

LVE - large through-hole



APPLICATION

Optimal for the end machining of large and long pipes, e.g. for the oil and gas industry (especially as front and rear chuck).

TYPE

Power chuck with integrated pneumatic cylinder and cylindrical center mount. 3-jaw version with serration (90°).

CUSTOMER BENEFITS

- ⊕ Extra-large through-hole
- ⊕ Can be easily exchanged with manual clamping chuck
- ⊕ Compact system dimensions because it is self-contained
- ⊕ Unobstructed bore through spindle thanks to omission of the draw tube

TECHNICAL FEATURES

- Clamping and unclamping only when spindle at standstill
- Wedge hook system with integrated clamping cylinder
- Control valves maintain the clamping pressure during machining
- Short clamping cycle thanks to rapid and clamping stroke (optionally)
- Permanent monitoring of the clamping pressure while machining (optionally)

Note:

Other versions on request: e.g. front-end chucks for compensating clamping

Possible application

Two chucks are mounted on the front and rear sides of the machine spindle. Via a selection switch on our electronic control unit DF type 525-90 combined with one pneumatic control unit LSV type 525-91 each, the two chucks can be used together or separately and also with different clamping pressures. This combinations make a high cutting capacity and high turning precision possible for the end machining of long pipes.

Distributor ring

The distributor ring has the function of transferring compressed air from the outside into the chuck. This means that the distributor ring is always stationary, while the chuck rotates during workpiece machining. It is therefore mounted to the spindle box, and is therefore secured against rotating along. Special seals seal the gap between the distributor ring and chuck during the clamping operation so that the pressure can be transferred with no problems. Important: To prevent the sealing ring from being destroyed, the pressure may only be transferred when the chuck is at a standstill.

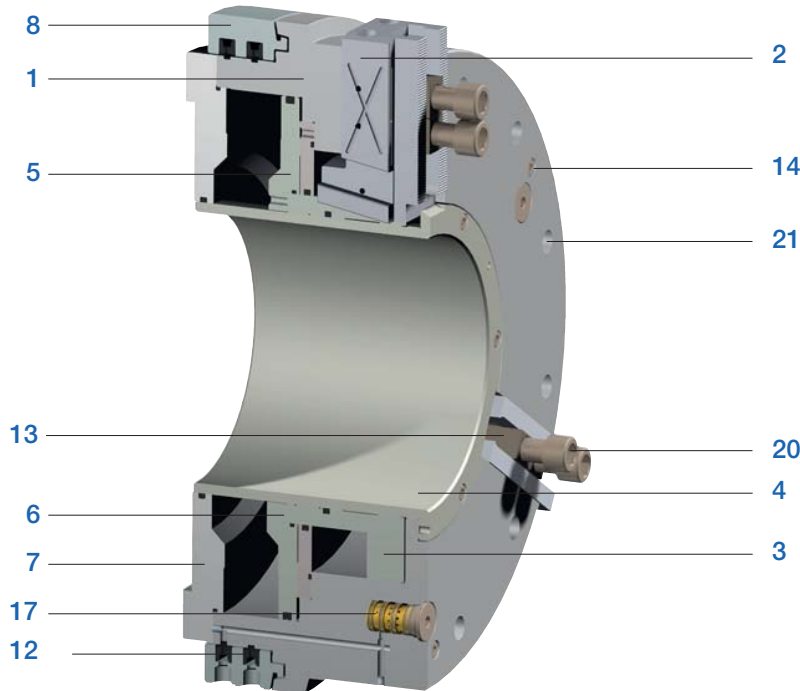
Control valve

The control valve has the job of securing the compressed air required for clamping in a closed system throughout machining. It automatically secures that piston side which is pressurized, whereby the compressed air of the opposite-lying piston side is unclamped automatically. The valve can be dismantled as a complete unit and is available as replacement unit.

Air-operated self-contained chucks, sizes 400-1000

Characteristic for this chuck is a pneumatic piston integrated in the chuck body for generating the clamping force. To clamp or unclamp the workpiece, the compressed air is conducted to the pneumatic piston while the chuck is stationary via the distributor ring and non-return valve. The pneumatic piston is screwed to the clamping piston, with which, in turn, the base jaws are connected via a wedge hook system. An axial movement of the pneumatic piston therefore causes a radial movement of the base jaws.

LVE - large through-hole



Components LVE

- 1. Body
- 2. Base jaw
- 3. Piston
- 4. Protective bush
- 5. Intermediate washer
- 6. Piston plate
- 7. Flange
- 8. Distributor ring
- 12. Seal
- 13. T-nut
- 14. Air-vent screw
- 17. Control valve
- 20. Jaw fixing screws
- 21. Chuck fixing screws

Control system

The clamping safety mainly depends on the leak-tightness of the closed pneumatic chamber. A pressure drop during machining causes a reduction in the clamping force.

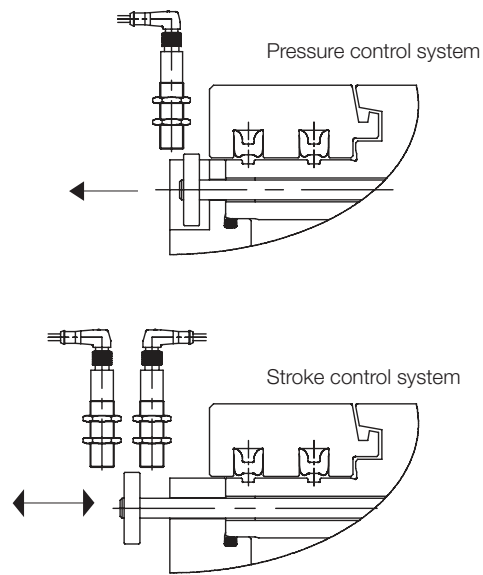
The „**RÖHM control system**“ is used to control the pressure of the closed pneumatic chamber. If the pressure falls below a defined minimum level, a spring-loaded pin attached to the rear side of the chuck moves out to the rear.

At the same height as the pin, a contactless inductive probe is fastened at a certain radial distance. If the extended pin moves through the magnetic field of the probe, an electrical pulse is triggered, which can be used to shut the machine down.

Wedge hook system

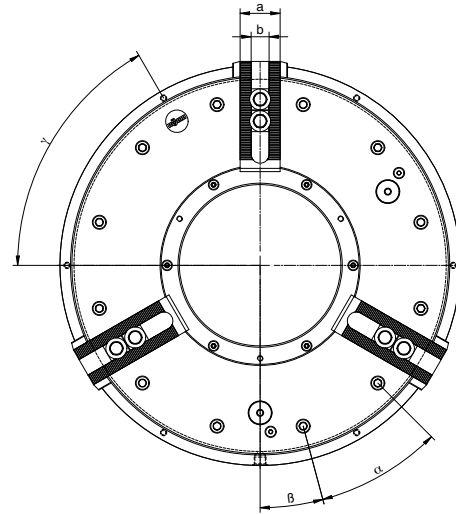
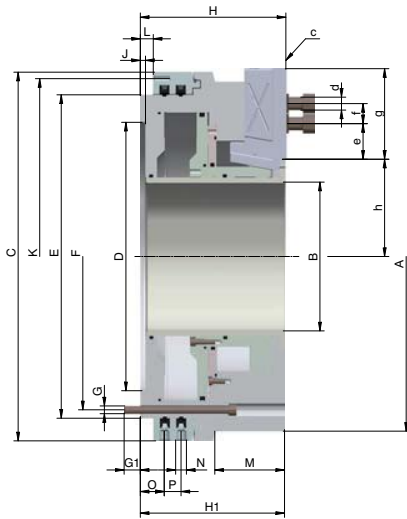
The axial piston force is transferred and transmitted into the radial jaw force via the proven wedge hooks. The large force transfer surfaces guarantee a long service life and a sustainably high clamping precision. These features apply both to the chuck with normal jaw stroke as well as to chucks with rapid and gripping jaw movements.

RÖHM-Control system



The control unit is designed for LVE chucks with rapid and clamping strokes only for external clamping. For LVE chucks with a normal stroke only pressure control device for the external clamping is provided (on customer demand for internal clamping).

LVE - large through-hole, standard design



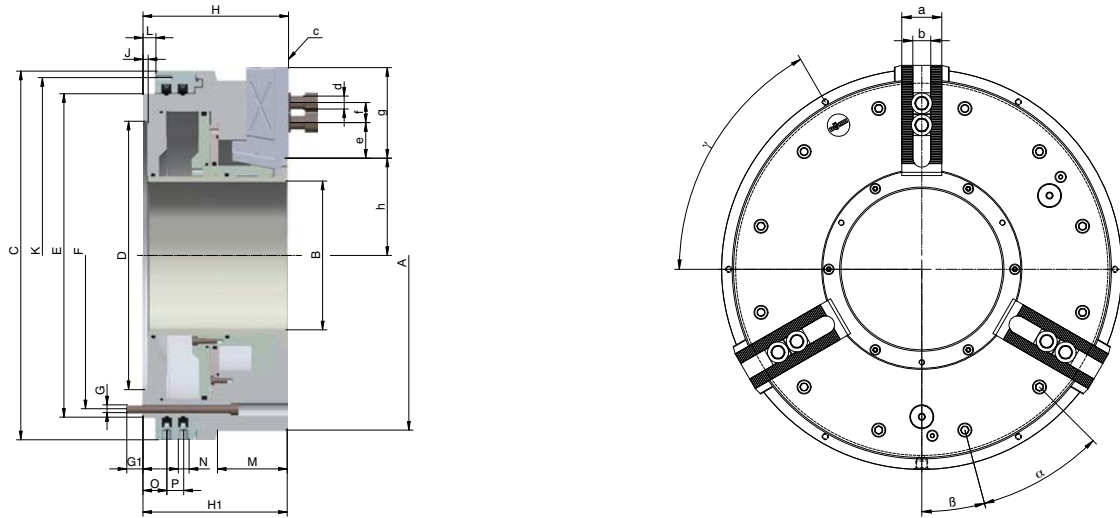
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3-jaw self-contained chucks LVE, with large through-hole, max. operating pressure 8 bar, with serration
 Cylindrical center mount (standard version)

| Item no. | 169400 ▲ | 169401 ▲ | 169402 ▲ | 169403 ▲ | 169404 ▲ | 169405 ▲ | 169406 ▲ | 169407 ▲ | 169409 ▲ |
|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Size | 400 | 400 | 500 | 500 | 600 | 600 | 600 | 700 | 800 |
| LVE | LVE 420-140 | LVE 480-185 | LVE 540-205 | LVE 570-230 | LVE 600-275 | LVE 640-275 | LVE 680-325 | LVE 730-375 | LVE 830-410 |
| Jaw travel mm | 7 | 8,5 | 8,5 | 8,5 | 8,5 | 10 | 10 | 10 | 12 |
| A mm | 425 | 480 | 540 | 570 | 605 | 640 | 685 | 735 | 835 |
| B mm | 140 | 185 | 205 | 230 | 280 | 275 | 325 | 375 | 410 |
| C mm | 470 | 530 | 570 | 570 | 605 | 685 | 685 | 735 | 850 |
| DH6 mm | 310 | 365 | 415 | 415 | 450 | 510 | 510 | 560 | 700 |
| E mm | 400 | 460 | 500 | 500 | 535 | 610 | 610 | 660 | 775 |
| F mm | 374 | 434 | 474 | 474 | 508 | 580 | 580 | 630 | 745 |
| G | M12 | M12 | M12 | M12 | M12 | M16 | M16 | M16 | M16 |
| G1 mm | 25 | 25 | 25 | 25 | 25 | 30 | 30 | 30 | 30 |
| H mm | 196 | 225 | 225 | 225 | 225 | 263 | 263 | 263 | 305 |
| H1 mm | 194 | 223 | 223 | 223 | 223 | 261 | 261 | 261 | 303 |
| J mm | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| K mm | 448 | 510 | 550 | 550 | 585 | 666 | 666 | 716 | 830 |
| L mm | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 25 |
| M mm | 70 | 90 | 100 | - | - | 110 | - | - | 155 |
| N | G 3/8 | G 3/8 | G 3/8 | G 3/8 | G 3/8 | G 3/8 | G 3/8 | G 3/8 | G 3/8 |
| O mm | 37 | 37 | 37 | 37 | 37 | 39,5 | 39,5 | 39,5 | 44,5 |
| P mm | 26 | 26 | 26 | 26 | 26 | 33 | 33 | 33 | 33 |
| a mm | 57 | 57 | 57 | 57 | 57 | 75 | 75 | 75 | 75 |
| bH7 mm | 25,5 | 25,5 | 25,5 | 25,5 | 25,5 | 30 | 30 | 30 | 30 |
| c | 3/32"x90° | 3/32"x90° | 3/32"x90° | 3/32"x90° | 3/32"x90° | 3/32"x90° | 3/32"x90° | 3/32"x90° | 3/32"x90° |
| d | M20x50 | M20x50 | M20x50 | M20x50 | M20x50 | M24x65 | M24x65 | M24x65 | M24x65 |
| e mm | 20 | 20 | 20 | 20 | 20 | 28 | 28 | 28 | 28 |
| f min. | 32 | 32 | 32 | 32 | 32 | 42 | 42 | 42 | 42 |
| f max. | 85 | 85 | 105 | 105 | 105 | 100 | 100 | 100 | 125 |
| g mm | 120 | 120 | 140 | 140 | 135 | 145 | 145 | 145 | 173 |
| h min. | 94 | 118,5 | 131,5 | 141,5 | 164 | 175 | 195 | 220 | 242,5 |
| h max. | 101 | 127 | 140 | 150 | 172,5 | 185 | 205 | 230 | 254,5 |
| α | 30° | 30° | 30° | 30° | 30° | 30° | 30° | 30° | 30° |
| β | 15° | 15° | 15° | 15° | 15° | 15° | 15° | 15° | 15° |
| γ | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° |
| Min. operating pressure bar | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 |
| Max. operating pressure bar | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| Total clamping force at 6 bar kN | 140 | 155 | 210 | 190 | 200 | 240 | 155 | 175 | 360 |
| Cylinder surface area cm ² | 710 | 899 | 1045 | 940 | 1010 | 1414 | 1181 | 1307 | 2121 |
| Air consumption (total stroke) l | 20 | 31 | 36 | 32 | 35 | 58 | 49 | 55 | 104 |
| Max. admissible speed min ⁻¹ | 1700 | 1500 | 1300 | 1300 | 1200 | 1000 | 900 | 800 | 750 |
| Moment of inertia kgm ² | 3,50 | 7,50 | 10,65 | 8,00 | 15,50 | 24,25 | 29,10 | 45,80 | 71,25 |
| Weight kg | 150 | 215 | 225 | 200 | 275 | 413 | 418 | 560 | 650 |

Air-operated self-contained chuck LVE

LVE - large through-hole, with pressure control device



C 15

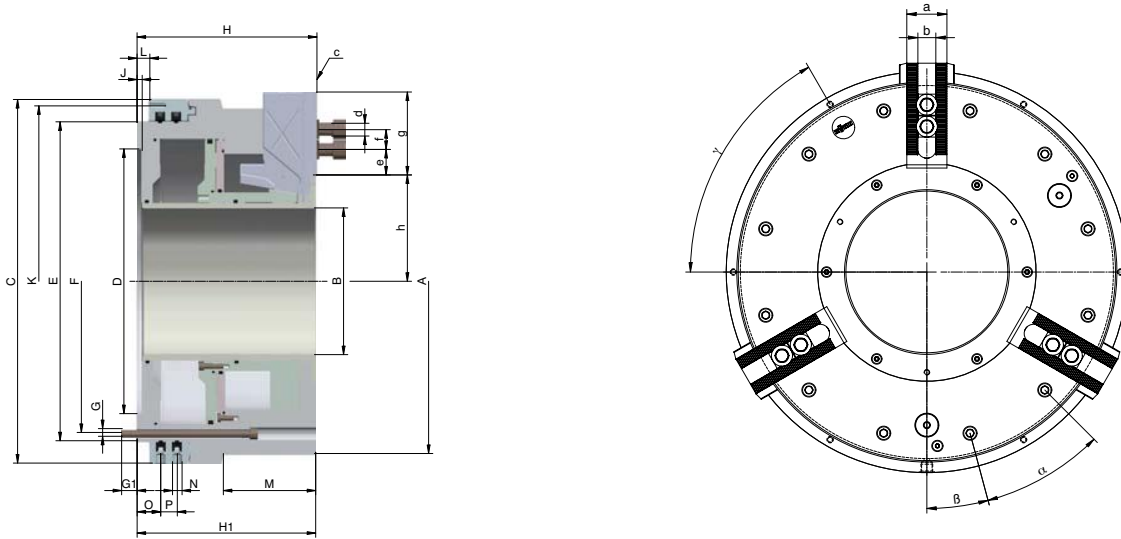
3-jaw self-contained chucks LVE, with large through-hole, max. operating pressure 8 bar, with serration

Cylindrical center mount with pressure control device for external clamping

| Item no. | 169411 ▲ | 169412 ▲ | 169413 ▲ | 169414 ▲ | 169415 ▲ | 169416 ▲ | 169417 ▲ | 169418 ▲ | 169420 ▲ |
|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Size | 400 | 400 | 500 | 500 | 600 | 600 | 600 | 700 | 800 |
| LVE | LVE 420-140 | LVE 480-185 | LVE 540-205 | LVE 570-230 | LVE 600-275 | LVE 640-275 | LVE 680-325 | LVE 730-375 | LVE 830-410 |
| Jaw travel mm | 7 | 8,5 | 8,5 | 8,5 | 8,5 | 10 | 10 | 10 | 12 |
| A mm | 425 | 480 | 540 | 570 | 605 | 640 | 685 | 735 | 835 |
| B mm | 140 | 185 | 205 | 230 | 280 | 275 | 325 | 375 | 410 |
| C mm | 470 | 530 | 570 | 570 | 605 | 685 | 685 | 735 | 850 |
| DH6 mm | 310 | 365 | 415 | 415 | 450 | 510 | 510 | 560 | 700 |
| E mm | 400 | 460 | 500 | 500 | 535 | 610 | 610 | 660 | 775 |
| F mm | 374 | 434 | 474 | 474 | 500 | 580 | 580 | 630 | 745 |
| G | M12 | M12 | M12 | M12 | M12 | M16 | M16 | M16 | M16 |
| G1 mm | 25 | 25 | 25 | 25 | 25 | 30 | 30 | 30 | 30 |
| H mm | 196 | 225 | 225 | 225 | 225 | 263 | 263 | 263 | 305 |
| H1 mm | 194 | 223 | 223 | 223 | 223 | 261 | 261 | 261 | 303 |
| J mm | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| K mm | 448 | 510 | 550 | 550 | 585 | 666 | 666 | 666 | 830 |
| L mm | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 25 |
| M mm | 70 | 90 | 100 | - | - | 110 | - | - | 155 |
| N | G 3/8 | G 3/8 | G 3/8 | G 3/8 | G 3/8 | G 3/8 | G 3/8 | G 3/8 | G 3/8 |
| O mm | 37 | 37 | 37 | 37 | 37 | 39,5 | 39,5 | 39,5 | 44,5 |
| P mm | 26 | 26 | 26 | 26 | 26 | 33 | 33 | 33 | 33 |
| a mm | 57 | 57 | 57 | 57 | 57 | 75 | 75 | 75 | 75 |
| bH7 mm | 25,5 | 25,5 | 25,5 | 25,5 | 25,5 | 30 | 30 | 30 | 30 |
| c | 3/32"x90° | 3/32"x90° | 3/32"x90° | 3/32"x90° | 3/32"x90° | 3/32"x90° | 3/32"x90° | 3/32"x90° | 3/32"x90° |
| d | M20x50 | M20x50 | M20x50 | M20x50 | M20x50 | M24x65 | M24x65 | M24x65 | M24x65 |
| e mm | 20 | 20 | 20 | 20 | 20 | 28 | 28 | 28 | 28 |
| f min. | 32 | 32 | 32 | 32 | 32 | 42 | 42 | 42 | 42 |
| f max. | 85 | 85 | 105 | 105 | 105 | 100 | 100 | 100 | 125 |
| g mm | 120 | 120 | 140 | 140 | 135 | 145 | 145 | 145 | 173 |
| h min. | 94 | 118,5 | 131,5 | 141,5 | 164 | 175 | 195 | 220 | 242,5 |
| h max. | 101 | 127 | 140 | 150 | 172,5 | 185 | 205 | 230 | 254,5 |
| α | 30° | 30° | 30° | 30° | 30° | 30° | 30° | 30° | 30° |
| β | 15° | 15° | 15° | 15° | 15° | 15° | 15° | 15° | 15° |
| γ | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° |
| Min. operating pressure bar | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 |
| Max. operating pressure bar | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| Total clamping force at 6 bar kN | 140 | 155 | 210 | 190 | 200 | 240 | 155 | 175 | 360 |
| Cylinder surface area cm ² | 710 | 899 | 1045 | 939 | 1010 | 1414 | 1181 | 1307 | 2121 |
| Air consumption (total stroke) l | 20 | 31 | 36 | 32 | 35 | 58 | 49 | 55 | 104 |
| Max. admissible speed min ⁻¹ | 1700 | 1500 | 1300 | 1300 | 1200 | 1000 | 900 | 800 | 750 |
| Moment of inertia kgm ² | 3,50 | 7,50 | 10,65 | 8,00 | 15,5 | 24,25 | 29,10 | 45,80 | 71,25 |
| Weight kg | 150 | 215 | 255 | 200 | 275 | 413 | 418 | 560 | 650 |

Air-operated self-contained chuck LVE

LVE - large through-hole, standard design, with rapid and clamping jaw movement

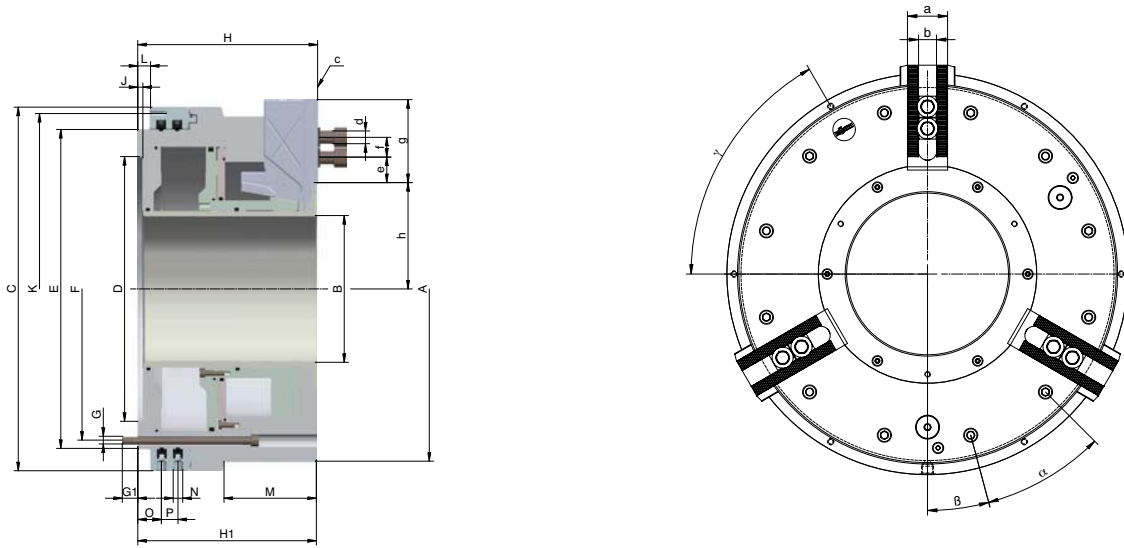


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3-jaw self-contained chucks LVE, with rapid and clamping jaw movements, with large through-hole, external chucking, max. operating pressure 8 bar, with serration
 Cylindrical center mount (standard version)

| Item no. | 169422 ▲ | 169423 ▲ | 169424 ▲ | 169425 ▲ | 169426 ▲ | 169428 ▲ | 169429 ▲ | 169430 ▲ | 169432 ▲ |
|---|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|
| Size | 400 | 400 | 500 | 500 | 600 | 600 | 700 | 800 | 1000 |
| LVE | LVE 470-140 ES | LVE 490-185 ES | LVE 570-205 ES | LVE 570-230 ES | LVE 610-275 ES | LVE 680-325 ES | LVE 730-375 ES | LVE 850-375 ES | LVE 1000-570 ES |
| Jaw travel mm | 19 | 25,4 | 25,4 | 25,4 | 25,4 | 25,4 | 25,4 | 25,4 | 25,4 |
| Rapid movement mm | 12 | 16,9 | 16,9 | 16,9 | 16,9 | 16,9 | 16,9 | 14,9 | 14,9 |
| clamping movement mm | 7 | 8,5 | 8,5 | 8,5 | 8,5 | 8,5 | 8,5 | 10,5 | 10,5 |
| A mm | 470 | 490 | 570 | 570 | 605 | 685 | 735 | 850 | 1000 |
| B mm | 140 | 185 | 205 | 230 | 275 | 325 | 375 | 375 | 570 |
| C mm | 470 | 530 | 570 | 570 | 605 | 685 | 735 | 850 | 925 |
| DH6 mm | 310 | 365 | 415 | 415 | 450 | 510 | 560 | 700 | 700 |
| E mm | 400 | 460 | 500 | 500 | 535 | 610 | 660 | 775 | 850 |
| F mm | 374 | 434 | 474 | 474 | 508 | 580 | 630 | 745 | 815 |
| G | M12 | M12 | M12 | M12 | M12 | M16 | M16 | M16 | M16 |
| G1 mm | 25 | 25 | 25 | 25 | 25 | 30 | 30 | 30 | 30 |
| H mm | 240 | 282 | 282 | 282 | 282 | 308 | 308 | 322 | 332 |
| H1 mm | 238 | 280 | 280 | 280 | 280 | 306 | 306 | 320 | 330 |
| J mm | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 10 |
| K mm | 448 | 510 | 550 | 550 | 585 | 666 | 716 | 830 | 910 |
| L mm | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 25 | 33 |
| M mm | - | 140 | 100 | - | - | - | - | - | 225 |
| N | G 3/8 | G 3/8 | G 3/8 | G 3/8 | G 3/8 | G 3/8 | G 3/8 | G 3/8 | G 3/8 |
| O mm | 37 | 37 | 37 | 37 | 37 | 39,5 | 39,5 | 44,5 | 52,5 |
| P mm | 26 | 26 | 26 | 26 | 26 | 33 | 33 | 33 | 33 |
| a mm | 57 | 57 | 57 | 57 | 57 | 75 | 75 | 75 | 75 |
| bH7 mm | 25,5 | 25,5 | 25,5 | 25,5 | 25,5 | 30 | 30 | 30 | 30 |
| c | 3/32"x90° | 3/32"x90° | 3/32"x90° | 3/32"x90° | 3/32"x90° | 3/32"x90° | 3/32"x90° | 3/32"x90° | 3/32"x90° |
| d | M20x50 | M20x50 | M20x50 | M20x50 | M20x50 | M24x65 | M24x65 | M24x65 | M24x65 |
| e mm | 20 | 20 | 20 | 20 | 20 | 28 | 28 | 28 | 28 |
| f min. | 32 | 32 | 32 | 32 | 32 | 42 | 42 | 42 | 42 |
| f max. | 80 | 80 | 95 | 95 | 95 | 95 | 95 | 120 | 120 |
| g mm | 112 | 112 | 130 | 130 | 125 | 140 | 140 | 170 | 170 |
| h min. | 126 | 132,6 | 142,1 | 154,6 | 177,1 | 202,6 | 227,6 | 234,6 | 329,6 |
| h max. | 145 | 158 | 167,5 | 180 | 202,5 | 228 | 253 | 260 | 355 |
| α | 30° | 30° | 30° | 30° | 30° | 30° | 30° | 30° | 30° |
| β | 15° | 15° | 15° | 15° | 15° | 15° | 15° | 15° | 15° |
| γ | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° |
| Min. operating pressure bar | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 |
| Max. operating pressure bar | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| Total clamping force at 6 bar kN | 120 | 150 | 190 | 170 | 180 | 200 | 175 | 200 | 180 |
| Cylinder surface area cm ² | 700 | 862 | 1003 | 895 | 958 | 1181 | 1307 | 1345 | 1075 |
| Air consumption (total stroke) l | 32 | 42 | 48 | 45 | 46 | 57 | 63 | 80 | 65 |
| Max. admissible speed min ⁻¹ | 1500 | 1300 | 1200 | 1200 | 1100 | 800 | 750 | 750 | 450 |
| Moment of inertia kgm ² | 6,50 | 8,25 | 14,65 | 12,75 | 19,10 | 34,25 | 47,50 | 103,0 | 158,2 |
| Weight kg | 200 | 260 | 320 | 270 | 350 | 490 | 580 | 970 | 955 |

LVE - large through-hole, with pressure control device, rapid and clamping jaw movement



C 15
3-jaw self-contained chucks LVE, with rapid and gripping jaw movements, with large through-hole, external chucking, max. operating pressure 8 bar, with serration
 Cylindrical center mount with pressure control device for external clamping

| Item no. | 169433 ▲ | 169434 ▲ | 169435 ▲ | 169436 ▲ | 169437 ▲ | 169439 ▲ | 169440 ▲ | 169441 ▲ | 169443 ▲ |
|---|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|
| Size | 400 | 400 | 500 | 500 | 600 | 600 | 700 | 800 | 1000 |
| LVE | LVE 470-140 ES | LVE 490-185 ES | LVE 570-205 ES | LVE 570-230 ES | LVE 610-275 ES | LVE 680-325 ES | LVE 730-375 ES | LVE 850-375 ES | LVE 1000-570 ES |
| Jaw travel mm | 19 | 25,4 | 25,4 | 25,4 | 25,4 | 25,4 | 25,4 | 25,4 | 25,4 |
| Rapid movement mm | 12 | 16,9 | 16,9 | 16,9 | 16,9 | 16,9 | 16,9 | 14,9 | 14,9 |
| Gripping movement mm | 7 | 8,5 | 8,5 | 8,5 | 8,5 | 8,5 | 8,5 | 10,5 | 10,5 |
| A mm | 470 | 490 | 570 | 570 | 605 | 685 | 735 | 850 | 1000 |
| B mm | 140 | 185 | 205 | 230 | 275 | 325 | 375 | 375 | 570 |
| C mm | 470 | 530 | 570 | 570 | 605 | 685 | 735 | 850 | 925 |
| DH6 mm | 310 | 365 | 415 | 415 | 450 | 510 | 560 | 700 | 700 |
| E mm | 400 | 460 | 500 | 500 | 535 | 610 | 660 | 775 | 850 |
| F mm | 374 | 434 | 474 | 474 | 509 | 580 | 630 | 745 | 815 |
| G | M12 | M12 | M12 | M12 | M12 | M16 | M16 | M16 | M16 |
| G1 mm | 25 | 25 | 25 | 25 | 25 | 30 | 30 | 30 | 30 |
| H mm | 240 | 282 | 282 | 282 | 282 | 308 | 308 | 322 | 332 |
| H1 mm | 238 | 280 | 280 | 280 | 280 | 306 | 306 | 320 | 330 |
| J mm | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 10 |
| K mm | 448 | 510 | 550 | 550 | 585 | 666 | 716 | 830 | 910 |
| L mm | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 25 | 33 |
| M mm | - | 140 | 100 | - | - | - | - | - | 225 |
| N | G 3/8 | G 3/8 | G 3/8 | G 3/8 | G 3/8 | G 3/8 | G 3/8 | G 3/8 | G 3/8 |
| O mm | 37 | 37 | 37 | 37 | 37 | 39,5 | 39,5 | 44,5 | 52,5 |
| P mm | 26 | 26 | 26 | 26 | 26 | 33 | 33 | 33 | 33 |
| a mm | 57 | 57 | 57 | 57 | 57 | 75 | 75 | 75 | 75 |
| bH7 mm | 25,5 | 25,5 | 25,5 | 25,5 | 25,5 | 30 | 30 | 30 | 30 |
| c | 3/32"x90° | 3/32"x90° | 3/32"x90° | 3/32"x90° | 3/32"x90° | 3/32"x90° | 3/32"x90° | 3/32"x90° | 3/32"x90° |
| d | M20x50 | M20x50 | M20x50 | M20x50 | M20x50 | M24x65 | M24x65 | M24x65 | M24x65 |
| e mm | 20 | 20 | 20 | 20 | 20 | 28 | 28 | 28 | 28 |
| f min. | 32 | 32 | 32 | 32 | 32 | 42 | 42 | 42 | 42 |
| f max. | 80 | 80 | 95 | 95 | 95 | 95 | 95 | 120 | 120 |
| g mm | 112 | 112 | 130 | 130 | 125 | 140 | 140 | 170 | 170 |
| h min. | 126 | 132,6 | 142,1 | 154,6 | 177,1 | 202,6 | 227,6 | 234,6 | 329,6 |
| h max. | 145 | 158 | 167,5 | 180 | 202,5 | 228 | 253 | 260 | 355 |
| α | 30° | 30° | 30° | 30° | 30° | 30° | 30° | 30° | 30° |
| β | 15° | 15° | 15° | 15° | 15° | 15° | 15° | 15° | 15° |
| γ | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° | 60° |
| Min. operating pressure bar | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 |
| Max. operating pressure bar | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| Total clamping force at 6 bar kN | 120 | 150 | 210 | 170 | 180 | 200 | 175 | 200 | 180 |
| Cylinder surface area cm ² | 700 | 862 | 1024 | 895 | 958 | 1181 | 1307 | 1345 | 1075 |
| Air consumption (total stroke) l | 32 | 42 | 50 | 45 | 46 | 57 | 63 | 80 | 65 |
| Max. admissible speed min ⁻¹ | 1500 | 1300 | 1200 | 1200 | 1100 | 800 | 750 | 750 | 450 |
| Moment of inertia kgm ² | 6,50 | 8,25 | 14,65 | 12,75 | 19,10 | 34,25 | 47,50 | 103,0 | 158,2 |
| Weight kg | 200 | 260 | 320 | 270 | 350 | 490 | 580 | 970 | 955 |

Air-operated self-contained chuck LVE

▲ on request

Jaws LVE

C 21

Reversible top jaws, 3-jaw set, hardened serration 90° - material: 16 MnCr 5


| Chuck Size | 3-jaw set | Jaw length mm | Jaw height mm | Jaw width mm | Serration |
|-------------|---------------|---------------|---------------|--------------|------------|
| 400/500/600 | 037531 | 135 | 65 | 68 | 3/32"x 90° |
| 600/700 | 169464 | 170 | 75 | 80 | 3/32"x90° |
| 800/1000 | 169466 | 195 | 85 | 80 | 3/32"x90° |

Additionally or later applied, hardened jaws must be ground out in the chuck.

C 21

Extended soft top jaws, 3-jaw set serration 90° - material: 16 MnCr 5

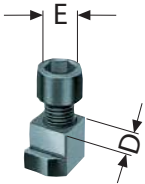

| Chuck Size | 3-jaw set | Jaw length mm | Jaw height mm | Jaw width mm | Serration |
|------------------|---------------|---------------|---------------|--------------|------------|
| 400/500/600 | 137028 | 180 | 80 | 50 | 3/32"x 90° |
| 500/600 | 169449 | 205 | 80 | 50 | 3/32"x90° |
| 600/700 | 169450 | 215 | 89 | 68 | 3/32"x90° |
| 600/700/800/1000 | 169452 | 245 | 89 | 68 | 3/32"x90° |

Accessories LVE

C 15

T-nuts

With screw



| Item no. | Chuck Size | Contents of delivery | D mm | E |
|----------------|------------------|----------------------|------|--------|
| 1305181 | 400/500/600 | piece | 25,5 | M20x50 |
| 1305182 | 600/700/800/1000 | piece | 30 | M24x60 |

Accessories LVE

C 15
Pneumatic control unit for LVE 400-1000



| Item no. | Width mm | Height mm | Depth mm | Control voltage | Connection | Weight approx. kg |
|----------|----------|-----------|----------|-----------------|---------------------|-------------------|
| 426560 | 280 | 250 | 100 | 24 V | R ½ „ inside thread | 3 |

When double chucks are used, two pneumatic control devices are required

C 15
Control units for single chucks with dual foot switch, wired, cable length 6 meters, for LVE 400-1000



| Item no. | Design | Width mm | Width with plug mm | Height mm | Depth mm | Control voltage | Cable length |
|----------|-----------------------------|----------|--------------------|-----------|----------|-----------------|--------------|
| 426481 | without pressure monitoring | 300 | 340 | 300 | 120 | 24 V | 6 m |
| 426263 | with pressure monitoring | 300 | 340 | 300 | 120 | 24 V | 6 m |

Power supplies on request: primary 35-264 V ~, 47-63 Hz - secondary 24V/1.5 A

C 15
Control units for dual chucks with dual foot switch, wired, cable length 6 meters, for LVE 400-1000

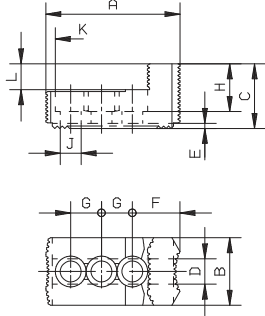


| Item no. | Design | Width mm | Width with plug mm | Height mm | Depth mm | Control voltage | Cable length |
|----------|-----------------------------|----------|--------------------|-----------|----------|-----------------|--------------|
| 426482 ▲ | without pressure monitoring | 300 | 340 | 300 | 120 | 24 V | 6 m |
| 426264 ▲ | with pressure monitoring | 300 | 340 | 300 | 120 | 24 V | 6 m |

Power supplies on request: primary 35-264 V ~, 47-63 Hz - secondary 24V/1.5 A

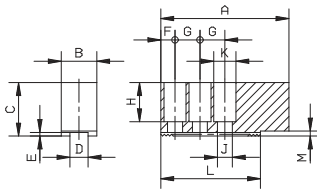
Jaw dimensions und Chucking capacities LVE

Reversible top jawsUB
serration 90°,
material 16MnCr5



| Chuck size | | 400 | | 500 | | 600 | | 700 | 800 | | 1000 | |
|-----------------------------|----|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| LVE | | 400-140 | 480-185 | 540-205 | 570-230 | 600-275 | 630-275 | 680-325 | 730-375 | 800-375 | 830-410 | 1000-570 |
| Type | | 538-07 | | 538-07 | | 538-07 | 543-21 | | 543-21 | 543-21 | | 543-21 |
| Item no. 3-jaw | | 037531 | | 037531 | | 037531 | 169464 | | 169464 | 169466 | | 169466 |
| A | | 135 | 135 | 135 | 135 | 135 | 170 | 170 | 170 | 195 | 195 | 195 |
| B | | 68 | 68 | 68 | 68 | 68 | 80 | 80 | 80 | 80 | 80 | 80 |
| C | | 65 | 65 | 65 | 65 | 65 | 75 | 75 | 75 | 85 | 85 | 85 |
| D ^{+0,05} | | 25,5 | 25,5 | 25,5 | 25,5 | 25,5 | 30,0 | 30,0 | 30,0 | 30,0 | 30,0 | 30,0 |
| E | | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 |
| F | | 48 | 48 | 48 | 48 | 48 | 56 | 56 | 56 | 78 | 78 | 78 |
| G | | 31+31 | 31+31 | 31+31 | 31+31 | 31+31 | 42+42 | 42+42 | 42+42 | 42+42 | 42+42 | 42+42 |
| H | | 48 | 48 | 48 | 48 | 48 | 58 | 58 | 58 | 62 | 62 | 62 |
| J | | 21 | 21 | 21 | 21 | 21 | 26 | 26 | 26 | 26 | 26 | 26 |
| K | | 31 | 31 | 31 | 31 | 31 | 40 | 40 | 40 | 40 | 40 | 40 |
| L | | 26 | 26 | 26 | 26 | 26 | 32 | 32 | 32 | 35 | 35 | 35 |
| M | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Serration | | 3/32"x90° | | 3/32"x90° | | 3/32"x90° | 3/32"x90° | | 3/32"x90° | 3/32"x90° | | 3/32"x90° |
| Weight/jaw kg | | 2,4 | 2,4 | 2,4 | 2,4 | 2,4 | 3,6 | 3,6 | 3,6 | 4,5 | 4,5 | 4,5 |
| External chucking | A1 | 85 - 255 | 135 - 305 | 160 - 370 | 180 - 390 | 220 - 430 | 225 - 420 | 265 - 460 | 315 - 510 | 280 - 530 | 315 - 565 | 500 - 750 |
| | A2 | 125 - 295 | 175 - 345 | 200 - 410 | 220 - 430 | 260 - 470 | 275 - 470 | 315 - 510 | 365 - 560 | 370 - 620 | 405 - 655 | 585 - 835 |
| | A3 | 330 - 500 | 380 - 550 | 405 - 615 | 425 - 635 | 465 - 675 | 540 - 735 | 580 - 775 | 630 - 825 | 640 - 890 | 675 - 925 | 855 - 1105 |
| Internal chucking | J1 | 155 - 325 | 205 - 375 | 230 - 440 | 250 - 460 | 290 - 500 | 305 - 500 | 345 - 540 | 395 - 590 | 405 - 655 | 440 - 690 | 600 - 850 |
| | J2 | 350 - 520 | 405 - 570 | 430 - 640 | 450 - 660 | 490 - 700 | 565 - 770 | 605 - 800 | 655 - 850 | 670 - 920 | 705 - 955 | 865 - 1035 |
| max. interferences diameter | S | 570 | 625 | 690 | 710 | 750 | 800 | 840 | 890 | 1000 | 1030 | 1215 |

Extended soft top jaws AB
serration 90°
material 16MnCr5



| Chuck size | | 400 | | 500 | | 600 | | | | | | | |
|---------------------------------|--|-----------|----------|-----------|----------|-----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| LVE | | 400-140 | 480-185 | 540-205 | 570-230 | 540-205 | 570-230 | 600-275 | 630-275 | 680-325 | 600-275 | 630-275 | 680-325 |
| Type | | 518-07 | | 543-22 | | 518-07 | | 543-22 | 543-22 | | 518-07 | 543-22 | |
| Item no. 3-jaw | | 137028 | | 169449 | | 137028 | | 169449 | 169452 | | 137028 | 169450 | |
| A | | 180 | 180 | 205 | 205 | 180 | 180 | 205 | 245 | 245 | 180 | 215 | 215 |
| B | | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 68 | 68 | 50 | 68 | 68 |
| C | | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 89 | 89 | 80 | 89 | 89 |
| D ^{+0,05} | | 25,5 | 25,5 | 25,5 | 25,5 | 25,5 | 25,5 | 25,5 | 30,0 | 30,0 | 25,5 | 30,0 | 30,0 |
| E | | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 5 | 6 | 6 |
| F | | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 25 | 25 | 20 | 25 | 25 |
| G | | 35+35 | 35+35 | 35+35 | 35+35 | 35+35 | 35+35 | 35+35 | 45+45 | 45+45 | 35+35 | 45+45 | 45+45 |
| H | | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 69 | 69 | 60 | 69 | 69 |
| J | | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 25 | 25 | 21 | 25 | 25 |
| K | | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 37 | 37 | 31 | 37 | 37 |
| L | | 180 | 180 | 190 | 190 | 180 | 180 | 190 | 140 | 140 | 180 | 140 | 140 |
| M | | -- | -- | 6 | 6 | -- | -- | 6 | 7 | 7 | -- | 7 | 7 |
| Serration | | 3/32"x90° | | 3/32"x90° | | 3/32"x90° | | 3/32"x90° | 3/32"x90° | 3/32"x90° | 3/32"x90° | 3/32"x90° | 3/32"x90° |
| Weight/jaw kg | | 4,2 | 4,2 | 5,0 | 5,0 | 4,2 | 4,2 | 5,0 | 9,1 | 9,1 | 4,2 | 7,8 | 7,8 |
| A1 Ø External chucking | | 20 - 155 | 30 - 200 | 10 - 220 | 30 - 240 | 60 - 270 | 80 - 290 | 75 - 285 | 60 - 255 | 100 - 295 | 125 - 335 | 120 - 315 | 160 - 355 |
| S Ø max. interferences diameter | | 330 | 575 | 640 | 660 | 640 | 660 | 710 | 760 | 800 | 710 | 760 | 800 |

| Chuck size | | 700 | | 800 | | 800 | | 1000 | |
|--------------------------------|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| LVE | | 730-375 | | 800-375 | | 830-410 | | 1000-570 | |
| Type | | 543-22 | | 543-22 | | 543-22 | | 543-22 | |
| Item no. 3-jaw | | 169452 | 169450 | 169456 | | 169452 | | 169456 | 169452 |
| A | | 245 | 215 | 285 | 285 | 245 | 245 | 285 | 245 |
| B | | 68 | 68 | 68 | 68 | 68 | 68 | 68 | 68 |
| C | | 89 | 89 | 89 | 89 | 89 | 89 | 89 | 89 |
| D ^{+0,05} | | 30,0 | 30,0 | 30,0 | 30,0 | 30,0 | 30,0 | 30,0 | 30,0 |
| E | | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| F | | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| G | | 45+45 | 45+45 | 55+55 | 55+55 | 45+45 | 45+45 | 55+55 | 45+45 |
| H | | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 |
| J | | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| K | | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 |
| L | | 140 | 140 | 160 | 160 | 140 | 140 | 160 | 140 |
| M | | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| Serration | | 3/32"x90° | | 3/32"x90° | | 3/32"x90° | | 3/32"x90° | 3/32"x90° |
| Weight/jaw kg | | 9,1 | 7,8 | 10,9 | 10,9 | 9,1 | 9,1 | 10,9 | 9,1 |
| A1 Ø External chucking | | 150 - 345 | 210 - 415 | 105 - 355 | 140 - 390 | 165 - 415 | 200 - 450 | 300 - 550 | 360 - 610 |
| S Ø max. interference diameter | | 850 | 850 | 945 | 980 | 920 | 955 | 1100 | 1150 |