



EQUIPMENT FOR RAIL WELDING PLANTS



CONTENT

EQUIPMENT FOR RAIL WELDING PLANTS

FBW machine for rail welding MCP-63.01A	4
FBW machine for rail welding MCP-120.01A	5
FBW machine for switch points welding MCPO-84.01	6
FBW machine for frogs welding MCC-150.01	7
Complex for equipment PKH-400	8
Universal roller transfer section CYPT-01	10
Brushing machine for rail contact surfaces C3-03.....	11
Rail drilling machine PCC-01.....	12
Special compact press ПМС-320	13
Hot joints straightening unit УПС-02	14
Rough grinding station ПГШ-01	15
Pulling unit УТ-02.....	16
Cold joints straightening unit УПСХ-01	17
Final grinding station ПЧШ-01	18
Modular pulling transporter ТТ	19
Transporter-distributor of continuously welded rails ТРП-01	20
Rail bar certification system	21
Technological line control system of rail welding plants	21

MOBILE RAIL WELDING UNITS

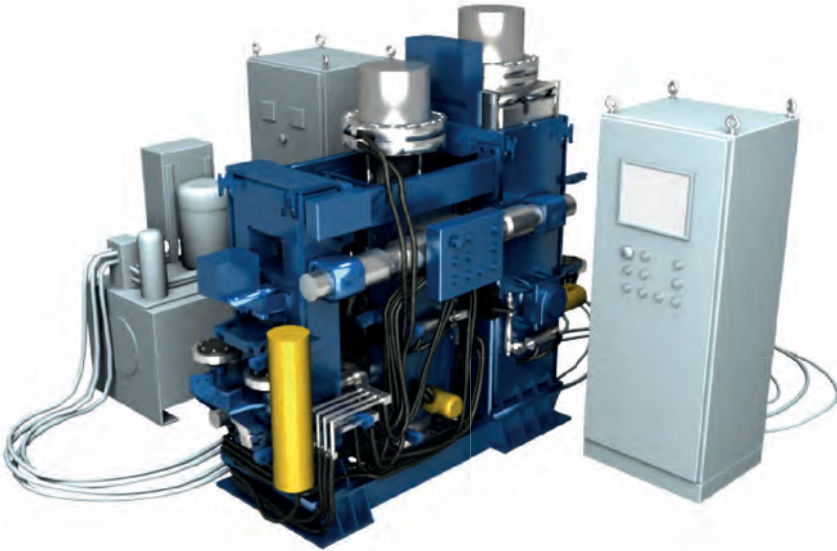
Road-rail welding vehicle MCK-01	22
Mobile rail welding unit MPK-01	24

SPARE PARTS FOR RAIL WELDING MACHINES

Spare parts for rail welding machines.....	25
--	----



FBW MACHINE FOR RAIL WELDING MCP-63.01A



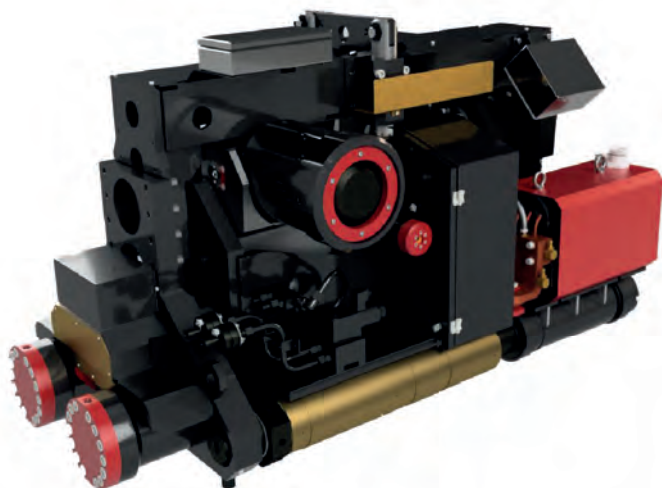
Welding machine MCP-63.01A is designed for flash butt welding (FBW) of rails by continuous or pulsating flashing in stationary plant conditions. The machine provides rail alignment before welding according to the rail axis and to the height of the rail head, welds rails according to the pre-set program, removes weld flash around the entire contour of the joint after welding.

The machine control system is based on an industrial controller. The system provides setting and checking welding process parameters. It provides the operator with the current information about technological welding procedure, records this information and issues a report (passport) on every welded joint.

TECHNICAL DATA

CHARACTERISTIC		VALUE
Nominal supply main voltage of 3-phase AC, V		380
Supply main frequency, Hz		50
Welding transformers power at rated stage at DC (duty cycle) = 50%, kVA		350
Adjustment stages number		2
Secondary current adjustment limits, V		7,92- 8,84
Nominal upsetting force at pressure 15.7 MPa (157 kg/cm ²), daN (kgf), not less		63 000
Nominal gripping force at pressure 18.8 MPa (188 kg/cm ²), daN (kgf), not less		151 000
Movable frame stroke, mm, not less		100
Clampings stroke, mm, not less		60
Max. upsetting speed, mm/s, not less		30
Flashing speed adjustment limits, mm/s		0,2 – 3,0
Max. cross-station area of welded item, mm ²		10 000
Short-term output power at rail welding, welds / h, not less		15
Vertical and horizontal correction interval, mm		±10
Cooling water consumption at pressure 0.15 MPa (1.5 kg/cm ²), l/min		30
Mass, kg	welding unit	12 870
	hydraulic drive station	890
	control and power cabinet	390

FBW MACHINE FOR RAIL WELDING MCP-120.01A



Suspended machine MCP-120.01A is designed for flash-butt welding of rails by pulsating flashing and tension of continuously welded rails R50 and R65 rails in field conditions. Weld flash is cut by the hinged trimmer. The machine is intended for operation as a part of rail-bound welding machines and road-rail welding vehicles.

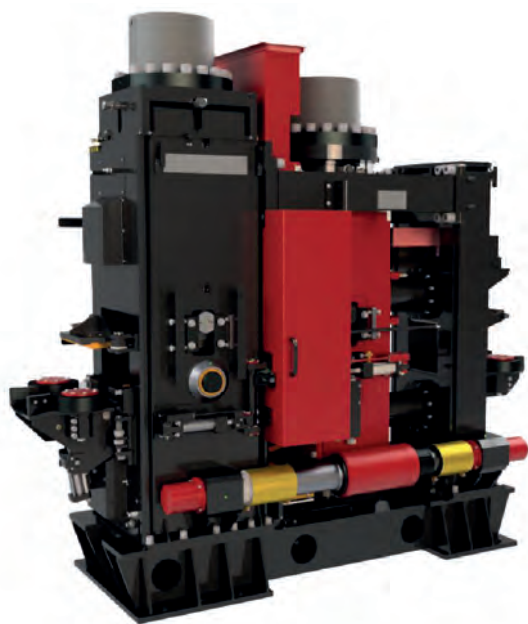
The machine control system is based on an industrial computer. It allows setting and checking the parameters of the welding process.

The system provides the operator with the current information about technological welding procedure, records the information and subsequently issues a report (passport) on every welded joint.

TECHNICAL DATA

CHARACTERISTIC		VALUE
Nominal supply main voltage of AC, V or rated voltage of diesel electric station, V		380 400
Supply main frequency, Hz		50
Welded transformers power at rated stage at duty cycle = 50%, kVA, not less		240
Maximum secondary current, kA, not less		72
Nominal continuous secondary current, kA		21,4
Secondary contour impedance, microOhm, not more		110
Welded transformers transformation ratio		48
Nominal upsetting force at pressure 30.8 MPa, kN		1 200
Max. gripping force at pressure 30.8 MPa, kN		2 800
Operating pressure in hydraulic system, MPa (kgf/mm)		30,8 (308)
Max. upsetting force, mm/s		100
Flashing speed control limits		0,2 - 1,2
Movable frame stroke, mm		95
Machine welded time of rail P65, sec, not more		240
Welding performance for rail P65, welds/h, not less		8
Dimensions, mm (length x width x height)	welding unit	1 876 x 993 x 1 130
	hydraulic drive station	1 572 x 740 x 1 620
	electrics box	1 090 x 550 x 1 670
Mass, kg	welding unit	3 750
	hydraulic drive station	933
	electrics box	650

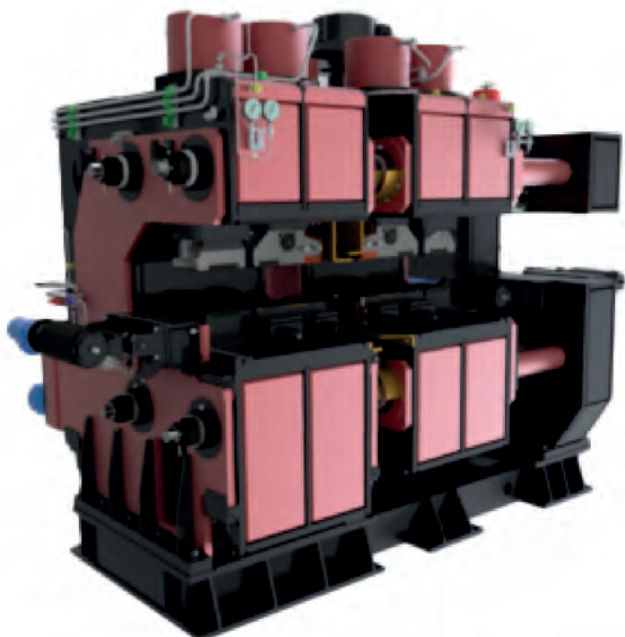
FBW MACHINE FOR SWITCH POINTS WELDING MCPO-84.01



Machine MCPO-84.01 is designed for FBW by continuous or pulsating flashing of switch points and rails, alloyed with chromium in stationary plant conditions and hot weld flash removal after welding.

TECHNICAL DATA	
CHARACTERISTIC	VALUE
Nominal supply main voltage of 3-phase AC, V	380
Supply main frequency, Hz	50
Welding transformers power at rated stage at DC (duty cycle) = 50%, kVA	350
Max. secondary current, kA, not less	80
Number of secondary voltage control stages	2
Secondary voltage control limits, V, not less	7.92 - 8.84
Max. upsetting force, kN, not less	840
Max. gripping force, kN, not less	2 100
Movable frame stroke, mm, not less	145
Average upsetting speed, mm/s, not less	30
Flashing speed control limits, mm/s	0.2 - 3.0
Max. short term performance, welds/ h	15
Vertical and horizontal correction interval, mm	±10
Cooling water consumption at pressure 0.15 MPa (1.5 kg/cm ²), l/min	60
Mass, kg, not more	17 000

FBW MACHINE FOR FROGS WELDING MCC-150.01



Machine MCC-150.01 is designed for FBW of frogs by continuous or pulsating flashing in stationary plant conditions.

TECHNICAL DATA		
CHARACTERISTIC		VALUE
Nominal supply main voltage of 3-phase AC, V		380
Supply main frequency, Hz		50
Nominal secondary coil voltage, V		7,92
Number of secondary voltage stages		2
Secondary voltage control limits, V		7,92 - 8,84
Short circuit power, kVA, not more		800 ±80
Welding power at DC = 50%, kVA		175
Welded transformers transformation ratio		48,43
Distance between conductors, mm: at least		240
at largest		340
Cooling water consumption at pressure 0.3 MPa (1.5 kg/cm ²), l/min, not less		25
Flashing speed, mm/s		0,2 - 1,0
Max. gripping force, mm/s		200
Nominal upsetting force at pressure 26.5 MPa, kN		1 500
Nominal gripping force at pressure 28.3 MPa, kN		4 000
Welding performance of rail P65, welders/hour, not less		8
Movable frame stroke, mm		100
Clampings stroke, mm		80
Vertical and horizontal correction intervals		±10
Max. cross-section area of welding item, mm ²		15 000
Dimensions, mm (length x width x height)	welding unit	4 881 x 2 764 x 3 735
	hydraulic station	1 708 x 1 417 x 1 522
Mass, kg	welding unit	44 500
	hydraulic station	1 470

COMPLEX PKH-400 FOR MULTILAYER SURFACING OF A STAINLESS-STEEL LAYER ON THE END OF THE RAIL AND THE RAIL END OF THE CROSSPIECE



Complex PKH-400 is designed for multilayer surfacing of a layer of stainless steel up to 22 mm thick on the end of the rail and the rail end of the crosspiece with a length of 1000-3110 mm.

The machine is designed to operate under operating conditions corresponding to the UHL design (temperate and cold climate), placement category 4 according to GOST 15150-69 and GOST 15543.1.

TECHNICAL DATA

CHARACTERISTIC	VALUE
Industrial manipulator with controller	
Number of degrees of mobility	6
Load capacity, kg	10
Power supply, kVA	3x220B, 2
Welding machine	
Welding current adjustment range, A	5 - 400
Power supply, kVA	24
Wire-feed mechanism	
Burner	
Burner cleaning	mechanical with injection of non-stick liquid
Protective gas	mixture based on argon
Lifting capacity of the inclined table, kg	600
Installation of autonomous cooling UO-2	
Power supply, kVA	2,5

TECHNOLOGICAL PROCESS OF THE RAIL WELDING LINE

LIST OF EQUIPMENT	
Universal roller transfer section CYPT-01	Delivery and unloading of the rails on the covered storage area
Brushing machine for rail contact surfaces C3-O3	Brushing of the contact surfaces of the rails before welding
Rail drilling machine PCC-01	Drilling of the bolt holes at the beginning and at the end of the continuously welded rails
FBW machine for rail welding MCP-63.01A	Flash butt welding of rails
Special compact press ПМС-320	Testing check samples for static transversal bending
Hot joints straightening unit УПС-02	Straightening of the welded joints in hot conditions in vertical and horizontal plane
Rough grinding station ПГШ-01	Rough grinding of the welded joints around the perimeter
Pulling unit УТ-02	Further movement along the rail welding line
Cold joints straightening unit УПСХ-01	Straightening of the welded joints in cold conditions
Final Grinding Station ПЧШ-01	Final grinding of the head of the rail in the welded joint area
Modular pulling transporter ТТ	Transporting the welded rails to the distributor
Transporter-distributor of continuously welded rails ТРП-01	Loading the continuously welded rails to the rail carrying train

UNIVERSAL ROLLER TRANSFER SECTION CYPT-01



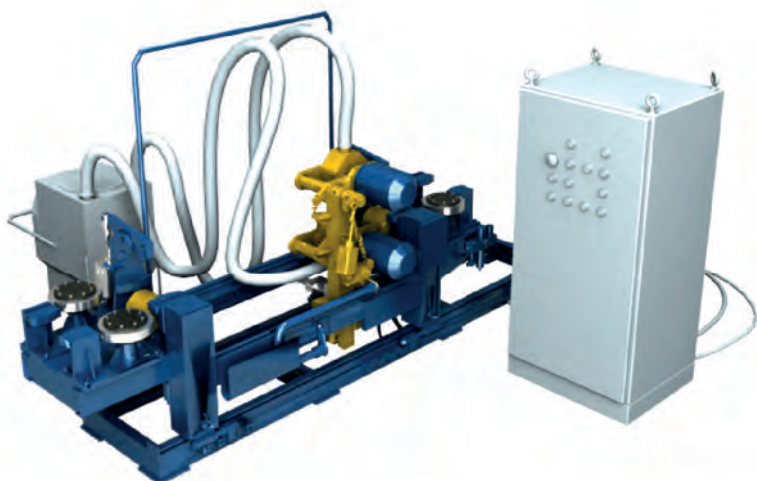
Universal roller transfer section CYPT-01 is designed for transportation of rails along the technological line. It allows transferring rails with insulated joint with combined metal composite fishplates.

The sections are manufactured in the next versions:

- A** – CYPT-01 with a drive without roller insulation (6ЯТ.321.007);
- B** – CYPT-01 with a drive and isolated rollers (6ЯТ.321.007-01);
- C** – CYPT-01 without drive, 4 000 mm long (6ЯТ.321.007-02);
- D** – CYPT-01 without drive, 3 500 mm long (6ЯТ.321.010);
- E** – CYPT- without drive, 2 900 mm long (6ЯТ.321.011);
- F** – CYPT-УИИ without drive for installation of УИИ 001-100 / PT-C (6ЯТ.321.008);
- G** – CYPT-УЗК without drive for ultrasonic control system installation (6ЯТ.321.009);
- H** – CYPT-ВДО without drive for water-cooling system installation (6ЯТ.321.012).

CHARACTERISTIC		TECHNICAL DATA							
		VALUE							
		A	B	C	D	E	F	G	H
Nominal supply main voltage of 3-phase AC, V		380	380	-	-	-	380	380	380
Supply main frequency, Hz		50	50	-	-	-	50	50	50
Drive power, kW		1,5	1,5	-	-	-	-	0,4	-
Max. rail transferred speed, m/s		0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5
Max. transferred items mass, kg		300	300	300	300	300	300	300	300
Rail transportation height above floor, mm		700	700	700	700	700	700	700	700
Nominal frequency inverter power, kW		-	-	-	-	-	75	-	-
Cooling water pressure in input, MPa		-	-	-	-	-	0,2 - 0,3	-	-
Air supplying system operating pressure, MPa		-	-	-	-	-	0,5 - 0,8	0,63	-
Dimensions, mm	length	4 000	4 000	4 000	3 500	2 900	2 950	3 320	4 000
	width	765	765	765	608	608	1 417	850	608
	height	796	796	796	796	796	2 200	1 600	1 170
Mass, kg		565	570	513	398	373	665	500	530

BRUSHING MACHINE FOR RAIL CONTACT SURFACES C3-03



Brushing machine for rail contact surfaces C3-03 is designed for simultaneous brushing of ends of two connected rails to ensure reliable electric contact immediately before flash butt welding.

The machine consists of brushing unit, control cabinet, filter and ventilation unit.

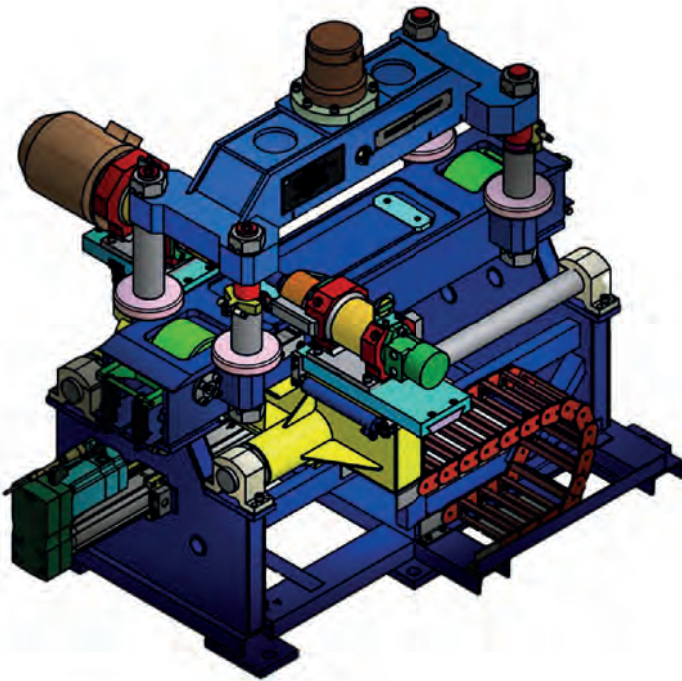
The condition of the treated contact surface meets requirements to flash butt welding. It permits to achieve optimal electrical parameters of the heat balance of flashing ensuring welded joint quality.

The machine can be installed in the technological line and be operated together with the rail welding machine or separately.

TECHNICAL DATA

CHARACTERISTIC		VALUE
Nominal supply main voltage of 3-phase AC, V		380
Supply main frequency, Hz		50
Time of joint treatment, min., not more		2
Max. length of brushed surfaces, mm		700
Nominal power at DC = 22%, kW		8,1
Additional stroke (manual movement), mm		1 000
Dimensions, mm (length x width x height)	peeling machine	3 160 x 940 x 1 042
	control cabinet	757 x 410 x 1 533
	filter ventilation unit	970 x 650 x 1 050
Mass, kg	peeling machine	940
	control cabinet	82
	filter ventilation unit	90

RAIL DRILLING MACHINE PCC-01



Single-spindle machine PCC-01 with digital program control is designed for drilling holes in rails P65 at stationary plant conditions.

Machine design allows to removing chamfers.

The machine is installed in mechanized product line for processing of volumetrically hardened rails on the rail welding plants as well as in metallurgical industry on the rail manufacturing plants.

TECHNICAL DATA

CHARACTERISTIC		VALUE
Nominal supply main voltage of 3-phase AC, V		380
Supply main frequency, Hz		50
Drill diameter, mm		36
Drill rotary speed, rpm		1 024
Drill feed, mm/s	at instrument supply	20 - 30
	at drilling	0,7 - 1,2
Chamfering mill rotation, rpm		750
Chamfering mill feeding speed, mm/s		20 - 30
Lubricating-cooling fluid fed in cutting area, max., l/min.		4
Nominal pressure in hydraulic system, bar		140
Dimensions, mm (length x width x height), not more	drilling unit	1 728 x 1 311 x 1 292
	hydraulic drive station	1 141 x 678 x 1 064
	control panel	600 x 500 x 1 055
Mass, kg, not over	drilling unit	1 116
	hydraulic drive station	326
	control panel	200

SPECIAL COMPACT PRESS ПМС-320



Special compact press ПМС-320 is designed for quality control of rail welded joints. It uses sampling method by means of testing check samples by static transversal bending.

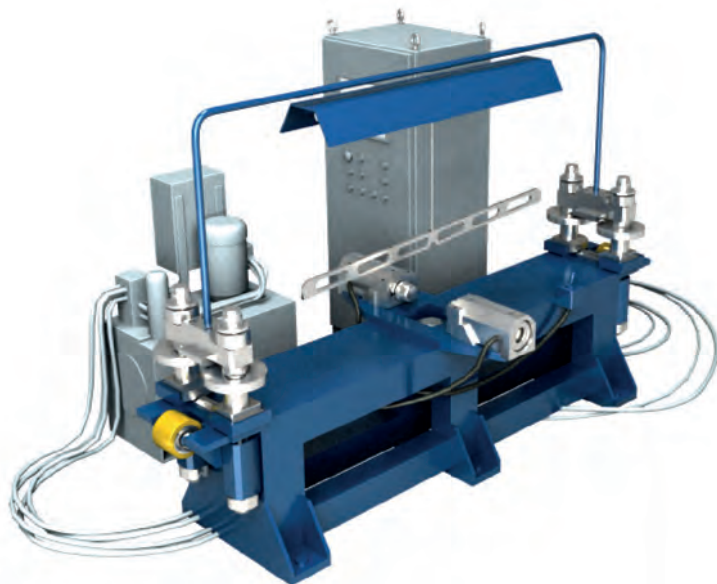
Control system of the press is based on an industrial computer. It allows recording and storing testing procedure information, registering every fracture, displays load curve of the process and allows controlling the process in real time mode.

Compact dimensions and mass of the press allow using it both in stationary plant conditions and as a part of portable rail welding machines.

TECHNICAL DATA

CHARACTERISTIC		VALUE
Nominal supply main voltage of 3-phase, AC V		380
Nominal voltage of diesel electric station, V		400
Supply main frequency, Hz		50
Max. force, t, not less		320
Max. bending, mm		60
Testing items length, mm		1 100 - 1 800
Hydraulic system operation pressure, MPa		40
Dimensions, mm (length x width x height)	press (without a pedestal)	2 200 x 560 x 1 080
	press (with a pedestal)	2 200 x 560 x 1 500
	hydraulic station	710 x 576 x 715
	control cabinet	622 x 535 x 1 765
	roller transfer section	2 000 x 510 x 700
Mass, kg	press (without a pedestal)	2600
	press (with a pedestal)	2860
	hydraulic station	110
	control cabinet	130
	roller transfer section	216

HOT JOINTS STRAIGHTENING UNIT УПС-02



Hot joints straightening unit УПС-02 is designed for hot welded joints straightening to meet the requirements of the rolling surface and the rail head geometry. The unit straightens the rail in horizontal and vertical planes along the standard length of 1500 mm.

The straightness of the welded joint is checked on the rolling surface of the rail head.

The unit can pass through insulated rail joints with combined metal-composite fishplates.

TECHNICAL DATA

CHARACTERISTIC		VALUE
Nominal supply main voltage of 3-phase AC, V		380
Supply main frequency, Hz		50
Operating pressure in hydraulic system, MPa (kgf/cm)		16 (160)
Straightening speed, mm/s, not less		30
Hydraulic cylinders forcing, kN (kgf)	horizontal straightening	80 (8 000)
	vertical straightening	196 (19 600)
Hydraulic cylinders rod stroke, mm	horizontal straightening	170
	vertical straightening	80
Dimensions, mm (length x width x height)	straightening unit	1 740 x 990 x 985
	hydraulic drive station	850 x 610 x 1 300
Mass, kg	straightening unit	780
	hydraulic drive station	480

ROUGH GRINDING STATION ПГШ-01



Rail rough grinding station ПГШ-01 is designed for abrasive treatment of the joint around the whole perimeter at the same level with the main profile along the rail.

The rough rail welding station is a cabin, equipped with local input-exhaust ventilation. The set of the station includes grinding machines for lateral sides, foot and head of the rail.

The station allows passing through insulated joint with combined metal-composite fishplates.

TECHNICAL DATA

CHARACTERISTIC	VALUE
Supply main voltage of 3-phase AC, V	380
Supply main frequency, Hz	50
Rated power, kW	12
Dimensions, mm (length x width x height)	3 600 x 3 000 x 3 520

GRINDING MACHINES

CHARACTERISTIC	VALUE
Type of grinding machine	electrical
Supply main voltage of 3-phase AC, V	380
Supply main frequency, Hz	50
Electric motor power, kW	3
Rotations number of the grinding wheel, rot/min	2 850
Dimensions of grinding wheel, mm	Ø 300 x Ø 76 x 32
Circumferential speed, m/s	40

PULLING UNIT YT-02



Pulling unit YT-02 is designed for transportation of continuously welded rails along technological lines of stationary rail welding plants up to the pulling transporter.

When the unit is in operation, the drivers of the roller transfer sections are automatically switched off ensuring electricity saving.

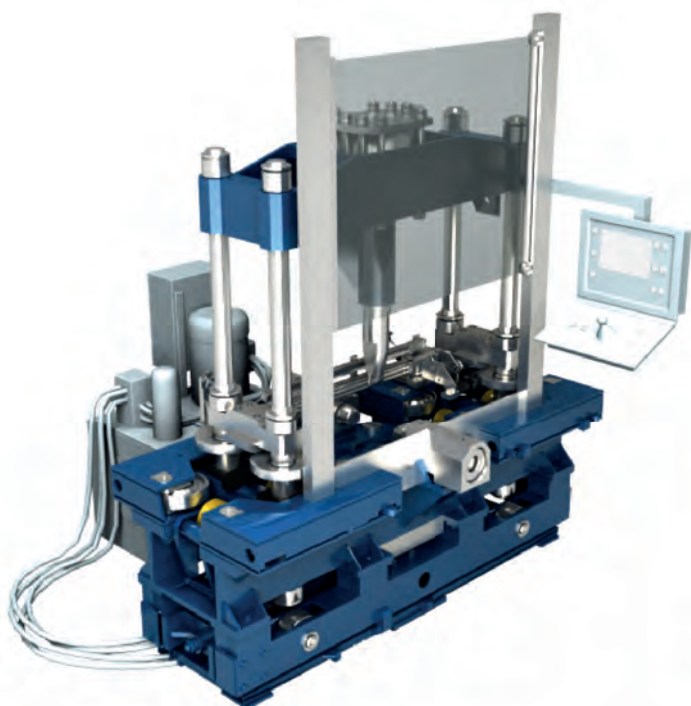
The unit has a variable-frequency drive ensuring smooth changing of traverse speed of continuously welded rails.

The unit can pass through insulated rail joints with combined metal-composite fishplates.

TECHNICAL DATA

CHARACTERISTIC	VALUE
Nominal supply main voltage of 3-phase AC, V	380
Supply main frequency, Hz	50
Power consumption, kW, not more	6,62
Pulling force, kN, not less	10,4
Rollers gripping force kN, not less	70
Rail strings traverse speed at stabilized conditions, m/s	0,5
Acceleration (deceleration) by continuously welded rails traverse, m/s, not more	0,02

COLD JOINTS STRAIGHTENING UNIT УПЦХ-01



Cold joint straightening unit УПЦХ-01 is designed for straightening cold rail joints to meet the required geometry of the rolling surface and of the rail head. The unit straightens the rail in horizontal and vertical planes along the standard length of 1300 mm, checking the rail bending along the length of 750 mm by laser sensor.

The unit can pass through insulation rail joint with combined metal-composite fishplates.

TECHNICAL DATA

CHARACTERISTIC		VALUE
Nominal supply main voltage of 3-phase AC, V		380
Supply main frequency, Hz		50
Straightening mode		manual/semiautomatic
Straightening time, min, not more		5
Measuring system precision, mm/m		0,1
Distance between supporting elements, mm		1 300
Max. bending moment, kgm, not less	horizontal straightening	15 460
	vertical straightening	53 485
Operating pressure at hydraulic system, MPa		31
Rated pneumatic pressure, MPa		0,617
Max. bending moment, kgm, not less	horizontal straightening	477,21 (47 721)
	vertical straightening	1 645,9 (164 590)
Hydraulic cylinders rod stroke, mm	horizontal straightening	160
	lower rod straightening	45
	upper rod straightening	115
	straightening unit movement	400
Dimensions, mm (length x width x height)	straightening unit	2 030 × 1 110 × 2 090
	hydraulic drive unit	1 370 × 1 070 × 1 244
	control cabinet	703 × 400 × 1 162
Mass, kg	straightening unit	3 050
	hydraulic drive unit	790
	control cabinet	110

FINAL GRINDING STATION ПЧШ-01



Rail final grinding station ПЧШ-01 is designed for final profile grinding of the welded joint of the rail head.

The station is a cabin equipped with local input-exhaust ventilation. The set of station include grinding machine for final grinding of the rail head profile.

The station can pass through insulating rail joint with combined metal-composite fishplates.

TECHNICAL DATA

CHARACTERISTIC	VALUE
Supply main voltage of 3-phase AC, V	380
Supply main frequency, Hz	50
Nominal electrical power, kW	4
Dimensions, mm (length x width x height)	3 600 x 3 000 x 3 520
Mass, kg	3 200

GRINDING MACHINES

CHARACTERISTIC	VALUE
Type of grinding machine	electrical
Supply main voltage of 3-phase AC, V	380
Supply main frequency, Hz	50
Electrical motor power, kW	3
Distance between the guiding rollers, mm	855 - 1 000
Distance between supporting rollers, mm	795 - 880
Dimensions of the grinding wheel, mm	Ø 150 x 72
Mass, kg	39

MODULAR PULLING TRANSPORTER TT



Transporter TT is designed for transportation of continuously welded rails, as a part of the rail welding plant process line.

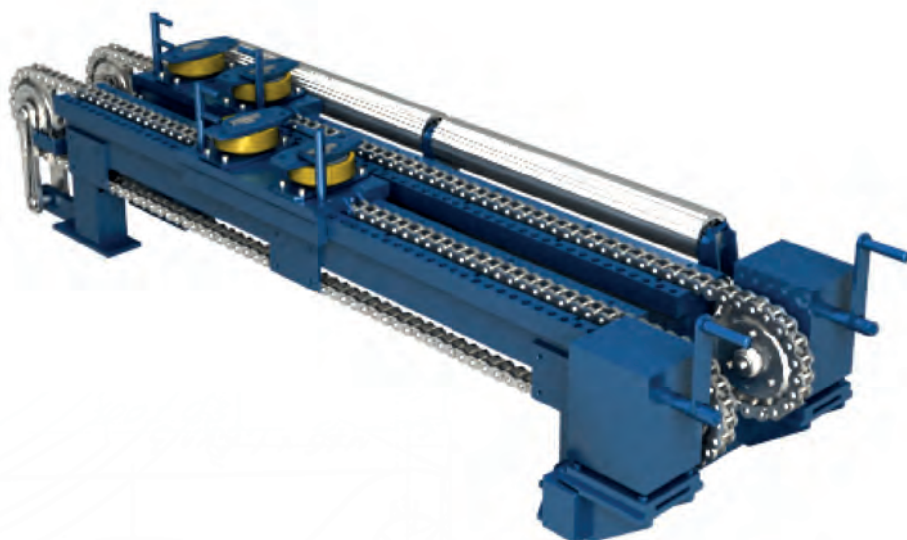
The control system is based on an industrial computer. The conveying speed of the continuously welded rails and the driving force of the transporter are determined by the variable frequency drive.

Depending on the length of the continuously welded rail, the pulling transporter can be made in two versions: TT-02, consisting of four modules, and TT-03, consisting of five modules.

The transporter can pass through insulating rail joints with combined metal-composite fishplates.

TECHNICAL DATA		
CHARACTERISTIC	VALUE	
	TT-02	TT-03
Nominal supply main voltage of 3-phase AC, 50 Hz, V	380	380
Supply main frequency, Hz	50	50
Pulling force, kg	6 820	8 280
Pushing rollers number	8	10
Max. conveying speed of continuously welded rails, m/s	0,5	0,5
Rated power, kW	37,92	47,12
Method of speed change of continuously welded rail	variable frequency	variable frequency
Dimensions, mm, (length x width x height), not less		
- transporting unit	3 500 x 900 x 1 750	4 500 x 900 x 1 750
- control cabinet	800 x 500 x 1500	800 x 500 x 1500
- control station	200 x 150 x 300	200 x 150 x 300
Mass, kg, not more		
- transporting unit	4 500	5 500
- control cabinet	380	380
- control station	4	4

TRANSPORTER-DISTRIBUTOR OF CONTINUOUSLY WELDED RAILS ТРП-01



Transporter-distributor TPΠ-01 is designed for re-distribution of continuously welded rails when loading them on rail-carrying trains in conditions of multiple-flow production. The transfer of continuously welded rails from one flow to another is carried out by switch screw mechanisms, movable guides and carriages with chain drive.

The transporter can pass through insulating rail joints with combined metal-composite fishplates.

TECHNICAL PARAMETERS	
CHARACTERISTIC	VALUE
Rail transportation height, mm	700
Distance between flows, mm	4 200
Distance from beginning of transporter to continuously welded rails carrying train, m	59
Rail bend angle by transfer to another flow, not more	4° 15'
Mass, kg	40 500



RAIL BAR CERTIFICATION SYSTEM

Passportization system provides the following information in real time:

- collection of technological information from the equipment of computerized posts of the line;
- obtaining information on mechanical tests on the press;
- storage of received information in a single database;
- formation of an electronic passport of the lash, its printout indicating the necessary details of the manufacturer of a particular rail lash.

The system allows you to view archives of accumulated data, generate reports and send them to print.

USING ARCHIVES

The system allows sorting archival data according to the number of the line and range of the time sample, view data archives, make reports and print them out. The size of the window for working with archives depends on chosen detailization, thus providing maximum convenience of working with the necessary data.

TECHNOLOGICAL LINE CONTROL SYSTEM OF RAIL WELDING PLANTS

The system is designed to control transportation of continuously welded rail along technological lines of rail welding plants. Diagnostics and visualization system of the line status displays mnemonic diagrams showing the conditions of all sensors and actuating mechanisms of the equipment of the line control system (modes of operation, direction and speed of continuously welded rails, failures and emergencies).

The system monitors equipment conditions without using additional control and measuring tools.

Control units are equipped with light-signal columns providing light and sound signaling when transporting continuously welded rails and in emergency cases.

The systems of video observation and central control room allow recording and controlling all stages of technological process in real time mode. Video cameras monitor the rail welding process 24 hours a day in conditions of middle and low light and provide detailing of elements.

The 16-channel video recorder is used for saving the information received from video cameras.

ROAD-RAIL WELDING MACHINE MCK-01



Road-rail welding machine MCK-01 is a special-purpose unit based on combined hydrostatic running and allowing to travel by public roads and intended for welding rails in the railway track.

Based on vehicle chassis and equipped with the suspended rail welding machine MSR-120.01A and the high frequency inductive heating unit. This vehicle is a competitive alternative to rail-bound welding machinery.

TECHNICAL DATA	
CHARACTERISTIC	VALUE
Basic parameters of the machine on vehicle chassis DAF	
Overall dimensions with box van, mm (length x width x height)	11 440 x 2 550 x 4 150
Mass, kg	32 000
Max. vehicle speed on route, km/h	80
Truck chassis type	8 x 2
Tank size, l	560
Basic parameters of vehicle during work on rails (rail vehicle)	
Time required for driving the vehicle onto the track, min., not more	10
Max. speed on straight line sections of railway track, km/h, forward/back	30/20
Max. speed passing switches, special railway track sections and curved track with radius less than 200 m, km/h	5
Max. down grade of the track, %	20
Time required for box van opening and positioning welding head on a joint, min., not more	10
Manipulator (welding lift) parameters	
Rotation angle roll of welding head, deg.	±60
Lifting capacity, kg	4 500
Lift height of welding above the track, mm	550



TECHNICAL DATA	
CHARACTERISTIC	VALUE
Welding parameters	
Machine welding time of rail P65 joint, s, not more	240
Power at DC = 50 %, kVA, not less	262
Nominal upsetting force, t	120
Max. upsetting speed, mm/s, not less	30
Parameters of joint thermo treatment	
Heating temperature, °C	850 - 900
Heating time, s, not more	240
Cooling time, s, not less	180
Diesel generator AC 400	
Power, kVA	400
Tank size, l	350



MOBILE RAIL WELDING UNIT MPK-01



Mobile rail welding unit MPK-01 provides welding rails of different length, strength and cross-sectional area from 6 500 mm² up to 10 000 mm² by electric-contact type of welding. It provides welds flash removing after welding, heat treatment of joint and testing of rails check samples in field conditions.

Operation conditions for mobile rail welding unit:

1. Altitude above sea level up to 1 000 m
2. Range of temperatures from -20 to +40°C

Humidity:

- Up to 80 % at temperature +20°C
- Up to 100% at temperature + 25°C

Mobile rail welding unit consists of the following equipment:

- Three phases diesel generator
- Hiab truck (lifting machine)
- Suspended machine for FBW of rails MSR-120.01A
- Inductive heating unit
- Special compact press for testing check samples of welded joints

All this equipment is installed on special frame with container.
The container construction allows its installation on the standard flat wagon.
The container is provided with special creepers for loading and unloading.

TECHNICAL DATA	
CHARACTERISTIC	VALUE
Length, mm	10 000
Width, mm	2 500
Height, mm	2 900
Weight of the whole unit, kg, not more	20 000

SPARE PARTS FOR RAIL WELDING MACHINES

We are engaged in the design and manufacturing of spare parts of all types: electrodes, electrode holders, flexible busbars, current leads, water-cooled cable, water-cooled busbars.

We produce spare parts for rail welding machines such as K 1000, K 1100, MCP-63.01, MCP-63.01A; K355, K900, K922, MCP-80.01, MCP-120.01, MCP-120.01A:

SIGNIFICATION	NAME
8ЯТ.925.047	Backing-up screw bolt
K1000M.02.00.004	Top conductive gasket
K1000M.02.00.003	Bottom conductive gasket
K355A.21.00.035	Screw bolt
K1000.02.00.008	Shim
K1000.02.00.033	Shim
K1000.02.08.008	Shim
K1000A.01.01.000-1	Hydraulic cylinder of rails coupling
K922A.62.00.000	Weld flash remover
5ЯТ.588.073	Jaw piece
5ЯТ.588.076	Jaw piece
K355A.21.16.600	Jaw piece
K355A.21.16.700	Jaw piece
K355A.21.16.800	Jaw piece
K355A.21.16.900	Jaw piece
K900A.50.03.000	Jaw piece
K900A.50.04.000	Jaw piece
K900A.50.25.000	Jaw piece
K900A.50.26.000	Jaw piece
K922-1.01.00.610	Jaw piece
K922-1.01.00.620	Jaw piece
K922-1.01.00.630	Jaw piece
K922-1.01.00.640	Jaw piece
K922-1.01.00.650	Jaw piece
K922-1.01.00.660	Jaw piece
K922-1.01.00.670	Jaw piece
K922-1.01.00.680	Jaw piece
5ЯТ.780.019	Insulator
K1000.01.15.001	Guide
K1000.01.15.002	Guide
8ЯТ.486.058	Blade

SIGNIFICATION	NAME
K900A.50.00.060	Blade
K900A.50.00.040	Blade
K900A.50.00.050	Blade
K922A.62.00.100	Blade
K922A.62.00.200	Blade
K922A.62.00.300	Blade
5ШЩ.585.022	Power-supply circuit
5ШЩ.585.023	Power-supply circuit
5ШЩ.585.024	Power-supply circuit
5ШЩ.585.025	Power-supply circuit
K355A.01.00.120	Power-supply circuit
5ЯТ.150.019	Clamping plate
8ЯТ.151.793	Clamping plate
8ЯТ.151.794	Clamping plate
5ЯТ.068.055	Card
5ЯТ.068.056	Card
5ЯТ.068.057	Card
K190ПА.01.04.000-03	Vertical displacement drive unit
K190ПА.01.03.000-03	Horizontal displacement drive unit
8ЯТ.588.083	Conducting wire
8ЯТ.588.084	Conducting wire
8ЯТ.588.094	Conducting wire
8ЯТ.588.095	Conducting wire
8ЯТ.588.120	Conducting wire
K355A.01.00.110	Conducting wire
K355A.01.00.140	Conducting wire
K922A.01.00.410	Conducting wire
K922A.01.00.420	Conducting wire
K922A.01.00.430	Conducting wire
K922-1.01.00.450	Conducting wire
K922A.01.00.470	Conducting wire
6ЯТ.031.024	Weld flash remover unit
5ЯТ.530.067	Bar
5ЯТ.530.068	Bar
5ЯТ.530.096	Bar
5ЯТ.530.097	Bar
5ЯТ.490.027	Electrode

CONTENTS

SKT Group LLC

Bld.3, Novatorov Str., Pskov, Russia
E-mail: export@skt-g.ru





SKT GROUP LLC
PSKOV, RUSSIA BLD. 3, NOVATOROV STR.
EXPORT@SKT-G.RU
SKT-G.RU

