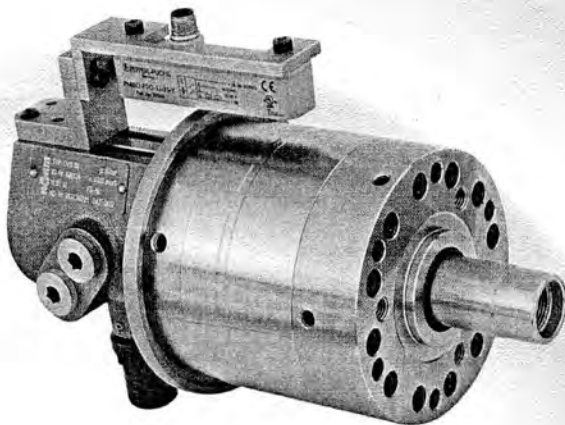
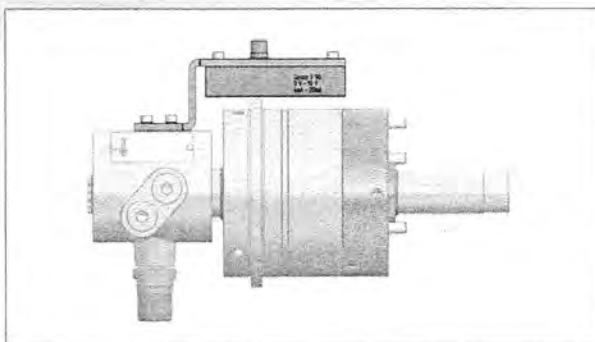
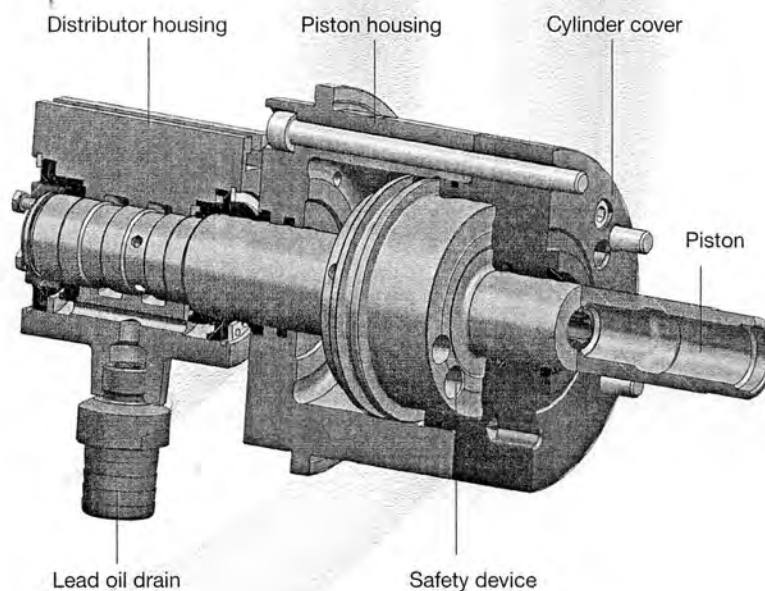




Technical features:

- Up to 80 bar
- Safety device
- Stroke monitor
- Minimum leakage
- Compact design, low mass moment of inertia
- Suitable for horizontal or vertical installation
- Additional connection for auxiliary functions, such as pneumatic contact monitoring, coolant supply, central lubrication etc., further rotating unions depending on operating condition on request



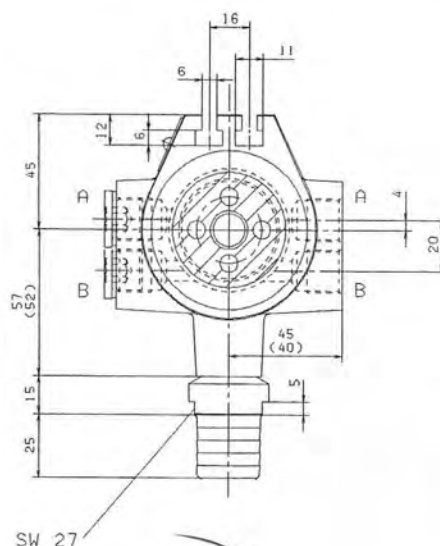
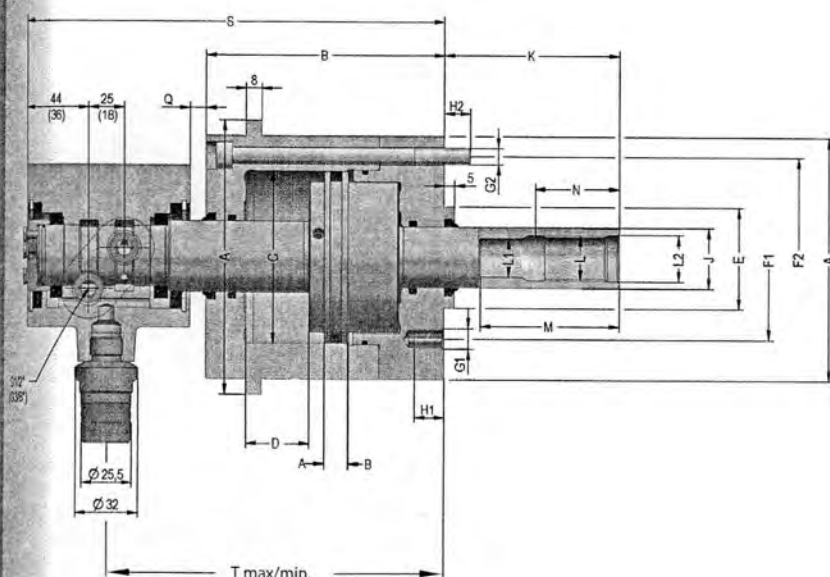
Stroke control with F 90:

- High resolution and accuracy
- Minimal temperature drift
- Contactless
- Teaching mode
- Inductive principle of operation

With high and low pressure chucking the change-over of the safety valve is guaranteed when:
 chucking pressure : releasing pressure $\leq 5,5 : 1$ (Size 85 - 130)
 chucking pressure : releasing pressure $\leq 3,8 : 1$ (Size 150 - 200)

Oil operated actuating cylinders without through-hole OVS available as basic model in steel design, also available with following options:

- Inductive stroke monitoring (limit switch **not included** in scope of delivery)
- Linear stroke monitoring F 90 (F 90 system **included** in scope of delivery)



Tool group C 15

453-05

Electrically operated actuating cylinders
without through-hole **OVS**

Basic model,

safety device,

up to 80 bar - Steel design

high speeds, mounting from the rear, with central passage

With high and low pressure
 bucking the change-over of the
 safety valve is guaranteed when
 bucking pressure : releasing
 pressure $\leq 5,5 : 1$ (size 85-130) /
 bucking pressure : releasing
 pressure $\leq 3,8 : 1$ (size 150-200)

Item no.	438261	438262	438263	438264	438265
Size	85	105	130	150	200
Design	steel	steel	steel	steel	steel
A	120	140	165	193	245
A1	135	155	180	208	260
B	120	120	120	147	164
C	85	105	130	150	200
D stroke	32	32	32	45	50
E _{ms}	50	50	80	95	125
F ₁	80	80	105	145	170
F ₂	100	120	145	170	220
G ₁	M10 (3x120°)	M10 (4x90°)	M12 (4x90°)	M16 (4x90°)	M16 (6x60°)
G ₂	M8 (6x60°)	M8 (6x60°)	M8 (8x45°)	M10 (8x45°)	M12 (8x45°)
H ₁	15	15	18	24	29
H ₂	13	13	13	14	19
J	30	32	42	50	70
K max.	88	88	82	98	108
K min.	56	56	50	53	58
L	M 22 x 1,5	M 22 x 1,5	M 30 x 2	M 36 x 2	M 48 x 2
L ₁	19	19	26	30	42
L ₂	23	23	32	38	50
M	70	70	88	105	125
Min. reach of draw bar N	43	43	65	78	90
Q max.	40	40	40	53	58
Q min.	8	8	8	8	8
S max.	252	247	247	307	329
S min.	220	215	215	262	279
T max.	202	202	202	250	272
T min.	170	170	170	205	222
Piston area A cm ²	47,1	77	116,8	160,8	298,2
Piston area B cm ²	49,7	78,6	118,9	157,1	275,7
Eff. draw bar pull (F=60 bar) kN	29,50	47	71,3	94	165,4
Max. admissible speed min ⁻¹	8000	8000	5000	5500	4500
Volume for full double stroke l	0,31	0,5	0,775	1,43	2,87
Moment of inertia J kgm ²	0,018	0,03	0,066	0,142	0,36
Weight approx. kg	10	12,7	17,7	31,4	49
Suitable connecting flange for Duoflow Rotating Unions	1022186	1022186	1022187	1022187	1022187