

Block cylinders *Application & selection*

Shown: BD-18202, BMD-70502, BD-40252



BD, BMD, BMS, BS-series

Block cylinders are used for punching, pressing, riveting and bending applications. In general, these cylinders are used for moving, positioning, lifting, opening and closing.

■ The versatile Enerpac block cylinders, fixture mounted for clamping applications.

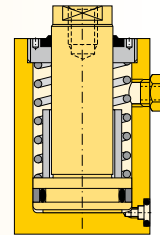
Versatile, all purpose cylinder

- Six clamping capacities enable you to choose the right size for your application
- Variety of strokes, to meet design needs
- Double acting and single acting (spring return), allows selection of cylinder that best conforms to your hydraulic system
- Two oil connection possibilities:
 - with BSPP threaded oil ports
 - with manifold O-ring ports
- Compact cylinder design does not require large amounts of space on your fixture
- Integral wiper ring, keeps contaminants out of cylinder to extend life
- Designed according ISO-standards.

Select your block cylinder type:

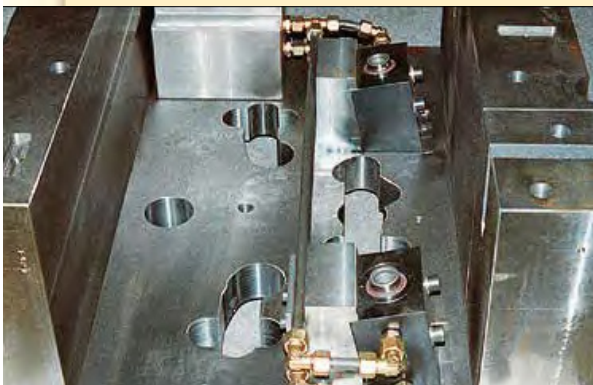
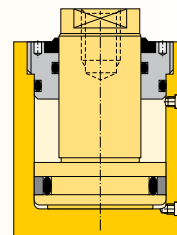
BMS, BS series, single-acting

- BS series with BSPP oil port
- BMS series with manifold O-ring ports
- Internal threaded plunger
- Nickel-plated plunger
- Strong return spring
- Black oxide base
- Filtered vent plug.



BMD, BD series, double-acting

- BD series with BSPP oil port
- BMS series with manifold O-ring ports
- Internal threaded plunger
- Nickel-plated plunger
- Black oxide base.



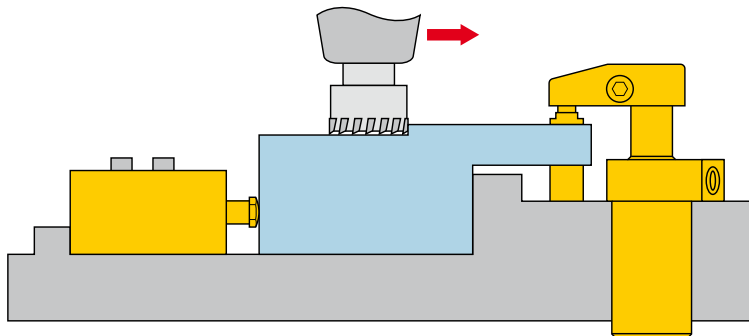
Dimensions & options **BD, BMD, BMS, BS-series**

i Application example

Block cylinder positions workpiece against fixed point with further clamping coming from an Enerpac swing cylinder.

Spherical Contact Bolts

Allow cylinders to act as a datum point in your clamping applications, and protect the piston when cylinders are used for pushing applications.



- Force: 10,9 - 274,8 kN**
- Stroke: 8 - 56 mm**
- Pressure: 40 - 350 bar**

- E Cilindros tipo bloque**
- F Vérins cube**
- D Blockzylinder**



i Options

Contact bolts

86 ▶

Fittings

194 ▶

Valves

156 ▶

i Product selection

Piston Ø	Rod Ø	Clamping force		Stroke mm	Model Nr. Manifold O-ring oil port	Model Nr. BSPP threaded oil port	Cylinder effective area		Cylinder oil capacity		Minimum spring return force	
		push	pull				cm ²	cm ³	push	pull	N	kg
▼ Single acting												
20	12	10,9	-	8	BMS-1082	BS-1082	3,1	-	2,5	-	93	0,9
20	12	10,9	-	18	BMS-10182	BS-10182	3,1	-	5,7	-	108	1,2
25	16	17,0	-	10	BMS-18102	BS-18102	4,9	-	4,9	-	168	1,3
25	16	17,0	-	25	BMS-18252	BS-18252	4,9	-	12,3	-	157	1,8
40	25	43,6	-	12	BMS-40122	BS-40122	12,6	-	15,1	-	378	2,0
40	25	43,6	-	25	BMS-40252	BS-40252	12,6	-	31,4	-	381	2,7
50	32	68,2	-	12	BMS-70122	BS-70122	19,6	-	23,6	-	471	3,3
50	32	68,2	-	25	BMS-70252	BS-70252	19,6	-	49,1	-	425	4,4
80	50	174,9	-	20	BMS-180202	BS-180202	50,2	-	100,5	-	917	12,0
100	63	273,4	-	25	BMS-280252	BS-280252	78,5	-	196,3	-	1419	19,0
▼ Double acting												
20	12	11,0	7,0	16	BMD-10162	BD-10162	3,1	2,0	5,0	3,2	-	0,9
20	12	11,0	7,0	36	BMD-10362	BD-10362	3,1	2,0	11,3	7,2	-	1,2
25	16	17,2	10,1	20	BMD-18202	BD-18202	4,9	2,9	9,8	5,8	-	1,3
25	16	17,2	10,1	50	BMD-18502	BD-18502	4,9	2,9	24,5	14,8	-	1,8
40	25	44,0	26,8	25	BMD-40252	BD-40252	12,6	6,3	31,4	15,8	-	1,9
40	25	44,0	26,8	50	BMD-40502	BD-40502	12,6	6,3	62,8	31,6	-	2,6
50	32	68,7	40,6	25	BMD-70252	BD-70252	19,6	11,6	49,1	29,0	-	3,2
50	32	68,7	40,6	50	BMD-70502	BD-70502	19,6	11,6	98,2	58,0	-	4,3
80	50	175,8	107,2	25	BMD-180252	BD-180252	50,2	30,6	125,6	76,6	-	9,3
80	50	175,8	107,2	50	BMD-180502	BD-180502	50,2	30,6	251,2	153,1	-	11,5
100	63	274,8	165,7	28	BMD-280282	BD-280282	78,5	47,3	219,8	132,6	-	14,7
100	63	274,8	165,7	56	BMD-280562	BD-280562	78,5	47,3	439,6	265,1	-	18,2



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FLUID SYSTEMS & COMPONENTS

Block cylinders *Dimensions & options*

Shown: BD-18202, BMD-70502, BD-40252



Collet-Lok® products

Swing clamps

Work Supports

Linear Cylinders

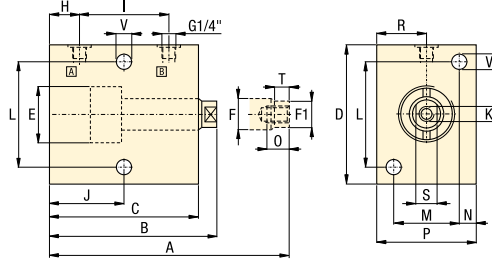
BD, BMD, BMS, BS-series

These compact block cylinders are easily mounted in horizontal or vertical position for a range of special tooling applications.

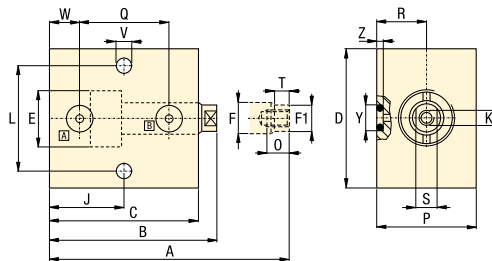
They can be used for positioning, clamping, pushing, pressing or punching operations.

The plunger has an internal thread to accommodate accessories such as contact bolts.

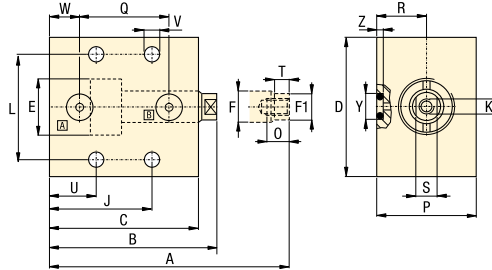
All BS and BD models



- BMS-1082 BMD-10162
- BMS-18102 BMD-18202
- BMS-40122 BMD-40252
- BMS-70122 BMD-70252
- BMD-280282



- BMS-10182 BMD-10362
- BMS-18252 BMD-18502
- BMS-40252 BMD-40502
- BMS-70252 BMD-70502
- BMS-180252 BMD-180502
- BMS-280252 BMD-280562



Dimensions in mm [$\pm \phi$]

Model Nr. Manifold O-ring port	Model Nr. BSPP port	A	B	C	D	E	F	F1	H	I	J
▼ Single acting											
BMS-1082	BS-1082	70	62	54,5	60	20	12	11	12,0	25	24,5
BMS-10182	BS-10182	100	82	74,5	60	20	12	11	12,0	45	44,5
BMS-18102	BS-18102	80	70	62,0	65	25	16	15	12,0	30	27,0
BMS-18252	BS-18252	125	100	92,0	65	25	16	15	12,0	60	57,0
BMS-40122	BS-40122	92	80	68,0	80	40	25	24	12,0	35	32,0
BMS-40252	BS-40252	130	105	93,0	80	40	25	24	12,0	60	57,0
BMS-70122	BS-70122	102	90	76,0	100	50	32	31	14,0	40	36,0
BMS-70252	BS-70252	140	115	101,0	100	50	32	31	14,0	65	61,0
BMS-180202	BS-180202	151	131	114,0	140	80	50	49	15,5	70	66,5
BMS-280252	BS-280252	177	152	132,5	170	100	63	62	18,0	80	77,5
▼ Double acting											
BMD-10162	BD-10162	78	62	54,5	60	20	12	11	12,0	25	24,5
BMD-10362	BD-10362	118	82	74,5	60	20	12	11	12,0	45	44,5
BMD-18202	BD-18202	90	70	62,0	65	25	16	15	12,0	30	27,0
BMD-18502	BD-18502	150	100	92,0	65	25	16	15	12,0	60	57,0
BMD-40252	BD-40252	105	80	68,0	80	40	25	24	12,0	35	32,0
BMD-40502	BD-40502	155	105	93,0	80	40	25	24	12,0	60	57,0
BMD-70252	BD-70252	115	90	76,0	100	50	32	31	14,0	40	36,0
BMD-70502	BD-70502	165	115	101,0	100	50	32	31	14,0	65	61,0
BMD-180252	BD-180252	131	106	89,0	140	80	50	49	15,5	45	41,5
BMD-180502	BD-180502	181	131	114,0	140	80	50	49	15,5	70	66,5
BMD-280282	BD-280282	152	124	104,5	170	100	63	62	18,0	52	49,5
BMD-280562	BD-280562	208	152	132,5	170	100	63	62	18,0	80	77,5

Block cylinder used for punching applications.



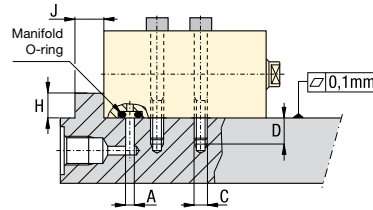
Dimensions & options **BD, BMD, BMS, BS-series**

Installation instructions

When operating above 140 bar in applications as shown in the figure below, provide cylinder back-up using a support to eliminate shear loads on the mounting bolts.

Manifold mounting

When hydraulic connections are made through the standard integrated O-ring ports as shown in figure, the sealing surface must have a roughness of 1,6 microns



Single-acting cylinders

If the risk of machining coolants or debris being entering via the breather vent (port B) exists, it is recommended that this port be connected to a clean, remote termination point.

- Force: 10,9 - 274,8 kN
- Stroke: 16 - 56 mm
- Pressure: 40 - 350 bar

- E** Cilindros tipo bloque
- F** Vérins cube
- D** Blockzylinder



Important
Linear cylinder support is required at operating pressures above 140 bar. Follow the instructions on this page.

Installation dimensions in mm [$\pm 0,1$]

Clamping force at 350 bar	Oil channel diameter	Mounting thread	Minimum thread length	Torque (bolt type 12.9 DIN 912)	Minimum support dimensions		Manifold O-ring	
					H	J	Di x W	Partnumber
11	ø 4	M6	11	17	5	7	4,34 x 3,53	CZ392.041
17	ø 4	M8	13	40	5	8	4,34 x 3,53	CZ392.041
44	ø 4	M10	16	85	5	10	4,34 x 3,53	CZ392.041
68	ø 4	M12	19	145	5	13	4,34 x 3,53	CZ392.041
175	ø 6	M16	24	353	10	16	7,52 x 3,53	CZ935.041
275	ø 6	M20	30	675	10	21	7,52 x 3,53	CZ935.041

¹⁾ Manifold O-rings included

Accessory chart

Plunger Thread K	Contact Bolt $\square 86$
M6 x 1	BS-62
M8 x 1,25	BS-82
M16 x 2	BS-16
M20 x 2,5	BS-20
M30 x 3,5	BS-30
M36 x 4	BS-36

	K	L	M	N	O	P	Q	R	S	T	U	V	W	Y	Z	Model Nr. Manifold O-ring	Model Nr. BSPP port
												ø		ø			
																	Single acting ▼
	M6	45	25	7,5	10	40	25,0	20,0	9	5,5	-	7,0	12,0	11,0 - 11,1	2,8 - 2,9	BMS-1082	BS-1082
	M6	45	25	7,5	10	40	45,0	20,0	9	5,5	24,5	7,0	12,0	11,0 - 11,1	2,8 - 2,9	BMS-10182	BS-10182
	M8	50	30	7,5	12	45	30,0	22,5	13	6,0	-	9,0	12,0	11,0 - 11,1	2,8 - 2,9	BMS-18102	BS-18102
	M8	50	30	7,5	12	45	60,0	22,5	13	6,0	27,0	9,0	12,0	11,0 - 11,1	2,8 - 2,9	BMS-18252	BS-18252
	M16	60	35	10,0	25	55	37,5	27,5	22	9,5	-	11,0	9,5	11,0 - 11,1	2,8 - 2,9	BMS-40122	BS-40122
	M16	60	35	10,0	25	55	62,5	27,5	22	9,5	27,0	11,0	9,5	11,0 - 11,1	2,8 - 2,9	BMS-40252	BS-40252
	M20	80	45	10,0	30	65	40,0	32,5	27	11,0	-	12,5	12,5	11,0 - 11,1	2,8 - 2,9	BMS-70122	BS-70122
	M20	80	45	10,0	30	65	65,0	32,5	27	11,0	26,0	12,5	12,5	11,0 - 11,1	2,8 - 2,9	BMS-70252	BS-70252
	M30	110	80	15,0	45	110	70,0	55,0	41	14,5	26,5	17,0	15,5	14,1 - 14,2	2,8 - 2,9	BMS-180202	BS-180202
	M36	135	90	17,5	50	125	80,0	62,5	50	17,0	37,5	21,0	18,0	14,1 - 14,2	2,8 - 2,9	BMS-280252	BS-280252
																	Double acting ▼
	M6	45	25	7,5	10	40	25,0	20,0	9	5,5	-	7,0	12,0	11,0 - 11,1	2,8 - 2,9	BMD-10162	BD-10162
	M6	45	25	7,5	10	40	45,0	20,0	9	5,5	24,5	7,0	12,0	11,0 - 11,1	2,8 - 2,9	BMD-10362	BD-10362
	M8	50	30	7,5	12	45	30,0	22,5	13	6,0	-	9,0	12,0	11,0 - 11,1	2,8 - 2,9	BMD-18202	BD-18202
	M8	50	30	7,5	12	45	60,0	22,5	13	6,0	27,0	9,0	12,0	11,0 - 11,1	2,8 - 2,9	BMD-18502	BD-18502
	M16	60	35	10,0	25	55	37,5	27,5	22	9,5	-	11,0	9,5	11,0 - 11,1	2,8 - 2,9	BMD-40252	BD-40252
	M16	60	35	10,0	25	55	62,5	27,5	22	9,5	27,0	11,0	9,5	11,0 - 11,1	2,8 - 2,9	BMD-40502	BD-40502
	M20	80	45	10,0	30	65	40,0	32,5	27	11,0	-	12,5	12,5	11,0 - 11,1	2,8 - 2,9	BMD-70252	BD-70252
	M20	80	45	10,0	30	65	65,0	32,5	27	11,0	26,0	12,5	12,5	11,0 - 11,1	2,8 - 2,9	BMD-70502	BD-70502
	M30	110	80	15,0	45	110	45,0	55,0	41	14,5	-	17,0	15,5	14,1 - 14,2	2,8 - 2,9	BMD-180252	BD-180252
	M30	110	80	15,0	45	110	70,0	55,0	41	14,5	26,5	17,0	15,5	14,1 - 14,2	2,8 - 2,9	BMD-180502	BD-180502
	M36	135	90	17,5	50	125	52,0	62,5	50	17,0	-	21,0	18,0	14,1 - 14,2	2,8 - 2,9	BMD-280282	BD-280282
	M36	135	90	17,5	50	125	80,0	62,5	50	17,0	37,5	21,0	18,0	14,1 - 14,2	2,8 - 2,9	BMD-280562	BD-280562