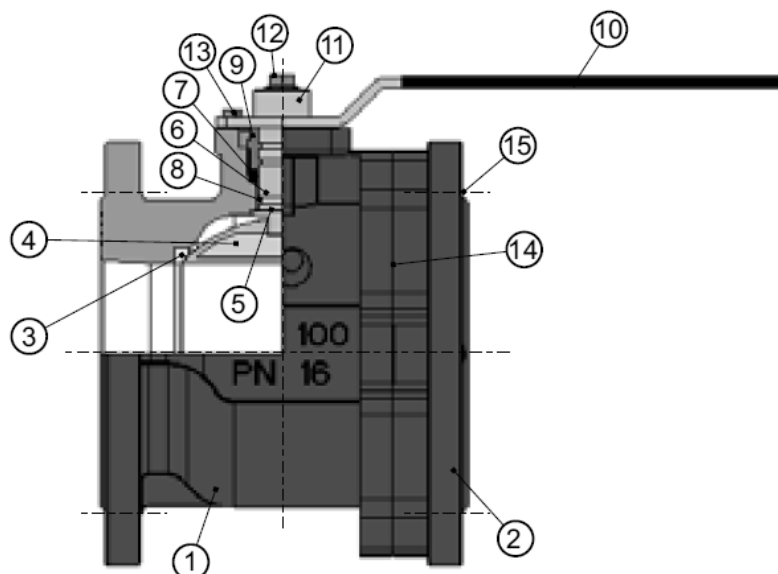


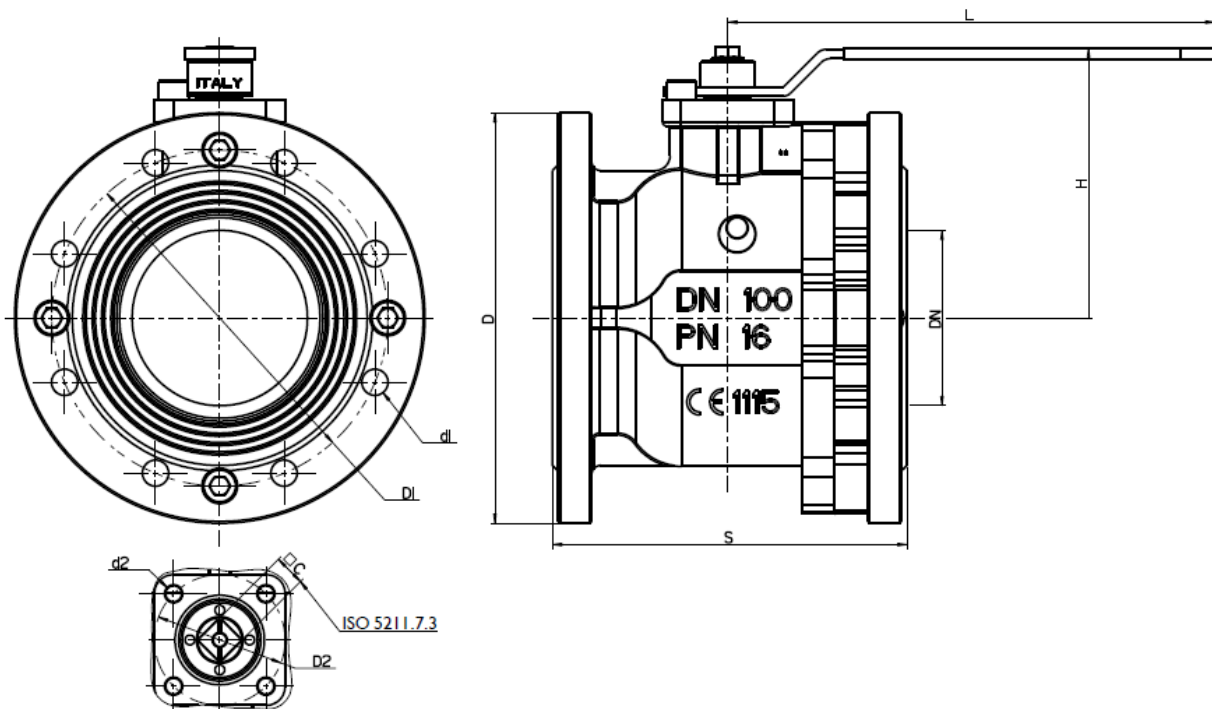
Flansch-Kugelhahn, Grauguss/ *Flanged ball valve, cast iron* PA-077.218.P / PA-077.216.P

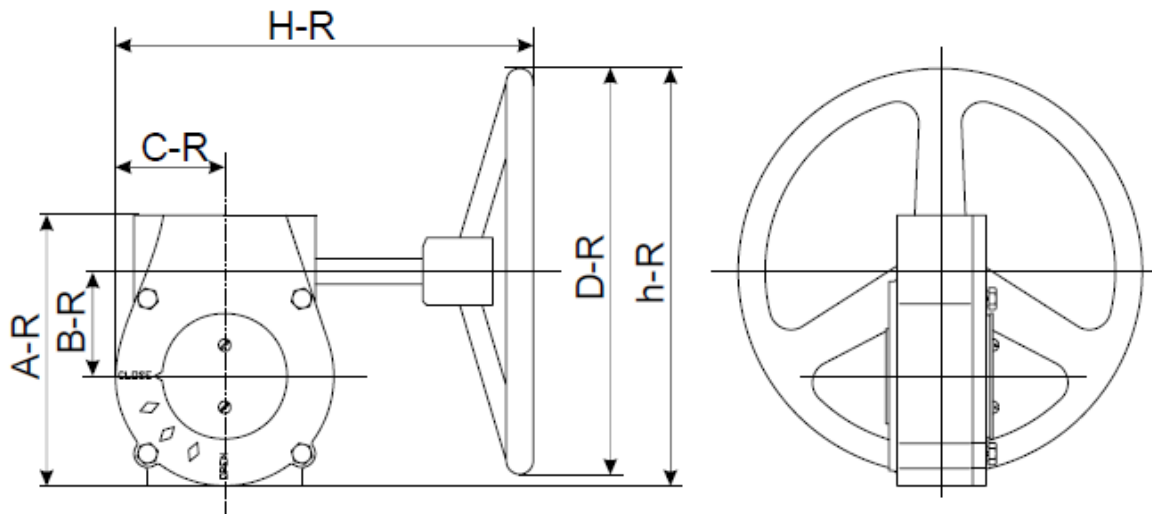
Technische Daten	Specification
Bauform	Design
Voller Durchgang	Full port
ISO-Direktaufbauflansch	ISO-Directmountingpad
Anschluss	Connection
Beidseitig Flansch	Flanged Ends
DN 20 - DN 200	DN 20 - DN 200
Baulänge nach DIN 3202 / F4	Face to face according to DIN 3202 / F4
PA-077.218.P	PA-077.218.P
Gehäuse: GG-25	Body: GG-25
Dichtung: PTFE	Seat: PTFE
Kugel: Messing hartverchromt	Ball: brass chrome plated
PA-077.216.P	PA-077.216.P
Gehäuse: GG-25	Body: GG-25
Dichtung: PTFE	Seat: PTFE
Kugel: Edelstahl AISI 304	Ball: stainless steel AISI 304
Betriebsdruck	Pressure Range
PN 16	PN 16
Betriebstemperatur	Temperature Range
min. -10°C / max. 150°C	min. -10°C / max. 150°C



Size	KV
DN 20	45
DN 25	60
DN 32	100
DN 40	170
DN 50	265
DN 65	510
DN 80	790
DN 100	1230
DN 125	1900
DN 150	2900
DN 200	5700

N	PART NAME	MATERIAL	TREATMENT
1	Body	Cast iron GJL250	Painted
2	Flange	Cast iron GJL250	Painted
3	Seat	PTFE	
4	Ball	Brass G-CuZn38Pb2-UNI 5035/62	Chrome plated
4*	Ball	AISI 304	
5	Seat	PTFE	
6	Stem	AVP - 9SMnPb36	
6*	Stem	AISI 304	
7	O-Ring	FP	
8	O-Ring	FP	
9	Packing nut	Brass CW 614N - UNI EN 12164/98	
10	Handle	Steel	Plastic coated
11	Cap	Brass CW 614N - UNI EN 12164/98	Nickel plated
12	Screw	Steel	Zinc plated
13	Screw	Steel	Zinc plated
14	O-Ring	FP	
15	Screw	Steel	Zinc plated





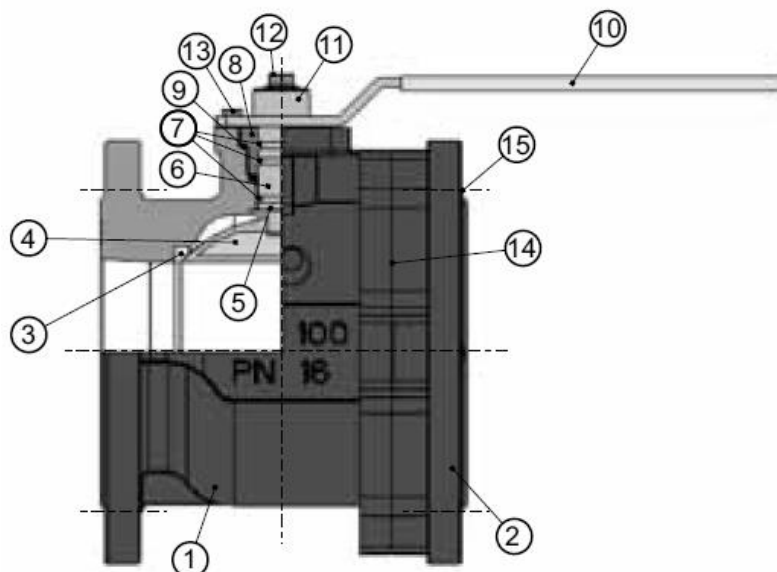
DN	∅	S	H	L	D	a	N°fori	M°fori	D°fori	F.ISO	∅F	□C	A-R	B-R	C-R	D-R	h-R	H-R
20	20	120	73	200	105	75	4	*	14	F04	42	9	*	*	*	*	*	*
25	25	125	77	200	115	85	4	*	14	F04	42	9	*	*	*	*	*	*
32	32	130	82	200	140	100	4	*	18	F04	42	9	*	*	*	*	*	*
40	40	140	92	240	150	110	4	*	18	F05	50	14	127	45	52	150	175	210
50	50	150	99	240	165	125	4	*	18	F05	50	14	127	45	52	150	175	210
65	61	170	121	260	185	145	4	*	18	F07	70	14	127	45	52	150	175	210
80	74	180	130	260	200	160	8	*	18	F07	70	14	127	45	52	150	175	210
100	95	190	144	260	220	180	8	*	18	F07	70	14	127	45	52	150	175	210
125	120	200	185	450	250	210	8	M16	*	F10	102	22	170	63	73	288	280	315
150	145	210	204	450	285	240	8	M20	*	F10	102	22	170	63	73	288	280	315
200	200	400	325	700	340	295	12	*	22	*	*	*	*	*	*	*	*	*

Flansch-Kugelhahn, Grauguss mit DVGW Zulassung / *Flanged ball valve, cast iron with DVGW certificate* PA-277.228.P / PA-277.226.P

Technische Daten	Specification
Bauform	Design
Voller Durchgang	Full port
ISO-Direktaufbauflansch	ISO-Directmountingpad
Anschluss	Connection
Beidseitig Flansch	Flanged Ends
DN 20 - DN 150	DN 20 - DN 150
Baulänge nach DIN 3202 / F4	Face to face according to DIN 3202 / F4
PA-277.228.P	PA-277.228.P
Gehäuse: GGG-40	Body: GGG-40
Dichtung: PTFE	Seat: PTFE
Kugel: Messing hartverchromt	Ball: brass chrome plated
PA-277.226.P	PA-277.226.P
Gehäuse: GGG-40	Body: GGG-40
Dichtung: PTFE	Seat: PTFE
Kugel: Edelstahl AISI 304	Ball: stainless steel AISI 304
Betriebsdruck	Pressure Range
PN 16	PN 16
Betriebstemperatur	Temperature Range
min. -10°C / max. 150°C	min. -10°C / max. 150°C

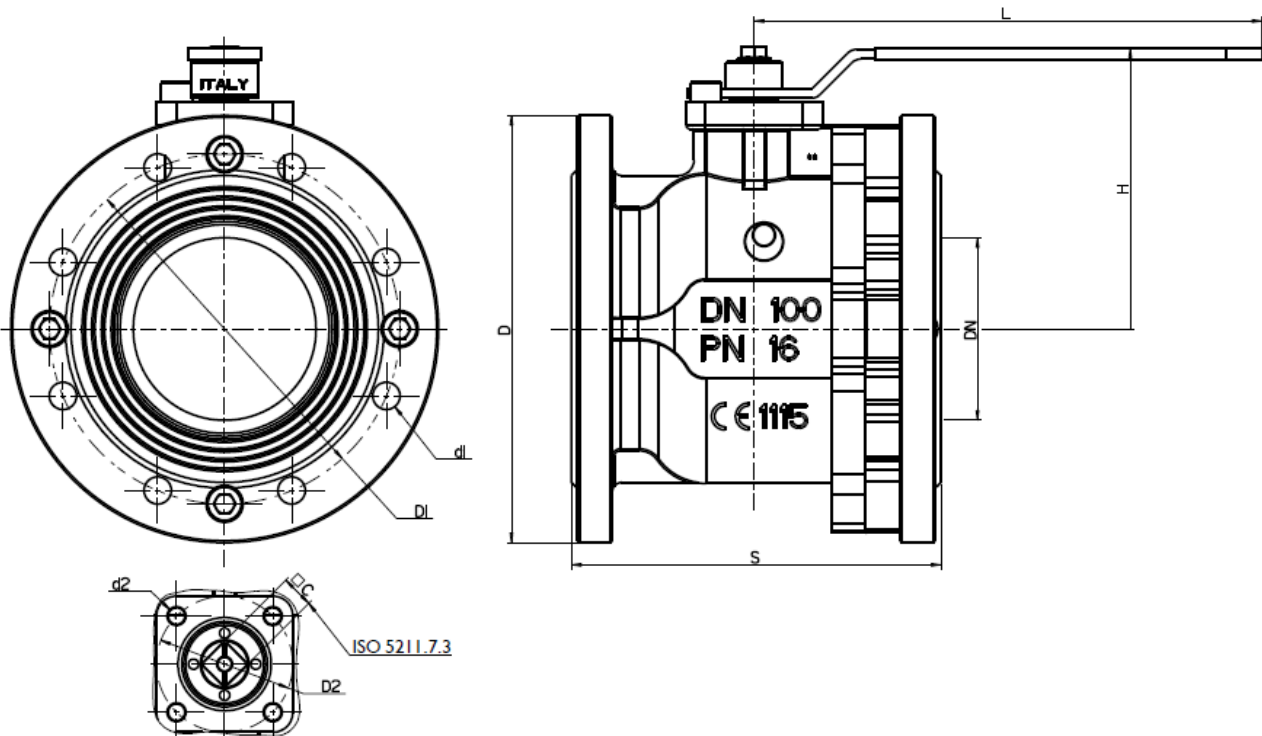


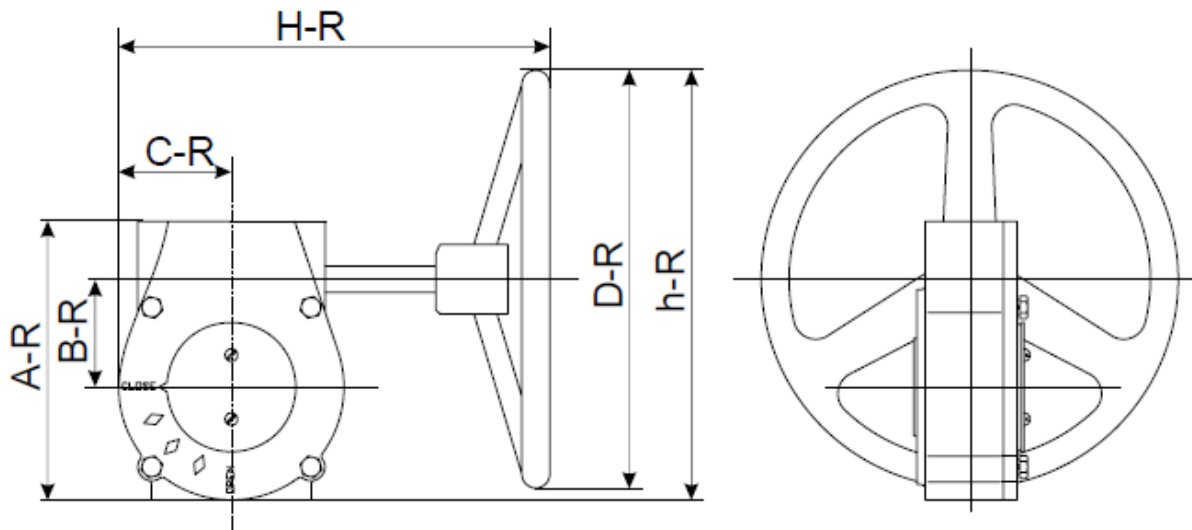
Gas



SIZE	KV
DN 20	45
DN 25	60
DN 32	100
DN 40	170
DN 50	265
DN 65	510
DN 80	790
DN 100	1230
DN 125	1900
DN 150	2900

N	PART NAME	MATERIAL	TREATMENT
1	Body	Cast iron GJS400	Painted
2	Flange	Cast iron GJS400	Painted
3	Seat	PTFE	
4	Ball	Brass G-CuZn38Pb2-UNI 5035/62	Chrome plated
4*	Ball	AISI 304	
5	Seat	PTFE	
6	Stem	AVP - 9SMnPb36	
6*	Stem	AISI 304	
7	O-Ring	FP	
8	O-Ring	FP	
9	Packing nut	Brass CW 614N - UNI EN 12164/98	
10	Handle	Steel	Plastic coated
11	Cap	Brass CW 614N - UNI EN 12164/98	Nickel plated
12	Screw	Steel	Zinc plated
13	Screw	Steel	Zinc plated
14	O-Ring	FP	
15	Screw	Steel	Zinc plated





DN	Ø	S	H	L	D	a	N°fori	M°fori	D°fori	F.ISO	ØF	□C	A-R	B-R	C-R	D-R	h-R	H-R
20	20	120	73	200	105	75	4	*	14	F04	42	9	*	*	*	*	*	*
25	25	125	77	200	115	85	4	*	14	F04	42	9	*	*	*	*	*	*
32	32	130	82	200	140	100	4	*	18	F04	42	9	*	*	*	*	*	*
40	40	140	92	240	150	110	4	*	18	F05	50	14	127	45	52	150	175	210
50	50	150	99	240	165	125	4	*	18	F05	50	14	127	45	52	150	175	210
65	61	170	121	260	185	145	4	*	18	F07	70	17	127	45	52	150	175	210
80	74	180	130	260	200	160	8	*	18	F07	70	17	127	45	52	150	175	210
100	95	190	144	260	220	180	8	*	18	F07	70	17	127	45	52	150	175	210
125	120	200	185	450	250	210	8	M16	*	F10	102	22	170	63	73	288	280	315
150	145	210	204	450	285	240	8	M20	*	F10	102	22	170	63	73	288	280	315

Flansch-Kugelhahn, Stahl/ Flanged ball valve, steel PA-19D.245/445.P

Technische Daten

Bauform
 2-teilig
 Entlastungsbohrung
 Ausblasseichere Spindel
 ISO-Direktaufbauflansch

Specification

Design
 2-piece
 Release bore
 Blow-out proof stem
 ISO-Directmountingpad

Anschluss

Beidseitig Flansch
 DN 15 - DN 200
 Baulänge nach DIN 3202
 F4, ab DN 125 F5

Connection

Flanged Ends
 DN 15 - DN 200
 Face to face acc. to DIN 3202
 F4, from DN 125 F5

Betriebsdruck

PN 10 - PN 40

Pressure Range

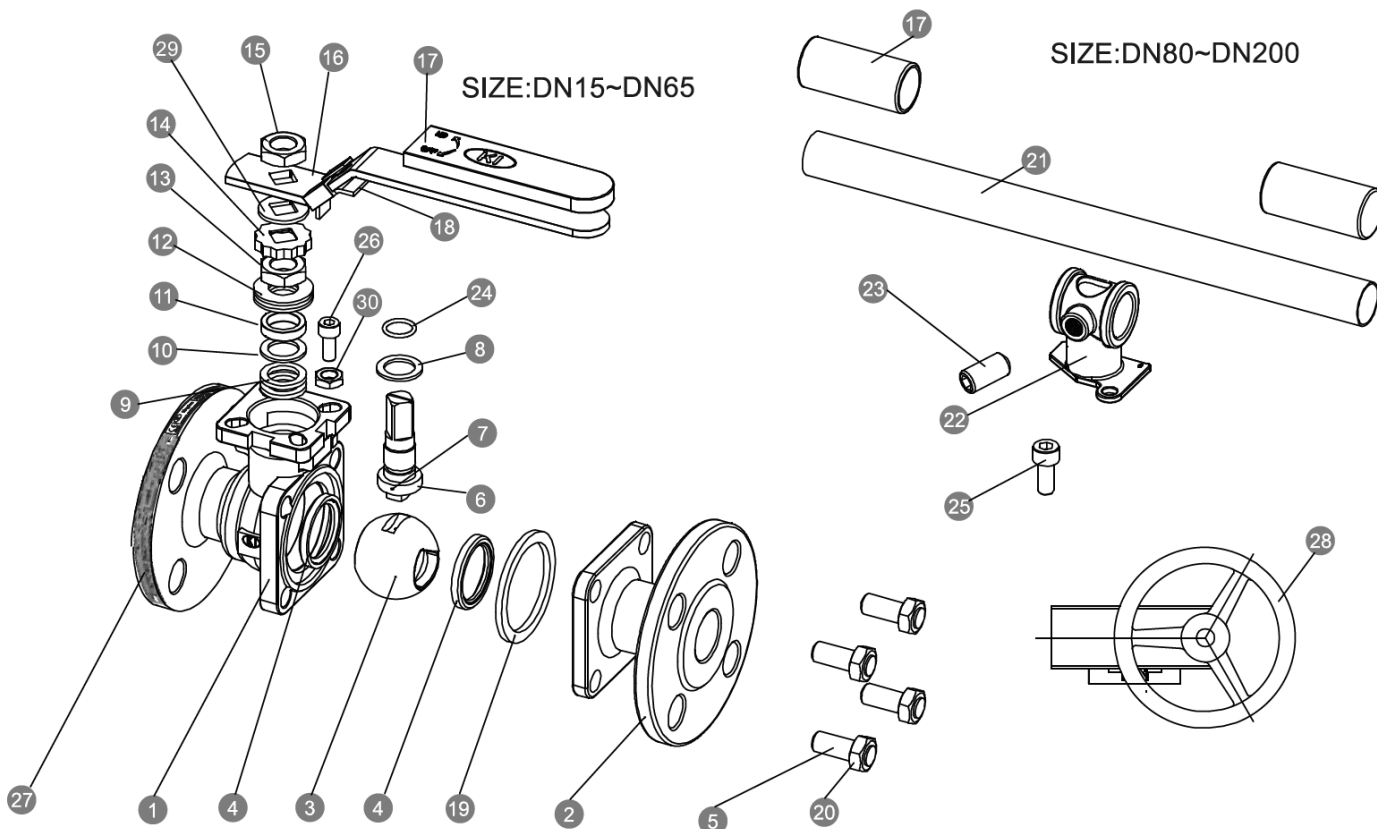
PN 10 - PN 40

Betriebstemperatur

max. 180°C

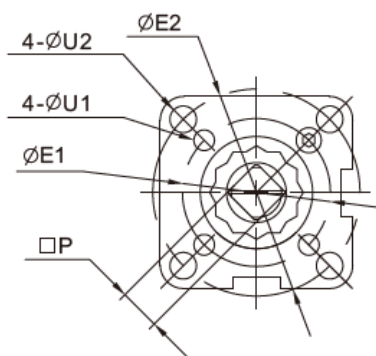
Temperature Range

max. 180°C



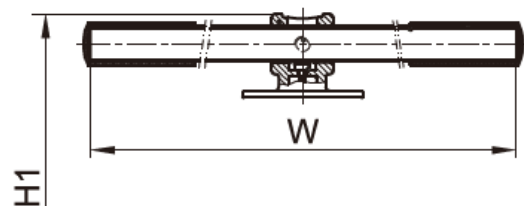
NO.	Part Name	Materials
1	Body	1.0619
2	Cap	1.0619
3	Ball	1.4308
4	Ball seat	TFM-1600
5	Bolt	8.8
6	Stem	304
7	Anti-Static	304
8	Thrust washer	PTFE
9	Stem packing	PTFE
10	Bushing	50%SS+50%PTFE / 304*
11	Gland	316
12	Belleville washer	301
13	Stem nut	A194-8
14	Stop-lock-cap	304
15	Handle nut (DN15 - DN65)	A194-8
16	Lever (DN15 - DN65)	304
17	Handle sleeve	304
18	Lock device (DN15 - DN65)	304
19	Body gasket	PTFE
20	Bolt nut	A2-70
21	Pipe handle (DN80 - DN200)	A53+Plated Zn
22	Handle Adapter (DN80 - DN200)	A351-CF8
23	Set screwed (DN80 - DN200)	A2-70
24	O-Ring	FKM (VITON)
25	Bolting (DN80 - DN200)	A2-70
26	Stop Bolt	A2-70
27	Nameplate	304
28	Worm gear (optional)	Package
29	Support washer	304
30	Stop nut	A2-70

Direct Mount Pad (ISO 5211)

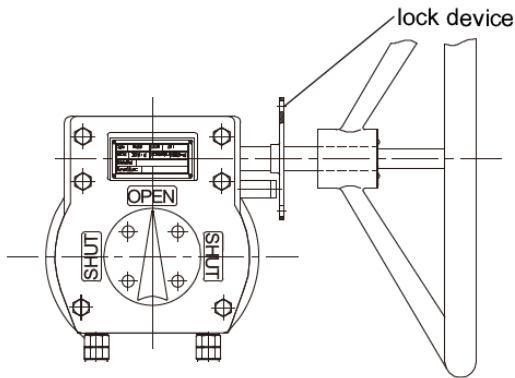


Pipe Handle Operation

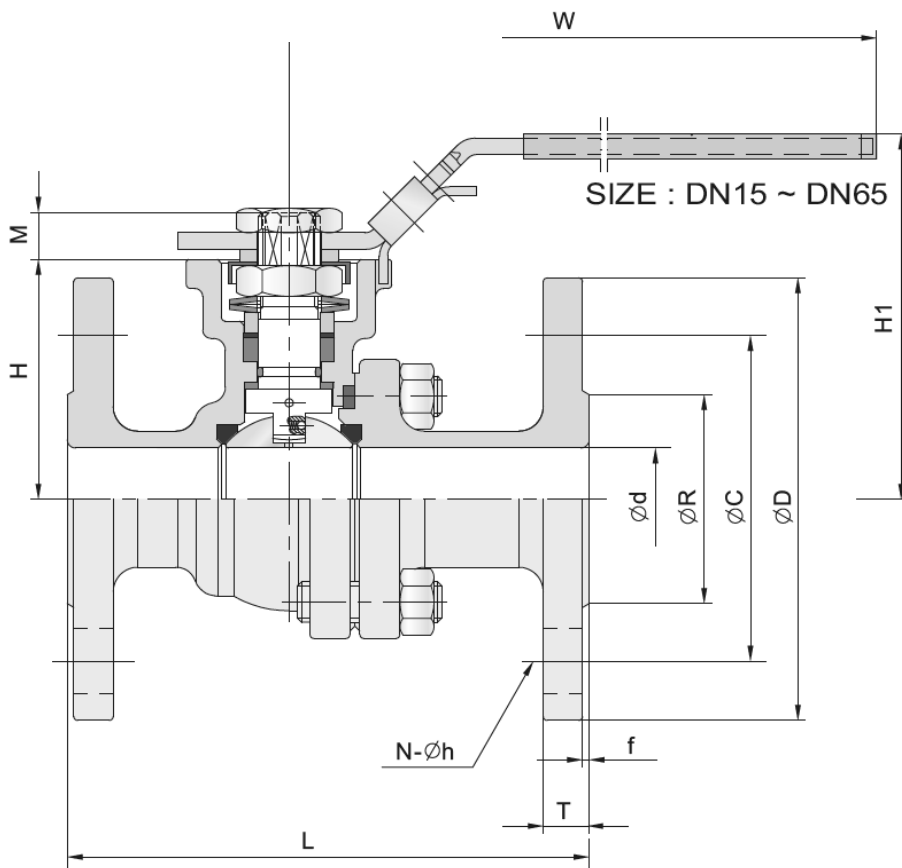
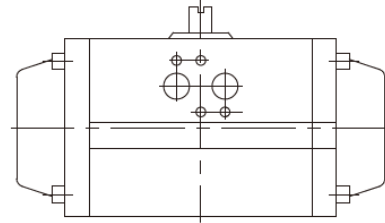
SIZE : DN80 ~ DN200



Gear Operation (Optional)
 SIZE : DN65 ~ DN200



Automation (Optional)
 SIZE : DN15 ~ DN200



EN PN10/16/25/40 (F1 / F7, F4 / F5)

Unit : mm

DN	PN	d	L	*L	R	D	C	f	T	N	h	H	H1	W	M	P	U1	U2	E1	E2	ISO 5211
15	10	15.0	115	130	45	95	65	2	16	4	14	48	78	147	9	9	6	6	36	42	F03-F04
20		20.0	120	150	58	105	75	2	18	4	14	53	84	147	9	9	6	6	36	42	F03-F04
25	16	25.0	125	160	68	115	85	2	18	4	14	59	90	177	11	11	6	7	42	50	F04-F05
32	25	32.0	130	180	78	140	100	2	18	4	18	71	102	177	11	11	6	7	42	50	F04-F05
40	40	38.0	140	200	88	150	110	3	18	4	18	76	110	197	14	14	7	9	50	70	F05-F07
50		50.0	150	230	102	165	125	3	20	4	18	85	118	197	14	14	7	9	50	70	F05-F07
65	10/16	63.5	—	290	122	185	145	3	18	4	18	102	150	267	17	17	9	11	70	102	F07-F10
									22	8		107	155								
	25/40	170	290	107	155																
80	10/16	76.0	180	310	138	200	160	3	20	8	18	112	176	300	17	17	9	11	70	102	F07-F10
	24								117			181									
100	10/16	100.0	190	350	158	220	180	3	20	8	18	140	210	400	22	22	—	11	—	102	F10
	162				235	190	24		22												
125	10/16	125.0	325	400	188	250	210	3	22	8	18	183	263	600	27	27	14	—	125	—	F12
	270				220	26	26														
150	10/16	150.0	350	450	212	285	240	3	22	8	22	204	284	800	27	27	14	—	125	—	F12
	218				300	250	28		26												
200	10	200.0	400	550	268	340	295	3	24	8	22	253	334	800	27	27	14	18 ^(a)	125	140 ^(a)	F12orF14 ^(a)
	16				30	12	26														
	25				30	12	26														
	40				34	30	30														

(a):Optional

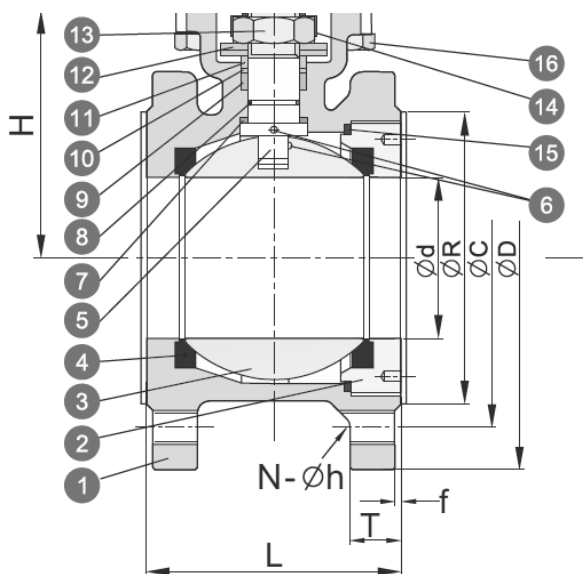
L for Series F4 / F5
 *L for Series F1 / F7

Kompakt-Flansch-Kugelhahn, Stahl/ Wafer type flanged ball valve, steel PA-55D.245/445.P

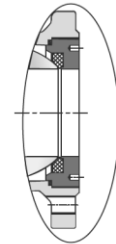
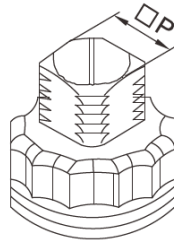
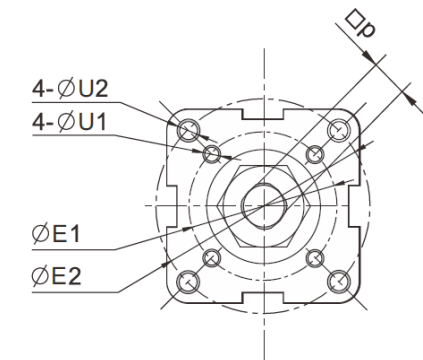
Technische Daten

Specification

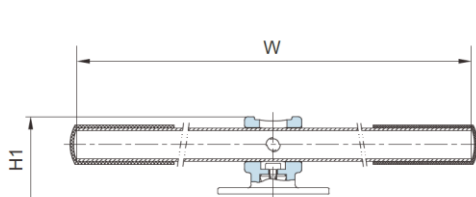
Bauform	Design
2-teilig	2-piece
ISO - Direktaufbauflansch	ISO - Directmountingpad
Anschluss	Connection
Beidseitig Flansch	Flanged Ends
DN 15 - DN 150	DN 15 - DN 150
Betriebsdruck	Pressure Range
PN 16/40	PN 16/40
Betriebstemperatur	Temperature Range
max. 180°C	max. 180°C



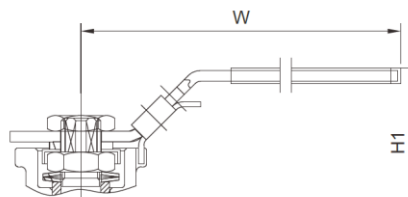
SIZE	PN	d	R	C	D	f	T	L	H1	W	H	M	P	N	h	U1	U2	E1	E2	ISO 5211	
DN15	1/2"	10~40	15.0	45	65	95	2	9	42	77	145	46.0	9	9	4	M12	6	6	36	42	F03-F04
DN20	3/4"	10~40	20.0	58	75	105	2	9	44	85	145	51.0	9	9	4	M12	6	7	36	50	F04-F05
DN25	1"	10~40	25.0	68	85	115	2	9	50	94	175	62.0	11	11	4	M12	6	7	42	50	F04-F05
DN32	1-1/4"	10~40	32.0	78	100	140	2	12	60	104	175	72.0	11	11	4	M16	6	9	42	70	F05-F07
DN40	1-1/2"	10~40	38.0	88	110	150	3	13	65	114	196	78.0	14	14	4	M16	7	9	50	70	F05-F07
DN50	2"	10~40	50.0	102	125	165	3	20	80	120	196	86.0	14	14	4	M16	7	9	50	70	F05-F07
DN65	2-1/2"	10/16	63.5	122	145	185	3	18	110	158	265	108.0	17	17	4	M16	9	11	70	102	F07-F10
		22						113													
DN80	3"	10/16	76.0	138	160	200	3	20	120	165	265	116.0	17	17	8	M16	9	11	70	102	F07-F10
		24																			
DN100	4"	10/16	95.0	158	180	220	3	20	150	182	400	139.0	22	22	8	M16	N/A	11	N/A	102	F10
		162		190	235	24		154													
DN125	5"	10/16	118.0	188	210	250	3	22	180	224	800	176.0	27	27	8	M16	N/A	14	N/A	125	F12
		220		270	26																
DN150	6"	10/16	142.0	212	240	285	3	22	225	268	800	192.0	27	27	8	M20	N/A	14	N/A	125	F12
		218		250	300	28															



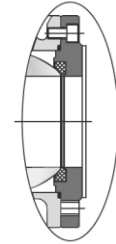
SIZE : DN 15 ~ DN 80



SIZE : DN 100 ~ DN 150



SIZE : DN 15 ~ DN 80

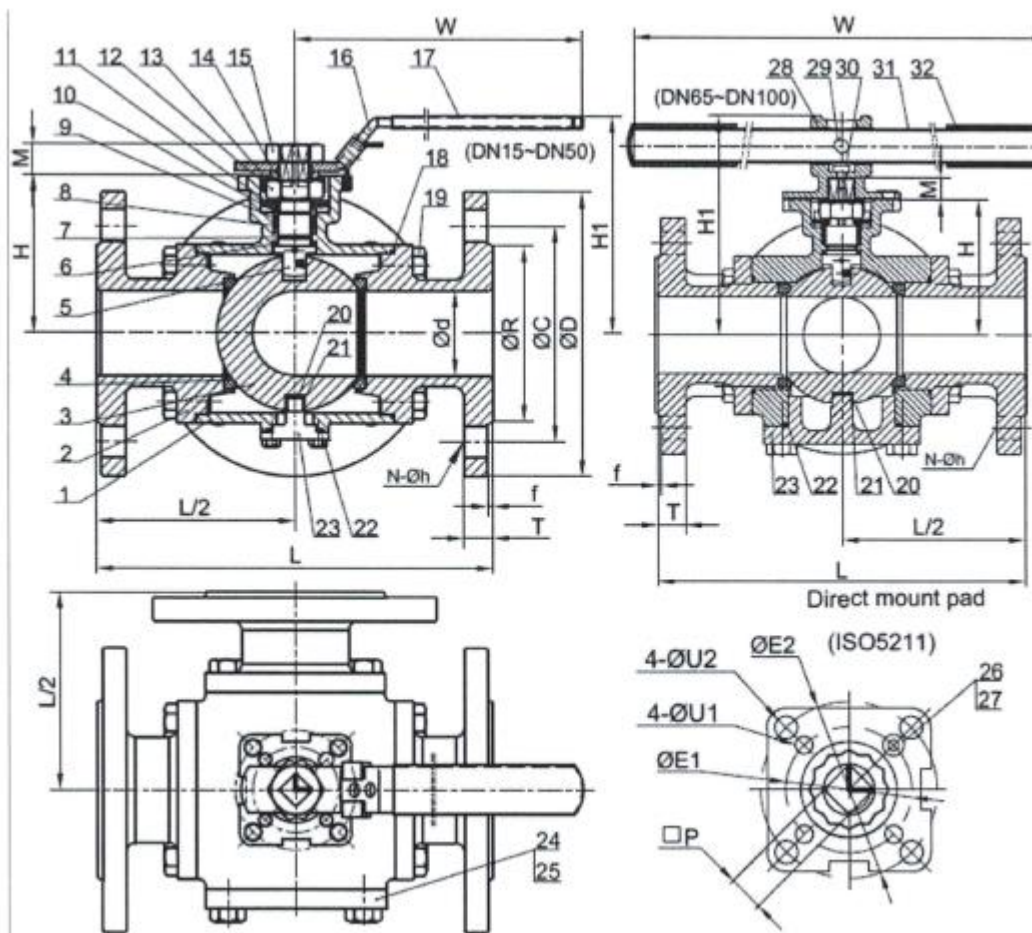


SIZE : DN 100 ~ DN 150

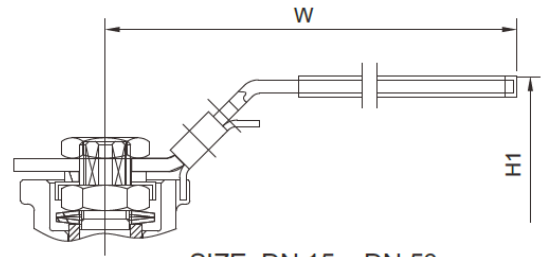
No.	Part name	Material
1	Body	1.0619
2	Cap	1.0619
3	Ball	1.4308
4	Ball Seat	TFM-1600
5	Stem	316
6	Anti-Static Device	316
7	Thrust washer	PTFE
8	O-Ring	FKM
9	Stem Packing	PTFE
10	Bushing	50%SS + 50%PTFE
11	Gland	316
12	Belleville Washer	301
13	Stem Nut	A194-8
14	Stop-lock-Cap	304
15	Body Gasket	PTFE
16	Hex Bolting	A193-B8

3-Wege Flansch-Kugelhahn, Stahl/ 3-way flanged ball valve, steel PA-48D.235/435.P

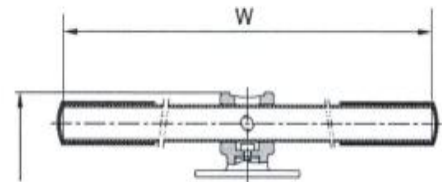
Technische Daten	Specification
Bauform	Design
Voller Durchgang	Full port
ISO-Direktaufbauflansch	ISO-Directmountingpad
Anschluss	Connection
Beidseitig Flansch	Flanged Ends
L - oder T - Bohrung	L - or T - bore
DN 15 - DN 200	DN 15 - DN 200
Betriebsdruck	Pressure Range
PN 16 / PN 40	PN 16 / PN 40
Betriebstemperatur	Temperature Range
max. 180°C	max. 180°C



NO.	Part Name	Materials
1	Body	1.0619
2	End Cap (1)	1.0619
3	Ball	CF8
4	Ball Seat	PTFE/TFM1600
5	Stem (Anti-Static Device)	316
6	Thrust Washer	PTFE
7	O-Ring	FKM
8	Packing	PTFE/Grafoil
9	Bushing	50%SS + 50%PTFE/304
10	Gland	316
11	Belleville Washer	301
12	Stem Nut	A194-8
13	Stop-lock-cap	304
14	Handle Gland	304
15	Handle Nut (DN15 – DN 50)	A194-8
16	Handle + Lock Device (DN15 – DN50)	304
17	Handle Sleeve (DN15 – DN 50)	Vinyl Plastic
18	Body Gasket (1)	PTFE/Grafoil
19	Bolting	8.8
20	Washer	PTFE
21	Jacket	PTFE
22	Body Gasket (2)	PTFE/Grafoil
23	Bottom Cap	1.0619
24	End Cap (2)	1.0619
25	Body Gasket (3) (DN65 – DN100)	PTFE/Grafoil
26	Stop Bolt	A2-70
27	Stop Nut	A2-70
28	Handle Adapter (DN65 – DN100)	CF8
29	Set Screwed (DN65 – DN100)	A2-70
30	Bolting (DN65 – DN100)	A2-70
31	Pipe Handle (DN65 – DN100)	A53+Plated Zn
32	Handle Sleeve (DN65 – DN100)	Vinyl Plastic



SIZE: DN 15 ~ DN 50



SIZE: DN 65 ~ DN 100

SIZE	PN	d	R	C	D	f	T	L	H1	W	H	M	P	N	h	U1	U2	E1	E2	ISO 5211	
DN15	1/2"	10~40	15	45	65	95	2	16	150	83.3	144.5	52.5	9	9	4	14	6	6	36	42	F03-F04
DN20	3/4"	10~40	20	58	75	105	2	18	165	87.0	144.5	57.0	9	9	4	14	6	7	36	50	F03-F05
DN25	1"	10~40	25	68	85	115	2	18	181	99.0	175.0	68.0	11	11	4	14	6	7	42	50	F04-F05
DN32	1-1/4"	10~40	32	78	100	140	2	18	190	103.0	175.0	72.0	11	11	4	18	6	9	42	70	F04-F07
DN40	1-1/2"	10~40	38	88	110	150	3	18	212	119.0	200.0	85.0	14	14	4	18	7	9	50	70	F05-F07
DN50	2"	10~40	49	102	125	165	3	20	230	126.0	200.0	92.0	14	14	4	18	7	9	50	70	F05-F07
DN65	2-1/2"	10/16 25/40	63	122	145	185	3	18 22	290	172.0	400.0	107.0	17	17	4 8	18	9	11	70	102	F07-F10
DN80	3"	10/16 25/40	75	138	160	200	3	20 24	310 340	185.0	400.0	119.0	17	17	8	18	9	11	70	102	F07-F10
DN100	4"	10/16 25/40	99	158 162	180 190	220 235	3	20 24	350 386	221.0	400.0	150.0	22	22	8	18 22	N/A	11	N/A	102	F10
DN150	6"	10/16 25/40	150	212 218	240 250	285 300	3	22 28	490 520	—	500.0	229.0	36	36	8	18 26	18	22	140	165	F14-F16
DN200	8"	10 16 25 40	200	268 278 285	295 310 320	340 360 375	3	24 30 34	620 660	—	500.0	252.0	36	36	8 12	18 26 30	18	22	140	165	F14-F16

Edelstahlkugelhahn, 3-teilig, Flanschausführung/ Stainless steel ball valve, 3-pc., flange version PA-16D.466.P

Technische Daten

Bauform
 3-teilig
 Voller Durchgang
 Baulänge nach DIN 3202 F1
 Mit ISO-Direktaufbauflansch
 Mit Handhebel
 Gehäuse: Edelstahl 1.4408
 Kugel: Edelstahl 1.4408
 Dichtung: TFM-1600

Specification

Design
 3-piece
 Full port
 Face to face according to DIN 3202 F1
 With ISO-Directmountingpad
 With handlelever
 Body: 1.4408
 Ball: 1.4408
 Seat: TFM-1600

Anschluss

Beidseitig Flanschende
 DN 15 – DN 100

Connection

Flanged ends
 DN 15 – DN 100

Betriebsdruck

PN 40

Pressure Range

PN 40

Betriebstemperatur

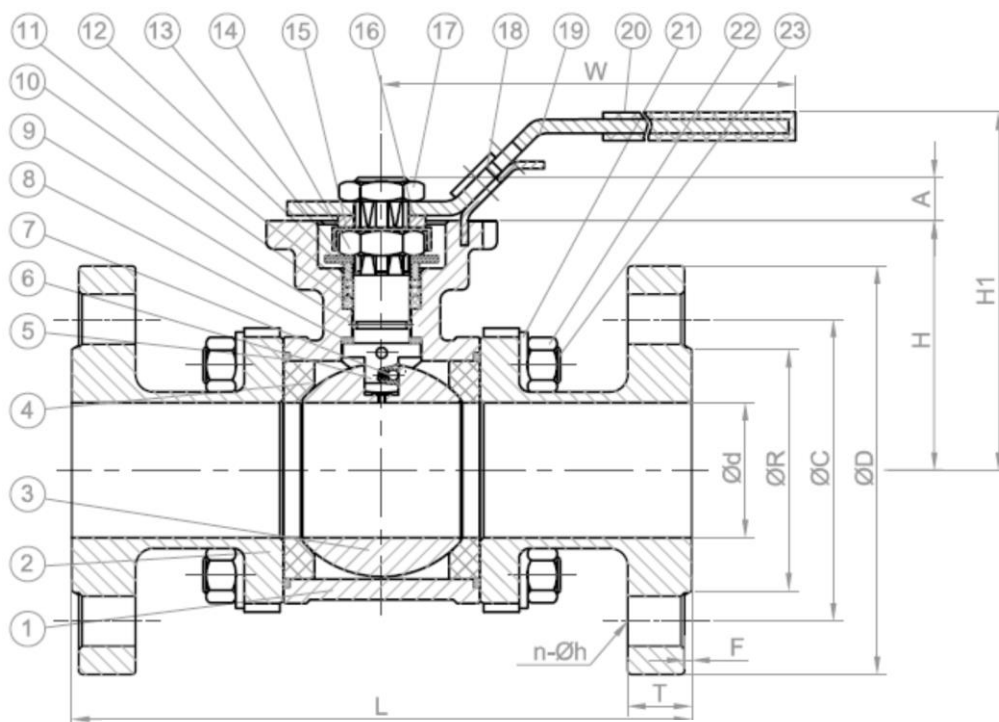
max. 180°C

Temperature Range

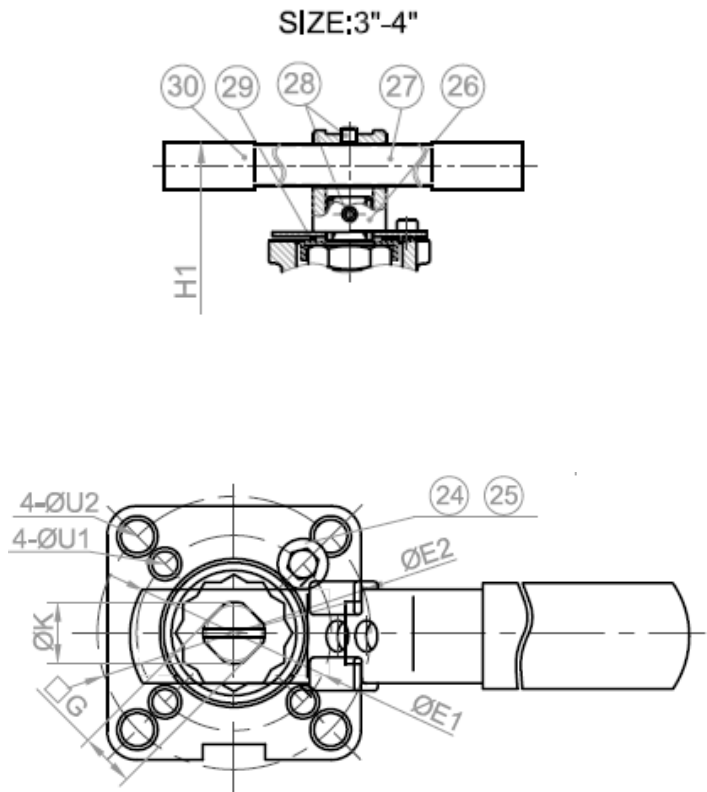
max. 180°C



**TA-LUFT
 ATEX**



NO.	Part Name	Materials
1	Body	1.4408 / CF8M
2	End Cap	1.4408 / CF8M
3	Ball	1.4408 / CF8M
4	Ball Seat	TFM1600
5	Body Gasket	TFM1600
6	Stem	SUS316 / 304
7	Anti-Static	SUS316 / 304
8	Thrust Washer	TFM1600
9	O-Ring	FKM (Viton)
10	V-Ring Stem Packing	TFM1600/PTFE/RTFE
11	Bushing	50%SS + 50% PTFE
12	Gland	SUS316
13	Belleville Washer	SUS301
14	Stem Nut	A194-8
15	Stop-Lock-Cap	SUS304
16	Handle Gland	SUS304
17	Handle Nut	A194-8
18	Lock device	SUS304
19	Handle	SUS304
20	Handle Sleeve	Vinyl Plastic
21	Bolt Washer	SUS304
22	Bolt Nut	A194-8
23	Bolting	A193-B8
24	Stop Bolt	A193-B8
25	Bolt Nut	A194-8
26	Handle Adapter (3" - 4")	A351-CF8
27	Pipe Handle (3" - 4")	SUS304
28	Set Screwed (3" - 4")	A193-B8
29	Triangle Stopper (3" - 4")	SUS304
30	Handle Sleeve (3" - 4")	Vinyl Plastic



■ DIN PN10-40 DIMENSION TABLE

Unit: mm

SIZE	Ød	L	H	H1	ØK	G	A	ØE1	ØE2	ØU1	ØU2	F	T	n	Øh	W	ØR	ØC	ØD
1/2"	15.0	130.0	42.0	69.0	7/16-20UNF	9.0	9.0	36.0	42.0	6.0	6.0	2.0	16.0	4	Ø14	145.0	Ø45	Ø65	Ø95
3/4"	20.0	150.0	48.5	76.0	7/16-20UNF	9.0	9.0	36.0	50.0	6.0	7.0	2.0	18.0	4	Ø14	145.0	Ø58	Ø75	Ø105
1"	25.0	160.0	58.5	89.0	9/16-18UNF	11.0	11.0	42.0	50.0	6.0	7.0	2.0	18.0	4	Ø14	175.0	Ø68	Ø85	Ø115
1-1/4"	32.0	180.0	63.0	93.5	9/16-18UNF	11.0	11.0	42.0	70.0	6.0	9.0	2.0	18.0	4	Ø18	175.0	Ø78	Ø100	Ø140
1-1/2"	38.0	200.0	71.3	103.0	3/4-16UNF	14.0	14.0	50.0	70.0	7.0	9.0	3.0	18.0	4	Ø18	190.0	Ø88	Ø110	Ø150
2"	50.0	230.0	78.2	109.0	3/4-16UNF	14.0	14.0	50.0	70.0	7.0	9.0	3.0	20.0	4	Ø18	190.0	Ø102	Ø125	Ø165
2-1/2"	63.5	290.0	100.0	147.0	7/8-14UNF	17.0	17.0	70.0	102.0	9.0	11.0	3.0	22.0	8	Ø18	265.0	Ø122	Ø145	Ø185
3"	76.0	310.0	108.5	173.0	7/8-14UNF	17.0	17.0	70.0	102.0	9.0	11.0	3.0	24.0	8	Ø18	300.0	Ø138	Ø160	Ø200
4"	100.0	350.0	140.0	205.0	1-1/8-12UNF	22.0	22.0	non	102.0	non	11.0	3.0	24.0	8	Ø22	400.0	Ø162	Ø190	Ø235

Flansch-Kugelhahn, Edelstahl/ Flanged ball valve, stainless steel PA-19D.266.P / 19D.466.P

Technische Daten

Bauform
 2-teilig
 Entlastungsbohrung
 Ausblasseichere Spindel
 ISO-Direktaufbauflansch

Specification

Design
 2-piece
 Release bore
 Blow-out proof stem
 ISO-Directmountingpad

Anschluss

Beidseitig Flanche
 DN 15 - DN 200
 Baulänge nach DIN 3202
 F4, ab DN 125 F5

Connection

Flanged Ends
 DN 15 - DN 200
 Face to face acc. to DIN 3202
 F4, from DN 125 F5

Betriebsdruck

PN 40, ab DN 65 PN 16 oder PN 40

Pressure Range

PN 40, from DN 65 PN 16 or PN 40

Betriebstemperatur

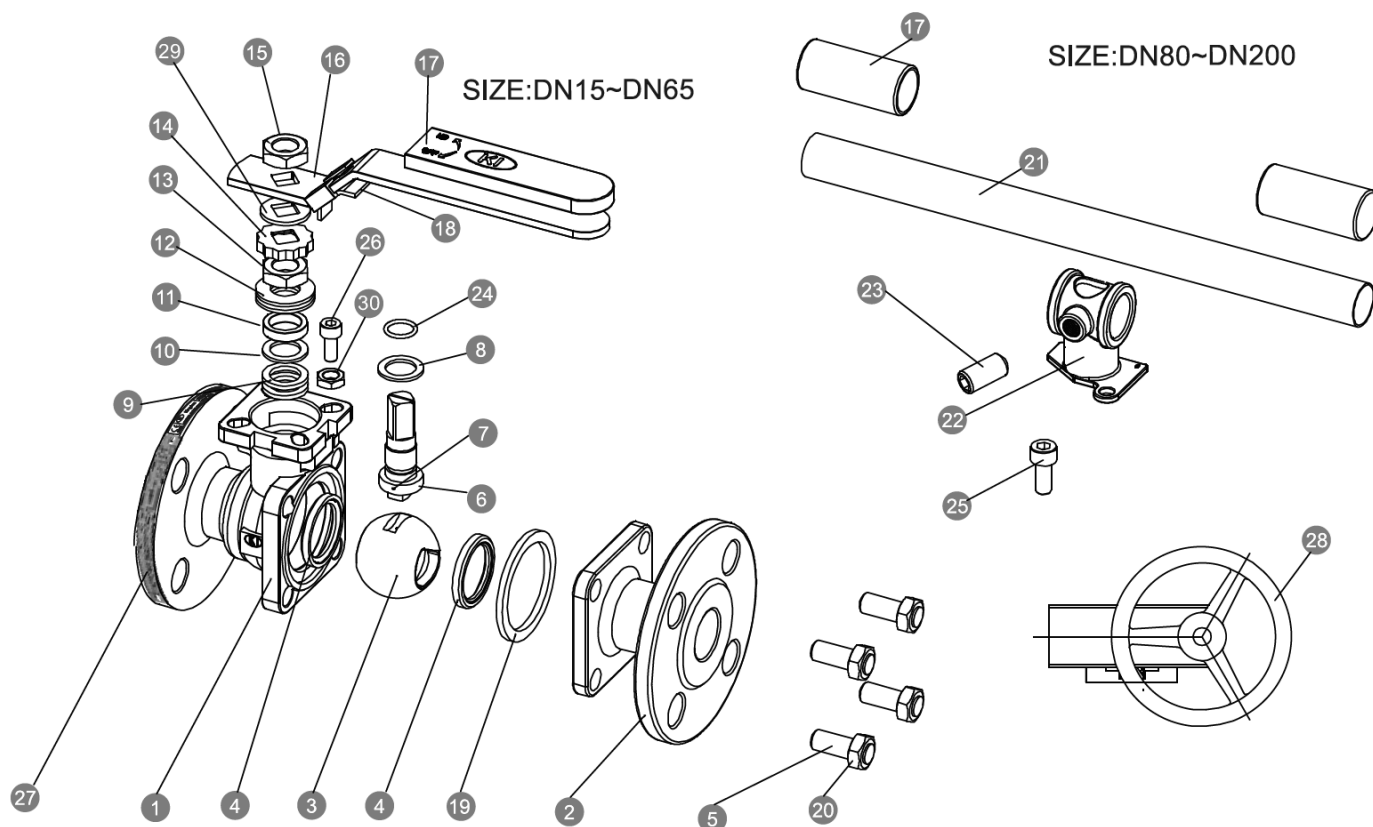
max. 180°C

Temperature Range

max. 180°C

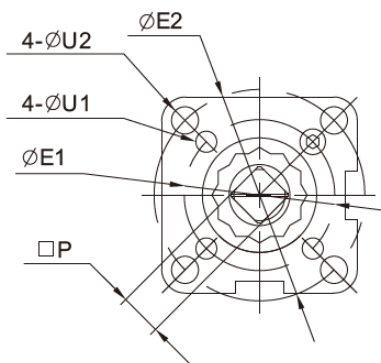


FIRE-SAFE / TA-LUFT / ATEX



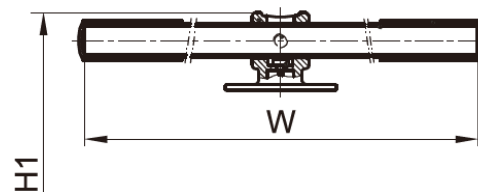
NO.	Part Name	Materials
1	Body	1.4408
2	Cap	1.4408
3	Ball	1.4408
4	Ball seat	TFM-1600
5	Bolt	A2-70
6	Stem	316
7	Anti-Static	316
8	Thrust washer	PTFE
9	Stem packing	Graphite
10	Bushing	304
11	Gland	316
12	Belleville washer	301
13	Stem nut	A194-8
14	Stop-lock-cap	304
15	Handle nut (DN15 - DN65)	A194-8
16	Lever (DN15 - DN65)	304
17	Handle sleeve	304
18	Lock device (DN15 - DN65)	304
19	Body gasket	316+Graphite
20	Bolt nut	A2-70
21	Pipe handle (DN80 - DN200)	A53+Plated Zn
22	Handle Adapter (DN80 - DN200)	A351-CF8
23	Set screwed (DN80 - DN200)	A2-70
24	O-Ring	FKM
25	Bolting (DN80 - DN200)	A2-70
26	Stop Bolt	A2-70
27	Nameplate	304
28	Worm gear (optional)	Package
29	Support washer	304
30	Stop nut	A2-70

Direct Mount Pad (ISO 5211)



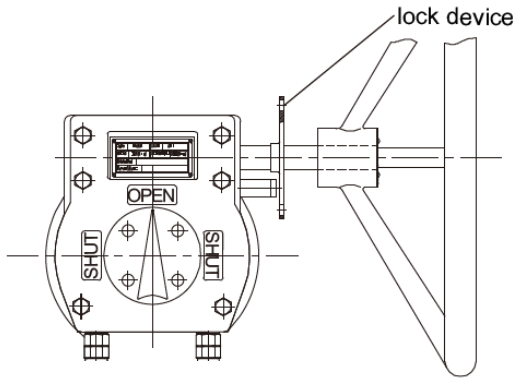
Pipe Handle Operation

SIZE : DN80 ~ DN200



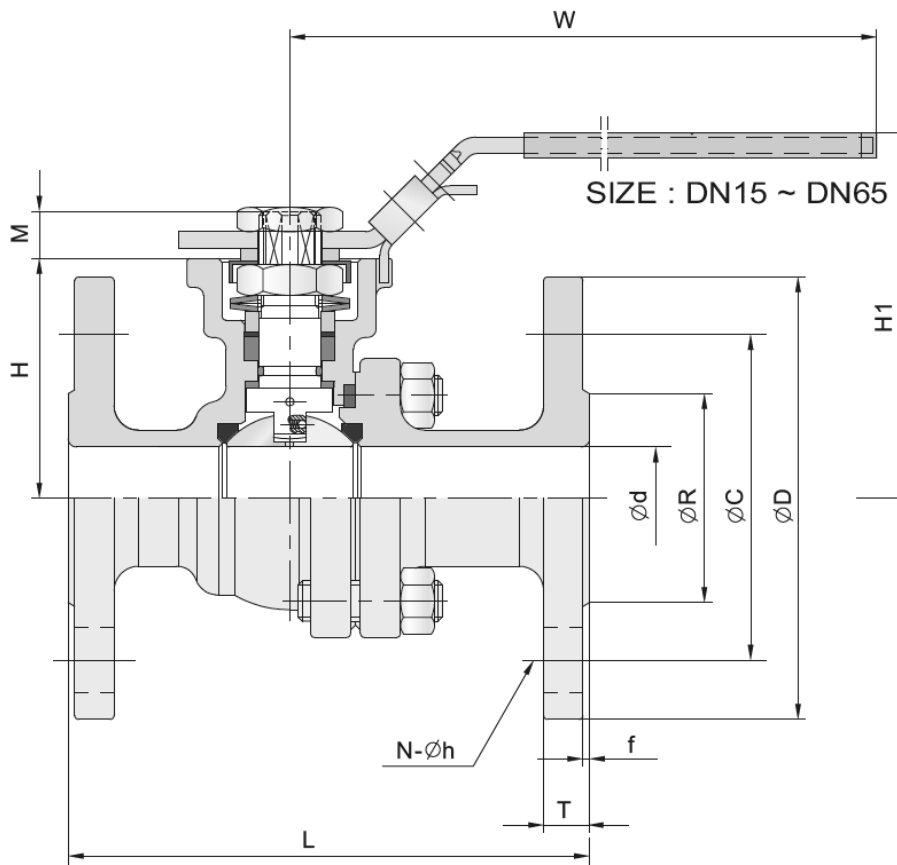
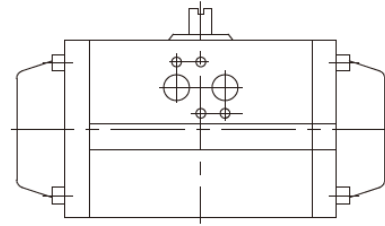
Gear Operation (Optional)

SIZE : DN65 ~ DN200



Automation (Optional)

SIZE : DN15 ~ DN200



EN PN10/16/25/40 (F1 / F7, F4 / F5)

Unit : mm

DN	PN	d	L	*L	R	D	C	f	T	N	h	H	H1	W	M	P	U1	U2	E1	E2	ISO 5211			
15	10	15.0	115	130	45	95	65	2	16	4	14	48	78	147	9	9	6	6	36	42	F03-F04			
20		20.0	120	150	58	105	75	2	18	4	14	53	84	147	9	9	6	6	36	42	F03-F04			
25	16	25.0	125	160	68	115	85	2	18	4	14	59	90	177	11	11	6	7	42	50	F04-F05			
32		32.0	130	180	78	140	100	2	18	4	18	71	102	177	11	11	6	7	42	50	F04-F05			
40	40	38.0	140	200	88	150	110	3	18	4	18	76	110	197	14	14	7	9	50	70	F05-F07			
50		50.0	150	230	102	165	125	3	20	4	18	85	118	197	14	14	7	9	50	70	F05-F07			
65	10/16	63.5	170	—	122	185	145	3	18	4	18	102	150	267	17	17	9	11	70	102	F07-F10			
			—	290								107	155											
	25/40	170	290	22	8	107	155																	
80	10/16	76.0	180	310	138	200	160	3	20	8	18	112	176	300	17	17	9	11	70	102	F07-F10			
	25/40											24	117									181		
100	10/16	100.0	190	350	158	220	180	3	20	8	18	140	210	400	22	22	—	11	—	102	F10			
	25/40				162	235	190															24	22	
125	10/16	125.0	325	400	188	250	210	3	22	8	18	183	263	600	27	27	14	—	125	—	F12			
	25/40				270	220	26															26		
150	10/16	150.0	350	450	212	285	240	3	22	8	22	204	284	800	27	27	14	—	125	—	F12			
	25/40				218	300	250															28	26	
200	10	200.0	400	550	268	340	295	3	24	8	22	253	334	800	27	27	14	18 ^(a)	125	140 ^(a)	F12orF14 ^(a)			
	16				278	360	310															30	12	26
	25				285	375	320															34	30	
	40				285	375	320															34	30	

(a):Optional

L for Series F4 / F5
 *L for Series F1 / F7

Flansch-Kugelhahn, Edelstahl/ Flanged ball valve, stainless steel PA-19D-F1.266.P / 19D-F1.466.P

Technische Daten

Bauform
 2-teilig
 Voller Durchgang
 Mit Handhebel
 Mit ISO-Direktaufbauflansch
 Baulänge nach DIN 3202 F1
 Gehäuse: Edelstahl 1.4408
 Kugel: Edelstahl 1.4408
 Dichtung: TFM-1600

Specification

Design
 2-piece
 Full port
 With handle
 With ISO-Directmountingpad
 Face to face according to DIN 3202 F1
 Body: 1.4408
 Ball: 1.4408
 Seat: TFM-1600

Anschluss

Beidseitig Flansche
 DN 15 – DN 100

Connection

Flanged Ends
 DN 15 - DN 200

Betriebsdruck

PN 40, ab DN 65 PN 16 oder PN 40

Pressure Range

PN 40, from DN 65 PN 16 or PN 40

Betriebstemperatur

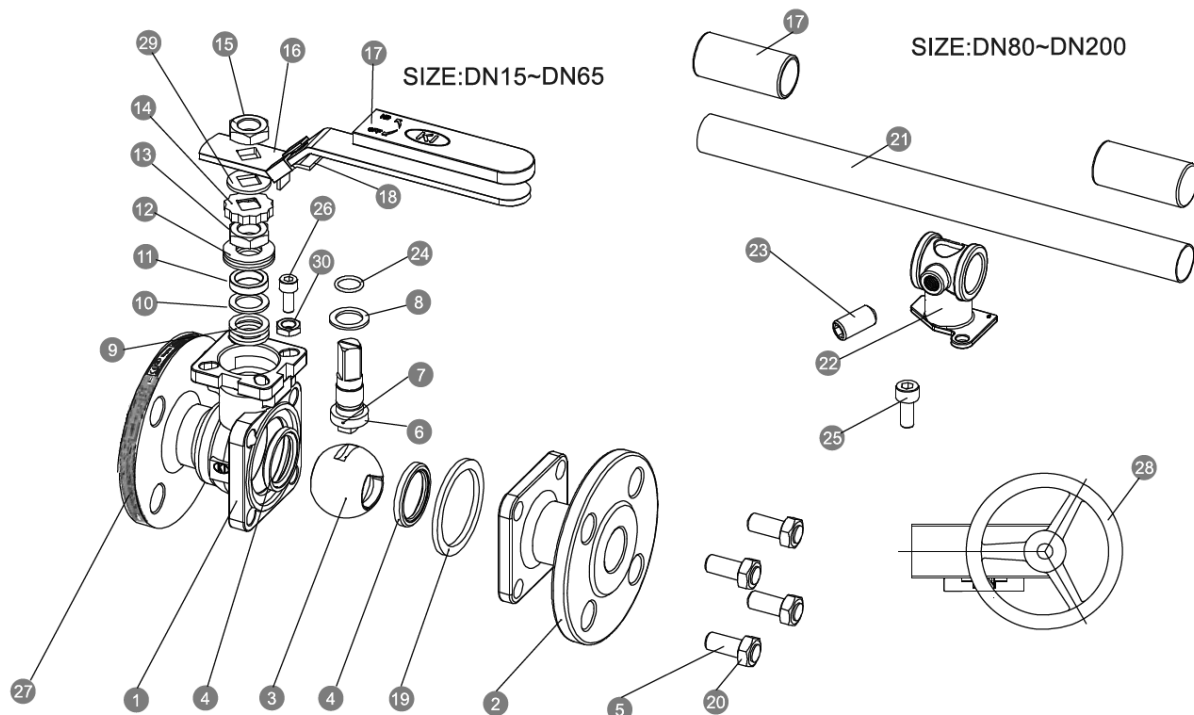
max. 180°C

Temperature Range

max. 180°C

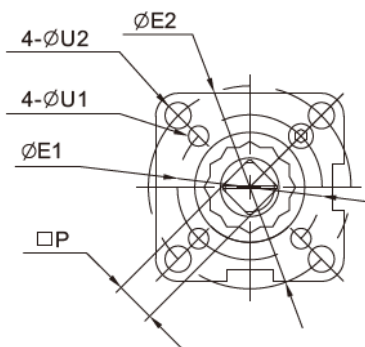


**F1-Baulänge
 FIRE-SAFE
 TA-LUFT
 ATEX**



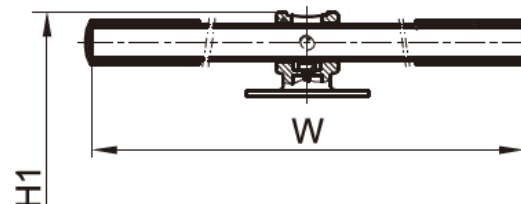
NO.	Part Name	Materials
1	Body	1.4408
2	Cap	1.4408
3	Ball	1.4408
4	Ball seat	TFM-1600
5	Bolt	A2-70
6	Stem	316
7	Anti-Static	316
8	Thrust washer	PTFE
9	Stem packing	PTFE
10	Bushing	50%SS+50%PTFE / 304*
11	Gland	316
12	Belleville washer	301
13	Stem nut	A194-8
14	Stop-lock-cap	304
15	Handle nut (DN15 - DN65)	A194-8
16	Lever (DN15 - DN65)	304
17	Handle sleeve	304
18	Lock device (DN15 - DN65)	304
19	Body gasket	PTFE
20	Bolt nut	A2-70
21	Pipe handle (DN80 - DN200)	A53+Plated Zn
22	Handle Adapter (DN80 - DN200)	A351-CF8
23	Set screwed (DN80 - DN200)	A2-70
24	O-Ring	FKM (VITON)
25	Bolting (DN80 - DN200)	A2-70
26	Stop Bolt	A2-70
27	Nameplate	304
28	Worm gear (optional)	Package
29	Support washer	304
30	Stop nut	A2-70

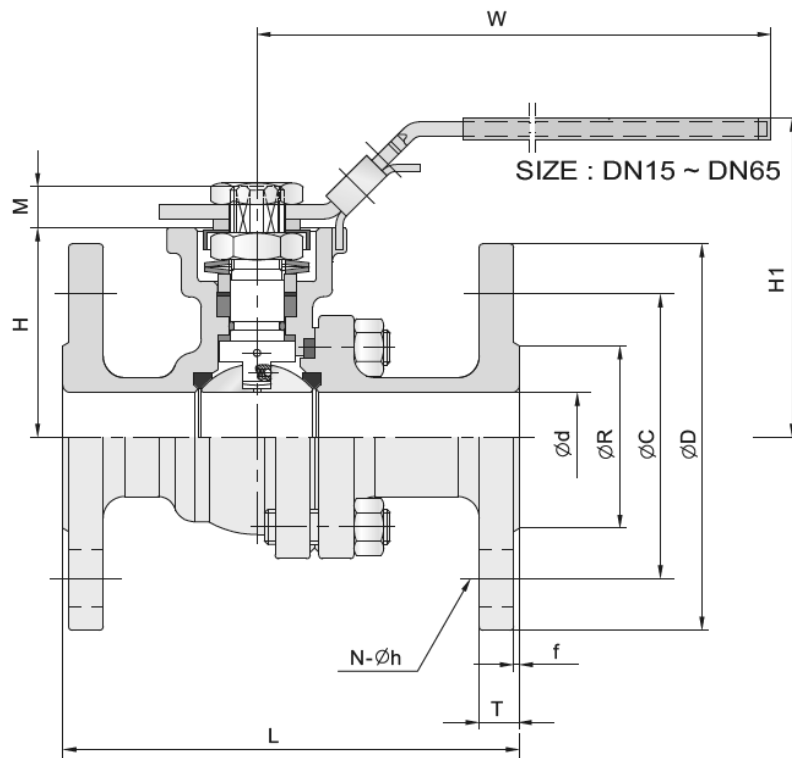
Direct Mount Pad (ISO 5211)



Pipe Handle Operation

SIZE : DN80 ~ DN200





DN	PN	d	L	R	D	C	f	T	N	h	H	H1	W	M	P	U1	U2	E1	E2	ISO 5211
15	10	15.0	130	45	95	65	2	16	4	14	48	78	147	9	9	6	6	36	42	F03-F04
20	10	20.0	150	58	105	75	2	18	4	14	53	84	147	9	9	6	6	36	42	F03-F04
25	16	25.0	160	68	115	85	2	18	4	14	59	90	177	11	11	6	7	42	50	F04-F05
32	25	32.0	180	78	140	100	2	18	4	18	71	102	177	11	11	6	7	42	50	F04-F05
40	40	38.0	200	88	150	110	3	18	4	18	76	110	197	14	14	7	9	50	70	F05-F07
50	40	50.0	230	102	165	125	3	20	4	18	85	118	197	14	14	7	9	50	70	F05-F07
65	10/16	63.5	—	122	185	145	3	18	4	18	102	150	267	17	17	9	11	70	102	F07-F10
	290		22					8	107		155									
80	10/16	76.0	310	138	200	160	3	20	8	18	112	176	300	17	17	9	11	70	102	F07-F10
	25/40							24			8	117								
100	10/16	100.0	350	158	220	180	3	20	8	18	140	210	400	22	22	—	11	—	102	F10
	25/40			162	235	190		24												

Flanschkugelhahn, Edelstahl, gelagerte Kugel Flanged ball valve, stainless steel, trunnion mounted Typ PA-19TM.266/466.P

Technische Daten

Bauform

Voller Durchgang
 2-teilig
 Flansche nach DIN PN 16 oder 40
 Gehäuse: 1.4408
 Kugel: 1.4408
 Dichtung: TFM-1600
 gelagerte Kugel
 mit Schneckenradgetriebe und
 ISO-Aufbauflansch

Specification

Design

Full port
 2-pc.
 Flanges according to DIN PN 16 or 40
 Body: 1.4408
 Ball: 1.4408
 Seat: TFM-1600
 Trunnion mounted
 with gearbox and
 with ISO-Mountingpad



PA-19TM.266.P (PN 16)

PA-19TM.266.P (PN 16)

PA-19TM.466.P (PN 40)

PA-19TM.466.P (PN 40)

Anschluss

Flanschanschluss

Connection

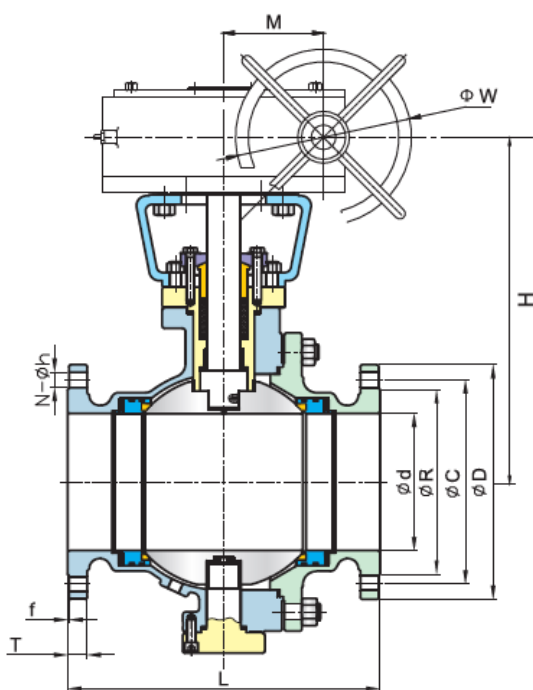
with flanges

Betriebstemperatur

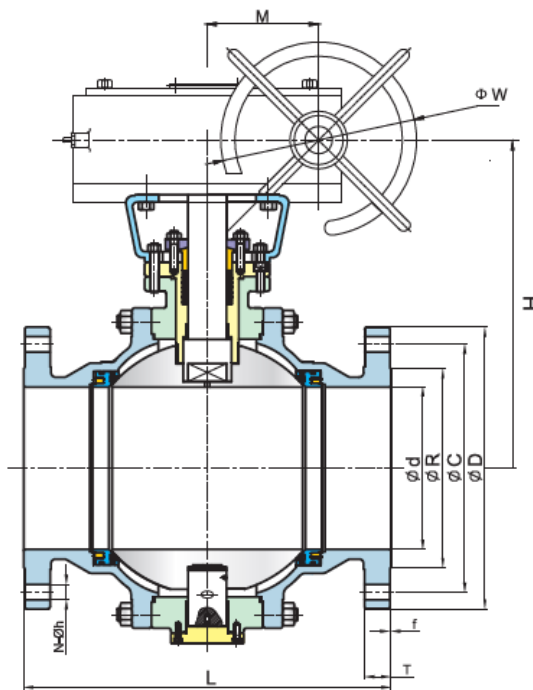
max. 180°C

Temperature Range

max. 180°C

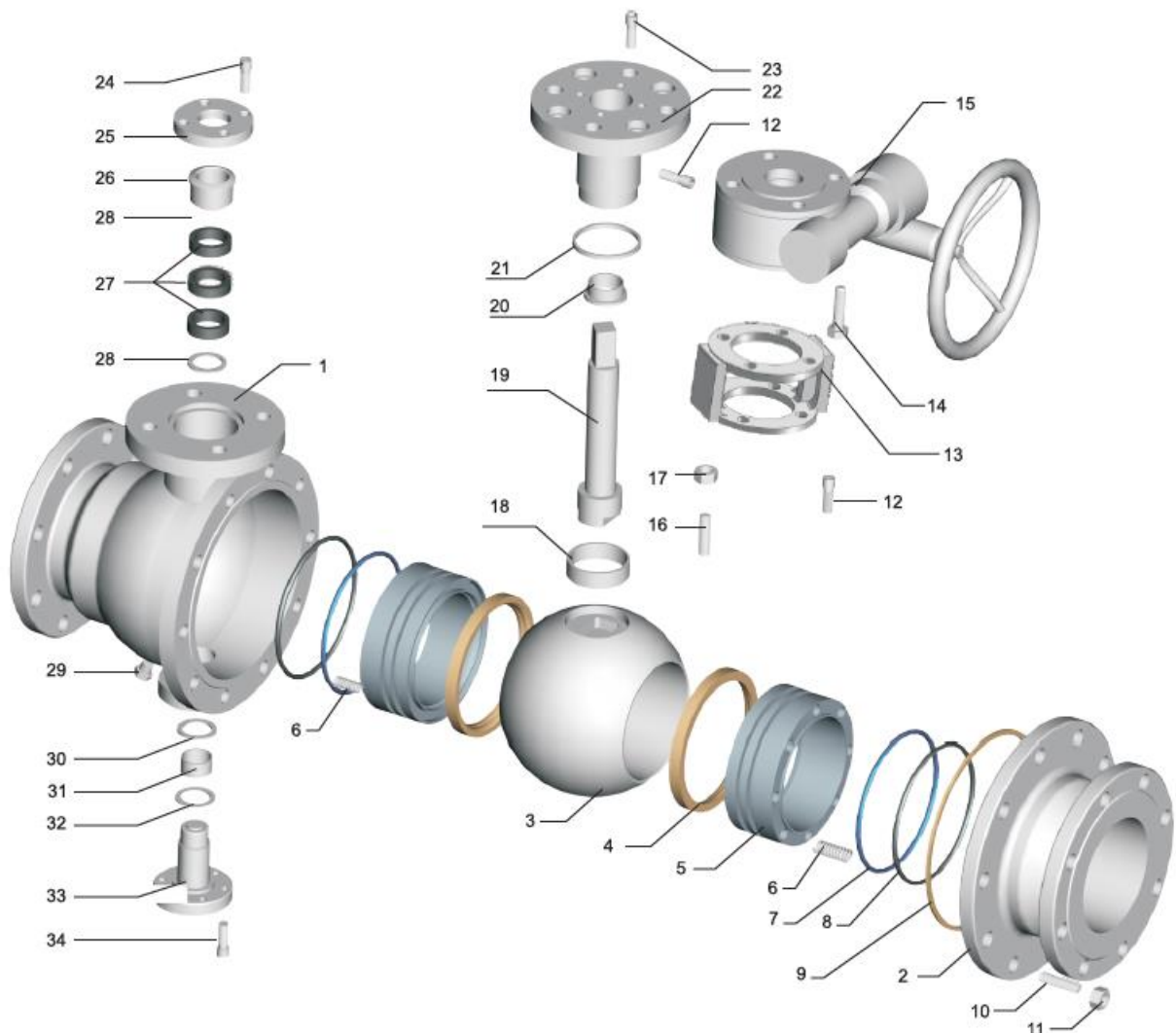


DN150~DN300
 (2-PC Body)



DN350~DN600
 (3-PC Body)

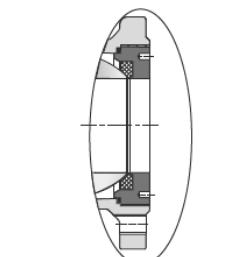
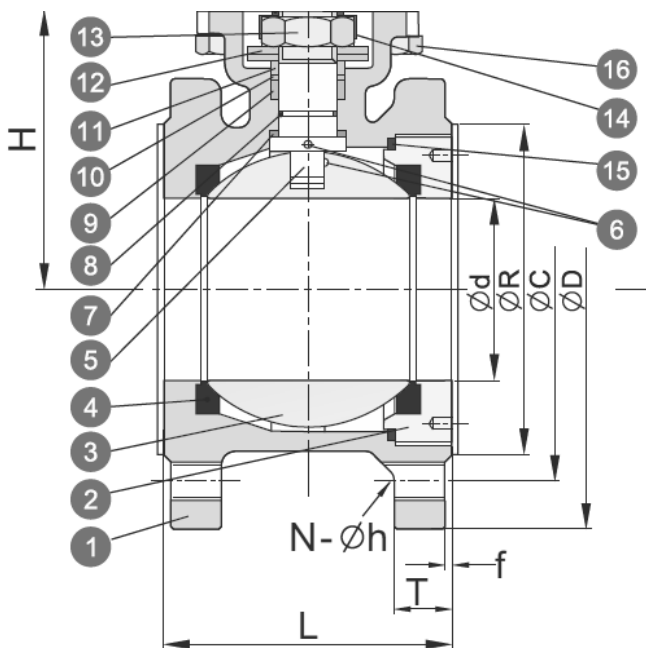
Size	PN	d	L	R	C	D	f	T	N	h	H	W	M	ISO 5211 on Valve
DN 150	16	150	394	212	240	285	2	22	8	22	420	400	105	F16
	40	150	403	218	250	300	2	28	8	26	420	400	105	
DN 200	16	200	457	268	295	340	2	24	12	22	485	400	105	F16
	40	200	502	278	320	375	2	34	12	30	485	500	120	
DN 250	16	250	533	320	355	405	2	26	12	26	500	500	126	F16
	40	250	568	345	385	450	2	38	12	33	500	500	126	
DN 300	16	300	610	378	410	460	2	28	12	26	540	500	126	F25
	40	300	648	410	450	515	2	42	16	33	540	500	126	
DN 350	16	336	686	438	470	520	2	30	16	26	630	500	126	F25
	40	336	762	465	510	580	2	46	16	36	630	710	138	
DN 400	16	387	762	490	525	580	2	32	16	30	680	710	138	F25
	40	387	838	535	585	660	2	50	16	39	680	710	138	
DN 450	16	438	864	550	585	640	2	40	20	30	720	710	138	F25
	40	432	914	560	610	685	2	57	20	39	720	710	138	
DN 500	16	489	914	610	650	715	2	44	20	33	760	710	138	F30
	40	483	991	615	670	755	2	57	20	42	760	710	138	
DN 600	16	590	1067	725	770	840	2	54	20	36	890	710	138	F30
	40	584	1143	735	795	890	2	72	20	48	890	800	150	



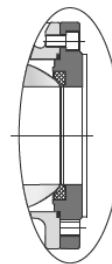
NO.	Part Name	Materials
1	Body	A351-CF8M
2	Body Cap	A351-CF8M
3	Ball	A182-F316
4	Seat Seal	TFM1600
5	Seat	A182-F316
6	Spring	SUS631/Inconel X-750
7	O-Ring	FKM/Silicon
8	Sealing Ring	Grafoil/FKM
9	Body Gasket	316 Spiral Wound + Grafoil / FKM
10	Stud	A193-B8
11	Hexagon Nut	A194-8
12	Injection Sealing	SUS316
13	Yoke	A216-WCB
14	Hexagon Bolt	A193-B8
15	Worm Gear	Package
16	Stud Bolt	A193-B8
17	Hexagon Nut	A194-8
18	Wear Sleeve	50%SS + 50%PTFE
19	Stem	A182-F316
20	Stem Sleeve	50%SS + 50%PTFE
21	Mid. Flange Gasket	316 Spiral Wound + Grafoil / PTFE
22	Mid. Flange	A351-CF8M
23	Hexagon Socket Cap Head Screw	A193-B8
24	Hexagon Socket Cap Head Screw	A193-B8
25	Packing Plate	A351-CF8
26	Gland	A351-CF8M
27	Stem Packing	Grafoil / PTFE
28	Packing Gasket	316
29	Drain Plug	316
30	Bottom End Cap Wear Bushing	50%SS + 50%PTFE
31	Bottom End Cap Sleeve	50%SS + 50%PTFE
32	Bottom End Cap Seal Ring	316 Spiral Wound + Grafoil / PTFE
33	Bottom End Cap	A182-F316
34	Hexagon Socket Cap Head Screw	A193-B8

Kompakt-Flanschkugelhahn, Edelstahl / Wafer type flanged ball valve, stainless steel PA-55D.266/466.P

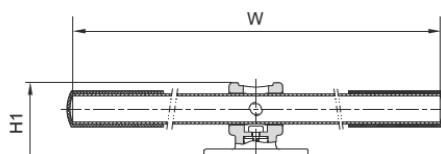
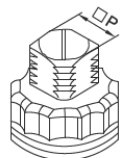
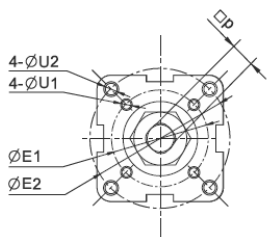
Technische Daten	Specification
Bauform 2-teilig ISO-Direktaufbauflansch	Design 2-piece ISO-Directmountingpad
Anschluss Beidseitig Flansch DN 15 - DN 150	Connection Flanged Ends DN 15 - DN 150
Betriebsdruck PN 16/40	Pressure Range PN 16/40
Betriebstemperatur max. 180°C	Temperature Range max. 180°C



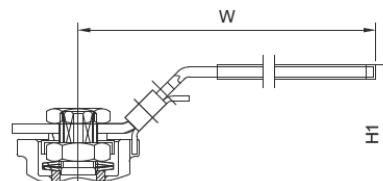
SIZE : DN 15 ~ DN 80



SIZE : DN 100 ~ DN 150



SIZE : DN 100 ~ DN 150



SIZE : DN 15 ~ DN 80

No.	Part name	Material
1	Body	1.4408
2	Cap	1.4408
3	Ball	1.4408
4	Ball Seat	TFM-1600
5	Stem	316
6	Anti-Static Device	316
7	Thrust washer	PTFE
8	O-Ring	FKM
9	Stem Packing	PTFE
10	Bushing	50%SS + 50%PTFE
11	Gland	316
12	Belleville Washer	301
13	Stem Nut	A194-8
14	Stop-lock-Cap	304
15	Body Gasket	PTFE
16	Hex Bolting	A193-B8

Unit: mm

SIZE	PN	d	R	C	D	f	T	L	H1	W	H	M	P	N	h	U1	U2	E1	E2	ISO 5211	
DN15	1/2"	10~40	15.0	45	65	95	2	9	42	77	145	46.0	9	9	4	M12	6	6	36	42	F03-F04
DN20	3/4"	10~40	20.0	58	75	105	2	9	44	85	145	51.0	9	9	4	M12	6	7	36	50	F04-F05
DN25	1"	10~40	25.0	68	85	115	2	9	50	94	175	62.0	11	11	4	M12	6	7	42	50	F04-F05
DN32	1-1/4"	10~40	32.0	78	100	140	2	12	60	104	175	72.0	11	11	4	M16	6	9	42	70	F05-F07
DN40	1-1/2"	10~40	38.0	88	110	150	3	13	65	114	196	78.0	14	14	4	M16	7	9	50	70	F05-F07
DN50	2"	10~40	50.0	102	125	165	3	20	80	120	196	86.0	14	14	4	M16	7	9	50	70	F05-F07
DN65	2-1/2"	10/16 25/40	63.5	122	145	185	3	18 22	110 113	158	265	108.0	17	17	4 8	M16	9	11	70	102	F07-F10
DN80	3"	10/16 25/40	76.0	138	160	200	3	20 24	120	165	265	116.0	17	17	8	M16	9	11	70	102	F07-F10
DN100	4"	10/16 25/40	95.0	158 162	180 190	220 235	3	20 24	150 154	182	400	139.0	22	22	8	M16 M20	N/A	11	N/A	102	F10
DN125	5"	10/16 25/40	118.0	188	210 220	250 270	3	22 26	180	224	800	176.0	27	27	8	M16 M24	N/A	14	N/A	125	F12
DN150	6"	10/16 25/40	142.0	212 218	240 250	285 300	3	22 28	225	268	800	192.0	27	27	8	M20 M24	N/A	14	N/A	125	F12

Flansch-Kugelhahn, Stahl, gelagerte Kugel Flanged ball valve, steel, trunnion mounted Typ PA-19TM.235/435.P

Technische Daten

Bauform

Voller Durchgang
 2-teilig
 Flansche nach DIN PN 16 oder 40
 Gehäuse: WCB A216
 Kugel: AISI 304
 Dichtung: TFM-1600
 gelagerte Kugel
 mit Schneckenradgetriebe und
 ISO-Aufbauflansch

Specification

Design

Full port
 2-pc.
 Flanges according to DIN PN 16 or 40
 Body: WCB A216
 Ball: AISI 304
 Seat: TFM-1600
 Trunnion mounted
 with gearbox and
 with ISO-Mountingpad

PA-19TM.235.P (PN 16)

PA-19TM.235.P (PN 16)

PA-19TM.435.P (PN 40)

PA-19TM.435.P (PN 40)

Anschluss

Flanschanschluss

Connection

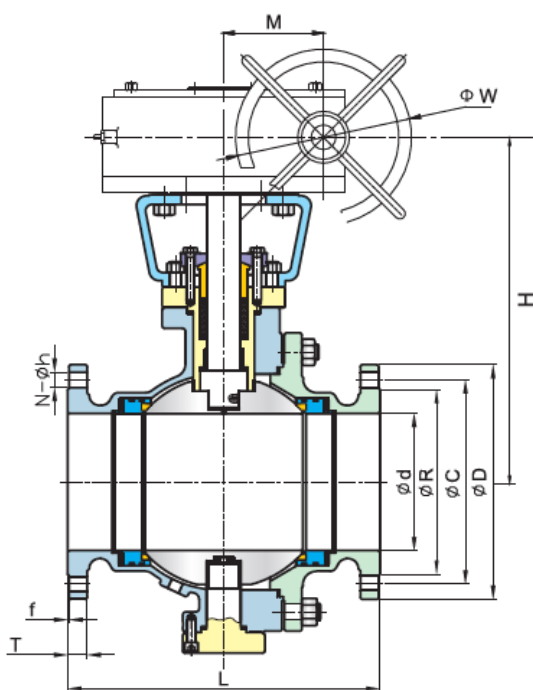
with flanges

Betriebstemperatur

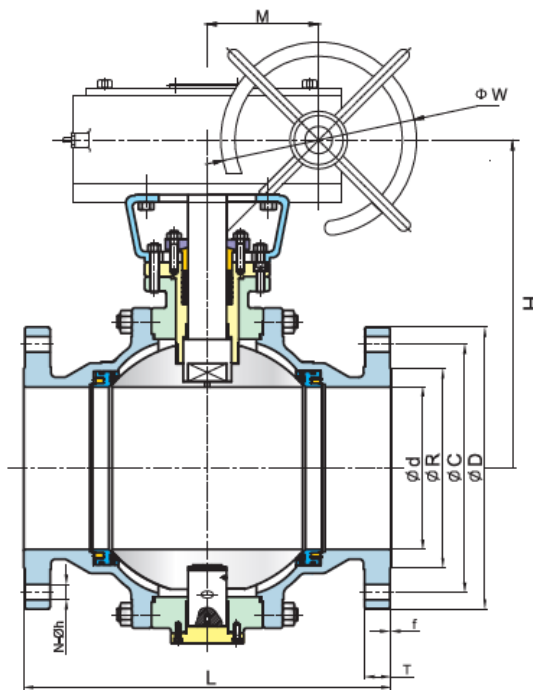
max. 180°C

Temperature Range

max. 180°C

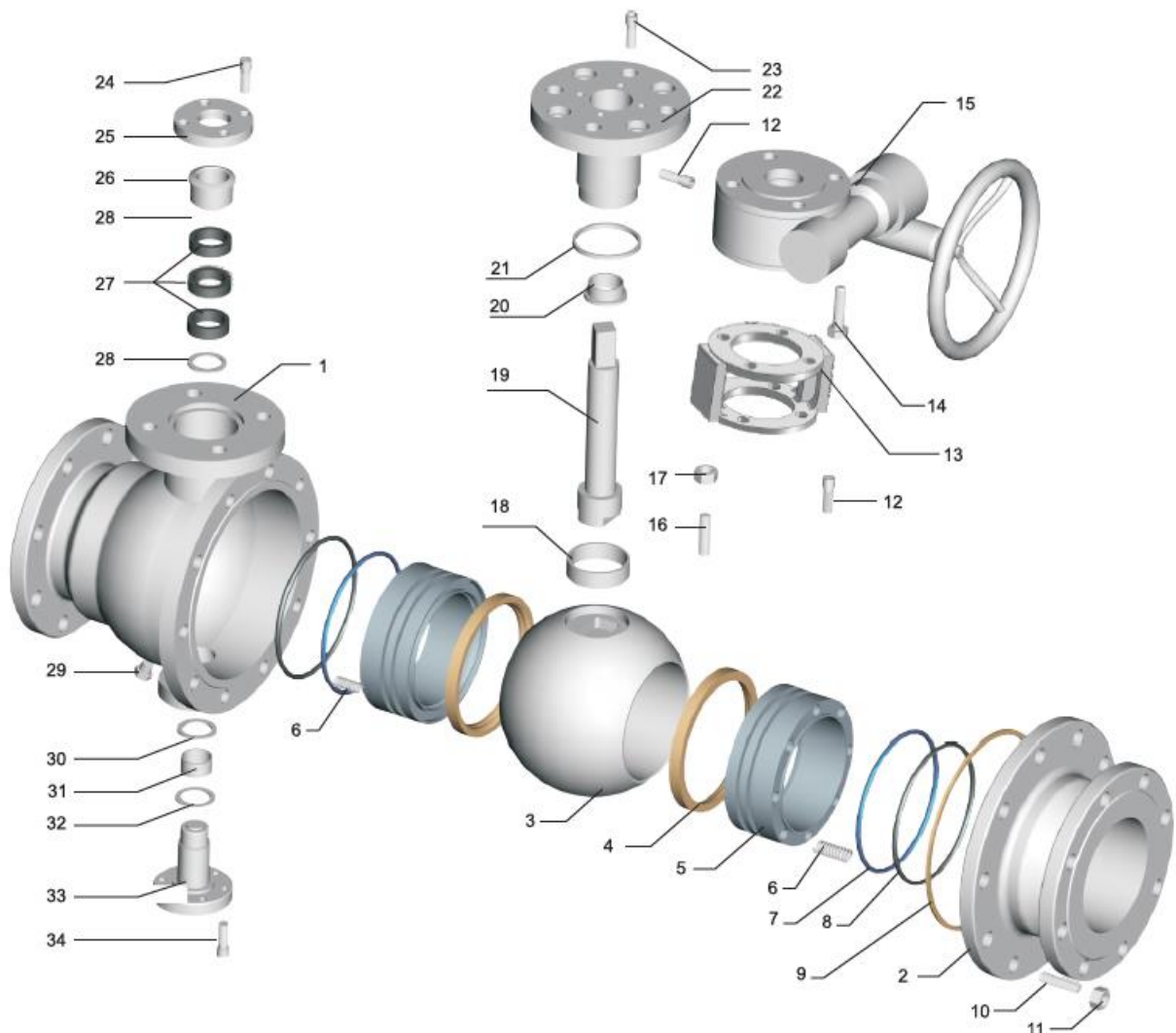


DN150~DN300
(2-PC Body)



DN350~DN600
(3-PC Body)

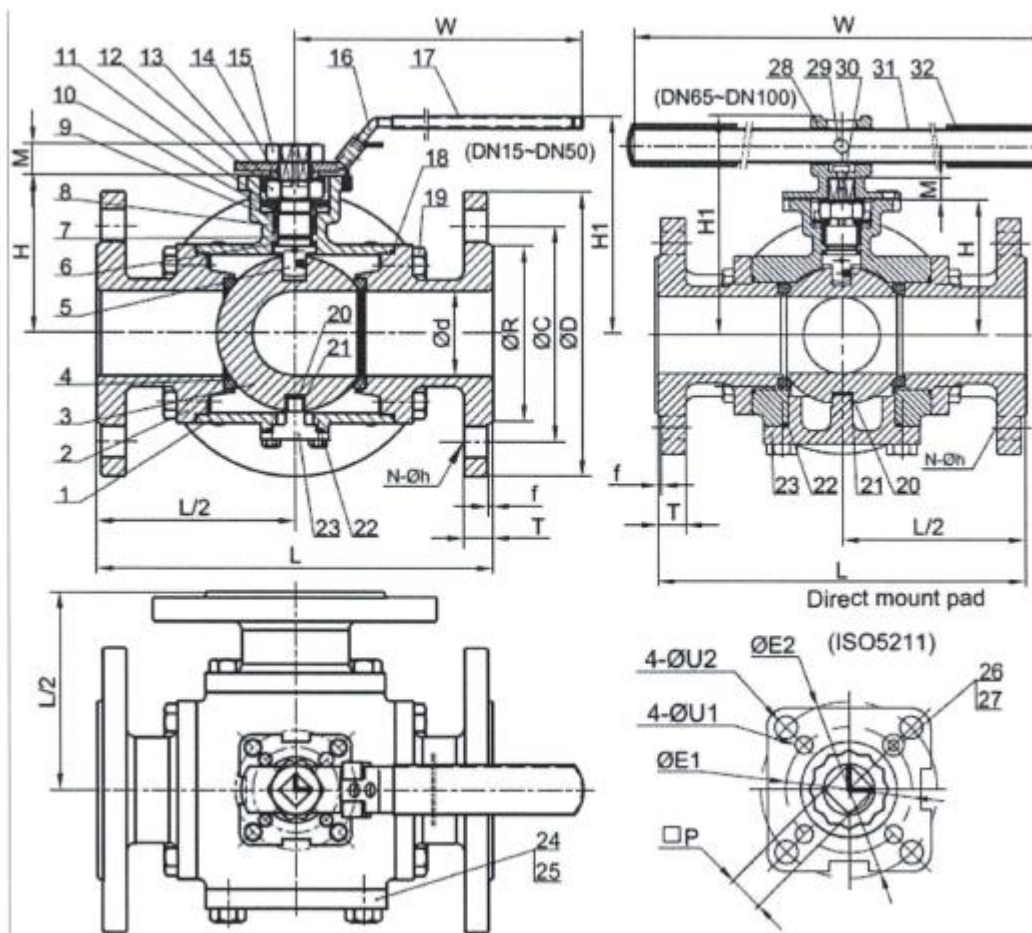
Size	PN	d	L	R	C	D	f	T	N	h	H	W	M	ISO 5211 on Valve
DN 150	16	150	394	212	240	285	2	22	8	22	420	400	105	F16
	40	150	403	218	250	300	2	28	8	26	420	400	105	
DN 200	16	200	457	268	295	340	2	24	12	22	485	400	105	F16
	40	200	502	278	320	375	2	34	12	30	485	500	120	
DN 250	16	250	533	320	355	405	2	26	12	26	500	500	126	F16
	40	250	568	345	385	450	2	38	12	33	500	500	126	
DN 300	16	300	610	378	410	460	2	28	12	26	540	500	126	F25
	40	300	648	410	450	515	2	42	16	33	540	500	126	
DN 350	16	336	686	438	470	520	2	30	16	26	630	500	126	F25
	40	336	762	465	510	580	2	46	16	36	630	710	138	
DN 400	16	387	762	490	525	580	2	32	16	30	680	710	138	F25
	40	387	838	535	585	660	2	50	16	39	680	710	138	
DN 450	16	438	864	550	585	640	2	40	20	30	720	710	138	F25
	40	432	914	560	610	685	2	57	20	39	720	710	138	
DN 500	16	489	914	610	650	715	2	44	20	33	760	710	138	F30
	40	483	991	615	670	755	2	57	20	42	760	710	138	
DN 600	16	590	1067	725	770	840	2	54	20	36	890	710	138	F30
	40	584	1143	735	795	890	2	72	20	48	890	800	150	



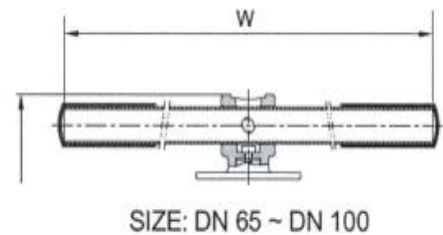
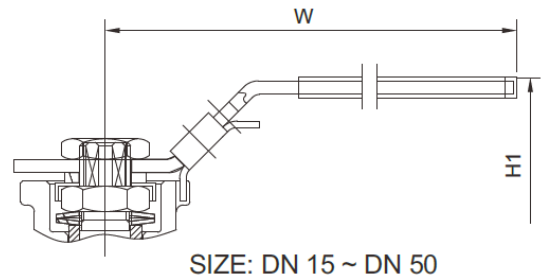
NO.	Part Name	Materials
1	Body	A216-WCB
2	Body Cap	A216-WCB
3	Ball	A182-F304
4	Seat Seal	TFM1600
5	Seat	A182-F316
6	Spring	SUS631
7	O-Ring	FKM/Silicon
8	Sealing Ring	Grafoil/FKM
9	Body Gasket	304 Spiral Wound + Grafoil / PTFE
10	Stud	A193-B7
11	Hexagon Nut	A194-2H
12	Injection Sealing	SUS316
13	Yoke	A216-WCB
14	Hexagon Bolt	A193-B7
15	Worm Gear	Package
16	Stud Bolt	A193-B7
17	Hexagon Nut	A194-2H
18	Wear Sleeve	50%SS + 50%PTFE
19	Stem	A182-F304
20	Stem Sleeve	50%SS + 50%PTFE
21	Mid. Flange Gasket	304 Spiral Wound + Grafoil / PTFE
22	Mid. Flange	A216-WCB
23	Hexagon Socket Cap Head Screw	A193-B7
24	Hexagon Socket Cap Head Screw	A193-B7
25	Packing Plate	A216-WCB
26	Gland	A351-CF8
27	Stem Packing	Grafoil / PTFE
28	Packing Gasket	316
29	Drain Plug	304
30	Bottom End Cap Wear Bushing	50%SS + 50%PTFE
31	Bottom End Cap Sleeve	50%SS + 50%PTFE
32	Bottom End Cap Seal Ring	304 Spiral Wound + Grafoil / PTFE
33	Bottom End Cap	A182-F304
34	Hexagon Socket Cap Head Screw	A193-B7

3-Wege Flansch-Kugelhahn, Edelstahl / 3-way flanged ball valve, stainless steel PA-48D.266/466.P

Technische Daten	Specification
Bauform	Design
Voller Durchgang	Full bore
ISO-Direktaufbauflansch	ISO-Directmountingpad
Anschluss	Connection
Beidseitig Flansch	Flanged Ends
L - oder T - Bohrung	L - or T - bore
DN 15 - DN 200	DN 15 - DN 200
Betriebsdruck	Pressure Range
PN 16 / PN 40	PN 16 / PN 40
Betriebstemperatur	Temperature Range
max. 180°C	max. 180°C



NO.	Part Name	Materials
1	Body	1.4408
2	End Cap (1)	1.4408
3	Ball	CF8M
4	Ball Seat	PTFE/TFM1600
5	Stem (Anti-Static Device)	316
6	Thrust Washer	PTFE
7	O-Ring	FKM
8	Packing	PTFE/Grafoil
9	Bushing	50%SS + 50%PTFE/304
10	Gland	316
11	Belleville Washer	301
12	Stem Nut	A194-8
13	Stop-lock-cap	304
14	Handle Gland	304
15	Handle Nut (DN15 – DN 50)	A194-8
16	Handle + Lock Device (DN15 – DN50)	304
17	Handle Sleeve (DN15 – DN 50)	Vinyl Plastic
18	Body Gasket (1)	PTFE/Grafoil
19	Bolting	A2-70
20	Washer	PTFE
21	Jacket	PTFE
22	Body Gasket (2)	PTFE/Grafoil
23	Bottom Cap	1.4408
24	End Cap (2)	1.4408
25	Body Gasket (3) (DN65 – DN100)	PTFE/Grafoil
26	Stop Bolt	A2-70
27	Stop Nut	A2-70
28	Handle Adapter (DN65 – DN100)	CF8
29	Set Screwed (DN65 – DN100)	A2-70
30	Bolting (DN65 – DN100)	A2-70
31	Pipe Handle (DN65 – DN100)	A53+Plated Zn
32	Handle Sleeve (DN65 – DN100)	Vinyl Plastic



SIZE	PN	d	R	C	D	f	T	L	H1	W	H	M	P	N	h	U1	U2	E1	E2	ISO 5211	
DN15	1/2"	10~40	15	45	65	95	2	16	150	83.3	144.5	52.5	9	9	4	14	6	6	36	42	F03-F04
DN20	3/4"	10~40	20	58	75	105	2	18	165	87.0	144.5	57.0	9	9	4	14	6	7	36	50	F03-F05
DN25	1"	10~40	25	68	85	115	2	18	181	99.0	175.0	68.0	11	11	4	14	6	7	42	50	F04-F05
DN32	1-1/4"	10~40	32	78	100	140	2	18	190	103.0	175.0	72.0	11	11	4	18	6	9	42	70	F04-F07
DN40	1-1/2"	10~40	38	88	110	150	3	18	212	119.0	200.0	85.0	14	14	4	18	7	9	50	70	F05-F07
DN50	2"	10~40	49	102	125	165	3	20	230	126.0	200.0	92.0	14	14	4	18	7	9	50	70	F05-F07
DN65	2-1/2"	10/16 25/40	63	122	145	185	3	18 22	290	172.0	400.0	107.0	17	17	4 8	18	9	11	70	102	F07-F10
DN80	3"	10/16 25/40	75	138	160	200	3	20 24	310 340	185.0	400.0	119.0	17	17	8	18	9	11	70	102	F07-F10
DN100	4"	10/16 25/40	99	158 162	180 190	220 235	3	20 24	350 386	221.0	400.0	150.0	22	22	8	18	N/A	11	N/A	102	F10
DN150	6"	10/16 25/40	150	212 218	240 250	285 300	3	22 28	490 520	—	500.0	229.0	36	36	8	22	18	22	140	165	F14-F16
DN200	8"	10 16 25 40	200	268 278 285	295 310 320	340 360 375	3	24 30 34	620 660	—	500.0	252.0	36	36	8 12	22 26 30	18	22	140	165	F14-F16