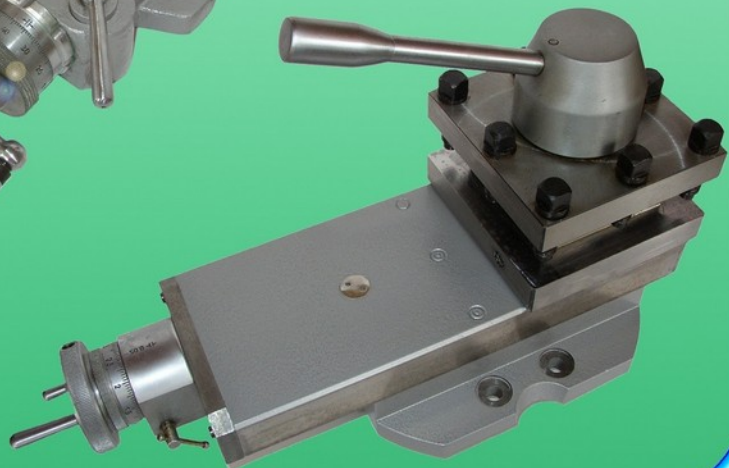
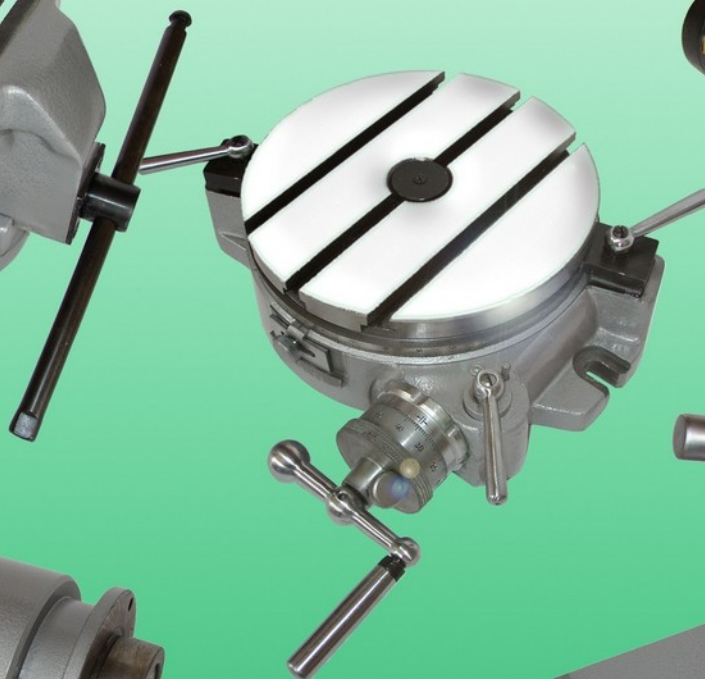


BARANOVICHI MACHINE TOOL ACCESSORIES PLANT

CATALOGUE





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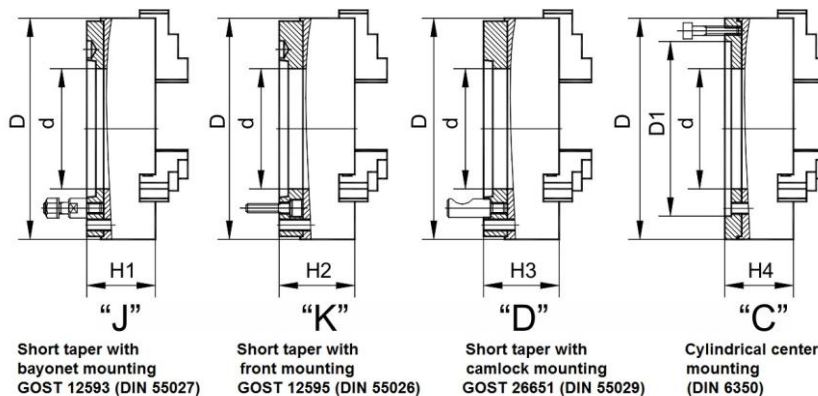
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THREE-JAW MANUAL SELF-CENTERING CHUCKS



These chucks are meant for mounting on conventional and special lathes.

Chuck design secures high-pressure force transfer with much less vise grip wrench torque in comparison with concentric jaw chucks. Wedge-strip chucks have high wear resistance and long lifetime, stability in reaching of high centering accuracy of workpieces. Chucks are made on a basis of a hardened steel case, and include hardened jaws set.

Under the customer request chucks are packaged with additional set of soft jaws and intermediate jaws for specific setups with them. Hardened chucks function as direct and reverse jaws when realignment.

CHUCKS SIZES AND PERFORMANCE SPECIFICATION

Chuck diameter D, mm		250	315	400	500
Chuck height, mm	H1	106	121	138	143
	H2	116	131	153	153
	H3	116	131	148	148
	H4	106	121	138	143
Through-hole diameter d, mm		65	95	120	180
Spindle nose size	GOST 12593 (DIN 55027)	J6;J8	J6;J8;J11	J8;J11	J8;J11
	GOST 12595 (DIN 55026)	K6;K8	K6;K8;K11	K8;K11	K8;K11
	GOST 26651 (DIN 55029)	D6;D8	D6;D8;D11	D8;D11	D8;D11
Cylindrical center diameter D1, mm		210	270	340	440
Jaw working movement, mm		8	10,7	12	16
Wrench maximum torque, N·m		180	200	225	250
Max. total clamping force, kN		90	120	140	160
Maximum speed of rotation, min ⁻¹		3000	2300	1800	1300
Chuck weight, kg	"J"	34	67,8	110	175
	"K"	36	70	115	175
	"D"	35	69	112	180
	"C"	34,5	67,2	110	175

Chuck designation:

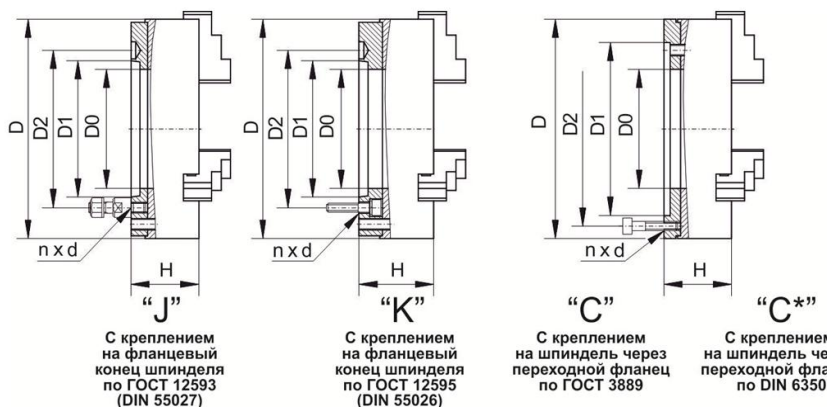
PR - 111. 222. 3 4 5

1 – Chuck external diameter, mm (250; 315; 400; 500)



- 2 – Through-hole diameter, mm
- 3 – Chuck fixation type:
 - C – cylindrical center mounting (DIN 6350)
 - J – short taper with bayonet mounting GOST 12593 (DIN 55027)
 - K – short taper with front mounting GOST 12595 (DIN 55026)
 - D – short taper with camlock mounting GOST 26651 (DIN 55029)
- 4 – Spindle nose size (6; 8; 11) or cylindrical center diameter, mm
- 5 – Accuracy class: without designation - normal , P - increased

THREE-JAW MANUAL SELF-CENTERING CHUCKS Ø 630 MM



These chucks are meant for mounting on conventional and special lathes.

Chuck design secures high-pressure force transfer with much less vise grip wrench torque in comparison with concentric jaw chucks. Wedge-strip chucks have high wear resistance and long lifetime, stability in reaching of high centering accuracy of workpieces. Chucks are made on a basis of a hardened steel case, and include hardened jaws set.

Under the customer request chucks are packaged with additional set of soft jaws and intermediate jaws for specific setups with them. Hardened chucks function as direct and reverse jaws when realignment.

	PR-630.254.J11	PR-630.254.K11	PR-630.254.J15	PR-630.254.K15	PR-630.254.C560	PR-630.254.C545
Chuck diameter D, mm	630					
Chuck fixation type	J	K	J	K	C	C*
Spindle nose size	11	11	15	15	-	-
The outer diameter of the	196,869	196,869	285,775	285,775	560x8	545x7
Mounting holes position	235,0	235,0	330,2	330,2	595	
Mounting holes number n /	6xM20	6x22	6xM24	6x26	6xM16	6xM16
Through-hole diameter D0,	191				254	
Height of chuck without jaws	143	153	148	158	143	143
Gripping range, mm	170-605					
Working jaw stroke, mm	20,0					
Maximum torque on the key,	250					
The total clamping force in	160					
Maximum speed of rotation,	1000					
Chuck weight, kg	300					

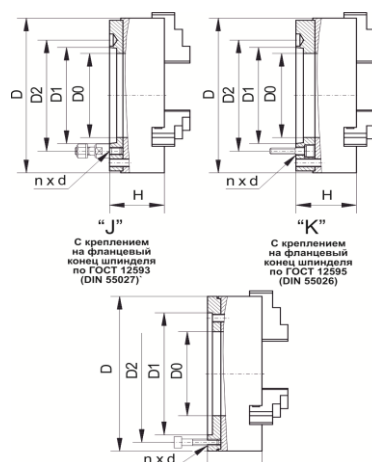
C* - with mounting to the spindle via the DIN 6350 transition flange

Comparison table for manual lathe chucks



GOST 2675-80	JSC "BZSP"
7100-0019	PR-630.254.C560 (ц)
7100-0020	PR-630.254.C560 (с)
7100-0051	PR-630.254.J11 (ц)
7100-0052	PR-630.254.J11 (с)
7100-0053	PR-630.254.J15 (ц)
7100-0054	PR-630.254.J15 (с)
7100-0069	PR-630.254.K15 (ц)
7100-0070	PR-630.254.K15 (с)

FOUR-JAW MANUAL WEDGE BAR CHUCKS, SELF-CENTERING PR4-500.180



The chucks are designed for mounting on universal and special lathes. The design of the chucks provides high pressure force transfer with much less vise grip wrench torque compared to concentric jaw chucks. Wedge bar chucks have high wear resistance and long service life, stability in reaching high precision of centering parts. The basic package includes a set of hardened reversing jaws that perform the function of direct and reversible jaws when reinstalling. Under the customer request chucks are packaged with additional set of non-hardened (soft) jaws and intermediate jaws for specific setups with them.

TECHNICAL SPECIFICATIONS

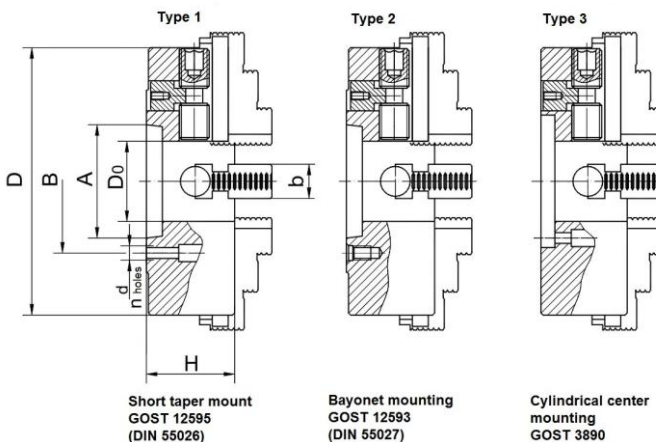
Parameters	Value
Wrench maximum torque, N·m	250
Max. total clamping force, kN	200
Maximum speed of chuck	1300
Jaw stroke, not less than, mm	16,0
Weight, not more than, kg	185

CHUCKS SIZE RANGE

Model	Type	D	D ₀	D ₁	D ₂	H	d	n
PR4-500.180.K8	K	500	180	139,719	171,4	153	18	6
PR4-500.180.K11	K	500	180	196,869	235	153	22	6
PR4-500.180.J8	J	500	180	139,719	171,4	143	M16	4
PR4-500.180.J11	J	500	180	196,869	235	143	M20	6
PR4-500.180.C440	C	500	180	440	465	143	M16	6
PR4-500.180.C420	C*	500	180	420	458	143	M16	6



FOUR-JAW INDEPENDENT CHUCKS



Four-jaw independent chucks, that are correspond to the GOST 3890, are meant for clamping and machining of bar stock and complex shape piece part components, non-symmetrical, eccentric (casts, forgings, armature etc.) on machines of lathe group. Chucks fixation on a machine spindle is in accordance with a chuck type. Chuck cases $\varnothing 630 - \varnothing 800$ mm may be produced of steel or cast iron. When ordering a chuck with steel case then letter “C” must be added to the chuck designation. Chucks $\varnothing 250 - \varnothing 500$ mm are produced with steel case.

Parameter	Model 7103																		
	-0002	-0044	-0028	-0045	-0059	-0046	-0018	-0003	-0012	-0030	-0047	-0019	-0004	-0049	-0005	-0013	-0033	-0058	-0020
Chuck diameter D, mm	250						315						400						
Chuck fixation type	1	2	1	2	1	2	3	1	2	1	2	3	1	2	1	2	1	2	3
Spindle nose size	5	5	6	6	8	8	-	6	6	8	8	-	6	6	8	8	11	11	-
The outer diameter of the connecting cone (girdle) A, mm	82,563	82,563	106,375	106,375	139,719	139,719	160x8	106,375	106,375	139,719	139,719	200x8	106,375	106,375	139,719	139,719	196,869	196,869	200
Mounting holes position diameter B, mm	104,8	104,8	133,4	133,4	171,4	171,4	133,4	133,4	133,4	171,4	171,4	171,4	133,4	133,4	171,4	171,4	235	235	171,4
Mounting holes diameter d, mm	12	M10	14	M12	18	M16	14	14	M12	18	M16	18	14	M12	18	M16	22	M20	18
Mounting holes number, n	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	8	6	4

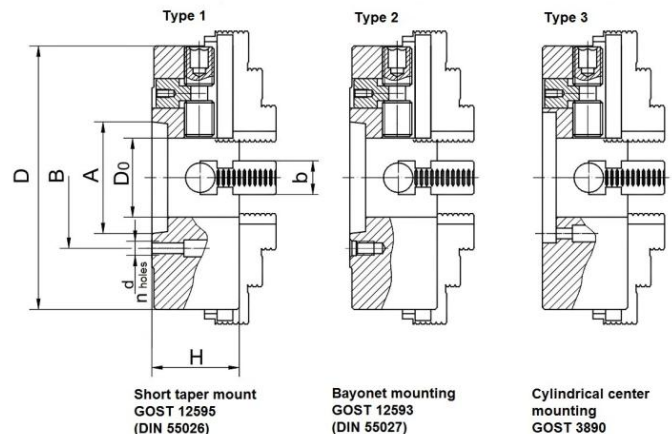


Through-hole diameter D ₀ , mm	75	100	100	130
Chuck height H, mm	83	95	93	105
Jaw width b, mm	32	32		45
Size for the key S, mm	12	12		17
Gripping range, mm	15-180	20-245		35-320
Maximum speed of rotation, min ⁻¹	2000	1500		1100
Chuck weight, kg	30	50		90

Parameter	Model 7103															
	-0060	-0052	-0006	-0014	-0021	-0061	-0053	-0007	-0015	-0022	-0008	-0054	-0009	-0055	-0023	
Chuck diameter D, mm	500					630					800					
Chuck fixation type	1	2	1	2	3	1	2	1	2	3	1	2	1	2	3	
Spindle nose size	8	8	11	11	-	8	8	11	11	-	11	11	15	15	-	
The outer diameter of the connecting cone (girdle) A, mm	139,719	139,719	196,869	196,869	270x12	139,719	139,719	196,869	196,869	270	196,869	196,869	285,775	285,775	360	
Mounting holes position diameter B, mm	171,4	171,4	235	235	235	171,4	171,4	235	235	235	235	235	330,2	330,2	330,2	
Mounting holes diameter d, mm	18	M16	22	M20	22	18	M16	22	M20	22	22	M20	26	M24	26	
Mounting holes number, n	4	4	8	6	4	4	4	8	6	4	8	6	8	6	8	
Through-hole diameter D ₀ , mm	130		180			130		180			190		280		190	
Chuck height H, mm	105					125					135					130
Jaw width b, mm	45					60					80					
Size for the key S, mm	17															
Gripping range, mm	35-400					45-520					55-670					
Maximum speed of rotation, min ⁻¹	700					500 (400 cast-iron)					400 (300 cast-iron)					
Chuck weight, kg	120					180					290					



INDEPENDENT FOUR-JAW CHUCKS 7103 Ø1000 mm



Lathe chucks with four independent jaws comply with GOST Standard 3890 and are designed for clamping and machining bar stock and irregularly shaped, non-symmetric, eccentric workpieces (castings, forgings, fittings, etc.) on lathes.

Chucks mounting on a lathe spindle is done in accordance with a chuck type.

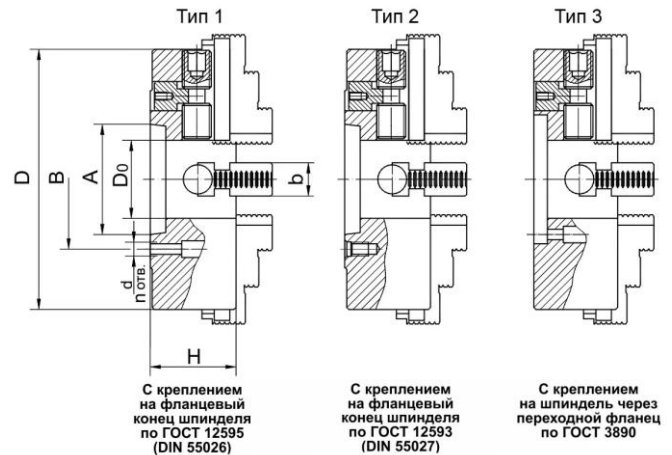
Chucks are delivered with solid hardened jaws which after reinstallation can perform the function of both direct and reversible ones.

Chuck cases are made of steel. The chucks have T-slots on the body for installation of various technological adjustments.

	Model 7103-		
	-0011	-0057	-0024
Chuck diameter D, mm	1000		
Chuck fixation type	1	2	3
Spindle nose size	15	15	-
The outer diameter of the connecting cone (girdle) A, mm	285,775	285,775	360
Mounting holes position diameter B, mm	330,2	330,2	330,2
Mounting holes diameter d, mm	26	M24	26
Mounting holes number, n	8	6	8
Through-hole diameter D0, mm	280		
Chuck body height H, mm	135		130
Jaw width b, mm	80		
Gripping range, mm	70-870		
Maximum speed of rotation, min-1	250		
Chuck weight, kg	390		



INDEPENDENT FOUR-JAW CHUCKS Ø1250 MM



Lathe chucks with four independent jaws comply with GOST Standard 3890 and are designed for clamping and machining bar stock and irregularly shaped, non-symmetric, eccentric workpieces (castings, forgings, fittings, etc.) on lathes.

Chucks mounting on a lathe spindle is done in accordance with a chuck type.

Chucks are delivered with solid hardened jaws which after reinstallation can perform the function of both direct and reversible ones.

Material – steel.

Lathe chucks with four independent jaws are designed for clamping and processing workpieces during high-performance turning on screw-cutting lathes manufactured by “Ryazan Machine-Tool Plant”. A design feature of these chucks is a tooth rim on the back end of the chuck to drive the chuck.

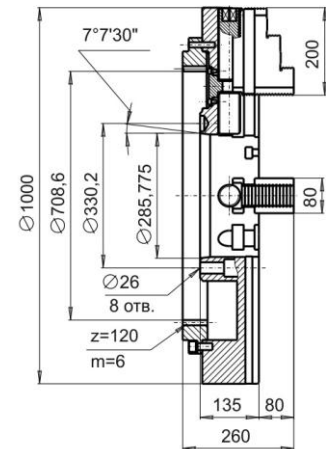
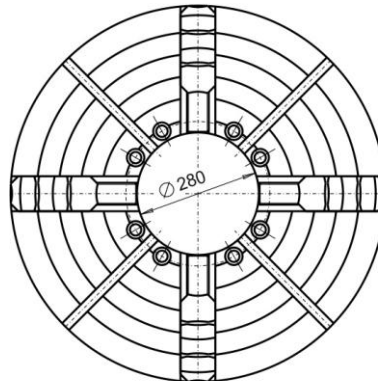
Chuck 7103-0011B is installed on lathes model 165 and its modifications: 1A165, 1M165, 1N165, PT117, PT317, PT817 and their analogues.

CHUCKS SIZE RANGE AND TECHNICAL SPECIFICATION

Parameter	Designation of chuck 7103-		
	-0062	-0063	-0064
Chuck outer diameter D, mm	1250		
Chuck fixation type	1	2	3
Spindle nose size	15	15	-
Outer diameter of a spindle nose A, mm	285,775	285,775	550
Mounting holes position diameter B, mm	330,2	330,2	500
Mounting holes diameter d, mm	26	M24	26
Number of mounting holes n	8	6	8
Inside (through hole) diameter D ₀ , mm	280		
Chuck height H, mm	135		130
Jaw width b, mm	80		
Gripping range, mm	70-1120		
Maximum rotational speed, min ⁻¹	150		
Chuck weight, not more than, kg	590		



INDEPENDENT FOUR-JAW CHUCKS 7103 WITH A RING GEAR



Lathe chucks with independent movement of the cam is designed for clamping and machining at the power turning on lathes production of "Ryazan Machine Tool Works" model 165 and its modifications: 1A165, 1M165, 1N165, RT117 .

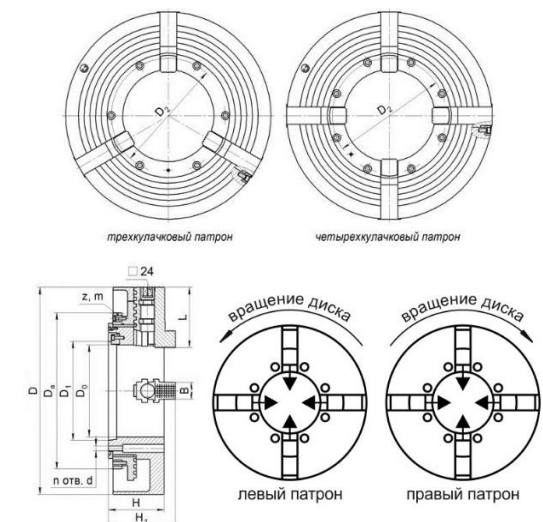
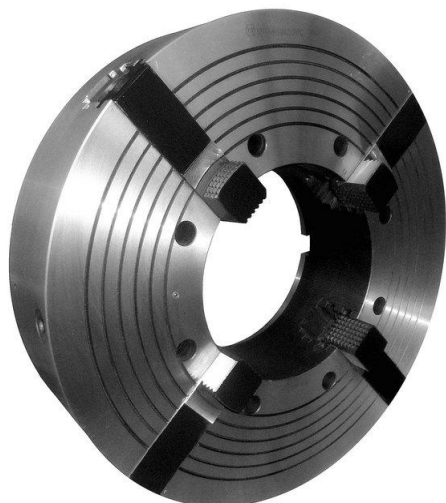
Design feature is the presence of the ring gear on the rear end of the cartridge to cartridge drive.

CHUCKS SIZE RANGE AND TECHNICAL SPECIFICATION

Parameter	Designation of chuck 7103-	
	0011B	0062B
Chuck outer diameter D, mm	1000	1250
Chuck fixation type	ГОСТ 12595-2003 (DIN 55026)	ГОСТ 12595-2003 (DIN 55026)
Spindle nose size	15	15
Outer diameter of a spindle nose	285,775	285,775
Mounting holes position diameter	330,2	330,2
Mounting holes diameter d, mm	26	M24
Number of mounting holes n	8	8
Inside (through hole) diameter	280 H14	
Chuck height H, mm	135	
Jaw width b, mm	80	
Gripping range, mm	70-870	70-1120
Maximum rotational speed, min ⁻¹	450	350
Chuck weight, not more than, kg	435	600



THREE-JAW POWER CHUCKS FOR PIPES MACHINING



Lathe chuck 3 and 4-jaw power combined PPT 3N-630.205, 630.205 PPT 4H (analogue RT 783) designed for fixing pipes, cylinder and eccentric parts, non-concentric clamping workpieces of complex shape, provided the individual reconciliation cams and semifinished materials on turning pipe processing machines. The left and right chucks are installed on the headstock.

Chucks are powered by a mechanized drive that is part of the machine design, transmitting torque to the gear wheel located at the rear end of the chuck. Chucks have screws to adjust the processing workpieces of different cross-sectional shapes.

Chucks for turning 4-jaw mechanized combined PPT 4N-720.320, PPT 4N-720.340 (analogue chucks 1N983, 1N984, SA 983, SA 984, Bison-Bial models 2615-720-320, 2615-720-340) are designed for fastening of pipes, cylindrical and eccentric details, non-concentric clamping of blanks of complex shape, provided by individual adjustment of jaws, and rod materials on turning special stations. Chucks work from a mechanized drive mounted on the machine, transmitting torque to the gear, located at the rear end of the chuck. The left and right chucks are installed on the spindle headstock of the machine.

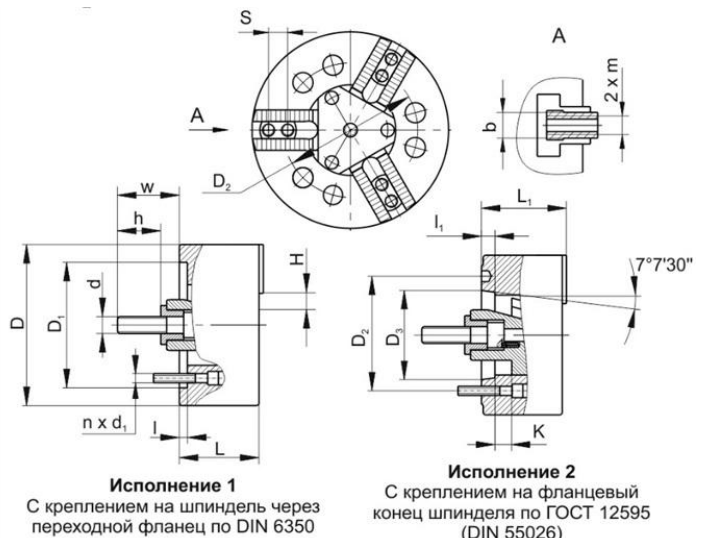
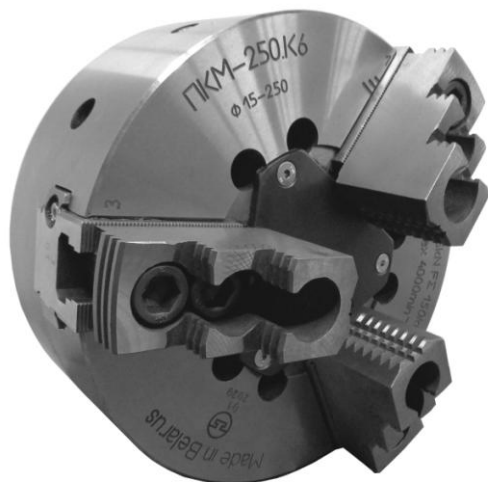
Chucks of models PPT 4N-720.320 and PPT 4N-720.340 have screws for tuning for processing of blanks of various shape of section.

CHUCKS SIZES AND PERFORMANCE SPECIFICATION

Parameter	Model			
	PPT 3N-630.205	PPT 4N-	PPT 4N-	PPT 4N-720.340
Chuck diameter, D, mm	630		720	
Number of jaws	3	4	4	4
Chuck height, H1, mm, max	235,5 283,5	235,5 283,5	345	365
Chuck body height, H, mm	195		195	
Through-hole diameter, D0, mm	205		320	340
Cone outer diameter, D1, mm	285,775		345	365
Mounting holes diameter, D2, mm	310		400	406
Diameter and number of mounting holes, d/n,	17/6	17/8	17/8	
Jaw height L, mm	210 230	210 230	210 230	200 200
The total clamping force in the jaws when max	8000		12000	
Maximum speed of rotation, min-1	630		450	
Gripping range, mm, mm	48-205		70-320	70-340
Chuck weight, kg	315 323	321 329	340 348	320 328



THREE-JAW POWER CHUCKS ACCURACY CLASS P AND B TYPE PKM



The chucks are designed for clamping workpieces machined on lathes of accuracy class P and B in full-scale and mass production conditions. These are power chucks; the drive is mounted on the rear end of a machine. The adjustment for a required clamping diameter is made by reinstalling hardened jaw inserts by main jaws riffling, thereby required chuck accuracy remains. The chuck is provided with oil lubricators for lubricating the working surfaces of the rod and jaws. Chucks are interchangeable with Bison-Bial chucks.

Parameters	Chuck designation				
	PKM-210.C170	PKM-210.K6	PKM-250.C220	PKM-250.K6	PKM-250.K8
Chuck diameter D, mm	210		250		
Chuck fixation type	1	2	1	2	2
Chuck height L, mm	90	96	90	96	
Chuck height to base jaw L1, mm	95	101	95	101	
Gripping range, mm	15-210		15-250		
Jaw stroke H, mm	6,7		8,0		
Maximum speed of rotation, min-1	4500		4000		
Conjoint shoulder (spindle nose) diameter D_1 , mm	170	--	220	--	--
Conjoint shoulder (spindle nose) depth l, mm	5	--	5	--	--
Spindle nose size	--	6	--	6	8
Outer diameter of a spindle nose D_3 , mm	--	106,375	--	106,375	139,719
Spindle nose depth l_1 , mm	--	14	--	14	16
Mounting holes position diameter D_2 , mm	133,4		171,4	133,4	171,4
Number / size of threads of fixing screws, n x d_1	6 x M12		6 x M16		
Rod thread size d, mm	M20		M24		
Thread length of screw h, mm	53				
Screw minimum distance w, mm	70		63		
Block (collet) width b, mm	17		20		
Jaw inserts fixation thread size m	M12		M16		
Distance between jaw inserts mounting holes S, mm	19		25		
Jaws tooth pitch, mm	1,5875 x 90° (1/16" x 90°)				
Rod stroke K, mm	25		30	32	
Max, draw bar pull, kN	45		65		
Total clamping force, kN	100		150		
Chuck weight, kg	24		36		



HIGH-PRECISION POWER HOLLOW CHUCKS TYPE – “PPM” Ø170-400



Chucks are designed for clamping workpieces machined on lathes of “B” accuracy class in producing multiple units.

A motorized drive mounted on a back spindle terminus of a machine starts a chuck.

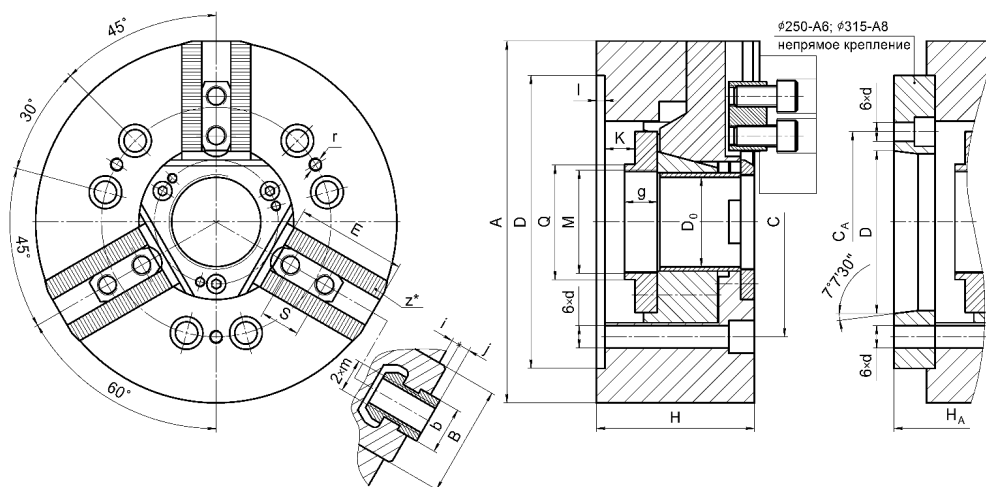
Adjustment of a required clamping diameter is performed by remounting of hardened top jaws to base jaws riffling, in this case required chuck accuracy remains. A chuck is available with grease lubricators for lubricating working surfaces of a chuck. The advantage of a chuck is that it has a through-hole which allows machining workpieces by passing them through the machine spindle.

Chucks are interchangeable with the chucks produced by leading European manufacturers (SMW-AutoBlok, Schunk, etc) and Asian manufacturers (KITAGAWA, AUTO Strong, etc.).

TECHNICAL DATA

Parameter name		Chuck diameter, mm				
		170	210	250	315	400
Through-hole	mm	45	52	66	95	118
Plunger stroke	mm	14	17	21	21	27
Jaw stroke	mm	3,5	4,5	5,5	5,5	7
Clamping surface diameters*	mm	12-210	14-235	20-275	40-350	52-450
Max draw pull transmitted by a drive	kN	25	38	50	60	70
Max gripping force of top jaws	kN	60	100	120	150	190
Admissible rotating speed of a chuck	min ⁻¹	6000	5000	4000	3200	2500
Weight*, not more than	kg	14	22	34	45	90

* Diameter range of the surface clamped by jaws (come with the equipment);
Chuck weight including hardened top jaws.





TECHNICAL DATA

Parameter name		PPM-170.45D PPM-170.45M		PPM -210.52D PPM -210.52M		PPM -250.66D PPM -250.66M			PPM -315.95D PPM -315.95M			PPM -400.118D PPM -400.118M	
Mounting type*		D140	A5	D170	A6	D220	A6	A8	D300	A8	A11	D300	A11
A	mm	170		210		250			315			400	
D	mm	140	82,56 3	170	106,37 5	220	106,37 5	139,71 9	300	139,71 9	196,86 9	300	196,86 9
l	mm	5	-	5	-	5	-	-	5	-	-	5	-
D ₀	mm	45		52		66			95			118	
C	mm	104,8		133,4		171, 4	-	171,4	235	-	235	235	
C _A	mm	-	-	-	-	-	133,4	-	-	171,4	-	-	-
d	mm	11		13		17	13	17	17		21	21	
H	mm	77		92		105			111			128	
H _A	mm	-	87	-	104	-	124	119	-	136	127	-	143
E	mm	47		64		77,5			91			115	
M*	mm	M55x2		M60x1,5		M72x1,5			M102x2			M130x2	
Q	mm	60		67		78			111			143	
z*	D inch	1/16''x90°		1/16''x90°		1/16''x90°			1/16''x90°			3/32''x90°	
	M mm	1,5x60°		1,5x60°		1,5x60°			1,5x60°			1,5x60°	
g	mm	mm		19		20			23			34	
K	mm	mm		17		21			21			27	
B	mm	mm		40		45			45			60	
b	D mm	14		17		21			21			25,5	
	M mm	12		14		16			21			22	
m	D mm	M10		M12		M16			M16			M20	
	M mm	M10		M12		M12			M16			M20	
i	mm	mm		3		4			4			5	
j	mm	mm		4		4,5			4,5			4,5	
S	D mm	16,5		23		30			34			34	
	M mm	20		25									
r	mm	M8		M8		M10			M10			M12	

*z – jaws serration pitch; mounting type: D (DIN 6353); A (GOST 12595; DIN 55026; ISO 702-1);

M – further thread sizes are possible to manufacture on request (according to your specifications).

Standard equipment:

1. a chuck with soft jaws;
2. mounting wrench for mounting a chuck on a machine and for readjustment of top jaws;
3. mounting screws.



HIGH-PRECISION POWER HOLLOW CHUCKS TYPE PPM (LARGE THROUGH HOLE)



Chucks are designed for clamping workpieces machined on lathes of “B” accuracy class in producing multiple units.

A motorized drive mounted on a back spindle terminus of a machine starts a chuck.

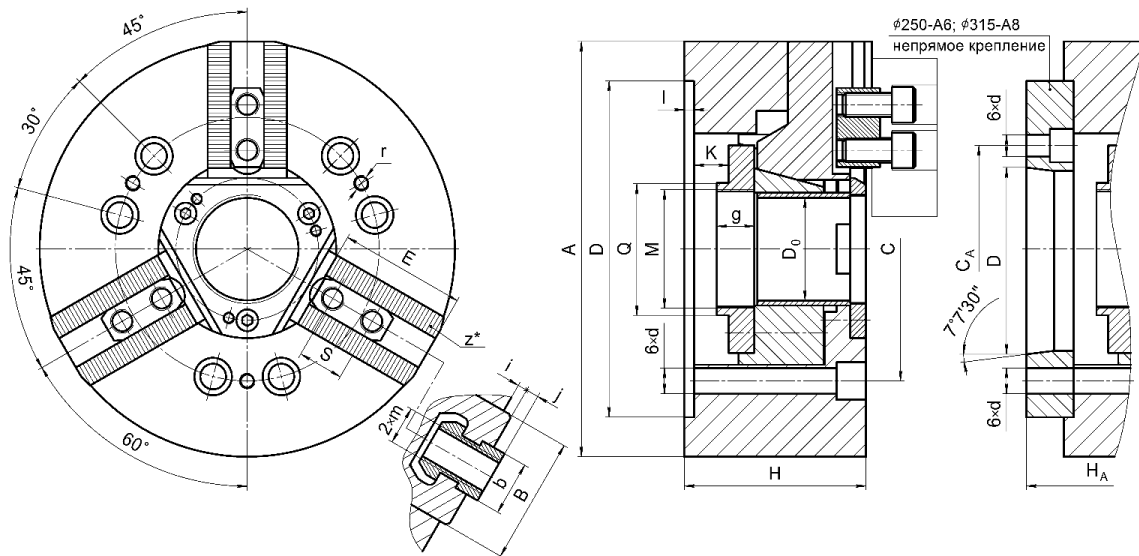
Adjustment of a required clamping diameter is performed by remounting of hardened top jaws to base jaws riffling, in this case required chuck accuracy remains. A chuck is available with grease lubricators for lubricating working surfaces of a chuck. The advantage of a chuck is that it has a large through-hole which allows machining workpieces by passing them through the machine spindle with a large internal diameter. Chucks are interchangeable with the chucks produced by leading European

manufacturers (SMW-AutoBlok, Schunk, etc) and Asian manufacturers (KITAGAWA, AUTO Strong, etc.).

Standard equipment:

1. a chuck with soft jaws;
2. mounting wrench for mounting a chuck on a machine and for readjustment of top jaws;
3. mounting screws.

A set of hardened jaws is available at an additional cost.



TECHNICAL DATA

Parameter name		PPM-210.66D		PPM-250.78D			PPM-315.122D		
Mounting type*		D170	A6	D220	A6	A8	D300	A8	A11
A	mm	210		250			315		
D	mm	170	106,375	220	106,375	139,719	300	139,719	196,869
l	mm	5	-	5	-	-	5	-	-
D ₀	mm	66		78			122		
C	mm	133,4		171,4	-	171,4	235	-	235
C _A	mm	-	-	-	133,4	-	-	171,4	-

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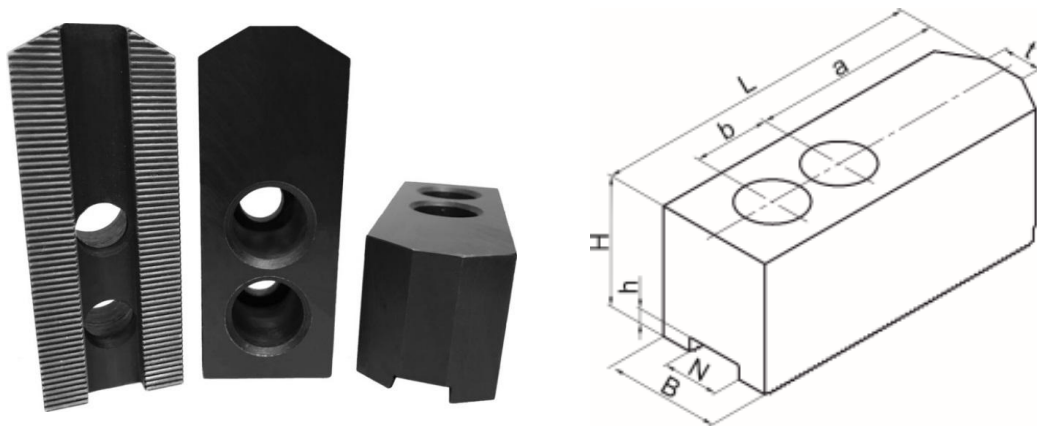
bzsp-omip@mail.ru



d	mm	13	17	13	17	17	21
H	mm	92		105		111	
H _A	mm	-	104	-	124	119	-
E	mm	58,5		71,5		75	
M*	mm	M72x1,5		M85x2		M125x2	
Q	mm	78		92		143	
z*	Д	inch	1/16''x90°	1/16''x90°		1/16''x90°	
	M	mm	1,5x60°	1,5x60°		1,5x60°	
g	mm	19		20		23	
K	mm	17		21		21	
B	mm	40		45		45	
b	Д	mm	17	21		21	
	M	mm	14	16		21	
m	Д	mm	M12	M16		M16	
	M	mm	M12	M12		M16	
i	mm	3		4		4	
j	mm	4		4,5		4,5	
S	Д	mm	23	30		34	
	M	mm	25				
r	mm	M8		M10		M10	

*z – jaws serration pitch; mounting type: D (DIN 6353); A (GOST 12595; DIN 55026; ISO 702-1)

SOFT TOP JAWS WITH 1/16"×90°, 3/32"×90° (INCH) AND 1,5×60° (METRIC) SERRATION



Soft top jaws are used for final operations to guarantee high concentricity between clamping and processed diameters. The clamping surfaces are adjusted via turning complete with a chuck selecting beats and deflections. For high concentricity between clamping and processed diameters it's necessary to take up clearance and deflections of the chuck before boring. It is achieved by clamping the tool "PRKV" for boring soft top jaws.

Soft top jaws are interchangeable with soft top jaws produced by leading manufacturers (SMW-AutoBlok, Schunk, KITAGAWA, AUTO Strong, etc.).

Any type of soft top jaws should be placed so that the clamping of the part occurs in the middle of the clamping stroke of the base jaw.



DIMENSIONS AND TECHNICAL DATA

Inch serration 1/16"×90°; 3/32"×90°

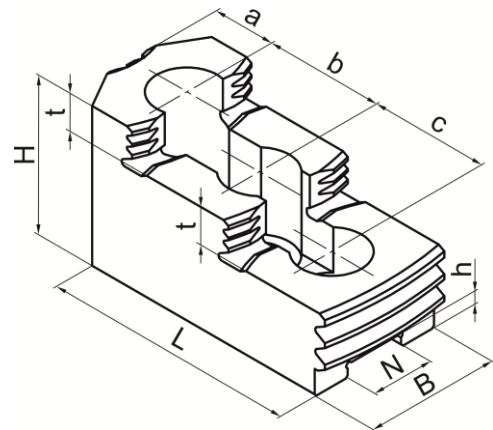
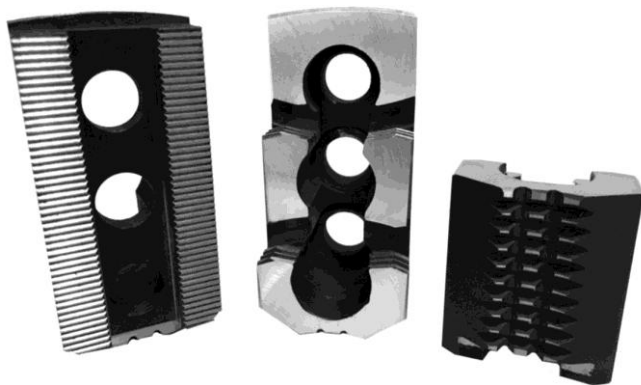
Description	Dimensions*, mm								Mounting holes for screws	Serration pitch	Weight, kg
	B	H	L	N (H7)	h	t	a	b			
PPM-170.11	30	35	70	14	4	10	38	16,5	M10	1/16"×90°;	0,43
PPM -210.11	35	40	90	17	4	12	47	23	M12	1/16"×90°;	0,76
PPM -250.11	42	45	110	21	5	14	60	30	M16	1/16"×90°;	1,2
PPM -315.11	42	50	125	21	5	16	73	30	M16	1/16"×90°;	1,8
PPM -400.11	60	60	140	25,5	5	18	75	38	M20	3/32"×90°	3,2

Meter serration 1,5×60°

Description	Dimensions *, mm								Mounting holes for screws	Serration pitch	Weight, kg
	B	H	L	N (H7)	h	t	a	b			
PPM -170.11-01	30	35	70	12	4	10	38	20	M10	1,5×60°	0,43
PPM -210.11-01	35	40	90	14	4	12	47	25	M12	1,5×60°	0,77
PPM -250.11-01	42	45	110	16	5	14	60	30	M12	1,5×60°	1,2
PPM -315.11-01	42	50	125	21	5	16	60	30	M16	1,5×60°	1,8
PPM -400.11-01	60	60	140	25,5	5	18	75	38	M20	1,5×60°	3,2

*Further sizes of soft top jaws are possible to manufacture on request

HARDENED TOP JAWS WITH 1/16"×90°, 3/32"×90° (INCH) AND 1,5×60° (METRIC) SERRATION



Hardened top jaws are designed for clamping unmachined surfaces of the parts within initial operations. Clamping surfaces of jaws are provided with teeth which engage the part while clamping, balancing the deviations from the norm and increasing the index of friction. For high precision and concentricity between clamping and processed diameters use soft top jaws type PPM.

Hardened top jaws are interchangeable with top jaws produced by leading manufacturers (SMW-AutoBlok, Schunk, KITAGAWA, AUTO Strong, etc.).

Any type of hardened top jaws should be placed so that the clamping of the part occurs in the middle of the clamping stroke of the base jaw.



DIMENSIONS AND TECHNICAL DATA

Inch serration 1/16"×90°; 3/32"×90°

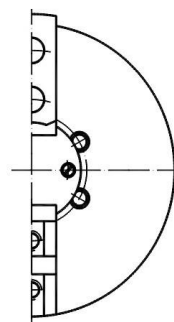
Description	Dimensions*, mm									Mounting holes for screws	Serration pitch	Weight, kg
	B	H	L	N (H7)	h	t	a	b	c			
PPM-170.11	32	39	65	14	5	10	13	16,5	16,5	M10	1/16"×90°;	0,43
PPM -210.11	38	45	83	17	5	10,5	15	23	23	M12	1/16"×90°;	0,76
PPM -250.11	42	58	104	21	6	13,5	18	30	30	M16	1/16"×90°;	1,2
PPM -315.11	42	65	115	21	6	15	30	30	30	M16	1/16"×90°;	1,8
PPM -400.11	48	75	140	25,5	6	17	35	38	38	M20	3/32"×90°	3,2

Meter serration 1,5×60°

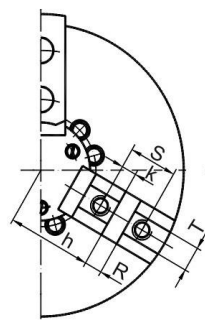
Description	Dimensions *, mm									Mounting holes for screws	Serration pitch	Weight, kg
	B	H	L	N (H7)	h	t	a	b	c			
PPM -170.11-01	32	39	65	12	5	10	13	20	20	M10	1,5×60°	0,43
PPM -210.11-01	38	45	83	14	5	10,5	15	25	25	M12	1,5×60°	0,77
PPM -250.11-01	42	58	104	16	6	13,5	18	30	30	M12	1,5×60°	1,2
PPM -315.11-01	42	65	115	21	6	15	30	30	30	M16	1,5×60°	1,8
PPM -400.11-01	48	75	140	25,5	6	17	35	38	38	M20	1,5×60°	3,2

*Further sizes of soft top jaws are possible to manufacture on request

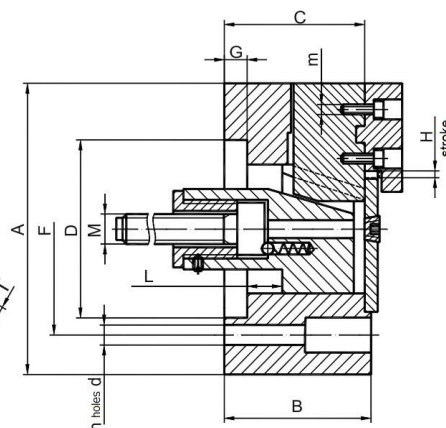
TWO- AND THREE-JAW POWER CHUCKS FOR AUTOMATIC LATHES



Two-jaw power chuck



Three-jaw power chuck



The chucks are intended for clamping of piece blanks over their external surfaces on multi-spindle automatic lathes with P accuracy class.

Design of chucks provides for jaw inserts compatibility, that allows to increase productivity and accuracy to a great extent when workpieces machining on automatic machines.



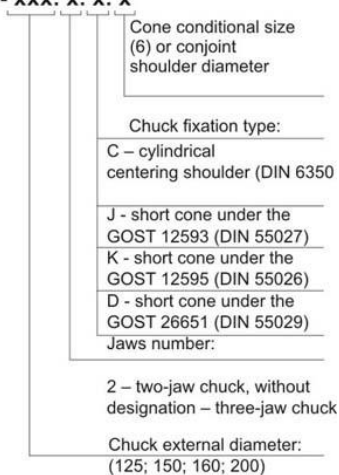
Chucks secure inner space sealing from entry of fine chip and bleeding of lubricate, increasing of lifetime, jaws centering particular accuracy.

CHUCKS SIZES AND PERFORMANCE SPECIFICATION

Parameter	Values for chucks with external diameter A, mm							
	125		150		160		200	
Number of jaws	2	3	2	3	2	3	2	3
Chuck height, B, mm	65		75		75		90	
Chuck height to base jaw, C, mm	72		82		82		92	
Gripping range, mm	8-125		12-150		12-160		20-200	
Jaw stroke, H, not less then, mm	4,0		5,3		5,3		6,7	
Maximum speed of rotation, min ⁻¹	3600		3600		3600		3000	
Conjoint shoulder diameter D, mm	100		120		130		165	
Conjoint shoulder depth G, mm	6		8		8		8	
Mounting holes position diameter, F, mm	82,6		104,8		104,8		133,4	
Number/mounting holes diameter, n/d, mm	4x11	6x11	4x11	6x11	4x11	6x11	4x11	6x11
Rod stroke, L, mm	16		20		20		25	
Rod thread size, M	M12		M16		M16		M20	
Thread for soft jaws mounting, m	M10		M12		M12		M12	
Max draw bar pull, kN	12	15	16	20	16	20	30	40
Max. total clamping force, kN	20	30	30	45	30	45	45	60
Centering accuracy for jaws compatibility, mm	0,15		0,15		0,15		0,15	
Centering accuracy for direct jaws boring, mm	0,05		0,06		0,06		0,06	
Distance between soft jaws mounting holes, S, mm	23		30		30		40	
Soft jaw mounting transverse slot width, R, mm	8		10		10		16	
Soft jaw mounting long slot width, T, mm	12		14		14		20	
Chuck weight, kg	6,5	7,0	10,5	11,0	11,5	12,0	19,5	20,0

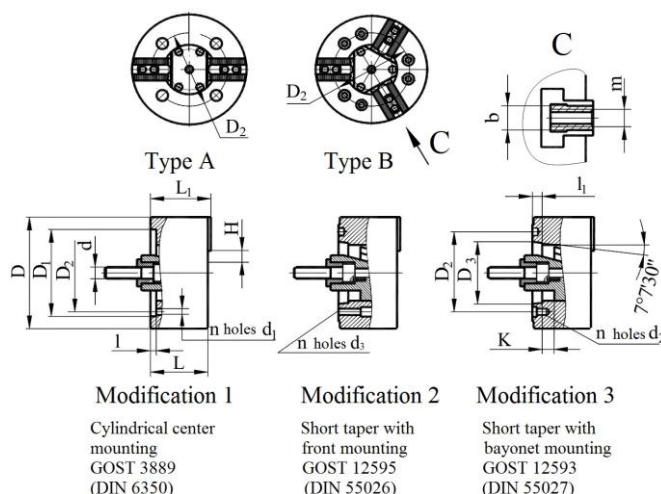
Chuck designation:

PKSA - xxx. x. x. x





TWO- AND THREE-JAW POWER CHUCKS



Are meant for clamping workpieces, machined on lathes of accuracy class N and P, in serial and mass production conditions.

Chuck works from motorized drive, mounted on a back spindle terminus of a machine.

Adjustment on a required clamping diameter is performed by remounting of jaw hardened inserts by main jaws riffling, thereby required chuck accuracy remains. Accuracy of the chuck with unhardened jaws is reached by boring of jaw inserts after remounting of them on a required diameter.

CHUCKS SIZES AND PERFORMANCE SPECIFICATION (TYPE A)

Parameter	Chuck designation 7102-														
	-0021M	-0022M*	-0024M*	-0025M*	-0026M*	-0027M	-0029M*	-0030M*	-0031M*	-0032M*	-0034M*	-0035M*	-0036M	-0037M*	
Chuck diameter D, mm	200		250				315				400				
Modification	2	3	2	3	2	3	2	3	2	3	2	3	2	3	
Chuck height L, mm	96						125								
Chuck height to base jaw L1, mm	101						128								
Gripping range, mm	15-243		15-325				30-393				30-475				
Jaw stroke N, mm	6,7		8,0				10,0								
Maximum speed of rotation, min ⁻¹	4500		4000				3000								
Spindle nose size	GOST 12593 (DIN 55027)	-	6	-	8	-	6	-	8	-	11	-	8	-	11
	GOST 12595 (DIN 55026)	6	-	8	-	6	-	8	-	11	-	8	-	11	-
Cone external diameter D3, mm	106,375		139,719		106,375		139,719		196,869		139,719		196,869		
Cone depth l1, mm	14		16		14		16		18		16		18		



Mounting holes position diameter D2, mm	133,4		171,4		133,4		171,4		235,0		171,4		235,0					
Mounting holes diameter:	d2	-	M12	-	M16	-	M12	-	M16	-	M20	-	M16	-	M20			
	d3, mm	14	-	18	-	14	-	18	-	22	-	18	-	22	-			
Number of mounting holes n	4								6		4				6		4	
Rod thread size d, mm	M20				M24				M27									
T-nut width b, mm	17				20				25									
Jaw inserts mounting thread m	M12				M16				M20									
Jaws tooth pitch, mm	1,5875x90°																	
Jaw stroke K, mm	25		30		32		40		38		40		38					
Max draw bar pull, kN	30		45				55				65							
Max. total clamping force, kN	65		100				130				175							
Chuck weight not above, kg	20		36				70				113							
* - market exploration in process (single purchase order is possible)																		

CHUCKS SIZES AND PERFORMANCE SPECIFICATION (TYPE B)

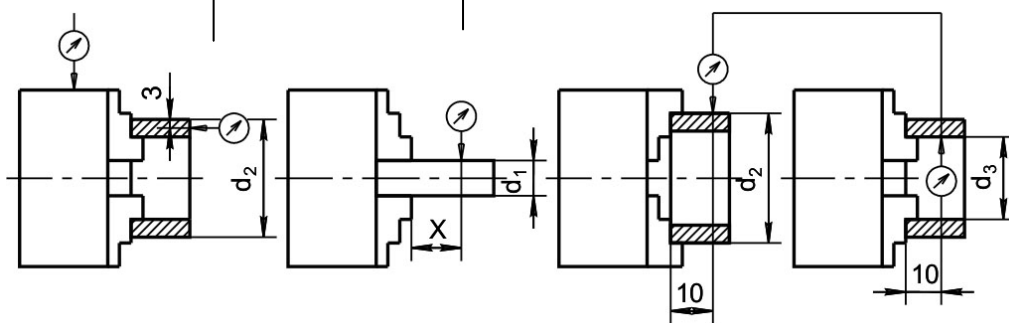
Parameter	Chuck designation 7102-																
	-0070M	-0071M	-0075M	-0072M	-0073M	-0076M	-0077M	-0078M	-0080M	-0081M	-0085M	-0086M	-0087M	-0088M	-0092M	-0093M	
Chuck diameter D, mm	200			250				315			400			500			
Modification	1	2	3	1	2	3	2	3	2	3	2	3	2	3	2	3	
Chuck height L, mm	90	96		90	96			125									
Chuck height to base jaw L1, mm	95	101		96	101			128									
Gripping range, mm	15-200			15-250				30-315			30-400			35-500			
Jaw stroke N, mm	6,7			8,0				10,0									
Maximum speed of rotation, min ⁻¹	4500			4000				3000						1500			
Cylindrical center diameter D, mm	165	-		210	-												
Spindle nose size	GOST 12593 (DIN 55027)	-	-	6	-	-	8	-	6	-	8	-	8	-	11	-	11
	GOST 12595 (DIN 55026)	-	6	-	-	8	-	6	-	8	-	8	-	11	-	11	-
Cone external diameter D3, mm	-	106,375		-	139,719			106,375			139,719			196,869			
Cone depth l1, mm	-	14		-	16			14			16			18			
Mounting holes position diameter D2, mm	133,4			171,4				133,4			171,4			235,0			
Mounting holes diameter:	d1, mm	14	-	-	18	-	-	-	-	-	-	-	-	-	-	-	-
	d2	-	--	M12	-	-	M16	-	M12	-	M16	-	M16	-	M20	-	M20
	d3, mm	-	14	-	-	18	-	14	-	18	-	18	-	22	-	22	-



Number of mounting holes n	6	6	4	6	6	4	6	4	6	4	6	4	6	6	6	6
Rod thread size d, mm	M20			M24				M27								
T-nut width b, mm	17			20				25								
Jaw inserts mounting thread m	M12			M16				M20								
Jaws tooth pitch, mm	1,5875x90°															
Jaw stroke K, mm	25			30	32			40			38					
Max draw bar pull, kN	45			65				80			95					
Max. total clamping force, kN	100			150				200			260					
Chuck weight not above, kg	20			36				70			113			171		

CHUCKS STANDARDS OF ACCURACY GOST 1654

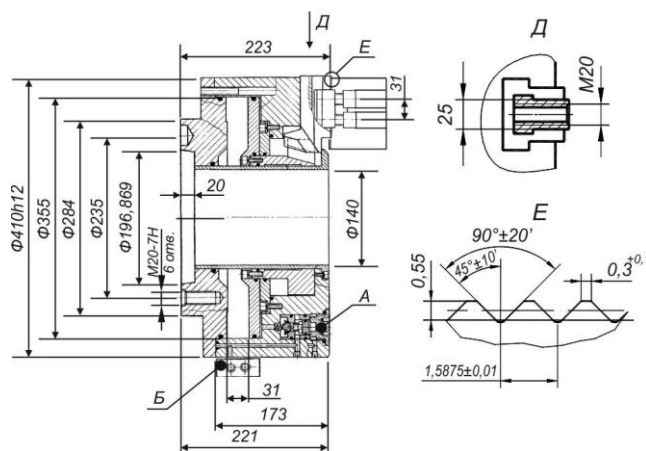
Outside chuck diameter, mm → Chuck accuracy class	125		160 (150)		200		250		315		400		500		630	
	P	N	P	N	P	N	P	N	P	N	P	N	P	N	P	N
Radial runout of outside chuck diameter, μ	25	40	30	50	30	50	40	60	40	60	50	80	50	80	100	100
Radial runout of control departure, clutched in direct jaws of self-centering chuck, μ	50	75	60	75	60	75	80	100	80	100	80	100	100	120	100	120
Radial runout of control ring clutched by outside steps of direct jaws, inside steps of reverse jaws of self-central chuck, μ	50	75	60	75	60	75	80	100	80	100	80	100	100	120	100	120
End runout of control ring clutched by inside steps of reverse jaws, outside steps of direct jaws, μ	40	50	40	50	40	50	50	70	50	70	50	70	50	80	50	80



Chuck diameter, mm	125	160 (150)	200	250	315	400	500	630
x, mm	50	50	80	80	120	120	160	160
d ₁ , mm	16, 20, 28	20, 32, 40	25, 32, 45	32, 50, 55	50, 80, 100	50, 80, 100	55, 80, 125	55, 80, 125
d ₂ , mm	100	100	160	160	250	250	400	400
d ₃ , mm	62	62	92	136	202	202	312	312



AIR OPERATED SELF-CENTERING CHUCK WITH THROUGH-HOLE PPT



А - автономный блокирующий клапан
Б - автономный пневмораспределительный коллектор

Air operated self-centering chuck with through-hole model PPT-410.140.J11 serves for kitting of special lathes with clamped spindle stop, meant for pipe machining in oil and gas producing industry.

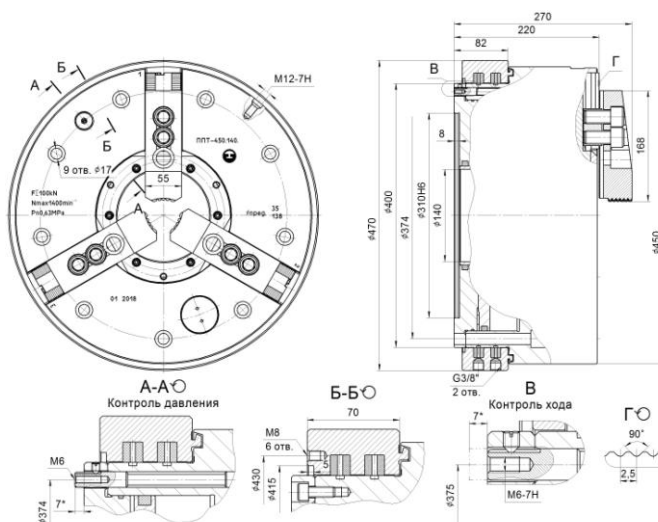
Pneumatic actuator allows to install two chucks on a machine (on a spindle nose and back spindle terminus of a lathe) for better centering of pipe workpiece. Increased movement of clamping jaw allows to clamp a pipe without couplings removing. For emergency shutting-down of spindle rotation when loss of pressure in a chuck hollow, there is a pressure fall control mechanism installed.

DIMENSIONS AND SPECIFICATIONS

Model	PPT-410.140
Max. total clamping force, kN, at nominal air pressure 6,3	100
Maximum speed of rotation with exchange jaws, min-1	1400
Conjoint cone conditional size GOST12593 (DIN 55026)	11
Total jaw stroke, mm:	19
Accelerated jaw stroke, mm:	12
Clamping jaw stroke, mm:	7
Pressure fall control mechanism operating pressure, bar	2,5
Pressure drop time in a chuck working hollow to 2,5 bar,	20
Chuck weight, kg	180



AIR OPERATED SELF-CENTERING CHUCK WITH THROUGH-HOLE PPT



Air operated self-centering chuck with through-hole model PPT-450.140 (**analogue of Bison chuck 2500-400-140**) serves for kitting of special lathes with clamped spindle stop, meant for pipe machining in oil and gas producing industry. Pneumatic actuator allows to install two chucks on a machine (on a spindle nose and back spindle terminus of a lathe) for better centering of pipe workpiece.

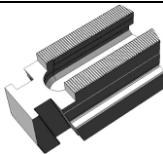


The chuck is equipped with a collector, which is mounted on the front headstock of the machine.

Increased movement of clamping jaw allows to clamp a pipe without couplings removing. For emergency shutting-down of spindle rotation when loss of pressure in a chuck hollow, there is a pressure fall control mechanism installed.

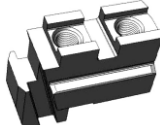
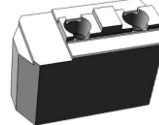
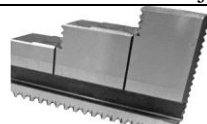

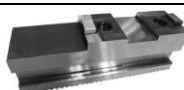
DIMENSIONS AND SPECIFICATIONS

Model	PPT-450.140
Total clamping force, kN, at nominal air pressure 6,3 bar	100
Diameter of the connecting belt D, mm	310
Depth of the connecting belt I, mm	8
Max. total clamping force, kN, at nominal air pressure 6,3 bar	1400
Total jaw stroke, mm	19
Accelerated jaw stroke, mm	12
Clamping jaw stroke, mm	7
Gripping range, mm	35-138
Pressure drop time in a chuck working hollow to 2,5 bar, not less, min	20
Chuck weight, kg	200

JAW DIMENSIONS

Chuck model	Base jaws	Top jaws	
		Soft 	Hardened 
Two- and three-jaw power chucks (7102-)			
Ø 200			
7102-0021M-1-2	7102-0071U-1-2/002M	7102-0071U-1-2/005M	7102-0071U-1-2/003M
7102-0070M-1-2			



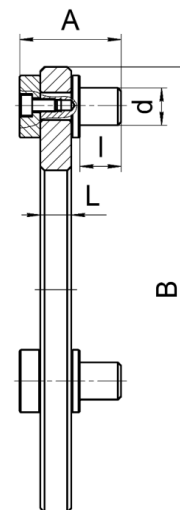
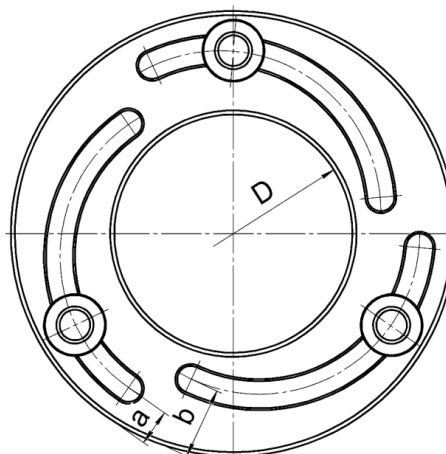
7102-0071M-1-2				
7102-0075M-1-2				
Ø 250				
7102-0027M-1-2	7102-0073U-1-2/004M	7102-0073U-1-2/007M	PKV-250Ø8.95/006M	
7102-0072M-1-2				
7102-0073M-1-2				
7102-0076M-1-2				
7102-0077M-1-2				
7102-0078M-1-2				
Ø 315				
7102-0080M-1-2	7102-0080U-1-2/002M	7102-0088U-1-2/007M	PKV-400Ø11.93/006M	
7102-0081M-1-2				
Ø 400				
7102-0085M-1-2	7102-0088U-1-2/004M	7102-0088U-1-2/007M	PKV-400Ø11.93/006M	
7102-0086M-1-2				
7102-0087M-1-2				
7102-0088M-1-2				
Four-jaw independent chucks (7103-)				
7103-0002	7103-0045/004		Ø 250	
7103-0044				
7103-0045				
7103-0003	7103-0045/004-01		Ø 315	
7103-0012				
7103-0047				
7103-0005	7103-0013/004		Ø 400	
7103-0013				
7103-0020				
7103-0058				
7103-0006	7103-0052/004		Ø 500	
7103-0014				
7103-0021				
7103-0052				
7103-0007				
7103-0015	7103-0053/004		Ø 630	
7103-0022				
7103-0053				
7103-0008				
7103-0023	7103-0054/004		Ø 800	
7103-0054				
Two- and three-jaw power chucks for automatic lathes (PKSA)				
Chuck model	Base jaws	Soft top jaws		
				
PKSA-125.S100	PKSA-125.S100/003	PKSA-125.S100/004		
PKSA-150.S120	PKSA-150 /003	PKSA-150 /004		
PKSA-160.S130	PKSA-160 /002	PKSA-150 /004		
PKSA-200.S165	PKSA-200.S165/004	PKSA-200.S165/006		
Three-jaw manual self-centering chucks (PR)				
Chuck model	Reversible hardened jaws	Soft jaws	Built-up jaws*	
			Base 	Top Soft Reversible hardened



PR-250.65	PR-250.65J6/005	PR-250.65J6/016	PR-250.65/030		
			PR-250.65J6/017	PR-250.65/030.001	PR-250.65/030.020
PR-315.95	PR-315.85/005	PR-315.85/019	PR-315.85/030		
			PR-315.85/018	PR-315.85/032	PR-315.85/031
PR-400.120	PR-400.105J11/005	PR-400.105J11/016	PR-400.105/020		
			PR-400.105.J11/017	PR-400.105/022	PR-400.105/021
PR-500.180	PR-400.105J11/005-01	PR-400.105J11/016	PR-400.105/020		
			PR-400.105.J11/017	PR-400.105/022	PR-400.105/021

* available on the consumer's request

TOOL “PRKV” FOR BORING SOFT TOP JAWS



Tool “PRVK” is designed for boring soft top jaws of power chucks type “PPM”.

DIMENSIONS AND TECHNICAL DATA

Model	Dimensions, mm								Weight, kg
	A	B	D	L	a	b	d	l	
PRKV-175	40	180	80	15	15,5	32,5	16	10	1,7
PRKV-210	40	215	115	15	17,5	34,5	18	10	2,6
PRKV-250	40	255	150	15	19,5	38,5	18	10	3,3
PRKV-315	42	320	190	18	21,5	42,5	24	12	5,7
PRKV-400	45	405	230	20	23,5	52,5	30	15	10,5

Benefits:

- ensuring high concentricity of soft jaws in relation to the surface of a workpiece to be processed;
- accuracy of centering up to 10 **microns** and achieving its stability during operation;

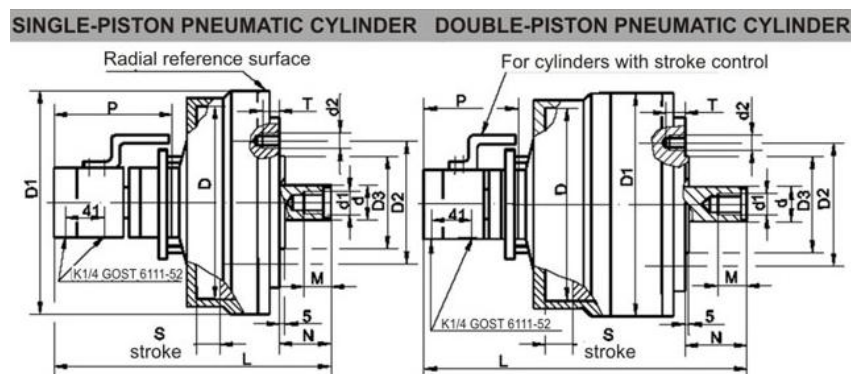
Operating peculiarities:

- set the jaws to the desired position taking into account necessary allowance for machining;
- adjust and align the tool with the mounting holes of top jaws;
- fix the tool with the chuck, the base jaws of the chuck



- overall simplicity;
 - possibility to work on both new and on old chucks.
 - must be in the middle of their full stroke, it ensures the best clamping efficiency and sufficient clearance when installing a workpiece to be processed;
 - to clamp the base jaws in the middle of their full stroke, release the jaws and slightly turn the disc of the tool to move the adjustable pins, then re-fix the tool with the chuck;
 - process the jaws to the required size;
- * It is possible to manufacture for further sizes of chucks on request.

ROTATING CLAMPING PNEUMATIC CYLINDERS



Rotating clamping pneumatic cylinders are meant for installation in metal-cutting machine tools as a powered chuck drive. For preventing pressure drop in cylinder hollows, when there is an unexpected pressure drop in feeding system, pneumatic valves are built-in in pneumatic cylinder, which automatically disconnect cylinder hollows from feeding system and secures keeping of workpiece clamping force in the chuck till machine spindle stops.

Pneumatic cylinders with piston position control are meant for installation in automated machines, that contains pneumatic control valve with electrical control.

For pneumatic cylinders with stroke control – the customer installs induction switch.

Three-piston pneumatic cylinders CPV-250.3 are meant for height clamping efforts, mainly for lathe chucks $\varnothing 315 - \varnothing 400$ mm.

PNEUMATIC CYLINDERS BASIC DIMENSIONS

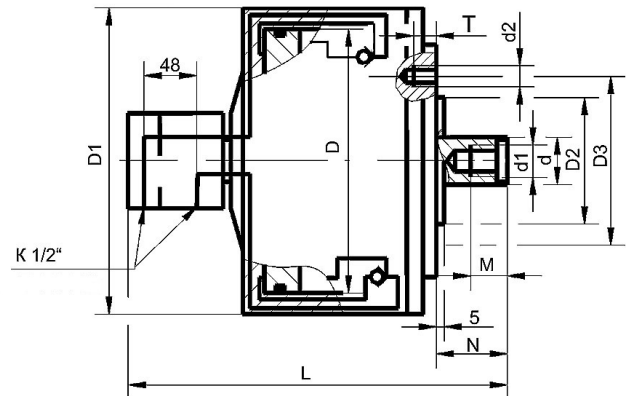
Model	Dimensions, mm												
	D	D ₁	D ₂	D ₃	d	d ₁	d ₂	L	M	N _{min}	P	S	T
CPV-200.160	200	238	145	95	25	M16	4xM16	375	43	42	164	32	26
CPV-200 CPV-200K	200	238	145	95	35	M24	4xM16	373	50	55	164	32	26
CPV-250 CPV-250K	250	288	170	125	35	M24	6xM16	382	50	48	164	40	26
CPV-200.2 CPV-200.2K	200	238	145	95	35	M24	4xM16	462	50	66	164	32	26
CPV-250.2 CPV-250.2K	250	288	170	125	35	M24	6xM16	471	50	50	164	40	26
CPV-250.3 CPV-250.3K	250	288	170	125	37	M27	6xM16	581	60	55	165	40	26



TECHNICAL CHARACTERISTIC

Parameter	CPV-200.160	CPV-200 CPV-200K	CPV-250 CPV-250K	CPV-200.2 CPV-200.2K	CPV-250.2 CPV-250.2K	CPV-250.3 CPV-250.3K
Nominal air pressure, bar	6,3	6,3	6,3	6,3	6,3	6,3
Maximum speed of rotation, min ⁻¹	5000	4000	4000	4000	4000	3000
Draw bar pull, kN	18	18	28	35	52	75
Touch-up pressure, bar	0,6	0,6	0,6	0,8	0,8	0,8
Time of pressure drop to 50% from nominal pressure in a pneumatic cylinder hollow when emergency pressure drop in pressure line is to 0, sec, not less	20	20	20	20	20	20
Full stroke movement time, sec, not above	2	2	2	2	2	4
Disbalance, g·cm, not above	100	100	140	100	140	140
Weight, kg	12	12	16,5	19	24	30

ROTATING CLAMPING HYDRAULIC CYLINDERS



Rotating hydraulic cylinder is meant for installation in metal-cutting machines as a powered chuck drive. For preventing pressure drop in cylinder hollows, when there is an unexpected pressure drop in feeding system or feeding line hoses breakage, hydraulic pilot-operated valves are built-in in hydraulic cylinder, which automatically disconnect cylinder hollows from feeding system and secures keeping of workpiece clamping force in the chuck till machine spindle stops. For hydraulic cylinder installation in automated machines, that contain hydraulic distributor with electrical control, there are piston stroke working movement control inductive switches mounted for workpiece clamping and unclamping.

HYDRAULIC CYLINDERS BASIC DIMENSIONS

Model	Dimensions, mm										
	D	D1	D2	D3	d	d1	d2	N	M	T	L
CGV-125	125	165	80h6	105	32	M24	6xM12	82	55	26	375
CGV-150	150	182	125h6	145	40	M24	4xM16	47	70	28	330
CGV-200	200	240	125h6	170	50	M36	6xM16	108	80	28	423

TECHNICAL CHARACTERISTIC

JSC «Baranovichi Machine Tool Accessories Plant»,

40 Proletarskaya, 225411 Baranovichi, Republic of Belarus, Tel/fax +375 (163) 67-25-73

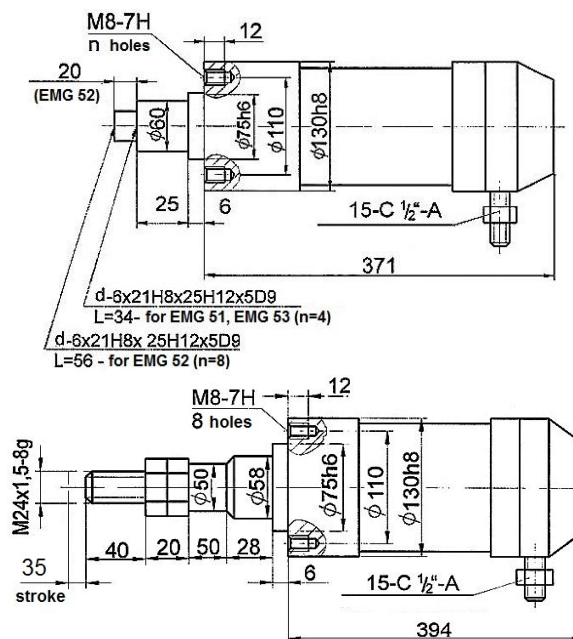
<http://bzsp-by.com>

bzsp-omip@mail.ru



Parameter	CGV-125	CGV-150	CGV-200
Nominal working pressure, bar	40	40	40
Maximum speed of rotation, min ⁻¹	4500	4500	3000
Draw bar pull, kN	40	50	105
Touch-up pressure, bar	3,7	3,5	3,0
Total leakage, l/min	0,72	1,38	1,98
Time of pressure drop to 50% when emergency pressure drop in pressure line is to 0, sec, not less	20	20	20
Movement time on full stroke value with feed 20 l/min, sec, not above	2	2	3
Piston stroke, mm	32	40	50
Disbalance, g·cm	60	80	100
Weight, kg	17	20	46

ELECTROMECHANICAL CLAMPING HEADS



EMG heads are meant for tool mechanical clamp in spindles of milling, boring and others machine tools, lathe chucks jaws drive, footstock spindle transfer. Heads may be built-in as in new equipment, so while working machine tools modernization. Four head modifications are available:

- EMG 50 – rotating with pulling out stroke;
- EMG 51 – stationary with rotating out stroke;
- EMG 52 – rotating with rotating out stroke;
- EMG 53 – stationary with rotating out stroke.

EMG 50 and EMG 52 heads are installed directly on the machine spindle by means of adapter flange and rotate jointly with it. Power supply realized via brushes.

Maximum machine tool spindle speed of rotation 3200 min⁻¹.

Heads mentioned above are dynamically balanced. Maximum disbalance is 80 g·cm.

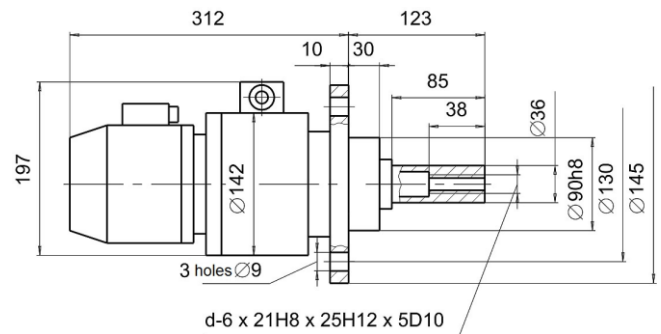
EMG 51 and EMG 53 heads are stationary version of the head EMG 52.



TECHNICAL CHARACTERISTIC

Parameter	Measurement units	Model			
		EMG 50	EMG 51	EMG 52	EMG 53
Draw bar pull (adjustible)	kN	15-45	-	-	-
Torque (adjustible) statical	N·m	-	10-25	50-100	50-100
Output shaft rotation (rated) if current frequency is 50 Hz if current frequency is 60 Hz	min ⁻¹	- -	210 250	70 84	70 84
Rod longitudinal travel speed (rated) if current frequency is 50 Hz if current frequency is 60 Hz	mm/min	375 450	- -	- -	- -
Rod stroke, not less	mm	35	-	-	-
Turn-on frequency per minute, not above	-	2	2	2	2

ELECTROMECHANICAL TOOL CLAMPING HEAD



Electromechanical head 7921-0003 is meant for, mainly, for tool mechanical clamp in milling machine tools spindles, as well as it can be applied as a drive with one-way rotation output shaft, for reaching of operation unit low speed with maximum torque.

In the head design there is automatic gear-box and electric motor disconnect with output driven shaft available, moreover head driven shaft after motor disconnection can rotate jointly with operation unit with rotation speed to 3000 min⁻¹. Rotation direction of output driven shaft is a one-way (left) rotation.

As agreed upon with the customer it's possible manufacturing of heads with right-hand rotation, and also with less torque due to changing of springs number or spring wire diameter.

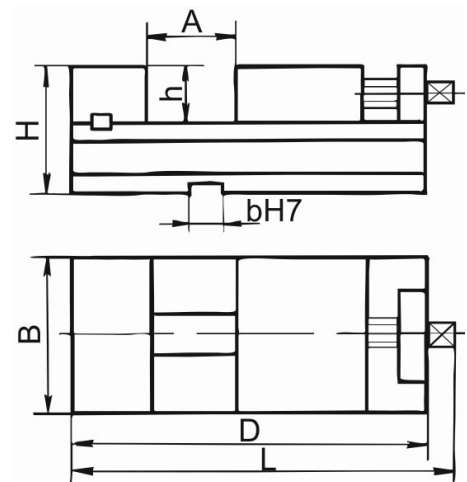
TECHNICAL CHARACTERISTIC

Parameter	Measurement units	Value
Maximum torque	N·m	60
Output shaft rotation	min ⁻¹	56±5
Output shaft rotation direction	-	left
Clamping time	sec	5
Mains current type	-	three-phase alternating



Current frequency	Hz	50
Voltage	V	380
Electric motor power	kW	0,25
Electric motor frequency	min ⁻¹	3000
Torque control	-	by microswitch
Head weight, not above	kg	16,6

MACHINE VISES 7200-0203-02, 7200-0205-02



Machine hand-operated vises are meant for workpieces clamping for machining on metal-cutting machine tools.

Vises are made from hardened alloy steel.

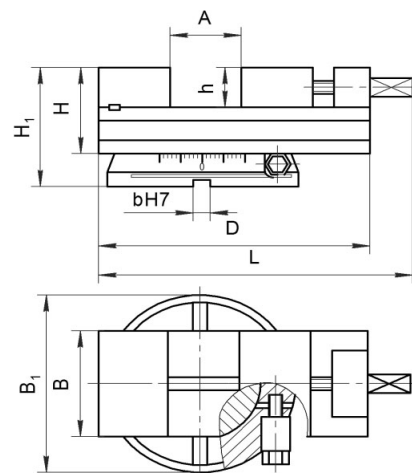
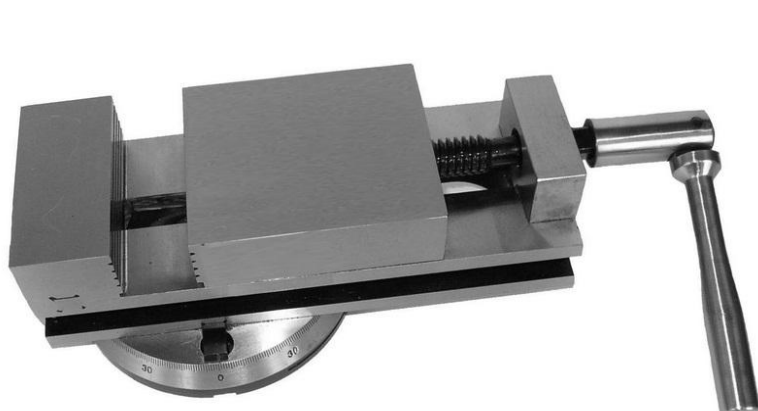
Vise accuracy class P is under the GOST 16518 (DIN 6370).

Vise mounting on a table of the machine is realized by means of dowels, fixation – by means of clamp arms. Design of plain vises allows to mountain of several vises close to each other, as well as on three orthogonally related supporting surfaces (bottom, side). Height hardness of working surfaces secures long lifetime of vises with accuracy stability. Inboard bearing and bent lever makes ease in service.

Model	B	A	h	b	H	D	L	Clamping force, kN	Weight, kg
7200-0203-02	80	50	30	12	65	190	220	6	5
7200-0205-02	100	80	35	12	72	272	305	10	10



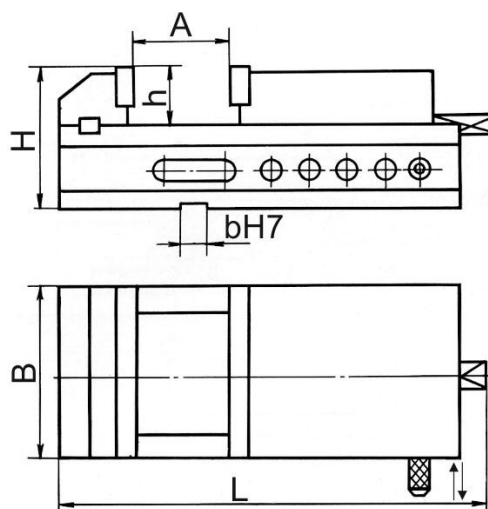
SWIVEL MACHINE VISES 7200-0204-02, 7200-0206-02



Swivel vise consists of the same machine vise and a swivel base.

Model	B	A	h	b	H	D	L	N ₁	V ₁	Clamping force, kN	Weight, kg
7200-0204-02	80	50	30	12	65	190	220	90	134	6	7
7200-0206-02	100	80	35	12	72	272	305	97	156	10	12,5

MACHINE VISES 7200-0209-05, 7200-0214-05, 7200-0219-05



Machine hand-operated vises are meant for workpieces clamping for machining on metal-cutting machine tools.

Vise accuracy class N and P is under the GOST 16518 (DIN 6370).

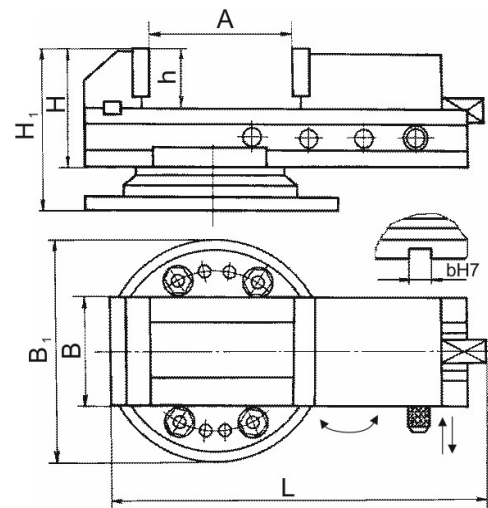


Vise case-type parts are produced from steel with guides hardened. Vise mounting on a table of the machine is realized by means of dowels, fixation – by means of clamp arms. Vise adjustment on external diameter is made by fixation of support arm, located inside the slider, by pin into case holes.

Height hardness of working surfaces secures long lifetime of vises with accuracy stability.

Model	B	A	h	b	H	L	Clamping force, kN	Weight, kg
7200-0209-05	125	125	45	14	110	465	20	25
7200-0214-05	160	200	50	14	120	524	25	36
7200-0219-05	200	250	65	18	153	635	35	57

SWIVEL MACHINE VISES 7200-0210-05, 7200-0215-05, 7200-0220-05

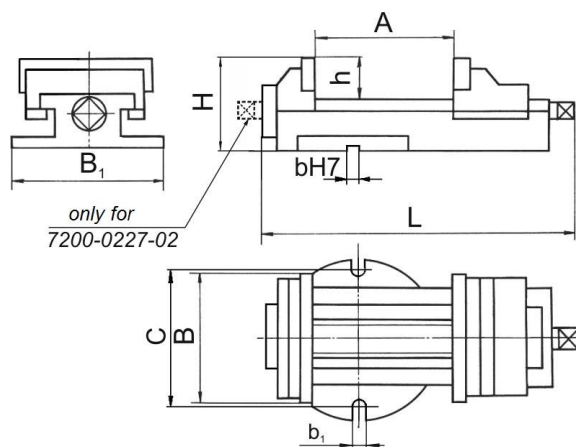
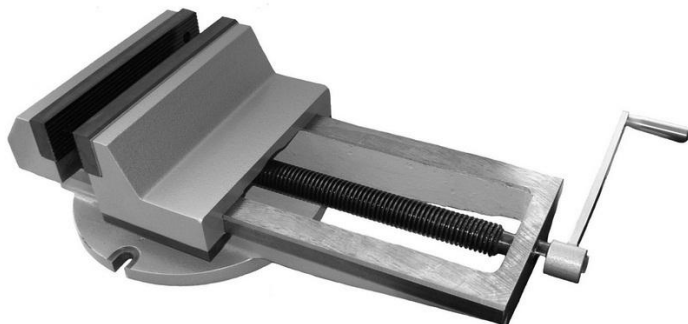


Swivel vise consists of the same machine vise and a swivel base. Swivel base is a separate unit. Base design allows rotational stroke, as well as linear motion of a vise on the table.

Model	B	A	h	b	b ₁	H	H ₁	L	V ₁	Clamping force, kN	Weight, kg
7200-0210-05	125	125	45	14	14	110	145	465	200	20	29
7200-0215-05	160	200	50	14	14	120	160	524	245	25	50
7200-0220-05	200	250	65	18	18	153	194	635	315	35	86



**MACHINE VISES 7200-0209-02, 7200-0214-02, 7200-0219-02,
7200-0224-03, 7200-0227-02**



Machine hand-operated vises are meant for workpieces clamping for machining on metal-cutting machine tools.

Vise accuracy class N is under the GOST 16518 (DIN 6370).

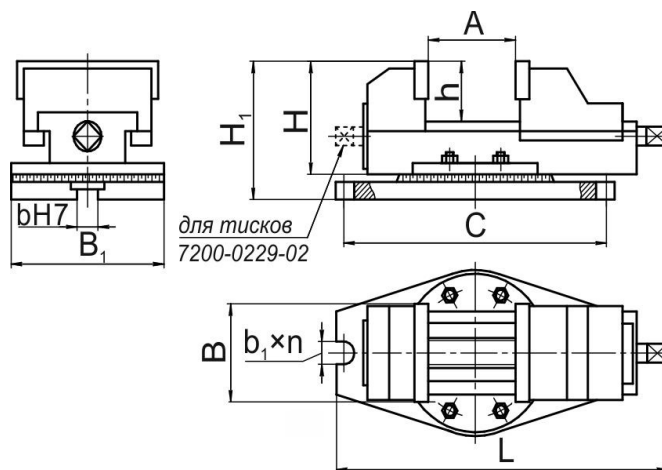
Main vise case-type parts are produced from cast iron.

Vise mounting on a table of the machine is realized by means of dowels, fixation – by means of bolts. Availability in the design of axial bearing decrease a force on the grip when clamping a workpiece. Disk springs increase the security of clamped workpiece restraint.

Model	B	A	V ₁	L	N	h	b	b ₁	C	Clamping force, kN	Weight, kg
7200-0209-02	125	130	176	349	105	47	14	14	150	20	13
7200-0214-02	160	200	176	424	114	50	14	14	150	25	19
7200-0219-02	200	250	251	546	146	65	18	18	210	35	41
7200-0224-03	250	320	326	644	183	80	18	18	280	45	72
7200-0227-02	320	400	382	780	197	100	22	22	340	55	96



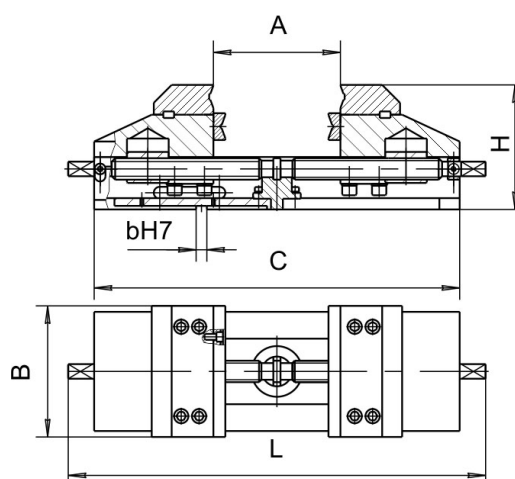
SWIVEL MACHINE VISES 7200-0210-02, 7200-0215-02, 7200-0220-02, 7200-0225-03, 7200-0229-02



Swivel vise consists of the same machine vise and a swivel base. Vises 7200-0221-02, 7200-0226-03, 7200-0229-02 are made with increased mounting of swivel base.

Model	B	A	V ₁	L	N	H ₁	h	b	b ₁	n	Clamping force, kN	Weight, kg
7200-0210-02	125	130	198	396	105	132	47	14	14	2	20	17
7200-0215-02	160	200	198	472	114	141	50	14	14	2	25	23
7200-0220-02	200	250	275	598	146	180	66	18	18	2	35	51
7200-0225-03	250	320	340	709	183	223	80	18	18	2	45	92
7200-0229-02	320	400	400	780	197	233	100	22	22	4	55	116

MACHINE SELF-CENTERING VISES 7200-0209-12, 7200-0219-12

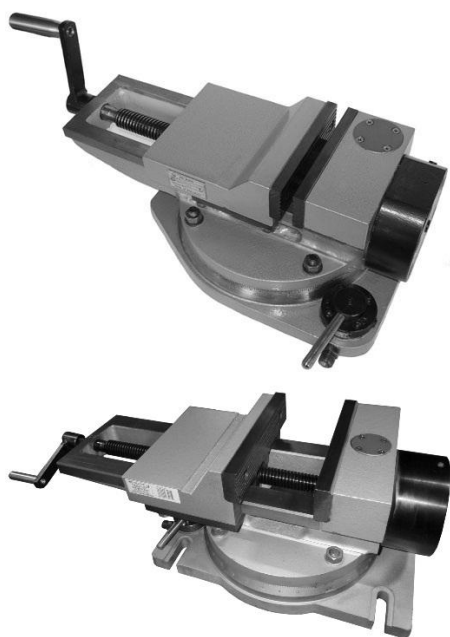


Self-centering vises are meant for workpieces clamping for machining on metal-cutting machine tools.

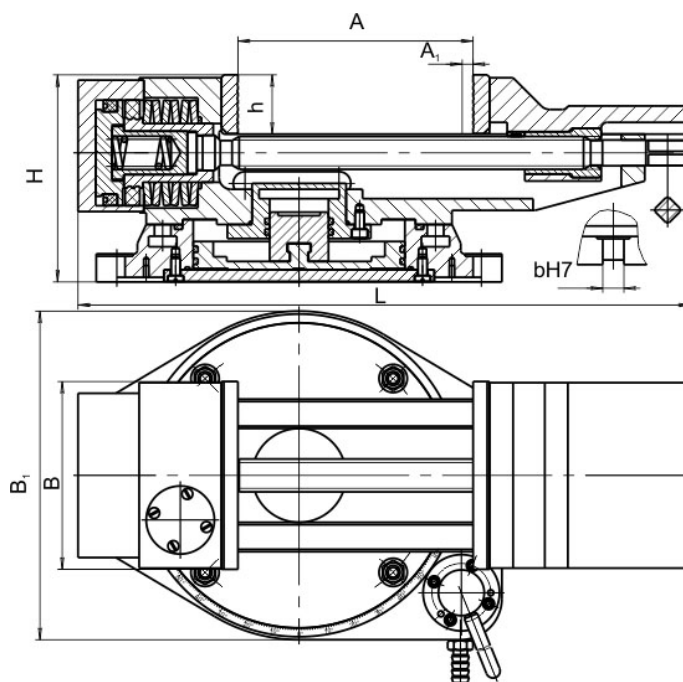


Model	B	A	h	H	C	L	Clamping force, kN	Weight, kg
7200-0209-12	125	125	45	110	418	366	20	30
7200-0219-12	200	210	65	198	613	700	35	90

PNEUMATIC MACHINE VISES WITH HYDRAULIC AMPLIFICATION



7201-0020-03



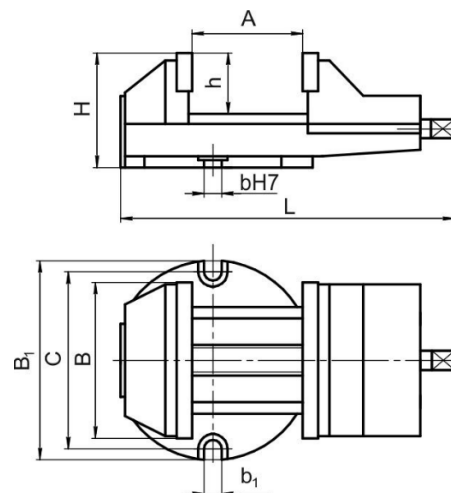
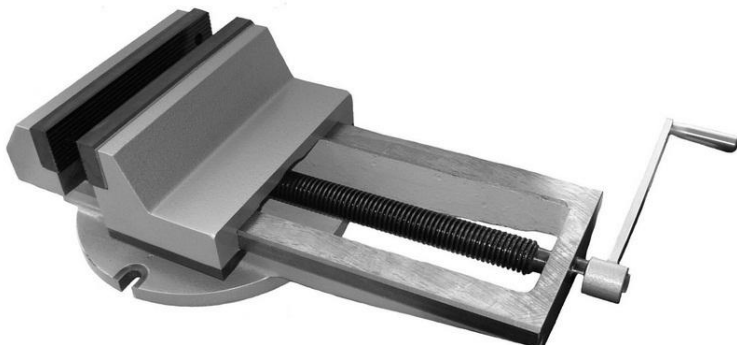
Pneumatic machine vises with hydraulic amplification are meant for workpieces clamping for machining on milling, planing, drilling and others machines. Vise accuracy class N and P is under the GOST 16518 (DIN 6370). Vise case-type parts are produced from cast iron.

Vise mounting on a table of the machine is realized by means of dowels, fixation – by means of bolts (number N). Workpiece clamping is made by means of pack of disk springs, which are previously compressed by power mechanism. Power mechanism is a built-in pneumo-hydroamplifier. Workpiece clamping by disk springs secures a safety of workpieces clamping when full air pressure drop in the system. Nominal air pressure is 6,3 bar.

Model	B	A	h	A ₁	L	V ₁	N	b	b ₁	N	Clamping force, kN	Weight, kg
7201-0014-03	200	250	65	4	640	325	210	18	18	2	40	88
7201-0019-03	250	320	80	6	720	338	240	18	18	2	50	120
7201-0020-03	250	320	80	6	720	338	240	18	18	4	50	120



MACHINE VICES 7200-0219-04, 7200-0224-04



Machine tool vises with manual drive are designed for fixing workpieces during mechanical processing on metal-cutting machines.

Accuracy class of the vise H according to GOST 16518 (DIN 6370).

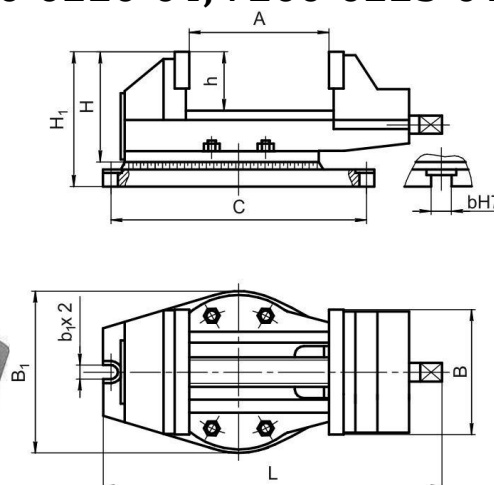
The main body parts of the vise are made of cast iron.

Optimization of the vise design allowed to reduce the weight of the main parts while maintaining accuracy and performance characteristics.

A thrust bearing is installed in the vise, which reduces the force on the handle when clamping workpieces. Disk springs increase the security of clamped workpiece restraint. Installation of the vise on the machine table is carried out using keys, fastening with 2 bolts.

Model	B	A	B1	L	H	h	b	b1	C	Clamping force, kN	Weight, kg
7200-0219-04	200	250	250	521	141	66	18	18	210	35	32
7200-0224-04	250	320	316	641	172	80	18	18	280	45	54

SWIVEL MACHINE VICES 7200-0220-04, 7200-0225-04





Bench vises are designed for clamping workpieces for various types of fittings (mechanical work). A production version of the non-rotating vise is available, similar to the rotary vise. Fixing all bench vises on the table is carried out using screws and nuts.

Model	Type	B	A	h	L	S	H	Clamping force, N	Weight, kg	Material
T-160SM	S	160	160	90	460	235	220	35000	26,5	Steel
T-180SM	S	180	160	90	460	235	220	42000	27	Steel
T-200SM	S	200	160	90	460	235	220	52000	28	Steel
T-250SM	N	250	250	125	610	282	310	35000	60	Iron

*s - swivel vise, n - non-swivel vise

ROUND ROTARY TABLE WITH MANUAL AND POWER OPERATED DRIVE

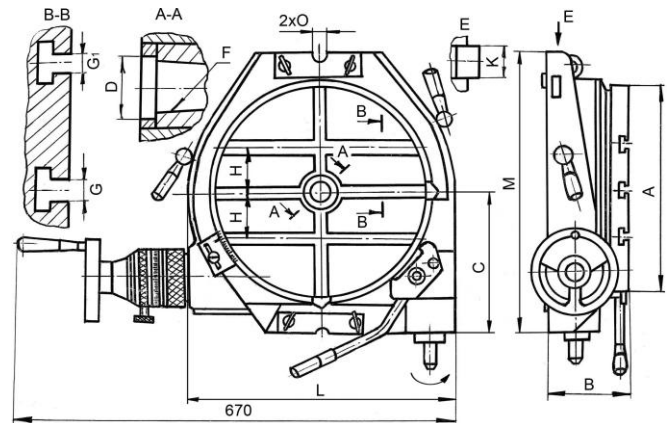
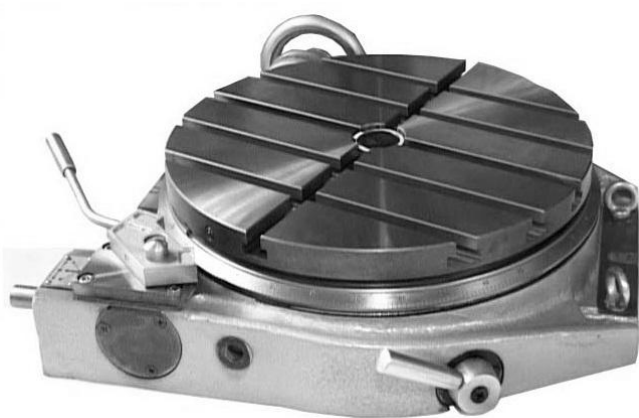


Table is meant for workpieces positioning and clamping for machining on metal-cutting machine tools. Table consists of a case, a face chuck, a worm gear and a worm screw.

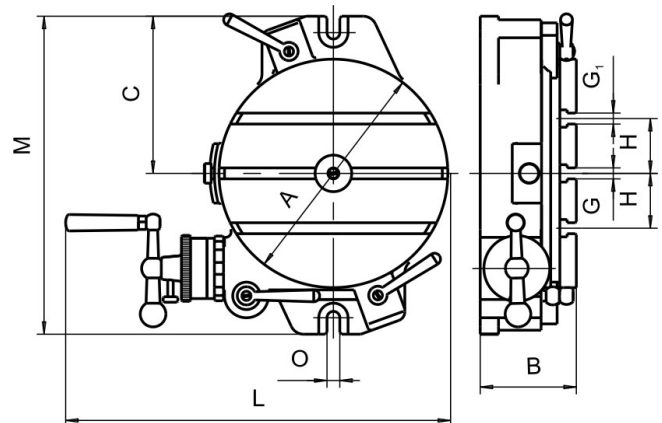
Rotation is made by means of worm-gear manually with flywheel or mechanically from machine tool drive.

- Table accuracy class - P or N,
- Dial scale-division value - 1 min,
- Face chuck scale-division value - 1 degree.
- Worm-gear ratio 1:90,
- Face chuck maximum torque, - 377 N·m,
- Table drive maximum capacity - 0,33 kW

Model	A	B	C	D	F	G	G ₁	H	K	L	M	O	Weight, kg
7204-0023-01	400	130	260	40N7	KM4 (MT4/MK4)	14N8	14N11	63	18N8	470	510	18	114



MILLING ROUND TABLE



Hand-operated milling round table was designed and manufactured taking into account requirements of up-to-date machine tool industry.

Table is meant for workpieces positioning and clamping for machining on metal-cutting machine tools. Table consists of a case, a face chuck, a worm gear and a worm screw.

Rotation is made by means of worm-gear manually with flywheel.

Table accuracy rating - P or N,

Dial scale-division value - 1 min,

Face chuck scale-division value - 1 degree,

Worm-gear ratio 1:180.

Model	A	B	C	G	G ₁	H	L	M	O	Weight, kg
61P-17-000	250	105	172	12N9	12N12	60	421	348	14	36

ROUND HORIZONTAL-VERTICAL TABLE

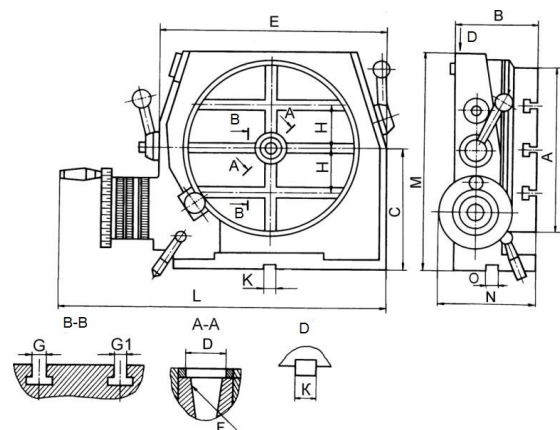




Table is meant for workpieces positioning and clamping for machining on metal-cutting machine tools. Table consists of a case, a face chuck, a worm gear and a worm screw.

Rotation is made by means of worm-gear manually with flywheel.

Table accuracy rating - P or N,

Dial scale-division value - 1 min,

Face chuck scale-division value - 1 degree,

Worm-gear ratio 1:90.

Mode I	A	B	C	D	F	G	G ₁	H	K	E	M	L	N	O	Weight , kg
RKV 7205- 4003	25 0	11 3	20 0	40N 7	KM4 (MT4/MK4)	12N 8	12N1 1	6 3	14N 8	30 6	33 8	49 5	14 0	14N 8	54

TABLES STANDARDS OF ACCURACY GOST 16935

Deviation designation	TOLERANCE, μ (Face chuck diameter/ Accuracy class)			
	250		400	
	N	P	N	P
Face chuck working surface flatness	16	10	20	12
Face chuck working surface axial runout	20	12	25	16
Parallelism of face chuck working surface to table basis	20	12	25	16
Central opening radial runout: a) by face chuck end face b) on length, mm	12 20/75	8 12/75	16 25/100	10 16/100
Cone accuracy rating under the GOST 2848	AT7	AT6	AT7	AT6

CYLINDRICAL SHANK TOOL HOLDERS FOR NC TURNING LATHES

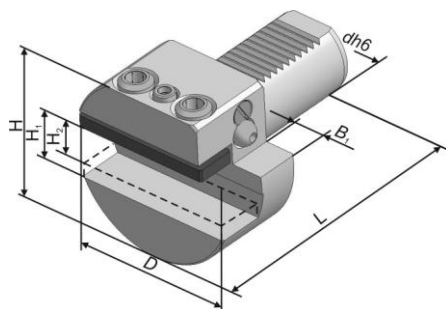
The tool holders are meant for clamping the prismatic cutters with size (mm):

-20x20 and 16x16 – for tool holders with cylindrical shank 30 mm;

-25x25 and 20x20 – for tool holders with cylindrical shank 40 mm;

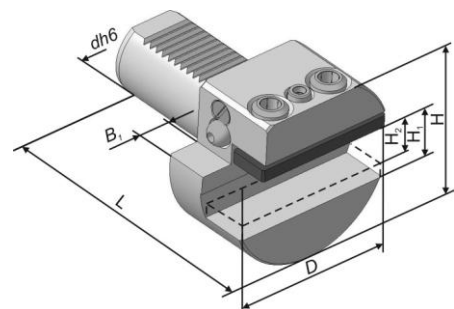
-32x32 and 25x25 – for tool holders with cylindrical shank 30 mm,

and also for clamping the straight and cone shank tool. Custom – made with straight and conical hole sockets. The tool holders shank conforms to the GOST 24900 and DIN 69880.



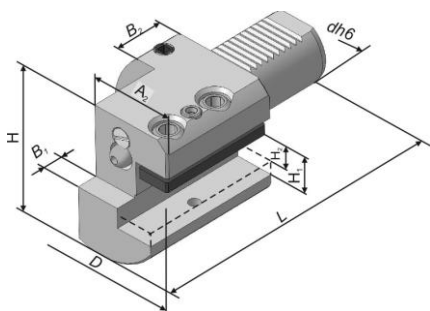
Radial

Designation	d	D	L	H	H ₁	H ₂	B ₁
291.341.111	30	80	95	70	20	16	12
291.341.131*	40	88	107	80	25	20	16



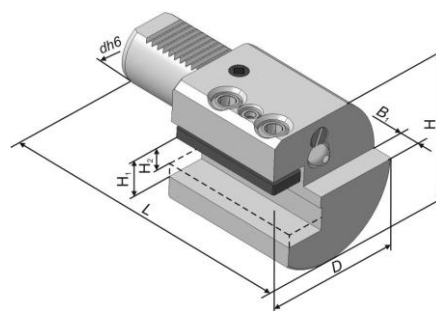
Radial

Designation	d	D	L	H	H ₁	H ₂	B ₁
291.341.101	30	80	95	70	20	16	12
291.341.121*	40	88	107	80	25	20	16



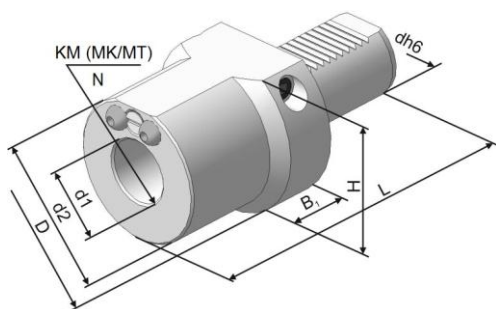
Axial

Designation	d	D	L	H	H ₁	H ₂	B ₁	B ₂	A ₂
291.341.211	30	78	125	71	20	16	10	-	-
291.341.231*	40	88	148	78	25	20	12,5	30	50



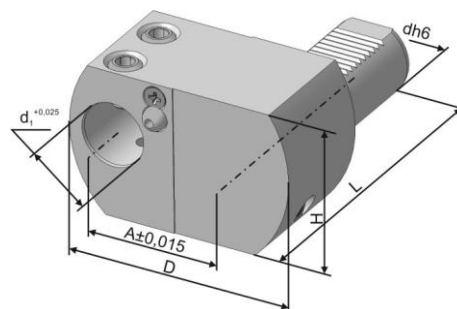
Axial

Designation	d	D	L	H	H ₁	H ₂	B ₁
291.341.201	30	78	125	67	20	16	10
291.341.221*	40	88	148	81	25	20	12,5



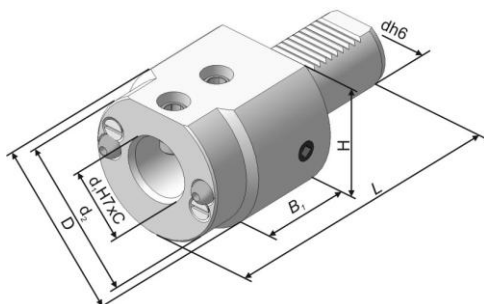
For boring bars with morse taper

Designation	d	D	L	H	B ₁	N	d ₁	d ₂
291.342.311	30	68	111	62	25	3	23,825	64
291.342.331	40	83	143	74	25	4	31,267	70



For tools with cylindrical shank

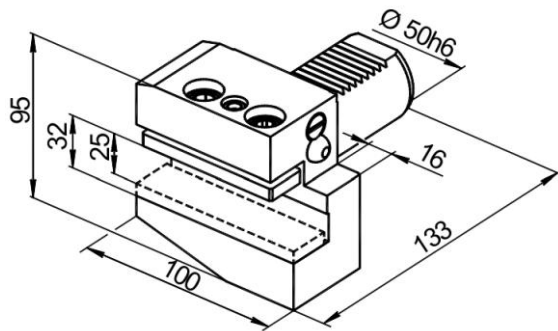
Designation	d	D	L	H	d ₁	A
291.342.200	30	84	111	62	25	45
291.342.222	40	116	123	75	32	65



For tools with cylindrical shank

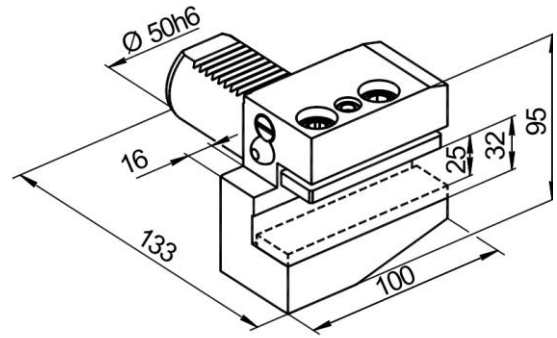
Designation	d	D	L	H	B ₁	d ₁	d ₂	C
291.342.112	30	68	121	66	-	32	-	54
-01	30	68	121	66	-	25	-	54
-02	30	68	126	66	-	20	-	59
-03	30	68	130	66	-	16	-	63
291.342.132	40	83	138	74	55	32	70	63
-01	40	83	138	74	55	25	70	63
-02	40	83	138	74	55	20	70	63
-03	40	83	138	74	55	16	70	53

* - When ordering a tool holder with a removable plate then letter "A" must be added to the designation.



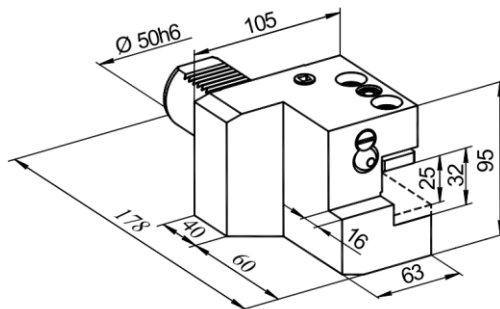
291.341.151

Radial



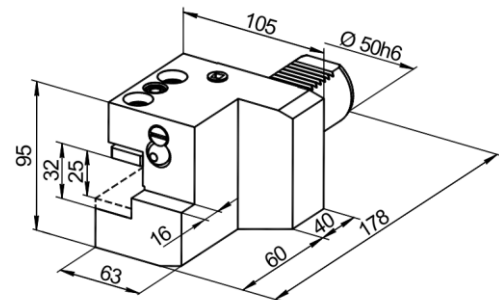
291.341.141

Radial



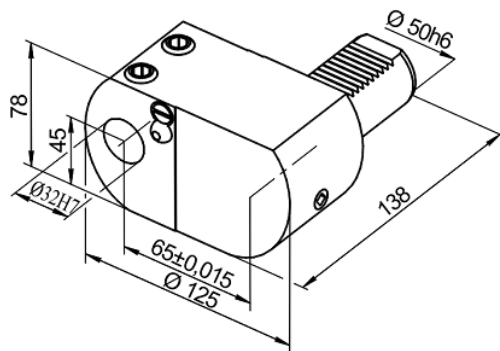
291.341.251

Axial



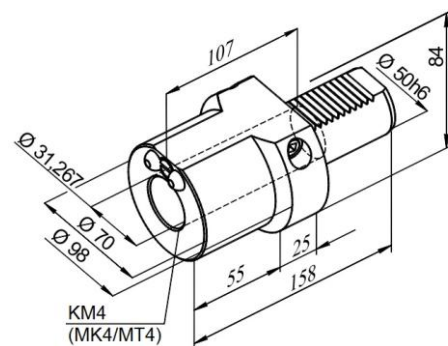
291.341.241

Axial



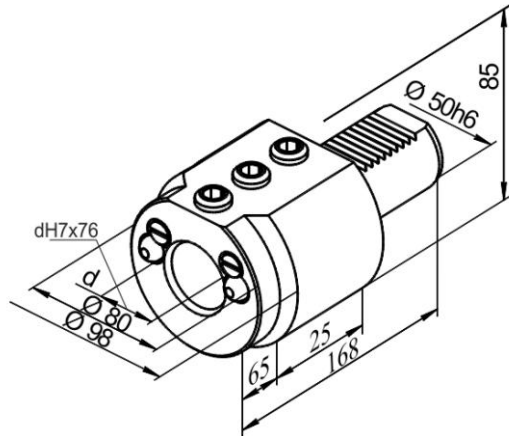
291.342.241

For tools with cylindrical shank



291.342.351

For boring bars with morse taper

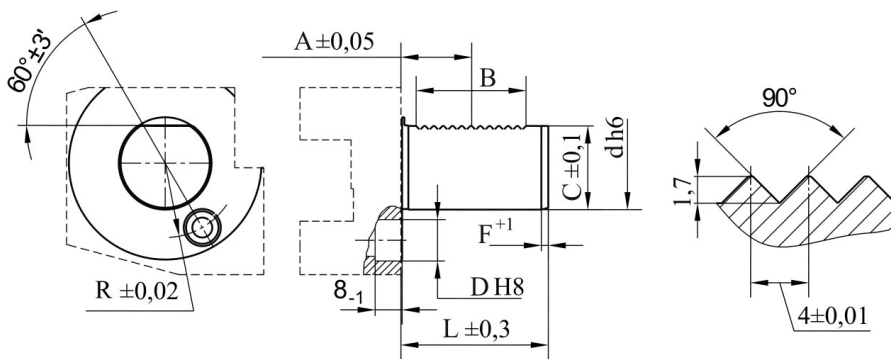


291.342.151

Designation	d
291.342.151	32
-01	25
-02	20

For tools with cylindrical shank

CYLINDRICAL SHANK DIMENSIONS GOST 24900 (DIN 69880)



d	C	L	A	B	F	R	D
30	27	55	29,7	44	2	25	14
40	36	63	29,7	48	3	32	14
50	45	78	39,2	48	3	37	16

TOOL HOLDERS WITH A CYLINDER-TYPE SHANK FOR NC LATHES MODELS D1-40X25 AND D2-40X25

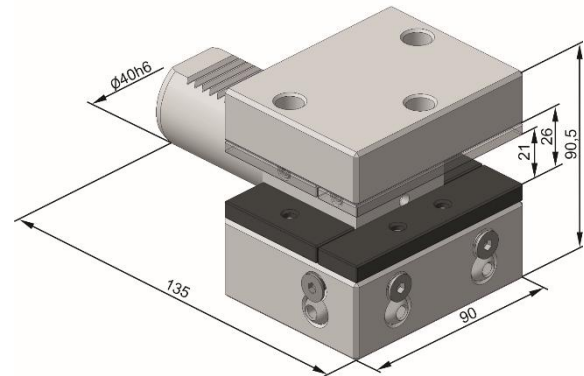
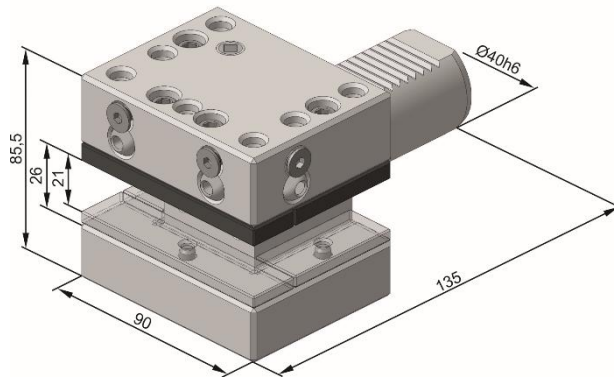
Tool holders are designed to clamp prismatic cutters with a cross section of 20x20 and 25x25. They are installed in tool disks of revolving heads of NC lathes. The advantage of this type of a cutting tool holder is that it gives an opportunity to use different types of cutting tools simultaneously.

The shank of the cutting tool holder complies with GOST Standard 24900 and DIN 69880.



D1-40x25

combined

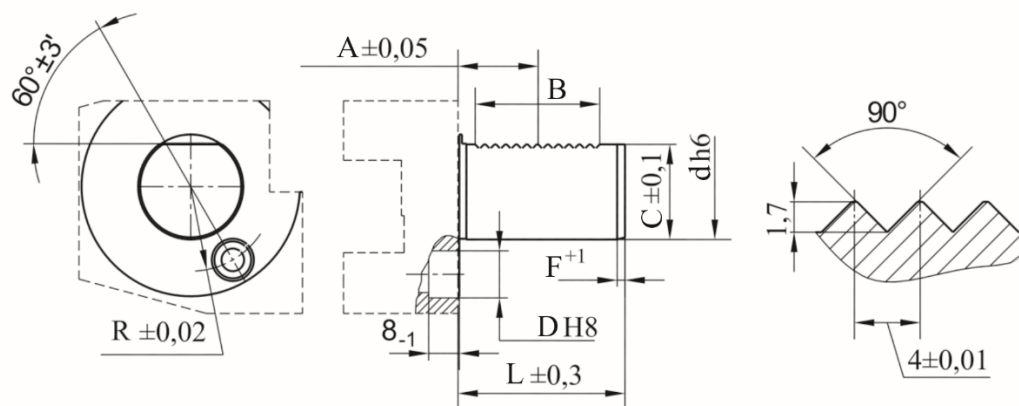


D2-40x25

combined

(reversible)

DIMENSIONS OF A CYLINDER-TYPE SHANK 40 MM
OF TOOL HOLDERS GOST STANDARD 24900 (DIN 69880)



d	C	L	A	B	F	R	D
40	36	63	29,7	48	3	32	14



TOOL DISKS

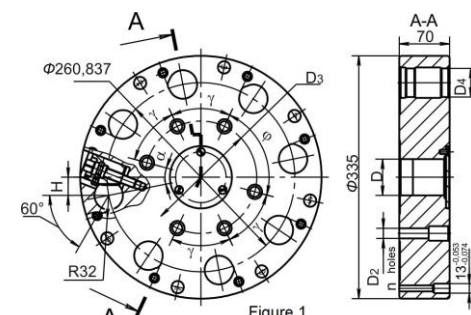


Figure 1

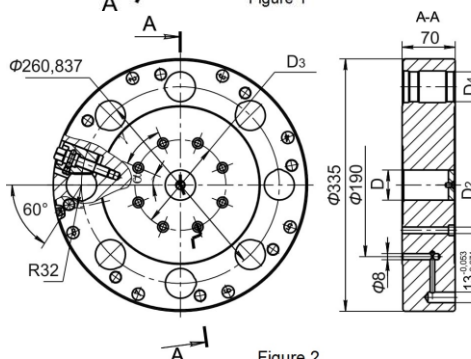


Figure 2

The 020.0100.000.40, 008PM.000.40 (Fig. 1) and DIP 8 (Fig. 2) tool disks are meant for mounting the tool holders with cylindrical shank according to GOST 24900 (DIN 69880) with diameter of 40 mm.

The 020.0100.000.40 eight-position tool disk is meant for mounting on GD-8 disk-type tool turret.

The 008PM.000.40 eight-position tool disk is meant for mounting on UG9326 disk-type tool turret manufactured by “Gomel machine tool units plant”.

DIP 8 tool disk is meant for mounting on 0.5.473.516 disk-type tool turret manufactured by “Sauter”.

The disks is oversized in D_4 tool slot. Final processing of D_4 slot in diameter 40H7 for mounting of tool holders is performed on-site with mounting on a specific dividing head.

DESIGNATION DECRYPTION

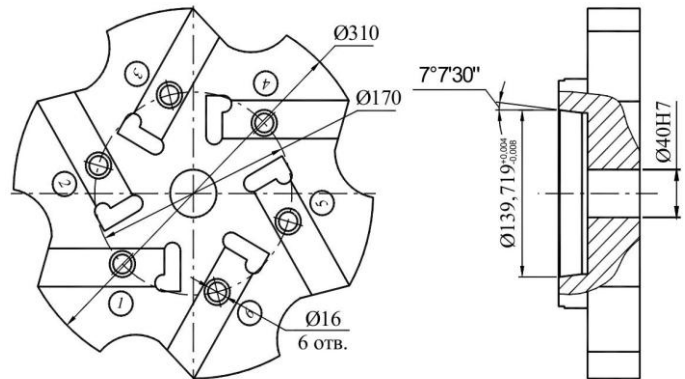
Designation	D	D_2	D_3	H	n	α	γ	φ	D_4	
020.0100.000.40	50H7	14	155	25±0,05	6	26°3'	50°	80°	pos.1	39,5H9
									pos.2...8	39,3 ^{+0,1}
008PM.000.40	Short taper 8 GOST 12595 (DIN 55026)	16	170	25±0,02	6	26°3'	50°	80°	pos.1	39,5H9
									pos.2...8	39,3 ^{+0,1}
DIP 8	40H7	8,5	120	-	8	22°30'	45°	-	pos.1	39,5H7
									pos.2...8	39,3 ^{+0,1}



SIX-POSITION DISK HEAD UG9321

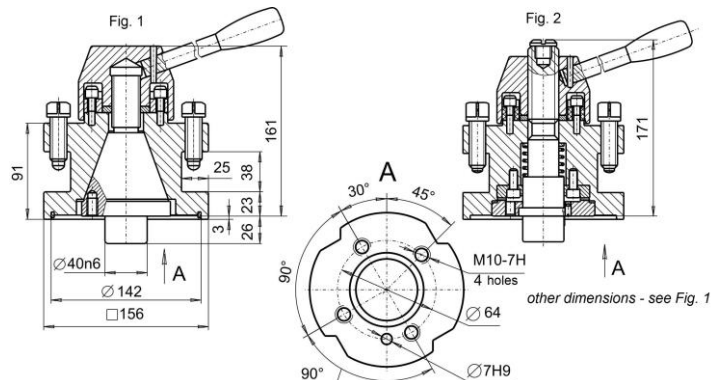
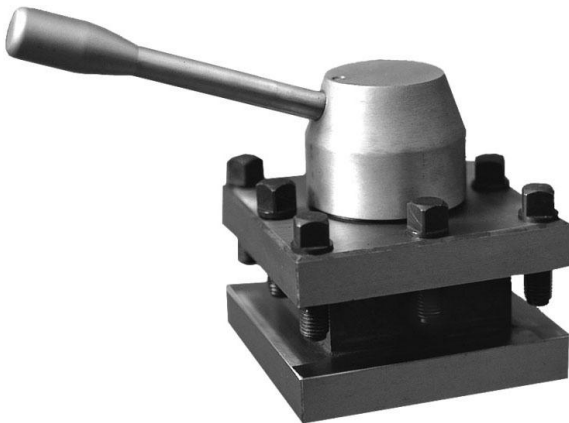


УГ9321.003.000.000.50



The head is designed for installation of six cutters with a cross section of 25x25 mm and three tool holders with a cylindrical shank with a diameter of 50 mm, installed in special blocks on the head. Dimensions of the head without blocks: diameter 310 mm, height 70 mm. Weight - 19.7 kg. Dimensions of the head with blocks: diameter 340 mm, height 157 mm. Weight - 36 kg.

FOUR-POSITION TOOL HOLDERS



The UG0101.600.000.000 (Fig.1) and RDT-4P (Fig. 2) four-position tool holders are meant for mounting on midrange screw-cutting. The UG0101.600.000.000 and RDT-4P tool holders are interchangeable.

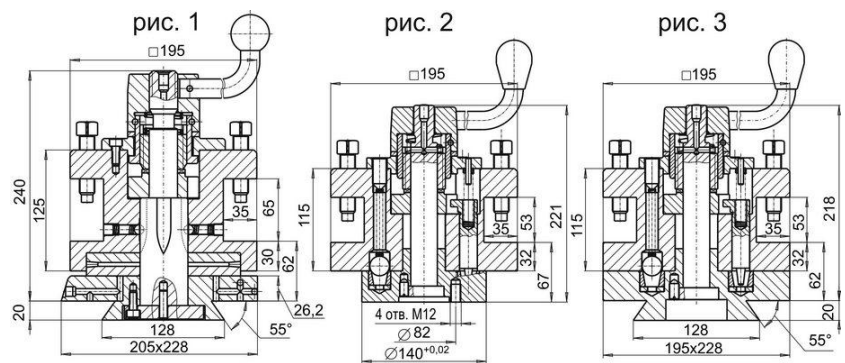
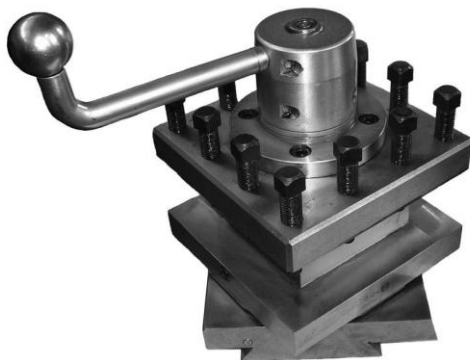
In the UG0101.600.000.000 tool holder, the cutter is fixed on the axis by a roller over taper counterfaces with positioning accuracy of 0,045 mm.

In the RDT-4P tool holder, the cutter is fixed on the axis by a Hirth crown gears and positioning accuracy of 0,005 mm. There are 48 teeth.

The tool holders are made of cemented steel with hardness of functional surfaces of 52...60 HRC and have high lifetime.



CUTTER HEADS



GR 001-02 (Fig. 1), GR 002 (Fig. 2), GR 003 (Fig. 3), GR 008 (Fig. 1), GR 009-01 (Fig. 1) cutter heads are meant for clamping the cutters and other machining tools on metal turning lathes.

In the GR 001-02, GR 008, GR 009-01 cutter head the cutter support position is fixed by a Hirth crown gears and positioning accuracy of 0,005 mm. There are 96 teeth.

In the GR 002 and GR 003 cutter heads the cutter support position is fixed by a rod holder and positioning accuracy of 0,05 mm.

GR 001-02 cutter heads are used on machines CA700 (800)CF2, CA983CF2.

GR 002 cutter heads are used on machines CA562, CA564.

GR 003 cutter heads are used on machines 1H983 (PT983).

GR 008 cutter heads are used on machines CA1100 (1250, 1400)CF, CPF2.

GR 009-01 cutter heads are used on machines CA500 (600, 630)F.

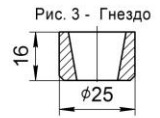
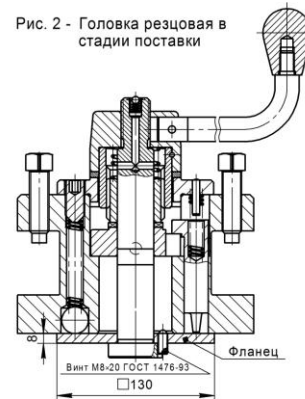
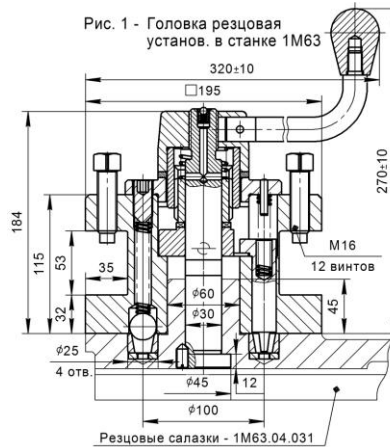
Hardness of under cutter surface is 47...55 HRC.

APPLICABILITY OF TOOL HOLDERS AND CUTTER HEADS

Tool holders/Cutter heads	JCS «Sasta» lathes
GR001-02 (Hirth clutch)	CA700 (800)CF2, CA983CF2
GR002	CA562, CA564
GR003	1H983 (RT983)
GR008 (Hirth clutch)	CA1100 (1250, 1400)CF, CPF2
GR009-01 (Hirth clutch)	CA500F, CA600F, CA630F



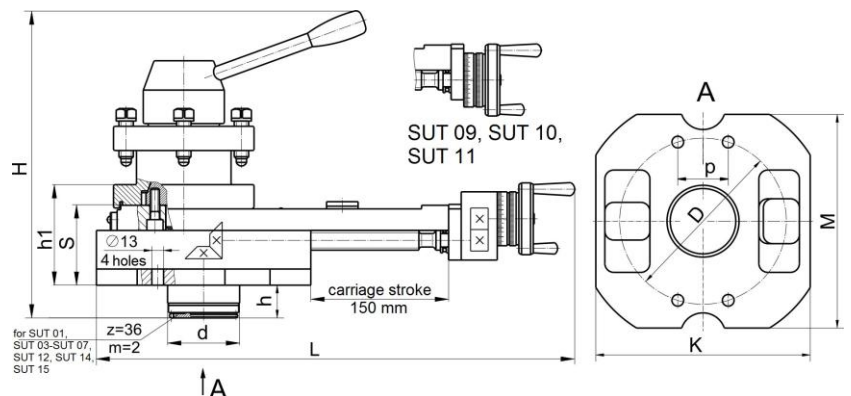
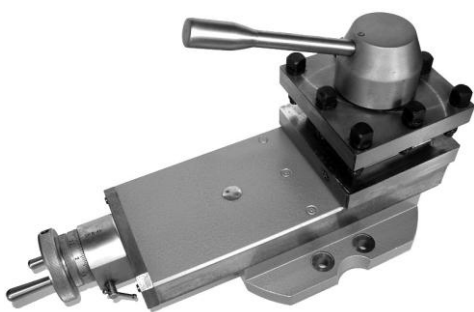
CUTTER HEADS GR 002-01 FOR LATHE 1M63, 16K40



The cutter head GR 002-01 (Fig.1) is intended for fixing the cutters on lathes 1M63, 16K40. In the head the tool holder is fixed on the axis by a finger lock with a positioning accuracy of 0.05 mm. This head is a 4-position head that can hold up to 4 incisors at the same time. This allows you to quickly change the tool during operation by turning the tool head to a different working position with the desired tool.

The greatest effect of this head is achieved when processing parts of complex shapes. The head is supplied with a process flange (Fig. 2), which is used for transporting the head Assembly. Before installing the head on the machine, the flange must be removed. Have the ability to put the nest (Fig.3) and spacers (Fig. 4) for a fee.

LATHE CARRIAGES



The SUT 01 and SUT 06 lathe carriages are meant for mounting on 16R25P metal turning lathes. The SUT 02, SUT 03, SUT 07, SUT 08 lathe carriages are meant for mounting on MK6046, MK6056 metal turning lathes and other modifications of them.

The SUT 04 and SUT 05 lathe carriages are meant for mounting on SA562 metal turning lathes.



The SUT 09 and SUT 10 lathe carriages are meant for mounting on 1K62 metal turning lathes.
 The SUT 11 and SUT 14 lathe carriages are meant for mounting on 16K20 metal turning lathes.
 The SUT 12 sliding carriage is meant for mounting on SA630S metal turning lathes.
 The SUT 15 sliding carriage is meant for mounting on SA550 metal turning lathes.

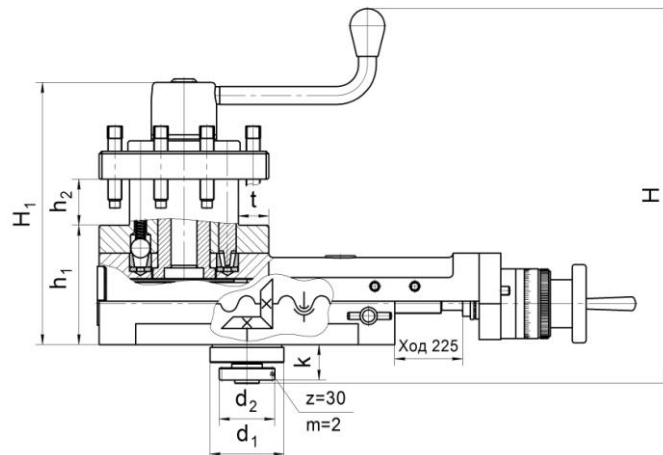
The lathe carriages are equipped with four-position UG0101.600.000.000 or RDT-4P tool holders, or GR 002 cutter head.

TECHNICAL CHARACTERISTIC

Model	Type of drive	Tool holder model	h1	d, h7	h	S	D	p	K	M	L	H	Weight, kg
SUT 01	Hand- and power operated	UG0101.600	112	80	35	89	185	56	238	225	530	343	44
SUT 02	Hand-operated	UG0101.600	115	80	10	92	185	56	238	225	530	318	43
SUT 03	Hand- and power operated	UG0101.600	115	80	27	92	185	56	238	225	530	335	43,5
SUT 04	Hand- and power operated	UG0101.600	120,5	80	27	97,5	185	56	238	225	530	343	45
SUT 05	Hand- and power operated	RDT-4P	120,5	80	27	97,5	185	56	238	225	530	342	43
SUT 06	Hand- and power operated	RDT-4P	112	80	35	89	185	56	238	225	530	343	44
SUT 07	Hand- and power operated	RDT-4P	115	80	27	92	185	56	238	225	530	335	43,5
SUT 08	Hand-operated	RDT-4P	115	80	10	92	185	56	238	225	530	318	43
SUT 09	Hand-operated	UG0101.600	83,5	90	7,5	60,5	180	56	220	220	497	287	34
SUT 10	Hand-operated	RDT-4P	83,5	90	7,5	60,5	180	56	220	220	497	282	34
SUT 11	Hand-operated	UG0101.600	86,5	80	7,5	63,5	185	56	220	220	497	292	37
SUT 12	Hand- and power operated	GR 002	168,5	90	47	136,5	200	68,5	310	246	563	436	85
SUT 14	Hand- and power operated	UG0101.600	86,5	80	25	63,5	185	56	238	225	530	311	37
SUT 15	Hand- and power operated	UG0101.600	157	80	27	134	185	56	238	225	530	377	76



LATHE CARRIAGES SUT-16



The SUT 16 support is intended for installation on lathes of the 1M63 model and its modification.

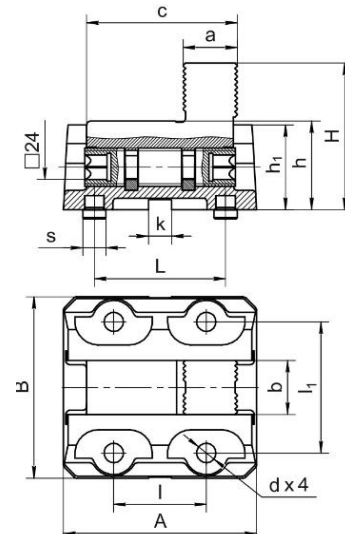
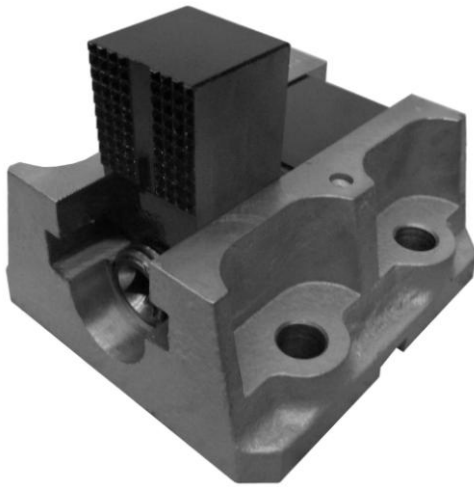
The support, equipped with manual and mechanized drives, is installed on the cross slide of the machine and serves to move the cutting tool in the specified direction.

Fixing the position of the tool head mounted on the caliper is provided by a finger lock with a positioning accuracy of 0.05 mm.

Model	SUT 16
Drive type	Hand and power
Tool head position stability, microns, no more	50
A	325
B	195
C	200
D	288
L	620
H	420
H1	290
h1	137
h2	53
d	13
d1(h6)	85
d2	64
l	152
l1	75
l2	55
t	35
k	40,5
n	4
Weight, kg \pm 5%	85



CLAMPING JAWS FOR A TURNING AND BORING LATHES KZ-170



The jaws are designed for mounting on turning-and-boring lathe 1512, 1516, 1531, 1531M, 1541.

The jaws are equipped with a stop bar (for machines 1512, 1516) and cylindrical bushings (for machines 1531, 1531M, 1541).

Simultaneously using the movement of several tools, one can perform multi-tool machining. It greatly improves productivity and makes performance easier.

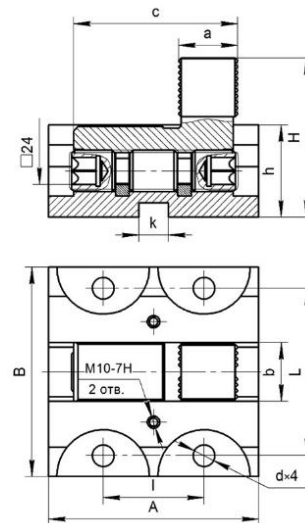
This design allows high accuracy machining of large workpieces.

Jaws can be hardened or non-hardened (soft). Hardened jaws are used for clamping workpieces with untreated surfaces. Non-hardened jaws provide high accuracy of installation, since the jaws themselves are directly machined on the lathe before machining a batch of parts, and a workpiece has previously treated surfaces.

Model	A	B	H	h	L	a	b	c	l	ll	d	s	k	Weight, kg
KZ-170	250	235	190	110	170	70	70	195	120	170	26	25H7	30H9	33,5



CLAMPING JAWS FOR A TURNING AND BORING LATHES KZ-200



The jaws are designed for mounting on turning-and-boring lathe 1525, 1532 and other machines with a T-slot face (center-to-center distance of T-slots – 200 mm) and fixation by a stop bar that moves the jaw along the faceplate and fixes it against lengthwise movement with the stop in the slot 35H9 and the slot of the faceplate.

Simultaneously using the movement of several tools, one can perform multi-tool machining. It greatly improves productivity and makes performance easier.

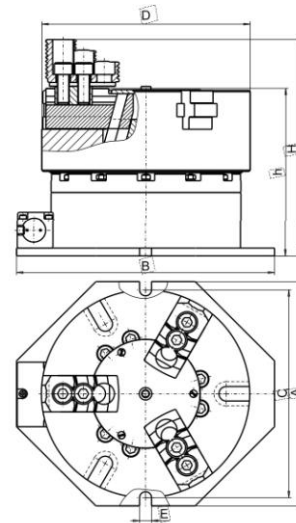
This design allows high accuracy machining of large workpieces.

Jaws can be hardened or non-hardened (soft). Hardened jaws are used for clamping workpieces with untreated surfaces. Non-hardened jaws provide high accuracy of installation, since the jaws themselves are directly machined on the lathe before machining a batch of parts, and a workpiece has previously treated surfaces.

Model	A	B	H	h	L	l	a	b	c	d	k	Weight, kg
KZ-200	250	250	190	110	200	120	70	70	195	26	35H9	45



PNEUMATIC CLAMPING DEVICE PPZ



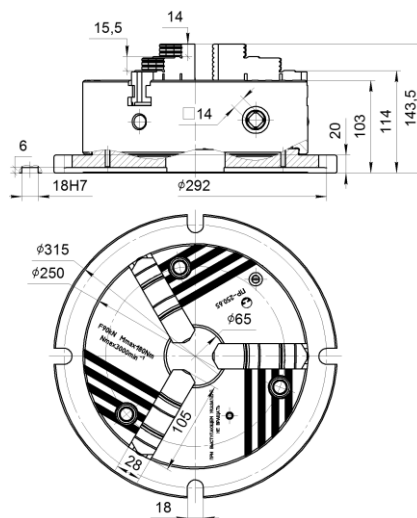
It's meant for working on drilling and milling machines. It is a mechanized power chuck (depending on configuration of a blank it can be either three-jawed or two-jawed), fastened on a pneumatic cylinder housing. Movement of rod's traction of a holder is carried out by a supply of compressed air in a cavity of pneumatic cylinder through a collector. Collector is used for protection against loss of operating pressure in a chain, which, in its turn, doesn't let to lose clamping force of a blank during its processing.

On a customer's request it is possible to produce several devices installed on one plate for clamping and processing of few blanks at once.

Model	PPZ-150	PPZ-200	PPZ-250	PPZ-315	PPZ-400
Chuck diameter, D, mm	150	200	250	315	400
Distance from base to main jaw, h, mm	208	226	227	255	255
Height, N, mm	248	276	287	326	326
Base width, A, mm	245	245	340	340	340
Base length, B, mm	310	310	390	390	390
Distance between grooves, C, mm	280	280	315	315	315
Slot width, E, mm	18	18	18	18	18
Nominal air pressure, MPa	0,63	0,63	0,63	0,63	0,63
The total clamping force in the jaws at a nominal pressure not less	30	40	60	70	70
Cam stroke at maximum stroke of the piston, not less than, mm	5,3	6,7	8,0	10,0	10,0
Gripping range, mm	15-150	15-200	15-250	30-315	30-400
Chuck weight, kg	30	48	65	99	142



MANUAL CLAMPING DEVICE ZPR-250.65

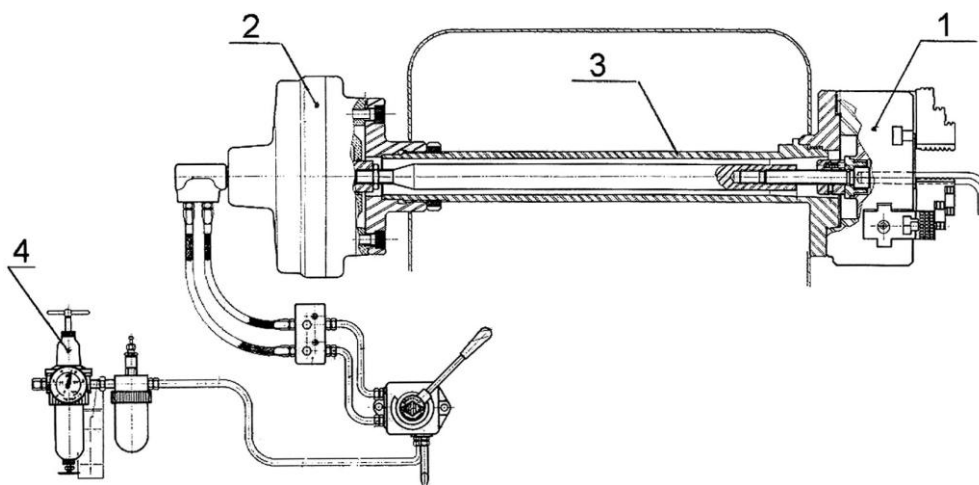


It is designed to perform work on drilling and milling machines. The device is made on the basis of a manual self-centering wedge bar chuck, it provides high pressure force transfer with less vise grip wrench torque. The design allows quick readjustment of reversible jaws which after their reinstallation perform the function of both direct and reversible.

TECHNICAL SPECIFICATIONS

Parameters	Value
Gripping range, mm	5-245
Jaw stroke, not less than, mm	8,0
Wrench maximum torque, N·m	180
Max. total clamping force, kN	90
Weight, not more than, kg	40

COMPLETE CLAMPING DEVICE





Fixing the lathe faceplate on the spindle in accordance with GOST 12595 15 cone. Faceplate is made of cast iron.

On request it is possible to change the connecting and landing sizes.

The outer diameter of the lathe faceplate to 1000 mm.

QUICK-CONNECT COUPLINGS FOR HYDRAULIC SYSTEMS



Quick-connect couplings are meant for quick connection and disconnection of flexible pipes of hydraulics working under pressure of up to 200 bar.

The design feature of the couplings is 100% casing hermeticity when disconnected due to original valve configuration, reduced differential pressure by oil flow through the locking feature as against known analogies, 100% of assemblability and hermeticity when assembling with couplings of European manufacturers.

The design of the couplings is complies with GOST R 50191 and international standards ISO 5675, ISO 7241-1 in terms of connection sizes, they can be coupled with response parts of couplings by different manufacturers.

The couplings can be applied in MAZ-type mobile transports, tractors and other agricultural engineering with towed vehicles. The couplings have passed tests on "Minsk Tractor Works", "Minsk Automobile Plant", "Lidagroprommash", "Volgograd Tractor Plant" and are being applied for equipping arrangement of "Belarus" tractors, MAZ trucks and support vehicles, support vehicle of "Mogilevtransmash" plant.

The plant can supply quick-connect couplings with adaptors and other thread versions: metric, conic inch, piped cylindrical, piped conic.

COUPLINGS BASIC DIMENSIONS

Designation	D ₁	D ₂	D ₃	D ₄	D ₅	D ₆	L ₁	L ₂	L ₃	L ₄	L ₅	L ₆	A ₁	A ₂
Left case (socket, female)														
UZ 036.50BMM.10 (fig.5)	M27x1,5	17	10,5				117	50	44				74	
UZ 036.50BMM.10-01 (fig.6)	M27x1,5	22	10,5				92	25	21				60	
UZ 036.50BMM.10-02 (fig.6)	M27x1,5	22	10,5				106	40	36				60	
UZ 036.50BMM.10-03 (fig.7)	M20x1,5	17,2	15				62	14	9				60	
UZ 036.50BMM.10-03-01(fig.7)	M22x1,5	17,2	15				64,5	16,5	11,5				60	
UZ 036.50BMM.10-03-02(fig.7)	M20x1,5	17,2	10,5				62	14	9				60	
UZ 036.50BMM.10-04 (fig.8)	M14x1,5	-	7				82	12	9				-	
UZ 036.50BMM.10-04-01(fig.8)	M16x1,5	12,5	8				90	23	20				24	
UZ 036.50BMM.10-05 (fig.7)	M20x1,5	17,2	15				62	14	9				60	
UZ 036.50BMM.10-06 (fig.9)	M20x1,5	21,8	10,5				84	21	15				60	
UZ 036.80B.10 (fig.7)	M27x1,5	22	19				87	16,5	11,5				60	
M 036.50B.10K (fig.10)	M20x1,5	17,2	15				70	14	9				60	
M 036.50B.10K-01 (fig.10)	M20x1,5	17,2	15				70	14	9				60	
M 036.50B.10K-02 (fig.10)	M20x1,5	17,2	15				70	14	9				60	
Right case (plug, male)														
UZ 036.50BMM.20 (fig.11)				M27x1,5	22	10,5				74	25	21		60
UZ 036.50BMM.20-03 (fig.12)				M20x1,5	17,2	15				50	16,5	12,5		60
UZ 036.50BMM.20-03-01(fig. 12)				M22x1,5	17,2	15				50	16,5	12,5		60
UZ 036.50BMM.20-04 (fig.13)				M16x1,5	11	7				67	16	12		60
UZ 036.50BMM.20-04-01(fig. 13)				M16x1,5	12,5	8				73	23	20		24



UZ 036.80B.20 (fig.12)				M27x1,5	22	19			58,5	20	12,5	60
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Delivery options of quick-connect couplings and their specifications

Designation	Coupling models								UZ 036.80B (fig.2)
	UZ 036.50BMM								
	- (fig.1)	-01 (fig.1)	-02 (fig.1)	-03 (fig.2)	-03-01 (fig.2)	-04 (fig.1)	-05 (fig.3)	-06 (fig.4)	
Left case (socket, female)									
UZ 036.50BMM.10 (fig.5)	x								
UZ 036.50BMM.10-01 (fig.6)		x							
UZ 036.50BMM.10-02 (fig.6)			x						
UZ 036.50BMM.10-03 (fig.7)				x					
UZ 036.50BMM.10-03-01 (fig.7)					x				
UZ 036.50BMM.10-03-02 (fig.7)									
UZ 036.50BMM.10-04 (fig.8)						x			
UZ 036.50BMM.10-04-01 (fig.8)									
UZ 036.50BMM.10-05 (fig.7)							x		
UZ 036.50BMM.10-06 (fig.9)								x	
UZ 036.80B.10 (fig.7)									x
M 036.50B.10K (fig.10)									
M 036.50B.10K-01 (fig.10)									
M 036.50B.10K-02 (fig.10)									
Right case (plug, male)									
UZ 036.50BMM.20 (fig.11)	x	x	x				x		
UZ 036.50BMM.20-03 (fig.12)				x				x	
UZ 036.50BMM.20-03-01 (fig.12)					x				
UZ 036.50BMM.20-04 (fig.13)						x			
UZ 036.50BMM.20-04-01 (fig.13)									
UZ 036.80B.20 (fig.12)									x
Technical characteristic									
Nominal size, mm	12								16
Nominal pressure, bar	200								
Disconnecting force, N	20...60								50...140
Rated flow, l/min (rated/max.)	50/80								80
Pressure drop, no more, bar	3,5								5,5
Length, no more, L, mm	166	141	156	84	87	123	110	103	115
Locking sleeve diameter, D, mm	40								47
Weight, no more, kg	0,73	0,63	0,68	0,28	0,30	0,38	0,48	0,62	0,58

<p>Fig. 1 - Quick-connect coupling UZ036.50BMM, UZ036.50BMM-01, UZ036.50BMM-02, UZ036.50BMM-04</p>	
<p>Fig. 2 - Quick-connect coupling UZ036.50BMM-03, UZ036.50BMM-03-01, UZ036.80B</p>	



<p>Fig. 3 - Quick-connect coupling UZ036.50BMM-05</p>	
<p>Fig. 4 - Quick-connect coupling UZ036.50BMM-06</p>	
<p>Fig. 5 – Left case (socket, female) UZ036.50BMM.10</p>	
<p>Fig. 6 - Left case (socket, female) UZ036.50BMM.10-01, UZ036.50BMM.10-02</p>	
<p>Fig. 7 - Left case (socket, female) UZ036.50BMM.10-03, UZ036.50BMM.10-03-01, UZ036.50BMM.10-05, UZ036.80B.10</p>	
<p>Fig. 8 - Left case (socket, female) UZ036.50BMM.10-04, UZ036.50BMM.10-04-01</p>	
<p>Fig. 9 - Left case (socket, female) UZ036.50BMM.10-06</p>	










<p>Fig. 10 - Left case (socket, female) M036.50B.10K (red cap), M036.50B.10K-01 (green cap), M036.50B.10K-02 (blue cap)</p>	
<p>Fig. 11 - Right case (plug, male) UZ036.50BMM.20</p>	
<p>Fig. 12 - Right case (plug, male) UZ036.50BMM.20-03, UZ036.50BMM.20-03-01, UZ036.80B.20</p>	
<p>Fig. 13 - Right case (plug, male) UZ036.50BMM.20-04, UZ036.50BMM.20-04-01</p>	



DETAILS MANUFACTURED FOR “MINSK TRACTOR WORKS”

	<p>Screw 70-4605320, Screw-nut 70-4605316</p> <p>Screws and screw-nuts are used in power sensor of mechanism of a tow bar</p> <p>Material: Screw – steel 35XGSA (35ChGSA) Screw-nut – Steel 45 (C45)</p> <p>It is used in tractors of following series: 800/820/890/892 900/920/950/952 1005/1025</p>
	<p>Bush 1220-4605502, 1220-4605502-01</p> <p>It is a part of a tractor’s tow bar</p> <p>Material – Steel 35XGSA (35ChGSA)</p> <p>It is used in tractors of following series: 800/900/1000/1200/1500/2000</p>
	<p>Bracket 1220-4605501 1220-4605501-01</p> <p>It is a part of a tractor’s tow bar</p> <p>Material – Steel 45L (GS-60)</p> <p>It is used in tractors of following series: 800/900/1000/1200/1500/2000</p>
	<p>Switching muff 50-4202046-Б, 50-4202046-Б-01</p> <p>Muff is used in a back shaft reducer of power selection that is placed on universal tractor-cultivator. Muff is used for switching of synchronous and independent PTO.</p> <p>Material – Steel 40X (41Cr4)</p> <p>It is used in tractors of following series: 800/820/890/892 900/920/950/952 1005/1025/1522</p>
	<p>Bracket 923-4235016 923-4235016-A</p> <p>Material – Steel 45L (GS-60)</p> <p>It is used in tractors of following series: 800/900/1000</p>
	<p>Basis 822-8403108</p> <p>It is used for installation of rotary bracket of a wing</p> <p>Material – HF 50 (GGG50)</p>



	<p>Axis 822-8403107</p> <p>It is used for installation of rotary bracket of a wing Material – Steel 40X (41Cr4)</p>
	<p>Steering traction 2522-3003010-A, 2522-3003010-A-01</p> <p>It is a part of a driving gear and it supplies kinematical connection of steering wheel with controlling device It is used in tractors of following series: 2522-3003010-A - Belarus-2522DV, 2822DC, 3022DV, 3022DC, 2522-3003010-A-01 –Belarus-3522DV</p>
	<p>Striker 2522-2622081 2522-2622081-01</p> <p>Material – HF50 (GGG50) It is used in tractors of following series: 3022/3522</p>
	<p>Frame 1520-2308015</p> <p>It is used in planetary wheel reducer of front axle Material – HF50 (GGG50) It is used in tractors of following series: 800/900/1000/1200/1500</p>
	<p>Barrel 1520-2308035</p> <p>It is used in planetary wheel reducer of front axle. It is used for regulation of axial clearance of a bearing of cylindrical gear of wheel reducer. Material – MF20 (GG20) It is used in tractors of following series: 822/1221/1222/1523/1500</p>
	<p>Barrel 1520-2308002</p> <p>It is used in planetary wheel reducer of front axle. It is used for regulation of axial clearance of a bearing of hub of wheel reducer. Material – Steel 45L (GS-60) It is used in tractors of following series: 800/900/1000/1200/1500</p>
	<p>Frame 2522-3502035</p> <p>Material – HF70 (GGG70) It is used in tractors of following series: 2522DV/ 2822DC/2822.1</p>



CONSUMER GOODS

Dismountable dumbbells RG.6M - 6 kg, RG.15M - 15 kg, chrome-plated steel.

