUNTSMAN CY 5997 / HY918

MN 4000 A


22.5
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R7
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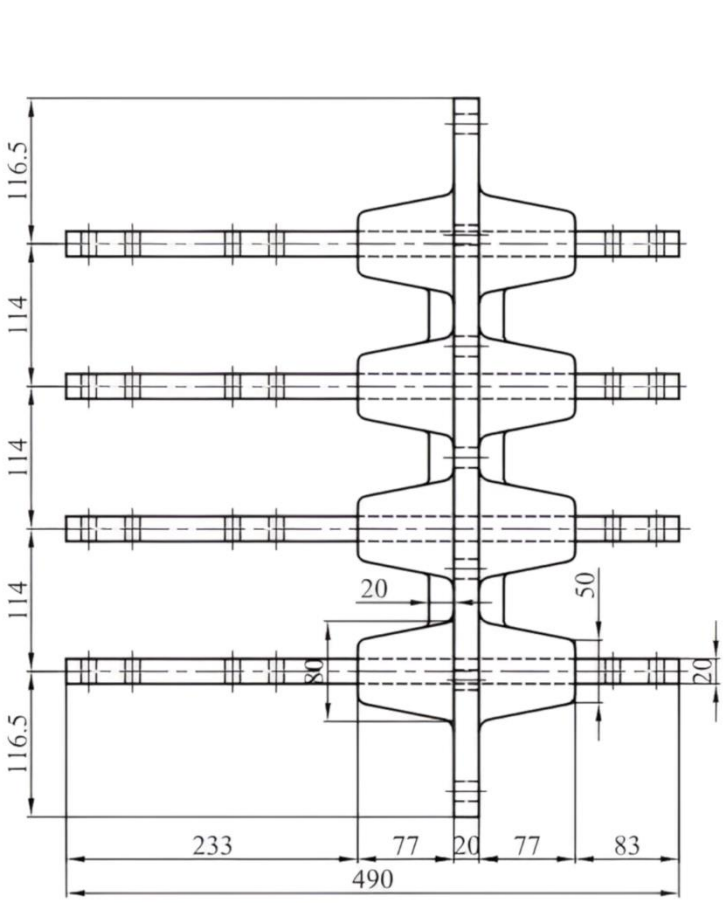
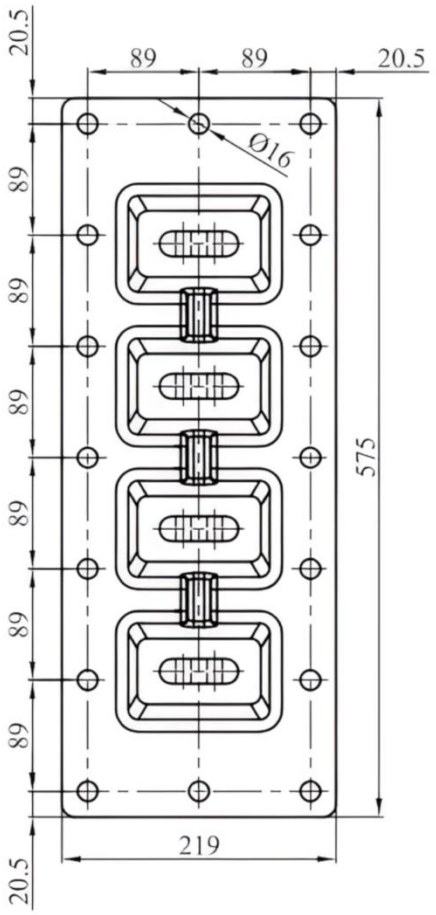
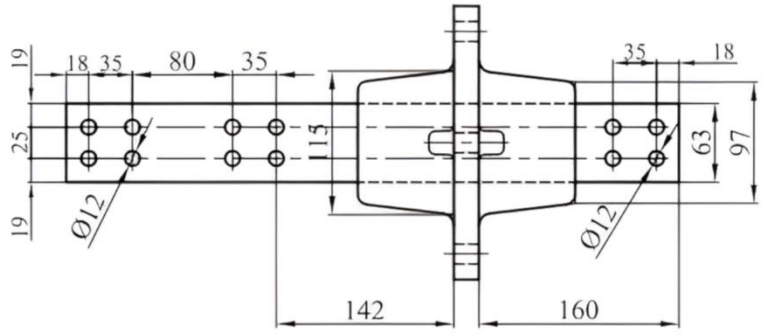
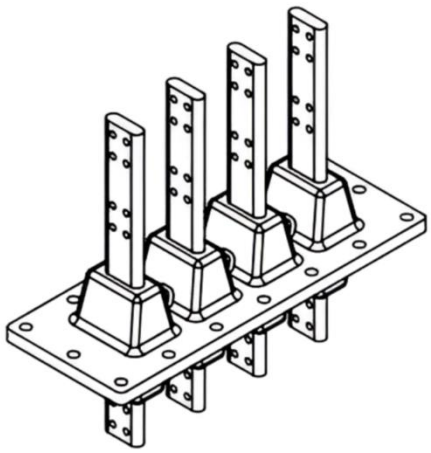
575

CAST RESIN MONOBLOCK (1.1 kV / *2500 A*)



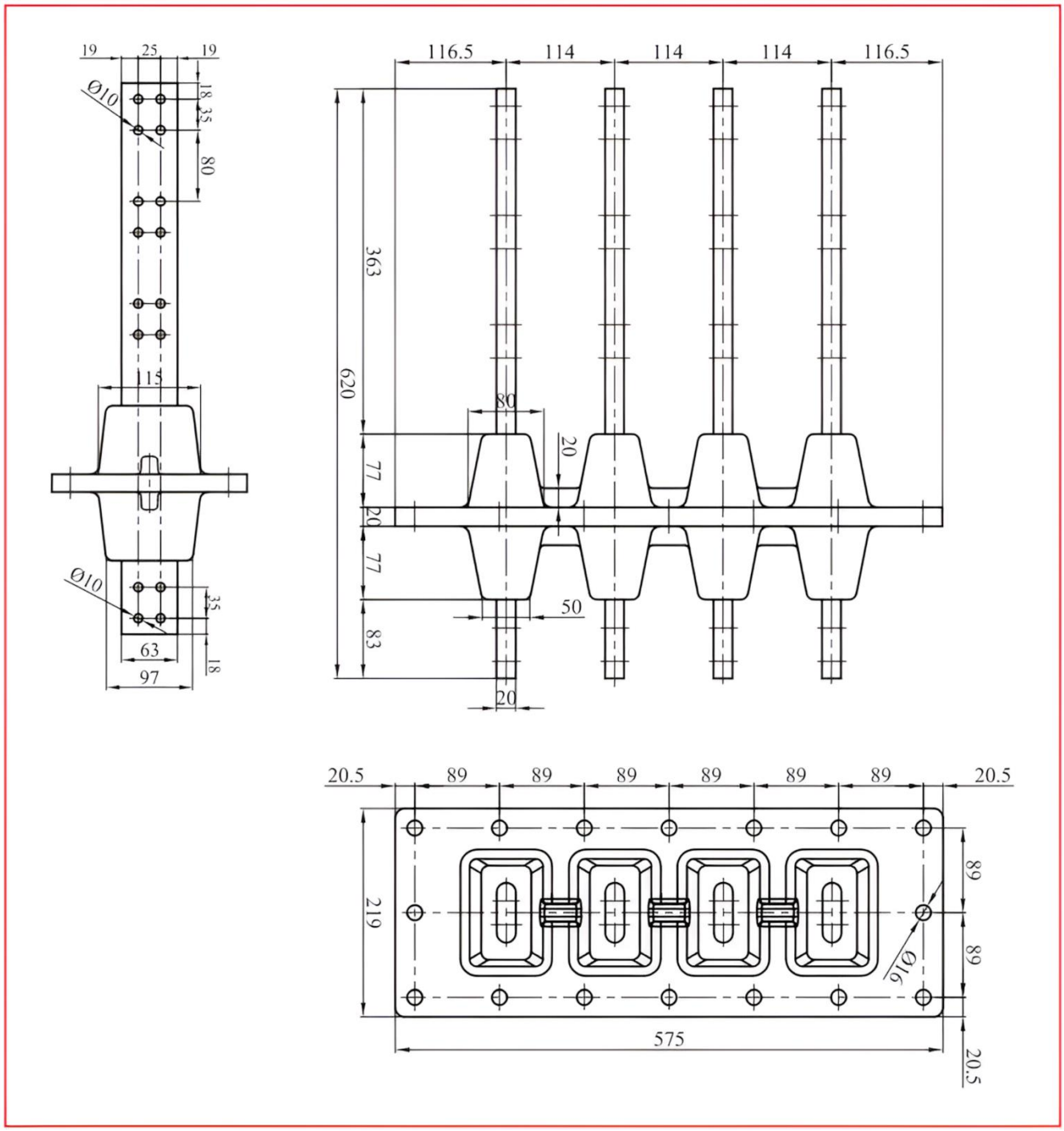






AIR LEAKAGE TEST %100 Test Pressure : 1.5 bar Test Time : 15m
STANDARTS : BS 2562 / EN 50387
Conductor Material : El .Cu. (TIN Plated) EPOXY : HUNTSMAN CY 5997/HY918

TK-MN 2500 A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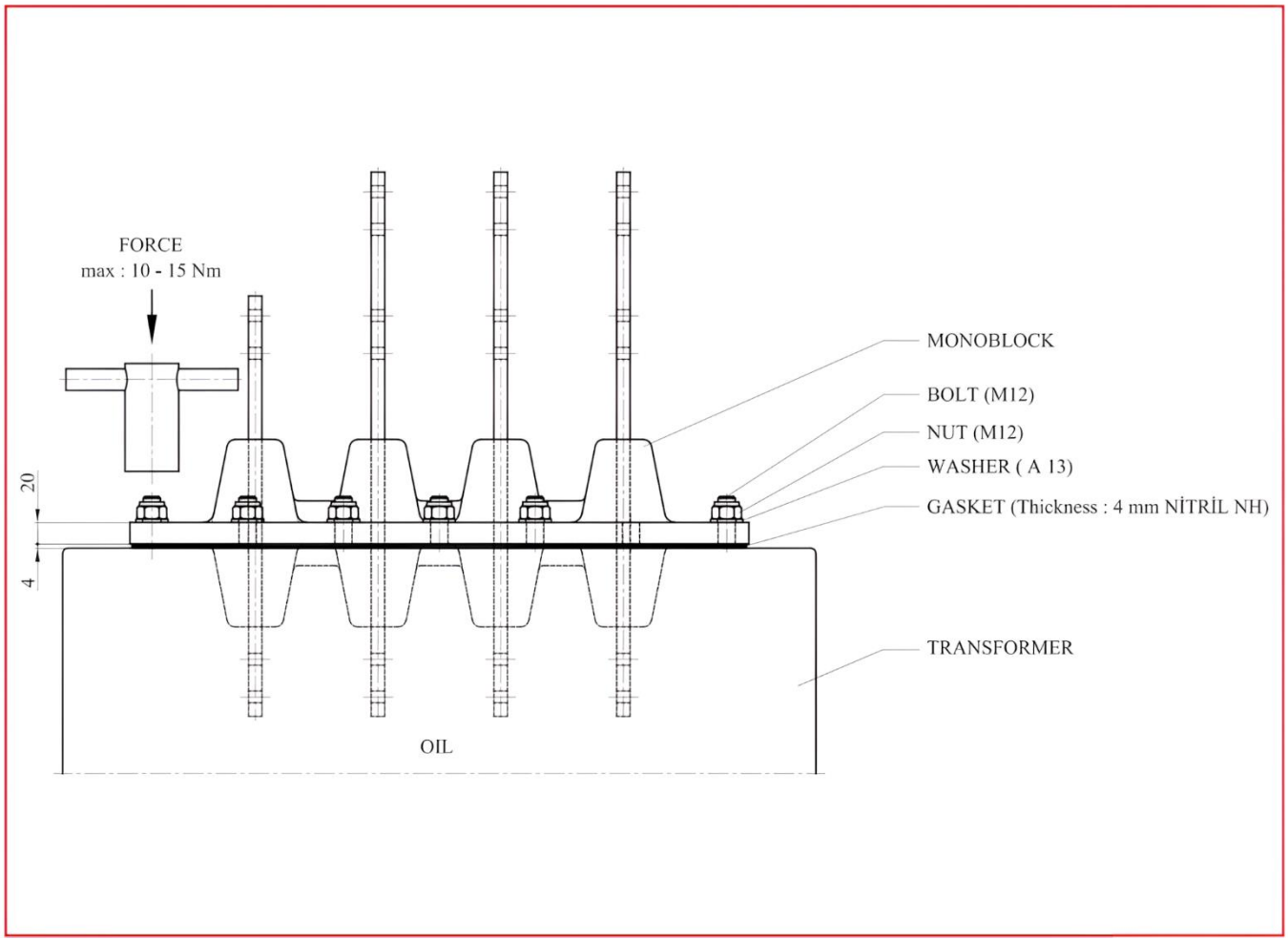
INSTRUCCIONES GENERALES DE MONTAJE DEL PASABARRAS /

GENERAL MONOBLOCK ASSEMBLING INSTRUCTIONS



TERMINAL CT DE 4 VÍAS TK CT-4 /

4 WAY CT TERMINAL TK CT-4

TERMINAL CT DE 6 VÍAS TK CT-6 /

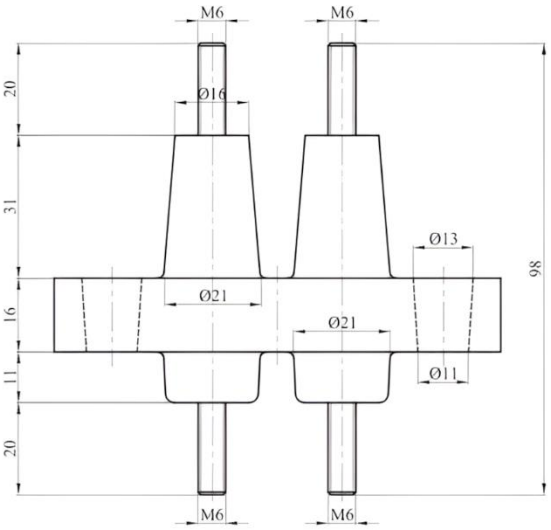
6 WAY CT TERMINAL TK CT-6

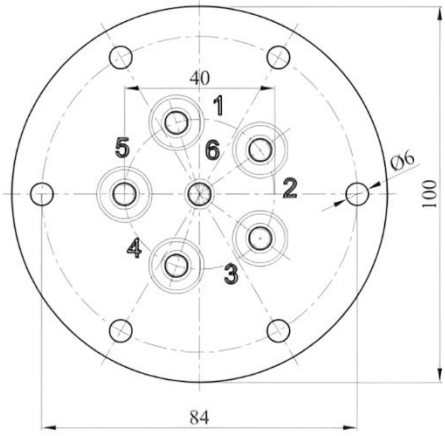
PRODUCTION

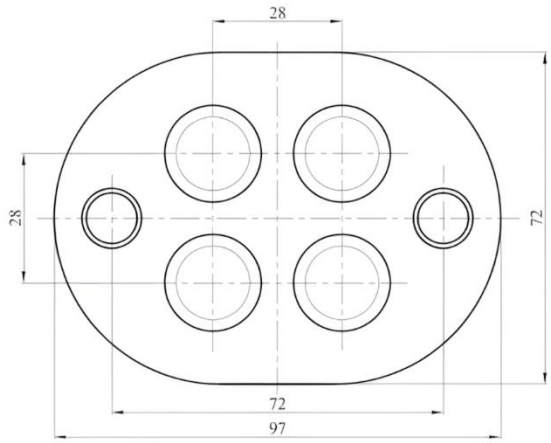
All the insert and conductive parts of the CT Terminals are manufactured with best quality material experienced in Turkey by TAKFAN.

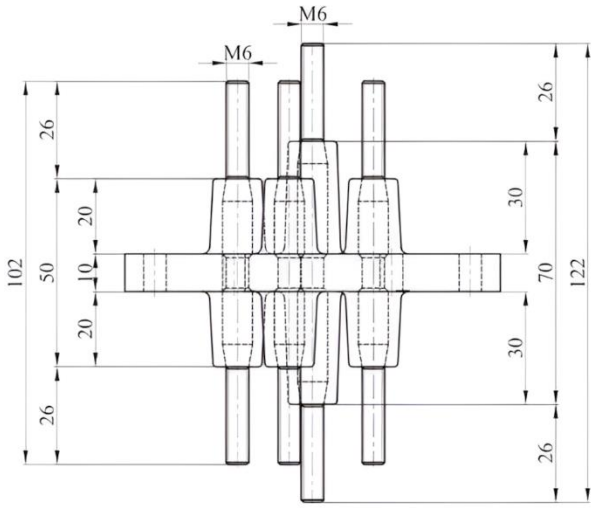
TESTING

The terminal block shall be air pressure leak tested at 1 bar for 15 minutes, where there should be no signs of air leakage.





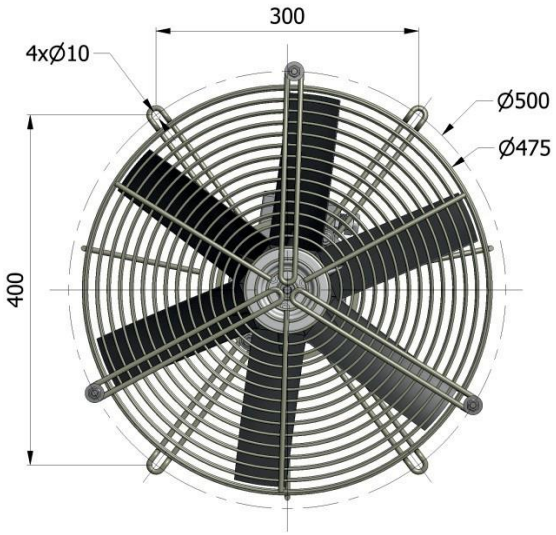




VENTILADORES

FANS

A450G-B Balanced Performance Axial



Number of Poles	6	
Type	A450G-B	
Frequency (±2%)	50 Hz	60 Hz
Voltage (3ph. ±5%)	230V Δ / 400V Y	278V Δ / 480V Y
Full Load Current	1,2 A / 0,7 A	1,4 A / 0,8 A
Input Power	230 W	320 W
Speed	960 rpm	1152 rpm
Sound Pressure (L_{PA} 1m/2m)	58 dB(A) / 53 dB(A)	62 dB(A) / 57 dB(A)
Air Flow	1,10 m³/s	1,35 m³/s
Weight (varies by options)	11 kg	

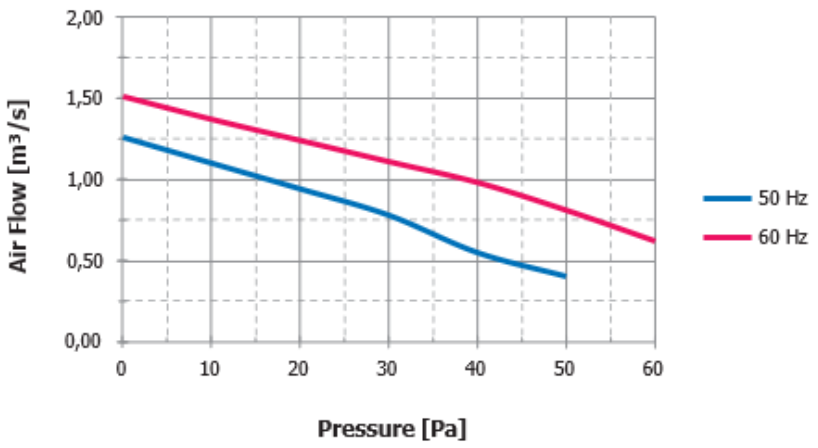
Air flow and sound pressure level (SPL) are given for free blowing operation with inlet&outlet guard grids.

SPL values at 1m are measured from side of the fan. SPL values at 2m are calculated by inverse square law.

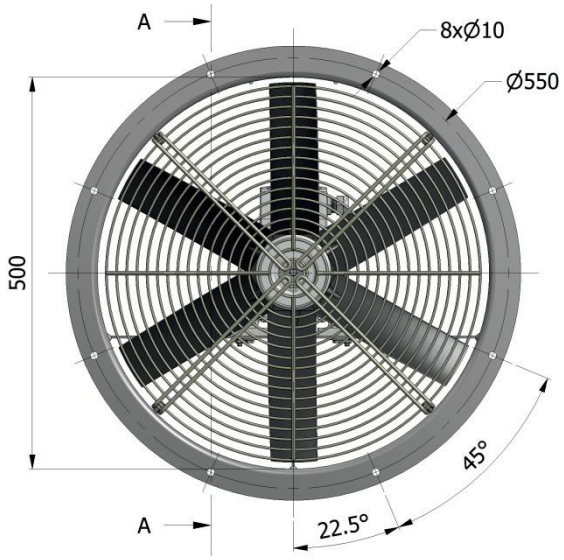
Motor Protection Class	☐ IP55	☐ IP56	☐ IP65	☐ IP66
Wings	☐ GFR Polyamide		☐ Aluminium	
Protection Grids	☐ Rear		☐ Front	
Color (housing,motor,grids)	☐ RAL7031	☐ RAL7032	☐ RAL7033	☐ Other
Operation Ambient (°C)	☐ -25~+60	☐ -25~+70	☐ -40~+60	☐ -40~+70
Corrosion Class	☐ C3	☐ C4	☐ C5	Medium/High
Thermal Protection	☐ No		☐ Yes	

Thermal protection requires an external control unit or relay to operate.

Performance



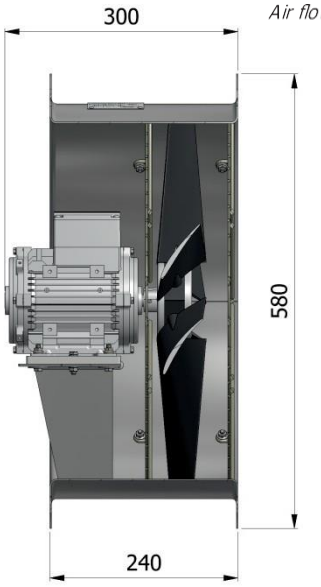
A500C-S Low Noise Axial Fan



Number of Poles	8	
Type	A500C-S5	A500C-S6
Frequency (±2%)	50 Hz	60 Hz
Voltage (3ph. ±5%)	230V Δ / 400V Y	278V Δ / 480V Y
Full Load Current	1,4 A / 0,8 A	1,4 A / 0,8 A
Input Power	220 W	230 W
Speed	720 rpm	864 rpm
Sound Pressure (L_{PA} 1m/2m)	59 dB(A) / 54 dB(A)	61 dB(A) / 56 dB(A)
Air Flow	1,21 m³/s	1,39 m³/s
Weight (varies by options)	21 kg	

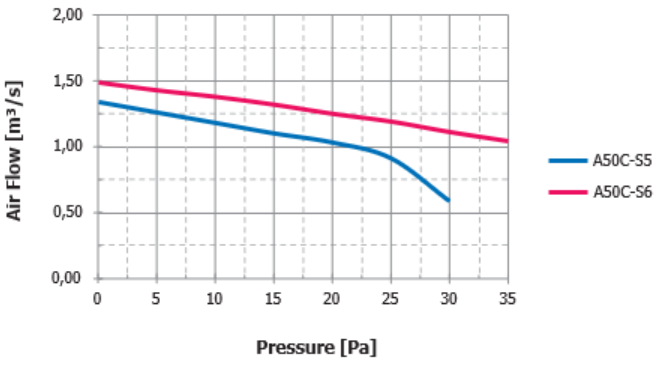
Air flow and sound pressure level (SPL) are given for free blowing operation with inlet&outlet guard grids.

SPL values at 1m are measured from side of the fan. SPL values at 2m are calculated by inverse square law.



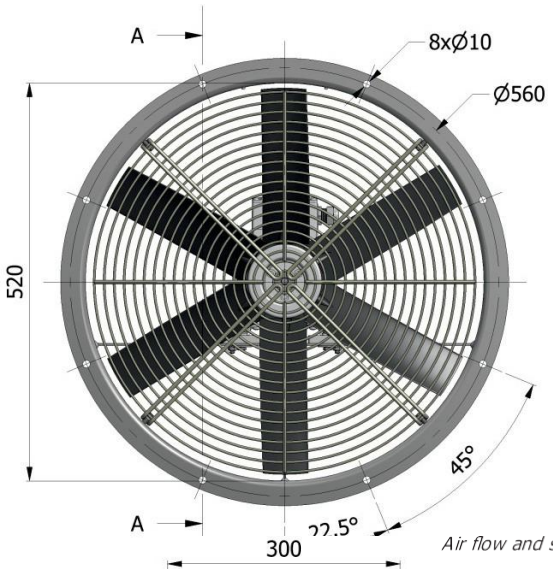
Motor Protection Class	☐ IP55	☐ IP56	☐ IP65	☐ IP66
Wings	☐ GFR Polyamide		☐ Aluminium	
Protection Grids	☐ Rear		☐ Front	
Color (housing,motor,grids)	☐ RAL7031	☐ RAL7032	☐ RAL7033	☐ Other
Operation Ambient (°C)	☐ -25~+60	☐ -25~+70	☐ -40~+60	☐ -40~+70
Corrosion Class	☐ C3	☐ C4	☐ C5	Medium/High
Thermal Protection	☐ No		☐ Yes	

Performance



Thermal protection requires an external control unit or relay to operate.

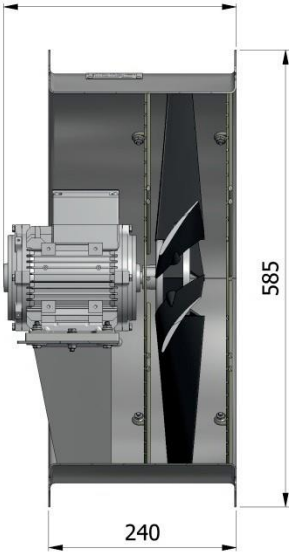
A520C-B Balanced Performance Axial Fan



Number of Poles	6	
Type	A520C-B5	A520C-B6
Frequency (±2%)	50 Hz	60 Hz
Voltage (3ph. ±5%)	230V Δ / 400V Y	278V Δ / 480V Y
Full Load Current	1,2 A / 0,7 A	1,2 A / 0,7 A
Input Power	250 W	300 W
Speed	960 rpm	1152 rpm
Sound Pressure (L_{PA} 1m/2m)	66 dB(A) / 61 dB(A)	69 dB(A) / 64 dB(A)
Air Flow	1,71 m³/s	1,80 m³/s
Weight (varies by options)	22 kg	

Air flow and sound pressure level (SPL) are given for free blowing operation with inlet&outlet guard grids.

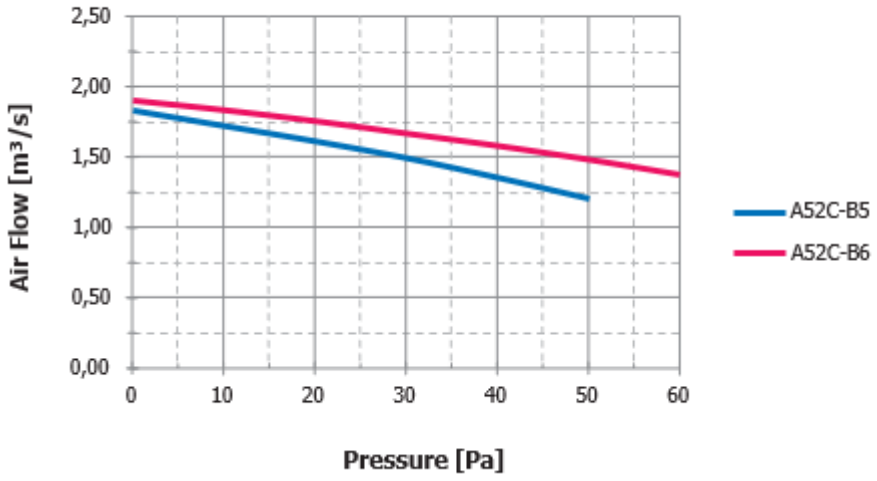
SPL values at 1m are measured from side of the fan. SPL values at 2m are calculated by inverse square law.



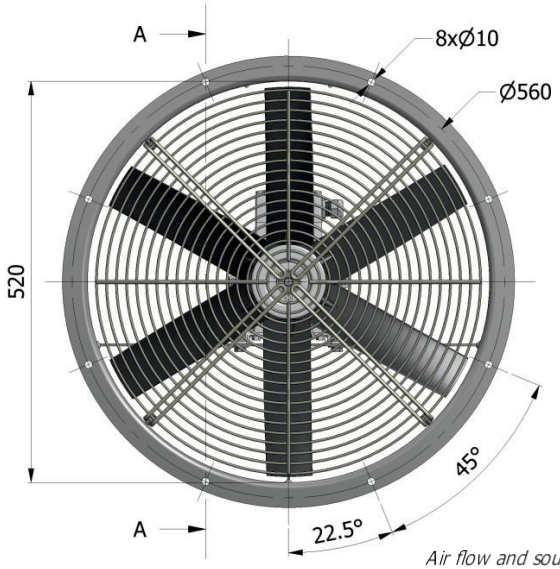
Motor Protection Class	☐ IP55	☐ IP56	☐ IP65	☐ IP66
Wings	☐ GFR Polyamide		☐ Aluminium	
Protection Grids	☐ Rear		☐ Front	
Color (housing,motor,grids)	☐ RAL7031	☐ RAL7032	☐ RAL7033	☐ Other
Operation Ambient (°C)	☐ -25~+60	☐ -25~+70	☐ -40~+60	☐ -40~+70
Corrosion Class	☐ C3	☐ C4	☐ C5	Medium/High
Thermal Protection	☐ No		☐ Yes	

Thermal protection requires an external control unit or relay to operate.

Performance



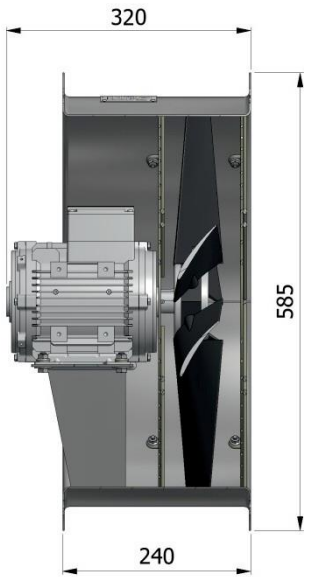
A520C-F Flow Optimized Axial Fan



Number of Poles	4	
Type	A520C-F5	A520C-F6
Frequency (±2%)	50 Hz	60 Hz
Voltage (3ph. ±5%)	230V Δ / 400V Y	278V Δ / 480V Y
Full Load Current	2,8 A / 1,6 A	2,8 A / 1,6 A
Input Power	680 W	790 W
Speed	1440 rpm	1728 rpm
Sound Pressure (L_{PA} 1m/2m)	77 dB(A) / 72 dB(A)	81 dB(A) / 76 dB(A)
Air Flow	2,63 m³/s	2,74 m³/s
Weight (varies by options)	24 kg	

Air flow and sound pressure level (SPL) are given for free blowing operation with inlet&outlet guard grids.

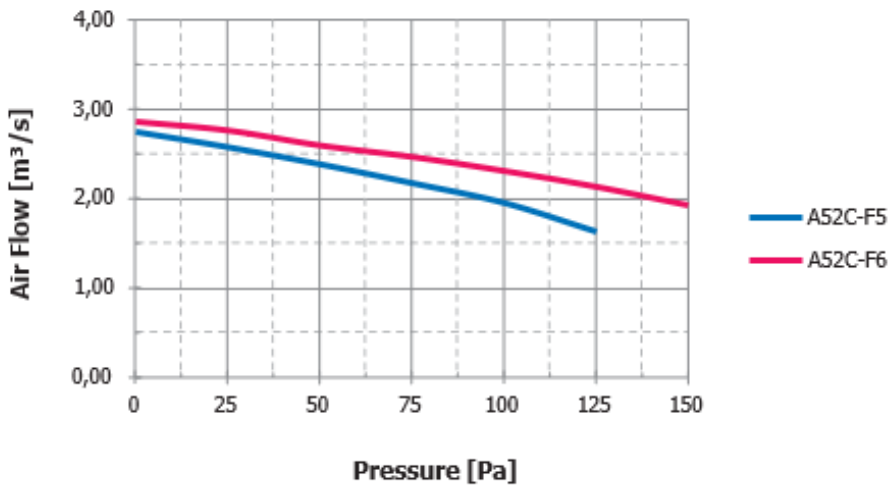
SPL values at 1m are measured from side of the fan. SPL values at 2m are calculated by inverse square law.



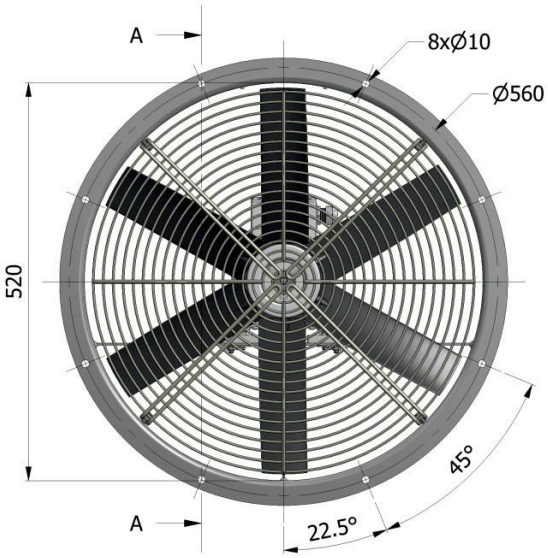
Motor Protection Class	☐ IP55	☐ IP56	☐ IP65	☐ IP66
Wings	☐ GFR Polyamide		☐ Aluminium	
Protection Grids	☐ Rear		☐ Front	
Color (housing,motor,grids)	☐ RAL7031	☐ RAL7032	☐ RAL7033	☐ Other
Operation Ambient (°C)	☐ -25~+60	☐ -25~+70	☐ -40~+60	☐ -40~+70
Corrosion Class	☐ C3	☐ C4	☐ C5	Medium/High
Thermal Protection	☐ No		☐ Yes	

Thermal protection requires an external control unit or relay to operate.

Performance



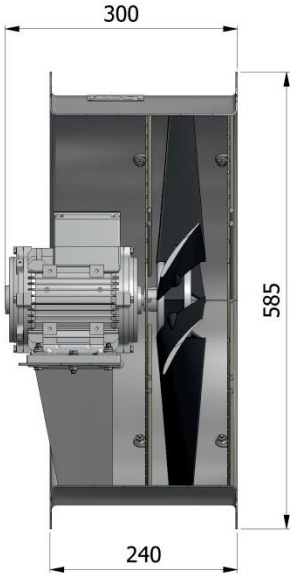
A520C-S Low Noise Axial Fan *C-F*



Number of Poles	8	
Type	A520C-S5	A520C-S6
Frequency (±2%)	50 Hz	60 Hz
Voltage (3ph. ±5%)	230V Δ / 400V Y	278V Δ / 480V Y
Full Load Current	1,4 A / 0,8 A	1,4 A / 0,8 A
Input Power	230 W	250 W
Speed	720 rpm	864 rpm
Sound Pressure (L_{PA} 1m/2m)	60 dB(A) / 55 dB(A)	63 dB(A) / 58 dB(A)
Air Flow	1,35 m³/s	1,53 m³/s
Weight (varies by options)	22 kg	

Air flow and sound pressure level (SPL) are given for free blowing operation with inlet&outlet guard grids.

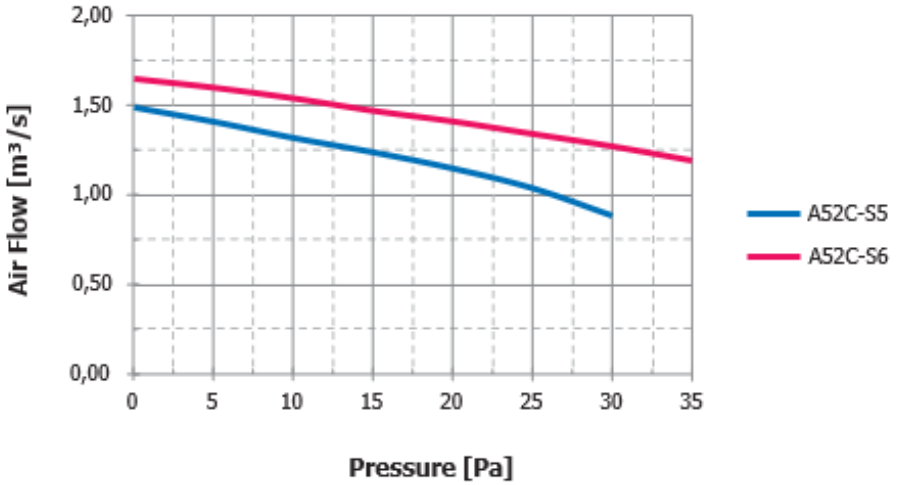
SPL values at 1m are measured from side of the fan. SPL values at 2m are calculated by inverse square law.



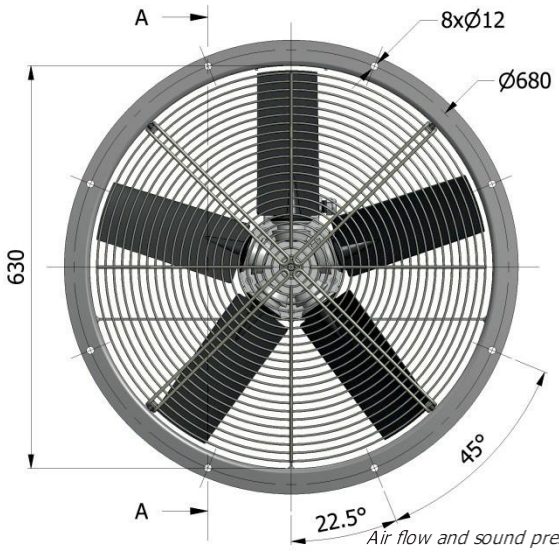
Motor Protection Class	☐ IP55	☐ IP56	☐ IP65	☐ IP66
Wings	☐ GFR Polyamide		☐ Aluminium	
Protection Grids	☐ Rear		☐ Front	
Color (housing,motor,grids)	☐ RAL7031	☐ RAL7032	☐ RAL7033	☐ Other
Operation Ambient (°C)	☐ -25~+60	☐ -25~+70	☐ -40~+60	☐ -40~+70
Corrosion Class	☐ C3	☐ C4	☐ C5	Medium/High
Thermal Protection	☐ No		☐ Yes	

Thermal protection requires an external control unit or relay to operate.

Performance



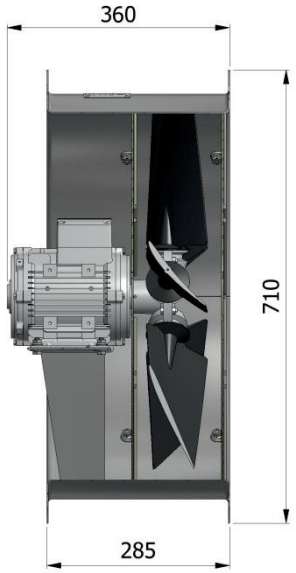
A630C-B Balanced Performance Axial Fan



Number of Poles	6	
Type	A630C-B5	A630C-B6
Frequency (±2%)	50 Hz	60 Hz
Voltage (3ph. ±5%)	230V Δ / 400V Y	278V Δ / 480V Y
Full Load Current	1,9 A / 1,1 A	1,9 A / 1,1 A
Input Power	450 W	480 W
Speed	960 rpm	1152 rpm
Sound Pressure (L_{PA} 1m/2m)	67 dB(A) / 62 dB(A)	72 dB(A) / 67 dB(A)
Air Flow	2,81 m³/s	2,90 m³/s
Weight (varies by options)	29 kg	

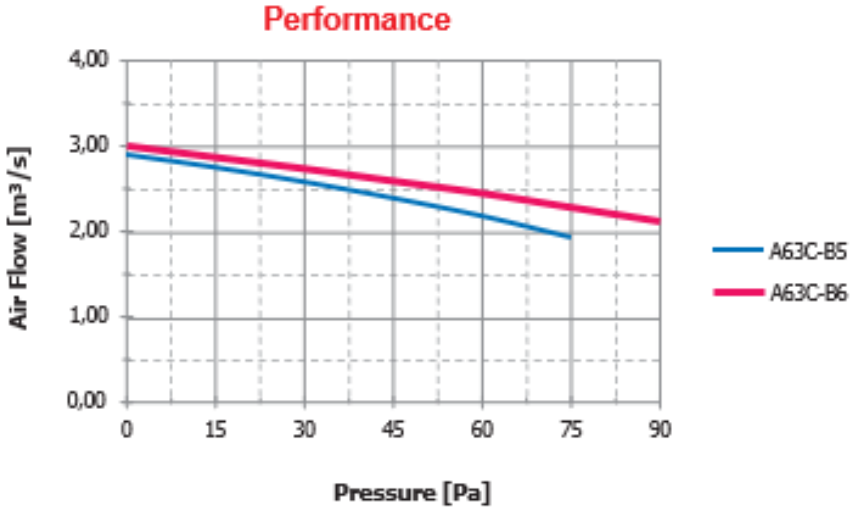
Air flow and sound pressure level (SPL) are given for free blowing operation with inlet&outlet guard grids.

SPL values at 1m are measured from side of the fan. SPL values at 2m are calculated by inverse square law.

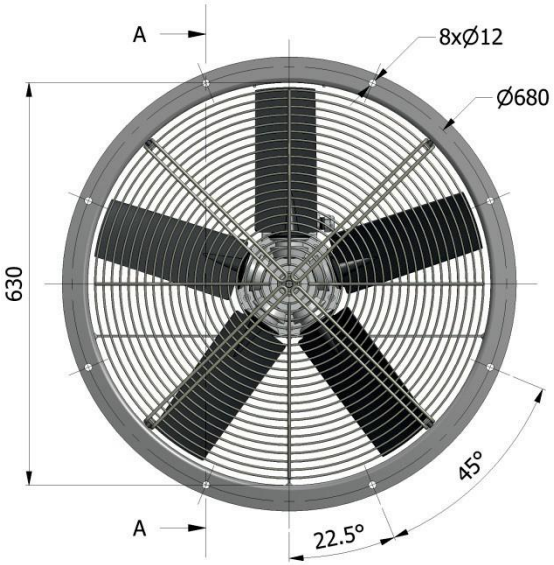


Motor Protection Class	☐ IP55	☐ IP56	☐ IP65	☐ IP66
Wings	☐ GFR Polyamide		☐ Aluminium	
Protection Grids	☐ Rear		☐ Front	
Color (housing,motor,grids)	☐ RAL7031	☐ RAL7032	☐ RAL7033	☐ Other
Operation Ambient (°C)	☐ -25~+60	☐ -25~+70	☐ -40~+60	☐ -40~+70
Corrosion Class	☐ C3	☐ C4	☐ C5	Medium/High
Thermal Protection	☐ No		☐ Yes	

Thermal protection requires an external control unit or relay to operate.



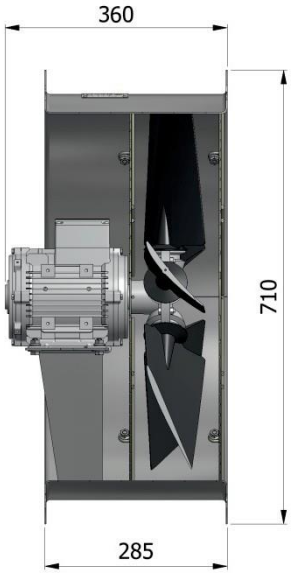
A630C-F Flow Optimized Axial Fan



Number of Poles	4	
Type	A630C-F5	A630C-F6
Frequency (±2%)	50 Hz	60 Hz
Voltage (3ph. ±5%)	230V Δ / 400V Y	278V Δ / 480V Y
Full Load Current	3,3 A / 1,9 A	3,3 A / 1,9 A
Input Power	830 W	900 W
Speed	1440 rpm	1728 rpm
Sound Pressure (L_{PA} 1m/2m)	78 dB(A) / 73 dB(A)	83 dB(A) / 78 dB(A)
Air Flow	3,65 m³/s	3,61 m³/s
Weight (varies by options)	31 kg	

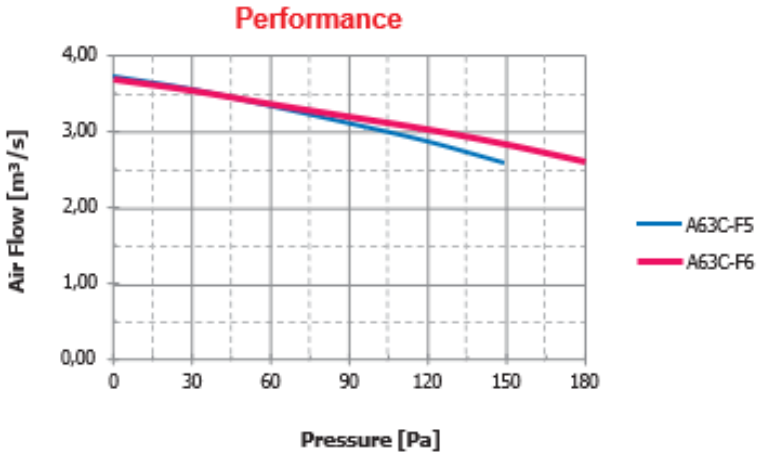
Air flow and sound pressure level (SPL) are given for free blowing operation with inlet&outlet guard grids.

SPL values at 1m are measured from side of the fan. SPL values at 2m are calculated by inverse square law.

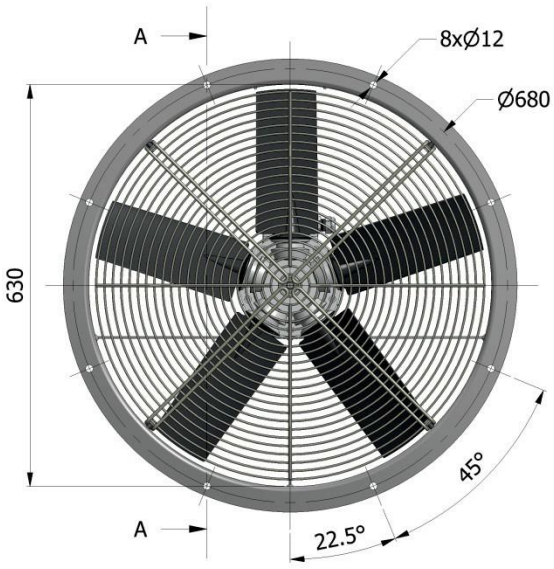


Motor Protection Class	☐ IP55	☐ IP56	☐ IP65	☐ IP66
Wings	☐ GFR Polyamide		☐ Aluminium	
Protection Grids	☐ Rear		☐ Front	
Color (housing,motor,grids)	☐ RAL7031	☐ RAL7032	☐ RAL7033	☐ Other
Operation Ambient (°C)	☐ -25~+60	☐ -25~+70	☐ -40~+60	☐ -40~+70
Corrosion Class	☐ C3	☐ C4	☐ C5	Medium/High
Thermal Protection	☐ No		☐ Yes	

Thermal protection requires an external control unit or relay to operate.



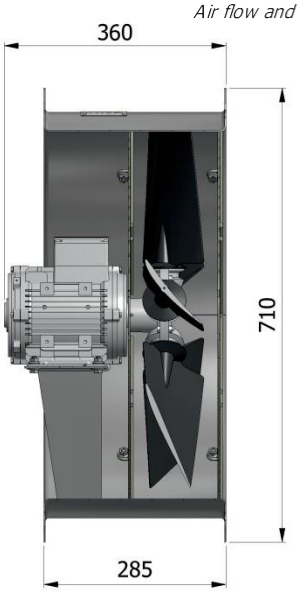
A630C-S Low Noise Axial Fan



Number of Poles	8	
Type	A630C-S5	A630C-S6
Frequency (±2%)	50 Hz	60 Hz
Voltage (3ph. ±5%)	230V Δ / 400V Y	278V Δ / 480V Y
Full Load Current	1,7 A / 1,0 A	1,7 A / 1,0 A
Input Power	280 W	370 W
Speed	720 rpm	864 rpm
Sound Pressure (L_{PA} 1m/2m)	61 dB(A) / 56 dB(A)	65 dB(A) / 60 dB(A)
Air Flow	2,35 m³/s	2,52 m³/s
Weight (varies by options)	30 kg	

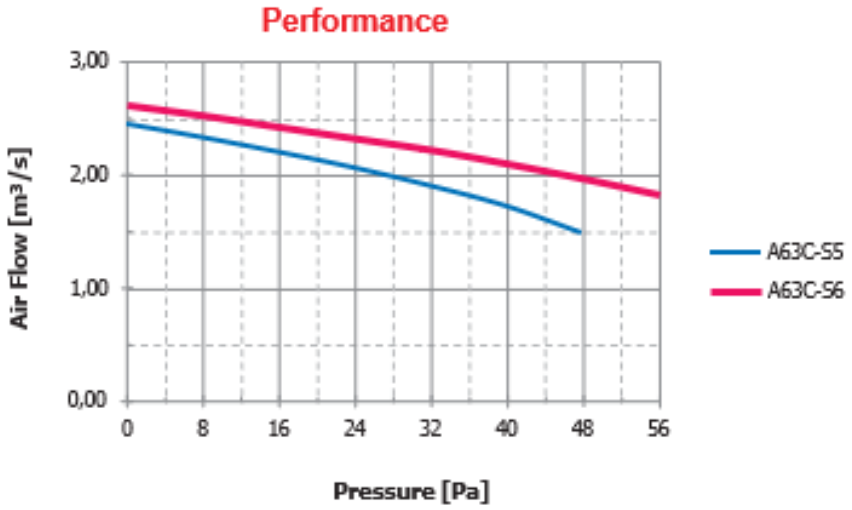
Air flow and sound pressure level (SPL) are given for free blowing operation with inlet&outlet guard grids.

SPL values at 1m are measured from side of the fan. SPL values at 2m are calculated by inverse square law.

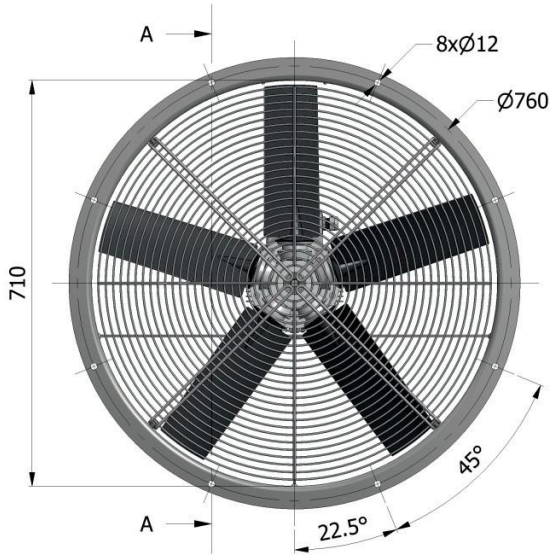


Motor Protection Class	☐ IP55	☐ IP56	☐ IP65	☐ IP66
Wings	☐ GFR Polyamide		☐ Aluminium	
Protection Grids	☐ Rear		☐ Front	
Color (housing,motor,grids)	☐ RAL7031	☐ RAL7032	☐ RAL7033	☐ Other
Operation Ambient (°C)	☐ -25~+60	☐ -25~+70	☐ -40~+60	☐ -40~+70
Corrosion Class	☐ C3	☐ C4	☐ C5	Medium/High
Thermal Protection	☐ No		☐ Yes	

Thermal protection requires an external control unit or relay to operate.



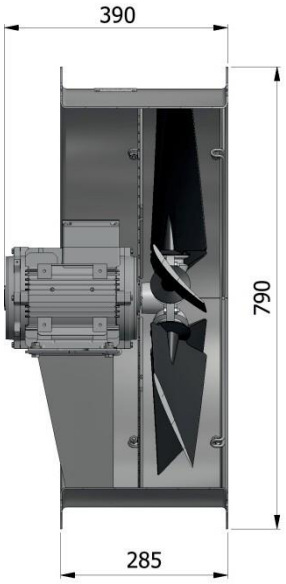
A710C-B Balance Performance Axial



Number of Poles	6	
Type	A710C-B5	A710C-B6
Frequency (±2%)	50 Hz	60 Hz
Voltage (3ph. ±5%)	230V Δ / 400V Y	278V Δ / 480V Y
Full Load Current	3,7 A / 2,1 A	3,7 A / 2,1 A
Input Power	830 W	880 W
Speed	960 rpm	1152 rpm
Sound Pressure (L_{PA} 1m/2m)	75 dB(A) / 70 dB(A)	78 dB(A) / 73 dB(A)
Air Flow	4,48 m³/s	4,37 m³/s
Weight (varies by options)	41 kg	

Air flow and sound pressure level (SPL) are given for free blowing operation with inlet&outlet guard grids.

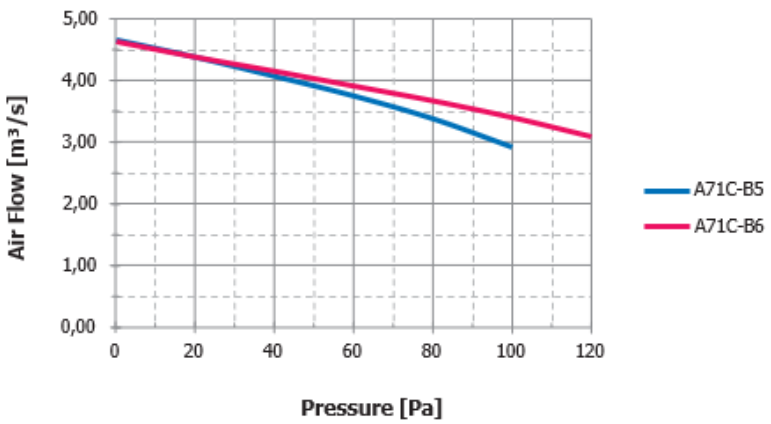
SPL values at 1m are measured from side of the fan. SPL values at 2m are calculated by inverse square law.



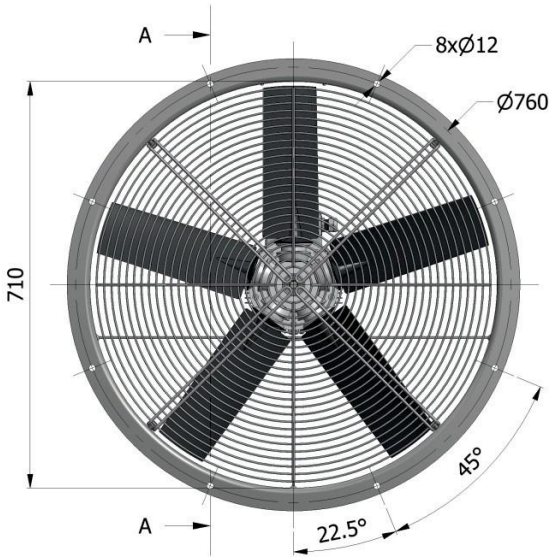
Motor Protection Class	☐ IP55	☐ IP56	☐ IP65	☐ IP66
Wings	☐ GFR Polyamide		☐ Aluminium	
Protection Grids	☐ Rear		☐ Front	
Color (housing,motor,grids)	☐ RAL7031	☐ RAL7032	☐ RAL7033	☐ Other
Operation Ambient (°C)	☐ -25~+60	☐ -25~+70	☐ -40~+60	☐ -40~+70
Corrosion Class	☐ C3	☐ C4	☐ C5	Medium/High
Thermal Protection	☐ No		☐ Yes	

Thermal protection requires an external control unit or relay to operate.

Performance



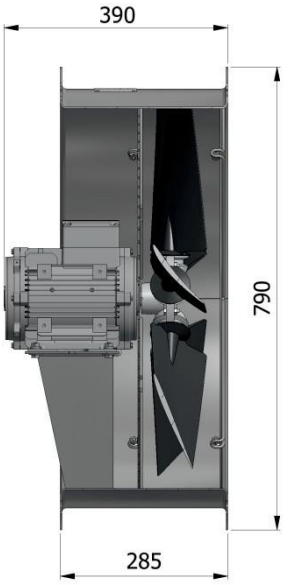
A710C-S Low Noise Axial Fan



Number of Poles	8	
Type	A710C-S5	A710C-S6
Frequency (±2%)	50 Hz	60 Hz
Voltage (3ph. ±5%)	230V Δ / 400V Y	278V Δ / 480V Y
Full Load Current	2,1 A / 1,2 A	2,3 A / 1,3 A
Input Power	460 W	560 W
Speed	720 rpm	864 rpm
Sound Pressure (L_{PA} 1m/2m)	67 dB(A) / 62 dB(A)	71 dB(A) / 66 dB(A)
Air Flow	3,28 m³/s	3,51 m³/s
Weight (varies by options)	41 kg	

Air flow and sound pressure level (SPL) are given for free blowing operation with inlet&outlet guard grids.

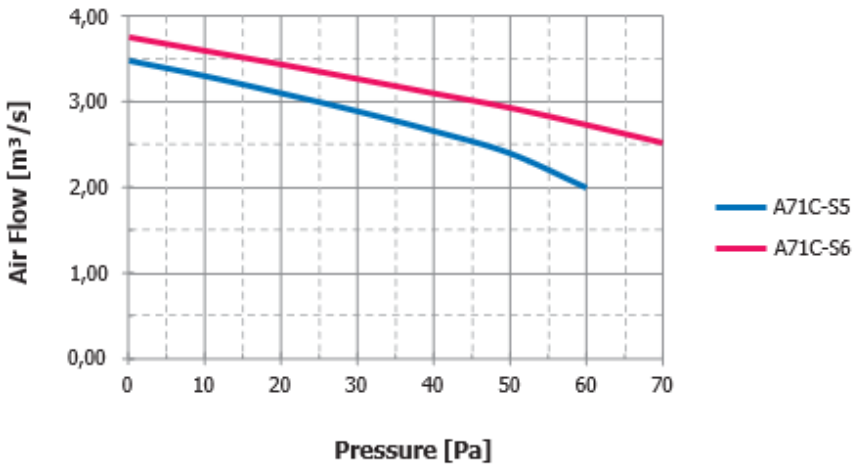
SPL values at 1m are measured from side of the fan. SPL values at 2m are calculated by inverse square law.



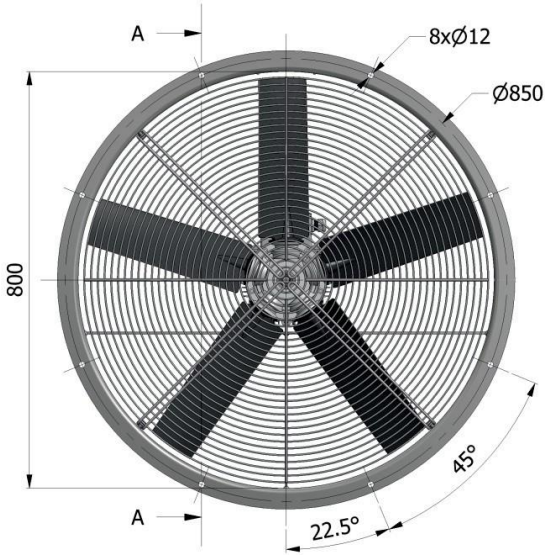
Motor Protection Class	☐ IP55	☐ IP56	☐ IP65	☐ IP66
Wings	☐ GFR Polyamide		☐ Aluminium	
Protection Grids	☐ Rear		☐ Front	
Color (housing,motor,grids)	☐ RAL7031	☐ RAL7032	☐ RAL7033	☐ Other
Operation Ambient (°C)	☐ -25~+60	☐ -25~+70	☐ -40~+60	☐ -40~+70
Corrosion Class	☐ C3	☐ C4	☐ C5	Medium/High
Thermal Protection	☐ No		☐ Yes	

Thermal protection requires an external control unit or relay to operate.

Performance



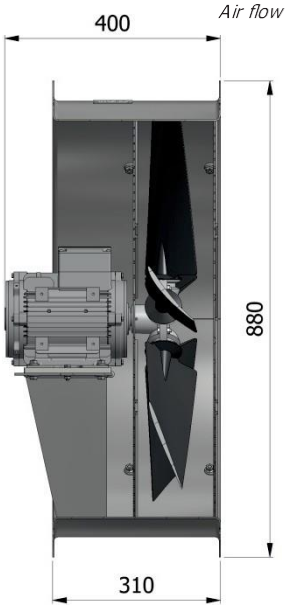
A800C-B Balanced Performance Axial Fan



Number of Poles	6	
Type	A800C-F5	A800C-F6
Frequency (±2%)	50 Hz	60 Hz
Voltage (3ph. ±5%)	230V Δ / 400V Y	278V Δ / 480V Y
Full Load Current	5,0 A / 2,9 A	5,2 A / 3,0 A
Input Power	900 W	1100 W
Speed	960 rpm	1152 rpm
Sound Pressure (L_{PA} 1m/2m)	76 dB(A) / 71 dB(A)	81 dB(A) / 76 dB(A)
Air Flow	5,52 m³/s	5,69 m³/s
Weight (varies by options)	50 kg	

Air flow and sound pressure level (SPL) are given for free blowing operation with inlet&outlet guard grids.

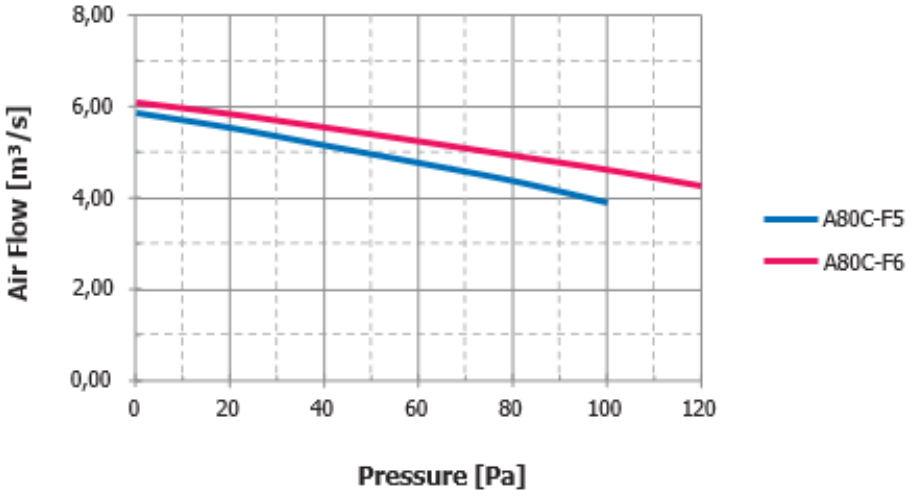
SPL values at 1m are measured from side of the fan. SPL values at 2m are calculated by inverse square law.



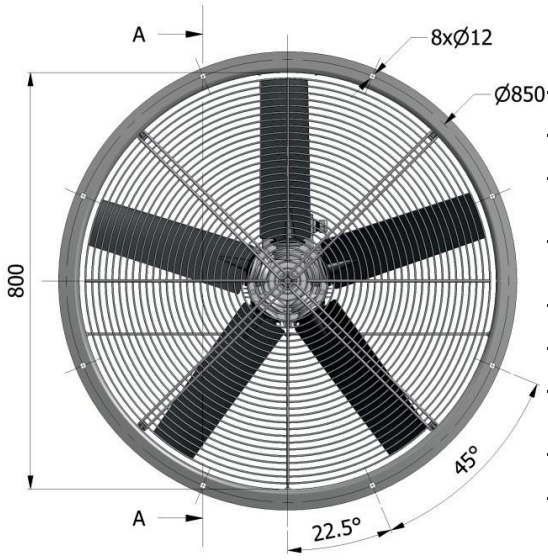
Motor Protection Class	☐ IP55	☐ IP56	☐ IP65	☐ IP66
Wings	☐ GFR Polyamide		☐ Aluminium	
Protection Grids	☐ Rear		☐ Front	
Color (housing,motor,grids)	☐ RAL7031	☐ RAL7032	☐ RAL7033	☐ Other
Operation Ambient (°C)	☐ -25~+60	☐ -25~+70	☐ -40~+60	☐ -40~+70
Corrosion Class	☐ C3	☐ C4	☐ C5	Medium/High
Thermal Protection	☐ No		☐ Yes	

Thermal protection requires an external control unit or relay to operate.

Performance



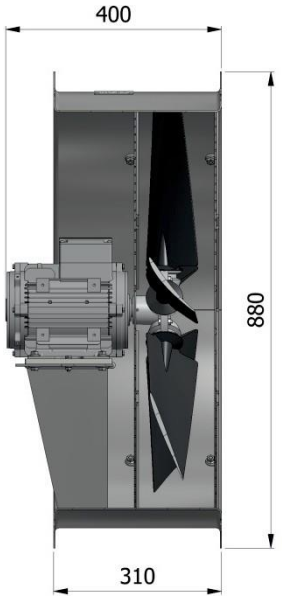
A800C-F Flow Optimized Axial Fan



Number of Poles	6	
Type	A800C-F5	A800C-F6
Frequency (±2%)	50 Hz	60 Hz
Voltage (3ph. ±5%)	230V Δ / 400V Y	278V Δ / 480V Y
Full Load Current	5,0 A / 2,9 A	5,2 A / 3,0 A
Input Power	900 W	1100 W
Speed	960 rpm	1152 rpm
Sound Pressure (L_{PA} 1m/2m)	76 / 71 dB(A)	81 / 76 dB(A)
Air Flow	5,52 m³/s	5,69 m³/s
Weight (varies by options)	50 kg	

Air flow and sound pressure level (SPL) are given for free blowing operation with inlet&outlet guard grids.

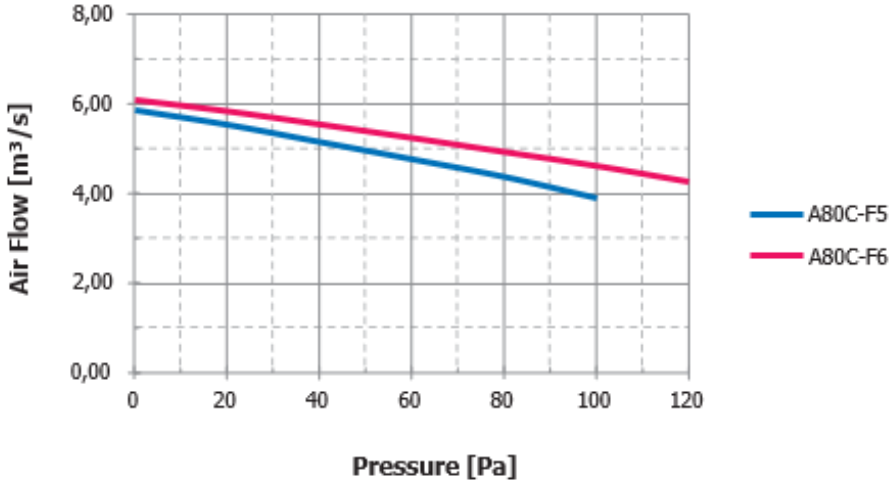
SPL values at 1m are measured from side of the fan. SPL values at 2m are calculated by inverse square law.



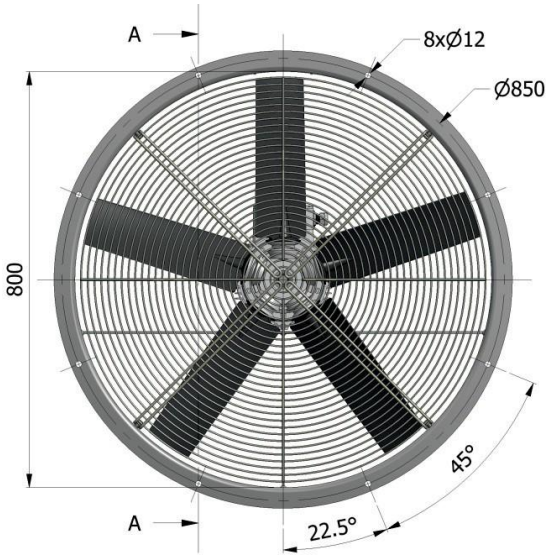
Motor Protection Class	☐ IP55	☐ IP56	☐ IP65	☐ IP66
Wings	☐ GFR Polyamide		☐ Aluminium	
Protection Grids	☐ Rear		☐ Front	
Color (housing,motor,grids)	☐ RAL7031	☐ RAL7032	☐ RAL7033	☐ Other
Operation Ambient (°C)	☐ -25~+60	☐ -25~+70	☐ -40~+60	☐ -40~+70
Corrosion Class	☐ C3	☐ C4	☐ C5	Medium/High
Thermal Protection	☐ No		☐ Yes	

Thermal protection requires an external control unit or relay to operate.

Performance



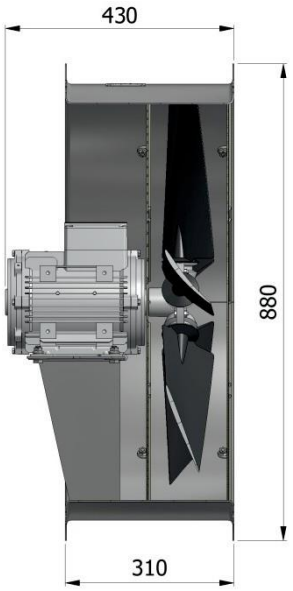
A800C-S Low Noise Axial Fan



Number of Poles	12	
Type	A800C-S5	A800C-S6
Frequency (±2%)	50 Hz	60 Hz
Voltage (3ph. ±5%)	230V Δ / 400V Y	278V Δ / 480V Y
Full Load Current	3,1 A / 1,8 A	3,3 A / 1,9 A
Input Power	370 W	560 W
Speed	480 rpm	576 rpm
Sound Pressure (L_{PA} 1m/2m)	58 dB(A) / 53 dB(A)	61 dB(A) / 56 dB(A)
Air Flow	3,28 m³/s	3,84 m³/s
Weight (varies by options)	54 kg	

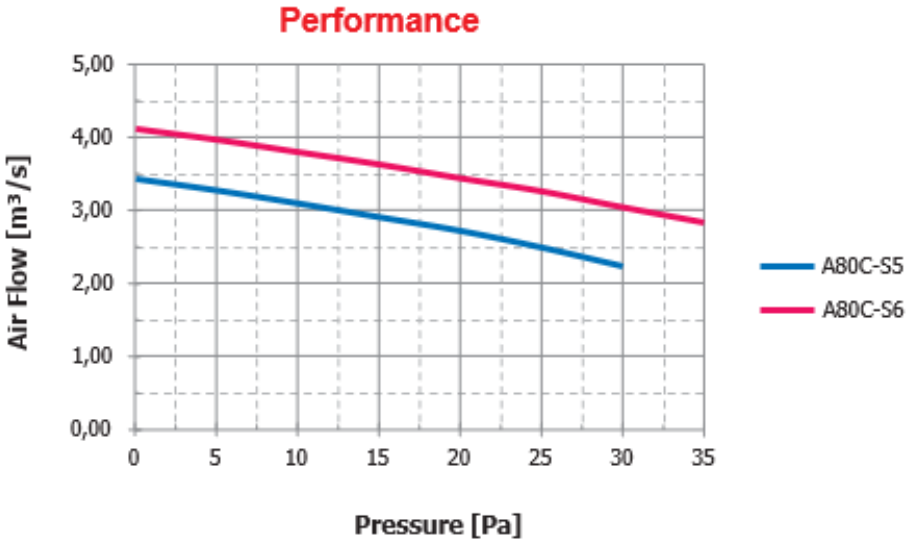
Air flow and sound pressure level (SPL) are given for free blowing operation with inlet&outlet guard grids.

SPL values at 1m are measured from side of the fan. SPL values at 2m are calculated by inverse square law.

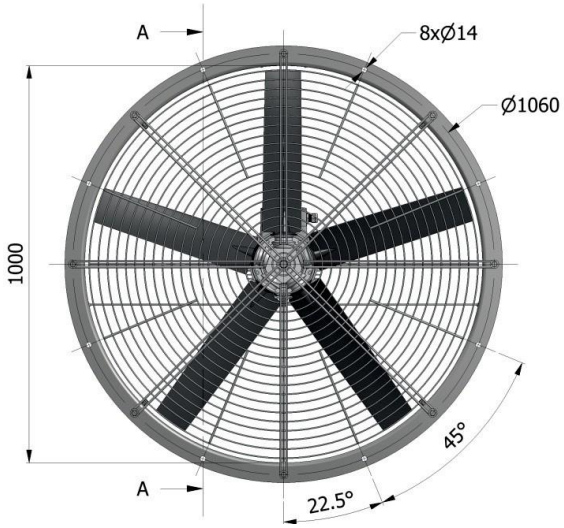


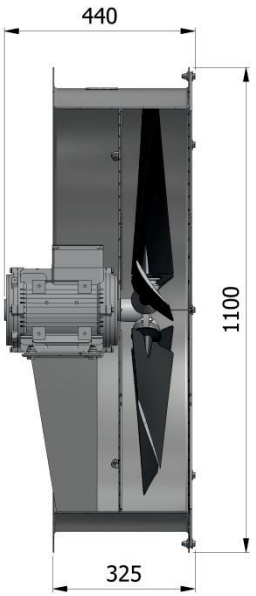
Motor Protection Class	☐ IP55	☐ IP56	☐ IP65	☐ IP66
Wings	☐ GFR Polyamide		☐ Aluminium	
Protection Grids	☐ Rear		☐ Front	
Color (housing,motor,grids)	☐ RAL7031	☐ RAL7032	☐ RAL7033	☐ Other
Operation Ambient (°C)	☐ -25~+60	☐ -25~+70	☐ -40~+60	☐ -40~+70
Corrosion Class	☐ C3	☐ C4	☐ C5	Medium/High
Thermal Protection	☐ No		☐ Yes	

Thermal protection requires an external control unit or relay to operate.



A1000C-S Low Noise Axial Fan





Number of Poles	12	
Type	A1000C-S5	A1000C-S6
Frequency (±2%)	50 Hz	60 Hz
Voltage (3ph. ±5%)	230V Δ / 400V Y	278V Δ / 480V Y
Full Load Current	3,3 A / 1,9 A	3,3 A / 1,9 A
Input Power	560 W	620 W
Speed	480 rpm	576 rpm
Sound Pressure (L_{PA} 1m/2m)	63 dB(A) / 58 dB(A)	66 dB(A) / 61 dB(A)
Air Flow	5,18 m³/s	5,08 m³/s
Weight (varies by options)	62 kg	

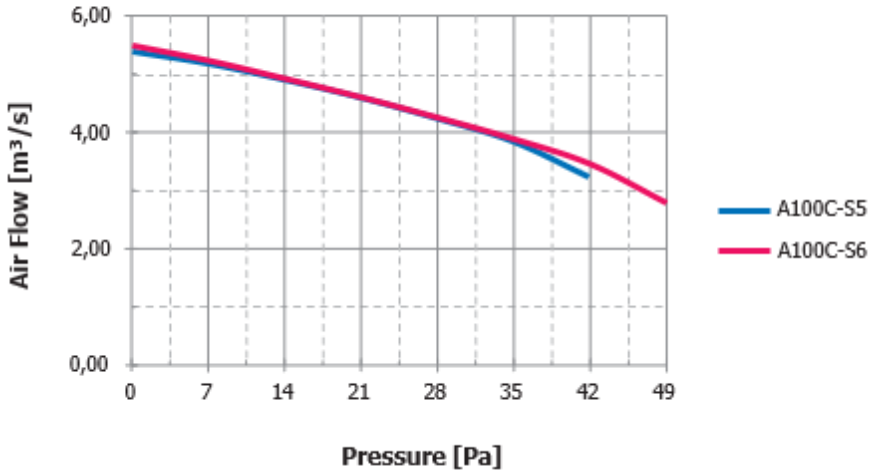
Air flow and sound pressure level (SPL) are given for free blowing operation with inlet&outlet guard grids.

SPL values at 1m are measured from side of the fan. SPL values at 2m are calculated by inverse square law.

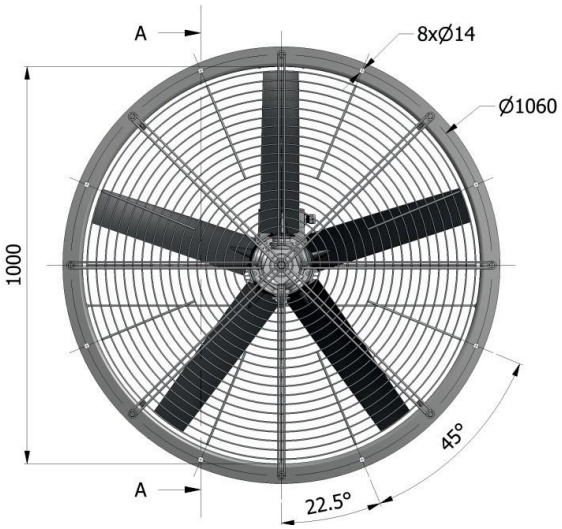
Motor Protection Class	☐ IP55	☐ IP56	☐ IP65	☐ IP66
Wings	☐ GFR Polyamide		☐ Aluminium	
Protection Grids	☐ Rear		☐ Front	
Color (housing,motor,grids)	☐ RAL7031	☐ RAL7032	☐ RAL7033	☐ Other
Operation Ambient (°C)	☐ -25~+60	☐ -25~+70	☐ -40~+60	☐ -40~+70
Corrosion Class	☐ C3	☐ C4	☐ C5	Medium/High
Thermal Protection	☐ No		☐ Yes	

Thermal protection requires an external control unit or relay to operate.

Performance

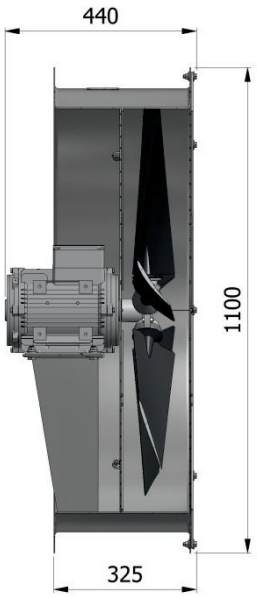


A1000C-B Balanced Performance Axial Fan



Number of Poles	8	
Type	A1000C-B5	A1000C-B6
Frequency (±2%)	50 Hz	60 Hz
Voltage (3ph. ±5%)	230V Δ / 400V Y	278V Δ / 480V Y
Full Load Current	3,8 A / 2,2 A	3,8 A / 2,2 A
Input Power	750 W	800 W
Speed	720 rpm	864 rpm
Sound Pressure (L_{PA} 1m/2m)	72 dB(A) / 67 dB(A)	76 dB(A) / 71 dB(A)
Air Flow	6,41 m³/s	6,24 m³/s
Weight (varies by options)	62 kg	

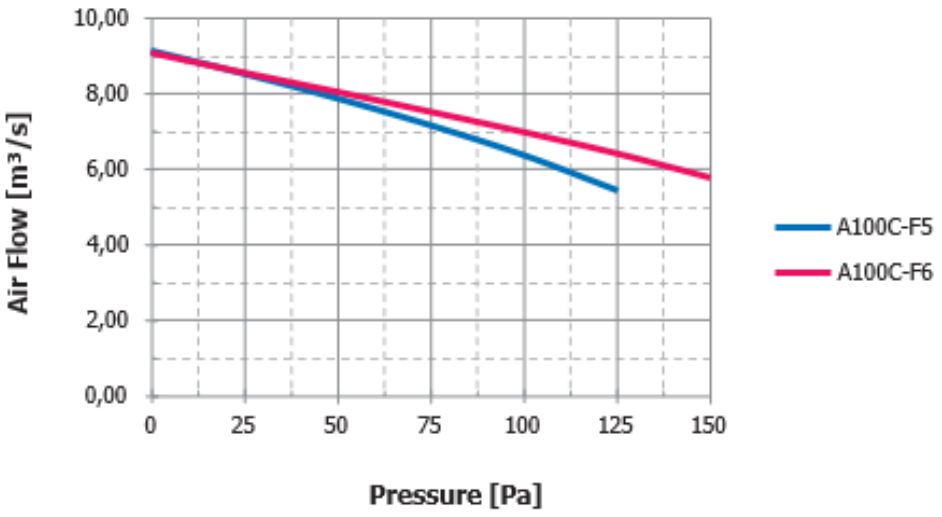
Air flow and sound pressure level (SPL) are given for free blowing operation with inlet&outlet guard grids.
SPL values at 1m are measured from side of the fan. SPL values at 2m are calculated by inverse square law.



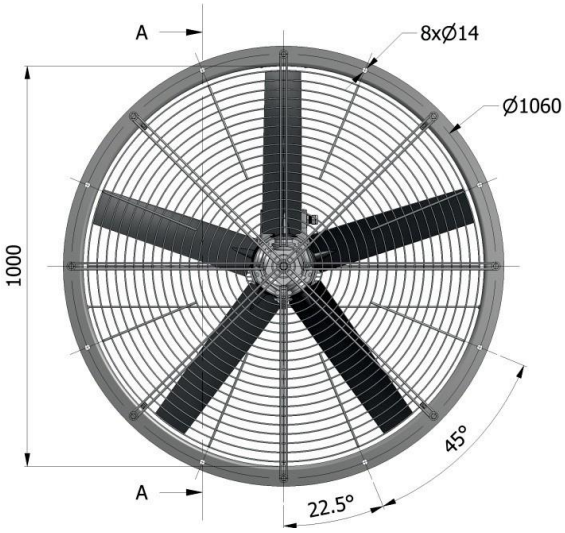
Motor Protection Class	☐ IP55	☐ IP56	☐ IP65	☐ IP66
Wings	☐ GFR Polyamide		☐ Aluminium	
Protection Grids	☐ Rear		☐ Front	
Color (housing,motor,grids)	☐ RAL7031	☐ RAL7032	☐ RAL7033	☐ Other
Operation Ambient (°C)	☐ -25~+60	☐ -25~+70	☐ -40~+60	☐ -40~+70
Corrosion Class	☐ C3	☐ C4	☐ C5	Medium/High
Thermal Protection	☐ No		☐ Yes	

Thermal protection requires an external control unit or relay to operate.

Performance



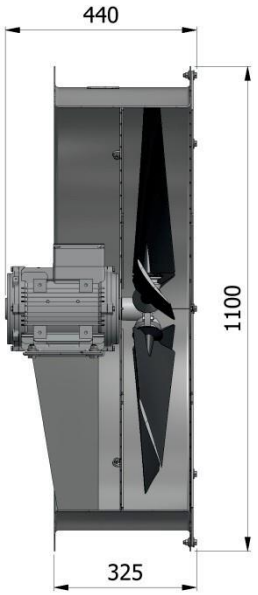
A1000C-F Flow Optimized Axial Fan



Number of Poles	6	
Type	A1000C-F5	A1000C-F6
Frequency (±2%)	50 Hz	60 Hz
Voltage (3ph. ±5%)	230V Δ / 400V Y	278V Δ / 480V Y
Full Load Current	6,6 A / 3,8 A	6,6 A / 3,8 A
Input Power	1500 W	1750 W
Speed	960 rpm	1152 rpm
Sound Pressure (L_{PA} 1m/2m)	79 dB(A) / 74 dB(A)	87 dB(A) / 82 dB(A)
Air Flow	8,64 m³/s	8,42 m³/s
Weight (varies by options)	63 kg	

Air flow and sound pressure level (SPL) are given for free blowing operation with inlet&outlet guard grids.

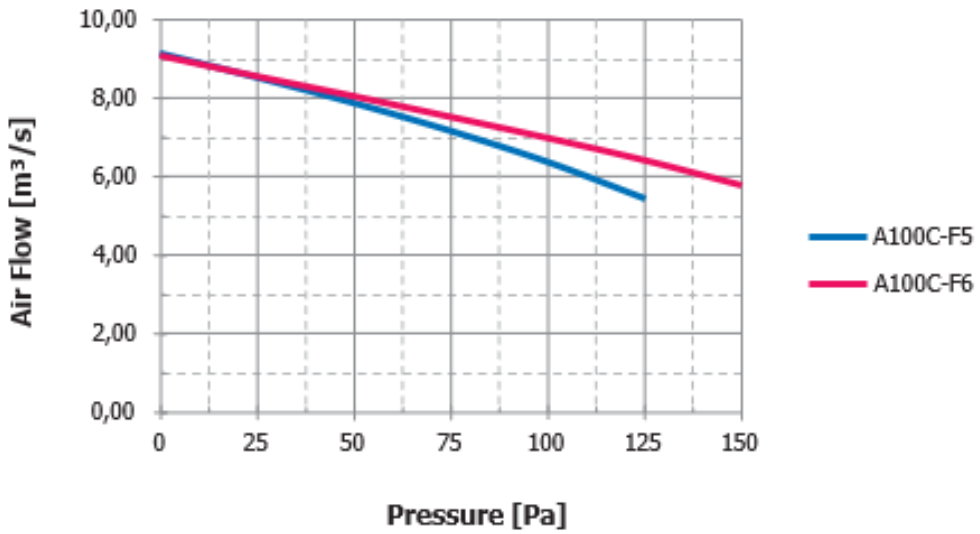
SPL values at 1m are measured from side of the fan. SPL values at 2m are calculated by inverse square law.



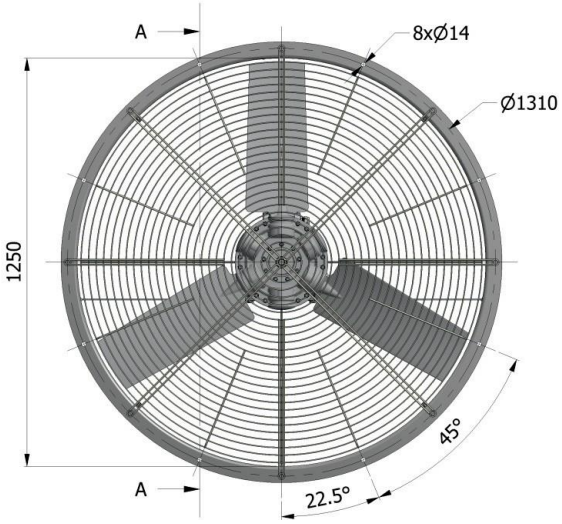
Motor Protection Class	☐ IP55	☐ IP56	☐ IP65	☐ IP66
Wings	☐ GFR Polyamide		☐ Aluminium	
Protection Grids	☐ Rear		☐ Front	
Color (housing,motor,grids)	☐ RAL7031	☐ RAL7032	☐ RAL7033	☐ Other
Operation Ambient (°C)	☐ -25~+60	☐ -25~+70	☐ -40~+60	☐ -40~+70
Corrosion Class	☐ C3	☐ C4	☐ C5	Medium/High
Thermal Protection	☐ No		☐ Yes	

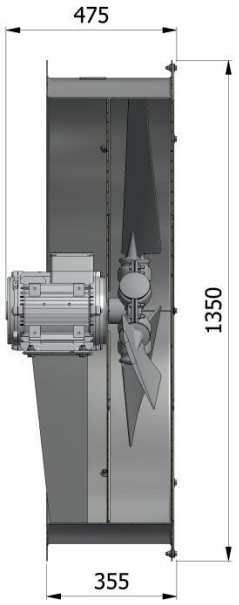
Thermal protection requires an external control unit or relay to operate.

Performance



A1250C-B Balanced Performance Axial Fan





Number of Poles	8	
Type	A1250C-B5	A1250C-B6
Frequency (±2%)	50 Hz	60 Hz
Voltage (3ph. ±5%)	230V Δ / 400V Y	278V Δ / 480V Y
Full Load Current	7,7 A / 4,4 A	7,7 A / 4,4 A
Input Power	1600 W	1800 W
Speed	720 rpm	864 rpm
Sound Pressure (L_{PA} 1m/2m)	75 dB(A) / 70 dB(A)	78 dB(A) / 73 dB(A)
Air Flow	11,38 m³/s	11,59 m³/s
Weight (varies by options)	88 kg	

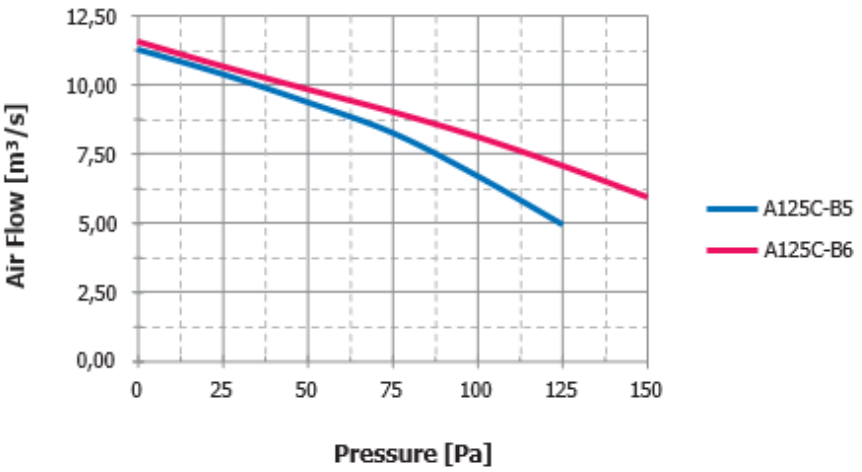
Air flow and sound pressure level (SPL) are given for free blowing operation with inlet&outlet guard grids.

SPL values at 1m are measured from side of the fan. SPL values at 2m are calculated by inverse square law.

Motor Protection Class	☐ IP55	☐ IP56	☐ IP65	☐ IP66
Wings	☐ GFR Polyamide		☐ Aluminium	
Protection Grids	☐ Rear		☐ Front	
Color (housing,motor,grids)	☐ RAL7031	☐ RAL7032	☐ RAL7033	☐ Other
Operation Ambient (°C)	☐ -25~+60	☐ -25~+70	☐ -40~+60	☐ -40~+70
Corrosion Class	☐ C3	☐ C4	☐ C5	Medium/High
Thermal Protection	☐ No		☐ Yes	

Thermal protection requires an external control unit or relay to operate.

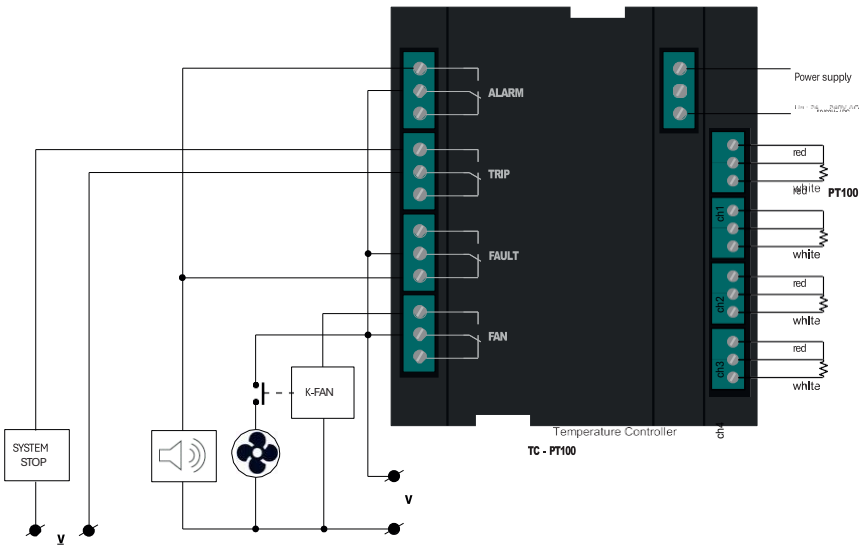
Performance



Cooling Fan Controller ARS - PT100

Temperature Controller
For Dry Type Medium Voltage Transformers

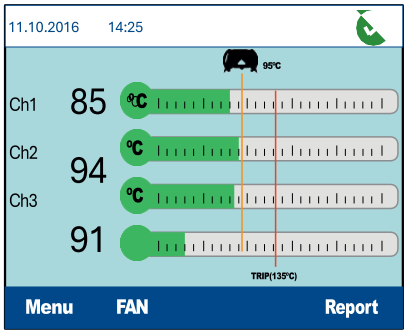
Developed for winding temperature control of resin or dry ype MV transformers. It is based on high level electromagnetic interference, also standardized. There are 4 PT100 sensor inputs. The transformer core temperature or the ambient temperature can also be measured from the 4th sensor input if the 3-phase transformer requests the winding temperatures individually as well as it can be measured. There are 4 relay outputs, ALARM, FAULT. TRIP and FAN.
The desing, hardware and software were entirely made by ARES TRAFO engineers. State-of-the-art technology has been incorporated into this device, and features have been added that make it easier for the user to use both menus and features. The device has a color LCD display (TFT). As memory, the device has its own recording ares and records error reports.
All information and warnings that you need to know about the device are described in the user manuel. Please read this booklet carefully before commissioning your system and your own reports.
All information and warnings that you need to know about the device are described in the user manual. Please do not make anything about the topics that are not being understood without making any contact with our company.



Features

- 24-240 VAc - Vdc 50/60 Hz ultra-wide feed input
- Easy menu design with Turkish, English and Russian language support
- Color LCD display (320x240 pixel x 2.4")
- It has 4 Pt100 (3-Wires) RTD sensor inputs
- Sensor inputs are resistant to electromagnetic interference
- Cable lengths in Pt100 are not included in the calculation
- It measures temperature between -10°C and 205°C and has ± 1% measurement accuracy
- 1 ALARM relay output
- 1 TRIP relay output
- There is a relay output (FAULT) for errors in one device memory (the last 40 records)
- 3VA supply available
- Intelligent Fan operation and stop algorithm saves energy in transformer cooling
- Continuously monitors temperature sensors for faults. It detects errors "Sensor cable is broken", "Sensor cable short circuit' 'Sensor not attached"
- Error detection in case of data recording center failure
- Password Protection protects the Settings menu against unauthorized users

-There is a botton for making the alarm silent or for manual fan control.

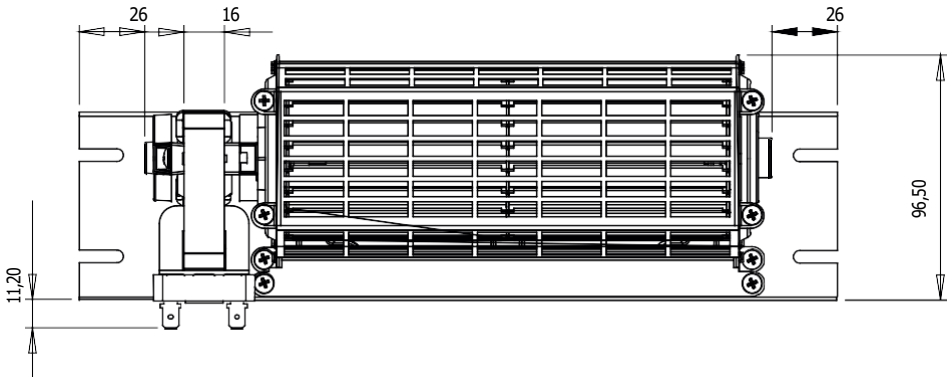


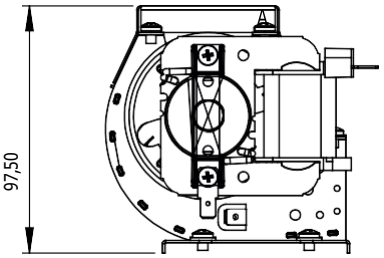
General

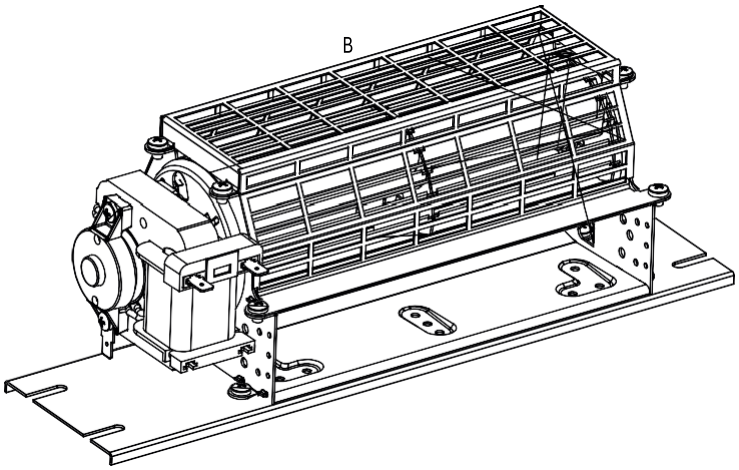
The device that is developed to protect the windings of MV tarnsformers and high-power motors equipped with today's technology, is guided well equipped in terms of function richness and has added a new product to its sector with its advanced software. Additionally, the microprocessor inside is very fast and uses the operating system. This ensures that all operations can be synchronized simultaneously.
Displaying the error and temperature values that may occur on the main screen during device operation is as follows.

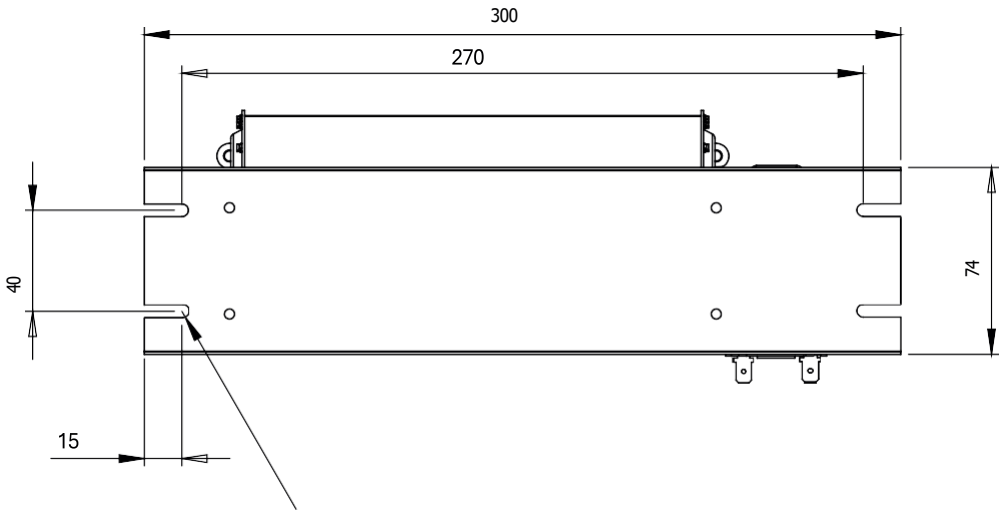
-

Cooling Fan (Little) ARS 680-180G



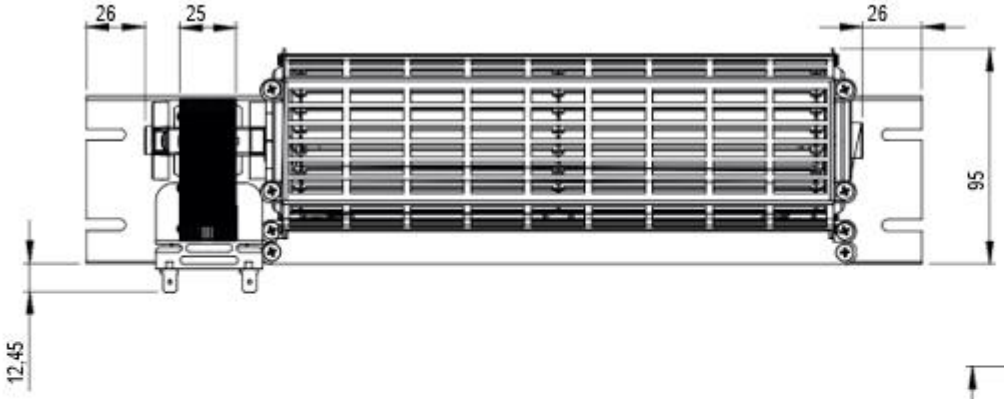


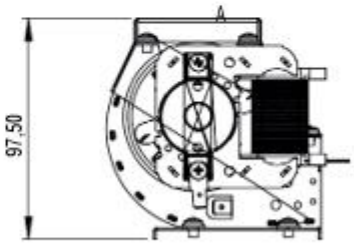


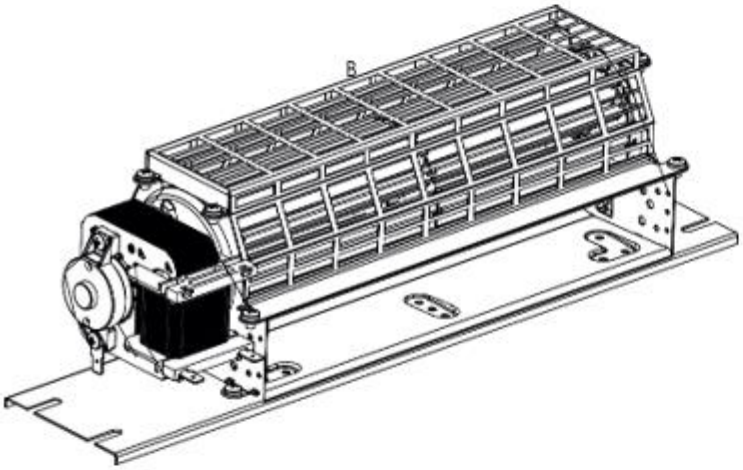


Voltage (V)	230
Frequency (Hz)	50
Power (W)	32
Current (mA)	0,24
Airflow (m³/h)	150
Rpm (±100)	2000

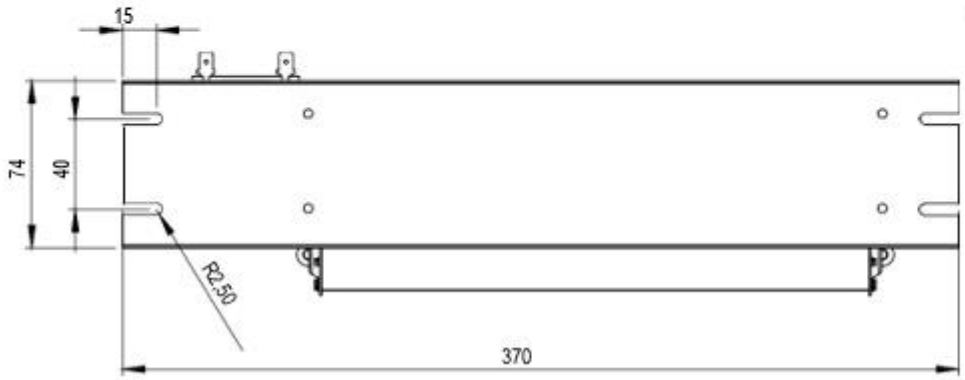
Cooling Fan (Little) ARS 680-240G



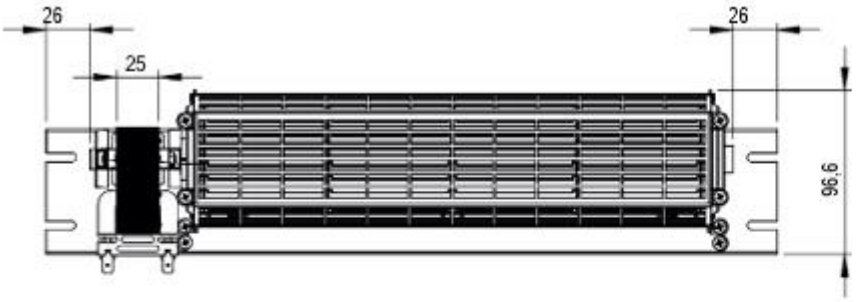


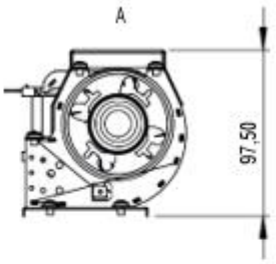


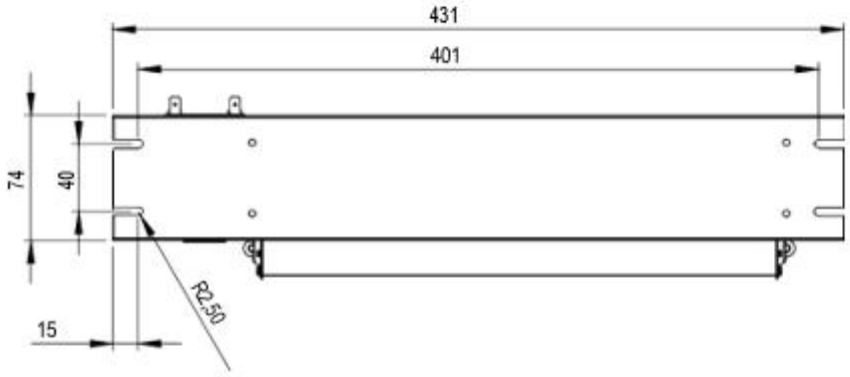
Voltage (V)	230
Frequency (Hz)	50
Power (W)	48
Current (mA)	0,32
Airflow (m³/h)	225
Rpm (±100)	2150

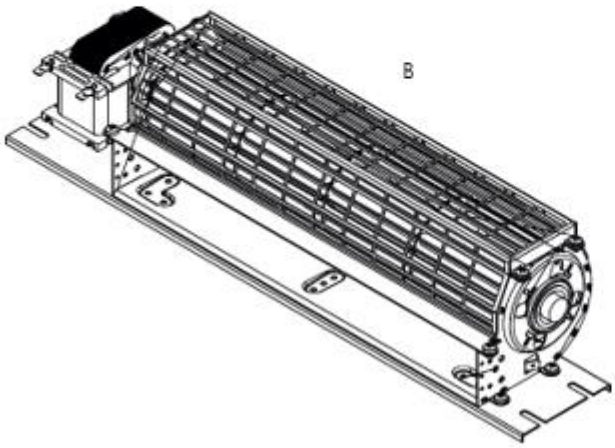


Cooling Fan (Little) ARS 680-300G



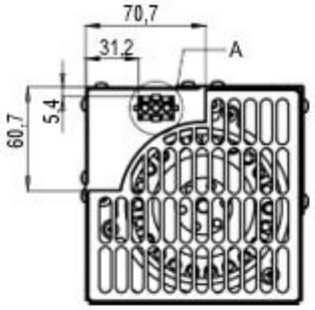


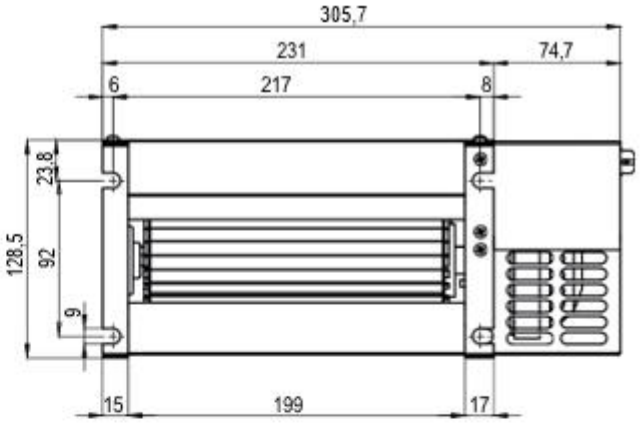


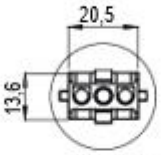


Technical Specifications	
Voltage (V)	230
Frequency (Hz)	50
Power (W)	52
Current (mA)	0,40
Airflow (m³/h)	325
Rpm (±100)	2150

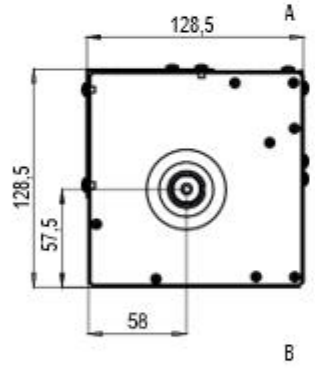
Cooling Fan (Medium) ARS 80-180

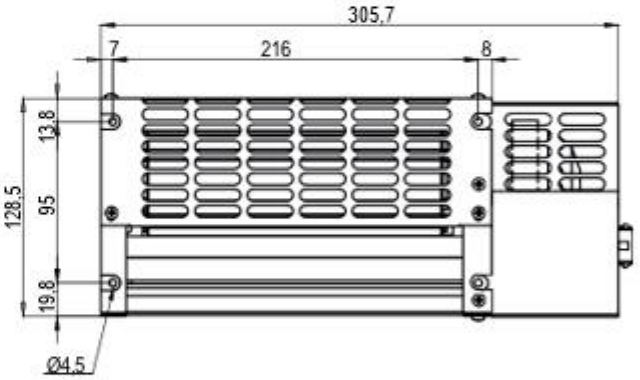






DETAIL A
SCALE 1: 2

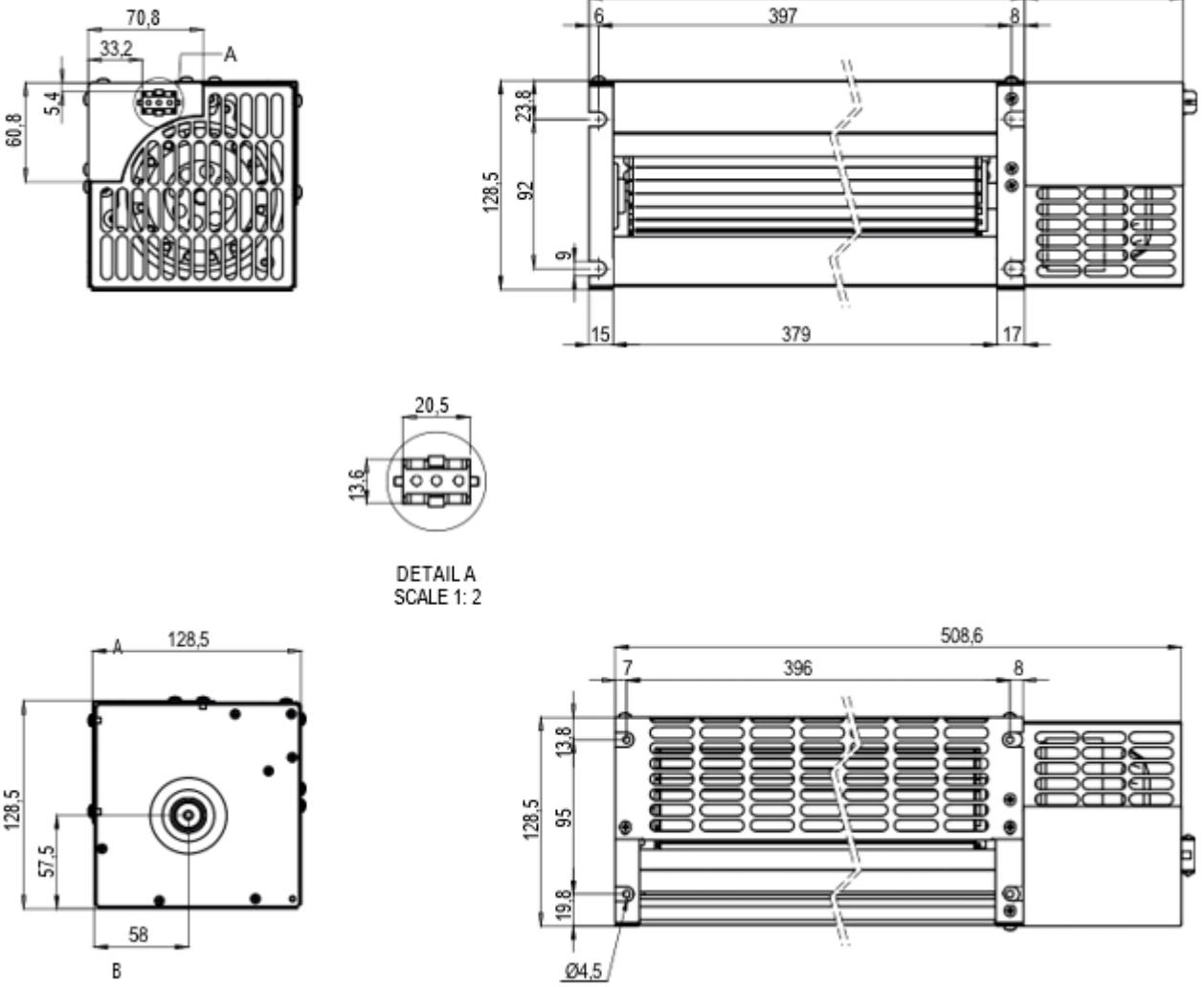




Voltage (V)	230
Frequency (Hz)	50
Power (W)	60
Current (mA)	0,26
Speed (rpm)	2450
Airflow (m³/h)	515
Capacitor (uF)	1,5

INSULATION CLASS (H)

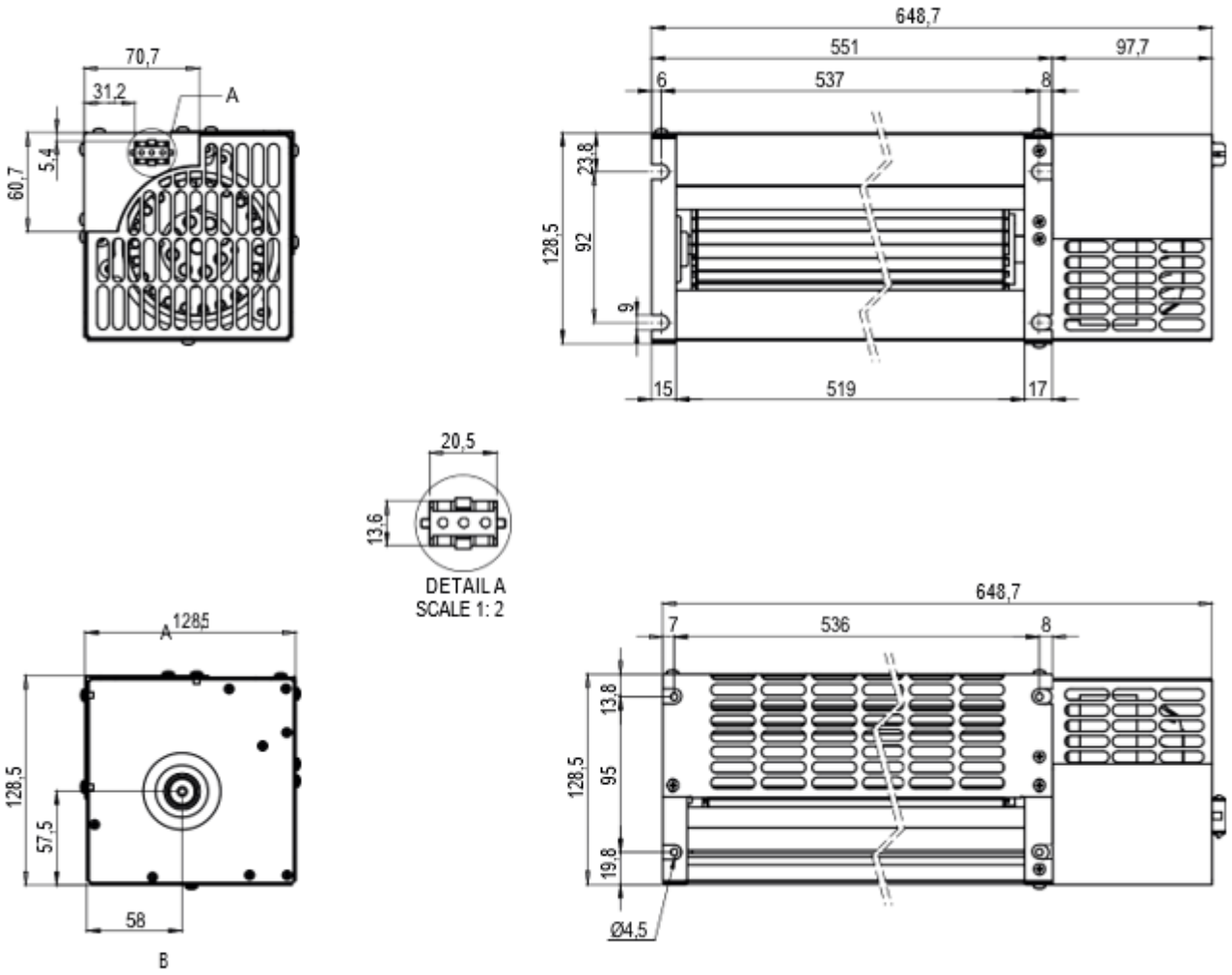
Cooling Fan (Medium) ARS 80-370

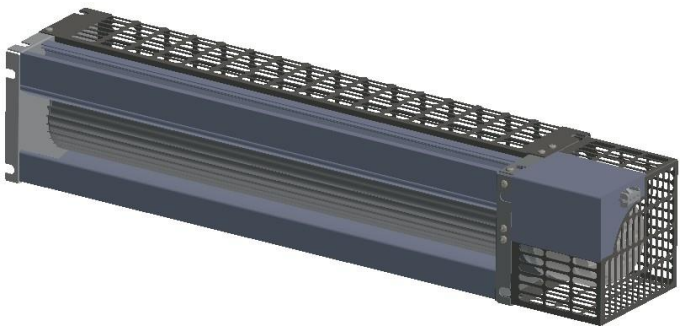


Voltage (V)	230
Frequency (Hz)	50
Power (W)	105
Current (mA)	0,45
Speed (rpm)	2620
Airflow (m^3/h)	865
Capacitor (uF)	3

INSULATION CLASS (H)

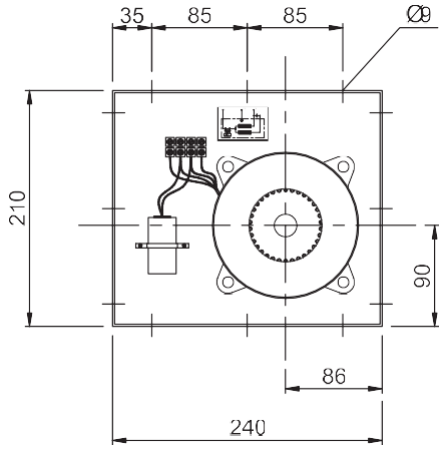
Cooling Fan (Medium) ARS 80-500

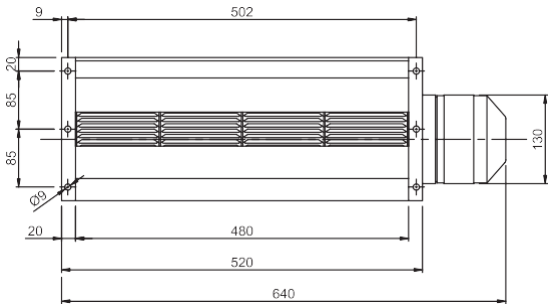




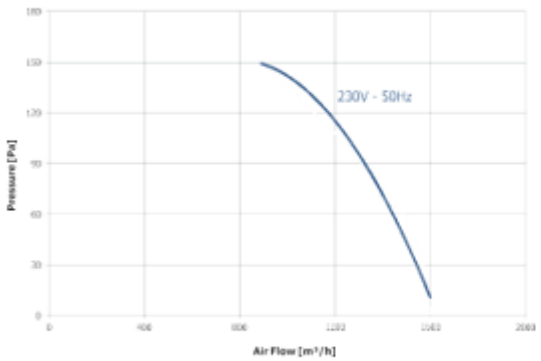
Voltage (V)	230
Frequency (Hz)	50
Power (W)	170
Current (mA)	0,73
Speed (rpm)	2580
Airflow (m^3/h)	1235
Capacitor (uF)	6

Cooling Fan (Turbo) ARS 120/480-230W-4P-1600





Standard	IEC 60034-1, IEC 60335-2:80, ISO 5801	
Tolerance	Class 2 acc. to DIN 24166	
Balance Quality	G6.3 acc. to ISO 1940-1	
Number of Poles	4	
Voltage (1P)	230 V	
Frequency	50 Hz	60 Hz
Power	230 W	380 W
Current (±5%)	1.2 A	1.9 A
Speed	1440 rpm	1680 rpm
Noise (LpA@1m)	69 dbA	72 dbA
Air Flow	1600 m³/h	1800 m³/h
Installation Position	Horizontal	
Operation	Indoor	
Operating Temperature	-25 ~ +50 °C	
Motor Insulation Class	F	
Thermal Protection	Yes (no external wiring required)	
Condansator	Yes (12µf 400V)	
Weight	10 kg	



Motor [1]
Protection Class: ☑ IP44

Wings [2]
Material: ☑ Aluminum ☐ Plastic

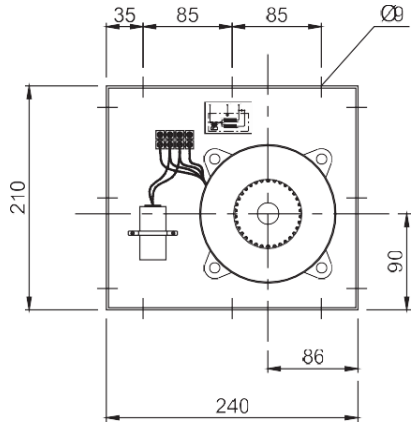
Housing
Material: ☐ Galvanized Steel ☑ Aluminum ☐ Stainless Steel
Color: ☐ RAL9005 ☐ RAL7032 ☐ Custom Color ☑ Unpainted

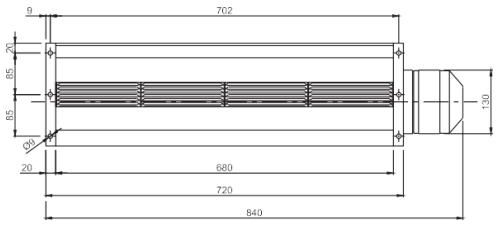
Fasteners [2]
Material: ☐ Zinc Coated ☑ Stainless Steel

Corrosion Class
Powder Coating: ☐ C3 medium ☑ C4 medium ☐ C5 medium

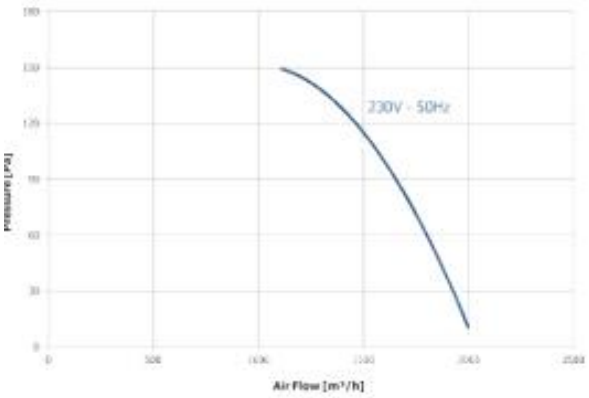
[1] : aluminum, RAL9005
[2] : delivered unpainted

Cooling Fan (Turbo) ARS 120/680-260W-4P-2000





Standard	IEC 60034-1, IEC 60335-2:80, ISO 5801	
Tolerance	Class 2 acc. to DIN 24166	
Balance Quality	G6.3 acc. to ISO 1940-1	
Number of Poles	4	
Voltage (1P)	230 V	
Frequency	50 Hz	60 Hz
Power	260 W	425 W
Current (±5%)	1.3 A	2.0 A
Speed	1400 rpm	1600 rpm
Noise (LpA@1m)	70 dbA	74 dbA
Air Flow	2000 m³/h	2200 m³/h
Installation Position	Horizontal	
Operation	Indoor	
Operating Temperature	-25 ~ +50 °C	
Motor Insulation Class	F	
Thermal Protection	Yes (no external wiring required)	
Condansator	Yes (12µf 400V)	
Weight	11 kg	



Motor [1]
- Protection Class: ☑ IP44

Fasteners [2]
- Material: ☐ Zinc Coated ☑ Stainless Steel

Wings [2]
- Material: ☑ Aluminum ☐ Plastic

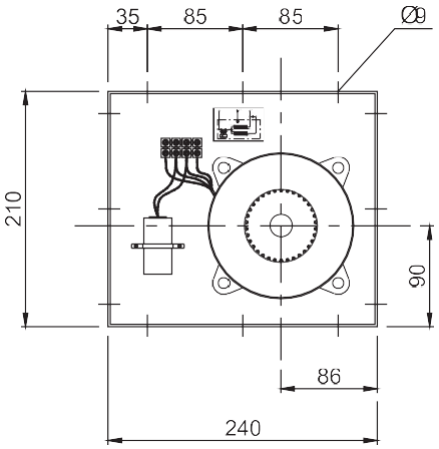
Corrosion Class
- Powder Coating: ☐ C3 medium ☑ C4 medium ☐ C5 medium

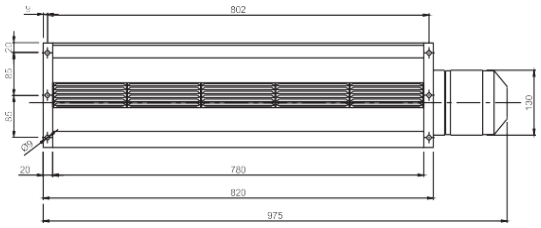
Housing
- Material: ☐ Galvanized Steel ☑ Aluminum ☐ Stainless Steel

[1] : aluminum, RAL9005
[2] : delivered unpainted

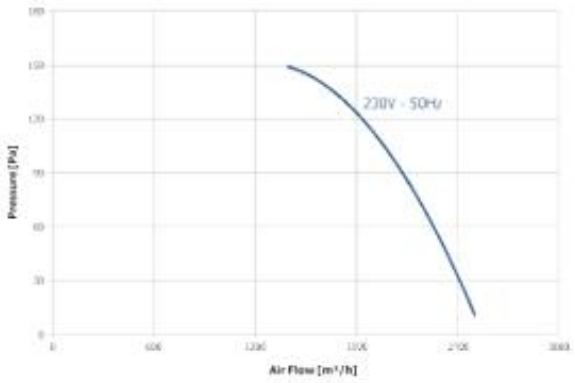
- Color: ☐ RAL9005 ☐ RAL7032 ☐ Custom Color ☑ Unpainted

Cooling Fan (Turbo) ARS 120/780-350W-4P2500





Standard	IEC 60034-1, IEC 60335-2:80, ISO 5801	
Tolerance	Class 2 acc. to DIN 24166	
Balance Quality	G6.3 acc. to ISO 1940-1	
Number of Poles	4	
Voltage (1P)	230 V	
Frequency	50 Hz	60 Hz
Power	350 W	600 W
Current (±5%)	1.7 A	3.0 A
Speed	1450 rpm	1700 rpm
Noise (LpA@1m)	71 dbA	75 dbA
Air Flow	2500 m³/h	2800 m³/h
Installation Position	Horizontal	
Operation	Indoor	
Operating Temperature	-25 ~ +50 °C	
Motor Insulation Class	F	
Thermal Protection	Yes (no external wiring required)	
Condansator	Yes (16µf 400V)	
Weight	14 kg	



Motor [1]
- Protection Class: ☑ IP44

Fasteners [2]
- Material: ☐ Zinc Coated ☑ Stainless Steel

Wings [2]
- Material: ☑ Aluminum ☐ Plastic

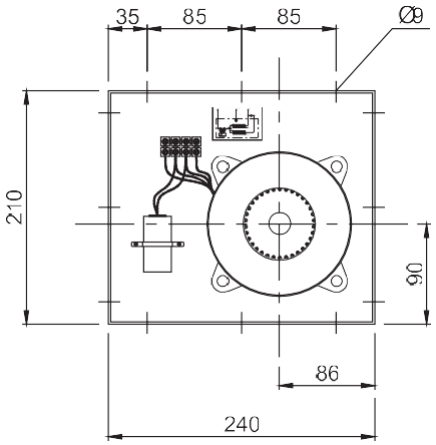
Corrosion Class
- Powder Coating: ☐ C3 medium ☑ C4 medium ☐ C5 medium

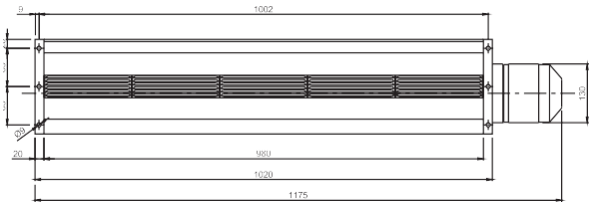
Housing
- Material: ☐ Galvanized Steel ☑ Aluminum ☐ Stainless Steel

[1] : aluminum, RAL9005
[2] : delivered unpainted

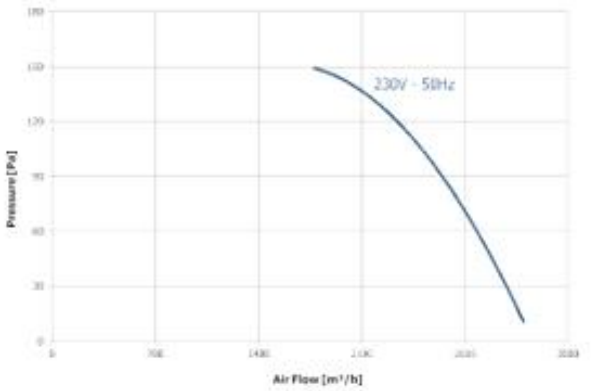
- Color: ☐ RAL9005 ☐ RAL7032 ☐ Custom Color ☑ Unpainted

Cooling Fan (Turbo) ARS 120/980-400W-4P-3200





Standard	IEC 60034-1, IEC 60335-2:80, ISO 5801	
Tolerance	Class 2 acc. to DIN 24166	
Balance Quality	G6.3 acc. to ISO 1940-1	
Number of Poles	4	
Voltage (1P)	230 V	
Frequency	50 Hz	60 Hz
Power	400 W	670 W
Current (±5%)	2.0 A	3.1 A
Speed	1430 rpm	1660 rpm
Noise (LpA@1m)	72 dbA	77 dbA
Air Flow	3200 m³/h	3500 m³/h
Installation Position	Horizontal	
Operation	Indoor	
Operating Temperature	-25 ~ +50 °C	
Motor Insulation Class	F	
Thermal Protection	Yes (no external wiring required)	
Condansator	Yes (16µf 400V)	
Weight	15 kg	



Motor [1]
- Protection Class: ☑ IP44

Wings [2]
- Material: ☑ Aluminum ☐ Plastic

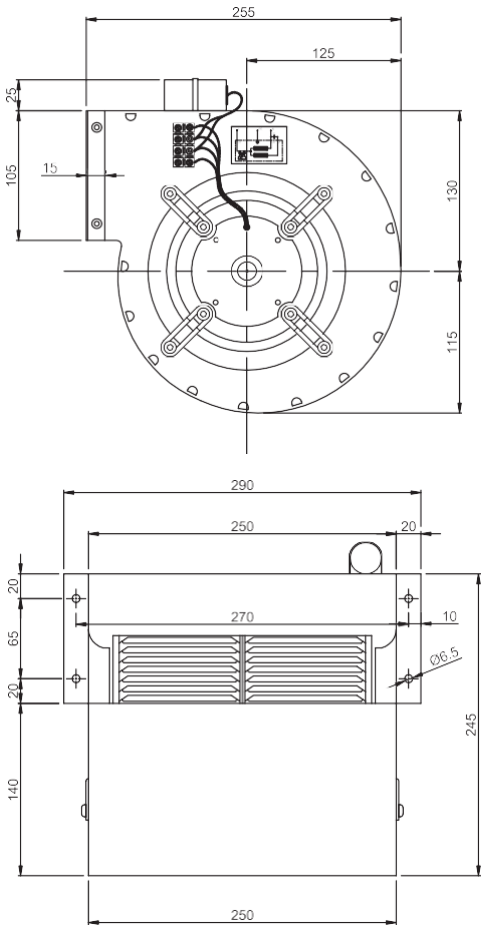
Housing
- Material: ☐ Galvanized Steel ☑ Aluminum ☐ Stainless Steel
- Color: ☐ RAL9005 ☐ RAL7032 ☐ Custom Color ☑ Unpainted

Fasteners [2]
- Material: ☐ Zinc Coated ☑ Stainless Steel

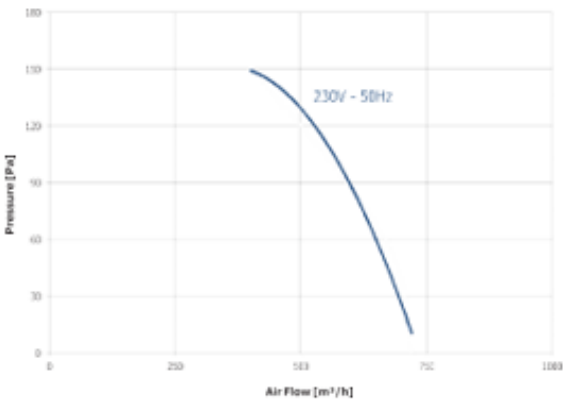
Corrosion Class
- Powder Coating: ☐ C3 medium ☑ C4 medium ☐ C5 medium

[1] : aluminum, RAL9005
[2] : delivered unpainted

Centrifugal Fans ARS 160/250-125W-4P-720



Standard	IEC 60034-1, IEC 60335-2:80, ISO 5801	
Tolerance	Class 2 acc. to DIN 24166	
Balance Quality	G6.3 acc. to ISO 1940-1	
Number of Poles	4	
Voltage (1P)	230 V	
Frequency	50 Hz	60 Hz
Power	125 W	145 W
Current (±5%)	0,6 A	0,7 A
Speed	1400 rpm	1620 rpm
Noise (LpA@1m)	58 dbA	60 dbA
Air Flow	720 m³/h	820 m³/h
Installation Position	Horizontal & Vertical	
Operation	Indoor	
Operating Temperature	-25 ~ +50 °C	
Motor Insulation Class	F	
Thermal Protection	Yes (no external wiring required)	
Condansator	Yes (3µf 400V)	
Weight	4 kg	



Motor [1]
- Protection Class: ☑ IP44

Wings [2]
- Material: ☑ Aluminum

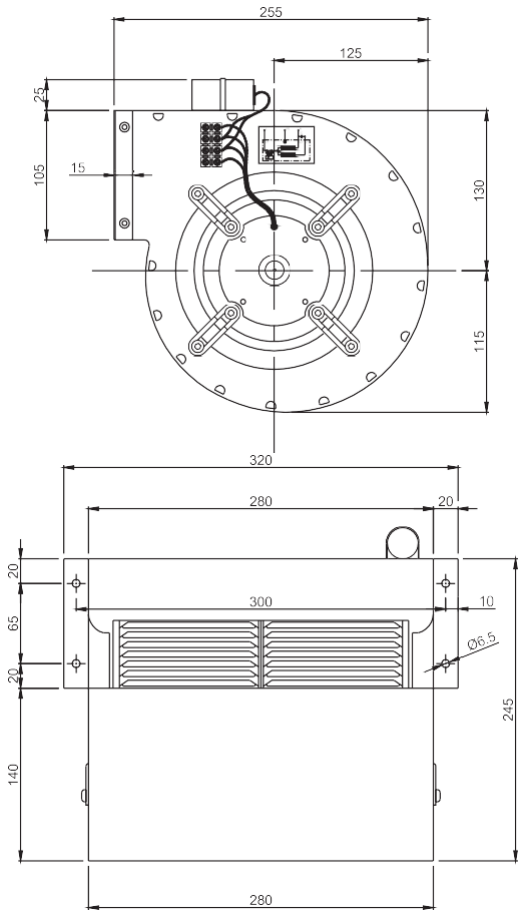
Housing
- Material: ☑ Galvanized Steel; ☐ Aluminum; ☐ Stainless Steel
- Color: ☐ RAL9005; ☐ RAL7032; ☐ Custom Color; ☑ Unpainted

Fasteners [2]
- Material: ☐ Zinc Coated; ☑ Stainless Steel

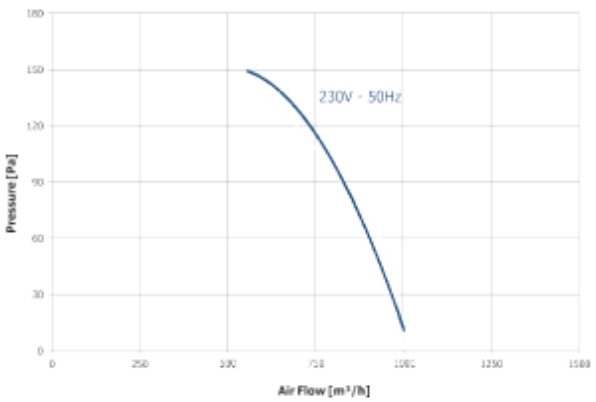
Corrosion Class
- Powder Coating: ☐ C3 medium; ☑ C4 medium; ☐ C5 medium

[1] : aluminum, RAL9005
[2] : delivered unpainted

Centrifugal Fans ARS 160/280-480W-2P-1000



Standard	IEC 60034-1, IEC 60335-2:80, ISO 5801	
Tolerance	Class 2 acc. to DIN 24166	
Balance Quality	G6.3 acc. to ISO 1940-1	
Number of Poles	4	
Voltage (1P)	230 V	
Frequency	50 Hz	60 Hz
Power	480 W	620 W
Current (±5%)	2,2 A	2,9 A
Speed	2000 rpm	1770 rpm
Noise (LpA@1m)	63 dbA	62 dbA
Installation Position	Horizontal & Vertical	
Operation	Indoor	
Operating Temperature	-25 ~ +50 °C	
Motor Insulation Class	F	
Thermal Protection	Yes (no external wiring required)	
Condansator	Yes (3µf 400V)	
Weight	6 kg	



Motor [1]
- Protection Class: ☑ IP44

Wings [2]
- Material: ☑ Aluminum

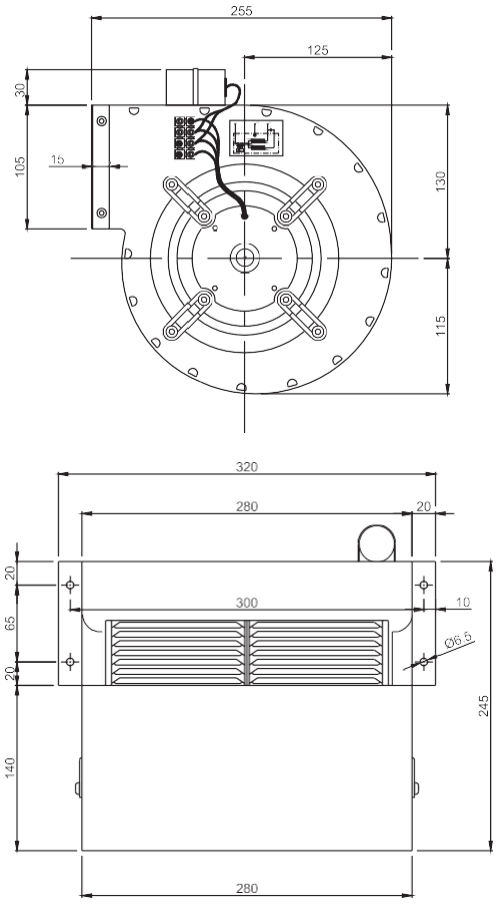
Housing
- Material: ☑ Galvanized Steel; ☐ Aluminum; ☐ Stainless Steel
- Color: ☐ RAL9005; ☐ RAL7032; ☐ Custom Color; ☑ Unpainted

Fasteners [2]
- Material: ☐ Zinc Coated; ☑ Stainless Steel

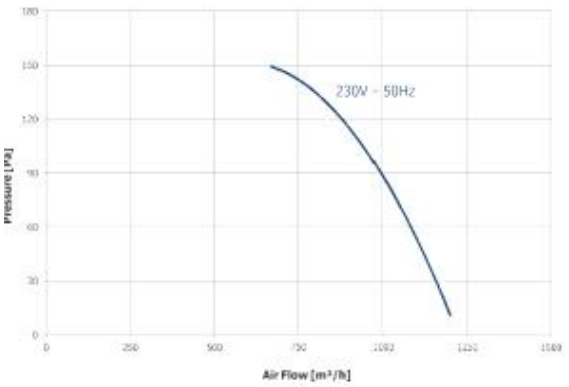
Corrosion Class
- Powder Coating: ☐ C3 medium; ☑ C4 medium; ☐ C5 medium

[1] : aluminum, RAL9005
[2] : delivered unpainted

Centrifugal Fans ARS 160/280-510W-2P-1200



Standard	IEC 60034-1, IEC 60335-2:80, ISO 5801	
Tolerance	Class 2 acc. to DIN 24166	
Balance Quality	G6.3 acc. to ISO 1940-1	
Number of Poles	2	
Voltage (1P)	230 V	
Frequency	50 Hz	60 Hz
Power	510 W	630 W
Current (±5%)	2,4 A	2,8 A
Speed	2300 rpm	2180 rpm
Noise (LpA@1m)	66 dbA	65 dbA
Air Flow	1200 m³/h	1150 m³/h
Installation Position	Horizontal & Vertical	
Operation	Indoor	
Operating Temperature	-25 ~ +50 °C	
Motor Insulation Class	F	
Thermal Protection	Yes (no external wiring required)	
Weight	6 kg	



Motor [1]
- Protection Class: ☑ IP44

Wings [2]
- Material: ☑ Aluminum

Housing
- Material: ☑ Galvanized Steel; ☐ Aluminum; ☐ Stainless Steel
- Color: ☐ RAL9005; ☐ RAL7032; ☐ Custom Color; ☑ Unpainted

Fasteners [2]
- Material: ☐ Zinc Coated; ☑ Stainless Steel

Corrosion Class
- Powder Coating: ☐ C3 medium; ☑ C4 medium; ☐ C5 medium

[1] : aluminum, RAL9005
[2] : delivered unpainted