GM5

一、概述 Description

GM5系列高压齿轮马达为三片式结构，主要由前盖、中间体、后盖及齿轮组成。前后盖内各压装两个DU轴承。后盖内装有压力板，可进行轴向压力补偿和径向压力平衡，大大提高了齿轮马达的性能指标。

GM5系列可以提供不带前轴承的单、双旋向齿轮马达和带前轴承的单、双旋向齿轮马达四种结构型式。其中带前轴承的齿轮马达可承受一定的轴向力和径向力。

GM5系列齿轮马达可以提供各种符合SAE和国家标准的法兰、轴伸、进出油口连接型式。

GM5系列齿轮马达广泛适用于汽车、拖拉机、工程机械及其他机械液压系统。

High pressure gear motor series GM5 is three section structure,mainly composed of front and rear cover,body, gear,Du bearing in front and rear cover,pressure plate in rear cover realize axial pressure compensation and radial pressure balance,which largely improves the performance of the motor.

Series GM5 have four Structure styles,single or double rotation motors without front bearing and single or double rotation motors with front bearing. Gear motor with front bearing is recommeded for application where radial shaft loads are present.

GM5 May provide various kind of mounting flanges shaft ends,inlet and outlet connection styles according with SAE and chinese standards.

GM5 is broadly applied in the hydraulic systems of auto mobile, tractors. construct machinery and other machines.

二、型号说明 Model instruction

$$\frac{GM}{①}\ \frac{5-}{②}\ \frac{**}{③}\ -\ \frac{*}{④}\ \frac{*}{⑤}\ \frac{(*)**}{⑥}\ \frac{*}{⑦}\ \frac{-20}{⑧}-\ \frac{*}{⑨}$$

①、齿轮马达
②、结构代号
③、公称排量：（ml/r）
5、6、8、10、12、16、20、25
④、安装法兰型式
A: 菱型法兰，止口 ϕ82.55(符合SAE 标准)
1: 菱型法兰，止口 ϕ80
⑤、传动轴支承：
无：不带前轴承
F ：带前轴承
⑥、 轴伸型式
13: 平键圆柱轴伸 ϕ19.05
15: SAE渐开线花键轴伸DP16/32 9齿
E13: 平键圆柱轴伸 ϕ18
H15: 渐开线花键轴伸EXT12Z×1.5m×30p×5d GB3478.1–83
S16: 半圆键圆锥轴伸1:5Z4
S17: 平键圆锥轴伸1:10Z4
⑦、进出油口连接型式
F: 法兰连接
S:公制螺纹连接
R:管螺纹连接
R1:管螺纹连接 (用于双旋向油口 R3/4)
⑧、设计编号
⑨、旋向(从轴端看)
L:左旋(逆时针)
R:右旋(顺时针)
无:双旋向

①、gear motor
②、frame size
③、nominal displacement
④、mounting flange style
A:Rhombic,spigot ϕ82.55(standard SAE)
1:Rhombic,spigot ϕ80
⑤、transmission shaft bearing
none:without front bearing
F:with front bearing
⑥、 shaft end
13:straight keyed shaft ϕ19.05
15:SAE involute spline DP 16/32 9–teeth
E13:straight keyed shaft ϕ18
H15:involute splined shaft EXT12Z×1.5m×30p×5d GB3478.1–83
S16:semicircular splined cone 1:5Z4
S17:straight keyed splined cone 1:10Z4
⑦、outlet and inlet connection style
F:flange connection
S:Metric thread
R:Pipe thread
R1: pipe thread (for double direction,port R3/4)
⑧、design number
⑨、direction of rotation (looking onto from shaft end)
L: counter clockwise
R: clockwise
None: double direction

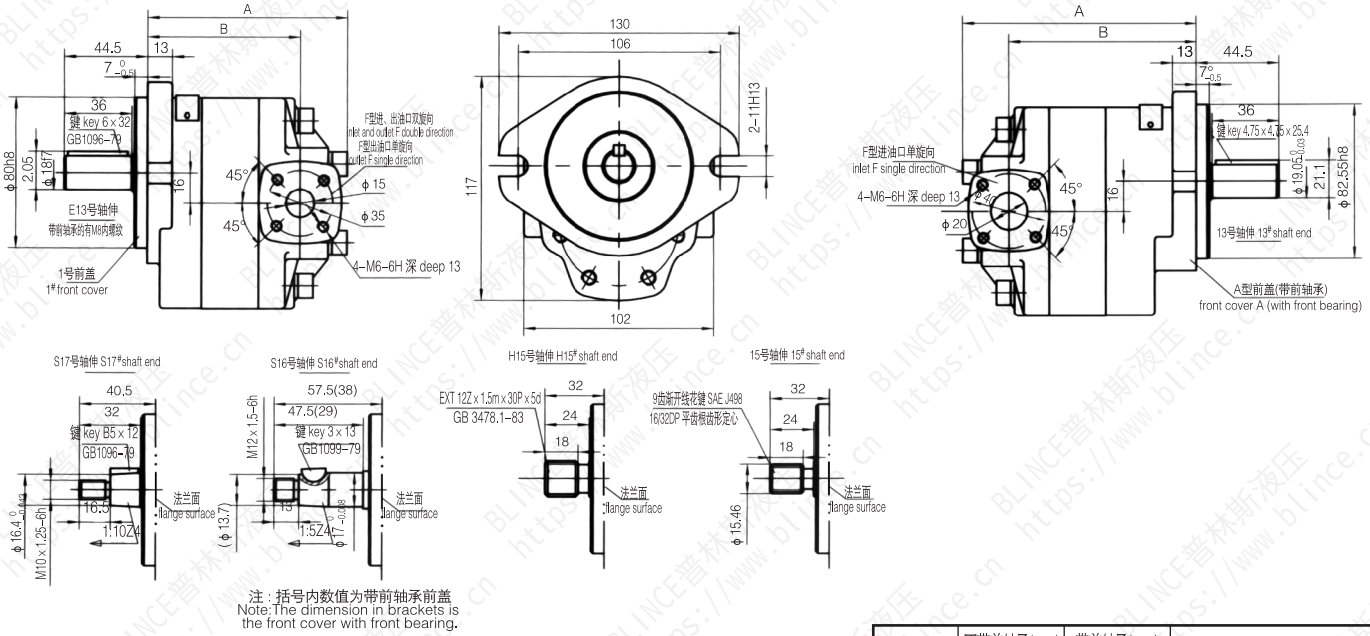
三、性能参数及尺寸 Specifications and Application Data

型号 Models	理论排量 theoretic displacement ml/r	额定压力 rated pressure MPa		额定转速 Rated speed (r/min)	最低转速 Min speed(r/min)		理论扭矩(N·M)(额定压力下) theoretil torque(under rated pressure)		质量Mass(Kg)	
		单旋向 Single direction	双旋向 Double direction		单旋向 Single direction	双旋向 Double direction	单旋向 Single direction	双旋向 Double direction	带前轴承 With front bearing	不带前轴承 Without front bearing
GM5-5	5.2	20	20	4000	900	800	16.5	16.5	2.6	1.9
GM5-6	6.4	25	21		1000	700	25.5	21.4	2.7	2.0
GM5-8	8.1					650	32.2	27.1	2.8	2.1
GM5-10	10.0					600	39.8	33.4	2.9	2.2
GM5-12	12.6			3600	900	550	50.1	42.1	3.0	2.3
GM5-16	15.9			3300		500	63.3	53.2	3.1	2.4
GM5-20	19.9	20	20	3100	750		63.4	63.4	3.2	2.5
GM5-25	25.0	16	16	2800	600		63.7	63.7	3.4	2.7

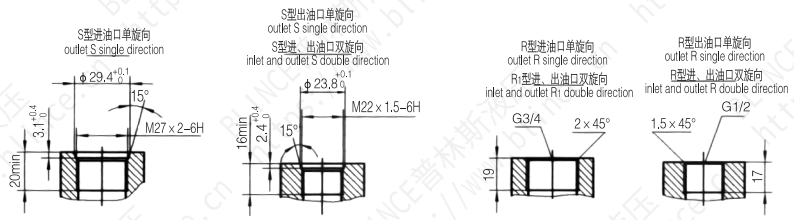
注：1、外泄油口最高工作压力（单旋向齿轮马达为出油口最高工作压力）
连续工作：0.6MPa
间歇工作：1MPa
2、进、出油口压力差最小为4MPa

Note: 1. The max pressure of drain port (for single direction gear motor is the max pressure of outlet)
continual: 0.6MPa
Interval: 1MPa
2. The minimum pressure between outlet and inlet is 4 MPa

四、安装与连接 Mounting and Connection



注：括号内数值为带前轴承前盖
Note:The dimension in brackets is the front cover with front bearing.



型号 Model	不带前轴承(mm) without from bearing (mm)		带前轴承(mm) with from bearing (mm)		双旋向进、出油口尺寸 outlet and inlet dimension of double direction			
	A	B	A	B	F	S	R	R_1
GM5-5	84.0	59.0	112.0	87.0	Φ15	M22×1.5	G1/2	G3/4
GM5-6	86.0	61.0	114.0	89.0				
GM5-8	88.5	63.5	116.5	91.5				
GM5-10	91.5	66.5	119.5	94.5				
GM5-12	95.5	70.5	123.5	98.5				
GM5-16	100.5	75.5	128.5	103.5				
GM5-20	106.5	81.5	134.5	109.5				
GM5-25	114.5	89.5	142.5	117.5				