

NEW



TRITON® Precision Power Chuck
for turning, hard turning, and grinding processes



TRITON®

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With Triton®, SwissChuck AG has introduced a new, modular power chuck range, which specifically caters to the needs of high-end applications such as turning, hard turning and grinding. Precision manufacturing, together with components of high-quality materials, guarantee a radial run-out of less than 5 µm. The precision interfaces between base jaws and the top jaws ensure a fast changeover of the accessory parts and guarantee constant chucking repeatability, which eliminates subsequent turning or regrinding of the top jaws. The extended Version, Triton® PLUS, additionally features centrifugal force compensation, and thus guarantees constant chucking force at high RPM, specifically when dealing with hard turning.

Decisive advantages of Triton® in comparison with conventional chucking system are its hermetical sealing and that it offers a reliable precision within a few microns (µm). This precision in terms of chucking repeatability and the low run-out is the prerequisite for using this chuck for grinding processes. The hermetic seal not only protects against the ingress of dirt and cutting fluids but also guarantees a long service life.

Advantages



- Radial run-out ≤ 0.005 mm
- Accuracy of jaw change over ≤ 0.002 mm
- No need for regrinding clamping faces after jaw changeover
- Completely sealed off and low maintenance
- Jaws can be changed between chucks of the same design
- Reinforces jaw interface for high material removal rates
- Offers a wide range of applications; a chuck for turning, hard-turning and grinding

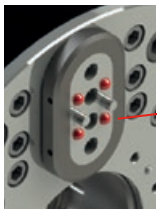
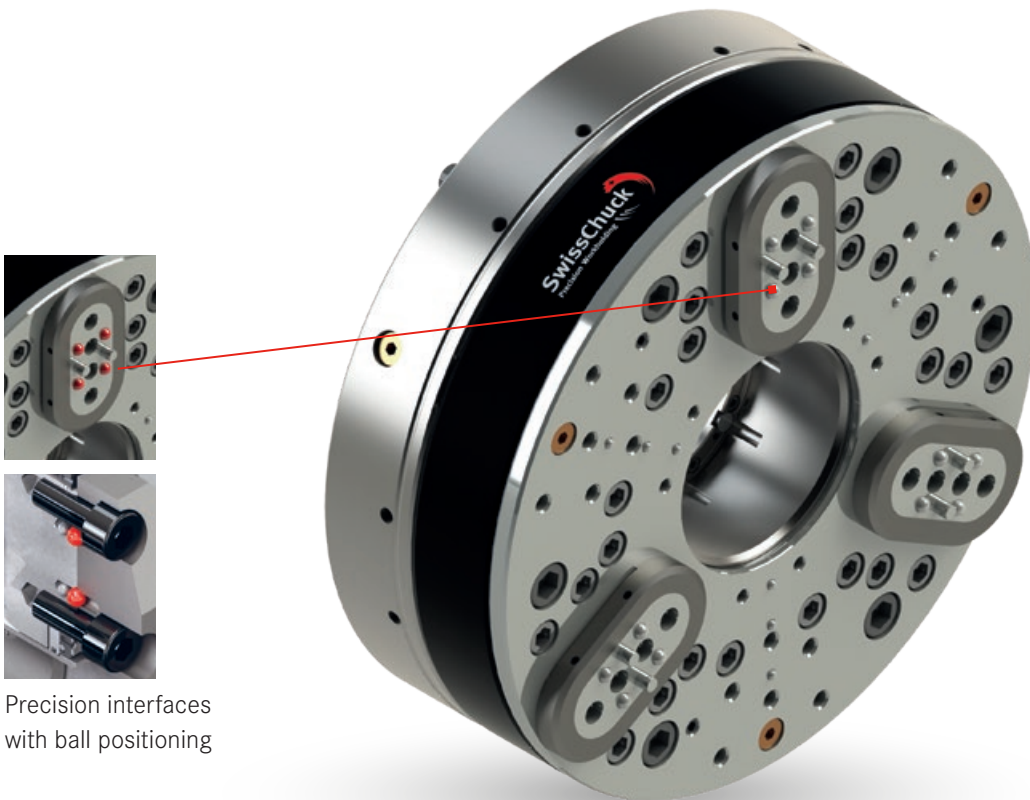
Function



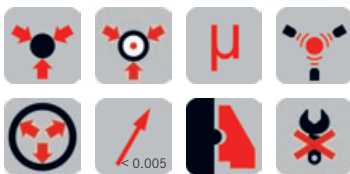
- Sealed, suitable for applications on lathes and grinding machines
- Precision interface between the base and top jaws
- Optional centrifugal force compensation for Triton® PLUS version for high RPM turning operations

Suitability according to machining process:

- A**
Cylindrical grinding
- B**
Eccentric cylindrical or orbital pin grinding
- C**
Turning
- D**
Hard turning
- E**
Combination Grinding/hard turning



Precision interfaces with ball positioning

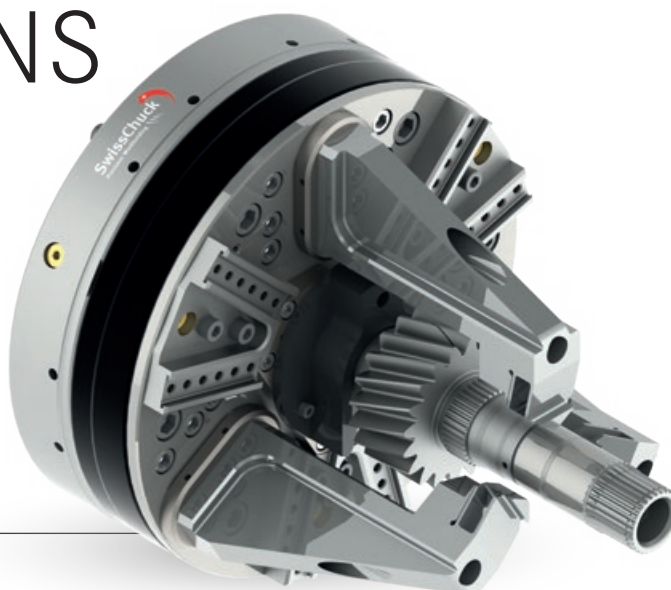


Explanation of symbols:
SwissChuck.com

F Triton® | Triton® PLUS

Type	Designation	ø Dim. [mm]	Height [mm]	ø Through bore hole [mm]	Clamping force max. [kN]	Max. RPM [1/min]	Stroke per jaw [mm]	Weight [kg]
Triton® 165	SX1029948-OFA	165	67	40	12	3500	2.5	8
Triton® PLUS 165	SX1029948	165	67	40	12	6000	2.5	9
Triton® 220	SX1029929-OFA	220	88	60	35	2700	3.5	18
Triton® PLUS 220	SX1029929	220	88	60	35	4500	3.5	20
Triton® 290	SX1024480-OFA	290	117	80	55	2100	4.5	45
Triton® PLUS 290	SX1024480	290	117	80	55	3500	4.5	48
Triton® 370	SX1031119-OFA	370	140	116	80	1800	5.4	85
Triton® PLUS 370	SX1031119	370	140	116	80	3000	5.4	92

EXAMPLES OF APPLICATIONS



TRITON®-PLUS 370

External clamping of transmission part

Operation:

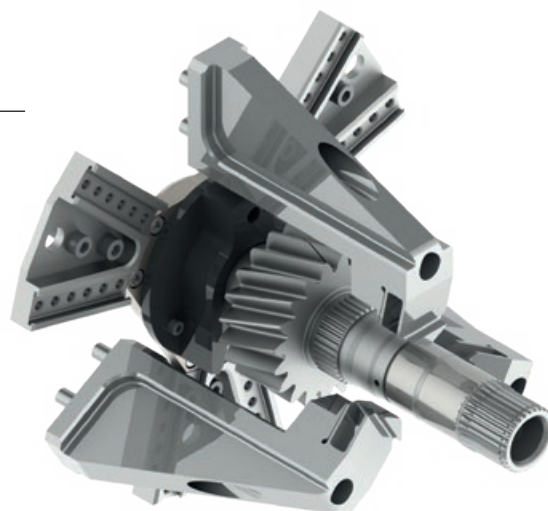
- Grinding and hard turning of bore



Workpiece specific accessories

consisting of:

- Centerpoint insert
- Centerpoint
- Loading aid
- Top jaws with retraction function



TRITON®-PLUS 370

External clamping of diverse ball heads

Operation:

- Grinding of spherical form

Sphere-Ø260, ca. 87 kg, Clamping-Ø100

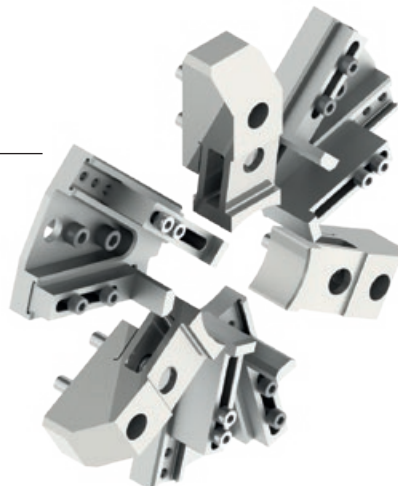
Sphere-Ø85, ca. 3.3 kg, Clamping-Ø32



Workpiece specific accessories

consisting of:

- Hardened, ground in top jaws with retraction to axial end-stop
- Precision interface between base jaws and top jaws
- Radially simply adjustable axial end-stops
- Radially simply adjustable pre-centering as a loading aid





TRITON®-PLUS 370

Clamping on tip circle of thin-walled gear part

Operation:

- Grinding or hard turning of bore



Workpiece specific accessories

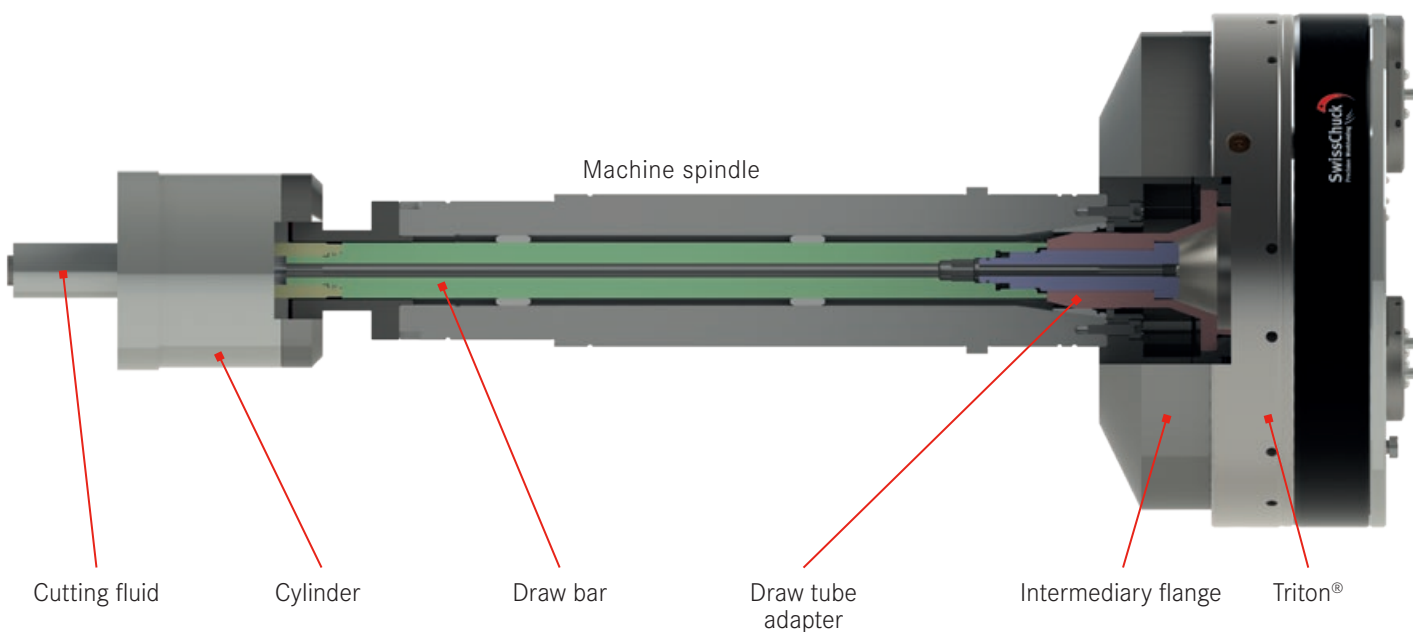
consisting of:

- Compensating jaws for 6-point clamping
- Exchangeable top jaws to compensating jaws for different clamping diameters
- Precision interface between compensating jaws and top jaws
- Radially adjustable axial end-stops



MOUNTING EXAMPLE

F Triton® | Triton® PLUS



Mounting components

All chucks are specifically mounted according to the machine tool type and SwissChuck designs and provides all the required components. Hence, our customers receive the entire work holding unit ready for installation.

Mounting of work holding systems

If desired, SwissChuck can mount the work holding system on the machine, or assist the customer's personnel during the commissioning and the start-up operation regarding the holding system. Furthermore, SwissChuck offers operator training.



KCHP/VKHP
High-precision force chuck



SAP to KCHP
Automated drive carrier



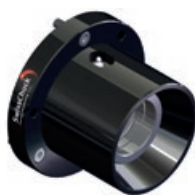
KFHP
Precision power chuck



KCHSF
Centrifugal force chuck



VMCHP
Diaphragm chuck



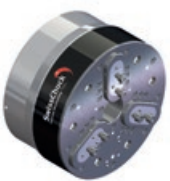
LZK/LSK-S
Collet chuck with clamping lamellas



DL
Collet expanding mandrel



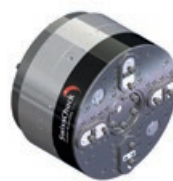
TGC/FTGC
Tool chuck



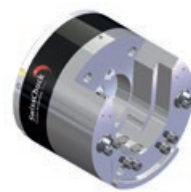
OVEK
High-precision force chuck



OVEKA
Compensating chuck



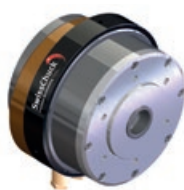
OVEKAV
Moving compensating chucks



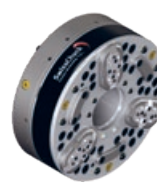
FLD/AFLD
Twist finger type console chuck



SPECIAL SOLUTIONS
Tailor made solutions



PZLHM
Pneumatic force clamping cylinder



TRITON®
Precision lathe chuck

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