

TSF-RM

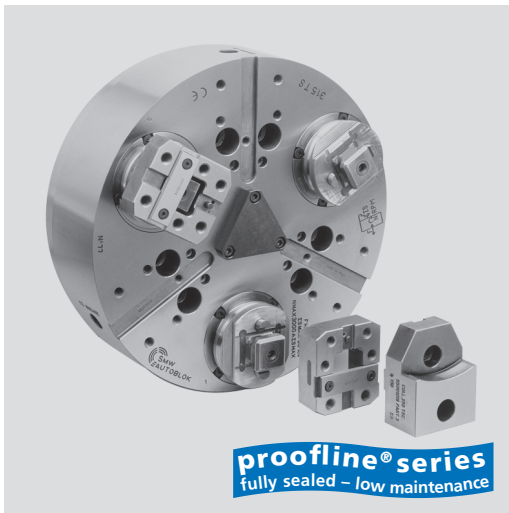
TSR-RM

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

Self centering
Floating jaws

Self centering
Rigid jaws

- 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 gripping 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

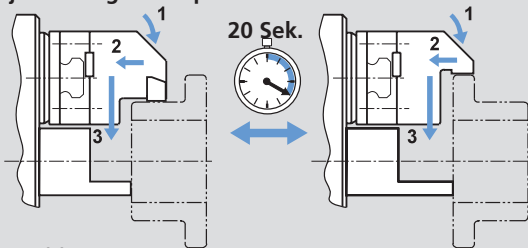
3-jaw chuck
Key
Mounting bolts

Ordering example

3-jaw chuck TSF-RM 210/A6
or
3-jaw chuck TSR-RM 315/Z220

TSF-RM / TSR-RM

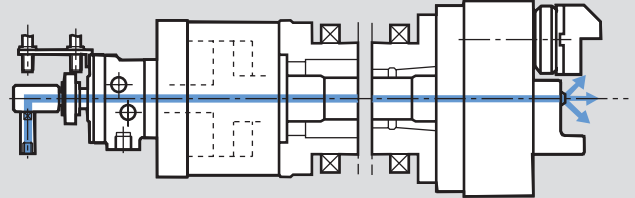
Quick jaw change with pallets



Principle of function:

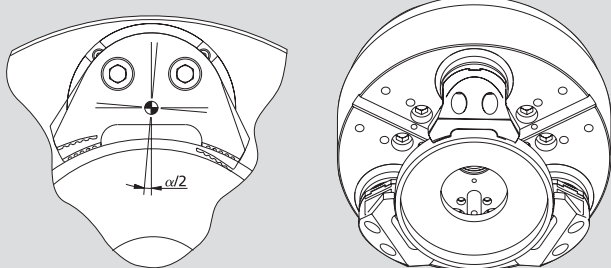
- 1 pre-clamping - 2 active pull-down - 3 clamping
- For O.D. clamping only.

TSF-RM / TSR-RM



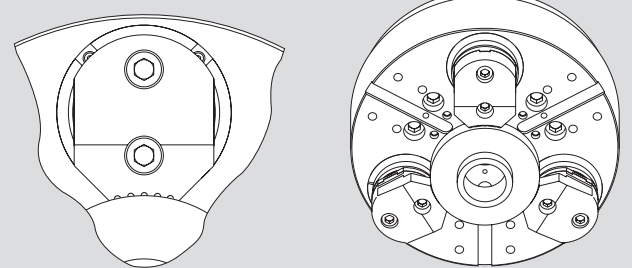
- TSF-RM and TSR-RM chucks operated with a SIN-S cylinder with central bore for air sensing and / or coolant flush.

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 with 3-point-contact, quick jaw change with pallets.

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 U° | 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·m ² | 0.06 | 0.16 | 0.34 | 0.83 | 2.3 | 7 |
| Recommended actuating cylinders | Type | SIN-S 85 | SIN-S 100 | SIN-S 125 | SIN-S 125 | SIN-S 150 | SIN-S 150-175 |
| Id. No. TSF-RM (center mounting) | | 77193317*** | 77193321 | 77193325 | 77193331 | 77193340 | 77193353 |
| Id. No. TSR-RM (center mounting) | | 77193517*** | 77193521 | 77193525 | 77193531 | 77193540 | 77193553 |

* The above maximum speed is allowed with standard weight / height top jaws and applying the full draw pull only. For more information please contact SMW-AUTOBLOK.
** For internal clamping reduce the draw pull by 30%.

*** TSF-RM 170 Z140 / 170 Z160 77193318.
TSR-RM 170 Z140 / 170 Z160 77193518.




on request:
Tooling Standard
Parts Catalog




**QUICK
CHANGE
PALLETES**


SMW-AUTOBLOK
192



SMW-AUTOBLOK
472



SMW-AUTOBLOK
466



SMW-AUTOBLOK
327

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

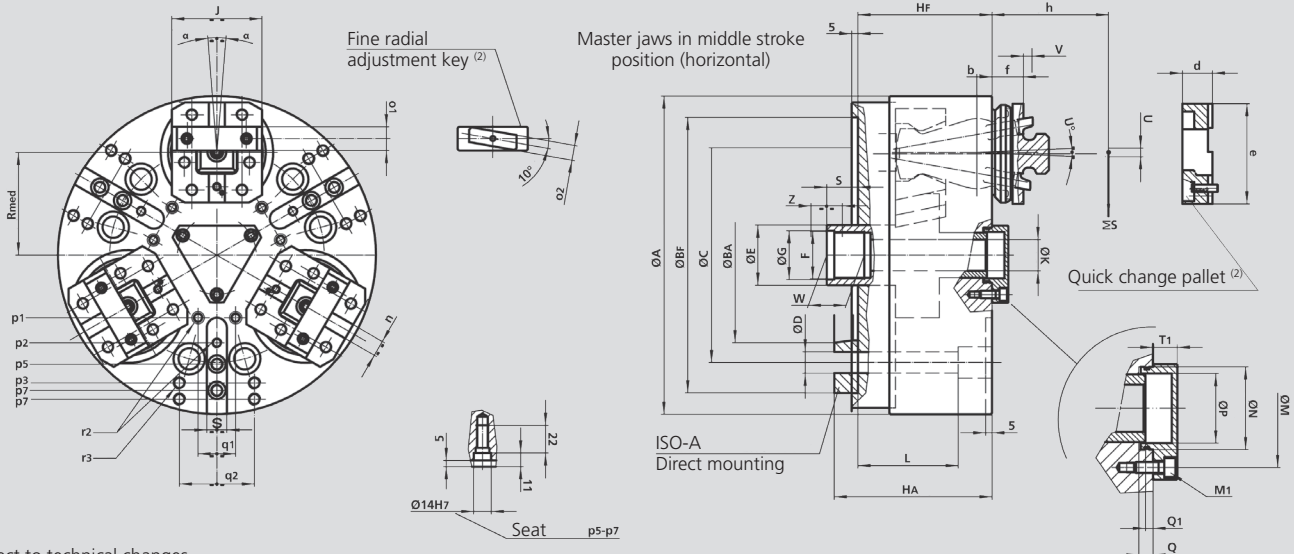
TSF-RM

TSR-RM

- Active pull-down
- Quick jaw change with pallets
- Tongue & groove pallets - 3 jaws

Self centering
Floating jaws

Self centering
Rigid jaws



Subject to technical changes.
For more detailed information please ask our customer service.

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| 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 |
| | A | mm | 173 | | | | 212 | | 254 | | 315 | | 390 | | 535 | |
| | Bf/BA H6 | mm | 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 | | 133.4 | | 171.4 | | 171.4 | | 235 | | 330.2 | |
| | D | mm | 11.5 | | 13.5 | | 13.5 | | 17 | | 17 | | 21 | | 25 | |
| | E | mm | 36 | | | | 38 | | 48 | | 48 | | 75 | | 75 | |
| | F | 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 | mm | 29 | | | | 33 | | 39 | | 39 | | 61 | | 61 | |
| | Hf/HA | mm | 83 | 98 | 83 | 100 | 100 | 117 | 107 | 126 | 107 | 126 | 127 | 148 | 132 | 155 |
| Through-hole | K | mm | 14 | | | | 18 | | 25 | | 25 | | 52 | | 52 | |
| | L | mm | 56 | | | | 82 | | 80 | | 80 | | 74 | | 77 | |
| | M | mm | 36 | | | | 42 | | 63 | | 63 | | 90 | | 90 | |
| Thread / depth | M1 | mm | M5 / 13 | | | | M6 / 11 | | M6 / 12 | | M6 / 12 | | M8 / 17 | | M8 / 17 | |
| | N H8 | mm | 28 | | | | 34 | | 44 | | 44 | | 75 | | 75 | |
| | P | mm | 23 | | | | 28.5 | | 37 | | 37 | | 66 | | 66 | |
| | Q | mm | 6 | | | | 5.5 | | 7.5 | | 7.5 | | 9 | | 9 | |
| At middle stroke | Q1 | mm | 3 | | | | 2 | | 4 | | 4 | | 4 | | 4 | |
| At middle stroke | Rmed | mm | 55 | | | | 64 | | 82 | | 107 | | 130 | | 190 | |
| At middle stroke | S | mm | 18 | | | | 20 | | 25 | | 25 | | 25 | | 20 | |
| Radial stroke | T1 | mm | 10 | | | | 13 | | 13 | | 13 | | 15 | | 15 | |
| Radial stroke | U° | deg. | 5.2° | | | | 5.2° | | 4.9° | | 4.9° | | 4.7° | | 4.7° | |
| Radial stroke ⁽¹⁾ @ h | U | mm | 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 | mm | 7.94 | | | | 7.94 | | 12.7 | | 12.7 | | 12.7 | | 12.7 | |
| | o1 H7 | mm | 12.68 | | | | 12.68 | | 19.03 | | 19.03 | | 19.03 | | 19.03 | |
| | o2 h7 | mm | 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.

⁽²⁾ SMW-AUTOBLOK 192: General catalog.