

ABER
Manufacturing Hydraulic Excellence since 1972



TECHNICAL DATA SHEETS
&
RECOMMENDATIONS



**HYDRAULIC
MOTORS**

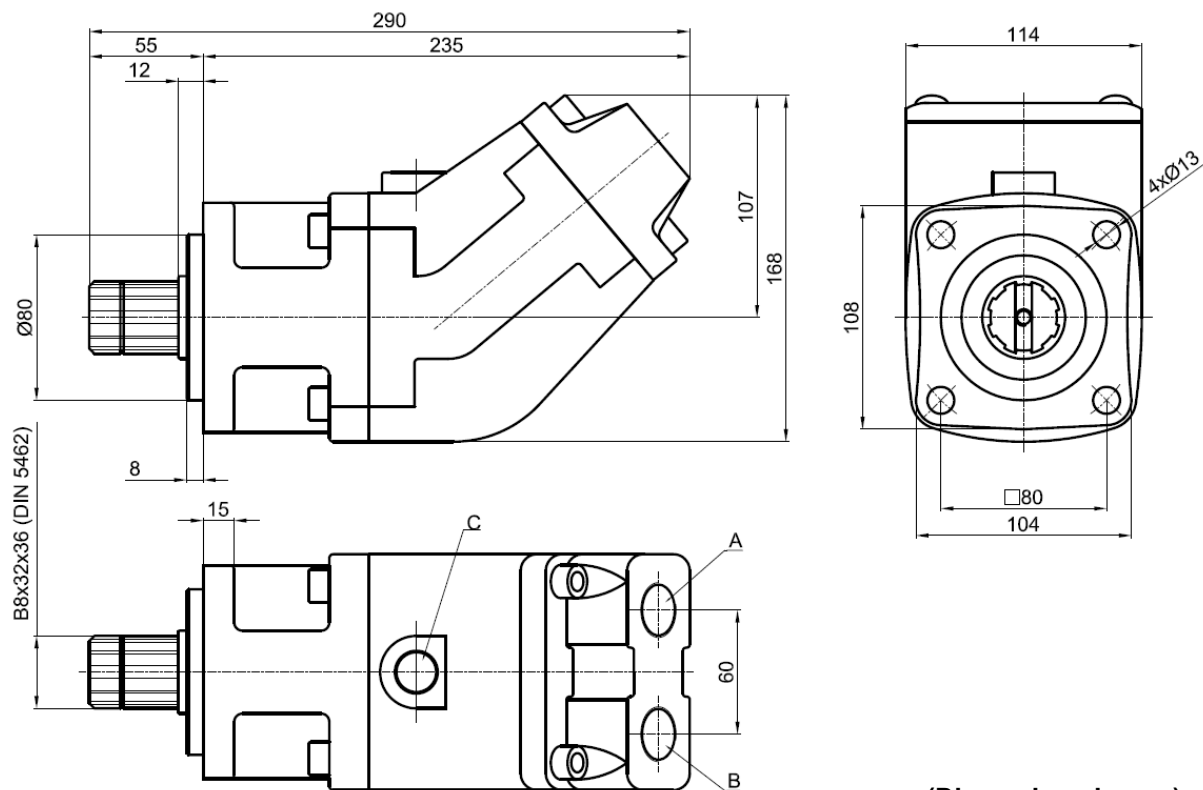




OIL-HYDRAULIC BENT MOTOR AXIAL PISTONS

Ref.
MBI M

Main Dimensions



(Dimensions in mm)

Main Data

Motors MBI	30M	40M	50M
Cylinder capacity (cm ³ /rot.)	32	42	50
Rotation (rpm)	max. intermittent max. continuous	4000 3200	3500 2800
Pressure (bar)	max. intermittent max. continuous	400 350	400 350
Max torque – theoretical value (Nm)	190	250	315
Weight (kg)	10	10	10
Pistons quantity	5	5	5
A-Oil port (mm)	3/4" BSP	3/4" BSP	3/4" BSP
B-Oil port (mm)	3/4" BSP	3/4" BSP	3/4" BSP
C-Drain hole	M22x1.5	M22x1.5	M22x1.5

How to order:

Example: Motor 30cm³/rot.; pressures 400/350 bar; rotation 4000/3200; ref. MBI M MBI30M

Important notes:

-To install one of these motors, please consult and respect the instruction "BI motors recommendations before start-up".

ABER is constantly engaged in improving its products and, therefore, reserves itself the right to modify without any further notice the characteristics shown



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Technical drawing of a 3D printed part, showing three views: isometric, front, and side. The drawing includes dimensions in mm and specific part specifications.

Isometric View:

- Overall length: 218
- Threaded section: DIN5480 W35x2x16x9g
- Dimension: 110
- Feature C is indicated.

Front View:

- Outer diameter: $\varnothing 160$
- Inner diameter: $\varnothing 140$
- Four mounting holes: 4x $\varnothing 14$
- Overall width: 140

Side View:

- Overall height: 125
- Inner diameter of mounting holes: $\varnothing 40$
- Dimensions: 32,5, 32, 30, 83, 81, 48, 67, 48
- Mounting holes: 8xM10
- Features A and B are indicated.
- Feature C is indicated.

(Dimensions in mm)

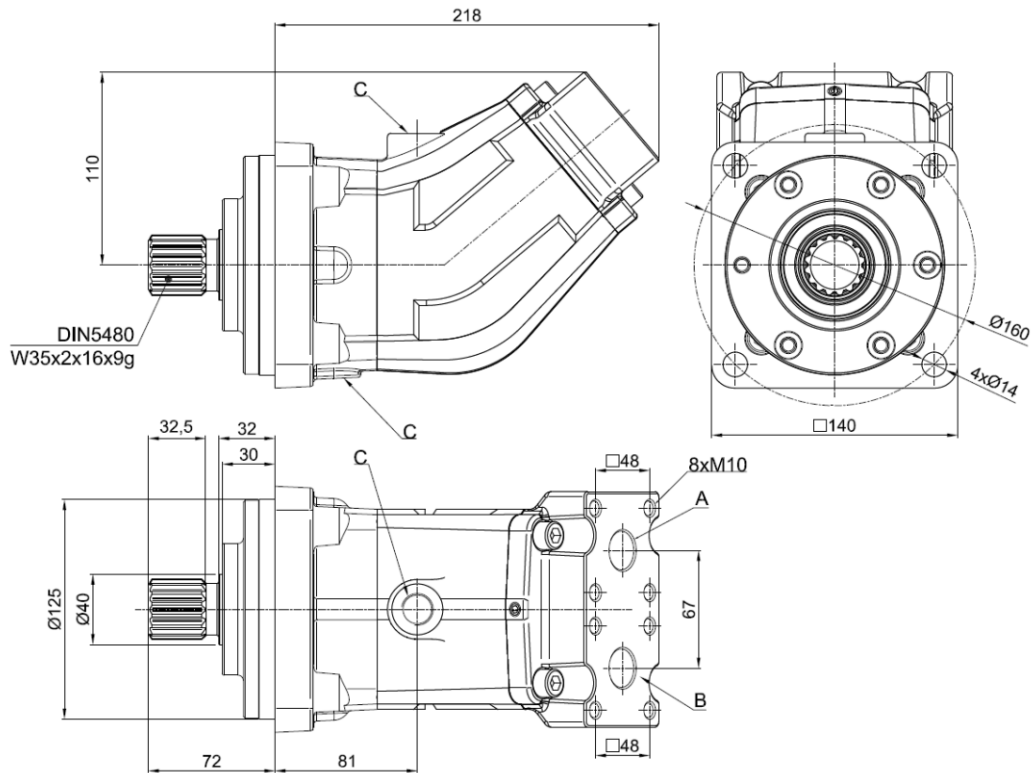
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OIL-HYDRAULIC BENT MOTOR AXIAL PISTONS

Ref.
MBI M IE1

Main Dimensions



(Dimensions in mm)

Main Data

Motors MBI	50M5IE1	60M7IE1	80M7IE1
Cylinder capacity (cm ³ /rot.)	50	60	81
Rotation (rpm)			
max. intermittent	3000	3000	2750
max. continuous	2400	2400	2200
Pressure (bar)			
max. intermittent	400	400	350
max. continuous	350	350	300
Max torque – theoretical value (Nm)	315	380	450
Weight (kg)	12	12	12
Pistons quantity	5	7	7
A-Oil port (mm)	Ø22	Ø22	Ø22
B-Oil port (mm)	Ø22	Ø22	Ø22
C-Drain hole	M22x1.5	M22x1.5	M22x1.5

How to order:

Example: Motor 60cm³/rot.; pressures 400/350 bar; rotation 3000/2400; ref. MBI M IE1 → MBI60M7IE1

Important notes:

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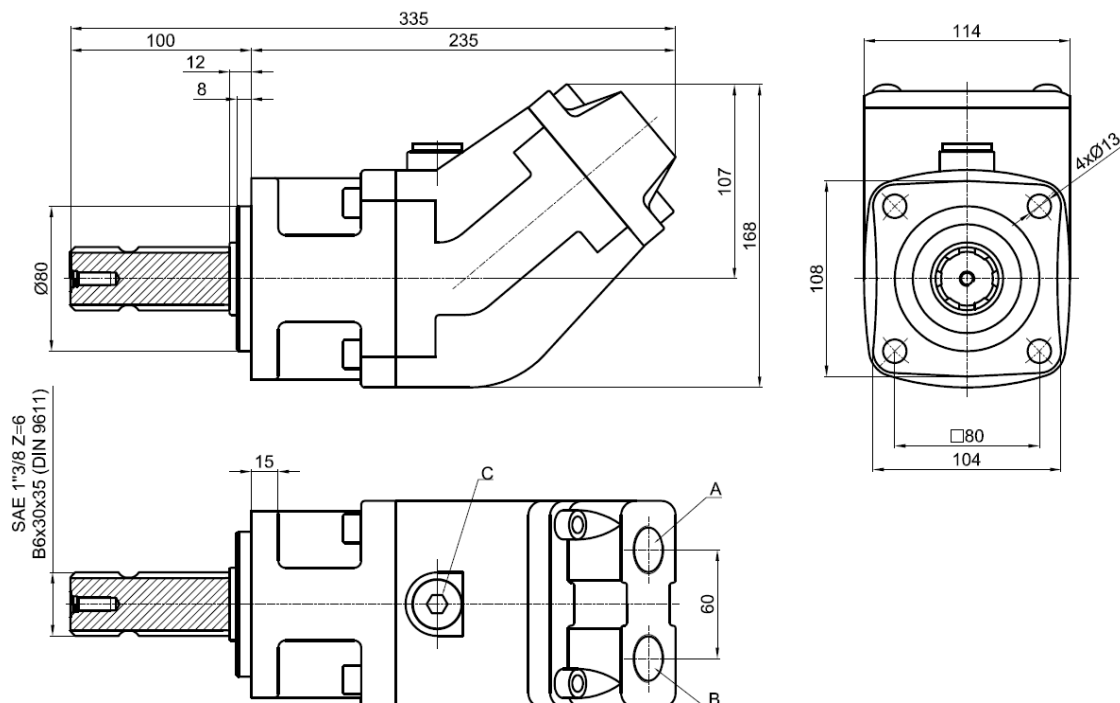
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OIL-HYDRAULIC BENT MOTOR AXIAL PISTONS

Ref.
MBI_MDA

Main Dimensions



(Dimensions in mm)

Main Data

Motors MBI		25MDA	30MDA	40MDA	50MDA
Displacement (cm ³ /rot.)		26	32	42	50
Rotation (rpm)	max. intermittent	4000	4000	3500	3000
	max. continuous	3200	3200	2800	2400
Pressure (bar)	max. intermittent	400	400	400	400
	max. continuous	350	350	350	350
Torque (N.m)	max. intermittent (theoretical value)	160	190	250	320
	max. continuous (theoretical value)	140	170	220	280
Approx. Weight (kg)		10	10	10.5	10.5
Pistons quantity		5	5	5	5
A-Oil port (mm)		3/4"BSP	3/4"BSP	3/4"BSP	3/4"BSP
B-Oil port (mm)		3/4"BSP	3/4"BSP	3/4"BSP	3/4"BSP
C-Drain hole		M22x1.5			

How to order:

Example: Motor 40 cm³/rot.; pressures 400/350 bar; rotation 3000/2400; ref. MBI_MDA

➔ MBI40MDA

Important notes:

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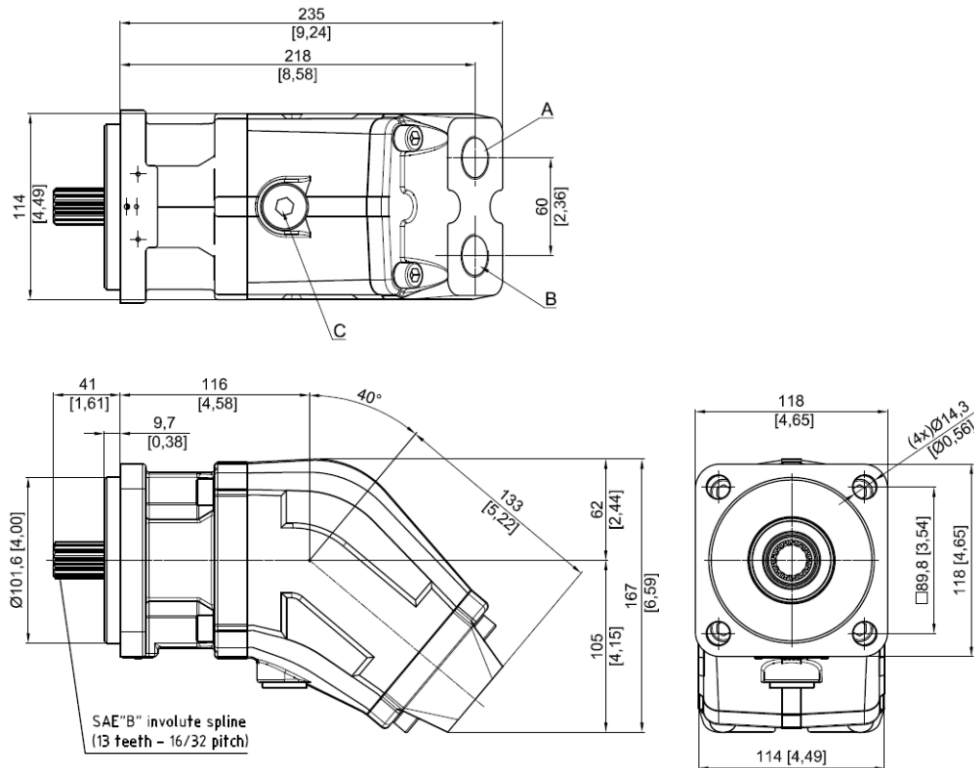
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OIL - HYDRAULIC BENT MOTOR AXIAL PISTONS

Ref.
MBI M5B4

Main Dimensions



(Dimensions in mm – [inch])

Main Data

Motors MBI	30M5B4	40M5B4	50M5B4
Cylinder capacity (cm ³ /rot. – in ³ /rot.)	32 – 2,0	42 – 2,6	50 – 3,0
Rotation (rpm)	max. intermittent max. continuous	4000 3200	3500 2800
Pressure (bar - psi)	max. intermittent max. continuous	400 - 5800 350 - 5100	400 - 5800 350 - 5100
Max torque – theoretical value (Nm – lb.ft)	190 - 140	250 - 184	315 - 232
Weight (kg - lb)	10 – 22	10 – 22	10 – 22
Pistons quantity	5	5	5
A-Oil port (DIN ISO 228)	3/4" BSP	3/4" BSP	3/4" BSP
B-Oil port (DIN ISO 228)	3/4" BSP	3/4" BSP	3/4" BSP
C	Drain hole		

How to order:

Example: Motor 30 – 2,0 (cm³/rot. - in³/rot.); pressures 400/350 – 5800/5100 (bar – psi); rotation 4000/3200; ref. MBI M5B4 → MBI30M5B4

Important notes:

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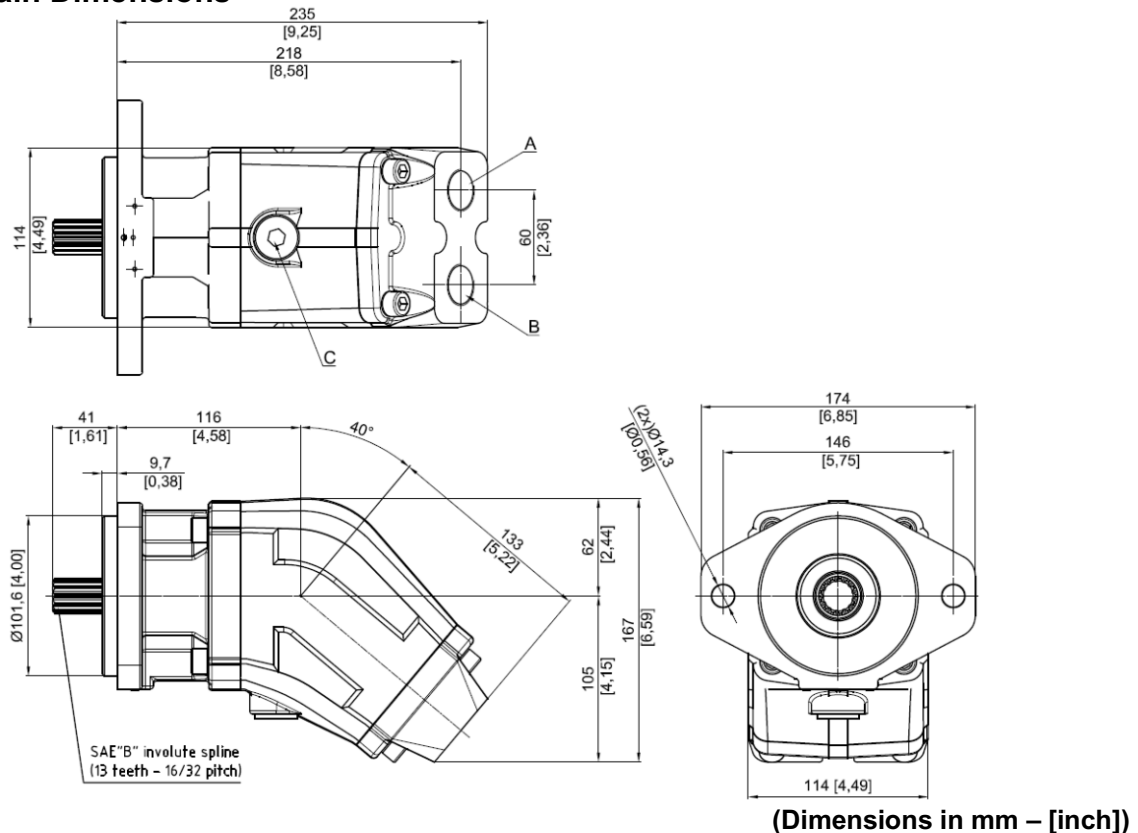
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OIL - HYDRAULIC BENT MOTOR AXIAL PISTONS

Ref.
MBI M5B2

Main Dimensions



Main Data

Motors MBI		30M5B2	40M5B2	50M5B2
Cylinder capacity (cm ³ /rot. – in ³ /rot.)		32 – 2,0	42 – 2,6	50 – 3,0
Rotation (rpm)	max. intermittent	4000	3500	3000
	max. continuous	3200	2800	2400
Pressure (bar - psi)	max. intermittent	400 - 5800	400 - 5800	400 - 5800
	max. continuous	350 - 5100	350 - 5100	350 - 5100
Max torque – theoretical value (Nm – lb.ft)		190 - 140	250 - 184	315 - 232
Weight (kg - lb)		10 – 22	10 – 22	10 – 22
Pistons quantity		5	5	5
A-Oil port (DIN ISO 228)		3/4" BSP	3/4" BSP	3/4" BSP
B-Oil port (DIN ISO 228)		3/4" BSP	3/4" BSP	3/4" BSP
C		Drain hole		

How to order:

Example: Motor 30 – 2,0 (cm³/rot. - in³/rot.); pressures 400/350 – 5800/5100 (bar – psi); rotation 4000/3200; ref. MBI M5B2 → MBI30M5B2

Important notes:

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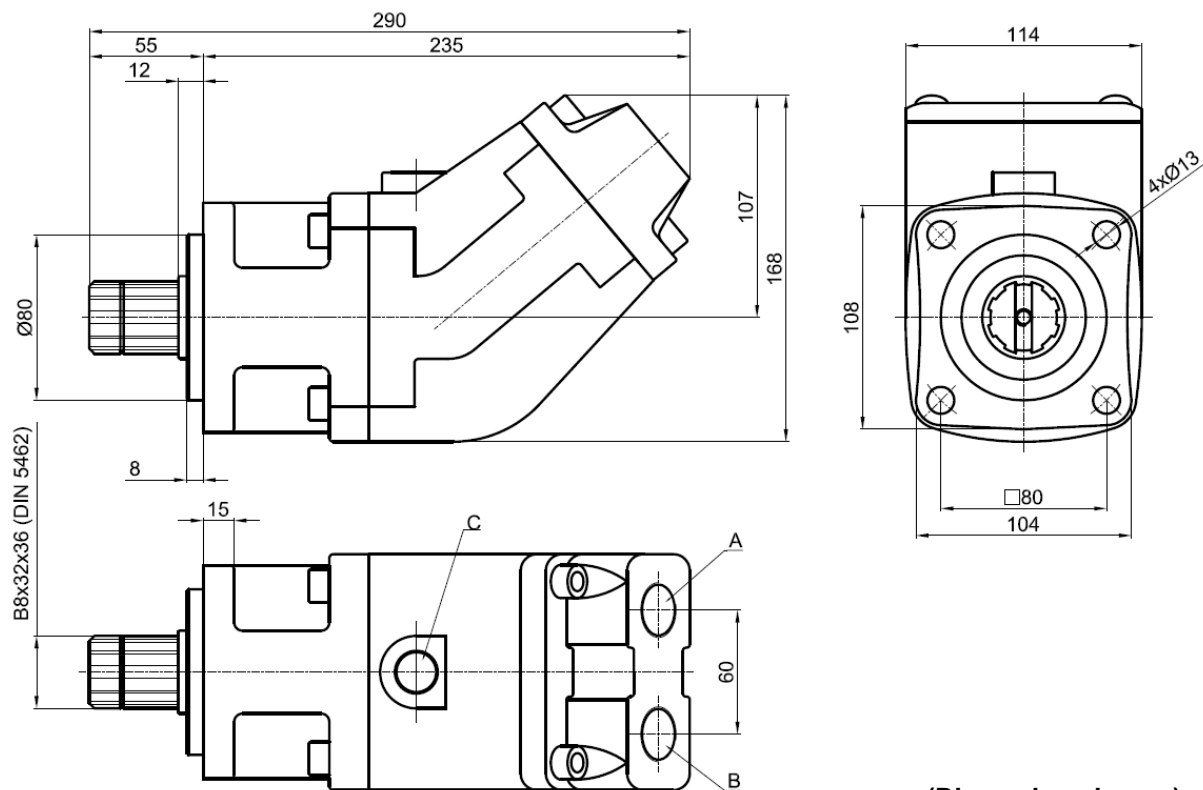
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OIL-HYDRAULIC BENT MOTOR AXIAL PISTONS

Ref.
MBI M7

Main Dimensions



(Dimensions in mm)

Main Data

Motors MBI	60M7	80M7
Cylinder capacity (cm ³ /rot.)	60	81
Rotation (rpm)		
max. intermittent	3000	2750
max. continuous	2400	2200
Pressure (bar)		
max. intermittent	400	350
max. continuous	350	300
Max torque – theoretical value (Nm)	380	450
Weight (kg)	10.5	10.5
Pistons quantity	7	7
A-Oil port (mm)	3/4" BSP	1" BSP
B-Oil port (mm)	3/4" BSP	1" BSP
C-Drain hole	M22x1.5	M22x1.5

How to order:

Example: Motor 60cm³/rot.; pressures 400/350 bar; rotation 3000/2400; ref. MBI M7 MBI60M7

Important notes:

-To install one of these motors, please consult and respect the instruction "BI motors recommendations before start-up".

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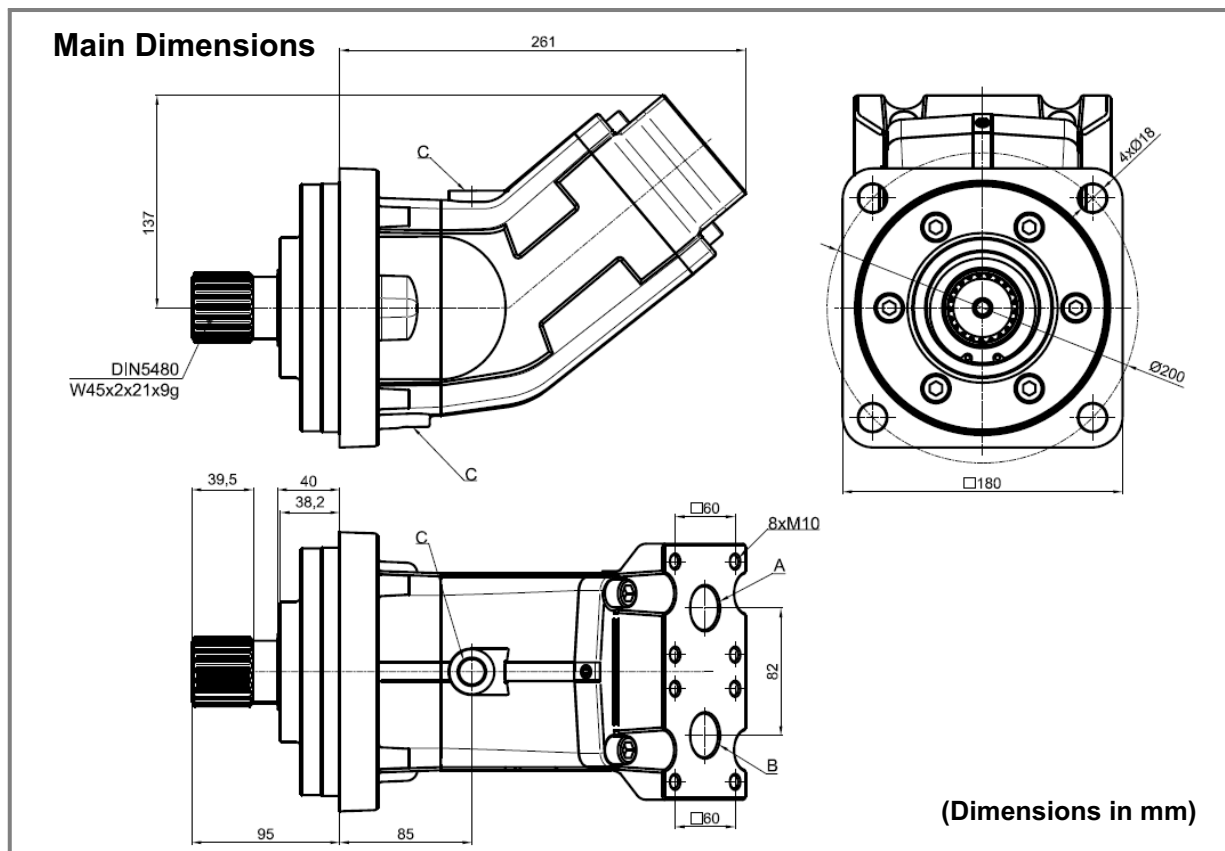
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OII-HYDRAULIC BENT MOTOR AXIAL PISTONS

Ref.
MBI P IA1



Main Data		
Motors MBI	80P7IA1	110P7IA1
Cylinder capacity (cm ³ /rot.)	80	108
Rotation (rpm)		
max. intermittent	3000	2800
max. continuous	2400	2250
Pressure (bar)		
max. intermittent	400	400
max. continuous	350	350
Max torque – theoretical value (Nm)	505	685
Weight (kg)	14	14
Pistons quantity	7	7
A-Oil port (mm)	ø28	ø28
B-Oil port (mm)	ø28	ø28
C-Drain hole	M22x1.5	M22x1.5

How to order:

Example: Motor 80cm³/rot.; pressures 400/350 bar; rotation 3000/2400; ref. MBI P IA1 MBI80P7IA1

Important notes:

-To install one of these motors, please consult and respect the instruction “BI motors recommendations before start-up”.

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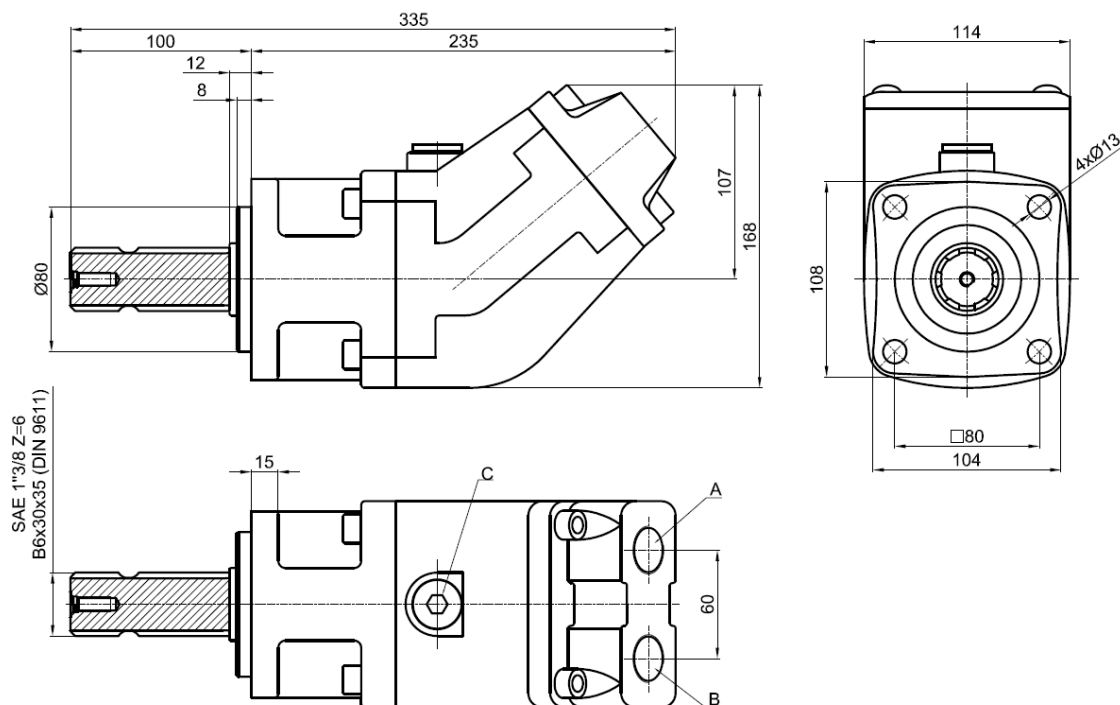
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OIL-HYDRAULIC BENT MOTOR AXIAL PISTONS

Ref.
MBI_M7DA

Main Dimensions



(Dimensions in mm)

Main Data

Motors MBI		60M7DA	80M7DA
Displacement (cm ³ /rot.)		60	81
Rotation (rpm)	max. intermittent	3000	2750
	max. continuous	2400	2200
Pressure (bar)	max. intermittent	400	350
	max. continuous	350	300
Torque (N.m)	max. intermittent (theoretical value)	380	445
	max. continuous (theoretical value)	335	380
Approx. Weight (kg)		11	11
Pistons quantity		7	7
A-Oil port (mm)		3/4"BSP	1"BSP
B-Oil port (mm)		3/4"BSP	1"BSP
C-Drain hole		M22x1.5	

How to order:

Example: Motor 60 cm³/rot.; pressures 400/350 bar; rotation 3000/2400; ref. MBI_M7DA

➔ MBI60M7DA

Important notes:

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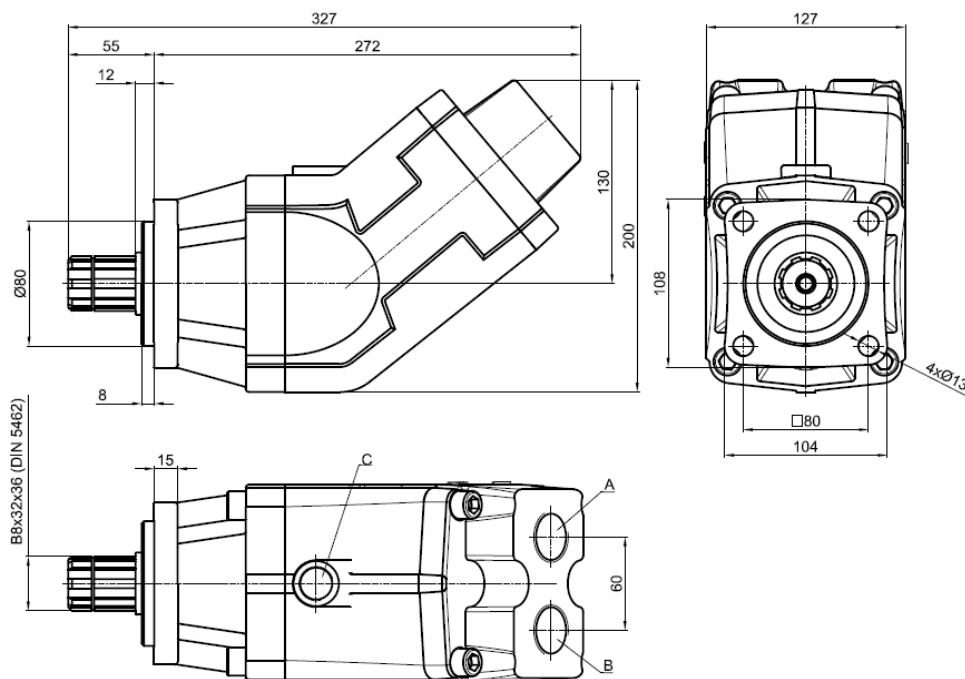
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OIL-HYDRAULIC BENT MOTOR AXIAL PISTONS

Ref.
MBI P7

Main Dimensions



(Dimensions in mm)

Main Data			
Motors MBI	80P7	110P7	135P7
Cylinder capacity (cm ³ /rot.)	80	108	136
Rotation (rpm)			
max. intermittent	3000	2800	2500
max. continuous	2400	2250	2000
Pressure (bar)			
max. intermittent	400	400	300
max. continuous	350	350	250
Max torque – theoretical value (Nm)	505	685	645
Weight (kg)	13	13.4	13.8
Pistons quantity	7	7	7
A-Oil port (mm)	1"BSP	1"BSP	1"BSP
B-Oil port (mm)	1"BSP	1"BSP	1"BSP
C-Drain hole	M22x1.5	M22x1.5	M22x1.5

How to order:

Example: Motor 80cm³/rot.; pressures 400/350 bar; rotation 3000/2400; ref. MBI P7 MBI80P7

Important notes:

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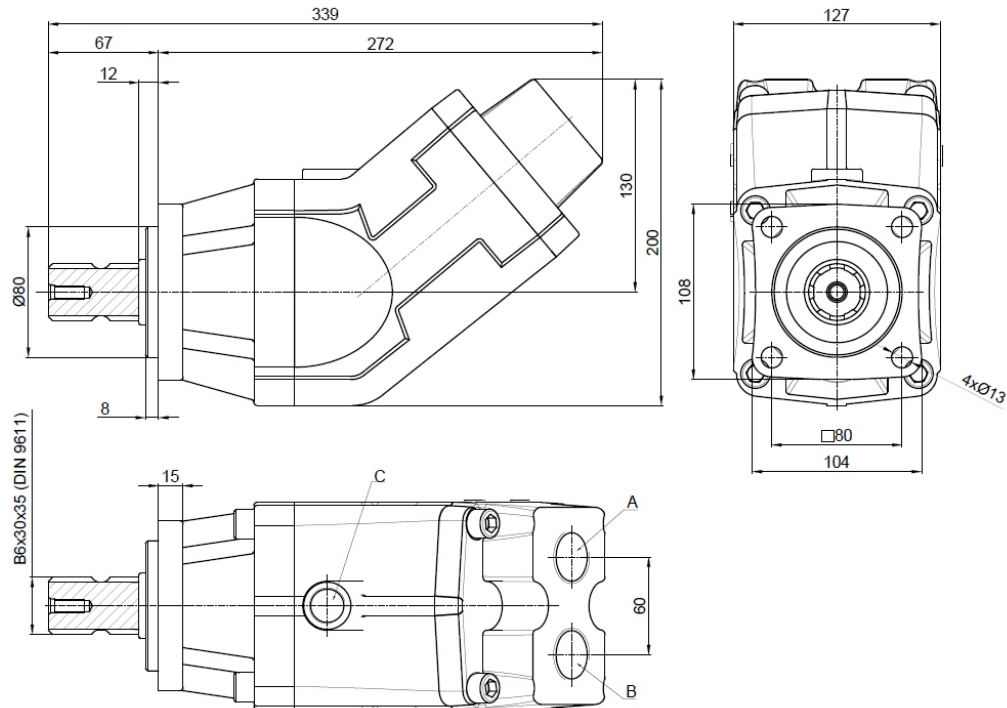
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OIL-HYDRAULIC BENT MOTOR AXIAL PISTONS

Ref.
MBI_P7DA

Main Dimensions



(Dimensions in mm)

Main Data

Motors MBI	80P7DA	110P7DA	135P7DA
Cylinder capacity (cm ³ /rot.)	80	108	136
Rotation (rpm)			
max. intermittent	3000	2800	2500
max. continuous	2400	2250	2000
Pressure (bar)			
max. intermittent	400	400	300
max. continuous	350	350	250
Max torque – theoretical value (Nm)	505	685	645
Weight (kg)	13	13.4	13.8
Pistons quantity	7	7	7
A-Oil port (mm)	1" BSP	1" BSP	1" BSP
B-Oil port (mm)	1" BSP	1" BSP	1" BSP
C-Drain hole	M22x1.5	M22x1.5	M22x1.5

How to order:

Example: Motor 80cm³/rot.; pressures 400/350 bar; rotation 3000/2400; ref. MBI_P7DA → MBI80P7DA

Important notes:

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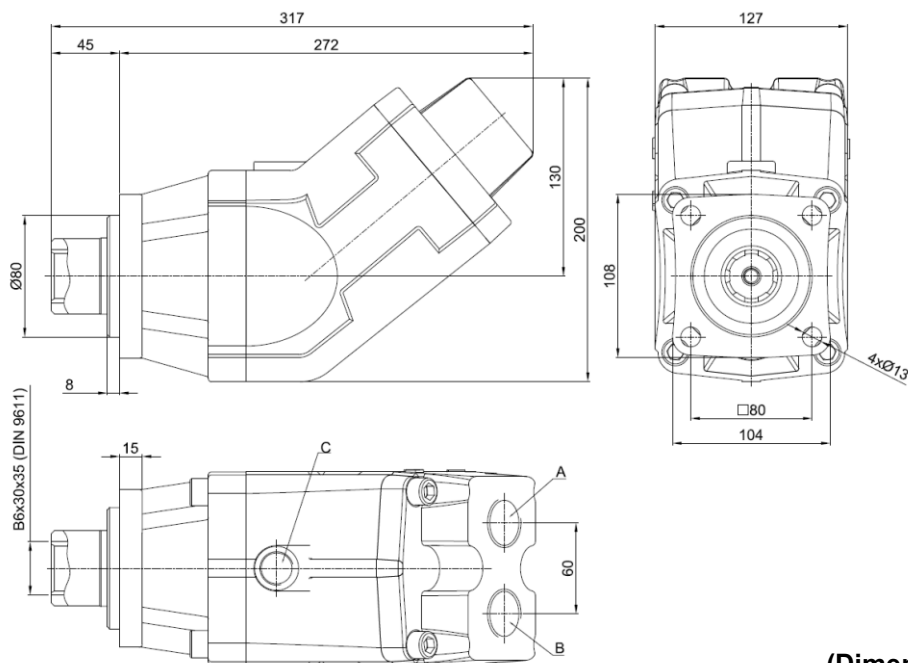
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OIL-HYDRAULIC BENT MOTOR AXIAL PISTONS

Ref.
MBI P7DI

Main Dimensions



(Dimensions in mm)

Main Data

Motors MBI	80P7DI	110P7DI	125P7DI	135P7DI
Displacement (cm ³ /rot.)	80	108	126	136
Rotation (rpm)	max. intermittent max. continuous	3000 2400	2800 2250	2500 2000
Pressure (bar)	max. intermittent max. continuous	400 350	400 350	350 250
Max. torque - theoretical value (Nm)	505	685	700	645
Weight (approx.) (kg)	13.0	13.4	13.6	13.8
Pistons quantity	7			
A-Oil port (DIN ISO 228)	1" BSP	1" BSP	1" BSP	1" BSP
B-Oil port (DIN ISO 228)	1" BSP	1" BSP	1" BSP	1" BSP
C - Drain hole	M22x1.5			

How to order:

Example: Motor 80cm³/rot, pressure 400/350 bar; rotation 3000/2400 ref. BI P7DI → BI80P7DI

Fluids	mineral oils type ISO HM or DIN 51524-2 HLP
Recommended viscosity range	20 to 40 cSt (mm ² /s) at working temperature
Limits viscosity range	10 to 400 cSt (mm ² /s)
Start-up viscosity range, without load	400 to 1500 cSt (mm ² /s)
Filtration	10µm ISO4406 18/13

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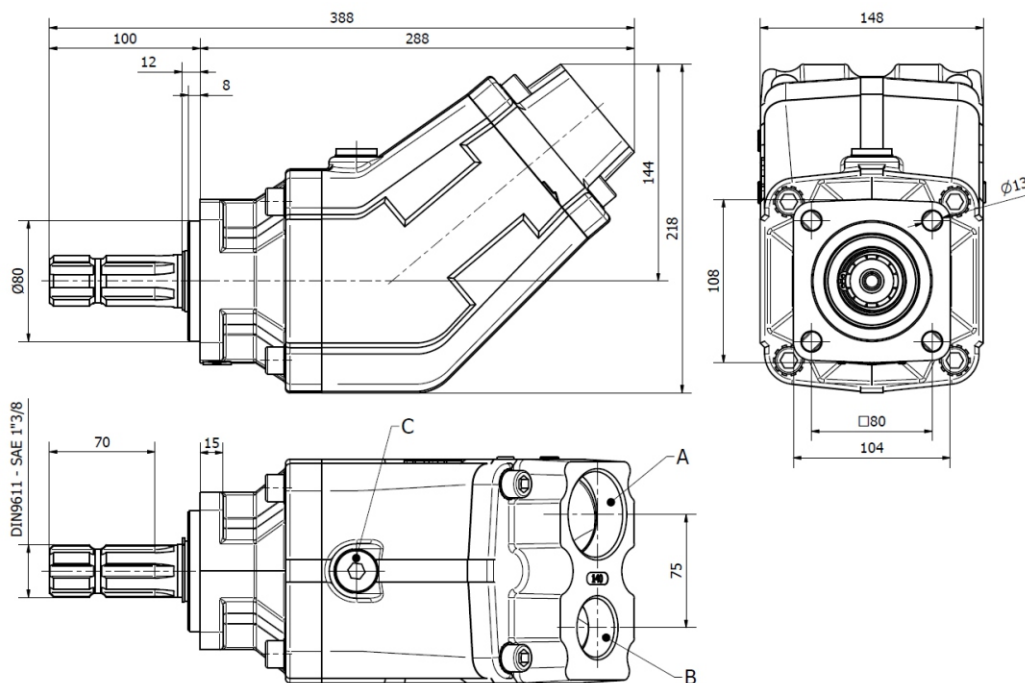
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OIL-HYDRAULIC BENT MOTOR AXIAL PISTONS

Ref.
MBI H9DA

Main Dimensions



(Dimensions in mm)

Main Data

Motors MBI	140H9DA	160H9DA	170H9DA
Displacement (cm ³ /rot.)	142	156	172
Rotation (rpm)	max. intermittent max. continuous	3000 2400	3000 2400
Pressure (bar)	max. intermittent max. continuous	400 350	350 300
Max torque – theoretical value (Nm)	900	990	955
Approx. Weight (kg)	19	19	19
Pistons quantity	9	9	9
A-Oil port (BSP)	1"1/4	1"1/4	1"1/4
B-Oil port (BSP)	1"1/4	1"1/4	1"1/4
C-Drain hole	M22x1.5	M22x1.5	M22x1.5

How to order:

Example: Motor 142cm³/rot.; pressures 400/350 bar; rotation 3000/2400; ref. MBI H9DA → MBI140H9DA

Important notes:

-To install one of these motors, please consult and respect the instruction "BI motors recommendations before start-up".

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