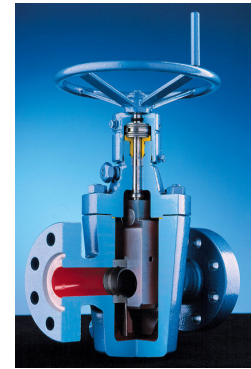


Wellhead equipment gate valves



General parameters of wellhead equipment gate valves

The wellhead equipment gate valves of DKG-East are closing valves of wellheads and X-mas trees of oil, gas or other well-spring. Design, material quality and examination system of valves are according to API Spec. 6A standard. They are integral parts of the structure of well, and provide a higher technical and secure level with minimal maintenance and low hazard of failure. Thanks to these favourable parameters, wellhead gate valves are still in operation under the most severe circumstances in the countries of ex CIS.



Demands of clients

DKG-EAST with many years of experience of development, manufacture and use aims to serve maximum demand of clients. The professional assistance of clients and continuous innovations enable the company to make offers to the emerging needs using innovative solutions.

Solutions

DKG-EAST has had an API qualification for nearly 25 years. The way to cope with the challenges in the past has resulted in rich experience and valuable knowledge which help our company recommend solutions to solve customers' problems and satisfy newer and newer demands. The wellhead-valves of DKG-EAST are safe and long-life valves which meet the highest international standards.

Scope

- natural gas transmission
- oil and gas wells
- natural gas storage
- crude oil refinery
- offshore drilling points
- drinking water wells



Main references

- MND, Czech Rep.
- RAG, Austria
- NAFTA A.S.Gbely, Slovakia
- NSG Technology, Slovakia
- Hartmann Valves, Germany
- Baker Oil Tool, Germany
- Robke GmbH, Germany
- GWC Valve Europe, Germany
- Robert Cort Ltd., England
- Transgaz, Czech Republic
- Tomskgazprom, Russia
- MRK Eng., Russia
- IKAR, Russia
- Belorusneft, Belarus
- Rochester Consulting, Uzbekistan
- GU Kazgermunai, Kazakhstan
- NIS AD Novi Sad, Serbia
- TSPCO (Altannan Ge.Trading), Iran
- ZRG Krosno, Poland
- PT Tiga Musim Mas Jaya, Indonesia
- SMART Energy, Hong Kong

Design Characteristics

Wellhead gate valves were designed, produced and tested by DKG-EAST according to the relating international standards.

The construction of the products meets the following requirements:

Generally:	ANSI/API 6A/ISO 10423
Size:	ASME Code ch. VIII.
Material:	ASTM, AISI, EN, GOSZT
Sealing surface of flanges:	6B (2000-5000 psi) acc. to API Spec 6A 6BX (10000-15000 psi) acc. to API Spec 6A
Sleeved execution:	API Std 5 L
Marking:	API Spec 6A
Sour service:	API Spec 6A: NACE MR0175
Pressure test:	API Spec 6A
Quality Control requirements:	API Spec 6A: PSL1; PSL2; PSL3
Performance level:	API Spec 6A: PR1; PR2
Working temperature range:	API Spec 6A: K; L; P; R S; T; U; V

Construction features:

Seat construction:

- loose fitted replaceable seat

Gate (closing element):

- Non-split and split wedge

Gate-seat sealing

- PTFE sealing or metal to metal sealing
- metal to metal sealing

Stem construction:

- rising stem
- non-rising stem

Stuffing box:

- Spiral spring PTFE gasket with support ring
- V – rings with protective bushing + plastic

Body-bonnet sealing:

- corrosion-proof serrated ring joint
- corrosion-proof packing ring of BX type

Stem bearing:

- rolling bearing





Type assortment

Nominal Size	Working Pressure psi			
	2000	3000	5000	10000
2 1/16"	X	X	X	Y
2 9/16"	X	X	X	Y
3 1/8"	X	X	X	Y
3 1/16"				Y
4 1/16"	X	X	X	
7 1/16"	X	X	X	

Nominal Size	Working Pressure psi		
	2000	3000	5000
2 1/16"	Z	Z	Z
2 9/16"	Z	Z	Z
3 1/8"	Z	Z	Z
4 1/16"	Z	Z	Z

X
KFT/A
KFT/AK

Y
KFT/A

Z
KFT/EK

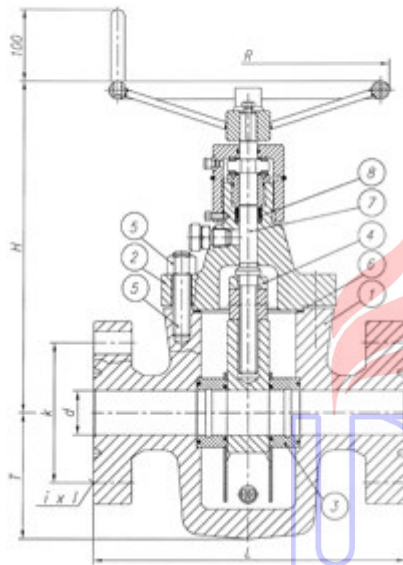


KFT/A**Main characteristics:**

- non rising stem
- body and bonnet connected by bolts
- body and bonnet sealing: BX type corrosion resistant ring joint
- gate: one piece
- gland bushing spiral ring operated teflon sealing with support ring
- loose fitted seat
- connection: flanged connection
- gate-seat sealing: metal to metal
- back seat possibility for gland bushing replace bi-directional flow

Desing, manufacturing:	API Spec 6A
Size range:	2 1/16"-4 1/16"
Working pressure:	10000 psi
Temperature range:	-60°C - +121 °C
Product specification level:	PSL2 - PSL3
Performance requirement level:	PR1, PR2

KFT/A



1	Body
2	Bonnet
3	Seat ring
4	Gate
5	Stud and nut
6	Body-bonnet sealing
7	Stem
8	Stuffing box sealing

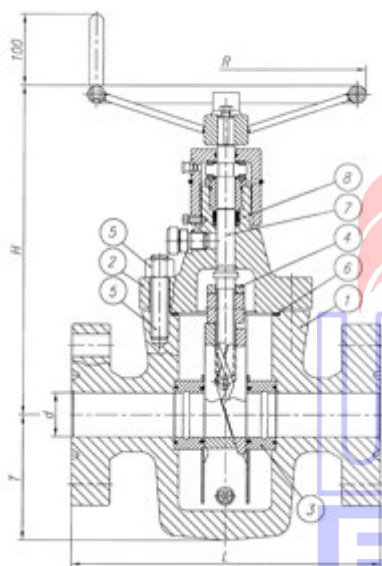
KFT/AK

**Main characteristics:**

- non rising stem
- body and bonnet connected by bolts
- body and bonnet sealing: acid resistant wound sealing
- gate: parallel expanding
- gland bushing spiral ring operated teflon sealing with support ring
- loose fitted seat
- connection: flanged, threaded connection
- seat sealing. PTFE ring
- back seat possibility for gland bushing replace
- flow direction according to the figure

Design, manufacturing:	API Spec 6A
Size range:	2 1/16"-7 1/16"
Working pressure:	2000, 3000, 5000 psi
Temperature range:	-60 °C - +121 °C
Product specification level:	PSL1 - PSL3
Performance requirement level:	PR1, PR2

KFT/AK



1	Body
2	Bonnet
3	Seat ring
4	Gate
5	Stud and nut
6	Body-bonnet sealing
7	Stem
8	Stuffing box sealing

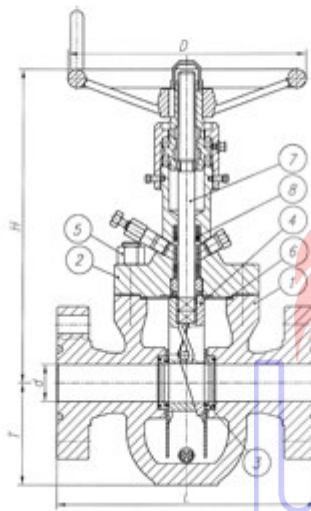
KFT/EK

**Main characteristics:**

- rising stem
- body and bonnet connected by bolts
- body and bonnet sealing: acid resistant wound sealing
- gate: parallel expanding, with springs
- V-type sealing ring with plastic resealing possibility
- loose fitted seat
- connection: flanged, threaded
- seat sealing: PTFE ring
- flow direction: according to drawing

Design:	API Spec 6A
Size:	2 1/16" - 4 1/16"
Working pressure:	2000, 3000, 5000 psi
Temperature range:	-46 °C - +121 °C
Product Specification Level:	PSL1 - PSL3
Performance Requirement L.:	PR1

KFT/EK



1	Body
2	Bonnet
3	Seat ring
4	Gate
5	Stud and nut
6	Body-bonnet sealing
7	Stem
8	Stuffing box sealing

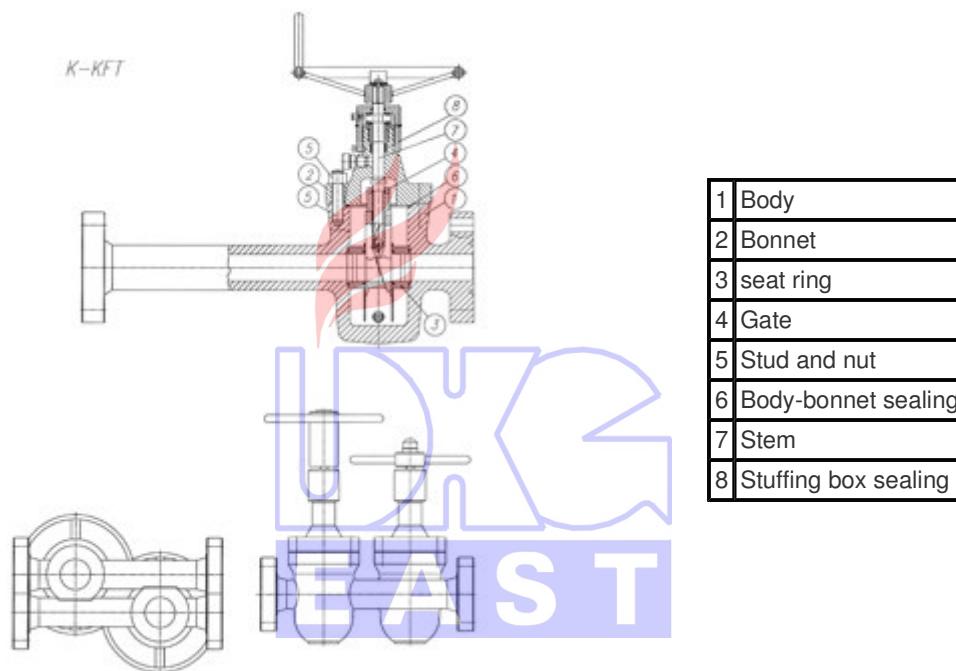
K-KFT

The Gate Valve type K-KFT is designed for oil and gas well wellheads, which comply with the API Spec 6A requirement (5 bolted asymmetrical flanges).

Main characteristics :

- rising and non rising stem
- body and bonnet connected by bolts
- body and bonnet sealing: acid resistant wound sealing
- gate: parallel expanding, with spring
- gland bushing spiral ring operated teflon sealing with support ring
- loose fitted seat
- connection: flange type 6B, according to API Spec 6A, with Ring Joint, or: API LP threaded
- seat sealing: PTFE ring
- back seat possibility for gland bushing replace

Design, manufacturing:	API Spec 6A
Size Range:	2 1/16"
Working Pressure:	2000, 3000, 5000 psi
Temperature Range:	-46°C - +121 °C
Product Specification Level:	PSL1
Performance Requirement L.	PR1



1	Body
2	Bonnet
3	seat ring
4	Gate
5	Stud and nut
6	Body-bonnet sealing
7	Stem
8	Stuffing box sealing

Dimension Table



Dimensions Table for Gate Valves Type KFT/AK:

WP psi	Min.bore inch	d	L	T	H	i	l	k	R	L ₁	API LP
2000	2 1/16	52,5	295,0	135	395	8	18	127,0	280	244,5	2"
	2 9/16	65,1	333,0	158	450	8	23	149,2	320	260,0	2 1/2"
	3 1/8	81,0	359,0	185	475	8	22	168,3	320	289,0	3"
3000	2 1/16	52,5	371,5	140	395	8	27	165,1	320	244,5	2"
	2 9/16	65,1	422,0	161	450	8	30	190,5	420	260,0	2 1/2"
	3 1/8	81,0	435,0	185	495	8	27	190,5	420	289,0	3"
	4 1/16"	103,2	511,2	226	590	8	33	235,0	500	330,0	4"
	7 1/16	152,4	612,6	320	695	12	33	317,5	680	-	-
5000	2 1/16	52,5	371,5	145	395	8	27	165,1	320	244,5	2"
	2 9/16	65,1	422,0	167	450	8	30	190,5	420	-	-
	3 1/8	81,0	473,0	190	495	8	33	203,2	420	-	-
	4 1/16	103,2	549,3	234	590	8	36	241,3	500	-	-

Dimensions Table for Gate Valves Type KFT/A:

WP psi	Min.bore inch	d	L	T	H	i	l	k	R	L ₁	API LP
2000	2 1/16	52,5	295,0	135	395	8	18	127,0	280	244,5	2"
	2 9/16	65,1	333,0	158	450	8	23	149,2	320	260,0	2 1/2"
	3 1/8	81,0	359,0	185	475	8	22	168,3	320	289,0	3"
3000	2 1/16	52,5	371,5	140	395	8	27	165,1	320	244,5	2"
	2 9/16	65,1	422,0	161	450	8	30	190,5	420	260,0	2 1/2"
	3 1/8	81,0	435,0	185	495	8	27	190,5	420	289,0	3"
	4 1/16	103,2	511,2	226	590	8	33	235,0	500	330,0	4"
	7 1/16	152,4	612,6	320	695	12	33	317,5	680	-	-
5000	2 1/16	52,5	371,5	145	395	8	27	165,1	320	244,5	2"
	2 9/16	65,1	422,0	167	450	8	30	190,5	420	-	-
	3 1/8	81,0	473,0	190	495	8	33	203,2	420	-	-
	4 1/16	103,2	549,3	234	590	8	36	241,3	500	-	-
10 000	2 1/16	52,5	520,7	155	395	8	23	158,75	470	-	-
	2 9/16	65,1	565,15	177	450	8	27	184,15	500	-	-
	3 1/16	77,8	620	200	495	8	30	215,9	580	-	-
	4 1/16	103,2	670	250	588	8	33	258,8	610	-	-
15 000	2 1/16	52,5	483	170	410	8	33	230,2	420	-	-
	2 9/16	65,1	533	192	465	8	36	261,9	500	-	-
	3 1/16	77,8	598	218	610	8	39	287,3	540	-	-

Dimensions Table for Gate Valves Type KFT/EK :

WP psi	Min bore inch	d	L	T	H	i	l	k	R	Ring Joint
2000	2 1/16	52.5	295.0	135	440	8	18	127.0	250	R 23
	3 1/8	81.0	359.0	181	548	8	23	168.3	300	R 31
3000	2 1/16	52.5	371.5	137	440	8	26	165.1	300	R 24
	2 9/16	65.1	422.0	167	480	8	29	190.5	400	R 27
	3 1/8	81.0	435.0	185	548	8	27	190.5	400	R 31
	4 1/16	103.2	511.2	226	645	8	33	235.0	500	R 37
5000	2 1/16	52.5	371.5	145	440	8	26	165.1	300	R 24
	2 9/16	65.1	422.0	167	480	8	29	190.5	400	R 27
	3 1/8	81.0	473.0	189	548	8	33	203.2	400	R 35
	4 1/16	103.2	549.3	234	645	8	36	241.3	500	R 27





Identification system

The notation of **KFT** type wellhead gate valves is according to API Spec 6A standard. In case of special demands, we can select valves regarding the following:

As per code:

Code:	Type selection
KFT/A	One piece gate, non-rising stem
KFT/AK	parallel expanding gate, non-rising stem
KFT/EK	parallel expanding gate, rising stem
K-KFT	parallel expanding gate, for dual completion

As per temperature:

Code	Temperature range
K	- 60 -- + 82 C°
L	- 46 -- + 82 C°
P	- 29 -- + 82 C°
R	4 -- + 50 C°
S	- 18 -- + 66 C°
T	- 18 -- + 82 C°
U	- 18 -- +121 C°
V	2 -- + 121 C°

As per material:

Code	Material requirement
AA	Carbon- or low alloyed steel
BB	Carbon- or low alloyed steel
CC	Stainless steel
DD	Carbon- or low alloyed steel acc. to NACE MR 0175
EE	Carbon- or low alloyed steel acc. to NACE MR 0175
FF	Stainless steel acc. to NACE MR 0175
HH	Stainless steel acc. to NACE MR 0175

AS per level of requirements: (according to API Spec 6A)

Service requirement:

PR1
PR2

Requirement of product specialization level:

PSL1
PSL2
PSL3

Gallery

