

# NASH HP系列单级液环压缩机

# NASH HP Single Stage Liquid Ring Compressor



# NASH液环压缩机 NASH Liquid Ring Compressors

## 全球范围内性能优异的液环压缩机 Excellenct Performance Range of Liquid Ring Compressors Worldwide

在许多工业应用中,都需要压缩湿气体、饱和气体或含颗 粒气体。为了应对这些挑战,液环压缩机是首要的选择。 通过液环技术,它们可以处理剧毒、爆炸性或腐蚀性气 体。

NASH为其客户提供可靠、优质的液环压缩机,其特点和性能能够保证液环压缩机可以适用于各种高要求应用中。无论是火炬气体压缩、氯乙烯单体(VCM)回收,还是任何其他类型的潮湿、腐蚀性、含颗粒气体或爆炸性气体,NASH产品都可以提供正确的解决方案,有单级和两级压缩机两种类型可选。

为了应对这些过程挑战,NASH压缩机可由多种材料制成。 当然,不锈钢是首选材料,但这些坚固的机器也可以用其 他优质的材料制造。 The ability to compress wet, saturated or dirty gases is essential in many industrial applications. To deal with these challenges, liquid ring compressors are the number one choice. Due to the liquid ring technology, they can handle highly toxic, explosive and corrosive gases.

NASH provides its customers with reliable, quality liquid ring compressors with the features and performance necessary for all demanding applications. Whether it is flare gas compression, Vinyl Chloride Monomer (VCM) recovery or any other type of wet, corrosive, dirty or explosive gas, the NASH product range can provide the right solution. Models are available as single and two stage compressors.

To deal with these process challenges, NASH compressors are available in a wide variety of materials. Of course, stainless steel is the first material of choice, but these-

#### 液环压缩机工作原理

#### How Liquid Ring Compressor Working Principal

铸造叶轮是NASH液环压缩机唯一的转动部件;旋转的叶轮 和椭圆形双层壳体之间形成液体封液(简称液环),每两 个叶片与液环之间形成的密封空间随叶轮的旋转,体积不 断增加或缩小,完成气体的吸入和压缩过程;两进口和两 出口的锥体,叶轮每旋转一周可完成两次吸排气过程。

The balance cast rotor in a NASH liquid ring compressors is its only moving part, Such simplicity is possible because the function of mechanical pistons, vanes, screws, or rotating lobes are performed by the rotating of liquid. Propelled by the rotor and guided by the oval shaped of double-lobe pump body, the compressant or seal liquid almost fills, then almost empties each rotor chamber twice each revolution. This set up the piston action. Inlet and discharge ports in the stationary cone provide flow paths at the inner edges of the rotor chambers.

# Features 特征 Ability to handle carryover 处理残渣的能力 Long design life of 40+ years 设计的使用寿命超过 40 年 No internal lubrication required 不需要内部润滑 No metal-to-metal contact 无金属与金属之间的接触点

Cool running - minimal temperature rise between inlet and





 

 Benefits 优点

 Minimal process problems resulting in more uptime; intended for severe applications 正常运行时间更长,过程问题最小;适用于苛刻条件应用

 Highest reliability 稳定性最高

 Less maintenance required; less downtime 所需维护更少,停机时间更少

 Constant wear-free performance 恒定的无磨损性能

# NASH单级液环压缩机HP—符合API681标准 HP Single Stage LR Compressor-Comliance with AP1681

## 产品特点介绍

•符合API681标准

- •单级双吸双排结构
- •径向力平衡设计
- •圆锥型分配器,进出通道面积更大,效率更高
- •允许气体中夹带固体颗粒和液体
- •抽气量变化不会对液环压缩机带来任何影响
- •介质摩尔质量的变化对压缩机运行没有任何影响
- •入口压力的波动对压缩机影响也很小,抽气量分配非常容易
- •几乎等温压缩(最大10度温升)
- •结构简单,维护成本低廉;无油压缩:不会污染介质

### Feature

•Compliance with API681

- •Single stage with dual suction and dual discharge construction
- •Radial force balanced
- Cone separator with higher capacity and efficiency.
- •Not sensitive to carry minimal solid and liquid
- •Not sensitive to flow variations
- •Not sensitive to changes in molecular weight
- Little sensitive to inlet pressure fluctuations, easy load sharing
- •Nearly isothermal compression (Max.Temperate Rising 10 °C)
- Simple design, lower maintenance cost, oil free service.



# 外形尺寸

Dimensions all dimensions are approximate

Pump Model	A inches mm	<b>B</b> inches mm	C inches mm	D inches mm	Gas Inlet Flange inches • mm	Gas Disch. Flange inches • mm
HP-4	27	13.5	12	6	2	2
	686	342	300	150	50	50
HP-6	42.88	24	20	11	4	4
	1089	610	508	280	100	100
HP-7	48.75	29.5	24	13.5	6	6
	1238	750	615	343	150	150
HP-8	57.5	36.5	30.6	16.5	<mark>8</mark>	8
	1460	928	777	419	200	200
HP-9	62.38	53.5	40	20	10	10
	1584	1359	1016	508	250	250







NASH HP单级压缩机基本参数 Basic specifications NASH HP (single stage compressor)					
及气量	240 to 4,300 m <sup>3</sup> /h				
uction capacity	140 to 2,500 CFM				
日压力	to 8,5 bar abs.				
Discharge pressure	110 psig				
几械密封	单端或双端面集装式机械密封				
Aechanical seals	Single,double,cartridge				
材质	不锈钢材质,其他材质可选				
Construction materials	Stainless steel; other materials optional				

# NASH HP液环压缩机 **NASH HP Liquid Ring Compressors**

## 无与伦比的经验 Unmatched experience

NASH液环压缩机是我们定制化液环压缩机的核心。我们已经 生产这些坚固耐用的机器近一个世纪, 在定制用于各种应用 的液环压缩机系统方面都有着无与伦比的经验。NASH是该领 域的领导者。

NASH liquid ring compressors are the heart of our engineered-to-order compressor systems. Having built these rugged machines for nearly a century, we have unmatched experience in engineering custom-made liquid ring compressor systems for almost every application. Applying our know-how to our machines and systems provides superior value for our customers. NASH is the leader of the field.





NASH

## 每个工艺都不相同 Every process is different

每个压缩机系统都有其独特的要求,有的需要考虑有限的空 间要求,有的需要考虑批量或连续生产过程或特定仪表中需 要使用的气体和液体。我们将使用最先进的3DCAD软件为您 设计压缩机系统,以满足您的要求。 There are unique requirements for every compressor system, whether it regards limited space requirements, gases and liquids used in a batch or continuous process or specialized instrumentation. We design your compressor system to match your requirements using state-of-the-art 3D CAD software.

HP液环压缩机专门设计应用于有毒、腐蚀性、爆炸性气体,在尾气、氯气和VCM回收等工艺,尤其是在石化炼厂和化工厂 中的火炬气回收系统有广泛应用,材质设计为316L材质,以及双端面集装式机械密封设计。 Nash liquid ring compressors handle wet, saturated or dirty gases in many industrial applications, they can also handle highly toxic, explosive and corrosive seal liquids. Thanks to sophisticated materials and decades of superior expertise, Nash compressors are used in:

- •硫化氢去除 •H2S Removal • Dry and Wet Chlorine Compression •干和湿氯气压缩 •Hydrogen Compression •氢气压缩 •油气回收 Hydrocarbon Recovery •VCM Recovery •VCM回收 • Flare Gas Recovery •火炬气回收 • Glycol Recovery •乙二醇回收 Biogas Production • 沼气生产 Waste Recovery •废气回收 •NOx Recovery •NOx回收 · other demanding applications

## 更高质量/安全标准 Highest quality&safety standards

NASH致力于在生产和安全方面达到最高标准。我们向世界各 地NASH设备颁发了许多ISO证书。我们通过优化内部流程,不 断提高产品质量。

NASH压缩机已经通过了ATEX和其他全球工业标准的认证。 我们随时提供全球网络服务与技术支持,以保持您的系统正 常运行。





•其它苛刻应用

NASH is committed to the highest standards in production and safety. We have many ISO certificates, issued to NASH facilities worldwide. We continuously improve our quality by optimizing our internal processes.

NASH compressors are certified to ATEX and other global industrial standards. Our global network of service and support is always available to keep your system running for years.

## Nash 产品和系统



#### NASH™ 液环真空泵&系统

可以为所有苛刻应用提供可靠和持久的解决方案。通过持续的承诺和创新,NASH液环真空泵,满足最严格的应用要求,提高效率和降低使用成本。



#### NASH<sup>™</sup>和 GARO<sup>™</sup> 液环压缩机

可以为所有苛刻应用提供坚固和可靠的解决方案。在最苛刻的条件下的应用经验证明,其设计 适用于处理有毒、易爆和有腐蚀性气体。



#### NASH<sup>™</sup> 蒸汽喷射器和系统

无论是单独使用,还是作为 NASH Ener-Jet<sup>™</sup> 复合真空系统的一部分, NASH 蒸汽喷射器按最佳 效率设计,减少了蒸汽消耗,同时具有大处理量,保持高真空的水平。



#### NASH 认证的服务和支持

HOFFMAN

NASH 认证的服务和支持可以保持 NASH&GARO 设备的性能、可靠性和效率。通过我们的全 球网络服务和配送中心, NASH 认证的服务团队可以为您提供快速、专业维修、服务、预防性 维护和原装配件。



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