GERMA
HYDRAULIKZYLINDER

BLOCK CYLINDER TYPE 603
DOUBLE-ACTING

- **Piston diameter:** 25 mm – 100 mm
- **Stroke:** 20 mm – 100 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 603

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

Our **block cylinders** are designed to meet the requirements of a wide range of applications and perform their tasks in **mechanical engineering**, **fixture construction**, **mold** and **tool making**, as well as **plant engineering**.

Type 603 – With 4 cross holes and cross slot / O-ring seat on the broad side

The **Type 603 block cylinder** features four cross holes as well as a cross slot (the cross slot is available from stroke stage 2 onwards). The cross slot is suitable for accommodating standard T-slot nuts, allowing the cylinder to be positioned and aligned quickly and easily. At higher pressures, the cylinder must be supported against the direction of force (using a T-slot nut or a stop bar). The cylinder is mounted using socket head cap screws in accordance with DIN EN ISO 4762.
The pressure medium is supplied directly through the holes on the broad side of the housing. These are sealed by O-rings, which are included in the scope of delivery.

Our block cylinders are of modular design and offer **a wide range of mounting options**, **stroke increments**, **sealing variants**, and **accessories**. They feature **high power density**, are **compact**, and therefore provide **high forces** in a very small installation space.

PERFORMANCE FEATURES TYPE 603

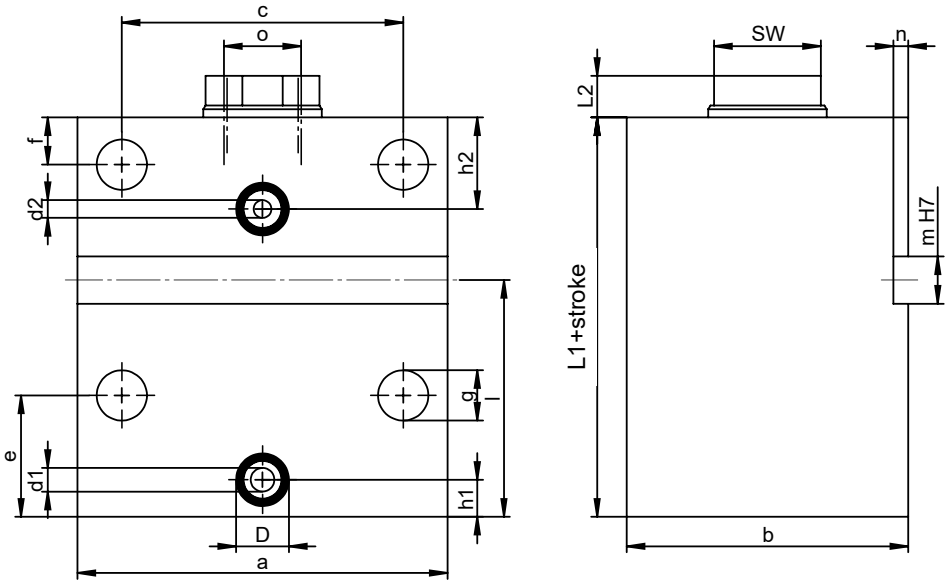
- **High force output**
- **Very compact and space-saving design**
- **Versatile mounting options**
- **Screwed connections secured against unintended loosening**
- **Application-specific sealing systems**
- **Modular design**
- **Roller-burnished cylinder bore**

GERMA GmbH
Raitestraße 1 • 71272 Renningen (Germany)
www.germa-gmbh.de • Tel.: +49 (0)7159/9325-0

GERMA
HYDRAULIKZYLINDER

DIMENSION TABLE
AND ORDER NUMBER

TYPE 603



Basic designation		603-025	603-032	603-040	603-050	603-063	603-080	603-100
Piston Ø	(mm)	25	32	40	50	63	80	100
RodØ	(mm)	16	20	25	32	40	50	63
Compressive force per 100 bar	(kN)	4,9	8,0	12,6	19,6	31,2	50,3	78,6
Tensile force per 100 bar	(kN)	2,9	4,9	7,7	11,6	18,6	30,6	47,4
a	(mm)	65	75	85	100	125	160	200
b	(mm)	45	55	63	75	95	120	150
c	(mm)	50	55	63	76	95	120	158
d1	(mm)	4	5	6	6,5	8	9	10
d2	(mm)	3	4	4,3	5	6	7	8
D	(mm)	11,3	11,3	13,8	13,8	17,8	17,8	17,8
e	(mm)	26	27	27	30	41	47	54
f	(mm)	9	11	12	14	16	19	22
g	(mm)	8,5	10,5	10,5	13	17	21	25
m	(mm)	10	10	12	12	16	16	16
n	(mm)	4	4	4	4	5	5	5
o		M10x15	M12x15	M16x25	M20x30	M27x40	M30x40	M42x60
SW	(mm)	13	17	22	27	36	46	55
h1	(mm)	10	11,5	12	13	12,5	15,5	17
h2	(mm)	21,5	24,5	25	27,5	31	36,5	39
L1	(mm)	44	50	54	65	72	85	90
L2	(mm)	7	10	10	10	14	14	15
Basic mass	(kg)	0,92	1,42	2,03	3,38	5,78	11,19	18,1
Weight increase per 10 mm stroke	(kg)	0,20	0,28	0,36	0,49	0,78	1,25	1,96

Stroke stage 1	(mm)	**20**	**25**	**25**	**25**	**30**	**32**	**40**
l	(mm)	Cross slot available from stroke stage 2 onwards due to dimensional constraints						
Order number		603-025-020	603-032-025	603-040-025	603-050-025	603-063-030	603-080-032	603-100-040

Stroke stage 2	(mm)	**50**	**50**	**50**	**50**	**63**	**80**	**100**
l	(mm)	56	58	60	66	80	97	111
Order number		603-025-050	603-032-050	603-040-050	603-050-050	603-063-063	603-080-080	603-100-100

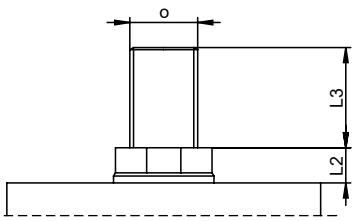
Stroke stage 3	(mm)	**100**	**100**	**100**	**100**	**100**	**-**	**-**
l	(mm)	80	83	85	91	99	-	-
Order number		603-025-100	603-032-100	603-040-100	603-050-100	603-063-100	-	-

GERMA GmbH
Raitestraße 1 • 71272 Renningen (Germany)
www.germa-gmbh.de • Tel.: +49 (0)7159/9325-0

GERMA
HYDRAULIKZYLINDER

FURTHER VERSIONS
EXTERNAL THREAD • FKM SEALS

TYPE 603



Piston Ø	o	L2	L3
25	M10	7	15
32	M12	10	15
40	M16	10	25
50	M20	10	30
63	M27	14	40
80	M30	14	40
100	M42	15	60

External thread on the piston rod

All block 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: 603-050-025-A

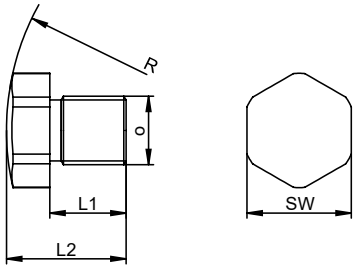
FKM seals

All block 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: 603-050-025-V

* Suffixes can be combined

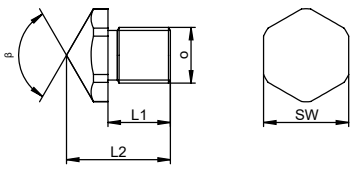
GERMA GmbH
Raitestraße 1 • 71272 Renningen (Germany)
www.germa-gmbh.de • Tel.: +49 (0)7159/9325-0



Order Nr.:	o	L1	L2	R	SW
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
DR-30	M30	35	54	100	46
DR-42	M42	45	71	140	65

Thrust pieces with radius

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



Order Nr.:	o	L1	L2	β	SW
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
DS-30	M30	35	60	120	46
DS-42	M42	45	77	120	65

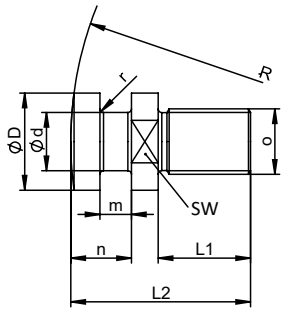
Pointed thrust pieces

Pointed thrust pieces are available for GERMA block 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 block 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
DK-30	M30	38	92	52	30	19	38	800	2	46

GERMA GmbH
Raitestraße 1 • 71272 Renningen (Germany)
www.germa-gmbh.de • Tel.: +49 (0)7159/9325-0