

**1 阀杆保护套管**

避免阀杆受到外部异物喷射  
**Stem protective tube**  
Stem protection against external splashes

**2 位置指示器**

显示刀闸阀位置 (与限位开关一同安装使用  
或仅安装位置指示器)  
**Position indicator**  
Indication of knife gate valve position (mounting only  
with limit switches or optionally)

**3 一体式阀体**

坚固抗变形, 防止泄漏  
**One piece body**  
Resistance to distortion, rigidity. Prevents leakage

**4 闸板锋利**

经过机加工并抛光处理  
**Sharp knife**  
Machined and polished

**5 密封圈对阀座无损坏**

模压成型橡胶密封圈  
**Gasket seat wrenching not possible**  
Molded rubber gasket and heel shaped

**6 预制支板 (DN ≤ 300)**

坚固、轻便。为环氧漆涂层钢或不锈钢,  
预留限位开关、电磁阀和安全保护装置  
安装孔 (CE 标识)  
**Pre-shaped parts (DN ≤ 300)**  
Rigid and light. Steel epoxy coated or stainless steel.  
Drilled for limit switches equipment, solenoid valve,  
security protection (CE marking)

**7 螺栓固定填料压块**

可在工作状态下调整  
**Bolted packing gland**  
Adjustable on duty

**8 防腐蚀涂层**

环氧烤漆涂层  
**Anti-corrosion coating**  
Oven backed epoxy

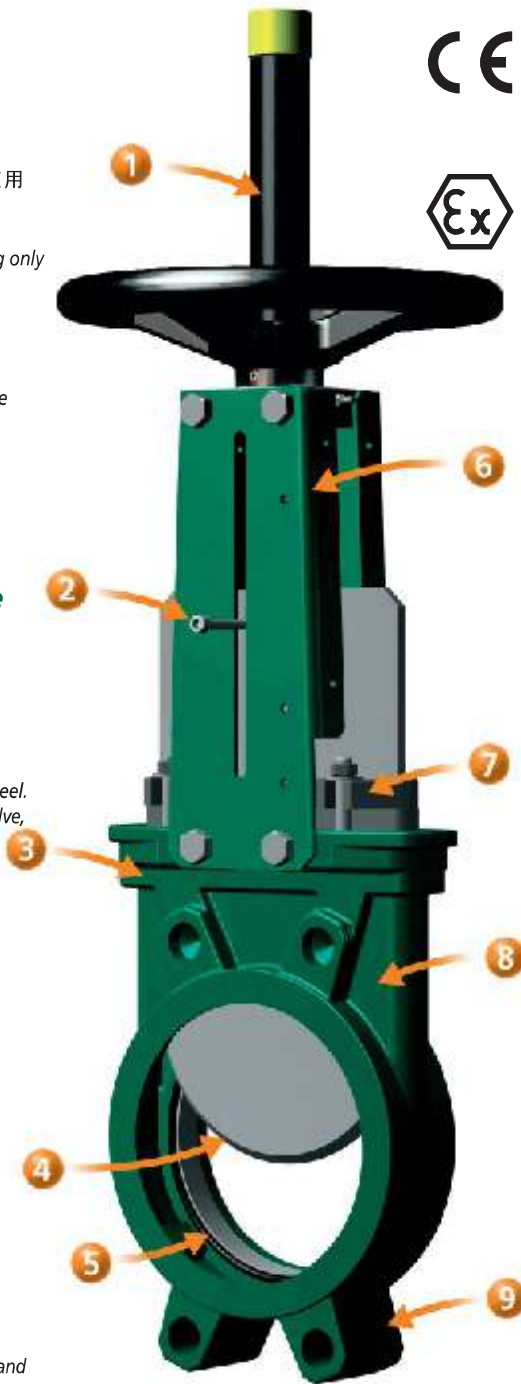
**9 固定螺纹支耳**

管端安装  
DN 300及以下口径阀门为一体式支耳  
**Fixing threaded lugs**  
Bottom line installation.  
One piece for valves DN ≤ 300

可订做: GEKO刀闸阀。  
符合及高于 TAPPI TIS 405-08, MSS SP-81-2006,  
MSS SP-61-2003。  
On request: GEKO knife gate valve built to meet  
and exceed the TAPPI TIS 405-08, MSS SP-81-2006 and  
MSS SP-61-2003 standards.

**主要应用 / Main Uses**

- 水、水处理及废水行业 / Water, water treatment, wastewater
- 污水和废水处理厂 / Sewage and Wastewater treatment plant
- 电梯站 / Lifting station
- 河水 / River water
- 纸浆生产 / Pulp production
- 化工行业: 粉体、颗粒、结晶和沉淀产品  
Chemical industry: powdery, granular, crystallizing and sludge products
- 粉体行业、气力输送、仓储、水泥工程  
Pulverized products, pneumatic transport, stocking, cement work
- 食品行业: 酿酒、制糖厂 / Food industry: wine-producing, sugar plant
- 矿业、钢铁业 / Mine, siderurgy



符合欧盟《压力设备》  
指令 N° 97/23/CE:  
第 III 类流体 H 系列  
In accordance with European directive  
«Pressure equipments» N°97/23/CE:  
category III module H



符合欧盟《用于潜在性爆炸环境设备》  
ATEX 指令 N° 97/23/CE:  
ATEX II 2 GD et ATEX II 3 GD  
In accordance with European directive  
«Potentially explosive atmospheres» N°94/9/CE:  
ATEX 2 GD et ATEX II 3 GD

**密封性能**  
**TIGHTNESS**



标配 STANDARD  
橡胶密封  
Rubber gasket  
tightness



金属硬密封  
Metal/metal  
tightness



阀座加强套  
Reinforced seat  
support ring

# 目录

	Page
■ <b>概述</b>	
技术特点	
材料图 .....	4
温度 .....	5
性能 .....	6
编码 .....	7
■ <b>产品系列</b>	
刀闸阀 (GKV) .....	8
穿通式刀闸阀 (GKVT) .....	21
放料式刀闸阀 (GKVS) .....	30
■ <b>30°角斜插板闸阀</b> .....	38
■ <b>方形平板阀 (GKVC)</b> .....	39
■ <b>水闸门 (GKVM)</b> .....	40
■ <b>成套组装附件</b>	
安装套件 .....	42
安装规范 .....	43
■ <b>11B 类型法兰</b>	
ISO PN 10 连接 .....	44
■ <b>ASA 150 标准连接</b> .....	45
■ <b>执行机构</b>	
电动执行器 .....	46
气动执行器 .....	48
气动接线圈 .....	49
附件 .....	50
■ <b>使用注意事项</b> .....	52
■ <b>填料及阀座更换</b> .....	54
■ <b>特殊应用</b> .....	55
■ <b>技术数据表</b> .....	56

# Summary

	Page
■ <b>General points</b>	
<b>Technical characteristics</b>	
Material chart .....	4
Temperature .....	5
Performance .....	6
Codification .....	7
■ <b>Manufacturing program</b>	
Knife gate valve (GKV) .....	8
Through conduit knife gate valve (GKVT) .....	21
Under silo special knife gate valve (GKVS) .....	30
■ <b>Gate valve 30° with rectangular slice</b> .....	38
■ <b>Square knife gate valve (GKVC)</b> .....	39
■ <b>Penstock (GKVM)</b> .....	40
■ <b>«Ready to assemble» accessories</b>	
Mounting kit .....	42
Installation examples .....	43
■ <b>ISO PN 10 connection for flange type 11B</b> .....	44
■ <b>ASA 150 connection</b> .....	45
■ <b>Actuators</b>	
Electric actuators .....	46
Pneumatic actuators .....	48
Pneumatic wiring diagram .....	49
Accessories .....	50
■ <b>Precautionary measures</b> .....	52
■ <b>Packing and seat replacement</b> .....	54
■ <b>Special applications</b> .....	55
■ <b>Technical data sheet</b> .....	56

## 材质对照表

## Material chart



### 阀体 / Body

铸铁 / Cast iron EN-GJL-250	GG25
球墨铸铁 / Ductile iron EN-GJS-400-15	GGG40
不锈钢 / Stainless steel GX5CrNi 19-10	AISI 304
不锈钢 / Stainless steel X6CrNi 25-20 *	AISI 310
不锈钢 / Stainless steel GX5CrNiMo 19-11-2	AISI 316
铸钢 / Cast steel GP240GH	ASTM A216WCA

\* 根据实际应用确认细微差别。 / Nuance to be confirmed according to application.



### 闸板 / Gate

不锈钢 / Stainless steel X5CrNi 18-10	AISI 304
不锈钢 / Stainless steel X8CrNi 25-21	AISI 310
不锈钢 / Stainless steel X5CrNiMo 17-12-2	AISI 316



### 阀座和O形圈 / Seat and O-ring

丁腈 / Nitril
白色丁腈 / White nitril
乙丙胶 / EPDM
FPM (Viton® 型)
白色 FPM (Viton® 型) / White FPM (type Viton®)
硅胶 / Silicone
白色硅胶 / White silicone
CSM (Hypalon® 型)
聚四氟乙烯 / PTFE



### 填料 / Packing

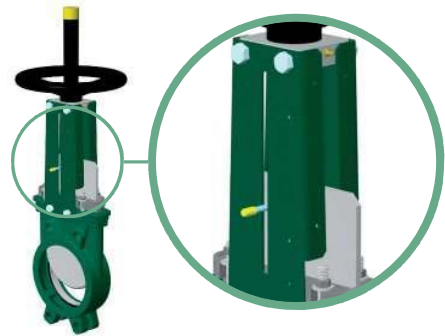
棉浸动物油 / Tallowed cotton
特氟龙丙烯酸酯 / Tefloned acrylic
纯聚四氟乙烯 / pure PTFE
石墨 / Graphite
超高温材料 / Very high temperature

应用于特殊环境或磨损性环境：  
- 将填料成角表面部分用芳纶加固  
- 将填料内部填充橡胶以避免永久变形。  
其它特殊应用，请向我们咨询。

For special or abrasive application:  
- packing with aramid reinforced on the angled surfaces,  
- packing with rubber inside to avoid permanent deformation.  
Please consult us for special application.

### 标准结构材质 / Standard construction

Type	GKV3400-GKVS3400 GKVT3400	GKV6400-GKVS6400 GKVT6400
阀体 / Body	铸铁 EN-GJL-250 Cast iron EN-GJL-250	不锈钢 GX5CrNiMo 19-11-2 GX5CrNiMo 19-11-2 stainless steel
闸板 / Gate	不锈钢 X5CrNi 18-10 X5CrNi 18-10 stainless steel	不锈钢 X5CrNiMo 17-12-2 X5CrNiMo 17-12-2 stainless steel
阀座 / Seat	丁腈 / Nitril	乙丙胶 / EPDM
填料 Packing	聚四氟乙烯 / PTFE	聚四氟乙烯 / PTFE



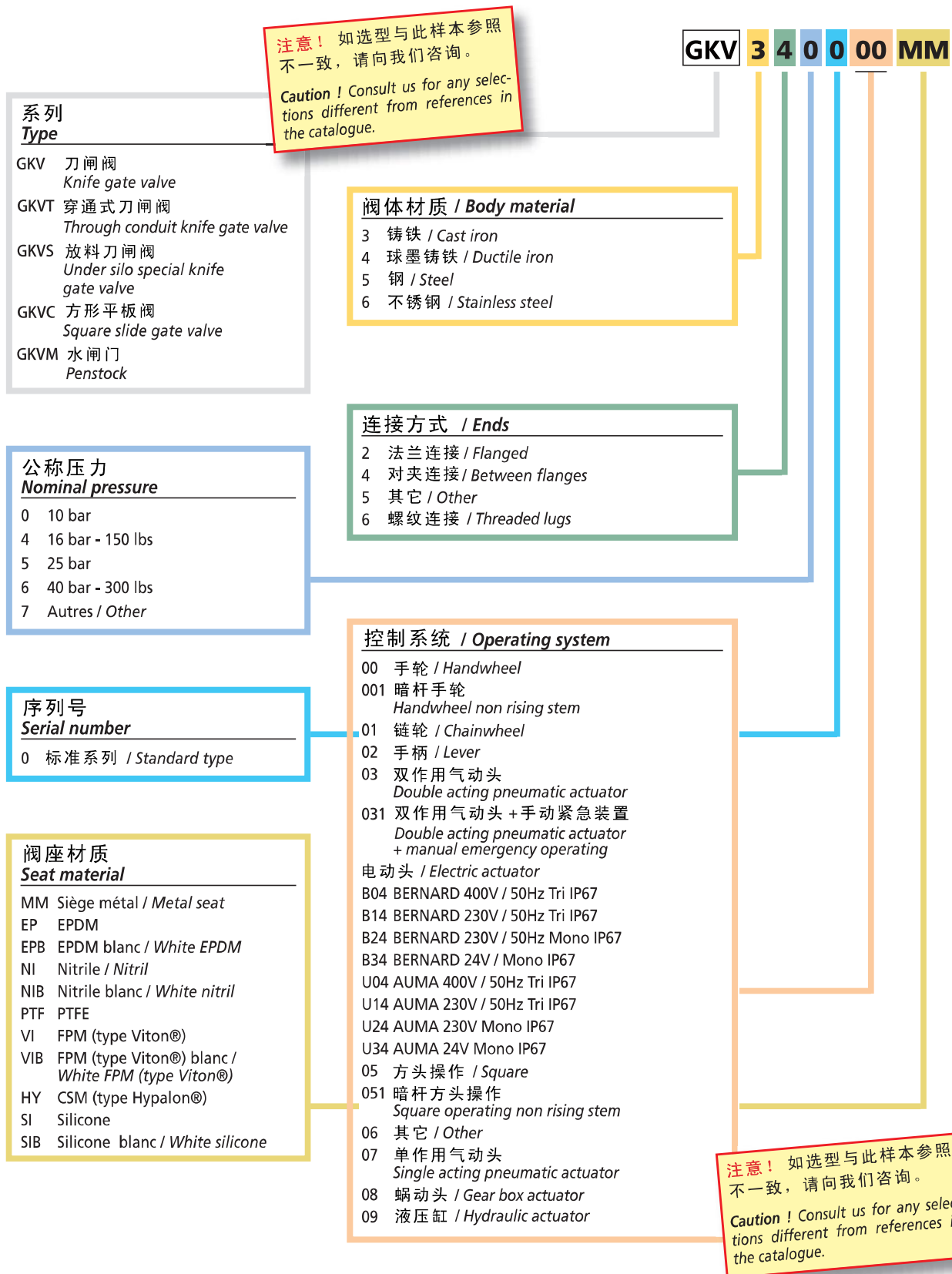
侧面型钢  
Sectional shaped steel  
口径 DN ≤ 300



标准 U 型结构  
Standard shaped U section  
DN ≥ 350

## 刀闸阀型号编制方法

## Knife gate valves codification



## 标准系列刀闸阀

### ■ 工作原理

- 刀闸阀由狭长阀体和阀体内滑动阀板构成。无论在关闭或开启状态，阀板上部始终伸出阀体外。阀板末端成倒角非常锋利，表面的抛光处理加强阀板穿透性。阀门关到底时，阀板被压附在连接处确保阀座密封性能。填料压块确保阀门内部密封。
- 刀闸阀技术特别适用于一些复杂的使用环境，如粘稠性或是粉状产品。
- 传统闸阀会有大滞留区，因此粘稠性或粉状介质会阻碍阀板关闭。而刀闸阀阀板上部始终伸出阀体，边缘锋利有切割功能，可以顺利开启和关闭。

### ■ 应用范围

- 纸浆生产。
- 水、水处理及污水行业。
- 化工行业：粉末或结晶产品。
- 酿酒业：葡萄酒生产。
- 粉体行业：水泥、气力输送及仓储。

### ■ 产品类型

- GKV 标准系列 / GKV type standard.

### ■ 性能特点

- 开启关断或调节功能。
- 对夹螺纹安装。
- 单向密封，阀体上标有方向箭头。
- 滞留区小：闸板在阀体内受牵引，与阀体间隙小。
- 填料压块：填料和O形圈（材质与阀座接头相同）保证上法兰密封性能并减小操作扭矩。
- 压力损失小。
- 可使用导向板来调节粘稠介质流量。

### ■ 标准结构材料 (详见第3页材料表)

- EN-GJL-250 球墨铸铁阀体 / X5CrNi 18-10 不锈钢阀板。
- GX5CrNiMo 19-11-2 不锈钢阀体 / X5CrNiMo 17-12-2 不锈钢阀板。

### ■ 保护层

- DN 600 及以下口径为 RAL 6005 环氧烤漆涂层。
- DN 600 以上口径为液态环氧涂层。

### ■ 阀座密封圈 (详见第3页材料表)

- 铸铁阀体为丁腈密封。
- 不锈钢阀体为乙丙胶密封。
- 硬密封：对应材质。
- 白色丁腈、白色乙丙胶、硅胶、氟橡胶、氯磺化聚乙烯等。
- L 型密封圈用不锈钢环套固定于阀体内，稳固性强，不会脱落。

### ■ 填料

- 铸铁或不锈钢结构为聚四氟乙烯。
- 根据具体情况，高温环境可用聚四氟乙烯、石墨等填料。
- 铸铁阀体选用丁腈O形圈，不锈钢阀体选用乙丙胶。

### ■ 预制支板 (直至 DN 300)

- 环氧树脂涂层钢板 (也可选不锈钢板)。
- 预留限位开关等检测元件和电磁阀固定孔。
- 可安装保护罩。

## Standard knife gate valve

### ■ PRINCIPLE OF FUNCTIONING

- knife gate valve is constituted by a gate which slides in a narrow body. The upper part of the gate, in closed or opened position, stands out from the body. The gate is sharp thanks to a chamfer of extremity. The polishing of faces facilitates the penetration of the gate in the product. At the end of valve closing, the gate is stuck to the joint to assure the seat tightness. The gland packing guarantees the internal tightness of the valve.
- This technology of knife gate valve is particularly adapted for difficult using conditions such as thick or powdery products.
- Traditional gate valves contain important retention zones. Also thick or powdery products prevent the good functioning of the wedge. The knife gate valves with the upper gate part always out of body can always open and being sharp always can close with sharp edge.

### ■ APPLICATION

- Pulp production.
- Water, water treatment, waste water.
- Chemical industry: powdery or crystallizing products.
- Brewery industry: wine-producing.
- Pulverized products: cement work, pneumatic transport, stocking.

### ■ MODEL

- Standard GKV type.

### ■ GENERAL CHARACTERISTICS

- Function ON/OFF or regulation.
- Wafer threaded mounting.
- Unidirectional tightness, direction indication thanks to the arrow on the body.
- Small retention zone: the gate is guided in the body and has little clearance.
- Gland assembly: packing and O-ring (same materials as seat joint) to assure the elasticity and decrease the operating torque.
- Small head loss.
- Possibility to regulate thick fluids with the adaptation of a diaphragm ring.

### ■ STANDARD CONSTRUCTION MATERIALS (see material chart on page 3)

- Cast iron EN-GJL-250 body / Stainless steel X5CrNi 18-10 gate
- Stainless steel GX5CrNiMo 19-11-2 body / Stainless steel X5CrNiMo 17-12-2 gate.

### ■ COATING

- Oven cooked epoxy until DN 600, RAL 6005.
- Liquid epoxy painting for diameter superior to the DN 600.

### ■ SEAT GASKET (see material chart on page 3)

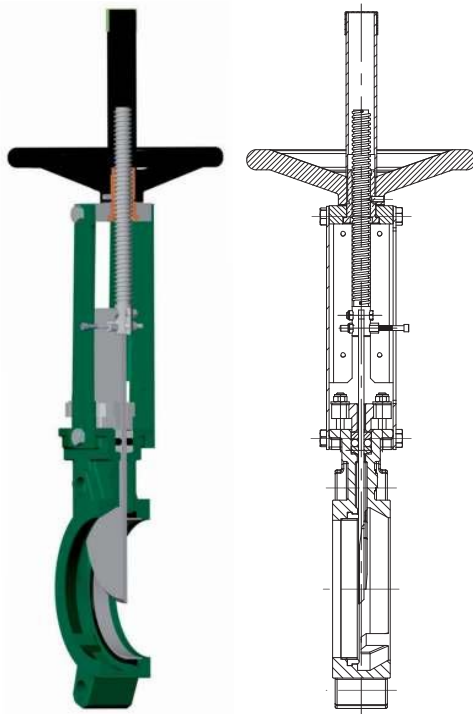
- Nitrile for cast iron body valve.
- EPDM for stainless steel body valve.
- Tightness metal / metal: relative tightness.
- White nitrile, white EPDM, silicone, FPM (type Viton®), CSM (type Hypalon®), PTFE etc.
- The L joint, fixed in the body with a stainless support ring, can not be torn away.

### ■ PACKING

- PTFE packing in cast iron or stainless steel construction.
- Optionally: graphite, PTFE for high temperature etc.
- Nitrile O-ring for cast iron body valve and EPDM for stainless body valve.

### ■ PREFORMED SUPPORTING PLATES (until DN 300)

- Steel plate epoxy coated (optionally with stainless steel material).
- Standard fixation holes for detection elements and solenoid valves.
- Possibility of mounting protection shields.



## 标准系列刀闸阀

### ■ 压力/温度

- 最大工作压力
- DN 50 至 250 : 10 巴
- DN 300 至 450 : 7 巴
- DN 500 至 600 : 4 巴
- DN 700 至 1200 : 2 巴
- 最高工作温度: 丁腈 80°C; 乙丙胶 110°C.
- 其它材质 (详见 5 页)

### ■ 标准和测试

- 生产标准遵循欧盟指令 97/23/CE《压力设备标准》: 流体类型 III 模式 H (从 DN 50 至 DN 600).
- 测试程序符合 NF EN 12266-1, NF EN 12266-2, DIN 3230 和 ISO 5208 标准。

### ■ 连接标准

- 法兰对夹安装, 由螺栓和螺母固定。(详见 44-45 页)
- PN 10 对夹式符合 EN 1092-1, EN 1092-2, BS 450, ANSI B 16-5 及 ASA 150 标准, 也可订做 TAPPI 标准。

### ■ 结构长度

依据 DIN 标准。

### ■ 执行机构

- 手轮、链条手轮, 可带明杆或在限定整体尺寸时可用暗杆。
- 杠杆
- 蜗动头。
- 双作用气动头和单作用气动头 (单作用气动头里的弹簧可能会增加气动头整体长度)。
- 按需求可在气动头上加配紧急手动装置。
- 紧急情况下可使用压缩空气罐。
- 三相或单相 230/400 V 电动头。
- 液压缸。
- 防爆保护装置。

### ■ 附件

- 机械式或感应式限位开关。
- 5/2 或 3/2 电磁阀。
- 消声器。
- 调节润滑过滤器。
- 电动气动定位器。
- 防爆电气排线。
- 可应要求提供镀 PVC 铜气动排线。

### ■ 特殊制造

- 阀门 ISO PN 25.
- 阀门 ASA 150 lbs.

## Standard knife gate valve

### ■ PRESSURES / TEMPERATURES

- Maximum working pressures:
- DN 50 - 250: 10 bar,
- DN 300 - 450: 7 bar,
- DN 500 - 600: 4 bar,
- DN 700 - 1200: 2 bar,
- Maximum working temperatures: nitrile: 80°C; EPDM: 110°C.
- Other materials (see table on page 5).

### ■ AGREEMENT AND TESTING

- Manufacture according to the requirements of the European directive 97/23/CE «Equipments under pressure»: category III modulate H (from DN 50 to DN 600).
- Test procedures are established according to NF EN 12266-1, NF EN 12266-2, DIN 3230 and ISO 5208.

### ■ CONNECTION

- Mounting between flanges by bolts and nuts (see pages 44 and 45).
- Between flanges PN 10 according to EN 1092-1 and EN 1092-2 / BS 450 / ANSI B 16-5 option ASA 150 or standard TAPPI on request.

### ■ FACE TO FACE

According to standard DIN

### ■ HANDLING POSSIBILITIES

- Handwheel, chain handwheel in standard with rising stem or no rising stem for limited overall dimensions.
- Lever.
- Gear box actuator.
- Double acting pneumatic actuator, single acting pneumatic actuator up to DN 300 (attention to important height because of springs).
- Pneumatic actuator with emergency manual operator on request.
- Possibility of using compressed air tank for emergency operation.
- Electric actuator 230/400 V 3-phases or mono-phase.
- Hydraulic actuator.
- ADF protection ...

### ■ ACCESSORIES

- Mechanical or inductive limit switches.
- Solenoid valves 5/2, 3/2 with coils of 24 to 230V AC or DC.
- Pneumatic distributor.
- Exhaust silencer.
- Regulating-lubricating filter.
- Electro-pneumatic positioner.
- Electric cabling anti-deflagration.
- Pneumatic cabling with copper coated PVC on request.

### ■ SPECIAL CONSTRUCTIONS

- ISO PN 25 valves.
- ASA 150 lbs valves.

