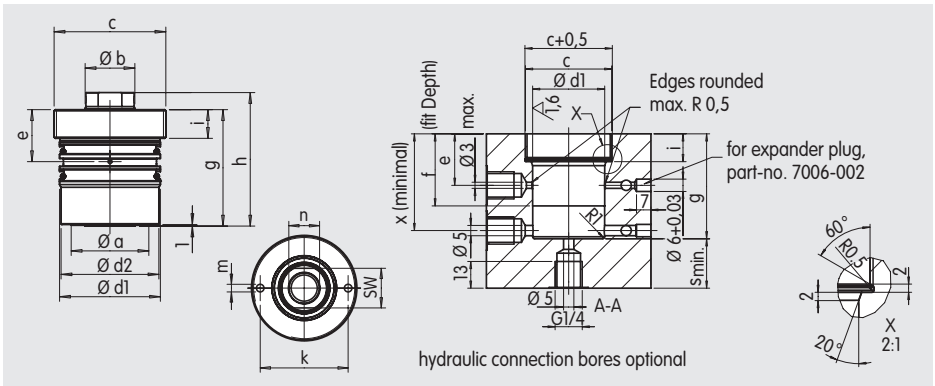
THREADED-BODY CYLINDER

double acting
$p_{max.}$ 500 bar



General Information

This cylinder construction with double acting function saves space when built into fixture plates or into plates of plastic injection moulds.

The double acting function makes cycle-dependant strokes possible when retracting and extending the piston. The operation times can be calculated from the possible flow rate of the power unit and the operated piston or ring area volume. Unlike with single acting cylinders both stroke directions are power operated.

On the piston rod end the cylinders are equipped with a retractable wiper made of NBR/Viton and an additional metal wiper. The metal wiper prevents the penetration of chips into the soft wiper and in this way the piston is prevented from jamming. This preventive measure protects the seals and increases the life of the cylinder.

Installation Instructions

Oil is fed to the inside of the fixture body by means of drilled oilways. Meticulous cleanliness is extremely important since drilling chips may damage the seals and cause leakage and the failure of the installation.

The cylinder is sealed by means of an O-ring / support ring combination. Due to the compact design the threaded-body cylinder does not have an internal stop for the return stroke, but uses the bore bottom of the assembly bore. For that reason the dimension 'g' for the installation depth must be adhered to absolutely.
The diagonal feeds and cross-bores for the oil supply must be well rounded in order to prevent the seals from being damaged during installation.

Materials used:

Housing:	Free cutting steel, black oxide
Piston:	Case-hardened steel
Seals:	NBR/FKM, PTFE

General Tecnical Data

Piston diameter a	mm	**16**	**20**	**25**	**32**	**40**	**50**
Rod diameter b	mm	10	12	16	20	25	32
Push-, pull force at 100 bar	kN	2.00/1.22	3.14/2.02	4.91/2.90	8.04/4.90	12.57/7.66	19.64/11.59
Push-, pull force at 500 bar	kN	10.00/6.10	15.70/10.00	24.50/14.50	40.20/24.50	62.80/38.30	98.50/57.90
Oil volume per 10 mm stroke							
Stroke / return stroke	cm^3	2.00/1.22	3.14/2.02	4.91/2.90	8.04/4.90	12.57/7.66	19.46/11.59
c	mm	M30x1.5	M36x1.5	M42x1.5	M56x2	M64x2	M72x3
d1 H7/f7	mm	22	28	35	45	55	65
d2	mm	20	26	33	43	53	63
e	mm	24	25	25	28	30	34
f +1 (Fit depth in the housing)	mm	38	40	40	41	46	50
i	mm	12	12	12	14.5	16.5	18.5
k	mm	23	28	30	40	50	60
m	mm	3.5	4.2	5.2	5.2	5.2	5.2
n x thread depth	mm	M6x15	M8x16	M10x17	M12x18	M16x27	M20x32
$s_{min.}$	mm	8	10	11	13	16	20
SW	mm	8	10	13	17	22	27
$x_{min.}$	mm	41	43	43	44	49	53
Stroke	mm	**16**	**16**	**20**	**25**	**25**	**25**
g	mm	50	51	56	64	68	75
h	mm	56	57	63	74	78	86
Part-no.	**EZY-DW-...**	**...16-16-001**	**...20-16-001**	**...25-20-001**	**...32-25-001**	**...40-25-001**	**...50-25-001**
Stroke	mm	**32**	**32**				
g	mm	66	67				
h	mm	72	73				
Part-no.	**EZY-DW-...**	**...16-32-001**	**...20-32-001**				
Stroke	mm	**50**	**50**	**50**	**50**	**50**	**50**
g	mm	84	85	86	89	93	100
h	mm	90	91	93	99	103	111
Part-no.	**EZY-DW-...**	**...16-50-001**	**...20-50-001**	**...25-50-001**	**...32-50-001**	**...40-50-001**	**...50-50-001**
Stroke	mm			**100**	**100**	**100**	**100**
g	mm			136	139	143	150
h	mm			143	149	153	161
Part-no.	**EZY-DW-...**			**...25-100-001**	**...32-100-001**	**...40-100-001**	**...50-100-001**
Stroke	mm				**160**	**160**	**160**
g	mm				199	203	210
h	mm				209	213	221
Part-no.	**EZY-DW-...**				**...32-160-001**	**...40-160-001**	**...50-160-001**

All threaded-body cylinders are available with VITON®-seals. **part-no.** with last digits **...-002**

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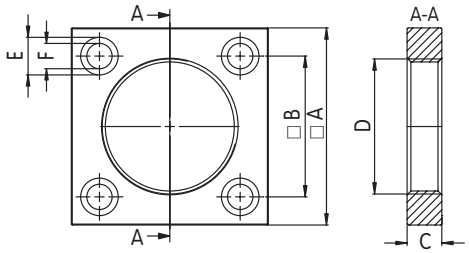
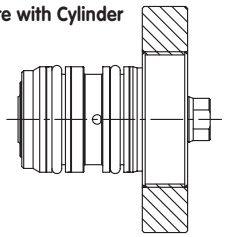
Accessories

The flange makes it is easy to mount the cylinder with four screws.
The thread „c" inside the mounting housing is not necessary.
The mounting dimension is less the dimension „i" from the table seen on page one.



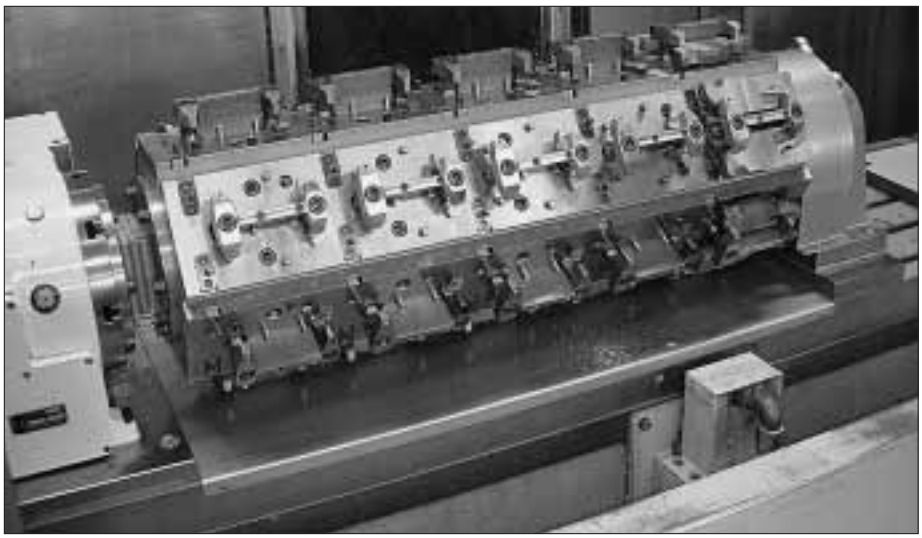
Mounting plate with Cylinder



Mounting plate

A	45	60	65	80	90	105
B	32	41	45	57	64	75
C	12	12	12	14.5	16.5	18.5
D	M30x1.5	M36x1.5	M42x1.5	M56x2	M64x2	M72x3
E	11	15	15	18	20	20
F	6.6	9	9	11	13.5	13.5
G	6.5	8.3	8.3	10.5	12.6	12.6
including:						
4 x screw DIN 912, 8.8	M6x16	M8x16	M8x16	M10x20	M12x25	M12x25
Part-no.	**MP-EZY-DW16**	**MP-EZY-DW20**	**MP-EZY-DW25**	**MP-EZY-DW32**	**MP-EZY-DW40**	**MP-EZY-DW50**

Sample application for HYDROKOMP threaded-body cylinder



With the illustrated reversible clamping device, 60 workpieces are completely manufactured in a three-sided machining process. The necessary clamping forces are achieved using 60 hydraulically operated ***HYDROKOMP*** threaded-body cylinders. The cylinders are used as pull-cylinders in this application.

The positioning of the workpieces is achieved by means of side stops. To replace the workpiece the upward-facing side of the device is unclamped. All the other 5 sides remain under hydraulic pressure. This function is performed by a support bearing with integrated controlled rotary transmission leadthrough, which was also designed by ***HYDROKOMP***.

The threaded-body cylinders are accommodated in a mounting block made of high-strength aluminium. The threaded bores were produced on the machining lathe itself for reasons of precision, The hydraulic oil is supplied via drilled oilways without any piping of any sort. This avoids high installation costs and enhances operational safety.

All ***HYDROKOMP*** threaded-body cylinders are equipped with an additional metal wiper on the piston rod. This protects the rubber wiper from mechanical damage, and lengthens the service life of the cylinder.

HYDROKOMP clamping systems offer more technical benefit.