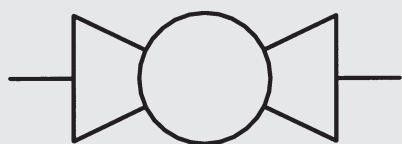


# SAE Fixed Flange Ball Valves

## KHF3/6



up to 420 bar  
up to DN 50



# 1. DESCRIPTION

## 1.1. GENERAL

According to DIN-ISO 1219, HYDAC 2/2-way SAE fixed flange ball valves are units which serve to shut off the flow of an operating medium in both directions.

These ball valves have the following advantages:

- Visual indication of the switching position by means of a slot on the control spindle
- Switching limited by means of stop pin and stop disc
- No glands, therefore no manual re-adjustment of seals required
- Sealing principle with floating ball, sealing on the outlet side
- Full flow passage for unrestricted flow of medium
- Compact design
- Easy operation
- Surface zinc-plated on metric thread version

Surface phosphate-plated on UNC thread version

For HYDAC flanged ball valves, see brochure no.: E 5.502../..

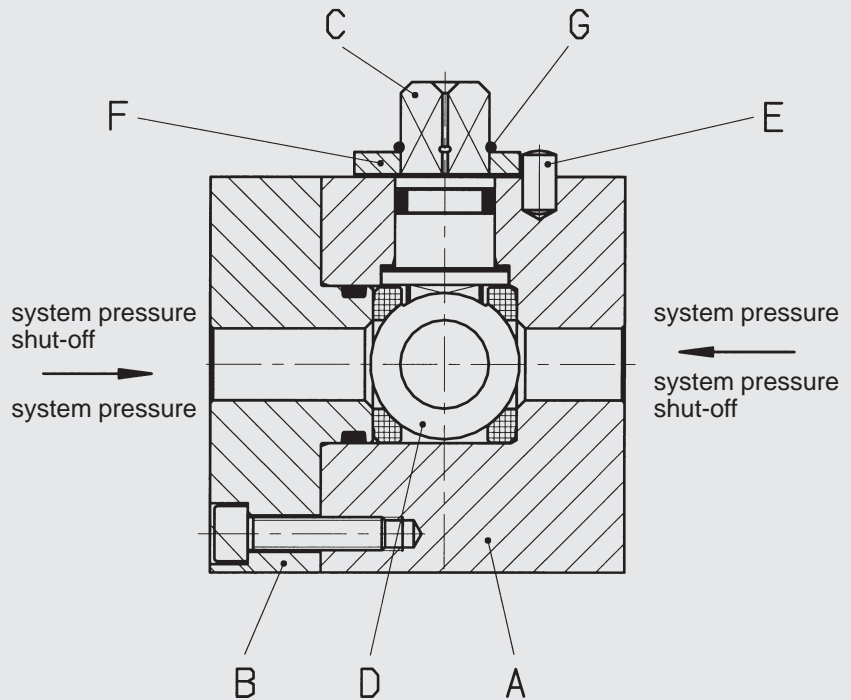
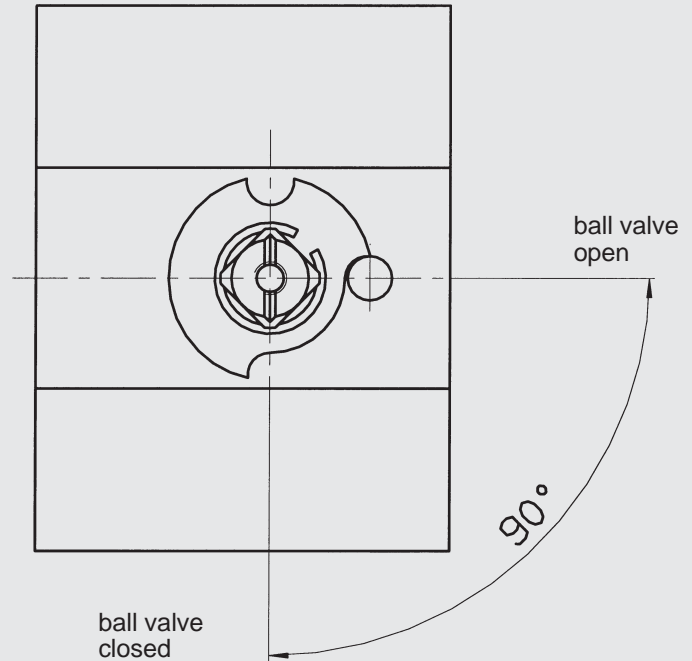
For HYDAC SAE flanged ball valves, see brochure no. E 5.513../..

For HYDAC SAE threaded flange ball valves, see brochure no.: E 5.520../..

On request we can supply other models to cover nearly all applications.

## 1.2. FUNCTION

Turning the control spindle moves the ball from the open to the closed switching position. The system pressure pushes the ball against the non-pressurised side of the sealing cup and shuts off the flow leakage-free.



- |   |                 |   |               |
|---|-----------------|---|---------------|
| A | Housing         | D | Ball          |
| B | Flange          | E | Stop pin      |
| C | Control spindle | F | Limit disc    |
|   |                 | G | Ring retainer |

## 1.3. APPLICATION

HYDAC SAE fixed flange ball valves KHF3/6 are used to shut off flow in hydraulic circuits.

Areas of application are for example:

- Pipeline construction
- Machine tools
- System engineering
- Off-shore sector

## 1.4. NOTES

Ball valves are not designed to be used as flow control valves; therefore they should always be either fully open or fully closed, to avoid damaging the sealing cups.

To ensure correct functioning, the pressure and temperature specifications must be observed.

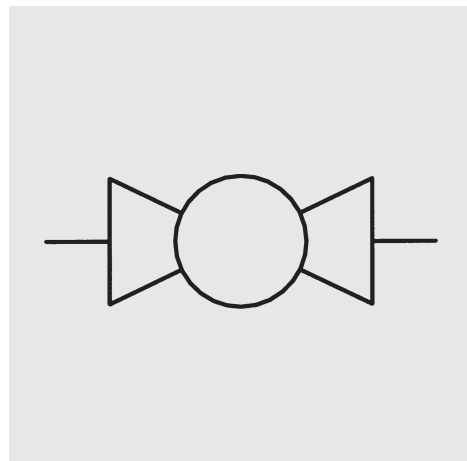
The permissible operating pressure of the ball valve and the flange connection must be taken into account.

## 2. TECHNICAL SPECIFICATIONS

### 2.1. GENERAL

#### 2.1.1 Designation and symbol

Fixed flange ball valve KHF3/6



#### 2.1.2 Model code (also order example)

**KHF3/6 - 20 - 1114 - 16X - G**

**Designation** \_\_\_\_\_  
KHF3/6 = fixed flange ball valve

**Nominal bore** \_\_\_\_\_

#### Materials

	Material code
Housing, flange and control spindle (steel)	1 _____
Ball (steel)	1 _____
Sealing cups (POM)	1 _____
Control spindle seal and connection seal, Viton (FKM)	4 _____

#### Handle

16 = steel bolt-on handle, cranked (SK), assembled  
36 = steel bolt-on handle, cranked long (SK), SW 17 assembled

#### Series

(Determined by manufacturer)

#### Type

G = metric connection thread, surface zinc-plated  
UNC = UNC connection thread, surface phosphate-plated

Please quote stock no. when ordering (see table 2.1.3)  
Delivery for non-standard valves is longer and the price is higher.

### 2.1.3 Standard models

#### Metric thread version

Type of connection	SAE size	Nominal bore / type	Nominal bore DN	Nominal press. PN [bar] *	Order no. = stock no.	Weight [kg]
Fixed flange connection to ISO 6162, table 1 + 2 (SAE J 518 c) <b>F3/F6</b>	1/2 "	KHF3/6 - 16 - 1114-16X-G	16	420	562298	2.5
	3/4 "	KHF3/6 - 20 - 1114-16X-G	20	420	562299	3.9
	1 "	KHF3/6 - 25 - 1114-16X-G	25	420	562300	6.0
	1 1/4 "	KHF3/6 - 32 - 1114-36X-G-M12	32	420	562301	11.6
	1 1/4 "	KHF3/6 - 32 - 1114-36X-G-M14	32	420	3011924	11.6
	1 1/2 "	KHF3/6 - 40 - 1114-36X-G	40	420	560239	16.4
	2 "	KHF3/6 - 50 - 1114-36X-G	50	420	562302	24.9

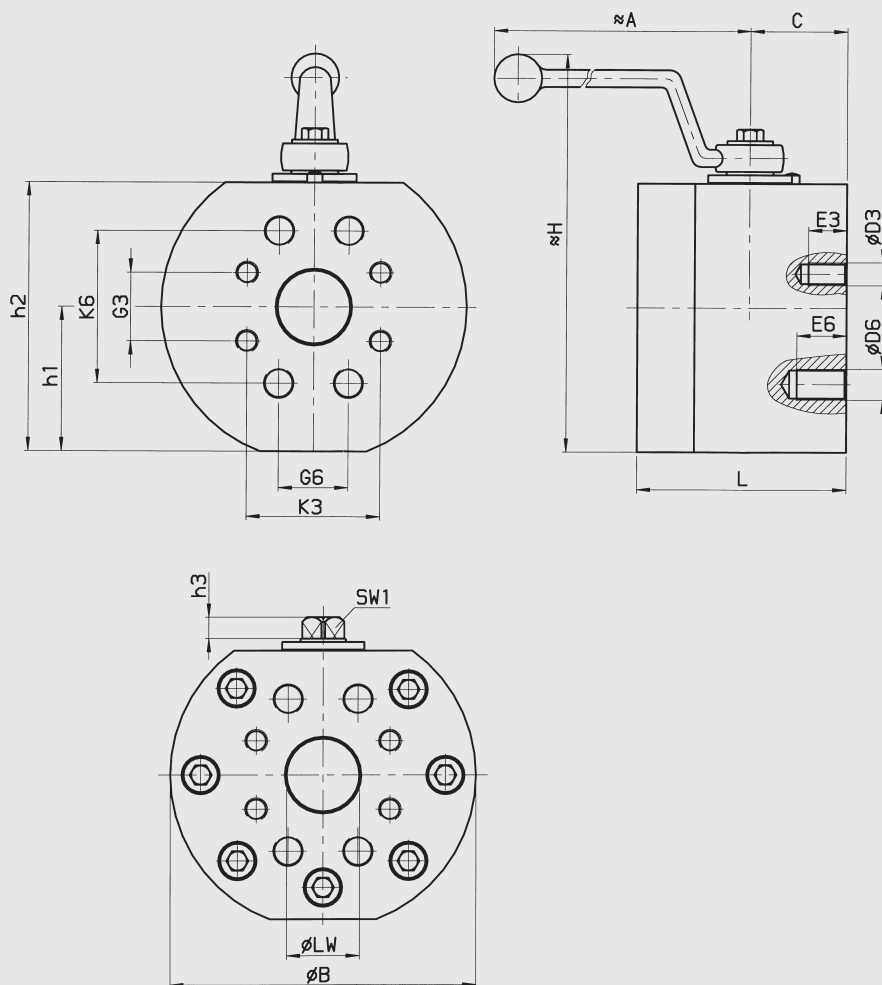
#### UNC thread version

Type of connection	SAE size	Nominal bore / type	Nominal bore DN	Nominal press. PN [bar]	Order no. = stock no.	Weight [kg]
Fixed flange connection to ISO 6162, table 1 + 2 (SAE J 518 c) <b>F3/F6</b>	1/2 "	KHF3/6 - 16 - 1114-16X-UNC	16	420	562669	2.5
	3/4 "	KHF3/6 - 20 - 1114-16X-UNC	20	420	562670	3.9
	1 "	KHF3/6 - 25 - 1114-16X-UNC	25	420	562671	6.0
	1 1/4 "	KHF3/6 - 32 - 1114-36X-UNC	32	420	562672	11.6
	1 1/2 "	KHF3/6 - 40 - 1114-36X-UNC	40	420	562673	16.4
	2 "	KHF3/6 - 50 - 1114-36X-UNC	50	420	562674	24.9

\* = The permissible operating pressure for the flange connection must be observed.

- 2.1.4 **Type of construction**  
Shut off device is a ball
- 2.1.5 **Type of connection**  
SAE fixed flanges to ISO 6162, table 1 and 2 (SAE J 518 c), either with metric or UNC thread
- 2.1.6 **Mounting position**  
Optional
- 2.1.7 **Weight**  
See table 2.1.3
- 2.1.8 **Flow direction**  
Optional
- 2.1.9 **Ambient temperature**  
-10 °C to +80 °C
- 2.1.10 **Materials**  
Housing with flange and control spindle in steel, surface zinc-plated on metric thread version, surface phosphate-plated on UNC thread version  
Ball in steel, hard chromed  
Ball seal in high quality synthetic material (POM)  
Soft seals in Viton (FKM)  
Cranked bolt-on handle in steel, zinc-plated
- 2.2. **HYDRAULIC DETAILS**
- 2.2.1 **Nominal pressure**  
420 bar
- 2.2.2 **Operating fluids**  
Mineral oil to DIN 51524 Part 1 and Part 2 (other media on request)
- 2.2.3 **Temperature of operating fluid**  
-10 °C to +80 °C

### 3. DIMENSIONS



#### KHF3/6

Size	SAE size	DN	LW	L	C	H	h1	h2	h3	B	SW 1	A
KHF3/6-16	1/2 "	16	13	75	32.5	129	37.5	71.5	11	79	12	174
KHF3/6-20	3/4 "	20	19	80	34.3	147	46.0	90.0	11	99	14	174
KHF3/6-25	1 "	25	25	88	38.0	160	55.0	102	11	119	14	174
KHF3/6-32	1 1/4 "	32	30	100	44.0	211	65.0	124	12	139	17	295
KHF3/6-40	1 1/2 "	40	38	110	51.0	227	75.0	140	12	160	17	295
KHF3/6-50	2 "	50	48	116	54.0	244	84.0	156.6	12	179	17	295

#### Connection dimensions – metric

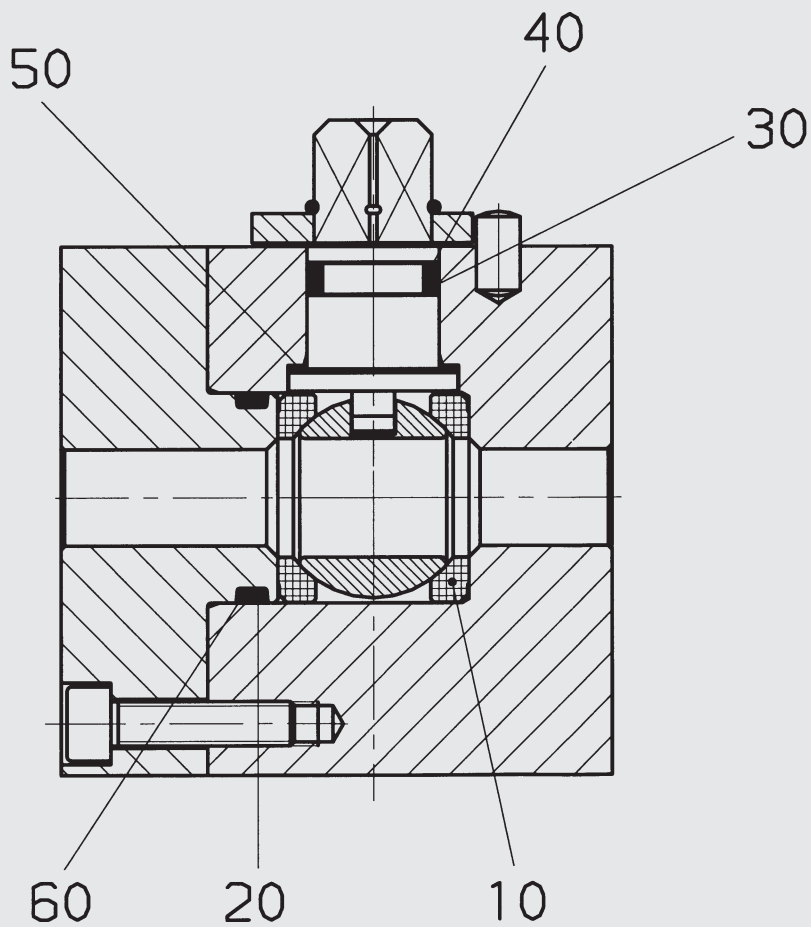
Size	K3	G3	D3	E3	K6	G6	D6	E6
KHF3/6-16	38.1	17.5	M 8	16	40.5	18.2	M 8	16
KHF3/6-20	47.6	22.3	M10	18	50.8	23.8	M10	18
KHF3/6-25	52.4	26.2	M10	18	57.2	27.8	M12	21
KHF3/6-32 / M12	58.7	30.2	M10	18	66.6	31.8	M12	21
KHF3/6-32 / M14	58.7	30.2	M10	18	66.6	31.8	M14	21
KHF3/6-40	69.9	35.7	M12	20	79.3	36.5	M16	26
KHF3/6-50	77.8	42.9	M12	22	96.8	44.5	M20	34

#### Connection dimensions – UNC

Size	K3	G3	D3	E3	K6	G6	D6	E6
KHF3/6-16	38.1	17.5	5/16-18-UNC	16	40.5	18.2	5/16-18-UNC	16
KHF3/6-20	47.6	22.3	3/8-16-UNC	18	50.8	23.8	3/8-16-UNC	18
KHF3/6-25	52.4	26.2	3/8-16-UNC	20	57.2	27.8	7/16-14-UNC	20
KHF3/6-32	58.7	30.2	7/16-14-UNC	18	66.6	31.8	1/2-13-UNC	21
KHF3/6-40	69.9	35.7	1/2-13-UNC	26	79.3	36.5	5/8-11-UNC	26
KHF3/6-50	77.8	42.9	1/2-13-UNC	22	96.8	44.5	3/4-10-UNC	30

#### 4. SPARE PARTS

(Seal kit)



#### 5. NOTE

The information in this brochure relates to the operating conditions and applications described.

For applications or operating conditions not described, please contact the relevant technical department.

Subject to technical modifications.

Seal kit	Order no.= stock no.
DN 16	3015691
DN 20	3015694
DN 25	3015695
DN 32	3015696
DN 40	3015697
DN 50	3015698