Clamping of easy deformed / thin walled workpieces

High precision 6 jaw chucks (2+2+2) equalising





Metric serration

2+2+2 equalising

Is clamping with 6 jaws, where always 2 jaws are equalising as a pair. This allows to compensate inaccuracy of the workpiece roundness. The grip force is always distributed equaly onto 6 jaws. The equal distribution of the grip forces results in a minimum of deformation.



Application for: Raw material clamping (1. Operation)

Centrifugal force compensation

SJL-C/-M 225-400 SJL-C 500-800

SJLS-C/-M 225-400

proofline® series fully sealed – low maintenance

6 jaw self centering

Is clamping concentric with all 6 jaws, where no equalisation is done during clamping. All 6 jaws make the same radial movement towards the chucks center.



Application for: Round, machined clamping diameters (2. Operation)

The centrifugal forces of master- and top jaws are compensated by counter balance weights. The centrifugal forces of the jaws under rotation are mostly compensated.

Clamping force	
	With centrifugal force compensation
	Without centrifugal force compensation
	Sneed

Clamping glossary

2+2+2 Equalisation: A system which allows 2 jaws in a pair to do a different radial jaw stroke. On raw material clamping the system ensures that all 6 jaws are in contact with the workpiece. The grip force is distributed onto all 6 jaws and reduces the deformation of the workpiece.

Locking system for 6 jaw self centering: SJL chuck have a locking system that allows to lock the 2+2+2 equalisation.

In this setting the **SJL chuck** can be used like a standard 6 jaw chuck with 6 concentric jaws. This setting can be used to clamp thin walled workpieces that need an equal wall thickness.

Air sensing: Air is fed through the contact face of the work stop. When the workpiece is in contact with the work stop, the airflow is stopped and converts into a signal. If the component is not correctly positioned or is lifted, the machine can not start or the spindle is stopped. The preparation of this important feature is standard on all **SJL type** chucks.

Centrifugal force compensation: When jaw chucks are rotating, the mass of the master jaws / top jaws is subject to centrifugal force. This centrifugal force reduces the dynamic grip force, and thus limits the feeds and speeds for machining.

All **SJL chuck** have a centrifugal force compensation system built in by default which reduces this effect and allows machining at higher speed with more aggressive feed rates.

Chuck body reinforcement: When the chucks are rotating, the chuck body has to prop up against the static grip force and against the centrifugal force caused by the rotation speed. On 6 jaw chucks, the centrifugal force caused by the jaws is the double compared to 3 jaw chucks. In order to increase the stiffness of the chuck body, **SJL chucks** have a reinforcement on the chuck body.

High-low clamping: For easily deformed components. High gripping forces for the rough cut are reduced to low gripping forces for the finish cut without unchucking. This means less deformation on the finished components. Contrarily to conventional chucks, the **SJL** lever drive is suitable for high-low clamping.



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SJLS-C

SJLS-M

Self centering **TONGUE & GROOVE**

Self centering METRIC SERRATION



High precision 6 jaw chucks (2+2+2) equalising Ø 225 - 400 mm

Jaws equalising as a pair
Equalising mechanism lockable

Application/customer benefit

- ٠ Clamping of easy deformed workpieces
- Low height = more z-clearance
- Low deformation by means of 2+2+2 jaw clamping
- High radial and axial clamping accuracy
- Fully sealed and oil bath lubricated
- Ideal for high speeds

Technical data

- Adjustable to 6 jaw 2+2+2 or true 6 jaw clamping
- Channels for air and / or coolant (2 media feed)
- proofline[®] chucks = fully sealed low maintenance

Standard equipment

6 jaw chuck with mounting bolts and adjustment key Oil

Chuck in open position = right end position



Subject to technical changes.

For more detailed information please ask our customer service.

SMW-AUTOBLOK Type		SJLS-C-225	SJLS-M-225	SJLS-C-290	SJLS-M-290	SJLS-C-400	SJLS-M-400	
Mounting		Z170	Z170	Z220	Z220	Z300	Z300	
	А	mm	225	225	290	290	400	400
	B F H6	mm	170	170	220	220	300	300
	с	mm	133.4	133.4	171.4	171.4	235	235
	D	mm	M24	M24	M30	M30	M42 x 3	M42 x 3
	E f7	mm	25	25	32	32	44	44
	F	mm	47	47	60	60	82	82
	G	mm	51	51	65	65	90	90
	н	mm	68	68	88	88	119	119
Piston stroke	к	mm	11.5	11.5	15	15	20.8	20.8
Piston position min.	L	mm	43.25	43.25	53	53	74.9	74.9
Piston position max.	L	mm	54.75	54.75	68	68	95.7	95.7
	М	mm	76	78.5	98	101	133	137
	Ν	mm	5	5	6	6	8	8
	0	mm	2.5	3	3	3,5	4	3.5
	R	mm	M12 (6 x 60°)	M12 (6 x 60°)	M16 (6 x 60°)	M16 (6 x 60°)	M20 (6 x 60°)	M20 (6 x 60°)
Max.	S	mm	79	79	101.5	101.5	139	139
Min.	S	mm	73	73	93.5	93.5	128	128
	т	mm	40	40	51	51	70	70
	v	mm	10	10	12.2	12.2	17	17
Protecting sleeve length	Z	mm	47.1	47.1	58.1	58.1	82.1	82.1
Width (C = tongue / M = notch)	а	mm	10	10	12	12	14	14
Groove width	b	mm	11	-	14	-	19	-
	c	mm	27 (2 x 13.5)	27 (2 x 13.5)	34 (2 x 17.0)	33 (2 x 16.5)	45 (2 x 22.5)	45 (2 x 22.5)
	d	mm	M8 (3x)	M8 (3x)	M10 (3x)	M10 (3x)	M12 (3x)	M12 (3x)

High precision 6 jaw chucks (2+2+2) equalising Ø 225 - 400 mm

Jaws equalising as a pair Equalising mechanism lockable

Self centering TONGUE & GROOVE

SJLS-C

Self centering METRIC SERRATION

SJLS-M

Technical data

SMW-AUTOBLOK Type		SJLS-C-225	SJLS-M-225	SJLS-C-290	SJLS-M-290	SJLS-C-400	SJLS-M-400
Stroke per jaw	mm	6	6	8	8	11	11
Equalising stroke at mid of jaw stroke	mm	±1	±1	±1	±1	±2.5	±2.5
Max. actuating force	kN	30	30	42	42	58	58
Max. gripping force	kN	45	45	65	65	90	90
Max. Speed	r.p.m.	3700	3700	2800	2800	1800	1800
Weight (without top jaws)	kg	20	20	44	44	115	115
Moment of inertia	kg∙m²	0.13	0.13	0.46	0.46	2.33	2.33

Order review

SMW-AUTOBLOK Type	SJLS-C-225	SJLS-M-225	SJLS-C-290	SJLS-M-290	SJLS-C-400	SJLS-M-400	
Mounting	Z170	Z170	Z220	Z220	Z300	Z300	
Id. No.	162675	162895	162680	162896	162685	162897	
Hex. Pin type socket wrench	202	.881	201064		203795		
Oil (RENOLIN CLPF 320 SUPER) 1 liter	202532						

Top jaws for SJLS



Top jaw WAC-SJL (Tongue and groove)





Mounting Kit WAM-SJL

SMW-AUTOBLOK Type	SJLS-C-225	SJLS-M-225	SJLS-C-290	SJLS-M-290	SJLS-C-400	SJLS-M-400
Jaw type	WAC-SJL 225	WAM-SJL 225	WAC-SJL 290	WAM-SJL 290	WAC-SJL 400	WAM-SJL 400
Id. No. / set	5300950	539053	5300955	539055	5301053	5301052
Mounting Kit (only WAM) / set		203572		203573		204115
Length L	94	84	115	108	150	153
Width B	20	20	40	40	52	52
Height H	32	32	36	35	46	46
kg / set	2.2 kg	1.8 kg	5.4 kg	4.9 kg	12.5 kg	12.5 kg

Top Jaw WAM-SJL (Metric serration)

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