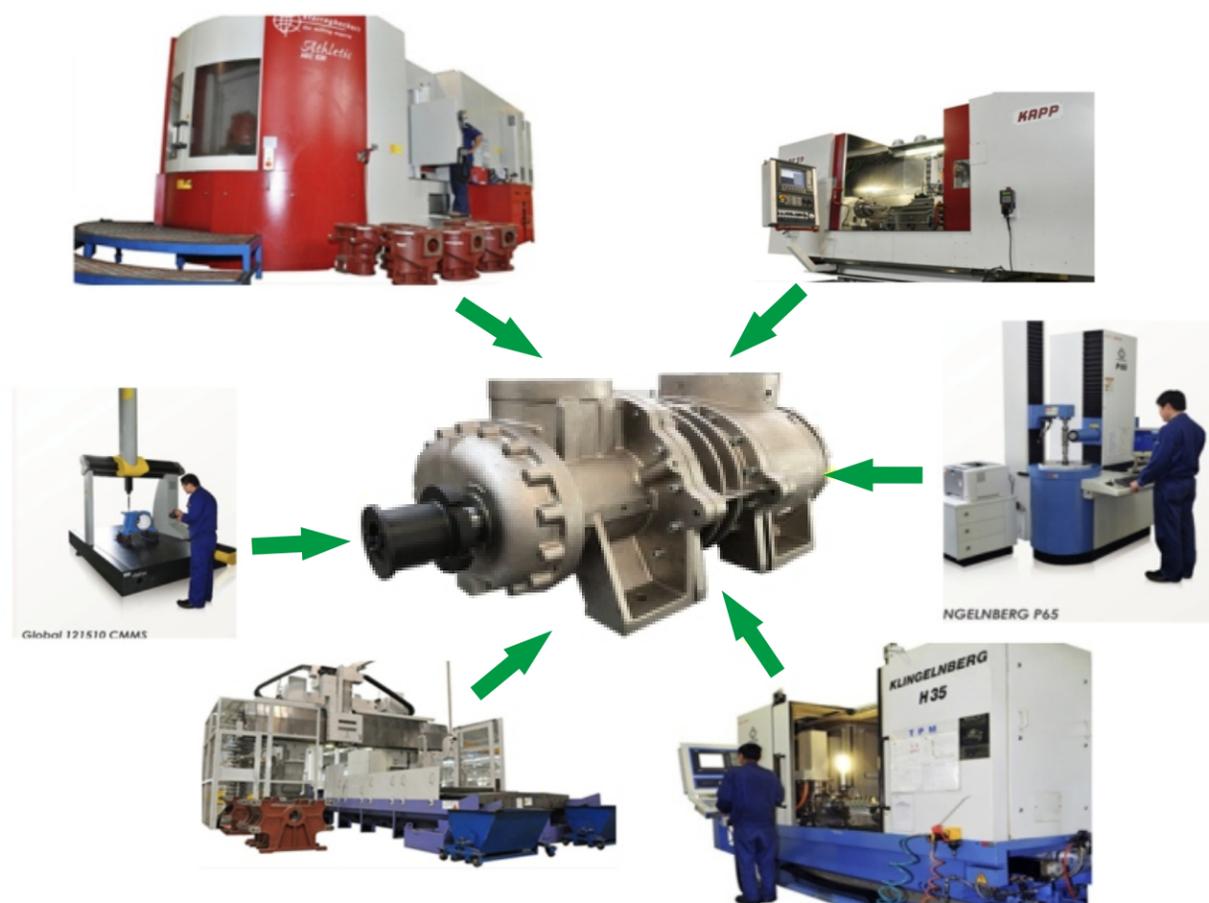


我们要用最先进的加工设备、最严格的制造管理体系、最专业的技术团队，为我们的客户制造出最可靠的工艺气螺杆压缩机，服务于我们的客户！



We must use the most advanced processing equipment, the most stringent manufacturing management system, and the most professional technology, the technical team manufactures the most reliable process gas screw compressors for our customers and serves our customers!

天津绿业石化环保装备有限公司

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(扫一扫关注)



各类工艺气体的回收与压缩、输送 -----

Recovery, compression and transportation of various process gases-----

LYLG型工艺气体双螺杆压缩机
LYLG Type process gas twin screw compressor



天津绿业石化环保装备有限公司
*Tianjin Lvye Petrochemical Environmental
Protection Equipment Co., Ltd.*



原理 Principle:

LYLG型工艺气双螺杆式压缩机是一种工作容积做回转运动的容积式压缩机，介质气体压缩过程是随着内腔容积的变化而实现，容积的变化是通过一对水平布置在机壳内阴阳转子的回转运动来完成，阳转子通过同步齿轮带动阴转子旋转，转子之间无接触啮合，如下图所示。

The LYLG type process gas twin-screw compressor is a positive displacement compressor with a working volume in a rotary motion. The medium gas compression process is realized with the change of the inner cavity volume, and the volume change is achieved through a pair of horizontally arranged in the compression. The female and male rotors in the machine are rotated by the rotary motion. The male rotor drives the female rotor to rotate through synchronous gears, and there is no contact meshing between the rotors, as shown in the figure below.

根据不同的工况条件和输送介质气的特性，我们可以为用户提供干式无油型和喷液型两大类型。

According to different working conditions and the characteristics of the conveying medium gas, we can provide users with two types: dry oil-free type and liquid spray type.



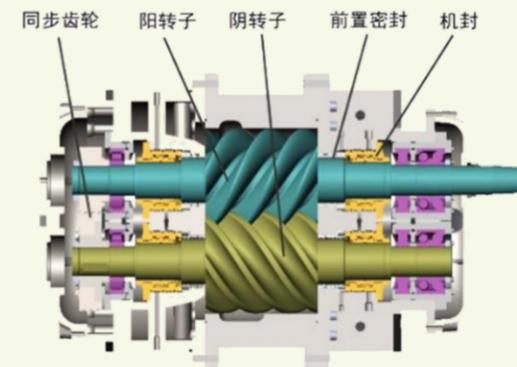
吸气



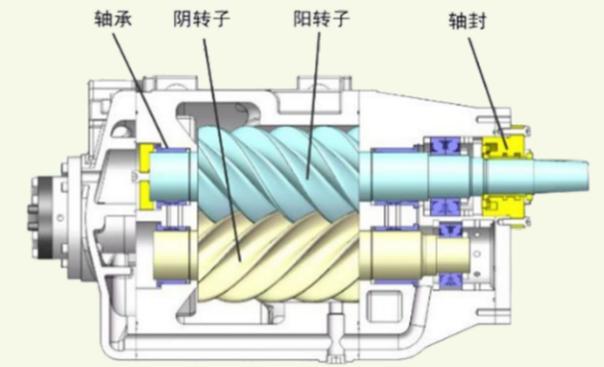
压缩



排气



干式无油型
Dry oil-free type



喷液型
Spray type

结构 structure

LYLG型双螺杆压缩机内部是一对水平且平行的阴阳转子配置在气缸体内，由进、排气端座的轴承支撑。轴承、同步齿轮等采用单独润滑方式，通过轴封装置与气缸体腔室隔离，防止润滑油漏入气缸和气缸内气体向外泄漏。同步齿轮箱靠近进气端，阴、阳转子主要通过同步齿轮厚薄齿的调整来保证阴、阳转子之间、转子外圆与气缸体之间和转子端面与气缸端面之间保持极小的间隙，工作时互不接触。

Inside the LYLG twin-screw compressor is a pair of horizontal and parallel female and male rotors arranged in the cylinder, supported by the bearings of the intake and exhaust end blocks. Bearings, synchronous gears, etc. adopt a separate lubrication method, and are isolated from the cylinder block chamber by a shaft seal device to prevent lubricating oil from leaking into the cylinder and gas leaking out of the cylinder. The synchronous gearbox is close to the intake end, and the female and male rotors mainly adjust the thickness of the synchronous gears to ensure that the female and male rotors, the outer circle of the rotor and the cylinder block, and the end face of the rotor and the end face of the cylinder maintain a very small gap, not touch each other at work.

应用 application

LYLG型工艺气体双螺杆压缩机具有独特的优势：可输送含尘、含液的介质气；对介质气的组分、分子量压比的变化不敏感；无喘振现象；必要时可采用喷液来冷却介质及冲洗聚结物；零件使用寿命长且易损零件少。

The LYLG type process gas twin-screw compressor has unique advantages: it can transport dusty and liquid-containing medium gas; it is not sensitive to changes in the composition of the medium gas and the molecular weight pressure ratio; there is no pulsating phenomenon; liquid injection can be used when necessary. Comes to cool the medium and flush the agglomerates; the parts have a long service life and there are few vulnerable parts.

主要应用于油田、炼油、化工、煤矿、钢铁等行业中，如以下工况：

such as the following working conditions:



★工艺放空气、尾气（火炬气）、解析气的回收，如苯乙烯尾气，硫磺气，氯乙烯，丁二烯，环氧氯丙烷，乙炔，焦炉气，氮气、氨气，氢气，CO气，CO₂气，煤制气，丙烷气，轻烃气，高炉气，其他可燃气体等；

Process venting air, tail gas (flare gas), recovery of desorption gas, such as styrene tail gas, sulfur gas, vinyl chloride, butadiene, epichlorohydrin, acetylene, coke oven gas, nitrogen, ammonia, hydrogen, CO gas, CO₂ gas, coal-based gas, propane gas, light hydrocarbon gas, other combustible gas, etc.

★原油、凝析油稳定气（闪蒸汽）、大型油罐气的回收，油井天然气、伴生气、湿气增压输送；

Recovery of crude oil, condensate stable gas (flash steam), large tank gas, oil well natural gas, associated gas, and wet gas pressurized transportation.



★煤层气输送等。
Coalbed methane transport etc.

在应用中，几乎没有LYLG型工艺气双螺杆压缩机不能处理的介质气体，特别是炼油工艺中产生的大量的工艺尾气，全部可以进行处理并回收后提取其中价值高的组分（如C₄、C₆等）。



In application, there is almost no medium gas that cannot be processed by the LYLG process gas twin-screw compressor, especially the large amount of process tail gas produced in the oil refining process, all of which can be processed and recovered to extract the high-value components (such as C₄, C₆ etc.).

规格与参数 Specifications and parameters

我公司现可提供四种规格的机型（按照阳转子名义直径表示）。

Our company can now provide four specifications of models (indicated by the nominal diameter of the male rotor).

规格 Size	160	204	255	321
气量 Flow	最小 min 150m ³ /h --- 最大 Max 6000m ³ /h			
压力 Pressure	吸入压力 Suction pressure ≥ Min 10kPaA			
	排出压力 Discharge pressure ≤ 2.4MPa G			
压比 Pressure ratio	最大 Max 11		最小 Min 1.5	
温度 Temperature	最高 Max 200° C		最低 Min -40° C	

特点 characteristic

★适用范围广---能操作含尘、带液的介质气体，入口不需要缓冲、分离；介质气组分和进出口压力的变化对容积流量的影响很小，可忽略不计；

Wide range of application --- can handle dusty and liquid-filled medium gas, the inlet does not need to be buffered or separated; the change of medium gas composition and inlet and outlet pressure has little effect on the volume flow rate and can be ignored;

★安全性、可靠性高---可采用喷液来冷却介质气和冲洗聚结物，压缩过程中温度小于80℃；内部零件寿命长，易损零件少，运行稳定，检修周期在24000小时以上；

High safety and reliability-liquid spray can be used to cool the medium gas and flush the agglomerates, the temperature during the compression process is less than 80 °C; the internal parts have long life, fewer vulnerable parts, stable operation, and the maintenance cycle is more than 24,000 hours;

特点 characteristic

★效率高、能耗低、气量调节范围宽：可采用变频、旁路回流等方式控制，气量调节范围达20-100%；高效区近乎一条直线，能耗非常低；

★集成化非常高的撬装型式，机组振动小，无不平衡力，对基础要求低，可无基础安装；可采用远程--就地等多种控制方式，模块化程序运行，一键启停。

High efficiency, low energy consumption, wide air volume adjustment range-can be controlled by means of frequency conversion, bypass return, etc., air volume adjustment range is 20-100%; the high efficiency zone is almost a straight line, and the energy consumption is very low;

The highly integrated skid-mounted type, the unit has low vibration, no unbalanced force, low requirements on the foundation, and can be installed without foundation; it can adopt multiple control methods such as remote-on-site, modular program

材料与配置 Material and configuration

LYHG型工艺气双螺杆压缩机一般采用整体撬装型式，根据工况要求，配套有气路系统、润滑系统、喷液系统、PLC控制系统等。

The LYHG type process gas twin-screw compressor generally adopts an integral skid-mounted type. According to the requirements of the working conditions, it is equipped with a gas circuit system, a lubrication system, a liquid injection system, a PLC control system, etc.

气路系统 gas circuit system	包括入口过滤器、消音器、旁路调节阀、出口单向阀、出口安全阀等部件。 Including inlet filter, silencer, bypass regulating valve, outlet one-way valve, outlet safety valve and other components.
润滑系统 lubrication system	包括油箱、油泵、油冷却器、油过滤器、油压调节阀等部件。 Including oil tank, oil pump, oil cooler, oil filter, oil pressure regulating valve and other components.
喷液系统 liquid injection system	包括喷液泵、油箱或水箱、冷却器、过滤器、调压阀、喷嘴等部件。 Including liquid injection pumps, fuel tanks or water tanks, coolers, filters, pressure valve, nozzles and other components.
工控系统 PLC control system	包括PLC等工控部件、程序、控制柜等，变频器、柜等。 Including PLC and other industrial control components, programs, control cabinets, etc., inverters, cabinets, etc.

转子：不锈钢、碳钢锻件通过铣-磨削成型，型面精度可达0.01mm。

Rotor: stainless steel and carbon steel forgings are milled and ground cutting and forming, the profile accuracy can reach 0.01mm.



壳体：耐腐铸铁、碳钢或不锈钢材料，根据工况条件可采用上进上出、上进下出或上进侧出结构。
Shell: Corrosion-resistant cast iron, carbon steel or stainless steel. According to the working conditions, it can adopt top-in and top-out, top-in and bottom-out or top-in-side-out structure.

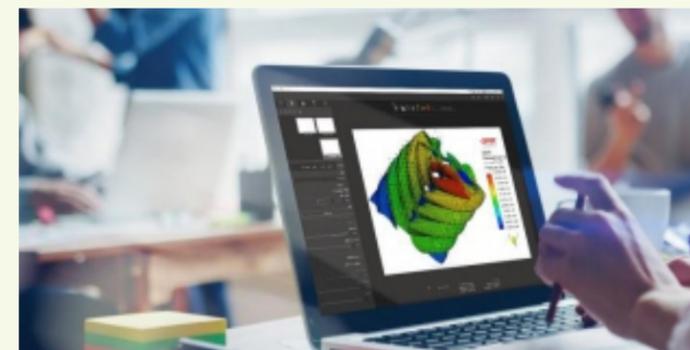
密封：可采用机械密封、碳环、干气密封等型式。

Seal: Mechanical seal, carbon ring, dry gas seal, etc. can be used.

轴承：根据工况条件，可采用滚动轴承或滑动轴承。
Bearings: According to the working conditions, rolling bearings or sliding bearings can be used.



同步齿轮：采用20CrMnTi等锻件通过铣齿-磨齿加工，制造精度5级。
Synchronous gear: Forgings such as 20CrMnTi are used for gear milling and gear grinding, with a manufacturing precision of level.



适用性 Applicability

可靠性 Reliability

安全性 Safety

环保性 Environmentally

经济性 Economy