

TSF-RM

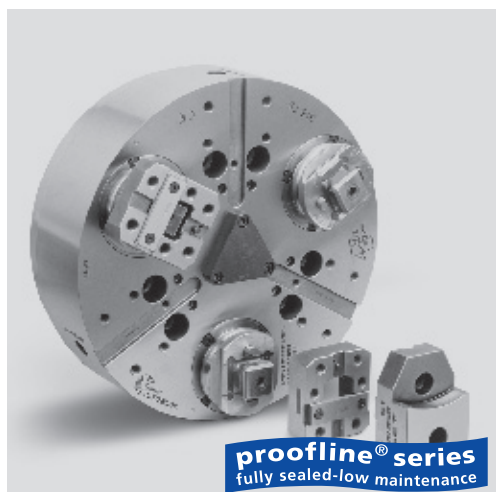
Self centering
Floating jaws

TSR-RM

Self centering
Rigid jaws

Quick jaw change pull-down chucks Ø 170 - 530 mm

- active pull-down
- quick jaw change with pallets
- tongue & groove pallets
- 3 jaws



Application/customer benefits

- **Quick jaw change** via pallets for quick setup
- Clamping of workpieces with highest demand for **parallelism**
- **Highest productivity** with long maintenance intervals
- Constant grip force and long lifetime ensure **constant quality of workpieces**

TSF-RM: Floating base jaws to clamp raw and/or easy deformed workpieces (6-point-contact).

TSR-RM: Rigid base jaws for precise clamping on premachined diameters.

Technical features

- for O.D. clamping only
- active pull-down
- precise quick-jaw-change via pallets
- centrifugal force compensation
- central bore for coolant and/or air
- permanent grease lubrication
- **proofline® chucks** = fully sealed – low maintenance

Standard equipment

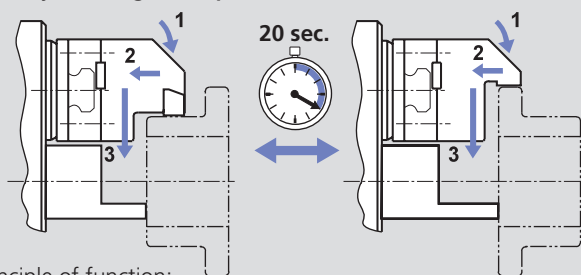
3-jaw-chuck
key
mounting bolts and grease gun

Ordering example

TSF-RM 210/A6
or TSR-RM 315/Z220

TSF-RM/TSR-RM

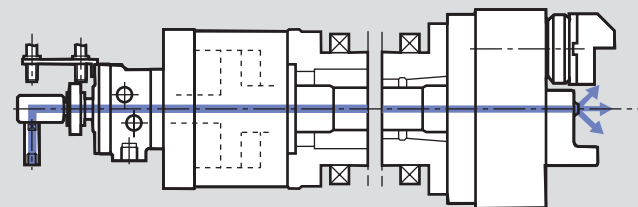
Quick jaw change with pallets



Principle of function:

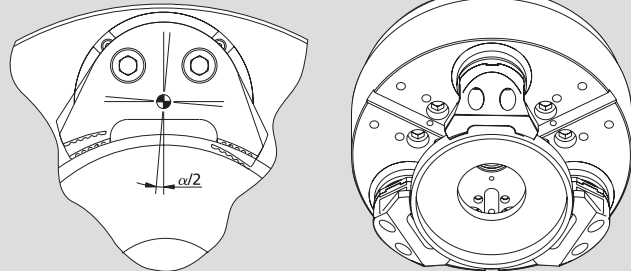
- 1 pre-clamping - 2 active pull-down - 3 clamping
- For O.D. clamping only

TSF-RM/TSR-RM



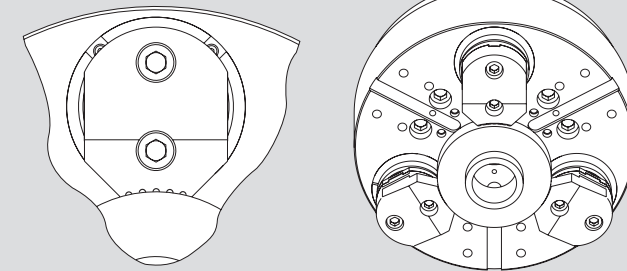
- TSF-RM and TSR-RM chucks operated with a SIN-S cylinder with central bore for air sensing and/ or coolant flush

TSF-RM



TSF-RM: Floating jaws to clamp raw/easy deformed workpieces quick jaw change with pallets with 6-point-contact

TSR-RM



TSR-RM: Rigid jaws for precise clamping on premachined diameters quick jaw change with pallets with 3-point-contact

Technical data

SMW-AUTOBLOK Type		TSF-RM 170 TSR-RM 170	TSF-RM 210 TSR-RM 210	TSF-RM 250 TSR-RM 250	TSF-RM 315 TSR-RM 315	TSF-RM 400 TSR-RM 400	TSF-RM 530 TSR-RM 530
Angular jaw stroke	deg.	5.2°	5.2°	4.9°	4.9°	4.7°	4.7°
Radial jaw stroke at distance h	mm	5.3	6.3	7	7	7.5	7.5
Pull down movement (standard)	mm	0.1	0.1	0.1	0.1	0.2	0.2
Axial piston stroke	mm	21	25	25	25	30	30
Max. draw pull**	kN	18	25	40	40	50	60
Max. gripping force** at distance h	kN	44	60	96	96	120	150
Max. speed*	r.p.m.	5000	4500	3800	3000	2200	1800
Weight (plain back without top jaws)	kg	15	27	41	66	115	196
Moment of inertia	kg·m²	0.06	0.16	0.34	0.83	2.3	7
Recommended actuating cylinders		SIN-S 85	SIN-S 100	SIN-S 125	SIN-S 125	SIN-S 150	SIN-S 150-175

* The above maximum speed is allowed with standard weight/height top jaws and applying the full draw pull only. For more informations please contact SMW-AUTOBLOK.

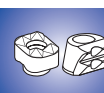
** For internal clamping reduce the draw pull by 30 %



on request:
Tooling Standard
Parts Catalog

**QUICK
CHANGE
PALLET**

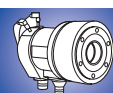
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Quick jaw change pull-down chucks Ø 170 - 530 mm

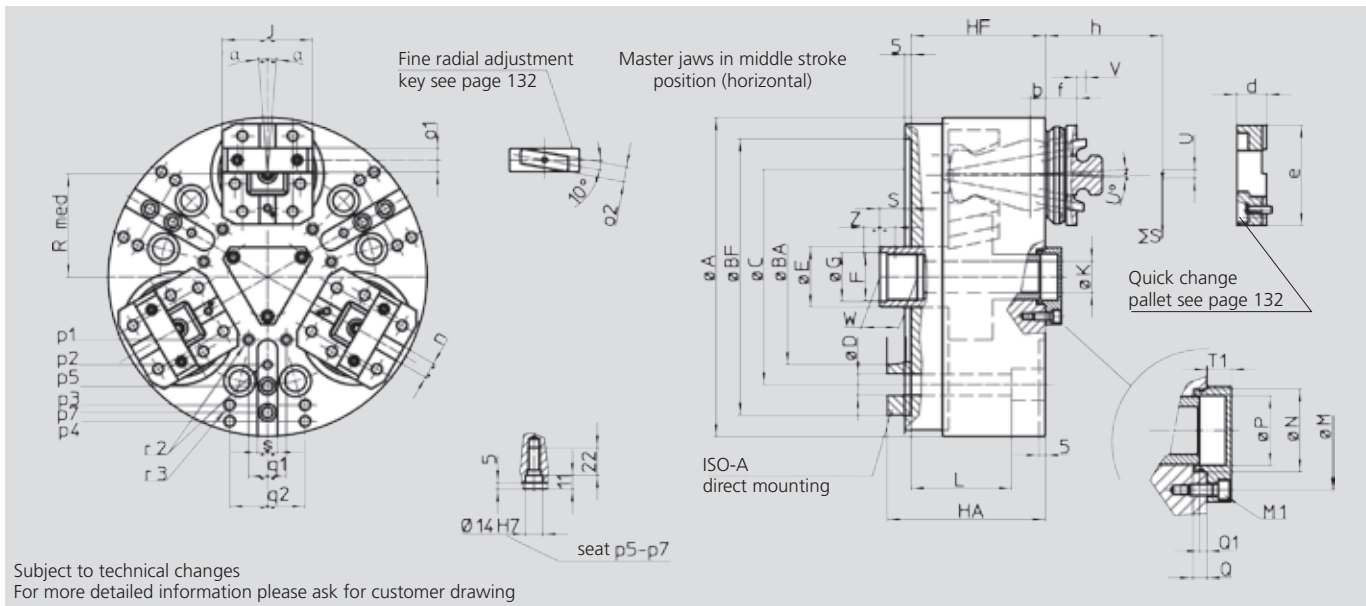
- active pull-down
- quick jaw change with pallets
- tongue & groove pallets
- 3 jaws

TSF-RM

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Rigid jaws



SMW-AUTOBLOK Type			TSF-RM 170 TSR-RM 170				TSF-RM 210 TSR-RM 210		TSF-RM 250 TSR-RM 250		TSF-RM 315 TSR-RM 315		TSF-RM 400 TSR-RM 400		TSF-RM 530 TSR-RM 530	
Mounting			Z140	A5	Z160	A6	Z170	A6	Z220	A8	Z220	A8	Z300	A11	Z380	A15
Through-hole	A	mm	173				212		254		315		390		535	
		H6	140	82.563	160	106.375	170	106.375	220	139.719	220	139.719	300	196.869	380	285.775
	C	mm	104.8				133.4		171.4		171.4		235		330.2	
		mm	11.5				13.5		17		17		21		25	
	E	mm	36				38		48		48		75		75	
		mm	M28 x 1.5				M32 x 1.5		M38 x 1.5		M38 x 1.5		M60 x 1.5		M60 x 1.5	
	G	H8	29				33		39		39		61		61	
		mm	83	98	83	100	100	117	107	126	107	126	127	148	132	155
	Hf/HA	mm	14				18		25		25		52		52	
		mm	56				82		80		80		74		77	
	M	mm	36				42		63		63		90		90	
		mm	M5/13				M6/11		M6/12		M6/12		M8/17		M8/17	
Thread/depth	M1	mm	28				34		44		44		75		75	
		H8	23				28.5		37		37		66		66	
	P	mm	6				5.5		7.5		7.5		9		9	
		mm	3				2		4		4		4		4	
At middle stroke	Q1	mm	55				64		82		107		130		190	
At middle stroke	Rmed	mm	18				20		25		25		25		20	
At middle stroke	S	mm	10				13		13		13		15		15	
Radial stroke	T1	mm	5.2°				5.2°		4.9°		4.9°		4.7°		4.7°	
Radial stroke (1) @ h	U	deg.	5.3				6.3		7		7		7.5		7.5	
Pull-down s/d (option)	V	mm	0.1				0.1		0.1		0.1		0.2		0.2	
	W	mm	25				25		25		25		25		25	
Axial piston stroke	Z	mm	21				25		25		25		30		30	
Only TSF-RM max.	α	deg.	±2°				±2°		±1.5°		±1.5°		±1.5°		±1.5°	
	b	mm	9				10		12		12		12		12	
	d	mm	18				22		24		24		30		30	
	e	mm	60				75		80		80		105		105	
	f	mm	24				25		25		25		28.5		28.5	
Reference height	h	mm	50				60		70		70		80		80	
	j	mm	55				65		72		72		100		100	
	n	h8	7.94				7.94		12.7		12.7		12.7		12.7	
	o1	H7	12.68				12.68		19.03		19.03		19.03		19.03	
	o2	h7	9				9		12		12		12		12	
	p1	mm	-				30		50		60		(*)		(*)	
	p2	mm	35				-		70		80		(*)		(*)	
	p3	mm	65				80		102		102		(*)		(*)	
	p4	mm	-				-		-		135		(*)		(*)	
	p5	mm	-				87		87		-		(*)		(*)	
	p7	mm	-				-		108		108		(*)		(*)	
	q1	mm	-				8		30		30		(*)		(*)	
	q2	mm	36				45		60		60		(*)		(*)	
Thread/depth	r2	mm	M6/12				M6/12		M8/15		M8/15		(*)		(*)	
Thread/depth	r3	mm	M8/17				M8/17		M10/19		M10/19		(*)		(*)	
	s	mm	16				16		16		16		20		20	

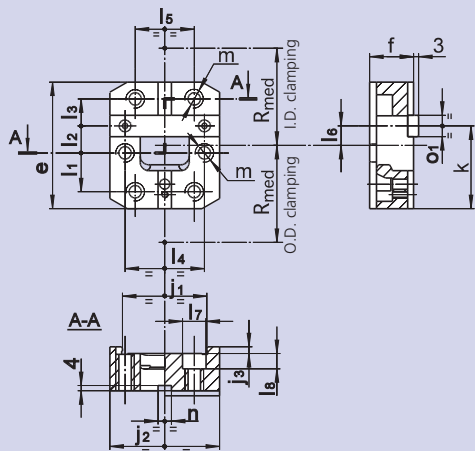
(1) Calculated at **h** distance from the chuck's face (where normally the clamping takes place)

(*) For chuck Ø 400-530 please ask for customer drawing

Accessories for TS chucks

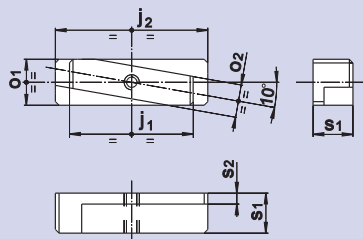
- quick jaw change pallets
- cross keys for top jaws fine adjustment

Quick change pallets for TSF-RM and TSR-RM chucks



Chuck type	170 TSF-RM 170 TSR-RM	210 TSF-RM 210 TSR-RM	250 TSF-RM 250 TSR-RM	315 TSF-RM 315 TSR-RM	400/530 TSF-RM 400/530 TSR-RM
Id. No.	19701716	19702116	19702516	19702516	19704016
e mm	60	75	80	80	105
f mm	21.5	26	28	28	34
j1 mm	44	50	55	55	80
j2 mm	55	65	72	72	100
j3 mm	3.5	4	4	4	4
k mm	39.5	49	51	51	66.5
l1 mm	19	23	22	22	28
l2 mm	12.5	16	19	19	25
l3 mm	12.5	16	19	19	25
l4 mm	42	47	52	52	74
l5 mm	32	35	40	40	62
l6 mm	9.5	11.5	11	11	14
l7 mm	11	14	14	14	17
l8 mm	7	9	9	9	11
m mm	M8	M10	M10	M10	M12
n (H7) mm	7.94	7.94	12.7	12.7	12.7
o1 (h7) mm	12.68	12.68	19.03	19.03	19.03
Rmed mm	55	64	82	107	130

Cross keys for jaw radial fine adjustment

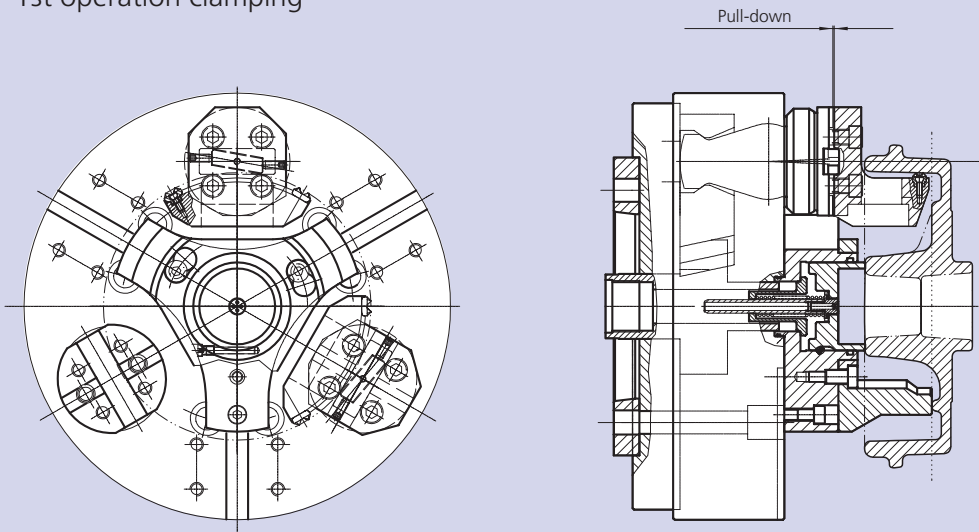
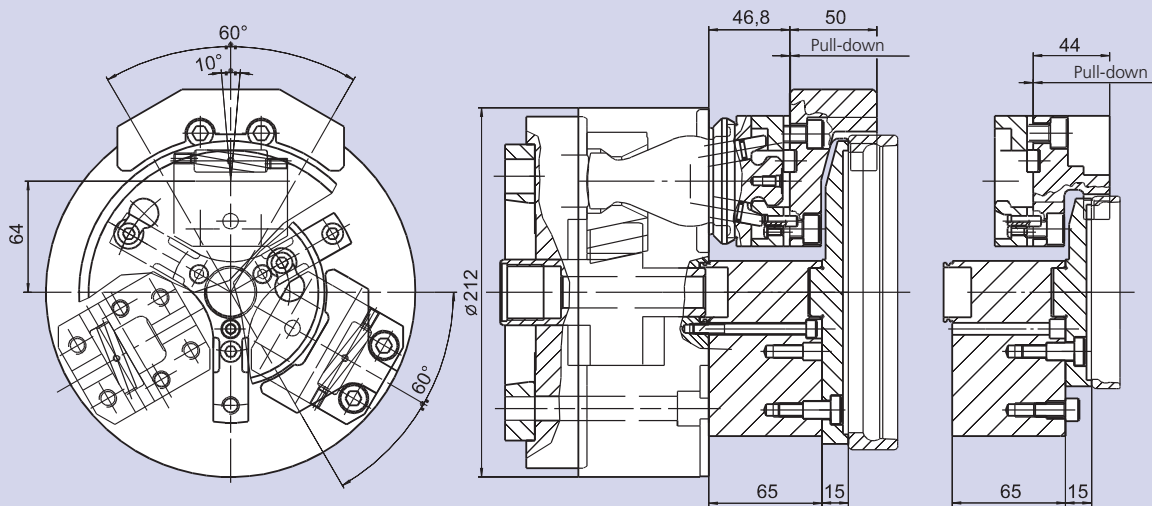


- Inclined key for radial fine adjustment of the top jaws, used when high concentricity for second operations is required.

- Used in second operation and sometimes in first or unique operations.

Chuck Ø	170	210	250	315	400/530
Id. No.	15711633	15712133	15712533	15712533	15714033
j1 mm	24	32	38	38	46
j2 mm	38	46	56	56	70
o1 (h7) mm	12.68	12.68	19.03	19.03	19.03
o2 (h7) mm	9	9	12	12	12
s1 mm	11	11	11	11	14.5
s2 mm	3	3	3	3	4.5

Clamping examples

Brake drum – 1st operation clamping**Bearing ring – 2nd operation clamping****Bearing flange – Complete machining in one set-up**