

## Type F-2 ISO-STANDARD Plug Valve with ISO Flange

- free of cavities
- maintenance free - self lubricating



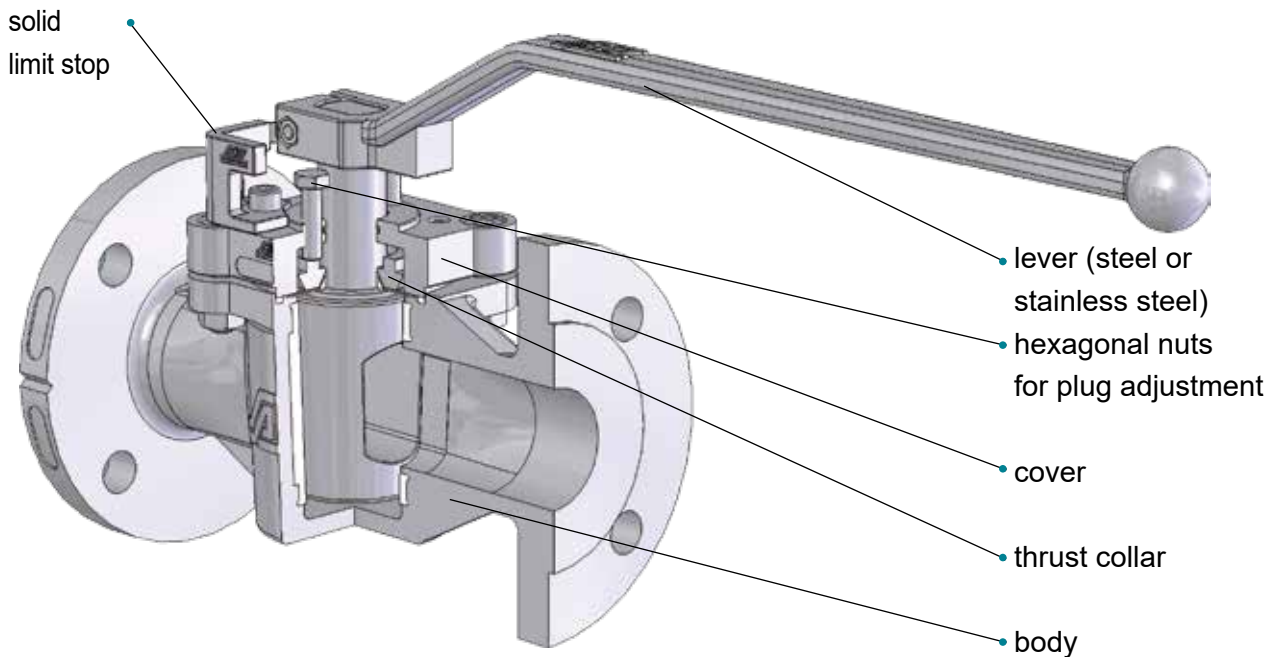
- mounting-flange for actuators acc. to ISO 5211
- easy accessible adjustment of the plug
- vacuum tight
- TA - Luft 2002 approval
- Firesafe - Design API 607 / ISO 10497
- DVGW - approval

### 1.1.1 Typ F-2 ISO-STD

DN 15 - 600 / PN 10 - 40  
NPS 1/2" - 24" / Class 150 - 300

# TYPE ISO - STANDARD

## Design characteristics



### The main advantages of the plug valve Type **ISO-STANDARD**:

- strong mounting flange for actuators acc. DIN ISO 5211: Cover screws independent of actuator mounting!
- patented full cardanic dihedron coupling
- improved shaft and cover sealing including V-diaphragm, delta thrust collar and PTFE cover sealing ring.
- safety spindle packing (FSN/CASN) to prevent fugitive emission of aggressive and toxic media.

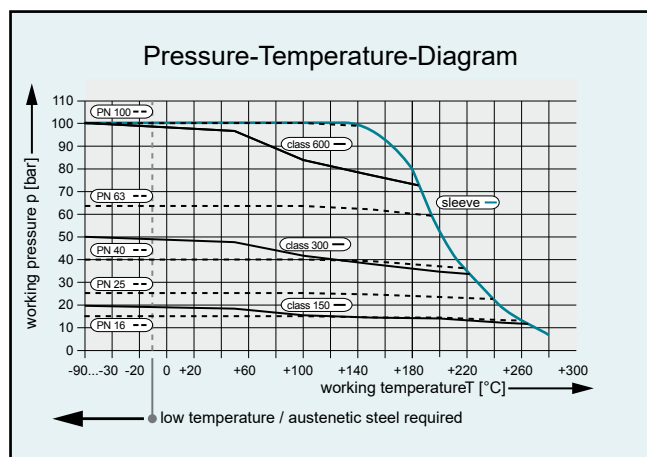
## Materials

### Standard body materials

- Ductile Iron EN-GJS-400-18 / (GGG 40.3) ASTM A395
- Carbon Steel 1.0619 (GS-C 25) / ASTM A216 WCB
- Stainless Steel 1.4408 / ASTM A351 CF8M

### Special body materials

- Hastelloy B / C
- Inconel
- Monel
- Nickel
- Zirconium
- Titanium
- Tantalum



operating temperatures  $< -30^{\circ}\text{C}$  and  $> 220^{\circ}\text{C}$  have to be checked and approved by AZ according to the operating conditions.

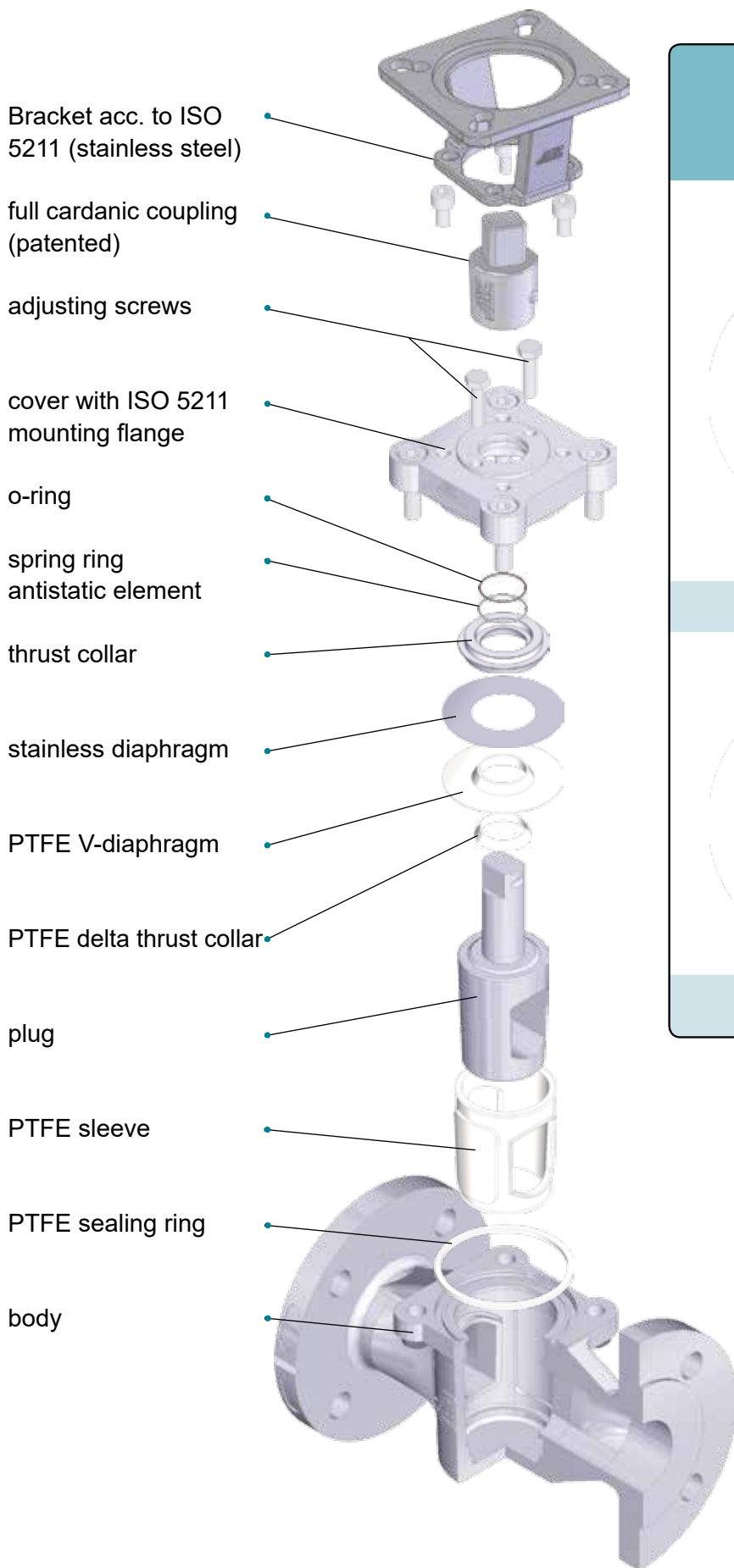
Other materials on request.

**On enquiry / order:** please state material for body and plug.



# TYPE ISO - STANDARD

## Design



Bracket acc. to ISO 5211 (stainless steel)

full cardanic coupling (patented)

adjusting screws

cover with ISO 5211 mounting flange

o-ring

spring ring  
antistatic element

thrust collar

stainless diaphragm

PTFE V-diaphragm

PTFE delta thrust collar

plug

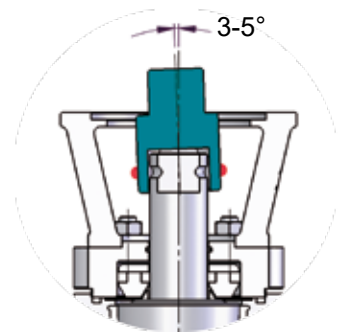
PTFE sleeve

PTFE sealing ring

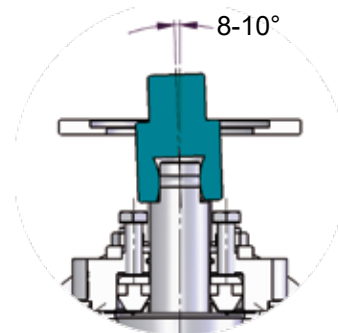
body

**NEW**

patented  
cardanic AZ-Coupling



**NO LATERAL FORCES!**

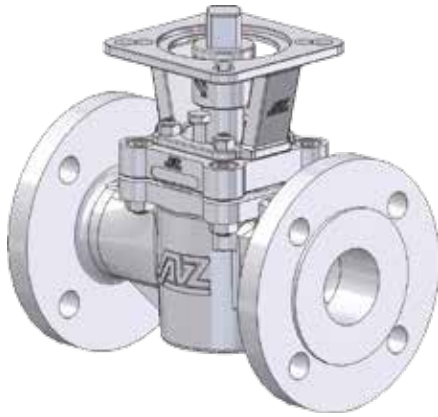


**GUARANTY**  
for long life span!



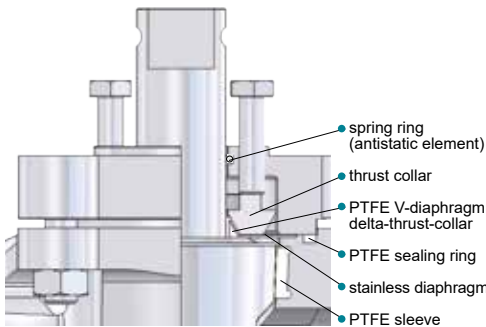
# TYPE ISO - STANDARD

## Flexible sealing selection through modular design



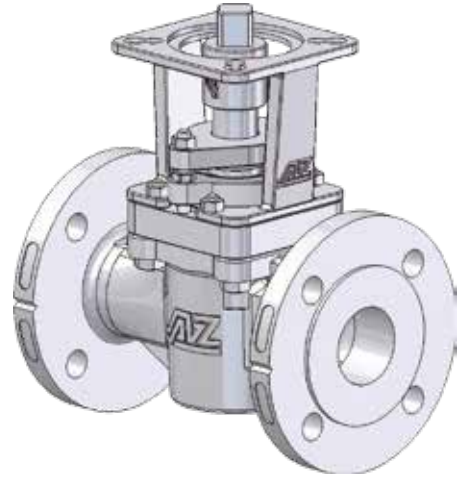
**STD**

**Standard sealing for all major applications**



- primary sealing: PTFE sleeve
- secondary sealing: PTFE V-diaphragm with delta thrust collar

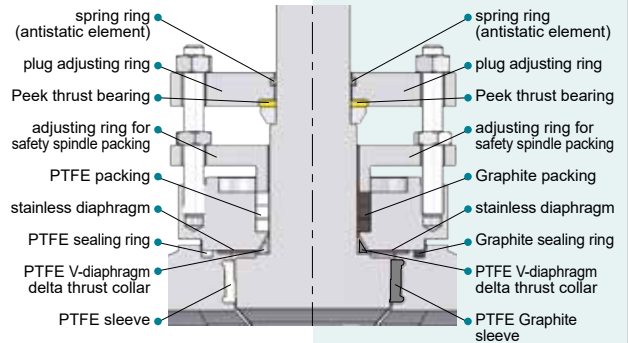
temperature range up to 230°C



**CASN**

**FSN**

**Safety sealing for fluctuating temperatures**



- primary sealing: PTFE sleeve
- secondary sealing: PTFE V-diaphragm with delta thrust collar
- tertiary sealing: triple safety spindle packing

temperature range up to 250°C



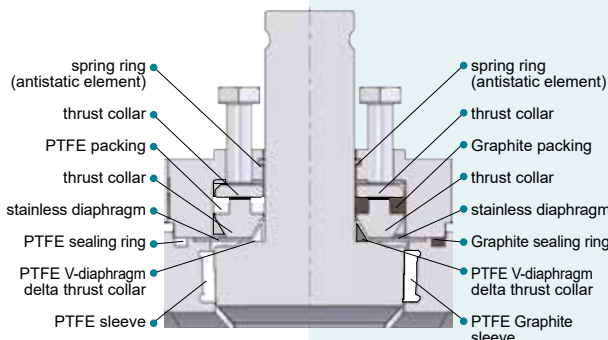
temperature range up to 280°C  
Fire-Safe Design (API 607)



**CA**

**FS**

**Chemistry sealing to prevent fugitive emission of aggressive and toxic media**



- primary sealing: PTFE sleeve
- secondary sealing: PTFE V-diaphragm with delta thrust collar
- tertiary sealing: spindle packing

temperature range up to 250°C



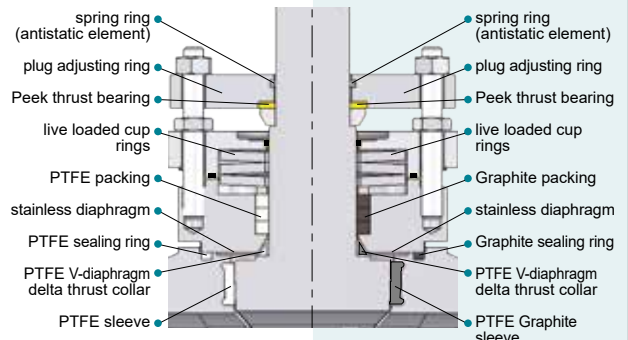
temperature range up to 280°C  
Fire-Safe Design (API 607)



**CASN-SL**

**FSN-SL**

**Life loaded safety sealing for fluctuating temperatures**



- primary sealing: PTFE-sleeve
- secondary sealing: PTFE V-diaphragm with delta-thrust-collar
- tertiary sealing: life loaded triple safety spindle packing

temperature range up to 250°C



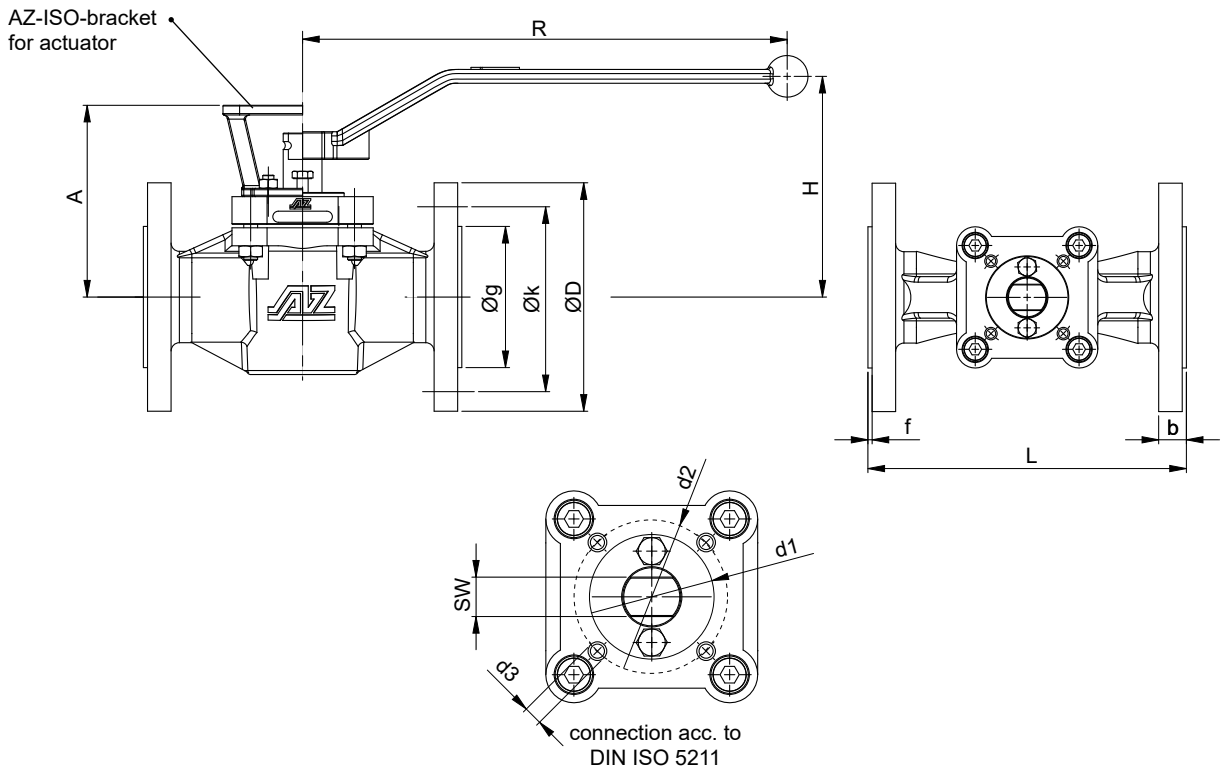
temperature range up to 280°C  
Fire-Safe Design (API 607)





# TYPE ISO - STANDARD

Dimensions DN 15 - 100S NPS ½" - 4"S acc. to DIN / ASME



	DN	PN	L	øD	flange bore			øg	b	f	bracket / lever			flange DIN ISO 5211			US-UNC d3**	dihe-dron	torque.* [Nm]	weight [kg]	Kvs-value [m³/h]	Cv-value [US.gal/min]		
					øk	No.	ø				Type	d1	d2	d3										
DIN EN 1092/1 / 558-1	15	10-40	130	95	65	4	14	45	16	2	88	103	200	F05	35	50	M6	1/4"	11	30	3,8	12	14	
	20	10-40	150	105	75	4	14	58	18	2	88	103	200	F05	35	50	M6	1/4"	11	30	4,3	13	15	
	25	10-40	160	115	85	4	14	68	18	2	94	109	200	F05	35	50	M6	1/4"	11	30	4,9	25	29	
	32	10-40	180	140	100	4	18	78	18	2	102	117	320	F07	55	70	M8	5/16"	14	70	8,6	46	53	
	40	10-40	200	150	110	4	18	88	18	3	109	124	320	F07	55	70	M8	5/16"	14	80	9,6	85	98	
	50	10-40	230	165	125	4	18	102	20	3	139	159	420	F07	55	70	M8	5/16"	19	120	13,9	160	185	
	65	10-16 25-40	290	185	145	4	8	18	122	18	3	158	165	600	F10	70	102	M10	3/8"	22	200	19,3	262	302
	80	10-40	310	200	160	8	18	138	24	3	158	165	600	F10	70	102	M10	3/8"	22	200	21,4	275	317	
	80S	10-40	310	200	160	8	18	138	24	3	173	180	600	F12	85	125	M12	1/2"	22	300	24,6	417	482	
	100	10-16 25-40	350	220	180	8	18	158	20	3	158	165	600	F10	70	102	M10	3/8"	22	200	24,6	197	228	
100S	10-16 25-40	350	220	180	8	18	158	20	3	173	180	600	F12	85	125	M12	1/2"	22	300	28,9	582	673		
ASME B 16.5 / 16.10	½"	150	108	90	60,3	4	15,7	34,9	10,0	2	88	103	200	F05	35	50	M6	1/4"	11	30	2,7	14	16	
		300	140	95	66,7		14,7	3,8	13												15			
	¾"	150	117	100	69,9	4	15,7	42,9	10,9	2	88	103	200	F05	35	50	M6	1/4"	11	30	3,2	13	16	
		300	152	115	82,5		16,3	4,3	13												15			
	1"	150	127	110	79,4	4	15,7	50,8	11,6	2	94	109	200	F05	35	50	M6	1/4"	11	30	3,5	24	28	
		300	165	125	88,9		17,9	4,9	26												31			
	1¼"	150	140	115	88,9	4	15,7	63,5	13,2	2	102	117	320	F07	55	70	M8	5/16"	14	70	5,4	46	53	
		300	178	135	98,4		19,5	8,6																
	1½"	150	165	125	98,4	4	15,7	73,0	14,7	2	109	124	320	F07	55	70	M8	5/16"	14	80	7	78	90	
		300	190	155	114,3		22,3	9,6	79												92			
	2"	150	178	150	120,7	4	19,1	92,1	16,3	2	139	159	420	F07	55	70	M8	5/16"	19	120	11,8	145	167	
		300	216	165	127,0		22,7	13,9	156												180			
	2½"	150	190	180	139,7	4	19,1	104,8	17,9	2	158	165	600	F10	70	102	M10	3/8"	22	200	15,5	236	273	
300		241	190	149,3	22,3		19,3																	
3"	150	203	190	152,4	4	19,1	127	19,5	2	158	165	600	F10	70	102	M10	3/8"	22	200	18,2	225	260		
	300	282	210	168,3		22,3	21,4	228												264				
4"	150	229	230	190,5	8	19,1	157,2	24,3	2	158	165	600	F10	70	102	M10	3/8"	22	200	20,3	169	195		
	300	305	255	200,0		22,3	24,6	198												229				
4"S	150	229	230	190,5	8	19,1	157,2	24,3	2	173	180	600	F12	85	125	M12	1/2"	22	300	24,6	523	604		
	300	305	255	200,0		22,3	28,9	542												627				

\* inclusive 100% safety factor for actuators

\*\* US -DESIGN: BOLTINGS / NUTS acc. to ASTM / UNC ANSI B1.1

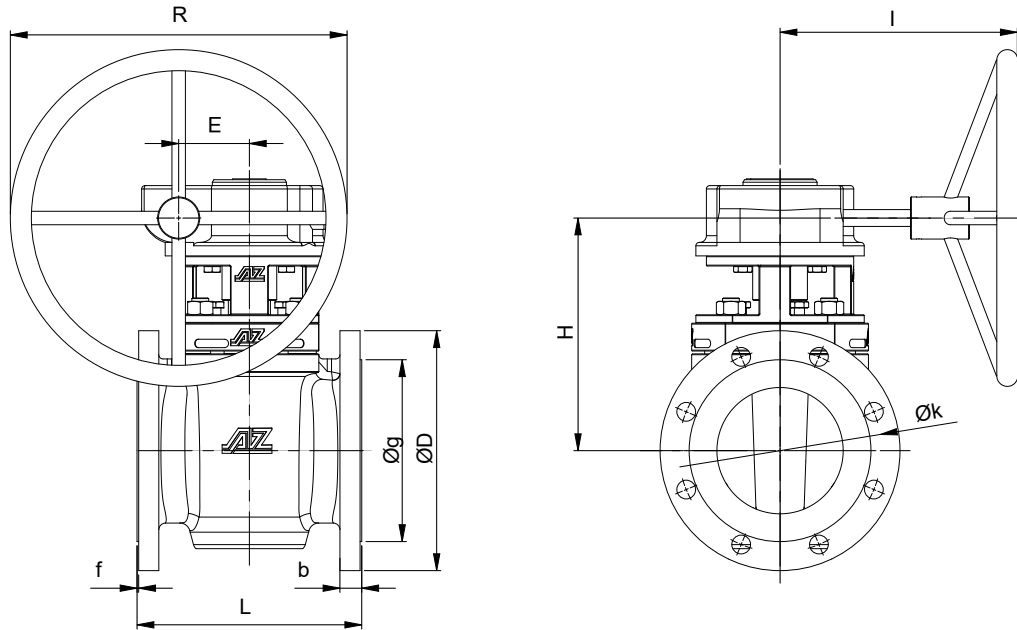
### Order Example: F-2-ISO-STANDARD DN50-PN40-1.4408

F = flange, 2 = two-way, ISO-STANDARD= Type,  
 DN50 = size, PN40 = rating,  
 1.4408 = body material



# TYPE ISO - STANDARD

Dimensions DN 125 - 600 NPS 5" - 24" acc. to DIN / ASME



DN	PN	L	flange bore			øg	b	f	gear (Pro-Gear)					flange DIN ISO 5211			US-UNC d3**	dihedron	torque* [Nm]	weight [kg]	Kvs-value [m³/h]	Cv-value [US.gal/min]				
			øk	No.	ø				Typ	Typ	d1	d2	d3													
DIN EN 1092/1 / 5568-1	125	10-16	250	210	18	188	22	3	84	400	277	290	Q1500-S	F16	130	165	M20	3/4"	36	900	67	865	1000			
		25-40	270	220	8	26	188	26	3	84	400	277	290	Q1500-S	F16	130	165	M20	3/4"	36	900	77	875	1011		
	150	10-16	285	240	8	22	212	22	3	84	400	277	290	Q1500-S	F16	130	165	M20	3/4"	36	900	79	875	1011		
		25-40	300	250	8	26	218	28	3	84	400	277	290	Q1500-S	F16	130	165	M20	3/4"	36	900	79	875	1011		
	200	10-16	340	295	8/12	22	268	24	3	117,5	500	325	365	Q3000-S	F16	130	165	M20	3/4"	36	1200	108	1770	2047		
		25-40	400	360 375	310 320	12	26 30	278 285	30 34	3	117,5	500	325	365	Q3000-S	F16	130	165	M20	3/4"	36	1200	119	1770	2047	
	250	10-16	395	405	350 355	12	22 26	320	26	3	117,5	600	328	465	Q5000-S	F16	130	165	M20	3/4"	36	1500	177	2788	3223	
		25-40	425	450	370 385	12	30 33	335 345	32 38	3	117,5	600	328	465	Q5000-S	F16	130	165	M20	3/4"	36	1500	235	2788	3223	
	300	10-16	445	460	400 410	12	22 26	370 378	26 28	4	117,5	600	366	465	Q5000-S	F16	130	165	M20	3/4"	36	2600	230	2618	3027	
		25-40	485	515	430 450	16	30 33	395 410	34 42	4	117,5	600	366	465	Q5000-S	F16	130	165	M20	3/4"	36	2600	249	2618	3027	
	350	10-16	505	520	460 470	12	22 26	430 438	26 30	4	137,5	600	460	465	Q6500-S	F25	200	254	M16	5/8"	46	5500	395	5070	5861	
		25-40	555	580	490 510	16	33 36	450 465	38 46	4	137,5	600	460	465	Q6500-S	F25	200	254	M16	5/8"	46	5500	468	5070	5861	
400	10-16	565	580	515 525	16	26 30	482 490	26 32	4	137,5	600	460	465	Q6500-S	F25	200	254	M16	5/8"	46	5500	411	4694	5426		
	25-40	620	660	550 585	16	36 39	505 535	40 50	4	137,5	600	460	465	Q6500-S	F25	200	254	M16	5/8"	46	5500	525	4694	5426		
450	10-16	615	640	565 585	20	26 30	532 550	28 36	4	180	600	485	520	Q12000-S	F30	230	298	M20	3/4"	55	6400	611	8065	9323		
	25-40	670	685	600 610	20	36 39	555 560	46 57	4	180	600	485	520	Q12000-S	F30	230	298	M20	3/4"	55	6400	730	8065	9323		
500	10-16	670	715	620 650	20	26 33	585 610	28 38	4	180	600	510	520	Q12000-S	F30	230	298	M20	3/4"	55	7500	655	10260	11862		
	25-40	730	755	660 670	20	36 42	615 615	48 57	4	180	600	510	520	Q12000-S	F30	230	298	M20	3/4"	55	7500	744	10260	11862		
600	10-16	780	840	725 770	20	30 36	685 725	30 42	5	180	600	510	520	Q12000-S	F30	230	298	M20	3/4"	55	7500	681	7980	9226		
	25-40	845	890	770 795	20	39 48	720 735	58 72	5	180	600	510	520	Q12000-S	F30	230	298	M20	3/4"	55	7500	863	7980	9226		
ASME B 16.5 / 16.10	5"	150	254	255	215,9	8	22,3	185,7	24,3	2	84	400	277	290	Q1500-S	F16	130	165	M20	3/4"	27	900	55	71		
		300	325	280	235	8	22,3	215,9	35,4	2	84	400	277	290	Q1500-S	F16	130	165	M20	3/4"	27	900	71			
	6"	150	267	280	241,3	8	22,3	215,9	25,9	2	84	400	277	290	Q1500-S	F16	130	165	M20	3/4"	27	900	60	738	853	
		300	403	320	269,9	12	22,3	215,9	37,0	2	84	400	277	290	Q1500-S	F16	130	165	M20	3/4"	27	900	70	775	896	
	8"	150	292	345	298,5	8	22,4	290	29,0	2	96,5	600	320	350	Q3000-S	F16	130	165	M20	3/4"	36	1200	94	1517	1754	
		300	419	380	330,2	12	25,4	269,9	41,7	2	96,5	600	320	350	Q3000-S	F16	130	165	M20	3/4"	36	1200	125	1978	2286	
	10"	150	330	405	362	12	25,4	323,8	30,6	2	117,5	600	328	465	Q5000-S	F16	130	165	M20	3/4"	36	1500	127	2239	2589	
		300	457	445	387,4	16	28,4	323,8	48,1	2	117,5	600	328	465	Q5000-S	F16	130	165	M20	3/4"	36	1500	160	2382	2754	
	12"	150	356	485	431,8	12	25,4	323,8	32,2	2	117,5	600	366	465	Q5000-S	F16	130	165	M20	3/4"	36	2600	153	1904	2202	
		300	502	520	450,8	16	31,7	381	51,3	2	117,5	600	366	465	Q5000-S	F16	130	165	M20	3/4"	36	2600	170	1925	2225	
	14"	150	686	535	476,3	12	28,4	412,8	35,4	2	137,5	600	460	465	Q6500-S	F25	200	254	M16	5/8"	46	5500	180	2448	2830	
		300	762	585	514,4	20	31,7	412,8	54,4	2	137,5	600	460	465	Q6500-S	F25	200	254	M16	5/8"	46	5500	210	2394	2768	
	16"	150	595	539,8	16	28,4	469,9	37,0	2	137,5	600	460	465	Q6500-S	F25	200	254	M16	5/8"	46	5500	246	5131	5932		
		300	600	650	571,5	20	35	469,9	57,6	2	137,5	600	460	465	Q6500-S	F25	200	254	M16	5/8"	46	5500	305	4618	5339	
	18"	150	864	635	577,9	16	31,8	533,4	40,1	2	180	600	485	520	Q12000-S	F30	230	298	M20	3/4"	55	6400	627	9135	10561	
		300	914	710	628,6	24	35	533,4	60,8	2	180	600	485	520	Q12000-S	F30	230	298	M20	3/4"	55	6400	763	9135	10561	
20"	150	914	700	635	20	31,8	584,2	43,3	2	180	600	510	520	Q12000-S	F30	230	298	M20	3/4"	55	7500	698	11728	13559		
	300	991	775	685,8	24	35	584,2	64	2	180	600	510	520	Q12000-S	F30	230	298	M20	3/4"	55	7500	860	11841	13689		
24"	150	1067	815	749,3	20	35,1	692,2	48,1	2	180	600	510	520	Q12000-S	F30	230	298	M20	3/4"	55	7500	825	9863	11402		
	300	1143	915	812,8	24	41,1	692,2	70,3	2	180	600	510	520	Q12000-S	F30	230	298	M20	3/4"	55	7500	1070	9509	10993		

\* inclusive 100% safety factor for actuators

\*\* US-DESIGN: BOLTINGS / NUTS acc. to ASTM / UNC ANSI B1.1

Order Example: F-2-ISO-STANDARD DN250-PN40-1.4408

F = flange, 2 = two-way, ISO-STANDARD= Type  
 DN250 = size, PN40 = rating,  
 1.4408 = body material



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