



BRAND PICTURE ALBUM

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产品手册

PRODUCT MANUAL

DIRECTORY CONTENT

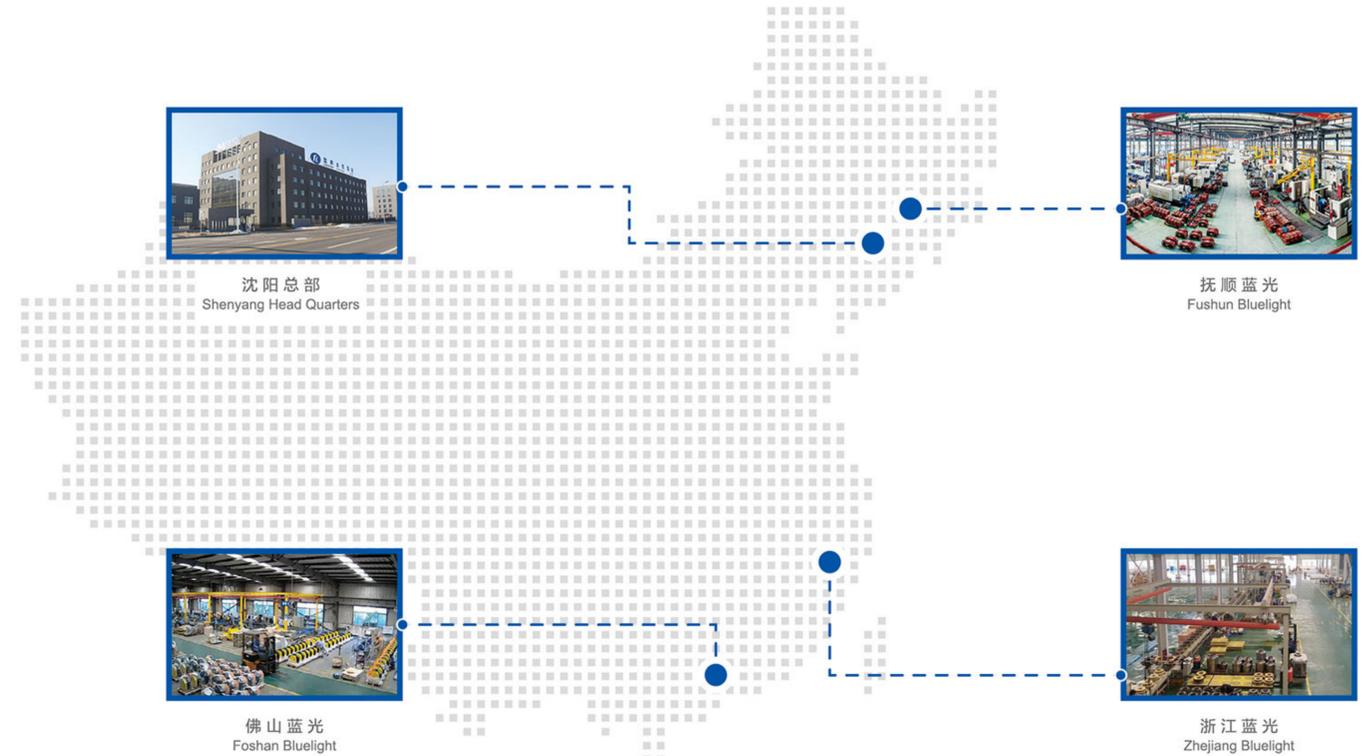
Product introduction 产品简介

目前油田领域，抽油机设备中主要以塔架式抽油机、游梁式抽油机应用最为广泛，但普遍存在耗能高、效率低、维护困难等问题，我公司依靠三十年专业永磁同步电机技术研发优势，有针对性的先后开发了 BLM 外转子系列曳引型油田电机、BLM 内转子系列曳引型油田电机、BLM 内转子系列超薄型半直驱油田电机等系列产品，实现直驱、半直驱，同时具有节能、可靠性高，故障率低、低速大扭矩等优点，有效提高采油效率，降低能耗、降低维护成本，非常适合油田采油设备的升级换代，同时为使用方带来可观的经济效益。

At present, in the field of oilfields, tower pumping units and beam pumping units are the most widely used in pumping unit equipment, but there are widespread problems such as high energy consumption, low efficiency and difficult maintenance. Our company relies on 30 years of professionalism. Advantages of research and development of permanent magnet synchronous motor technology, targeted development of BLM outer rotor series traction type oil field motor, BLM inner rotor series traction type oil field motor, BLM inner rotor series ultra-thin semi-direct drive oil field motor and other products, It realizes direct drive and semi-direct drive, and has the advantages of energy saving, high reliability, low failure rate, low speed and high torque, effectively improving oil recovery efficiency, reducing energy consumption and reducing maintenance cost. It is very suitable for the upgrading of oilfield oil production equipment. The user brings considerable economic benefits.

NO.1	BLM 内转子系列通用型油田电机	1-2/P
NO.2	BLM 内转子系列曳引型油田电机	3-4/P
NO.3	BLM 内转子系列超薄型半直驱油田电机	5-6/P
NO.4	BLM 外转子系列曳引型油田电机	7-8/P
NO.5	各领域产品 & 专利	9-10/P

企业简介 Company profile ENTERPRISE INTRODUCTION



沈阳蓝光永磁电机技术有限公司成立于1989年，是专业研究制造永磁同步电机系列产品的国家级高新技术企业、市级企业技术中心、ISO9001认证企业，从事永磁电机自主研发生产30年。沈阳蓝光永磁电机技术有限公司总部设在沈阳，在沈阳设有研发、制造基地，在广东佛山及浙江湖州均建有生产基地，具备年产各种用途的永磁同步电机60000台的生产能力，总产能100万千瓦以上。沈阳蓝光永磁电机技术有限公司在永磁电机方面取得近三十项自主知识产权。其中在低速大转矩永磁同步电机直驱技术应用方面持续创新突破，产品输出转矩可覆盖40000牛米以下，提高运行效率，可节能（15%—50%）。沈阳蓝光永磁电机技术有限公司永磁电机产品领域多元化。涉及高精度机床转台、机床直驱电主轴、矿山机戒、油田、天药、食品设备、新能源汽车及自动化注塑等行业。企业承担国家火炬计划项目，国家重点新产品项目，国家创新基金计划项目，市科技计划项目。曾经获得国家第十三届发明展览会银奖、辽宁省科技进步奖科技成果转化奖、沈阳市科技进步奖等荣誉。目前为止，沈阳蓝光永磁电机技术有限公司主要永磁电机产品在全国各地广泛使用，部分产品远销欧洲、美洲、韩国、日本、台湾、中东、东南亚等国家和地区。

Shenyang Blue Light Permanent Magnet Motor Technology Co., Ltd. was established in 1989. It is a national high-tech enterprise, municipal enterprise technology center, and ISO9001 certified enterprise specializing in the research and manufacturing of permanent magnet synchronous motor series products. It has been engaged in independent research and development and production of permanent magnet motors for 30 years. Shenyang Blue Light Permanent Magnet Motor Technology Co., Ltd. is headquartered in Shenyang and has research and development and manufacturing bases in Shenyang. It has production bases in Foshan, Guangdong and Huzhou, Zhejiang, with an annual production capacity of 60000 permanent magnet synchronous motors for various purposes, with a total production capacity of over 1 million kilowatts. Shenyang Blue Light Permanent Magnet Motor Technology Co., Ltd. has obtained nearly 30 independent intellectual property rights in the field of permanent magnet motors. Among them, continuous innovation and breakthroughs have been made in the application of low-speed and high torque permanent magnet synchronous motor direct drive technology. The product can cover an output torque of less than 40000 Nm, improve operating efficiency, and save energy (15% -50%). Shenyang Blue Light Permanent Magnet Motor Technology Co., Ltd. diversifies its permanent magnet motor product field. It involves industries such as high-precision machine tool turntables, machine tool direct drive electric spindles, mining machinery rings, oil fields, Tianyao, food equipment, new energy vehicles, and automated injection molding. Enterprises undertake national torch program projects, national key new product projects, national innovation fund program projects, and municipal science and technology program projects. He has won honors such as the Silver Award at the 13th National Invention Exhibition, the Liaoning Provincial Science and Technology Progress Award for Science and Technology Achievement Transformation, and the Shenyang Science and Technology Progress Award. So far, Shenyang Blue Light Permanent Magnet Motor Technology Co., Ltd.'s main permanent magnet motor products are widely used throughout the country, with some products exported to countries and regions such as Europe, the Americas, South Korea, Japan, Taiwan, the Middle East, and Southeast Asia.

BLM系列 高效永磁电动机

BLM Series High Efficiency Permanent Magnet Motor

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产品介绍 Product introduction

众所周知，电动机是将电能转化为机械能的机械，而这种能量的转换，必须以磁场为平台。在同样负载条件下，永磁同步电动机与异步电动机相比，减少了定子电流和定子铜损耗。由于稀土永磁电动机以同步转速运转，定子转子间无滑差，在稳定运行时没有转子铜耗，基于稀土永磁电动机不需要无功励磁电流。所以可显著提高功率因数至极限值（1.0）；由于稀土永磁电动机各项损耗的减小，其效率得以明显的提高，与同规格异步电动机相比，效率可提高4-8个百分点；而且永磁同步电动机在20%-120%额定负载范围内可保持较高的效率和功率因数；使轻载时节能更为显著。

在多工程实践基础上，本公司设计、研制和生产了BLM系列三相稀土永磁同步电动机。可广泛用于驱动各类通信设备，如水泵、风机、压缩机、纺织机械、金属拉丝、搅拌机、各类轻工设备，也可适用于石油、化工、医药、水泥、矿山、船舶等环境有特殊要求的行业。

应用实践证明，采用BLM系列三相稀土永磁同步电动机，能适应多种负载工况要求，有明显的节能效果，运行可靠安全、替代成本低、投资回收期短，得到了国家“电机系统节能工程”的推荐。

4~8%

效率提升百分点

20%

额定负载范围最低

150%

额定负载范围最高



技术优势 Technical advantages

永磁同步电动机直接驱动技术是当前人们公认的最有发展前景的驱动技术，同传统的异步电动机+减速机驱动结束相比，具有许多明显的优点：

1、节能。同传统异步电动机+减速机驱动技术相比，可节电15%-40%。

(1) 无齿轮永磁同步电动机效率和功率因数高。

传统异步电机的气隙磁场是由定子电流产生的，这部分电流约为异步电机额定电流的10%-35%，由于这部分电流的存在使得异步电动机的效率和功率因数较低。永磁同步电动机气隙磁场不再由定子电流建立，而是由高效的永磁体系形成，这使得永磁同步电动机在额定点时的效率比异步电机高5-10个百分点。轻载时，异步电机的效率和功率因数急剧变坏，而永磁同步电动机在低速和轻载时依然保持较高的效率和功率因数，此时永磁同步电动机的效率和功率因数比异步电动机高更多。

(2) 取消减速机构，提高系统效率。

无齿轮永磁同步电动机可在低速时具有很大的转矩，取消了减速机构，这使得系统的效率可再提高10个百分点以上。

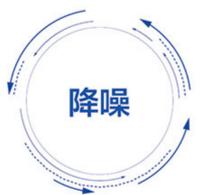
2、免维护。传统的异步电机+减速机结构，系统复杂，故障率高，减速机需要定期润滑维护，维护量大，维护费用高，且一旦维护将面临停产的问题。无齿轮永磁同步电动机具有结构简单，运行可靠，安装方便，无需维护的特点。

3、清洁环保。传统的异步电机+减速机驱动系统，减速机需要定期润滑维护，给制药生产环节带来诸多不便，存在药品污染的潜在风险，同时带来环境的油气污染等问题。永磁同步电动机具有无需维护的特点，清洁绿色环保。

4、智能化。永磁同步电动机由变频控制系统进行控制，可实现无极级调速运行，提高生产效率的同时，配以智能化终端，可实现实时在线监测，实现智能化工厂。

5、节省无功补偿设备的购置及维护费用，节省无功电费。永磁同步电动机在任何负载下的功率因数均能达到0.9以上，可以大大减少从电网吸收无功，节省无功补偿设备的购置及维护费用，改善了电网质量，节省了无功电费。

6、振动小、噪音低。传统的异步电机+减速机结构，异步电机转速高，振动噪音大，加上减速机的振动和噪音使得系统振动噪音更大。永磁同步电动机直接驱动系统低速运行平稳，振动小，噪声低。



型号说明 Model description

BLM OIT/OT - 40 - D460 - N70

行业代号 沈阳蓝光永磁同步电动机	OIT内转子 Inner rotor OT外转子 Outer rotor	转矩 Torque 4000N.m	曳引轮直径 Diameter of traction wheel 460mm	额定转速 Rated speed 70rpm
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B-TYPE SERISE GENERATOR

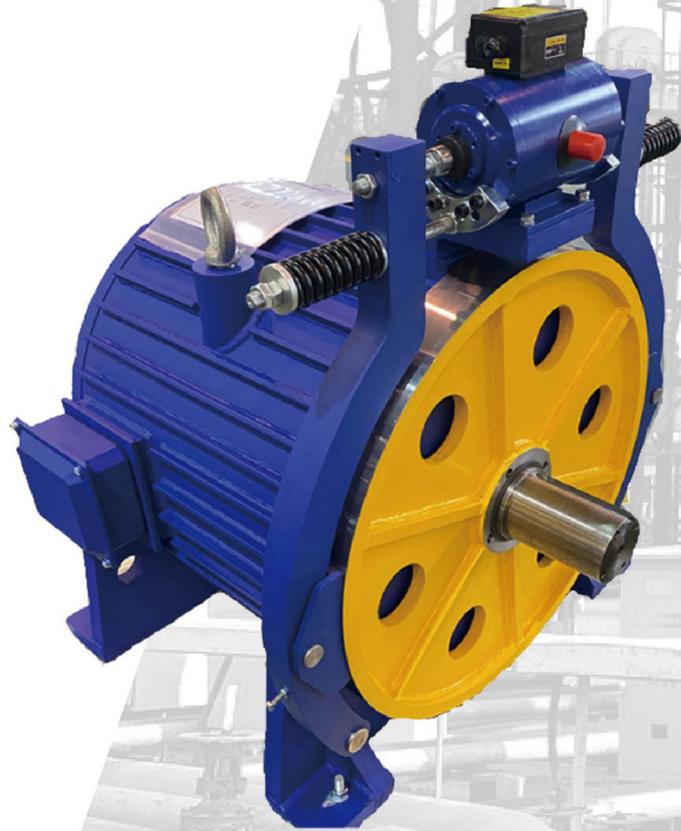
BLM

内转子系列通用型油田电机

BLM Internal rotor series universal oilfield motor

BLM内转子系列通用型油田电机，主要作为各型号塔架式抽油机，游梁式抽油机，超长冲程型抽油机的直驱/半直驱的动力源。采用内转子结构，具有较高防护性能，适合在密封性要求较高以及更加恶劣的环境中。为满足客户需求，支持多样化定制。

The internal rotor series universal oilfield motor is mainly used as the power source for direct/semi direct drive of various types of tower type pumping units, beam type pumping units, and ultra long stroke pumping units. Adopting inner rotor structure, it has high protective performance and is suitable for environments with high sealing requirements and even more harsh conditions. To meet customer needs, support diversified customization.



Features 产品特点

- 采用内转子结构，具有较高的防护性能，适合在密封性要求较高以及更加恶劣的环境中。
- 增加制动器设计，驱动与制动一体。
- 直驱/半直驱通用性强，使用灵活，提高运行效率，减少占地空间。
- 运行平稳，振动小，噪声低。

- Adopting inner rotor structure, it has high protective performance and is suitable for environments with high sealing requirements and even more harsh conditions.
- Increase brake design, integrating drive and braking.
- Direct/semi direct drive has strong versatility, flexible use, improves operational efficiency, and reduces space.
- Smooth operation, low vibration, low noise.

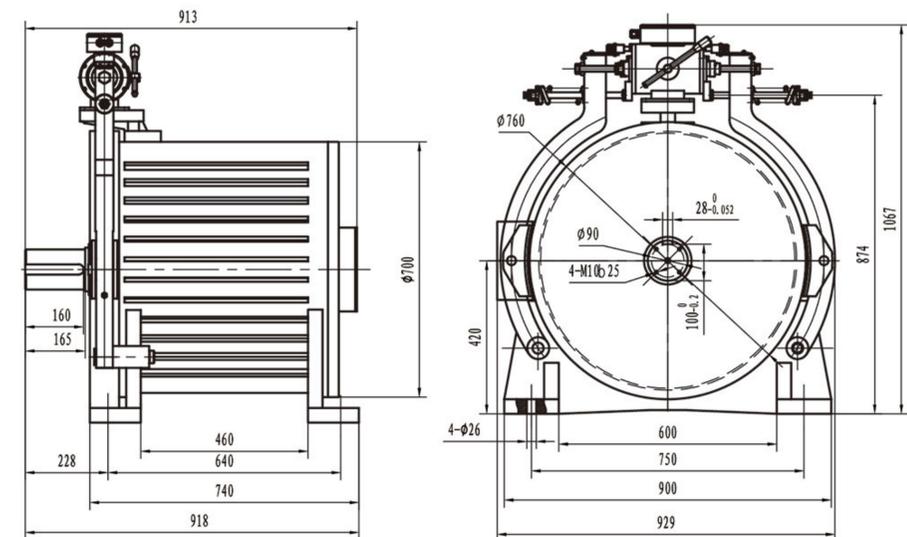
Product Parameters 产品参数

型号	额定电压V	额定电流A	额定转矩N.m	额定功率KW	额定转速rpm	防护等级	工作制	绝缘等级
BLM-OIT20N250	380	93	2000	52	250	IP54/55	S1	F/H
BLM-OIT22N250	380	102	2200	58	250	IP54/55	S1	F/H
BLM-OIT25N250	380	117	2500	65	250	IP54/55	S1	F/H
BLM-OIT28N250	380	130	2800	73	250	IP54/55	S1	F/H
BLM-OIT30N250	380	140	3000	78	250	IP54/55	S1	F/H
BLM-OIT32N250	380	150	3200	84	250	IP54/55	S1	F/H
BLM-OIT35N250	380	163	3500	92	250	IP54/55	S1	F/H
BLM-OIT38N250	380	177	3800	100	250	IP54/55	S1	F/H
BLM-OIT40N250	380	186	4000	105	250	IP54/55	S1	F/H

Field Application 现场应用



Outline Drawing 外形尺寸



B-TYPE SERISE GENERATOR

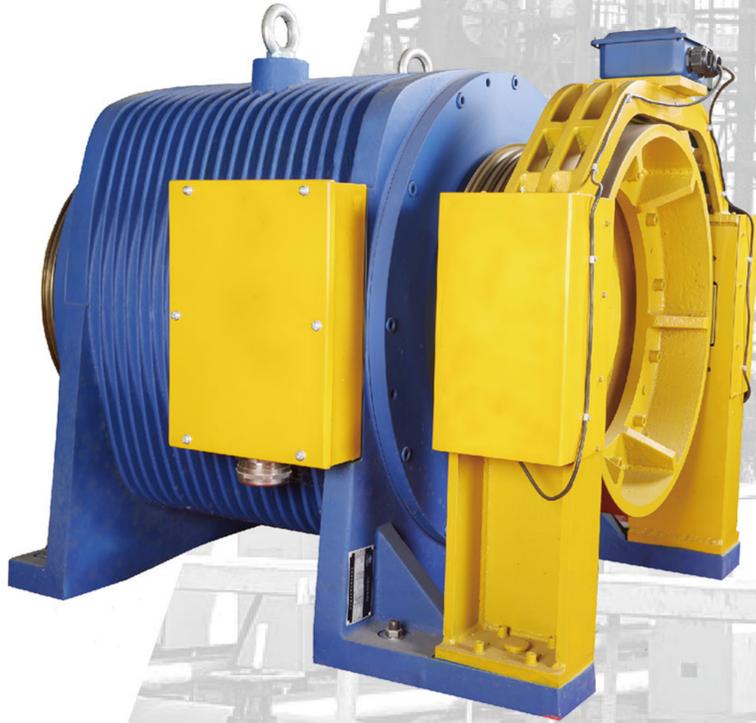
BLM

内转子系列曳引型油田电机

BLM inner rotor series traction type oilfield motor

BLM内转子系列曳引型油田电机，主要应用于塔架式抽油机，采用内转子结构，具有较高的防护性能，适合在对密封性要求较高以及更加恶劣的环境中，增加制动器设计，满足客户多样化定制需求，同时为了适应全球市场，额定电压分为380V、480V，最大额定转矩可达7500Nm。

BLM inner rotor series traction type oilfield motor, mainly used in tower type pumping unit, adopts inner rotor structure, has high protection performance, and is suitable for adding brake design in environments with high sealing requirements and more severe environments. To meet the diversified customization needs of customers, and in order to adapt to the global market, the rated voltage is divided into 380V, 480V, and the maximum rated torque can reach 7500Nm.



Features 产品特点

- 采用内转子结构，具有较高的防护性能（IP54），适合应用在对密封性要求较高以及更加恶劣的环境中。
- 对电磁和结构参数进行了精确优化，效率高，动态性能好。
- 搭载了全新的制动系统，采用模块化设计解决客户自行增加制动器，存在的兼容性差、调闸困难、布局浪费等问题，从而达到占地空间小，性价比高的诸多优点。
- 取代抽油机减速机构，直接驱动抽油杆和对重往复运动进行抽油，提高运行效率，减少占地空间。
- 运行平稳、振动小，噪声低、可靠性高。

- The inner rotor structure has high protection performance (IP54), which is suitable for applications with high sealing requirements and harsher environments.
- Accurate optimization of electromagnetic and structural parameters with high efficiency. Accurate optimization of electromagnetic and structural parameters with high efficiency.
- Equipped with a new brake system, the modular design solves the problem of customers adding brakes themselves, such as poor compatibility, difficulty in switching, and waste of layout, thus achieving many advantages such as small footprint and high cost performance.
- Replace the pumping unit speed reduction mechanism, directly drive the sucker rod and pump the counterweight reciprocating motion to improve the operating efficiency, save energy and reduce the floor space.
- Smooth operation, low vibration, low noise and high reliability.

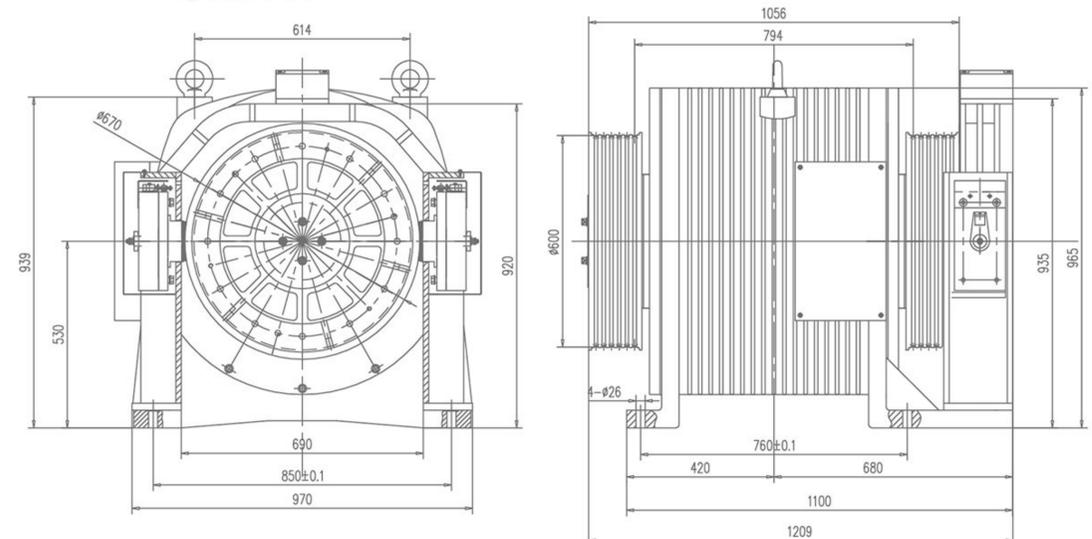
- Product Parameters 产品参数

型号	额定电压V	额定转矩N.m	额定转速rpm	曳引轮直径mm	槽型	槽数	槽宽mm	β角	γ角	钢丝绳直径mm	最大轴负荷T	防护等级	工作制	绝缘等级
BLM-OIT40D460N070A0	380	4000	70	460	U	6	22	80	30	10	20	IP54	S7	F
BLM-OIT45D520N120A0	380	4500	120	520	U	6	22	40	30	10	20	IP54	S7	F
BLM-OIT45D520N120A1	380	4500	120	520	U	6	22	80	30	10	20	IP54	S7	F
BLM-OIT45D520N120A0	480	4500	120	520	U	6	22	40	30	10	20	IP54	S7	F
BLM-OIT45D520N120A1	480	4500	120	520	U	6	22	80	30	10	20	IP54	S7	F
BLM-OIT45D520N070A0	380	4500	70	520	U	6	22	80	30	10	20	IP54	S7	F
BLM-OIT60D520N120A1	380	6000	120	520	U	6	22	80	30	10	20	IP54	S7	F
BLM-OIT75D600N120A0	380	7500	120	600	U	6	22	95	30	13	30	IP54	S7	F
BLM-OIT75D600N120A0	480	7500	120	600	U	6	22	95	30	13	30	IP54	S7	F

- Field Application 现场应用



- Outline Drawing 外形尺寸



B-TYPE SERISE GENERATOR

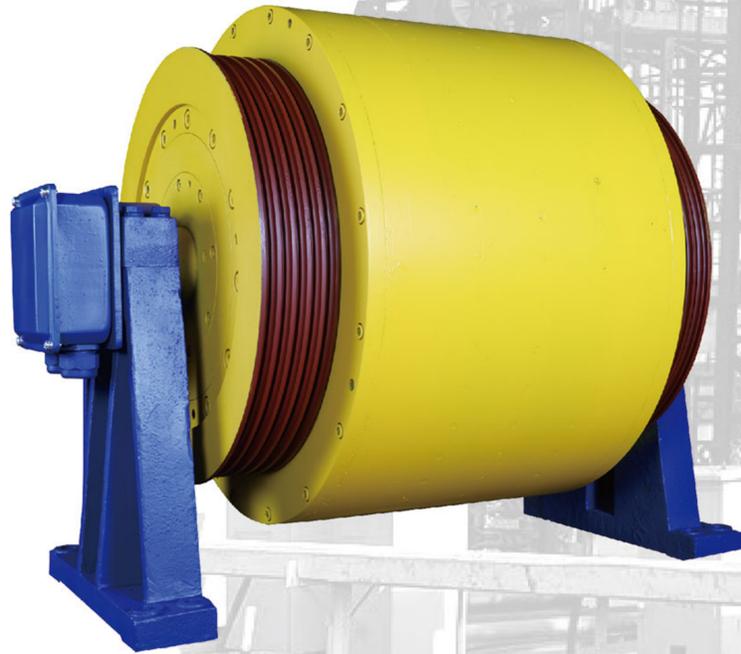
BLM

外转子系列曳引型油田电机

BLM outer rotor series traction type oilfield motor

BLM外转子系列曳引型油田电机，主要应用于塔架式抽油机，取消复杂的减速机构，降低维护成本，实现直驱，提高效率，采用外转子结构，结构紧凑，减少占地空间，最大限度的提高了输出转矩，目前我公司标准产品覆盖在额定转矩3000Nm~6000Nm之间。

BLM outer rotor series traction type oilfield motor, mainly used in tower type pumping unit, eliminating complicated speed reduction mechanism, reducing maintenance cost, realizing direct drive, improving efficiency, adopting outer rotor structure, compact structure and reducing floor space. The output torque is maximized. At present, our company's standard products cover the rated torque between 3000Nm and 6000Nm.



Features 产品特点

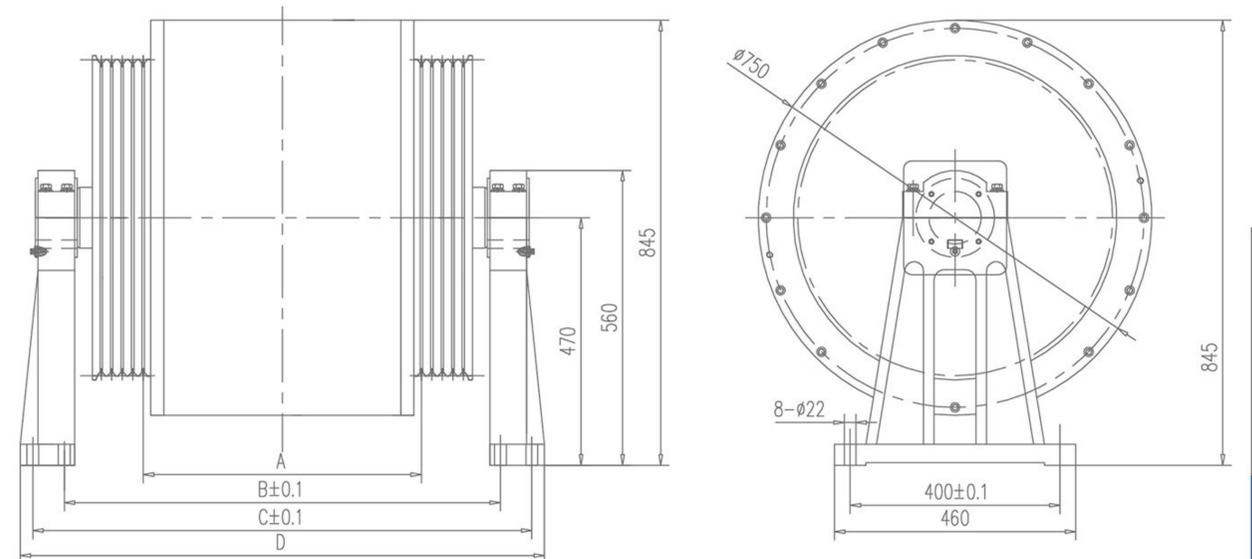
- 优化散热结构，散热好、温升低。
- 轻量化设计，在调速过程中速度响应快可获得较高的加速度，动态性能好。
- 采用外转子双支撑结构，最大的轴负荷可以达到20000kg。
- 取代抽油机减速机构，直接驱动抽油杆和对重往复运动进行抽油，提高运行效率，减少占地空间。
- 适用于高耗能、低速、重载、大扭矩油田领域。

- Optimize the heat dissipation structure, good heat dissipation and low temperature rise.
- Lightweight design, high speed response during high speed control, high dynamic performance.
- Using the outer rotor double support structure, the maximum axle load can reach 20,000kg.
- Replace the pumping unit speed reduction mechanism, directly drive the sucker rod and pump the counterweight reciprocating motion to improve the operating efficiency, save energy and reduce the floor space.
- Suitable for high energy, low speed, heavy load, high torque oil fields.

Product Parameters 产品参数

型号	额定电压V	额定转矩N.m	额定转速rpm	曳引轮直径mm	槽型	槽数	槽宽mm	β角	γ角	钢丝绳直径mm	最大轴负荷T	防护等级	工作制	绝缘等级	安装尺寸			
															A	B	C	D
BLM-OT30D550N050A0	380	3000	50	550	U	4	19	60	30	12	20	IP41	S7	F	429	667	787	835
BLM-OT30D600N048A0	380	3000	48	600	U	4	24	40	30	13	20	IP41	S7	F	414	667	787	835
BLM-OT35D600N047A0	380	3500	46.5	600	U	5	20	80	35	13	20	IP41	S7	F	530	831	951	999
BLM-OT45D520N047A0	380	4500	46.5	520	U	5	20	60	30	13	20	IP41	S7	F	530	831	951	999
BLM-OT45D600N047A0	380	4500	46.5	600	U	5	20	40	30	13	20	IP41	S7	F	530	831	951	999
BLM-OT45D600N047A1					U	5	20	80	35	13	20	IP41	S7	F				
BLM-OT45D600N047A2					U	5	20	95	35	13	20	IP41	S7	F				
BLM-OT60D525N048A0	380	6000	48	525	U	5	20	40	30	13	20	IP41	S7	F	630	931	1051	1119

Outline Drawing 外形尺寸



Machine Type Recommendation 蓝光各领域产品

沈阳蓝光永磁电机产品涵盖多个领域，包括高精度机床、矿山机械、油田、医药、食品设备，新能源汽车及自动化注塑等行业。



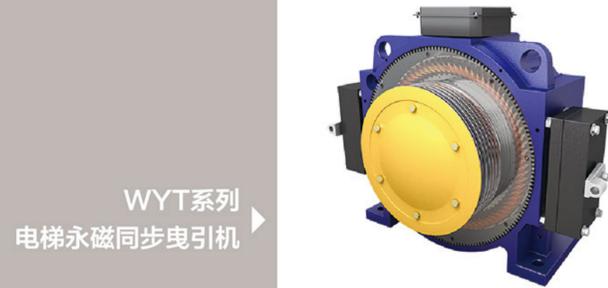
油田用外转子
永磁同步电机



制药设备、食品加工
设备用低速大转矩垂直
搅拌永磁电机



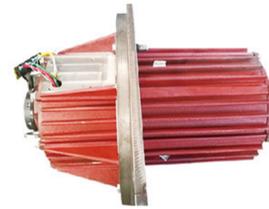
BLI系列快速响应
低惯量交流伺服电机



WYT系列
电梯永磁同步曳引机



油田用超薄型内转
子永磁同步电机



高效重载冷却塔
直驱永磁同步电机

注塑机同步熔胶，挤出机、
混料机用 BLI-A 系列低速
大转矩永磁直驱电机



沈阳蓝光是研究制造永磁电机国家级高新技术企业，省级企业技术中心，可根据客户的需求，提供有针对性的专属产品与解决方案。



“ 沈阳蓝光拥有一支专业的研发团队，把拥有自主知识产权和独立的核心技术视为企业的立足点和持续发展的原动力，也是为国内外用户提供优质、可靠产品的有效保证 ”

