



C & C HYDRAULICS LTD

MOTORS & BRAKES — BMM SERIES

BMM Small Displacement Motor

Compact small-displacement orbital motor in six sizes from 8.2 to 50.3 cm³/rev, giving a high torque to weight ratio. Available with a 2-hole oval flange or a square face mount, 3/8" BSP ports and a Ø16 mm keyed shaft. Supplied by C & C Hydraulics.

8.2 – 50.3 ^{cm³/rev}

Displacement

100 ^{Nm}

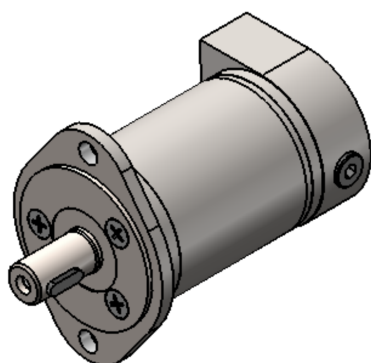
Max torque (peak)

140 ^{bar}

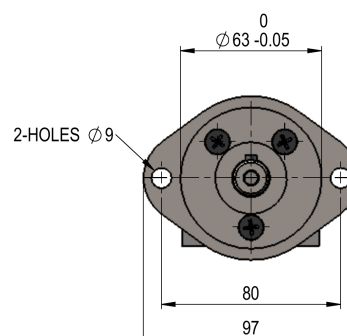
Max pressure (cont.)

25 ^{L/min}

Max flow (int.)



OVAL FLANGE MOUNT



Specification

Type	Small displacement gerotor motor
Displacement	8.2 – 50.3 cm ³ /rev (6 sizes)
Max pressure*	140 bar cont. · 175 bar int. · 225 bar peak
Max flow	Up to 20 L/min cont. · 25 L/min int.
Ports	3/8" BSP
Mounting	Oval flange (Ø63 pilot) or square face (Ø31.5 pilot)
Shaft	Ø16 keyed, M6 tapped end
Weight	1.9 – 2.4 kg

Note: *Max return pressure with drain line. Performance figures as published in the manufacturer's BMM specification; full figures for each size are on page 2.



Performance by size

Type		BMM8	BMM12	BMM20	BMM32	BMM40	BMM50
Displacement	cm ³ /rev	8.2	12.9	19.9	31.6	39.8	50.3
Max speed	Rated	1537	1256	814	513	452	358
	Cont.	1950	1550	1000	630	500	400
	Int.	2450	1940	1250	800	630	500
Max torque	Rated	8	13	19	31	37	33
	Cont.	11	16	25	40	45	46
	Int.	15	23	35	57	70	88
	Peak	21	33	51	64	82	100
Max output	Rated	1.3	1.7	1.7	1.7	1.7	1.2
	Cont.	1.8	2.4	2.4	2.4	2.2	1.8
	Int.	2.6	3.2	3.2	3.2	3.2	3.2
Max pressure*	Cont.	140	140	140	140	140	140
	Int.	175	175	175	175	175	175
	Peak	225	225	225	225	225	225
Max flow	Rated	14	18	18	18	20	20
	Cont.	16	20	20	20	20	20
	Int.	20	25	25	25	25	25
Weight	kg	1.9	2	2.1	2.2	2.3	2.4

Notes: *Max return pressure with drain line. Max inlet pressure 140 bar. Rated speed and torque are the output under rated flow and pressure. Continuous: max value when operating continuously. Intermittent: max value for 6 seconds per minute. Peak: max value for 0.6 seconds per minute.

Features

- Gerotor gear set made with advanced manufacturing for small size, high efficiency and long life
- High pressure shaft seals allow the motor to be used in series or in parallel
- High power and low weight

Ordering

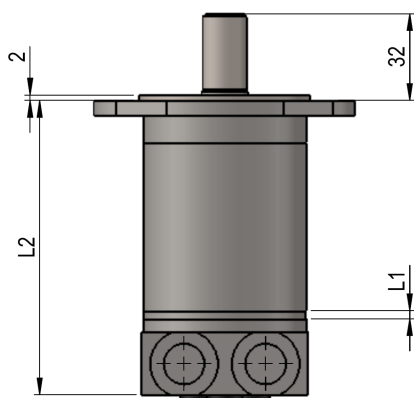
- Specify the size (BMM8 – BMM50) and mount (oval flange or square face)
- See also BMP, BMR and ZBMR data sheets



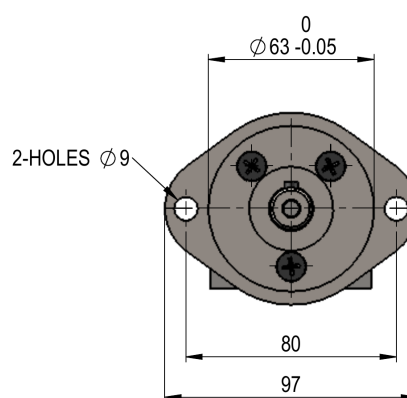
C & C HYDRAULICS LTD

Dimensions (mm)

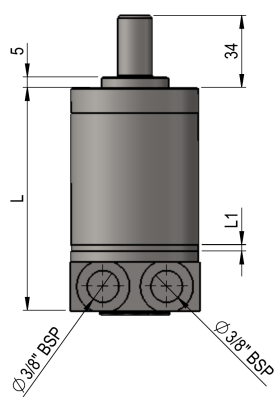
OVAL FLANGE MOUNT



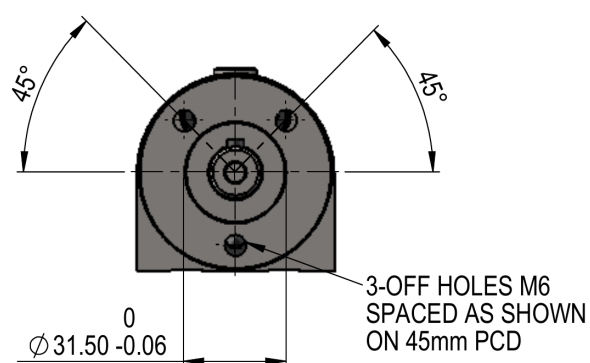
OVAL FLANGE · FRONT



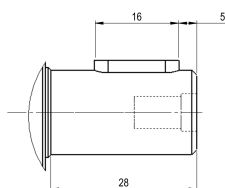
SQUARE FACE MOUNT



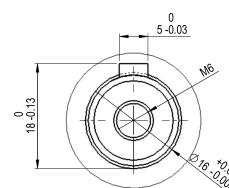
SQUARE FACE · FRONT



SHAFT



SHAFT SECTION



Dimension	Value
Body (port end)	61 × 62.5
Ports	3/8" BSP
Shaft	Ø16 +0.006/-0.005
Key width	5 -0.03
Over key	18 -0.13
Shaft end thread	M6
Shaft length	28 (key 16)

Dimension	Value
Oval flange · pilot	Ø63 -0.05
Oval flange · holes	2 × Ø9 on 80 centres
Oval flange · width	97
Oval flange · shaft projection	32
Square face · pilot	Ø31.5 -0.06
Square face · holes	3 × M6 on 45 PCD
Square face · shaft projection	34



C & C HYDRAULICS LTD

MOTORS & BRAKES — BMP SERIES

BMP Orbital Motor

Compact orbital hydraulic motor in nine displacements from 51.7 to 386.2 cm³/rev, with a 2-hole mounting flange, 1/2" BSP ports and a choice of Ø25 mm or Ø1" parallel shaft. Supplied by C & C Hydraulics.

51.7 – 386.2 cm³/rev

Displacement

533 Nm

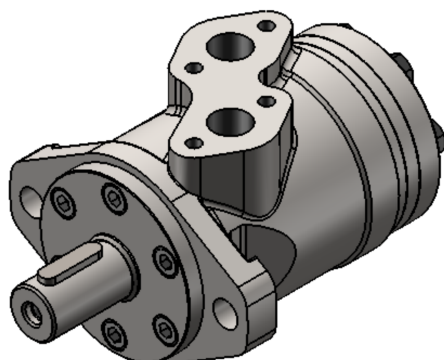
Max torque (int.)

175 bar

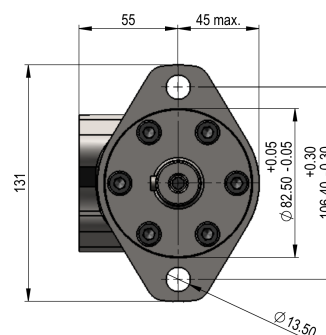
Max pressure (cont.)

75 L/min

Max flow (int.)



MOUNTING FLANGE



Specification

Type	Orbital hydraulic motor
Displacement	51.7 – 386.2 cm ³ /rev (9 sizes)
Max pressure*	175 bar cont. · 200 bar int. · 225 bar peak
Max flow	Up to 60 L/min cont. · 75 L/min int.
Ports A / B	1/2" BSP
Drain port	1/4" BSP
Mounting	2-hole flange, Ø82.5 pilot
Shaft options	A: Ø25 parallel · C: Ø1" parallel
Weight	5.6 – 7.4 kg

Note: *Max pressure with drain line fitted. Performance figures as published in the manufacturer's BMP data sheet; full figures for each size are on page 2.



C & C HYDRAULICS LTD

Performance by size

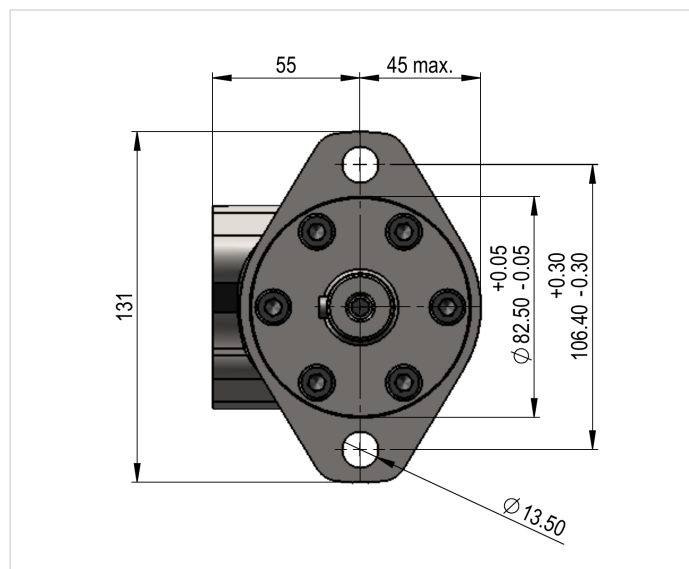
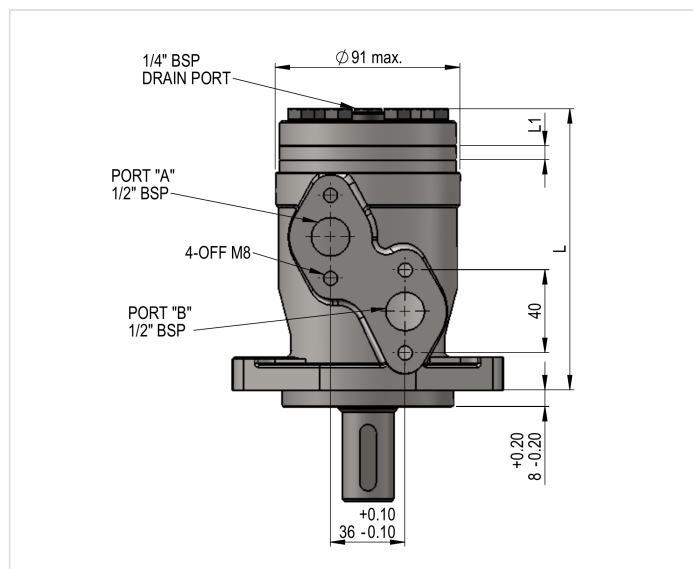
Type		BMP50	BMP80	BMP100	BMP125	BMP160	BMP200	BMP250	BMP315	BMP400
Displacement	cm ³ /rev	51.7	77.7	96.2	117.9	155.5	189.9	231	311.7	386.2
Max speed	Rated	850	650	520	390	310	260	200	156	130
	Cont.	879	740	589	475	370	296	237	189	149
	Int.	975	827	673	594	463	370	297	236	185
Max torque	Rated	81	129	161	202	204	259	325	345	435
	Cont.	81	129	161	202	245	286	360	406	435
	Int.	108	171	213	268	342	390	456	505	533
Max output	Rated	7	8.6	8.6	8	6.5	6.9	6.6	5.5	5.8
	Cont.	7	9.1	9	9.1	8.7	8.1	8.2	7.2	6.1
	Int.	8.9	11.8	11.9	11.8	11.9	10.9	10.1	8.6	7.2
Max pressure*	Cont.	175	175	175	175	175	175	175	175	175
	Int.	200	200	200	200	200	200	200	200	200
	Peak	225	225	225	225	225	225	225	225	225
Max flow	Rated	45	55	55	55	55	55	55	55	55
	Cont.	45	60	60	60	60	60	60	60	60
	Int.	50	75	75	75	75	75	75	75	75
Weight	kg	5.6	5.7	5.9	6	6.2	6.4	6.6	6.9	7.4
Length L	mm	137	140.5	143	146	151	157	162	172	182
Length L1	mm	7	10.5	13	16	21	26	32	42	52

Notes: *Max pressure with drain line fitted. Cont. = continuous, Int. = intermittent. Lengths L and L1 are shown on the drawing on page 3.

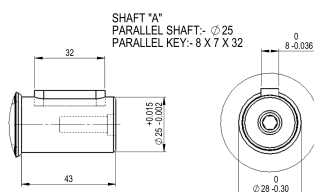


C & C HYDRAULICS LTD

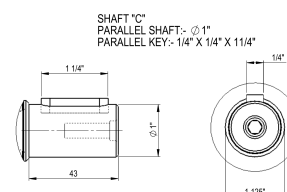
Dimensions (mm)



SHAFT A · Ø25 PARALLEL



SHAFT C · Ø1" PARALLEL



Dimension	Value
Body diameter	Ø91 max
Flange height	131
Pilot diameter	Ø82.5 ±0.05
Mounting holes	Ø13.5 (2 off)
Mounting hole centres	106.4 ±0.3
Pilot to shaft shoulder	8 ±0.2
Shaft CL to port side	55
Shaft CL to body side	45 max

Dimension	Value
Port A to port B	40
Ports A / B	1/2" BSP
Port flange bolts	4 × M8
Drain port	1/4" BSP
Shaft A	Ø25 +0.015/+0.002, 43 long
Shaft A key	8 × 7 × 32
Shaft C	Ø1", 43 long
Shaft C key	1/4" × 1/4" × 1 1/4"

Features

- Nine displacements from 51.7 to 386.2 cm³/rev
- 1/2" BSP ports A and B with 4-off M8 port flange holes
- 1/4" BSP drain port
- 2-hole mounting flange with Ø82.5 pilot
- Ø25 mm or Ø1" parallel keyed shaft

Ordering

- Specify the displacement (BMP50 – BMP400) and shaft option (A or C)
- The ZDQ2 disc brake flange accepts the BMP range
- See also BMR, BMM and ZBMR data sheets



C & C HYDRAULICS LTD

MOTORS & BRAKES — BMR SERIES

BMR Orbital Motor

Orbital hydraulic motor in nine sizes from BMR50 to BMR375, with a 2-hole mounting flange, 1/2" BSP ports and a choice of Ø25 mm or Ø1" parallel shaft. The BMR is also the base motor for the ZBMR motor with disc brake. Supplied by C & C Hydraulics.

9 sizes

BMR50 – BMR375

1/2" BSP

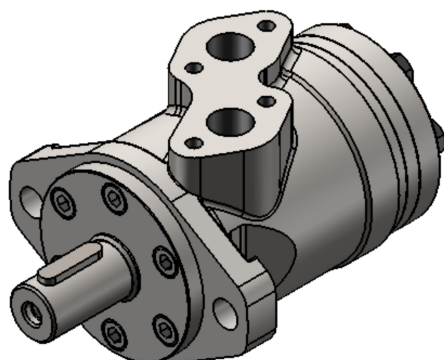
Ports A / B

Ø25 mm

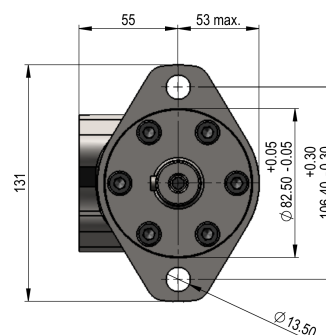
Shaft A (or Ø1" shaft C)

Ø105 mm max

Body diameter



MOUNTING FLANGE



Specification

Type	Orbital hydraulic motor
Sizes	BMR50, 80, 100, 125, 160, 200, 250, 315, 375
Ports A / B	1/2" BSP
Drain port	1/4" BSP
Mounting	2-hole flange, Ø82.5 pilot
Shaft options	A: Ø25 parallel · C: Ø1" parallel

Lengths by size (mm)

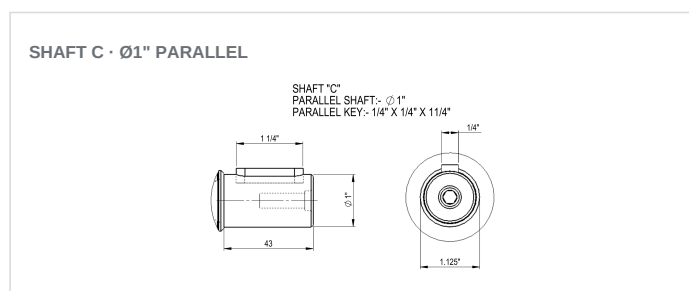
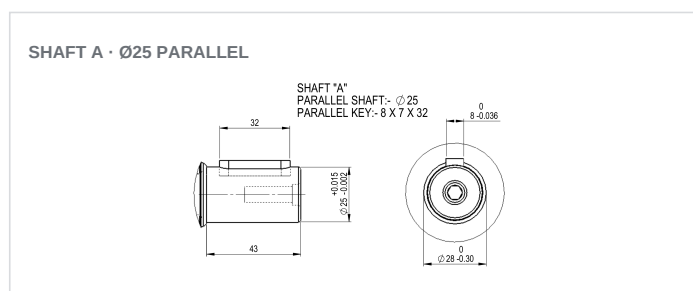
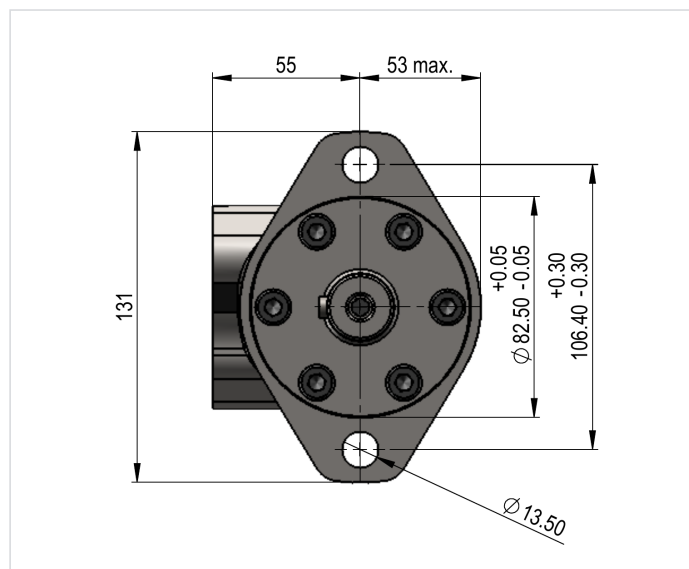
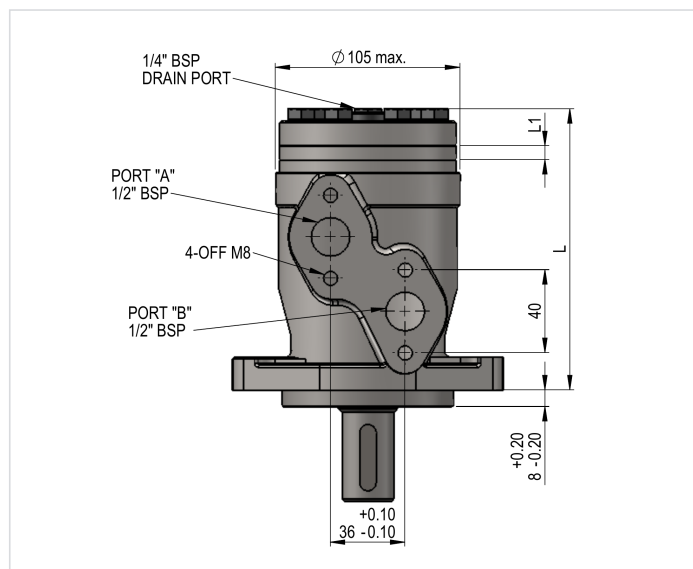
Type	BMR50	BMR80	BMR100	BMR125	BMR160	BMR200	BMR250	BMR315	BMR375
Length L mm	140	146	150	155	161.5	170	180	192	204
Length L1 mm	10	16	20	25	31.5	40	50	62	74

Note: Contact C & C Hydraulics for performance figures (speed, torque, pressure and flow) for each BMR size. Lengths L and L1 are shown on the drawing on page 2.



C & C HYDRAULICS LTD

Dimensions (mm)



Dimension	Value
Body diameter	Ø105 max
Flange height	131
Pilot diameter	Ø82.5 ±0.05
Mounting holes	Ø13.5 (2 off)
Mounting hole centres	106.4 ±0.3
Pilot to shaft shoulder	8 ±0.2
Shaft CL to port side	55
Shaft CL to body side	53 max

Dimension	Value
Port A to port B	40
Ports A / B	1/2" BSP
Port flange bolts	4 × M8
Drain port	1/4" BSP
Shaft A	Ø25 +0.015/+0.002, 43 long
Shaft A key	8 × 7 × 32
Shaft C	Ø1", 43 long
Shaft C key	1 1/4" × 1/4" × 1 1/4"

Features

- Nine sizes from BMR50 to BMR375
- 1/2" BSP ports A and B with 4-off M8 port flange holes
- 1/4" BSP drain port
- 2-hole mounting flange with Ø82.5 pilot
- Ø25 mm or Ø1" parallel keyed shaft

Ordering

- Specify the size (BMR50 – BMR375) and shaft option (A or C)
- Available with an integrated multi-disc brake as the ZBMR
- The ZDQ2 disc brake flange accepts the BMR range



C & C HYDRAULICS LTD

MOTORS & BRAKES — ZBMR SERIES

ZBMR-100 Motor with Disc Brake

BMR-100 orbital hydraulic motor with an integrated multi-disc static brake, built with a shuttle valve and hydraulic control system. 100.5 ml/rev, up to 194 Nm and 140 bar, with 250 Nm static brake torque. The brake releases at 15 – 20 bar. Supplied by C & C Hydraulics.

194 ^{Nm}

Max torque

250 ^{Nm}

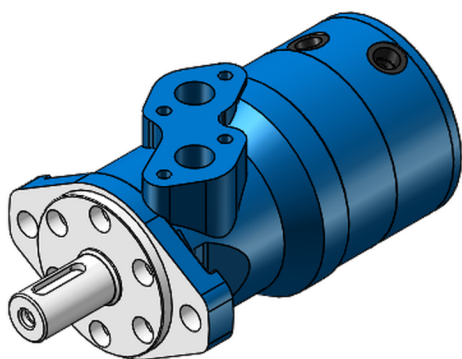
Static brake torque

140 ^{bar}

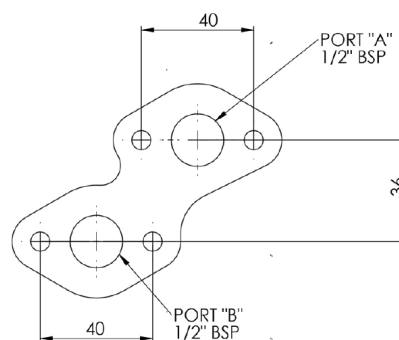
Max pressure

450 ^{rpm}

Max speed



PORT FACE



Specification

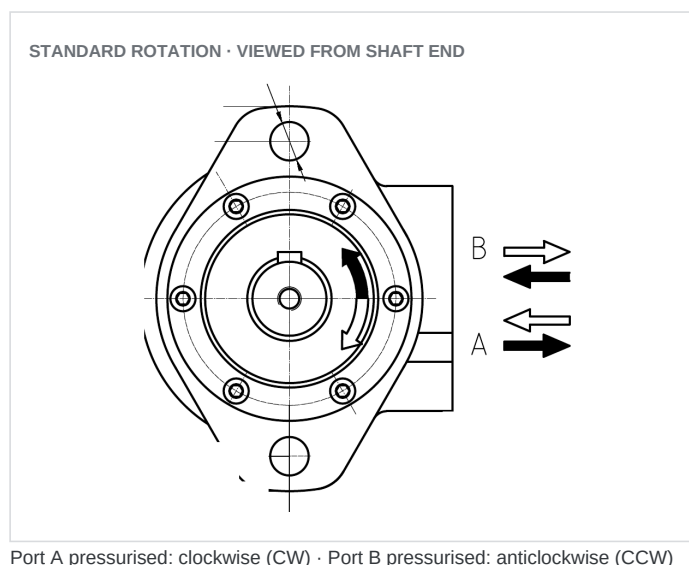
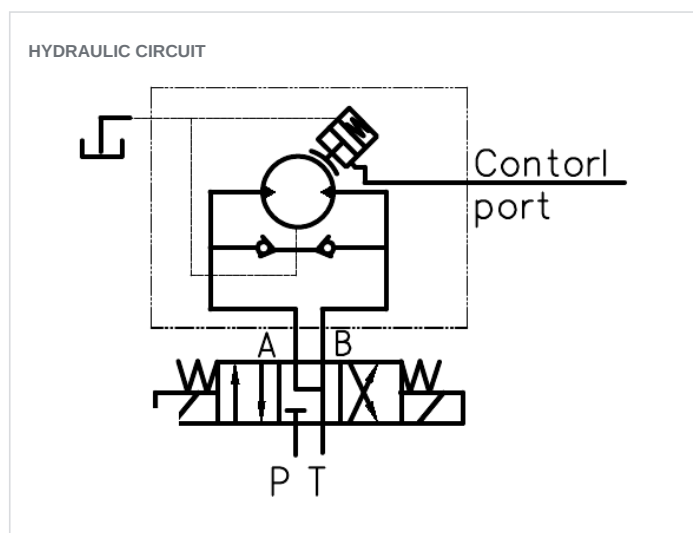
Part no.	ZBMR-100P20AIIY/T17 (UKCC)
Type	Orbital motor with multi-disc static brake
Base motor	BMR-100
Displacement	100.5 ml/rev
Max pressure	14 MPa (140 bar)
Max torque	194 Nm
Max speed	450 rpm
Static brake torque	250 Nm
Brake release pressure	1.5 – 2 MPa (15 – 20 bar)
Rotation (viewed from shaft end)	Port A pressurised: clockwise · Port B: anticlockwise
Weight	12.5 kg
Overall length	244 mm max



C & C HYDRAULICS LTD

Brake operation

- Static brake only.** The brake is a parking (holding) brake. It is not designed to stop a moving load.
- Back pressure reduces brake torque.** High back pressure lowers the holding torque, and when the motor is at rest, pressure in ports A or B can partly counteract the brake.
- Not for lifting duties.** Do not use this motor for lifting or similar duties powered by a pump. Contact C & C Hydraulics and we will recommend a suitable motor.
- Keep working pressure above release pressure.** The working pressure (pressure drop across ports A and B) must be higher than the brake release pressure of 15 – 20 bar, so the brake fully releases and does not drag.



Ports and connections

Ports A / B	2 × G1/2, 15 deep
Brake control (release) port	G1/4, 10 deep
Drain port	G1/4, 10 deep
Port flange bolts	4 × M8, 13 deep

ZBMR series

Part No.	Displacement	Max pressure	Max torque	Speed	Base motor	Weight	Length
ZBMR-80	80.5 ml/rev	140 bar	152 Nm	20–500 rpm	BMR-80	12.3 kg	240
ZBMR-100	100.5 ml/rev	140 bar	194 Nm	20–450 rpm	BMR-100	12.5 kg	244
ZBMR-315	321.5 ml/rev	90 bar	380 Nm	15–160 rpm	BMR-315	14.5 kg	282

Note: ZBMR-100 figures and dimensions from the manufacturer's drawing for ZBMR-100P20AIY/T17 (UKCC), dated April 2025. ZBMR-80 and ZBMR-315 figures from the manufacturer's ZBMR data sheet; static brake torque and release pressure for these sizes on request.



C & C HYDRAULICS LTD

Dimension schedule (mm)

Overall

Dimension	Value
Overall length (mounting face to end)	244 max
Body diameter	Ø106 max
Flange overall	131 max
Width, body to port face	108.5 max
Shaft CL to port face	55

Mounting flange

Dimension	Value
Pilot diameter	Ø82.5 -0.01/-0.04
Pilot length	8 +0.3/-0.2
Flange thickness	17 ±0.5
Mounting holes	2 × Ø13.5 ±0.2
Mounting hole PCD	Ø106.4 ±0.2

Shaft

Dimension	Value
Shaft diameter	Ø25 -0.020/-0.041
Shaft length to shoulder	43 0/-0.5
Shaft end to mounting face	54 +0.5/-1
Shoulder diameter	Ø28.5
Parallel key	8 × 7 × 32
Key position from shaft end	5
Keyway width	8 0/-0.036
Over key	28 0/-0.2
Shaft end thread	M8 × 20 deep

Ports A and B

Dimension	Value
Ports	2 × G1/2, 15 deep
Mounting face to port A	38 ±0.15
Port A to port B (axial)	36 +0.3/0
Port A below shaft CL	18 ±0.1
Port B above shaft CL	18 ±0.1
Port flange bolts	4 × M8, 13 deep
Port to bolt centres	20 ±0.3 each side

Brake control and drain

Dimension	Value
Control (brake release) port	G1/4, 10 deep
Drain port	G1/4, 10 deep
Control port to drain port (axial)	17
Drain port to body end	28

Rotation (viewed from shaft end)

Dimension	Value
Port A pressurised	Clockwise
Port B pressurised	Anticlockwise

Features

- BMR-100 orbital motor with integrated multi-disc static brake
- Shuttle valve and hydraulic brake control built in
- 2 × G1/2 ports, G1/4 brake control and drain ports
- Ø25 keyed shaft, Ø82.5 pilot, 2-hole flange

Ordering

- Part no. ZBMR-100P20AIIY/T17 (UKCC)
- Also available as ZBMR-80 and ZBMR-315 (page 2)
- Tell us the application if it involves lifting, so we can recommend the right motor



C & C HYDRAULICS LTD

MOTORS & BRAKES — ZDQ2 SERIES

ZDQ2 Disc Brake

Fail-safe disc brake that needs a pilot signal from the hydraulic system to release. The mounting flange accepts the BMP and BMR ranges of motors. Supplied dry; fill with oil after assembly with the motor. Supplied by C & C Hydraulics.

Fail-safe

Hydraulic release

113^{mm}

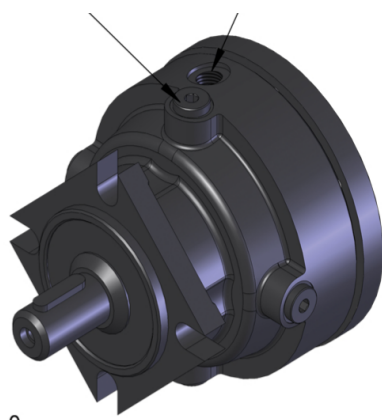
Body length

8 × M12

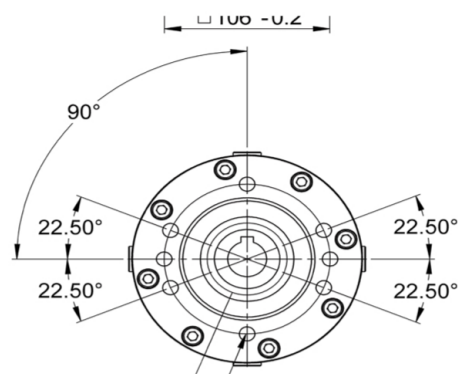
On Ø106.4 PCD

1/4" ^{BSP}

Release and drain ports



MOTOR MOUNTING FACE



Specification

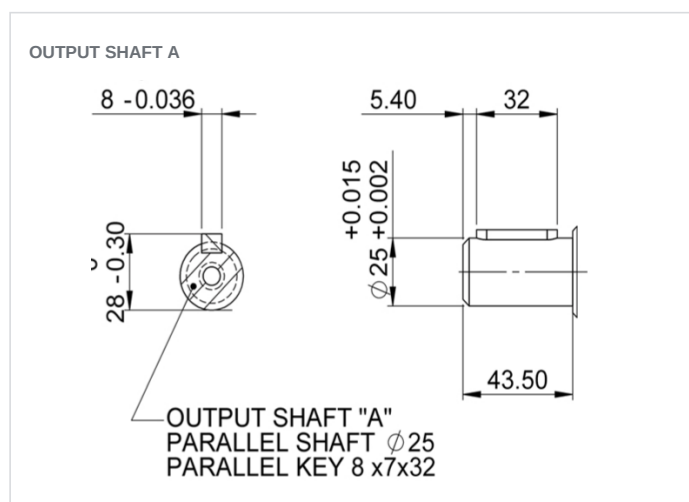
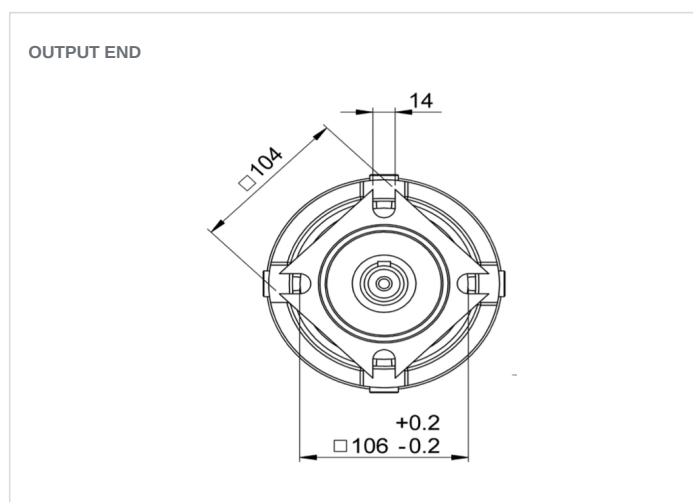
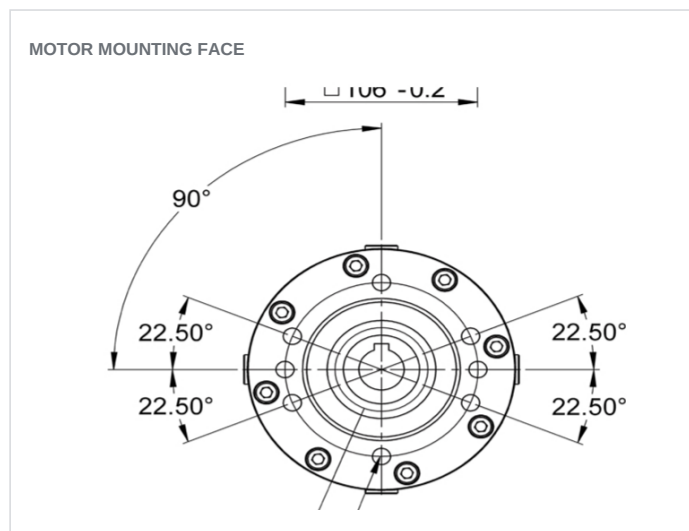
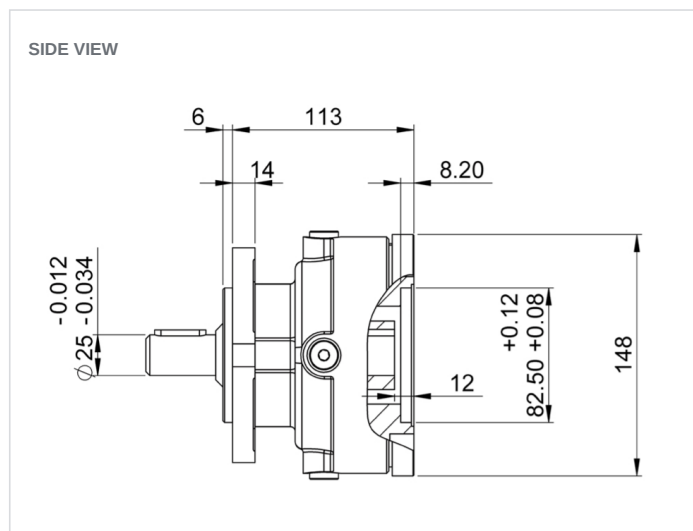
Type	Fail-safe disc brake, hydraulic release
Release	Pilot signal from the hydraulic system
Brake release port	1/4" BSP
Drain port	1/4" BSP
Compatible motors	BMP and BMR ranges
Input	Ø25 shaft hole with 8 mm keyway
Output shaft	Ø25 parallel, key 8 × 7 × 32
Motor mounting	8 × M12 holes on Ø106.4 PCD
Supplied	Dry, fill with oil after assembly with the motor

Note: Contact C & C Hydraulics for brake torque and release pressure. Applications: heavy duty machinery, off road vehicles, material handling, agriculture, mining, forestry and winches.



C & C HYDRAULICS LTD

Dimensions (mm)



Dimension	Value
Body length	113
Height	148
Square (output end)	□106 ±0.2
Across flats	□104
Motor pilot recess	Ø82.5 +0.12/+0.08
Motor mounting holes	8 × M12 on Ø106.4 PCD
Input shaft hole	Ø25 +0.06/+0.02

Features

- Fail-safe: the brake holds until a pilot signal releases it
- Mounting flange accepts BMP and BMR motors
- 1/4" BSP brake release and drain ports

Dimension	Value
Input keyway	8 +0.05/+0.02
Input hole over keyway	28.3 +0.2
Output shaft	Ø25
Output key	8 × 7 × 32
Output shaft length	43.5
Over key	28 -0.3
Ports	1/4" BSP release and drain

Installation

- Supplied dry; fill with oil after assembling with the motor
- Connect the brake release port to a pilot signal from the hydraulic system