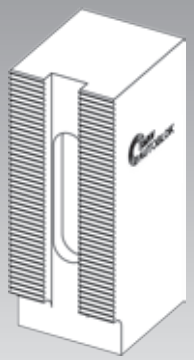
Clamping of easy deformed/ thin walled workpieces

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

Tongue & groove

METRIC serration

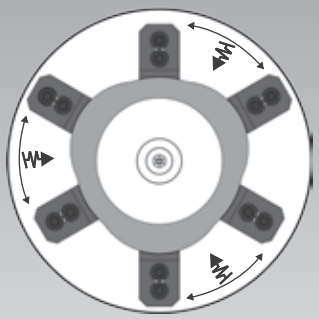


SJL-C/-M 225
SJL-C/-M 290
SJL-C/-M 400

proofline® series
fully sealed-low maintenance

2+2+2 equalising

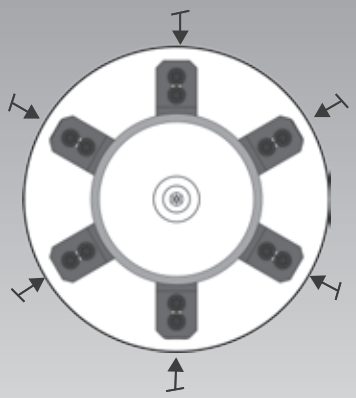
Is clamping with 6 jaws, whereat always 2 jaws are equalising as a pair. This allows to compensate inaccuracy of the workpiece roundness. The grip force is always distributed equal onto 6 jaws. The equal distribution of the grip forces results in a minimum of deformation.



Application for: Raw material clamping (1. Operation)

6 jaw self centering

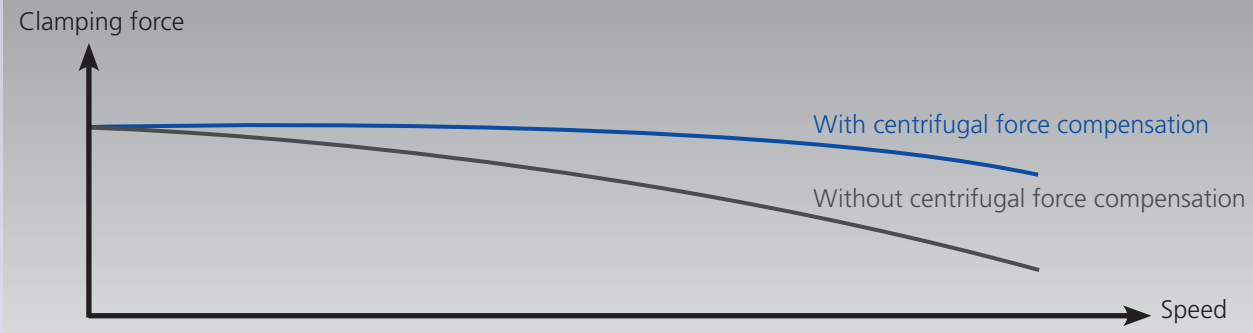
Is clamping concentric with all 6 jaws, whereat no equalisation is done during clamping.
All 6 jaws make the same radial movement towards the chucks center.



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

Centrifugal force compensation

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



Clamping glossary

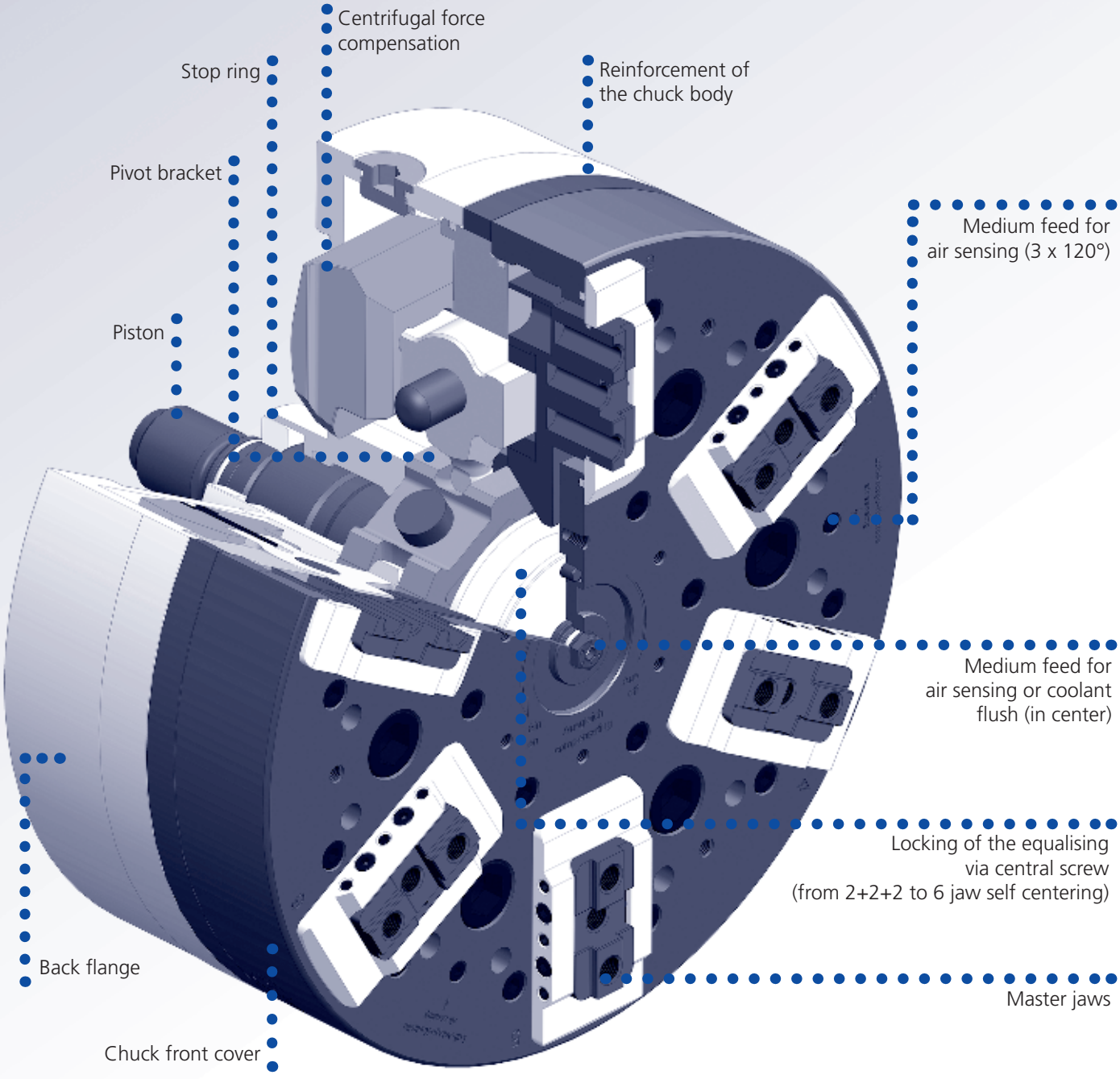
2+2+2 Equalisation: A system that allows 2 jaws in a pair to do a different radial jaw stroke. On raw material clamping the systems ensures, that all 6 jaws are in contact with the workpiece. The grip force is distributed onto all the 6 jaws, and reduces the deformation of the workpiece.

Locking system for 6 jaw self centering: SJL chucks 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 work-piece 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 for 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 chucks** have a centrifugal force compensation system built in, that reduces this effect, and allows machining at higher speed with more aggressive feed rates.

Chuck body reinforcement: When chucks are rotating, the chuck body has to support 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.



SJL-C

Self centering
Tongue & groove

SJL-M

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

- Clamping of deformation sensitive components
- 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

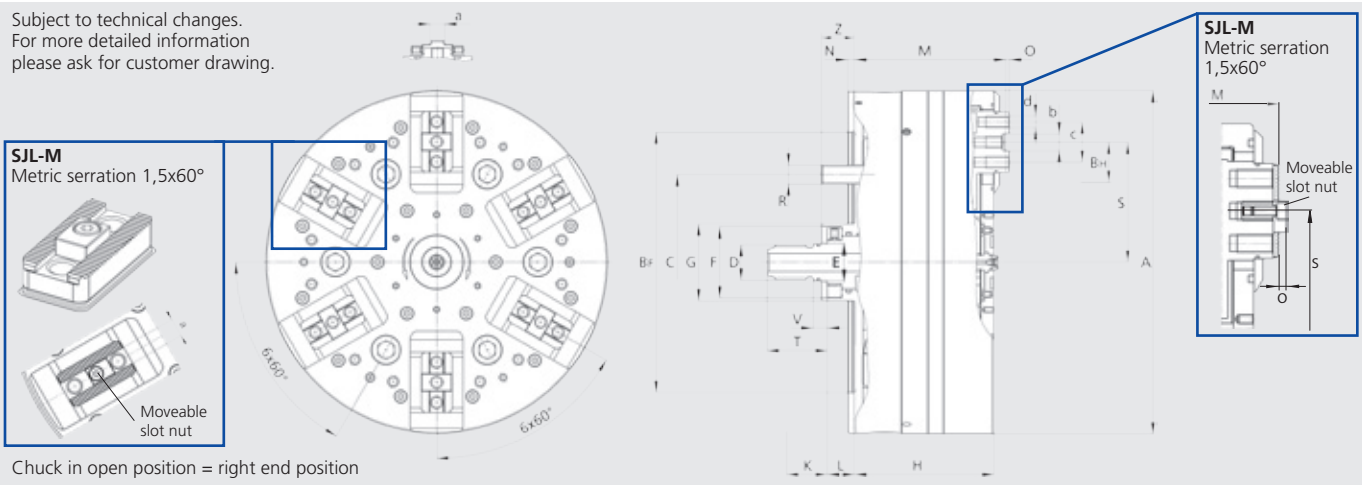
Technical data

- Adjustable to 6 jaw 2+2+2 or true 6 jaw clamping
- Channels for air and / or coolant (2 medium feed)
- Centrifugal force compensation
- **proofline® chucks** = fully sealed - low maintenance

Standard equipment

- 6 jaw chuck with mounting bolts and adjustment key
- Oil

Subject to technical changes.
For more detailed information
please ask for customer drawing.



Chuck in open position = right end position

SMW-AUTOBLOK Type				SJL-C-225	SJL-M-225	SJL-C-290	SJL-M-290	SJL-C-400	SJL-M-400
Mounting				**Z170**	**Z170**	**Z220**	**Z220**	**Z300**	**Z300**
	A		mm	225	225	290	290	400	400
	BF	H6	mm	170	170	220	220	300	300
	C		mm	133.4	133.4	171.4	171.4	235	235
	D		mm	M24	M24	M30	M30	M42x3	M42x3
	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
	H		mm	93	93	118	118	163	163
Piston stroke	**K**		mm	11.5	11.5	15	15	20,8	20,8
Piston position min.	**L**	min.	mm	18	18	23	23	30,9	30,9
Piston position max.	**L**	max.	mm	29.5	29.5	38	38	51,7	51,7
	M		mm	101	103,5	128	131	177	181
	N		mm	5	5	6	6	8	8
	O		mm	2.5	3	3	3,5	4	3,5
	R		mm	M12 (6x60°)	M12 (6x60°)	M16 (6x60°)	M16 (6x60°)	M20 (6x60°)	M20 (6x60°)
	S	max.	mm	79	79	101.5	101.5	139	139
	S	min.	mm	73	73	93.5	93.5	128	128
	T		mm	40	40	51	51	70	70
	V		mm	10	10	12.2	12.2	17	17
Protecting sleeve length	**Z**		mm	22.1	22.1	28.1	28.1	38,1	38,1
Slot nut notch width	**a**		mm	10	10	12	12	14	14
	b		mm	12	-	14	-	19	-
	c		mm	27 (2x13,5)	27 (2x13,5)	33 (2x16,5)	33 (2x16,5)	45	45
	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

SJL-C
Self centering
Tongue & groove

SJL-M
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Metric serration

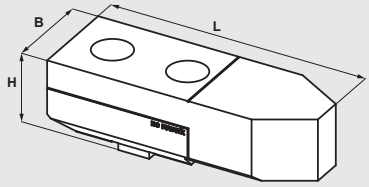
Technical data

SMW-AUTOBLOK Type			SJL-C-225	SJL-M-225	SJL-C-290	SJL-M-290	SJL-C-400	SJL-M-400
Stroke per jaw	BH	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. grip force		kN	45	45	65	65	90	90
Max. speed		r.p.m.	4200	4200	3600	3600	2600	2600
Weight (without top jaws)		kg	26	26	51	51	136	136
Moment of inertia		kg·m²	0.16	0.16	0.5	0.5	2.75	2.75

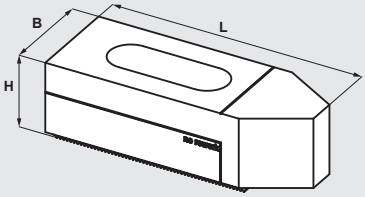
Order review

SMW-AUTOBLOK Type	SJL-C-225	SJL-M-225	SJL-C-290	SJL-M-290	SJL-C-400	SJL-M-400
Mounting	**Z170**	**Z170**	**Z220**	**Z220**	**Z300**	**Z300**
Id. No.	160870	160922	160670	160940	160970	161001
Hex. Pin type socket wrench	202881		201064		203795	
Oil (RENOLIN CLPF 320 SUPER) 1 Ltr.	202532					

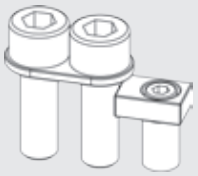
Top jaws for SJL



Top jaw WAC-SJL (Tongue and groove)



Top Jaw WAM-SJL (Metric serration)



Mounting Kit WAM-SJL

SMW-AUTOBLOK Type	SJL-C 225	SJL-M 225	SJL-C 290	SJL-M 290	SJL-C-400	SJL-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	0.4 kg	0.4 kg	0.9 kg	0.8 kg	2.1 kg	2.1 kg