TESO

CJSC "Pskovelectrosvar"

Concern "INTERSVAR"

RESISTANCE WELDING TRANSFORMERS

MAGNET CORES

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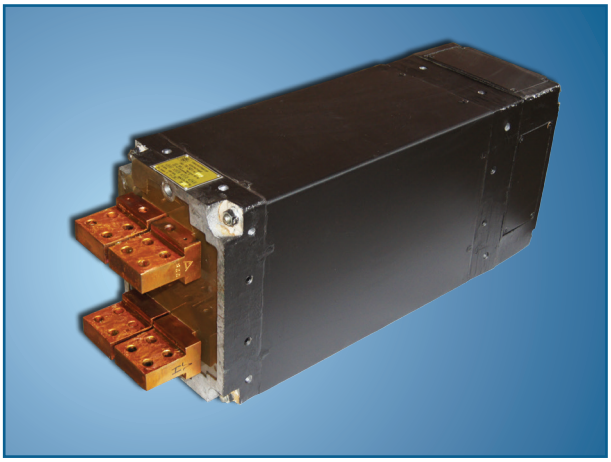
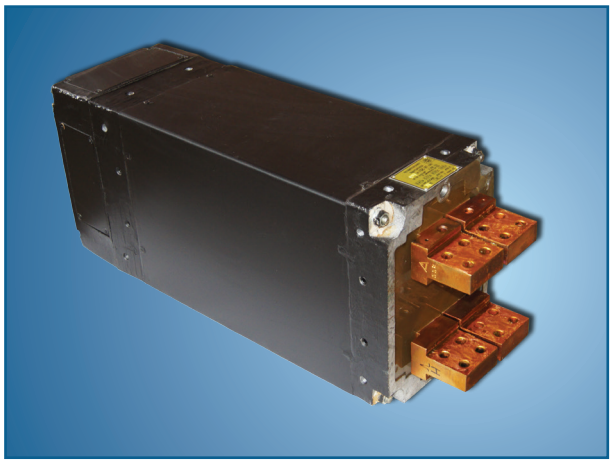


Transformers are designed for resistance welding machines (welding devices) as a source of welding current. The transformers have water cooling.

The transformers are used in moderately-cold climate conditions, location category 4 as per GOST 15150-69.

TECHNICAL DATA								
CHARACTERISTIC		VALUE						
		TK-301	TK-302	TK-401	TK-402	TK-501	TK-502	TK-601
		1ЮР.732.080А	1ЮР.732.081А	1ЮР.732.082А	1ЮР.732.086	6ЮР.172.089	6ЮР.172.071	1ЮР.732.093
Rated supply main voltage of 3-phase, V		380	380	380	380	380	380	380
Supply main frequency, Hz		50	50	50	50	50	50	50
Continuous current of one secondary winding turn, kA, not less		2,80	3,20	3,55	4,00	4,55	6,50	6,30
Secondary continuous current of transformer at parallel connection of turns, kA, not less		5,60	6,40	7,10	4,00	9,10	12,90	8,92
Rated voltage of primary coil, V		365	365	365	380	365	365	380
Secondary voltage, V		3,0 - 5,0	5,0 - 7,0	7,0 - 10,0	2,3 - 4,5	9,6 - 14,0	9,6 - 14,0	3,0 - 6,0
Continuous power, kVA		28	45	70	15,8	124	165	33
Power at duty cycle=50% at max. adjustment stage, kVA, not less		40	63	100	22,4	180	220	46,8
Cooling		water	water	water	water	water	water	water
Cooling water consumption, l/min, not less		4	4	4	1,1	5	5	2,16
Stages number		4	4	4	8	4	4	8
Insulation class		F	F	F	F	F	F	F
Dimensions, mm	length	184	184	184	468	240	240	506
	width	470	560	695	400	320	320	396
	height	235	235	235	270	790	809	200
Mass, kg		80	100	135	120	230	260	142

Resistance welding transformers TK-902, TK-903, TK-1103, TK-1402, TK-1802, TK-2201, TK-2801, 1ЮР.732.092



Transformers are designed for resistance welding machines (welding devices) as a source of welding current. The transformers have water cooling.

Transformers are used in moderately-cold climate conditions, location category 4 as per GOST 15150-69.

TECHNICAL DATA									
CHARACTERISTIC		VALUE							
		TK-902	TK-903	TK-1103	TK-1402	TK-1802	TK-2201	TK-2801	-
		6ЮР.172.019	1ЮР.732.089	1ЮР.732.090	1ЮР.732.088	1ЮР.732.087	6ЮР.172.032	1ЮР.732.091	1ЮР.732.092
Rated supply main voltage of 3-phase, V		380	380	380	380	380	380	380	380
Supply main frequency, Hz		50	50	50	50	50	50	50	50
Secondary continuous current, kA		9,0	9,0	11,2	14,0	18,0	21,5	28,0	20,0
Secondary current at duty cycle=20%, kA		20,0	-	-	-	-	-	-	-
Secondary current at duty cycle=50%, kA		-	12,70	15,86	19,80	25,50	31,16	39,60	31,20
Rated voltage of the first winding, V		380	380	380	380	380	380	380	380
Secondary voltage, V		4,05-8,1	4,1-8,1	4,5-9,0	3,5-10,6	3,9-11,9	3,66-11,2	4,8-14,6	4,22-13,1
Continuous power, kVA		68	64,5	89	126	185	215	354	254
Power at duty cycle=20%, kVA		152	-	-	-	-	-	-	-
Power at duty cycle=50%, kVA		-	91,5	126	179	262	303	500	360
Cooling		water	water	water	water	water	water	water	water
Cooling water consumption, l/min		3	2,7	4,8	3,8	5,95	8,1	8,9	8,1
Stages number		16	8	8	16	16	16	16	16
Insulation class		B	B	F	F	B	F	F	B
Dimensions, mm	length	374	470	480	470	520	502	621	570
	width	474	570	625	550	565	619	756	580
	height	568	381	381	625	634	633	620	609
Mass, kg		315	280	326	440	523	615	802,5	530

Resistance welding transformers TK-3201, 6ЮР. 172.052, 6ЮР.172.053, 6ЮР.172.062, 6ЮР.172.063

Transformers are designed for resistance welding machines as a source of welding current.

The transformers are used in moderately-cold climate conditions, location category 4 as per GOST 15150-69.

TECHNICAL DATA						
CHARACTERISTIC		VALUE				
		TK-3201	-	-	-	-
		6ЮР.172.051	6ЮР.172.052	6ЮР.172.053	6ЮР.172.062	6ЮР.172.063
Rated supply main voltage of 3-phase, V		380	380	380	380	380
Supply main frequency, Hz		50	50	50	50	50
Secondary continuous current, kA		32,0	14,0	10,3	22,0	20,9
Secondary current at duty cycle=12,5%, kA		90,4	-	-	-	-
Secondary current at duty cycle=20%, kA		-	30,0	40,0	49,0	42,0
Rated voltage of the first winding, V		-	-	380	748 - 332	340
Secondary voltage, V		20,4	3,87 - 11,9	6,08 - 12,15	16,3 - 7,2	1,98 - 6,07
Continuous power, kVA		670	148	220	358	100
Power at duty cycle=11%, kVA		-	-	-	1 080	-
Power at duty cycle=12,5%, kVA		1 900	-	-	-	-
Power at duty cycle=20%, kVA		-	317	490	800	224
Cooling		воздух	воздух	вода	вода	воздух
Cooling water consumption, l/min		нет	нет	4,0	10,8	нет
Stages number		1	16	8	1	16
Insulation class		F	F	B	B	B
Dimensions, mm	length	608	508	530	477	530
	width	784	625	778	510	618
	height	1 412	707	1 200	1 170	1 200
Mass, kg		1 088,3	458	1 380	926	1 020

Resistance welding transformers 6ЮР.172.064, 6ЮР.172.065, 6ЮР.172.066, 6ЮР. 172.075, 6ЮР. 172.076, 6ЮР.172.082, 6ЮР. 172.096

Transformers are designed for resistance welding machines as a source of welding current.

The transformers are used in moderately cold climate conditions, location category 4 as per GOST 15150-69.

TECHNICAL DATA								
CHARACTERISTIC		VALUE						
		6ЮР.172.064	6ЮР.172.065	6ЮР.172.066	6ЮР.172.075	6ЮР.172.076	6ЮР.172.082	6ЮР.172.096
Rated supply main voltage of 3-phase, V		380	380	380	380	380	380	380
Supply main frequency, Hz		50	50	50	50	50	50	50
Secondary continuous current, kA		50,0	22,0	22,0	50,0	14,0	23,0	11,0
Secondary current at duty cycle=20%, kA		-	-	49,0	-	-	51,4	24,6
Secondary current at duty cycle=50%, kA		71,0	31,2	-	71,0	19,8	-	-
Rated voltage of the first winding, V		-	415	-	380	-	340	340
Secondary voltage, V		7,9 - 15,8	4,15 - 13,0	16,3 - 22,0	7,9 - 15,8	6,78 - 10,1	2,43 - 4,86	5,6 - 8,5
Continuous power, kVA		700	254	358	700	140	98	87
Power at duty cycle=11%, kVA		-	-	1 080	-	-	-	-
Power at duty cycle=20%, kVA		-	-	800	-	-	-	-
Power at duty cycle=50%, kVA		1 000	360	-	1 000	198	138,6	123
Cooling		air	water	water	water	water	water	water
Cooling water consumption, l/min		no	8,1	10,8	4,5	0,08	11,0	5,0
Stages number		8	16	2	8	4	8	8
Insulation class		F	B	F	F	F	B	B
Dimensions, mm	length	647	600	1 170	780	280	478	480
	width	780	609	560	895	460	730	381
	height	895	634	635	647	700	1 200	625
Mass, kg		1 400	570	926	1 140	320	1 030	323

Resistance welding transformers 6ЮР. 172.109, 6ЮР. 172.110, 6ЮР. 172.113, 6ЮР. 172.114, 6ЮР. 172.116, 6ЮР. 172.117, 6ЮР. 172.906

Transformers are designed for resistance welding machines (welding devices) as a source of welding current. The transformers have water cooling.

The transformers are used in moderately cold climate conditions, location category 4 as per GOST 15150-69.

TECHNICAL DATA								
CHARACTERISTIC		VALUE						
		6ЮР.172.109	6ЮР.172.110	6ЮР.172.113	6ЮР.172.114	6ЮР.172.116	6ЮР.172.117	6ДЯ.172.906
Rated supply main voltage of 3-phase, V		220	660	380	380	220	220	380
Supply main frequency, Hz		50	50	50	50	50	50	50
Secondary continuous current, kA		1,6	28,0	18,0	14,0	5,78	10,4	17,9
Secondary current at duty cycle=20%, kA		-	-	-	-	-	-	89,4
Secondary current at duty cycle=50%, kA		2,3	39,6	25,4	19,8	8,2	14,7	-
Rated voltage of the first winding, V		195	527	380	340	195	195	325
Secondary voltage, V		6,96 - 13,93	14,6 - 18,8	6,0 - 9,05	6,94 - 10,0	2,12 - 4,24	2,16 - 4,33	4,06 - 5,80
Continuous power, kVA		31,9	527	163	140	34,5	64	91
Power at duty cycle=20%, kVA		-	-	-	-	-	-	203
Power at duty cycle=50%, kVA		45,1	745	230	198	48,8	91	-
Cooling		water	water	water	water	water	water	water
Cooling water consumption, l/min		8	24	8	8	10	18	5
Stages number		4	2	8	4	4	4	4
Insulation class		B	F	B	F	B	B	B
Dimensions, mm	length	450	493	520	186	450	570	472
	width	512	786	565	390	490	830	494
	height	1 000	1 112	634	850	530	1 364	474
Mass, kg		565	1 050	525	230	155	897	266

Resistance welding transformers ТКЭ-132, ТКЭ-140

Transformers are designed for resistance welding machines (welding devices) as a source of welding current. The transformers have water cooling.

The transformers are used in moderately cold climate conditions, location category 4 as per GOST 15150-69.

TECHNICAL DATA			
CHARACTERISTIC		VALUE	
		ТКЭ-132	ТКЭ-140
		КПБШ.672.212.002	КПБШ.672.212.001
Rated supply main voltage of 3-phase, V		380	380
Supply main frequency, Hz		50	50
Secondary continuous current, kA		14,3	17,9
Secondary current at duty cycle=20%, kA		31,9	40
Rated voltage of the first winding, V		335	335
Secondary voltage, V		4,2 - 8,4	4,3 - 8,6
Continuous power, kVA		157	157
Power at duty cycle=20%, kVA		351	344
Cooling		water	water
Cooling water consumption, l/min		4	4
Stages number		8	8
Insulation class		B	B
Dimensions, mm	length	500	500
	width	248	248
	height	687	687
Mass, kg		280	280

Resistance welding transformers (spot, seam welding) ТК-10.10, ТК-11.09, ТК-14.08, ТК-20ЭП

Transformers are designed for spot, seam resistance welding machines (welding devices) as a source of welding current.

The transformers have imbricated core from electrical steel. The first and second coils are filled with compound.

The welding transformers have water cooling.

The transformers are used in moderately cold climate conditions, location category 4 as per GOST 15150-69.

TECHNICAL DATA					
CHARACTERISTIC		VALUE			
		ТК-10.10	ТК-11.09	ТК-14.08	ТК-20ЭП
		6ДЭ.172.756	6ДЭ.172.864	6ДЭ.172.785	6ДЭ.483.118
Rated supply main voltage of 3-phase, V		380	380	380	380
Supply main frequency, Hz		50	50	50	50
Secondary continuous current, kA		10	11	14	22,2
Secondary current at duty cycle=50%, kA		14,15	15,55	19,80	29,00
Rated voltage of the first winding, V		340	340	340	335
Secondary voltage, V		3,26 - 9,5	5,0 - 8,5	5,06 - 7,2	2,7 - 3,98
Continuous power, kVA		95	93	102	178
Power at duty cycle=50%, kVA		134	132	144	252
Cooling		water	water	water	water
Cooling water consumption, l/min		5	5	5	5
Stages number		8	6	6	6
Insulation class		F	B	B	F
Dimensions, mm	length	310	310	310	378
	width	528	500	528	577
	height	655	633	606	580
Mass, kg		267	283	285	362

Resistance welding transformers TK-80

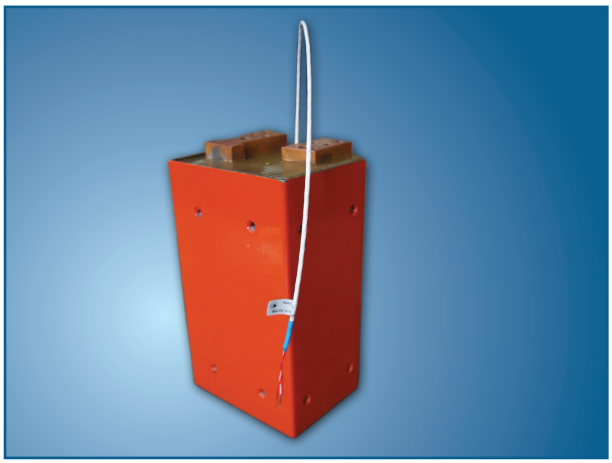
Transformer is designed for resistance welding machines (welding devices) as a source of welding current. The welding transformer has water cooling.

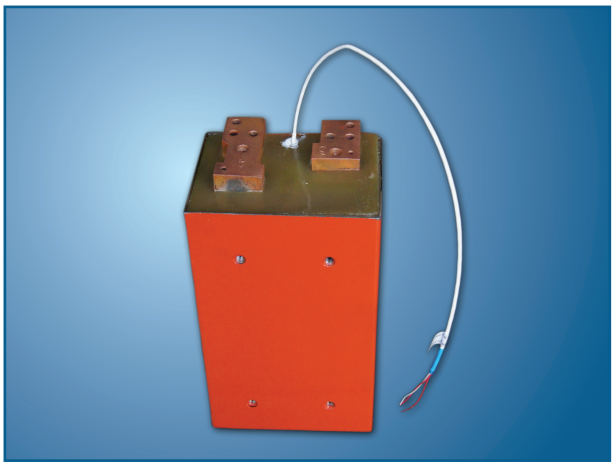
The transformer is designed for resistance welding machines as a source of welding current.

The transformer is used in moderately-cold climate conditions, location category 4 as per GOST 15150-69.

TECHNICAL DATA		
CHARACTERISTIC		VALUE
		TK-80
Supply main voltage of 3-phase, V		380
Supply main frequency, Hz		50
Excitation current, kA		3,9
Rated continuous primary current, A		155
Secondary continuous current at parallel connection of turns, kA		9
Rated voltage of primary winding, V		365
Number of the secondary winding turns		2
Secondary turn construction		tube M1
Secondary voltage of excitation, V		2,92 - 6,29
Power at duty cycle=50%, kVA		81
Cooling		water
Cooling water consumption at input pressure 1,47 × 105 Pa (1,5 kgf/cm^2), l/min		5
Stages number		8
Insulation class		F
Windings active resistance Ohm*10^{-6}, (R)		42
Windings inductive resistance Ohm*10^{-6}, (X)		56
Full windings resistance Ohm*10^{-6}, (Z)		70
Dimensions, mm	length	600
	width	186
	height	436
Mass, kg		117

Resistance welding transformers TK-20, TK-25, TK-32, 6ЮР.172.092, 6ЮР.172.092-01, 6ЮР.172.092-02, 6ЮР.172.092-3





The transformers are designed for installation in welding tongs of robotics and manipulators as sources of current for resistance welding.

The portable transformers have water cooling and protection from windings overheat.

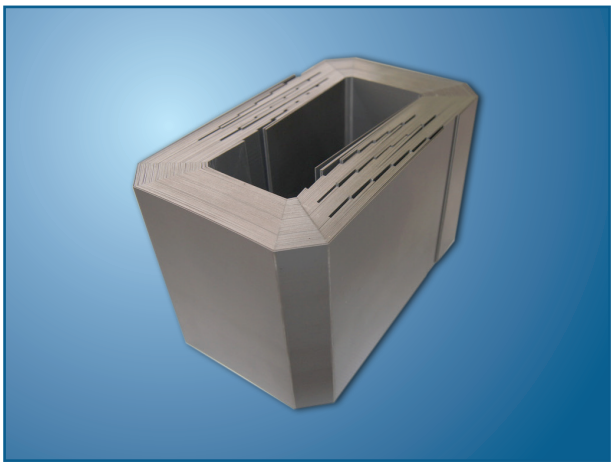
The transformers are connected to the welding equipment by any lateral side.

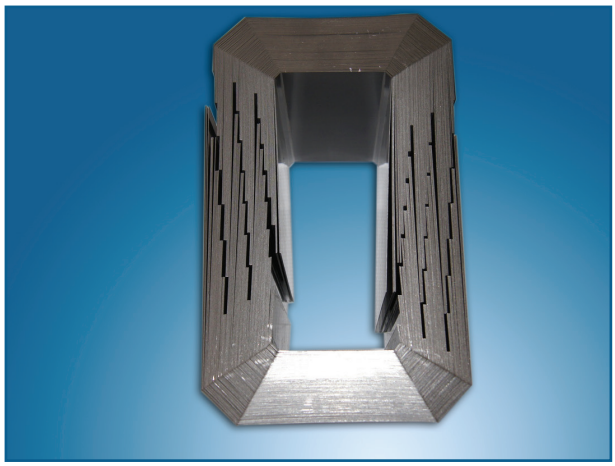
The portable transformers are used in moderately-cold climate conditions, location category 4 as per GOST 15150-69.

TECHNICAL DATA			
CHARACTERISTIC	TK-20	TK-25	TK-32
	6ЮР.172.108	6ЮР.172.108-01	6ЮР.172.108-02
Rated supply main voltage of 3-phase, V	380	380	380
Supply main frequency, Hz	50	50	50
Secondary continuous current, kA	4,0	4,0	4,0
Secondary current at duty cycle=50%, kA	5,7	5,7	5,7
Rated voltage of secondary winding, V	3,6	4,5	5,6
Continuous power, kVA	14,2	17,7	22,7
Power at duty cycle=50%, kVA	20	25	32
Cooling water consumption at input pressure 1,47 × 105 Pa (1,5 kgf/cm^2), l/min, not less	4,0	4,0	4,0
Insulation class	F	F	F
Dimensions, mm (length x width x height), not more	112 x 150 x 225	112 x 150 x 250	112 x 150 x 275
Mass, kg	17	20	22

CHARACTERISTIC	6ЮР.172.092	6ЮР.172.092-01	6ЮР.172.092-02	6ЮР.172.092-03
Rated supply main voltage of 3-phase, V	380	380	380	380
Supply main frequency, Hz	50	50	50	50
Secondary continuous current, kA	3,6	4,0	3,58	3,21
Secondary current at duty cycle=50%, kA	5,1	5,7	5,1	4,5
Secondary voltage, V	4,5	5,3	3,7	3,7
Continuous power, kVA	16,3	21,2	13,43	12
Power at duty cycle=50%, kVA	23	30	19	17
Cooling water consumption, l/min, not less	5,3	5,3	5,3	5,3
Insulation class	H	H	H	H
Dimensions, mm (length x width x height), not more	180 x 194 x 313			129 x 134 x 303
Mass, kg	19,9	20	19,8	13

Magnet cores





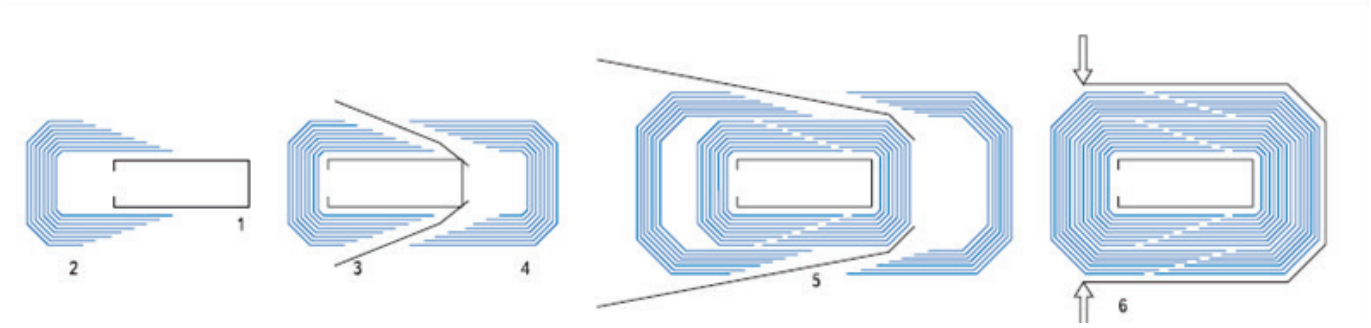
CJSC “Pskovelectrosvar” develops and manufactures magnet cores according to the customer’s drawings from electrical steel for one and three phase transformers for different purposes according to the technology UNICORE.

Control system allows computering all the elements of the magnet core with high accuracy.

Manufacturing and gathering of the item is carried out by an operator at one work place. Integrating of magnet core parts is carried out on the cross. Joint between the parts is placed equally according to the magnet cores rods. This stepped style of connection ensures distribution of magnet core gaps and improves its specification.

Magnetic flow doesn’t stop at air gap hindrance, but fit it, using near backing strips (conducting tracks). Such magnet core construction has min losses and the best physical and metrological specifications.

Below there is the drawing of one phase magnet core gathering.



Advantages of magnate cores manufactured according to the technology UNICORE:

- min losses of electromagnetic energy in a magnet core;
- materials economy up to 30% due to decreasing of losses in comparison with magnate cores of other types;
- low cost in comparison with the stranded and imbricated magnate cores;
- high magnetically conductive specifications;
- low labor input of magnate core gathering;
- it is possible to manufacture magnate cores of any sizes and cross section forms;
- urgent manufacturing of item according to the customer’s design.

Note

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