Power chucks and cylinders
BASIC PRINCIPLE OF POWER CHUCK OPERATION

- Actuating cylinder
- Drawbar
- Cylinder backplate
- Power chuck with through-hole (open center)
- Chuck backplate
Power chuck types

Without through-hole (closed center)

With through-hole (open center)
MAIN FEATURES

• Available in 2, 3 or 4 jaws execution
• Manufactured from high grade alloy steel
• Reversible top jaws hardened and ground
• Base jaws lubricated directly
COMPARISION OF TWO BASIC
BISON POWER CHUCKS

BISON MODEL
Type 2405-M

INTERCHANGEABLE WITH
KITAGAWA B200 Series
Type 2405-K
BASE JAW SERRATION

- **BISON MODEL SERRATION**  
  1/16” x 90°

- **KITAGAWA SERRATION**  
  1.5mm x 90°

JAW TRAVEL

- **BISON MODEL**  
  3.5 – 6.0 mm (ø160 – ø315)

- **KITAGAWA**  
  2.75 – 5.3 mm (ø160 – ø315)
Kitagawa B200 Series Interchangeable Power chuck – Type 2405-K

- Same back mount connections (recess, bolt circle, hole numbers and locations)
- Same top jaws connections (T-nuts, screws)
- Different inner dimensions
AVAILABLE TYPES

PLAIN BACK

2405-160-45
2405-200-52
2405-250-75
2405-315-91
2405-400-120

A TYPE MOUNT

2405-160-45A5
2405-200-52A6
2405-250-75A8
2405-315-91A8
2405-400-120A11
Open Center Power Chuck

Inner parts

- Adapter plate
- Drawbar nut
- Wedge nut
- T-nut
- Hard top jaw
- Hard master jaw
- Front cover
Power chuck - jaws

- Hard top jaw
- T-nut
- Master jaw
Checking the gripping force during chuck rotation

Gripping force measurement

Gripping force loss chart

Pressure gauge
Power chuck – Spare parts

Drawbar nut – threaded

Adapter plate
Type 8213
DIN 55026

Drawbar nut - blank
By mounting the special insert you may convert power chuck with through-hole in no through-hole option.
Lever type power chuck
Type 2409

Wedge power chucks

Features:
- High rigidity
- Large through-hole

Standard accessories
- Hard top jaws
- Special hard top jaw
- Mounting screws
2-jaw power chucks

- BISON MODEL
  Type 2101 SERRATION 1/16” x 90°

- KITAGAWA
  Type 2105 SERRATION 1.5mm x 90°

- Available sizes ø160 – ø315

Serration depending on model
4-jaw power chucks

- **BISON MODEL** Type 2604 SERRATION 1/16” x 90°
- **KITAGAWA** Type 2605 SERRATION 1.5mm x 90°
- **Available sizes** ø160 – ø315

Serration depending on model
Hydraulic cylinder with through-hole
Type 1305

1305-102/46
1305-130/52
1305-150/62
1305-225/95

Power chucks with through-hole
Hydraulic cylinder with through-holes
Type 1305

Position sensors
Openings for supply

SDC
SKC
Hydraulic cylinder without through-hole
Type 1304

Available sizes
1304-100
1304-200

Power chuck without through-hole
Hydraulic cylinder without through-hole – Type 1304

Position sensors

Openings for supply

Outflow of oil
Connecting cylinder type 1305 with power chuck

- Coolant flow
- Oil flow
- Openings for oil supply
Hydraulic unit for cylinder actuating power chuck
Built-in Power Chuck
Type 2500

- power chuck integrated with a air cylinder
- safety valve
- designed for gripping of tubes or other objects of similar shape
- mounted individually or in pairs—on both sides of the spindle
- two jaw strokes: rapid and slow (gripping)

Available sizes: 400 and 500mm
Power chucks with spring-loaded gripping
Type 2500-630-275-SPR

designed for gripping of tubes or other objects of similar shape
- mounted individually or in pairs
- adjustable clamping force
- high gripping force
- 1 set of hard upper jaws
Power chucks for DIN 6343 collets
Type 2905
Special Power Chucks
Type 2635-400mm  (Left i Right)

4-jaw self-centering and individually adjustable power chuck is designed for holding long pipes or similar workpieces and to be used with lathes allowing the mounting of two chucks at both ends of the spindle.