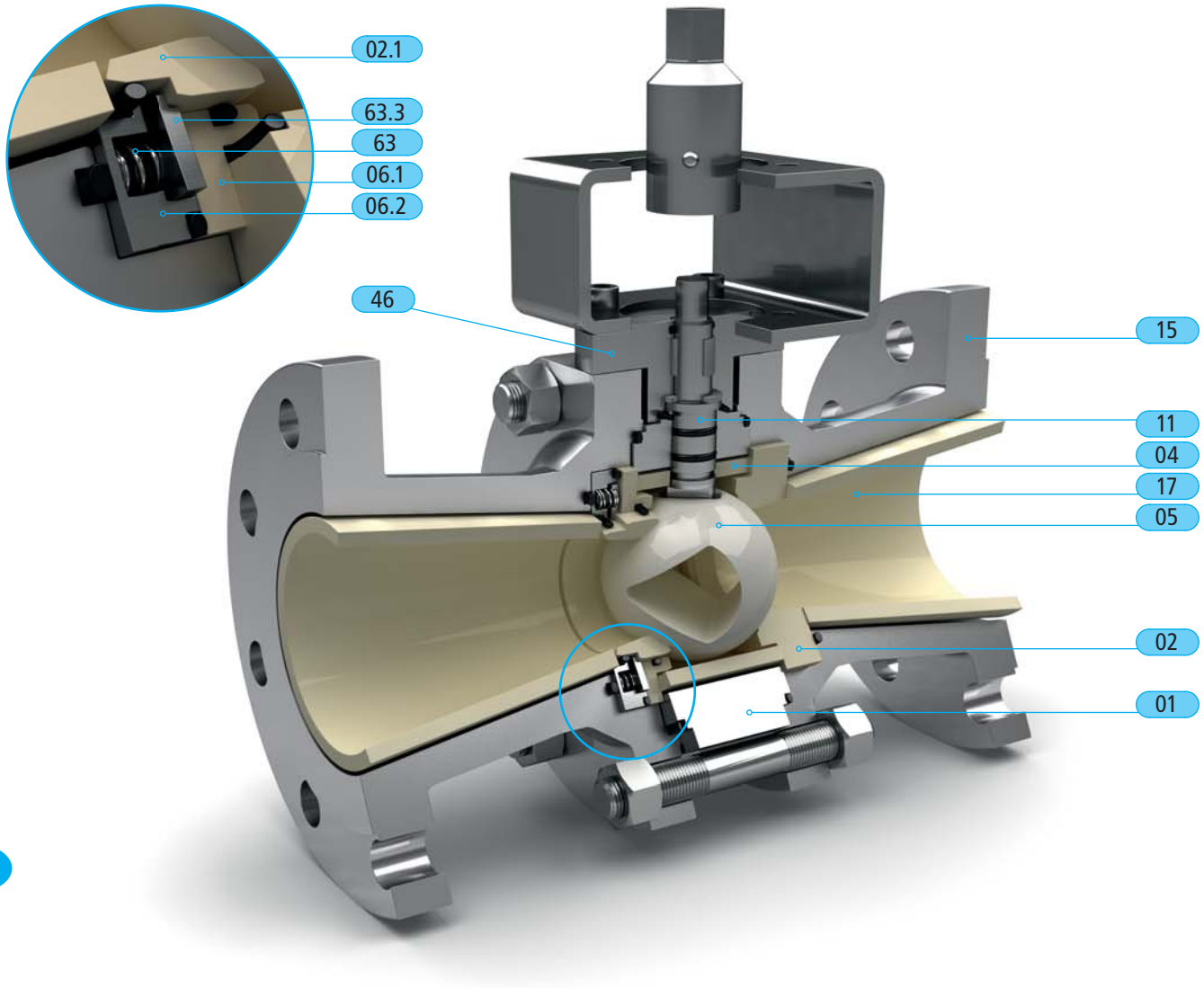
BALL VALVE • KAT

MATERIALS / MATERIAL OPTIONS:



Item	Part description	Materials	Material options
01	Housing	1.4301	1.4462 - 1.4571 - 1.4539 -C22.8 - PVDF -PP - 3.7035
02	Seat ring	Al_2O_3	Si_3N_4 - SSiC - ZrO_2
02.1	Spring loaded seat ring	Al_2O_3	Si_3N_4 - SSiC
04	Ball socket	Al_2O_3	Si_3N_4 - SSiC
05	Ball	ZrO_2	Si_3N_4 - WoC -2.4605 - 1.4112
06.1	Holding ring	Al_2O_3	1.4301
06.2	Pressure ring spring	1.4301	1.4462
06.3	Pressure ring seat	1.4301	1.4462
11	Stem shaft	1.4462	3.7035 - Tantal - ZrO_2 - 2.4605
15	Flange	1.4301	1.4462 - 1.4571 - 1.4539 -C22.8 - PVDF -PP - 3.7035
17	Wear protection sleeve	Al_2O_3	Si_3N_4 - SSiC
46	Bonnet flange	1.4301	1.4462 - 1.4571 - 1.4539 -C22.8 - 3.7035
63	Pressure spring	1.4310	
	O-rings	FKM(Viton)	FFKM (Kalrez)
	Seals	FKM(Viton)	PTFE - Viton/FEP - graphite
	Bearing bushes	PTFE	
	Screws / nuts	A2-/A4-70	

FUNCTION:

The CeraValve type KAT is a ball valve with ceramic lining for open / close function and control tasks to be used in excessively abrasive media. It is to be preferably used if special requirements are placed on the stem sealing, on the housing materials (PVDF, titanium) or if there are very high or very low operating temperatures and high pressures.
The basic principle is based on a ball in a floating bearing.
The outlet seat ring is fixed. The inlet seat ring is spring loaded. As a result, the ball has no clearance and always seals.
The ¼-turn movement of the ball between 0 and 90° releases an accurately defined opening cross-section.
The geometric shape of the ball defines the function and control characteristics.
This ball valve has a "three part body" design. Consequently, it can be adapted to existing pipelines and the flow and control characteristics can be optimised.
These valves are available with manual lever or gear box, as well as with pneumatic, electric and hydraulic actuators. The actuator is mounted by means of a yoke and adapter arrangement. All customary actuators can be used as part-turn valve actuators. Special connections are possible.

NOMINAL SIZE RANGE:

Flange connections DN 15 (1/2") up to DN 300 (12")
Center housing: DN 15 (1/2") to DN 150 (6")

PRESSURE RANGE:

PN 10 to PN 63
ANSI class 150, class 300, and class 600
Other nominal pressure ranges on request

OVERALL LENGTH:

according to EN 558-1 Series 1+27
according to ASME / ANSI B16.10 / EN 558-2 Series 37+38

OPTIONS:

all metallic materials for the housing
Fire-safe design
TA-Luft design
High temperature design (KAT-HT type)
Wafer-type
Chemistry design (KAC type)

TEMPERATURE RANGE:

Standard: -30 °C to +180 °C / -22 °F to +356 °F
Up to 310 °C / 590 °F possible with Kalrez + graphite

TYPICAL APPLICATION AREAS:

Steel works:

- Silo expansion valve with low seat leakage (ANSI class V)
- Pneumatic conveying of carbon powder, quartz, carbide…

Silicon:

- Conveying of silicon powder
- Silicon conveyor silo expansion valve

Petrochemistry:

- Dosing of FCC cat cracker (Al_2O_3 powder)

Mining:

- Dosing and conveying of copper concentrate
- Copper conveying silo expansion valve