## Series Technical Catalogue

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intermot

ц.,

Hydrostatic Balance Motor with Rotary Distribution Disc

# F SERIES HYDRAULIC MOTOR

#### **PRODUCT FEATURE**

The latest version of F series hydraulic motors represent not only the outstanding experience in the design and manufacturing capability of Intermot, but also absorb the advantages of crankshaft connecting-rod type hydraulic motor both home and abroad. The design has a series of characteristics, including ideal reliability, high efficiency, rigid service life, low noise and wide speed range , and a wide range of applications in mechanical hydraulic transmission systems, such as, marine, shipbuilding, mining, construction and metallurgy, petroleum, coal mine, geological drilling, injection molding industries. Main features include:

1. F series hydraulic motor is designed as a hydro-statically balanced structure between connecting rods and crankshaft. The friction pair gets better lubrication and therefore helps release of the stress of the shaft.

2. Due to the reduction of frictional power and heat loss, mechanical efficiency and startup efficiency of the motor improve, so as the the working pressure of the motor.

3. The crankshaft of F series motor adopts separated structure to enhance the service life characteristics of the crankshaft.

4. The key parts of this series motors are made of special materials and involve special heat treatment processes to effectively improve the rigidity of the motor.

5. The dimensions and performance parameters of this series motor are consistent with the HMB series motors of Staffa and are replaceable with the imported products.

#### INTRODUCTION OF DESIGN Refer to NHM series Page A02

#### CALCULATIONS & FORMULAS Refer to NHM series Page A02

#### **INSTRUCTIONS & ADVICES**

ORDERING CODE

In addition to the reference to NHM series motor (  ${\tt PageA02}$  ) , please pay attention to the following issues:

1. As the F series motors adopt a hydrostatically-balanced structure to increase the leakage of the motor, ensure the inner diameter of the drain pipe must not be less than 16 mm when it is connected with the external drain pipe, otherwise, the oil seal could be impacted or damaged. When connecting the tie-in of the drain port, do not over-screw in to avoid damage of the parts.



Unless specified on order, the standard configuration applies (see installation connection dimension drawing of various series of motors). In case of special

1. a represents the spline output shaft, and the footnote numbers indicate the installation dimensions of the corresponding models of other brands are

2. B represents the parallel key shaft is the same as HMB series of UK Staffa, and the footnote numbers indicate the installation dimensions of the correspond-

requirements, please indicate in the order or consult our engineer.

F series Identifier (crankshaft connecting rod low-speed high-torque

ing models of other brands are the same (with flange).

F50

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10)

hydraulic

Serial Code

Output shaft

the same (with flange)

Nominal displacement (ml/r)

E02

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### F50-3150~5300 INSTALLATION DIMENSIONS



Standard Parallel Key : F50-\*\*B







#### **TECHNICAL PERFORMANCE PARAMETERS**

Туре	Displacement (ml/r)	Rated Pressure (MPa)	Max. Pressure (MPa)	Rated Torque (N.m)	Unit Torque (N.m/MPa)	Speed (r/min)	Weight (kg)
F50-3150	3290	20	25	9730	486	8-125	450
F50-3500	3517	20	25	10401	520	8-125	450
F50-4000	3971	20	25	11743	587	8-125	450
F50-4300	4311	20	25	12749	637	8-100	450
F50-4500	4538	20	25	13420	671	8-100	450
F50-5000	5048	20	25	14930	746	8-100	450
F50-5300	5309	20	25	15701	785	8-100	450

The above data are measured and obtained under specific actual experimental conditions, and only for product description purposes. The data should not be interpreted as warranted characteristics in legal term. Ningbo intermot(Ningbo Oil Control Hydraulic Co. Ltd.) reserves the rights to implement modifications without notice. All Partial or total reproduction and copy of such data without formal authorization is strictly forbidden.

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ø140f7 ø180 ø278

#### <u>4-M16</u> Depth 32 <u>5-ø21</u> EQS 62 ø38 <u>G3/4'</u> Mounting Surface Drain port 36.7 R121 A or B Oil Inlet ø425 Ø470 38, 116 37 10 37 C Oil Inlet A 16 113 12.5 <u>8-M16</u> 69 Depth 32 22 ø419±0. 85.5 35 2-ø38 335.5 36.7 595 41.5 Standard Parallel Key: F68-\*\*B F68-\*\*I F68-\*\*A1 Mounting Surface Mounting Surface Mounting Surface 10-82b12×92b12×12f8 10-82H11×92H11×12D9 4 Thick 114 24h9 A20X30

#### F68-6000~6800/F80-8000 INSTALLATION DIMENSIONS

#### **TECHNICAL PERFORMANCE PARAMETERS**

Туре	Displacement (ml/r)	Rated Pressure (MPa)	Max. Pressure (MPa)	Rated Torque (N.m)	Unit Torque (N.m/MPa)	Speed (r/min)	Weight (kg)
F68-6000	6158	20	25	17625	881	8-120	520
F68-6800	6807	20	25	19481	974	8-120	520
F80-8000	8066	20	25	23085	1154	8-100	530

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F100-9000~12600 INSTALLATION DIMENSIONS



#### **TECHNICAL PERFORMANCE PARAMETERS**

Туре	Displacement (ml/r)	Rated Pressure (MPa)	Max. Pressure (MPa)	Rated Torque (N.m)	Unit Torque (N.m/MPa)	Speed (r/min)	Weight (kg)
F100-9000	9082	20	25	25992	1300	8-100	1000
F100-10000	10004	20	25	29587	1479	8-100	1000
F100-11600	11590	20	25	33171	1659	8-100	1000
F100-12600	12599	20	25	37261	1863	8-100	1000

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