GERMA
HYDRAULIKZYLINDER

SCREW-IN CYLINDER
DOUBLE-ACTING

TYPE 200

Operating pressure: max. 500bar
Lateral forces on the piston rod must be avoided

- **Piston diameter:** 16 mm – 63 mm
- **Stroke:** 16 mm – 63 mm
- **Seal variants:** NBR (80°C) and FKM (180°C)
- **Piston rod:** Internal or external thread
- **Accessories:** Thrust pieces
- **Possible custom series:** Special housing, Special stroke lengths, Special pistons

TYPE 200

Double-acting screw-in cylinders are particularly suitable for use in **multi-clamping fixtures**. The cylinders are screwed **directly** into the **fixture body**. This enables a **space-saving design** and eliminates the need for hydraulic lines, manifolds, and similar components. The pressure medium is supplied through internal bores.

Double-acting screw-in cylinders allow movement under pressure in **both directions**. The pressure medium can be supplied on the piston side either directly from below **or** at any **desired position** below the fit diameter.

The newly developed screw-in cylinder utilizes the **proven tandem sealing** system of our 600 series block cylinders.

The screw-in cylinders can be **fully** integrated into the fixture body. Both **individual connections** and **series connections** for multiple cylinders can be realized. When multiple cylinders are installed in the fixture body, they can be supplied via **deep-hole drilling** through all threaded installation bores, with one oil port for supply and one for return. **The tolerance specifications according to the dimension table must be strictly observed.**

PERFORMANCE FEATURES

TYPE 200

- **High force output**
- **Very compact and space-saving design**
- **Dadurch mehr Teile pro Vorrichtung/Spannturm**
- **Easy to machine threaded installation bore**
- **Simple cylinder assembly using a face spanner wrench**
- **Fully recessed housing**
- **Pressure oil supply without external piping**
- **Roller-burnished cylinder bore**

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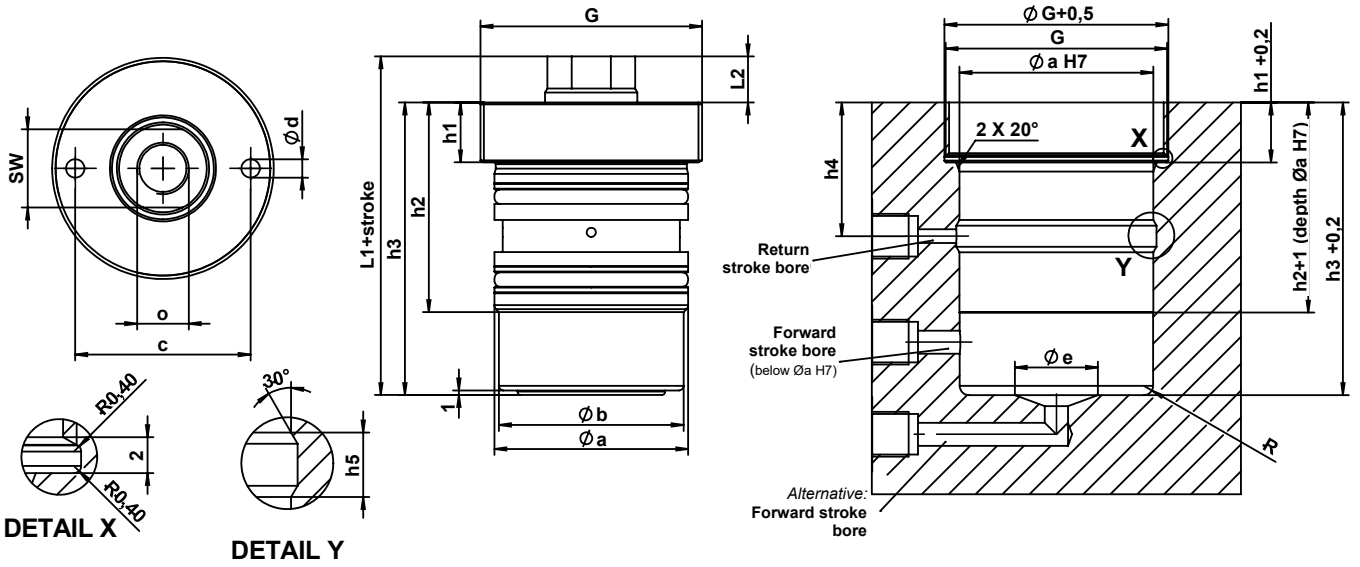
DIMENSION TABLE
AND ORDER NUMBER

TYPE 200



Basic designation		200-016	200-025	200-032	200-040	200-050	200-063
Piston Ø	(mm)	16	25	32	40	50	63
Rod Ø	(mm)	10	16	20	25	32	40
Compressive force per 100 bar	(kN)	2,0	4,9	8,0	12,6	19,6	31,2
Tensile force per 100 bar	(kN)	1,2	2,9	4,9	7,7	11,6	18,6
L1	(mm)	36	41	48,5	52	62	73
L2	(mm)	6	7	10	10	10	14
h1	(mm)	9	12	13	14,5	16	19
h2	(mm)	35,5	41	45,5	48	55	60
h4	(mm)	21,5	26	29	30,5	33,5	38
h5 max.	(mm)	6	6	7	8	10	11
a	(mm)	24	34	42	52	64	80
b	(mm)	21,8	32,2	40	49,2	60,8	76,7
c	(mm)	22	32	38	46	56	72
d	(mm)	2,5	3	4	5	6	6
e max.	(mm)	7	8	10	12	14	16
R max.	(mm)	1,5	1,5	2	2	2	2
SW	(mm)	8	13	17	22	27	36
G		M30x1,5	M40x1,5	M48x1,5	M58x1,5	M70x1,5	M88x2
o		M6x12	M10x15	M12x15	M16x25	M20x30	M27x40

Stroke stage 1	(mm)	**16**	**20**	**25**	**25**	**25**	**30**
h3	(mm)	46	54	63,5	67	77	89
Order number		**200-016-016**	**200-025-020**	**200-032-025**	**200-040-025**	**200-050-025**	**200-063-030**

Stroke stage 2	(mm)	**50**	**50**	**50**	**50**	**50**	**63**
h3	(mm)	80	84	88,5	92	102	122
Order number		**200-016-050**	**200-025-050**	**200-032-050**	**200-040-050**	**200-050-050**	**200-063-063**

Note: The supply bore for the return stroke should be deburred using a ball countersink or relieved at a 30° angle (see detail Y). The ratio of the flow cross-sections of the bores for forward and return stroke should be approximately 1.6.

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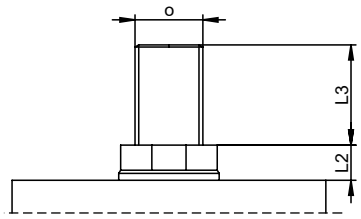
FURTHER VERSIONS
EXTERNAL THREAD • FKM SEALS

TYPE 200



Piston Ø	o	L2	L3
16	M6	6	12
25	M10	7	15
32	M12	10	15
40	M16	10	25
50	M20	10	30
63	M27	14	40

External thread on the piston rod

All screw-in cylinders are alternatively available with an **external thread** on the piston rod.
For this version, the suffix „**-A**“* must be added to the order number.

Example: 200-032-025-A

FKM seals

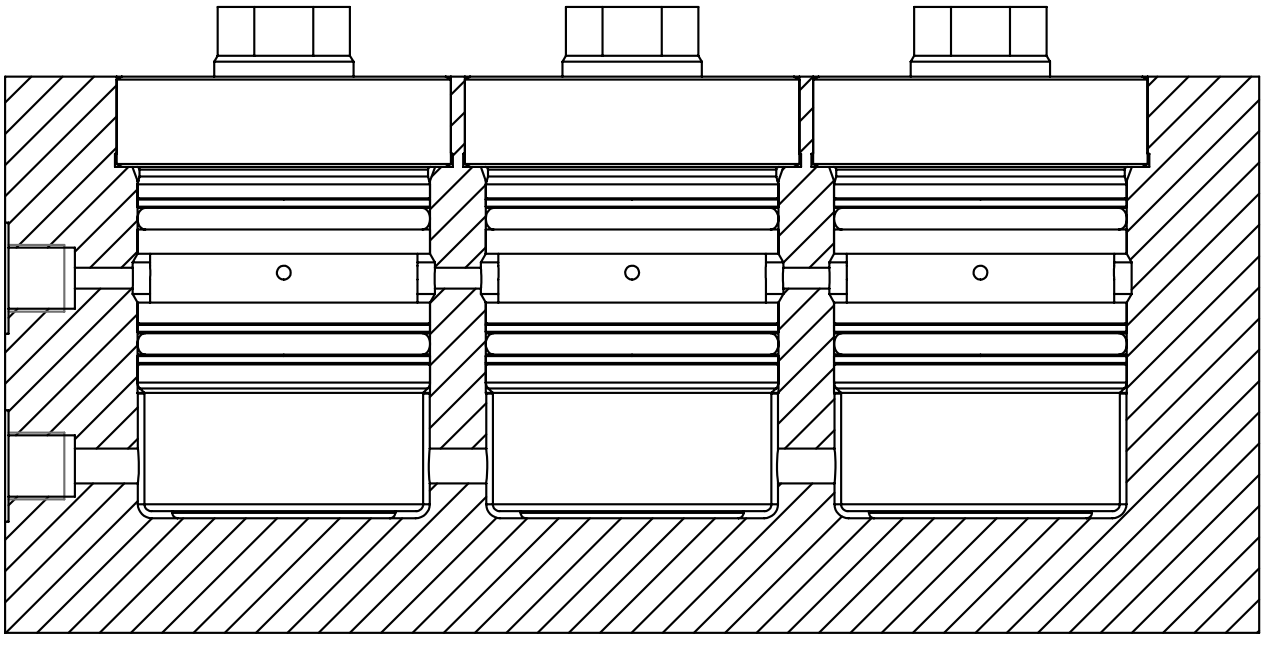
All screw-in cylinders can optionally be equipped with **FKM seals**. These increase the permissible operating temperature from 80°C to 180°C. For this version, the suffix „**-V**“* must be added to the order number.

Example: 200-032-025-V

* Suffixes can be combined

INSTALLATION EXAMPLE
MULTIPLE CLAMPING

TYPE 200



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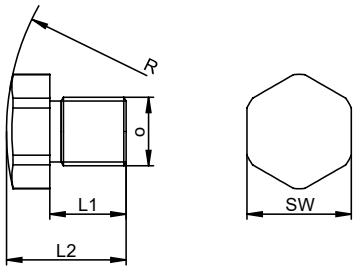
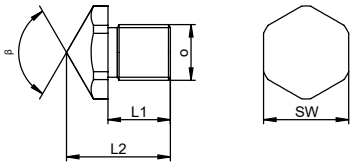


Order No.:	o	L1	L2	R	SW
DR-06	M6	10	20	20	10
DR-10	M10	12	22	35	17
DR-12	M12	14	24	45	19
DR-16	M16	20	30	60	24
DR-20	M20	25	35	60	30
DR-27	M27	30	47	100	41

Thrust pieces with radius

Radius thrust pieces are available for GERMA screw-in cylinders. They can be screwed into the internal thread of the piston rod.



Order No.:	o	L1	L2	β	SW
DS-06	M6	10	22	90	10
DS-10	M10	12	27	90	17
DS-12	M12	14	29	120	19
DS-16	M16	20	35	120	24
DS-20	M20	25	40	120	30
DS-27	M27	30	50	120	41

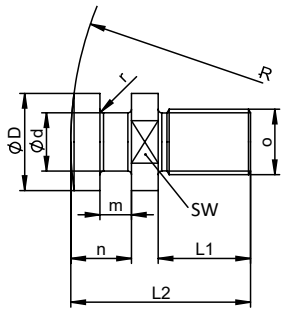
Pointed thrust pieces

Pointed thrust pieces are available for GERMA screw-in cylinders. They can be screwed into the internal thread of the piston rod.

Thrust pieces with coupling pin

Thrust pieces with **coupling pin** are available for GERMA screw-in cylinders. They can be screwed into the internal thread of the piston rod.

By means of the coupling – when used with a corresponding mating part – a **lateral-force-free** and **floating connection** between the hydraulic cylinder and the moving mass can be established.



Order No.:	o	L1	L2	D	d	m	n	R	r	SW
DK-10	M10	14	31,5	20	10	6,5	12	320	1	17
DK-12	M12	14	31,5	20	10	6,5	12	320	1	17
DK-16	M16	24	44	25	16	7	13	400	1	22
DK-20	M20	28	56	32	18	10	20	500	1	27
DK-27	M27	38	74	40	24	13	25	630	1,5	36

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