

A+R®



**MADE
IN
Germany**

**ANSI Class
900-1500 lbs**

Metallisch dichtend

Angefederte Kugelsitze, Druckentlastung

Flansch-Kugelhähne Typ KHF 710

DN 15, 1/2" bis DN 150, 6"
ASME B 16.5 - 16.10

Werkstoffe:	-EGE-	-SGE-
Gehäuse	A304/316	A105
Dichtungen	Metall-Graphit	Metall-Graphit
Kugel	CF8M	CF8M

DIN EN ISO 9001:2008 - TÜV CERT -
DGRL 97/23/EG
SIL 3 gem. IEC 61508:2010
Herstellung gem. ASME, AD-2000
TA-Luft 2002
Fire-Safe Design



Einsatzbereiche:
FCC, CCR, Polysilikon, Chlorsilane,
abrasive, erosive Medien.

Temperatur: -50 °C (-60 °F) bis +650 °C (1200 °F).

Metal seated

Live load ball seats, pressure relief

flanged-ball valves type KHF 710

DN 15, 1/2" up to DN 150, 6"
ASME B 16.5 - 16.10

materials:	-EGE-	-SGE-
body	A304/316	A105
seats	Metall-Graphite	Metal-Graphite
ball	CF8M	CF8M

DIN EN ISO 9001:2008 - TÜV CERT -
PED 97/23/EC
SIL 3 acc. IEC 61508:2010
manufacturing acc. ASME, AD-2000
TA-Luft 2002
Fire-Safe Design



Application:
FCC, CCR, Polysilicon, Chlorosilane,
abrasive, erosive Media.

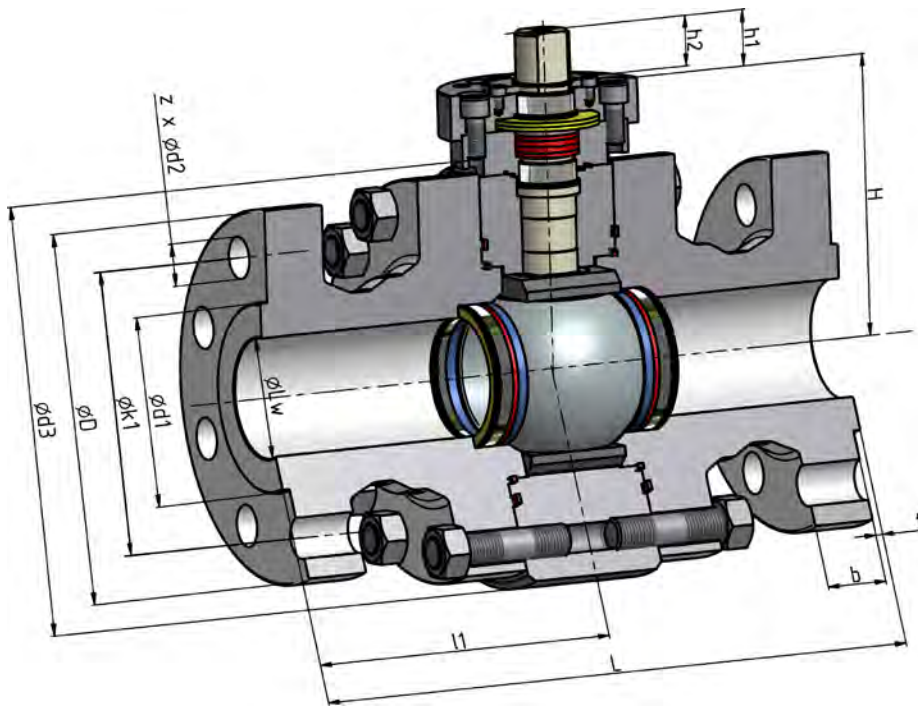
Temperature: -50 °C (-60 °F) to +650 °C (1200 °F).

A+R - Armaturen® GmbH - Germany

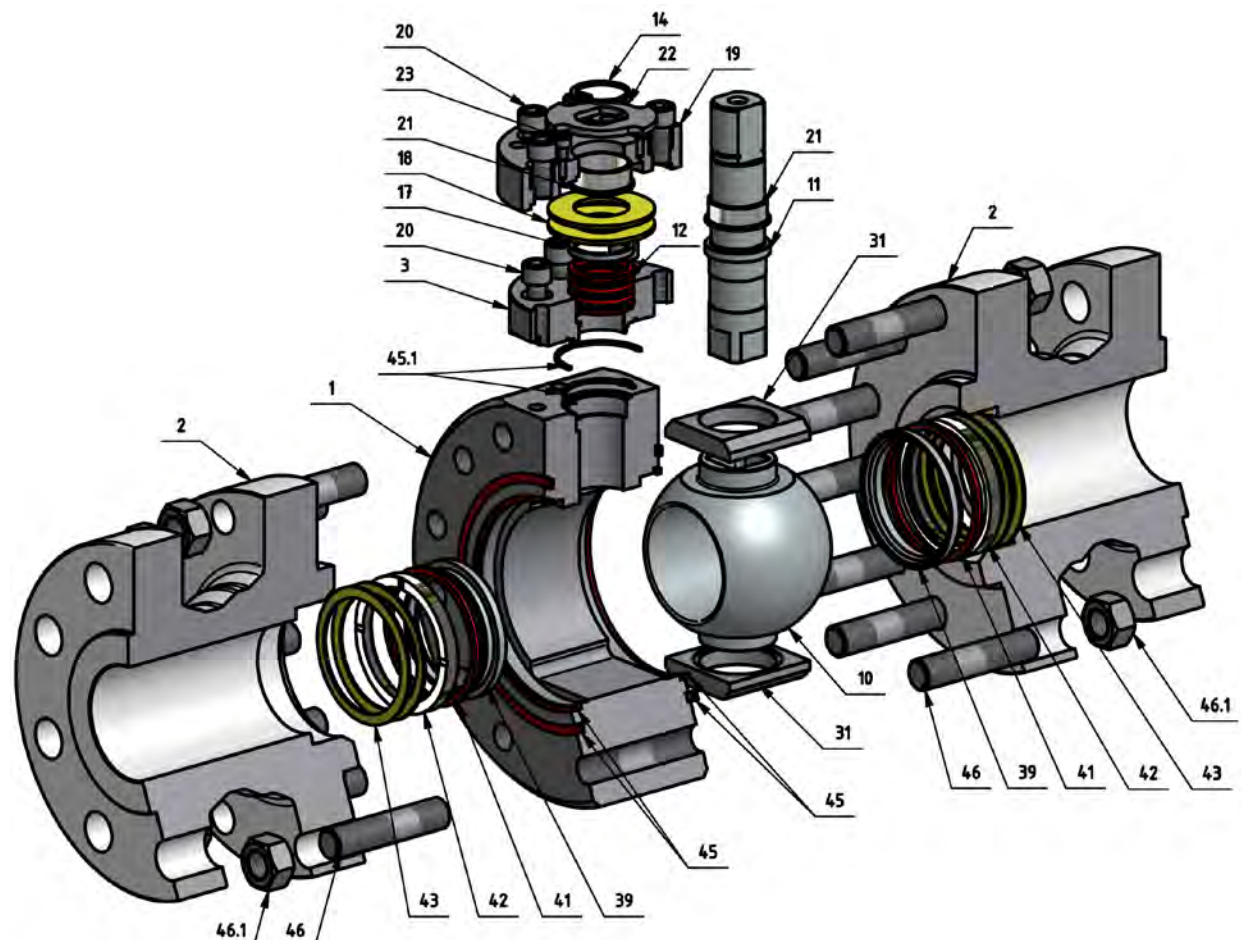
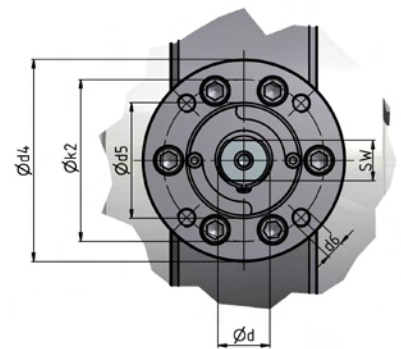
ООО «ТИ-СИСТЕМС» ИНЖИНИРИНГ И ПОСТАВКА ТЕХНОЛОГИЧЕСКОГО ОБОРУДОВАНИЯ
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Flansch-Kugelhähne Typ KHF 710 / flanged ball valves type KHF 710

ANSI Class 900-1500 lbs,
 metallisch dichtend / metal seats
 DGRL 97/23/EG / PED 97/23/EC
 SIL 3 IEC 61508:2010, TA-Luft 2002
 Fire-Safe Design



Antriebsaufbau
 nach DIN ISO 5211
 actuator attachment
 acc. to DIN ISO 5211



Flansch-Kugelhähne Typ KHF 710 / flanged ball valves type KHF 710

ANSI Class 900-1500 lbs

Class	Size	ØLw	L	I1	ØD	Øk1	Ød1	b	f	Ød2	z
900 1500	1/2"	15,0 (0,59 in)	215,9 (8,50 in)	108,0 (4,25 in)	120,7 (4,75 in)	82,6 (3,25 in)	35,1 (1,38 in)	22,4 (0,88 in)	6,4 (0,25 in)	22,4 (0,88 in)	4
	3/4"	20,0 (0,79 in)	228,6 (9,00 in)	114,3 (4,50 in)	130,0 (5,12 in)	88,9 (3,50 in)	42,9 (1,69 in)	25,4 (1,00 in)		25,4 (1,00 in)	
	1"	25,0 (0,98 in)	254,0 (10,00 in)	127,0 (5,00 in)	149,4 (5,88 in)	101,6 (4,00 in)	50,8 (2,00 in)	28,4 (1,12 in)		28,4 (1,12 in)	
	1 1/2"	40,0 (1,57 in)	304,8 (12,00 in)	152,4 (6,00 in)	177,8 (7,00 in)	124,0 (4,88 in)	73,2 (2,88 in)	31,8 (1,25 in)		25,4 (1,00 in)	
	2"	50,0 (1,97 in)	368,3 (14,50 in)	184,2 (7,25 in)	215,9 (8,50 in)	165,1 (6,50 in)	91,9 (3,62 in)	38,1 (1,50 in)		28,4 (1,12 in)	
	2 1/2"	65,0 (2,56 in)	419,1 (16,50 in)	209,6 (8,25 in)	244,3 (9,62 in)	190,5 (7,50 in)	104,6 (4,12 in)	41,1 (1,62 in)		25,4 (1,00 in)	
900	3"	80,0 (3,15 in)	381,0 (15,00 in)	190,5 (7,50 in)	241,3 (9,50 in)	190,5 (7,50 in)	127,0 (5,00 in)	38,1 (1,50 in)		31,8 (1,25 in)	8
1500	3"	80,0 (3,15 in)	469,9 (18,50 in)	235,0 (9,25 in)	266,7 (10,50 in)	203,2 (8,00 in)	127,0 (5,00 in)	47,8 (1,88 in)		31,8 (1,25 in)	
900	4"	100,0 (3,94 in)	457,2 (18,00 in)	228,6 (9,00 in)	292,1 (11,50 in)	235,0 (9,25 in)	157,2 (6,19 in)	44,5 (1,75 in)		31,8 (1,25 in)	
1500	4"	100,0 (3,94 in)	546,1 (21,50 in)	273,1 (10,75 in)	311,2 (12,25 in)	241,3 (9,50 in)	157,2 (6,19 in)	53,8 (2,12 in)		31,8 (1,25 in)	
900	6"	150,0 (5,91 in)	609,6 (24,00 in)	304,8 (12,00 in)	381,0 (15,00 in)	317,5 (12,50 in)	215,9 (8,50 in)	55,6 (2,19 in)		38,1 (1,50 in)	
1500	6"	150,0 (5,91 in)	704,9 (27,75 in)	352,4 (13,88 in)	393,7 (15,50 in)	317,5 (12,50 in)	215,9 (8,50 in)	82,6 (3,25 in)		38,1 (1,50 in)	

Class	Size	H	h1	h2	Ød	SW	Øk2	d6	Ød5	Ød4	Ød3	Weight Kg	ISO 5211
900 1500	1/2"	134,0 (5,28 in)	23,0 (0,91 in)	20,0 (0,79 in)	25,0 (0,98 in)	19,3 (0,76 in)	102,0 (4,02 in)	M10	70,0 (2,76 in)	120,0 (4,72 in)	185 (7,28 in)	25,5	F10
	27,0												
	29,5												
	45,5												
900 1500	2"	180,0 (7,09 in)	29,0 (1,14 in)	25,0 (0,98 in)	35,0 (1,38 in)	25,5 (1,00 in)	125,0 (4,92 in)	M12	85,0 (3,35 in)	160,0 (6,30 in)	250,0 (9,84 in)	97	F12
	118,5												
900	3"	221,5 (8,72 in)	47,0 (1,85 in)	42,0 (1,65 in)	45,0 (1,77 in)	35,0 (1,38 in)	140,0 (5,51 in)	M16	100,0 (3,94 in)	175,0 (6,89 in)	330,0 (13,00 in)	158,0	F14
1500	3"	221,5 (8,72 in)	47,0 (1,85 in)	42,0 (1,65 in)	45,0 (1,77 in)	35,0 (1,38 in)	140,0 (5,51 in)	M16	100,0 (3,94 in)	175,0 (6,89 in)	330,0 (13,00 in)	194,5	
900	4"	234,5 (9,23 in)	47,0 (1,85 in)	42,0 (1,65 in)	45,0 (1,77 in)	35,0 (1,38 in)	140,0 (5,51 in)	M16	100,0 (3,94 in)	175,0 (6,89 in)	355,0 (13,98 in)	220,0	
1500	4"	234,5 (9,23 in)	47,0 (1,85 in)	42,0 (1,65 in)	45,0 (1,77 in)	35,0 (1,38 in)	140,0 (5,51 in)	M16	100,0 (3,94 in)	175,0 (6,89 in)	355,0 (13,98 in)	253,5	
900	6"	315,5 (12,42 in)	58,0 (2,28 in)	50,0 (1,97 in)	75,0 (2,95 in)	55,0 (2,17 in)	165,0 (6,50 in)	M20	130,0 (5,12 in)	220,0 (8,66 in)	490,0 (19,29 in)	533,0	F16
1500	6"	315,5 (12,42 in)	58,0 (2,28 in)	50,0 (1,97 in)	75,0 (2,95 in)	55,0 (2,17 in)	165,0 (6,50 in)	M20	130,0 (5,12 in)	220,0 (8,66 in)	490,0 (19,29 in)	604,5	

KHF 710		EGE		SGE	
46.1	Mutter	Nut	A4/ 316	A2/ 304	
46	Stiftschraube	Stud bolt	A4-70/ 316	A2-70/ 304	
45.1	Oberteil Dichtung ¹	Top seal ¹	Graphite	Graphite	
43	Gehäusedichtring ¹	Body seal ¹	Graphite	Graphite	
45	Tellerfeder	Cup spring	Inconel 718	Inconel 718	
42	Druckring	Thrust ring	1.4404/ 316L	1.4401/ 316L	
41	Dichtring ¹	Seat ring ¹	Graphite	Graphite	
39	Kugeldichtring ¹	Ball seat ¹	1.4404/ 316L	1.4404/ 316L	
31	Lager ²	Bearing ²	1.4401/ 316	1.4401/ 316	
23	Anschlag	Limit stop	1.4301/ 304	1.4301/ 304	
22	Anschlagscheibe	Stop disc	1.4301/ 304	1.4301/ 304	
21	Lagerbuchse ²	Bearing bush ²	1.4401/ 316	1.4401/ 316	
20	Zylinderschraube	Hex.-socket screw	A2-70/ 304	A2-70/ 304	
19	Deckel	Cover	1.4401/ 316	1.0460/ A 105	
18	Tellerfeder	Cup spring	1.4310/ 301/1.4568	1.4310/ 301/1.4568	
17	Druckring	Ring	1.4401/ 316	1.4401/ 316	
14	Sicherungsring	Safety ring	1.4310/ 301	1.4310/ 301	
12	Dichtring ¹	Stem seal ¹	Graphite	Graphite	
11	Schaltwelle	Stem	1.4462/ S 31803	1.4462/ S 31803	
10	Kugel ²	Ball ²	1.4408/ CF8M	1.4408/ CF8M	
3	Gehäuseoberteil	Bonnet	1.4401/ 316	1.0460/ A 105	
2	Seitenteil	Side cap	1.4401/ 316	1.0460/ A 105	
1	Gehäuse	Body	1.4401/ 316	1.0460/ A 105	
Pos/ item	Benennung	Denomination	Werkstoff / material		

1 - Empfohlene Ersatzteile / recommended spare parts

2 - hartbeschichtet / hard coated

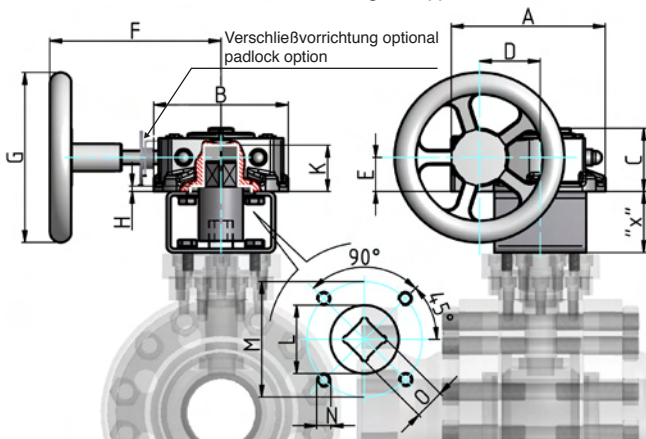


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Handgetriebe Typ AR
manual worm gear Type AR

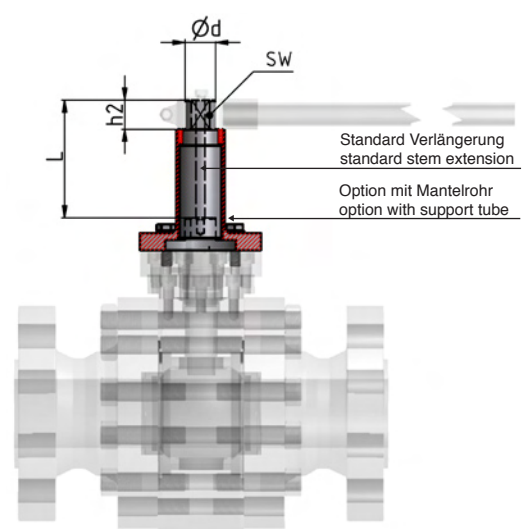


Type	A	B	C	D	E	F	G	H	K	L	M	N	O	ISO 5211
AR 1	122	112	69	38,5	30,5	195	200	2,5	55	38	102	M10	22	F 10
AR 2	180	150	81	66,7	42	235	250	7,5	72	64,5	125	M12	27	F 12
AR 3	217	198	93,5	89,5	50	285	457	8	81	90	140	M16	36	F 14
AR 4	292	252	105,5	123	50	355	600	10	92	115	140	M16	36	F 14

"X" - Brückenhöhe standard/ dimension of bracket standard

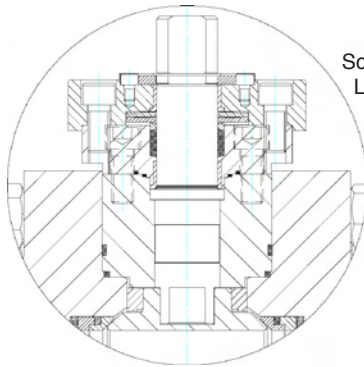
worm gear Type	Type KHF DN/NPS ISO 5211	NPS 1/2" - 1 1/2"	NPS 2" - 2 1/2"	NPS 3" - 4"	NPS 6"
AR 1	F 10	80	-	-	-
AR 2	F 12				
AR 3	F 14	-	90	120	-
AR 4	F 14				

Schaltwellenverlängerung
stem extension



	1/2"-1 1/2"	2"- 2 1/2"	3"- 4"	6"
L *	100	100	100	100
Ød	25	35	45	75
SW	19,3	25,5	35	55
h2	20	25	42	50

* - andere Längen auf Anfrage/ other dimensions on request

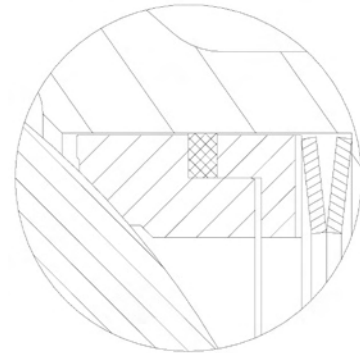


Schaltwellenabdichtung mit Tellerfedern, vorgespannter Graphitpackung und doppelter Lagerung erreicht eine Helium-Leckrate von $\approx 10^{-6}$ mbar-l-s⁻¹·m⁻¹ und erfüllt die TA-Luft 2002. Der Einbauraum der Tellerfedern ist vor Umwelteinflüssen geschützt und garantiert langlebige Funktionalität. Bis zu 50.000 Schaltungen werden ohne sichtbare Leckage erreicht.

Graphite stem packing with live load and double bushing ensures a Helium tightness of $\approx 10^{-6}$ mbar-l-s⁻¹·m⁻¹ and fulfils the TA-Clean Air 2002. The live load room is fully encapsulated from any negative environment impact and guarantees a long term functionality. Up to 50.000 quarter turns will be performed without visible leakage.

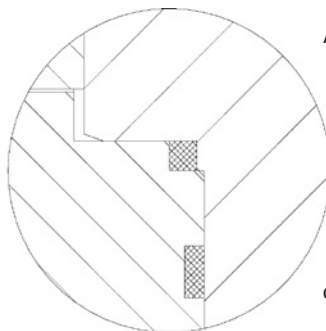
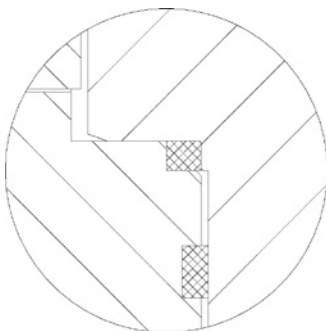
Metallische Sitzdichtungen mit Abstreifkanten und offenem Einbauraum der Tellerfeder. Optional gekapselte Tellerfeder möglich. Helium Dichtheit QL $\approx 10^{-6}$ mbar-l-s⁻¹.

Metal Seats with scraping edges and open live load room. Optional encapsulated live load room available. Helium tight QL $\approx 10^{-6}$ mbar-l-s⁻¹.



Vor Montage
Before tightening

Nach Montage
After tightening



Allseitig gekammerte Gehäusedichtungen aus Graphit. Montage mit definierter Vorspannung garantiert dauerhafte Dichtigkeit bei hoher Temperatur- und Druckbelastung oder schnellen Temperaturwechseln. Gehäuseteile auf metallischen Kraftschluss verschraubt.

Fully supported Graphite body sealing. Ensures absolute tightness by accurate preload of sealing between body and side caps during pressure and temperature service or thermal cycling. Body and side caps were screwed on metal closure.

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