高端拉断阀

KLAW 翻板阀

装卸臂与软管

应激更快

FLOWBREAK

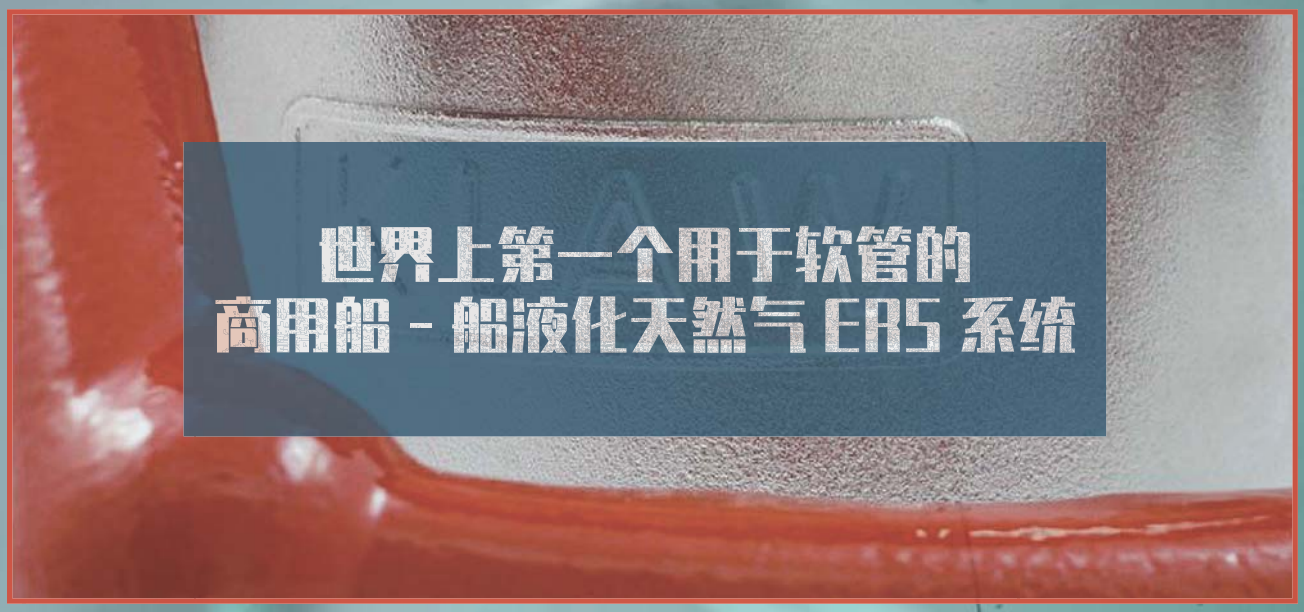
激活力和拉断力

传输更快

流量压降曲线

流量更大

应急手刹


世界上第一个用于软管的
商用船 - 船液化天然气 ERS 系统


先进技术最大限度
减少海上和陆上溢出风险


具有工匠精神的研发中心

杜绝溢出

KLAW 拉断阀能最大程度地降低液体和气体溢出的风险

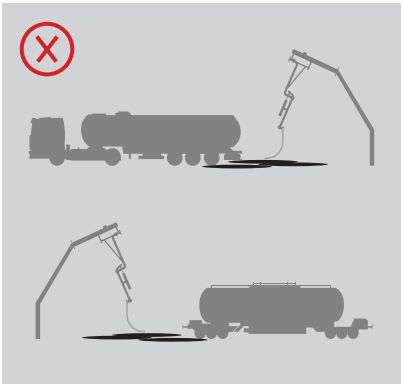
Minimising the risk of liquid and gas spillage

安装 KLAW 拉断阀，可为您最大程度地消除潜在风险，减少法律纠纷。KLAW 安全拉断阀不但能为输送系统提供安全可靠又便于识别的分离点，而且能在输送系统分离或承受张力等紧急状况下切断气流。

KLAW 公司经验丰富，业绩辉煌，可以帮助您最大程度地保护资产、人员、环境和商誉安全，免受停工、清理成本，法律纠纷和人员伤亡。

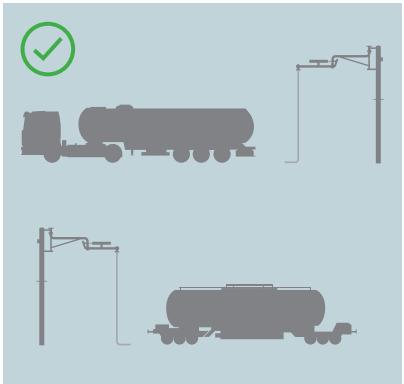
When fitting a KLAW Safety Breakaway Coupling you ensure that everything has been done to eliminate risk and mitigate legal action. The KLAW Safety Breakaway Coupling range offers a safe and identifiable parting point within the transfer system and will stop flow in an emergency such as when drive-off or other strain on the transfer system occurs.

The experience and track-record of KLAW enables you to minimise risk to assets, personnel, the environment and reputation and protect against downtime and clean-up costs, litigation and injury.



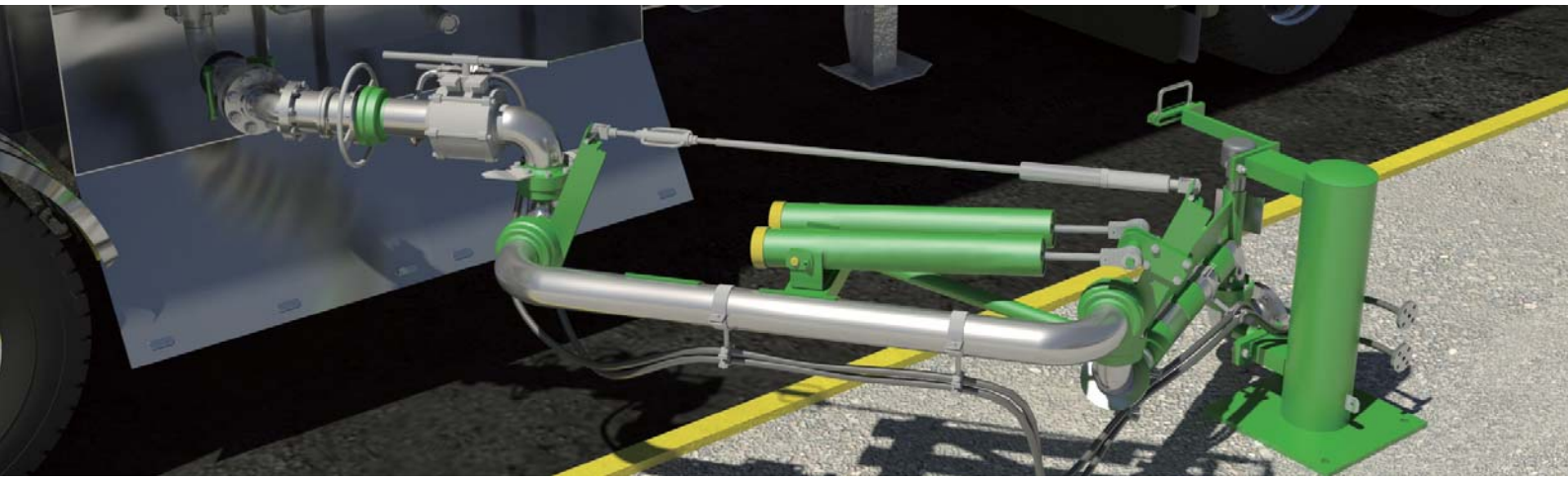
在无拉断系统情况下分离，会引发灾难。

The lack of a Breakaway System in the event of a drive-off can be catastrophic.



KLAW 拉断系统可防止溢漏、避免财产损失和人员伤亡。

KLAW Breakaway Systems prevent spillage, damage to assets and injury to personnel.



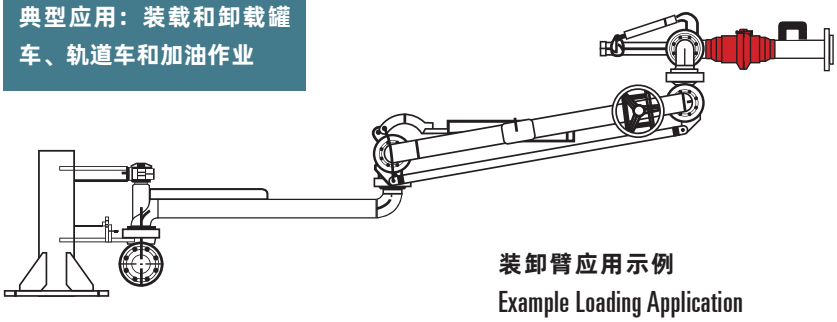
装卸臂鹤管与软管

KLAW 拉断阀被用于装载臂及软管输送工况

Loading arm and hose transfer applications

装卸臂指石油、化工码头液体装卸过程的专用装置。通常采用旋转接头、拉断安全保护阀和干式快速连接阀，实现软管或硬管与装卸口的对接过程。

典型应用：装载和卸载罐车、轨道车和加油作业



装卸臂应用示例
Example Loading Application

KLAW 拉断阀被广泛应用在公路罐车、轨道车、货场、船码头，以及输送介质过程中涉及的船舶加油、燃料加注、轨道车、公路罐车和装载臂系统之中。KLAW 拉断阀适用于 99% 的液体和气体。典型介质，例如：

- 液化石油气
- 盐酸
- 氨
- 乙醇
- 氯
- 硫酸
- 丙烷
- 柴油
- 喷气燃料
- 沥青
- 燃油

KLAW breakaway couplings are typically used in road Tankers, railcars, loading bays and ship terminals, bunkering, refuelling and Loading Arm systems involved in the transfer of media. KLAW Breakaway Couplings are suitable for 99% of all liquids and gases. Typical media include:

- LPG
- Hydrochloric Acids
- Ammonia
- Ethanols
- Chlorine
- Sulphuric Acid
- Propane
- Diesel
- Jet Fuel
- Bitumen
- Fuel oil

应激更快

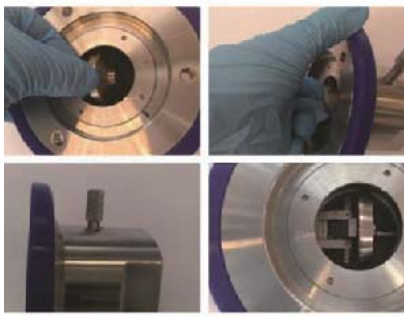
KLAW 拉断阀能在局部断开时启动断流

Immediate reaction from only partial separation and minimal media spills

口径 1"
Flowbreak 1"

口径 2"
Flowbreak 2"

FLOW BREAK
THE INDUSTRIAL BREAKAWAY COUPLING



KLAW 工业拉断阀，即 FLOWBREAK® 拉断阀的主要优势明显，最大限度地减少介质泄漏的风险；只要有一个螺栓断裂，翻板就会全部关闭。避免在发生分离或极端压力的情况下对人员造成伤害。

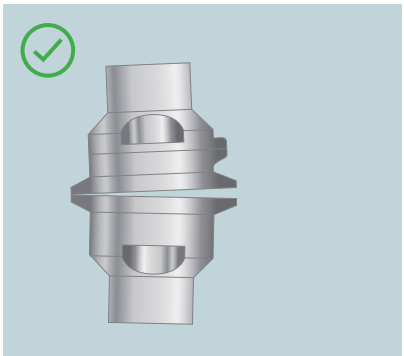
复位	复位插头在服务或激活后提供易于复位的过程
压头	压头损失最小
结构	结构轻巧紧凑
缆索	ATEX 缆索作为标准配置
连接	不需要单独的端连接器；但仍然保持多端连接灵活性
螺纹	平头扳手易于螺纹端安装
开关	可选择包括近端开关
翻板阀	KLAW 翻板阀和 Breakstud 技术

The KLAW Flowbreak Breakaway Coupling minimises risk of media spills; this reduces the risk of damage to assets and injury to personnel in the event of a drive-off or extreme pressure flow.

Reset	Reset plugs deliver easy to reset procedure after service or activation.
Headloss	Minimum headloss.
Construction	Compact and lightweight.
Cable	ATEX cable fitted as standard.
Adapter	No need for separate end connectors; but still maintains multiple End Connection Flexibility.
Thread	Wrench spanner Flats for easy threaded end attachment.
Switch	Option to include proximity switch.
Flip-flap	KLAW Flip-Flap Valve and Breakstud technology.

其他拉断阀在局部断裂的情况下可能导致不受控制的溢出。

Partial break occurs when a coupling only partially separates. A partial break event provides a situation where spillage is uncontrollable.



KLAW 拉断阀即使在局部断裂时也能 100% 关闭。

The valve mechanism within the KLAW range is designed to avoid 100% the risk and consequences of partial break.

激活力和拉断力

度身定制每一个工况中的拉断力数值，保证100% 激活

Precise activation force tuning per site condition

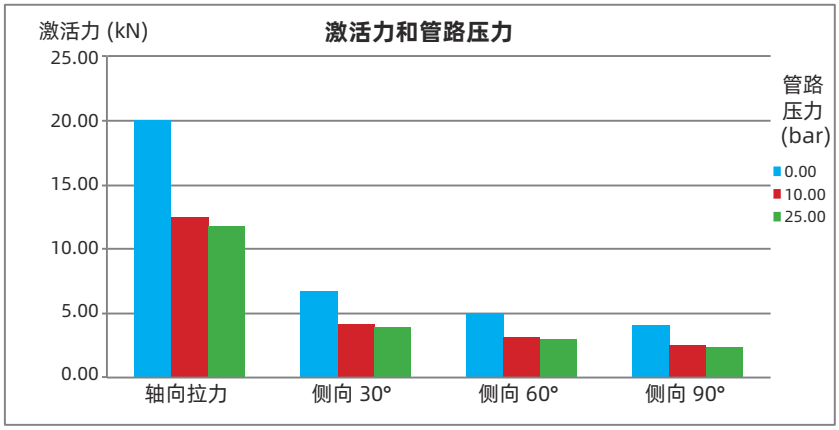
KLAW 拉断阀的拉断力设置是严格根据现场工况以及用户要求来设定的。一旦设定后，拉断力是一个准确的数值。拉断阀性能好坏与拉断力大小无关，而是与拉断力的准确与否相关。

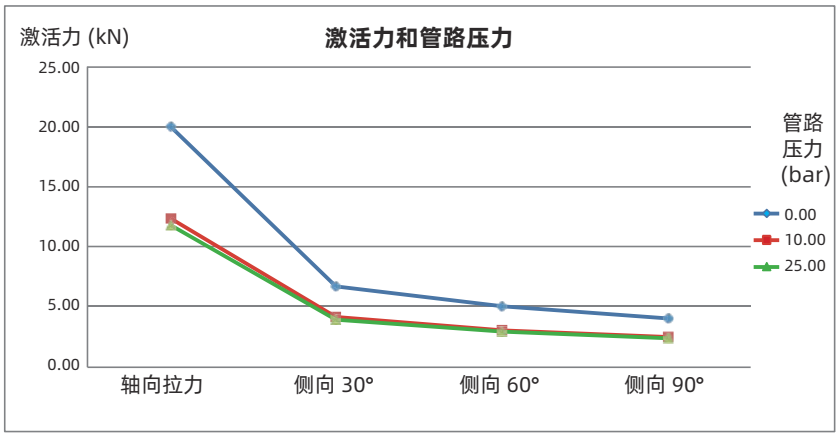
KLAW breakaway coupling functions to stop the flow at a rated force of activation, or at the desired angel of partial break. The rating is tuned according to the actual condition each time by our site engineers.

以下示例为：KLAW 4" 拉断阀在轴向拉力、与各侧向拉力角度的激活力值

Below an example for the avtivation forces by different angels for a KLAW 4".

管路压力	轴向拉力	侧向拉力		
bar	kN	30°	60°	90°
0.00	30.00	10.00	7.50	6.00
10.00	19.74	6.58	4.93	3.95
25.00	4.34	1.45	1.09	0.87





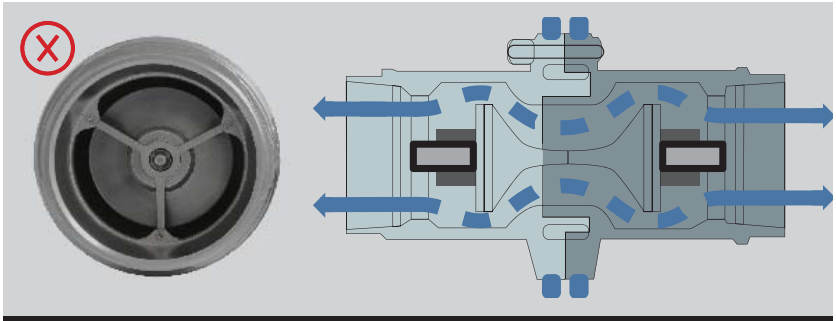
传输更快

KLAW 翻板阀设计流动性更好 / 压降更小 / 传输速度更快

Higher flow rate, least pressure drop thanks to flip-flap valve construction

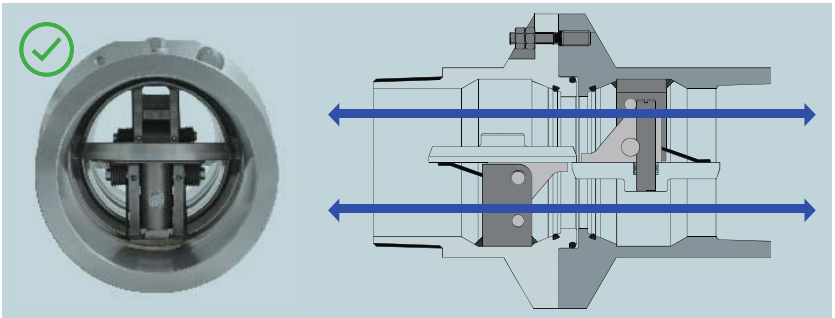
为什么选择翻板设计？因为翻板阀较同类提升式具有更好的流动性，借用蝶阀原理，翻板阀瓣在开启时与介质流向一致，流阻最小，压降最低，故有效提升了介质传输的流量，效率提升达 30%（实验室形式实验数据）。

Why internal flip-flap valve design? Because in that way the discs rotate 90 degrees to go in line with the flow direction, giving least headloss or pressure drop during transfer. That increases the flow rate by 30% according to type tests data in laboratory.



同类拉断阀提升式结构限制流动、压减增加，传输时间慢；包封更重更大，难以处理和安装；有局部断裂的风险。

Counterpart lift-and-push construction gives a bolder water cut in open position, with heavy pressure loss and low rate of transfer. Chance of partial break increases.



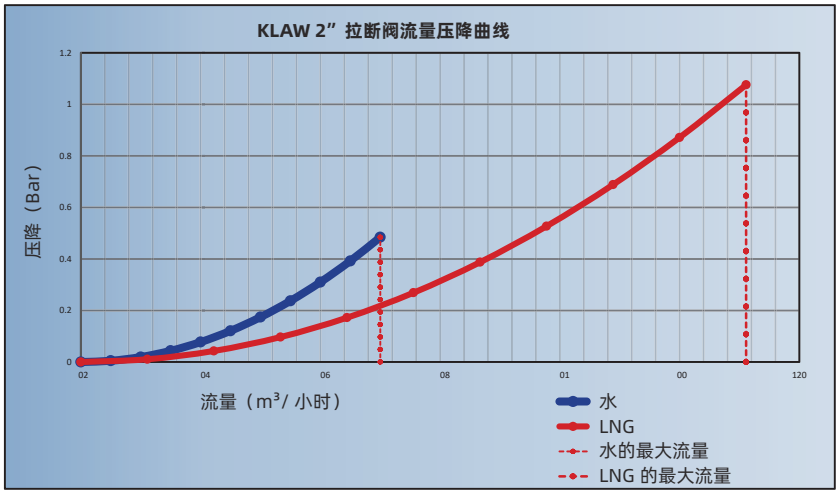
KLAW 拉断阀翻板式结构流动特性更好、压降更低，传输速度更快，耗时更短；包封更轻更小，处理和安装更容易；没有局部断裂风险。

KLAW flip-flap design decreases the headloss, and enlarges rate of flow by 30%. Rigid construction makes it least possible for breaking partially unexpectedly.

流量压降曲线

KLAW 的 2 寸 LNG 翻板式拉断阀的流量压降曲线

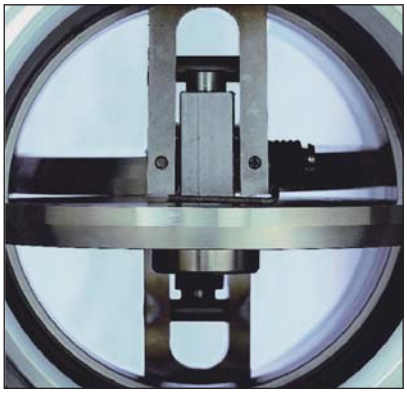
Pressure drop vs flowrate



流量更大

KLAW 翻板阀设计让流量损耗降到最低

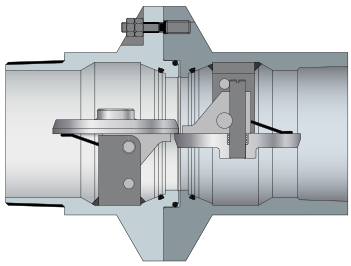
Minimum headloss from flip-flap valve construction during transfer



KLAW 拉断阀内部采用响应速度更快、压头损失更小的翻板技术，借鉴蝶阀原理，在连通状态下，阀板与内部介质流向一致，流量损耗降到最低，有效缩短物料的传输时间达 30%（实验室型式试验数据）。

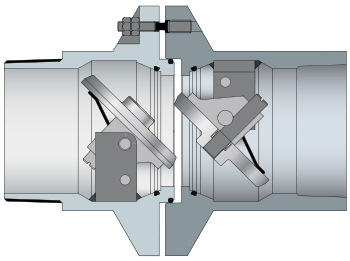
内部翻板位置与内部介质流向一致。这使每个翻板部件打开，压头损失最小。

Internal flaps are positioned in line with the flow. These keep each other open, offering minimum headloss.



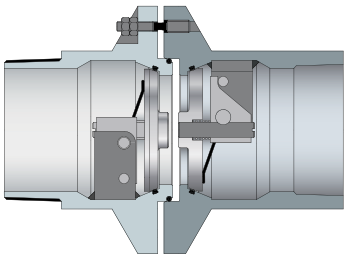
当拉断阀即将分离时，阀盘在受控状态下沿弧旋转。

As the unit begins to separate, the discs flip through a controlled arc.



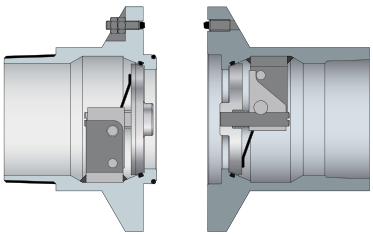
翻扳阀盘旋紧卡在阀座上，实现 100% 关闭。

The discs snap onto their seats, providing 100% shut-off.



当阀板到位处于关闭位置时，拉断阀立即分离。

With the valves in the closed position the coupling now separates.



应急手刹

紧急脱扣装置 (ERC) 的阀环脱扣装置配有多种脱扣方式

KLAW ERC various options of collar release mechanism

紧急脱扣装置通过预定脱扣实现紧急切断 (ESD)，无需依赖对输送系统施力。

- 缆索脱扣
- 弹簧固定
- 液压脱扣
- 双脱扣

This provides the option for predetermined release of the Emergency Shutdown (ESD) system, rather than being reliant on forces applied through the transfer system.

- Cable release
- Spring retained
- Hydraulic release
- Dual releaase