

ARGUS Flanged ball valve FK76M

Technical data sheet

DN65 (2 1/2") – DN900 (36")
PN10 – PN100, ANSI150 – ANSI900

Material: low temperature carbon steel / stainless steel
Sealing system: soft seated / full metal seated

Two piece body resp. three piece body, trunnion mounted ball design,
full bore resp. reduced bore, ends ANSI B16.5, EN 1092-1;
(Remarks: Welded end version on request, Standard face to face dimensions acc.
to DIN EN 12982 and DIN 3357 T7)

Design to API 6D / ANSI B 16.34 resp. PED 97/23/EC; BS 5351 available on request.

fire safe acc to BS 6755 Part 2, ISO 10497 resp. API 607 6th edition,

Anti-static Design acc. to. DIN EN ISO 17292 chapter 5.2.7,
Anti blow out Stem, long life double stem seal system.

Stem supported in bearings to ensure seals are free from operating loads.

Stem seal system complies with TA-Luft acc. VDI 2440, EPA fugitive emissions or
EN ISO 15848-1:2006 requirements.

Face to face dimensions in accordance with ANSI B16.10, EN 558-1 resp. EN 12982.

Ball valves – Full bore design:

Face to Face dimensions according to EN 558-1, flanged EN 1091.1B, or ANSI B16.10-2000 RF resp. RTJ,
(Welded end version acc. to DIN EN 12982 / DIN 3357 T2 – on request)

Serial index:

FK 76M DN 80, 100, 150, 200, 250, 300

FK 76 DN 65, 125, 350, 400

DN 450, 500, 600, 750, 900



Diameter		DIN EN 558-1 PN 10/16		DIN EN 558-1 PN 25/40		DIN EN 558-1 PN 63/100	ANSI B16.10				
Inch	mm	short mm	long mm	short mm	long mm	long mm	cl. 150 RF mm	cl. 300 RF mm	cl. 600 RF mm	cl. 900 RF mm	cl. 900 RTJ mm
2,5	65	170	290	170	290	290	190,5	241,3	-	-	-
3	80	180	310	180	310	310	203	283	356	381	384
4	100	190	350	190	350	350	229	305	432	457	460
5	125	325	-	325	-	400	325	381	400	-	-
6	150	350	-	350	-	450	394	403	559	610	613
8	200	400	-	400	-	550	457	502	660	737	740
10	250	*450	650	*450	650	650	533	568	787	838	841
12	300	*500	750	*500	750	750	610	648	838	965	968
14	350	-	**850	550	-	-	685,4	762	889	-	-
16	400	762	-	762	-	950	762	838,2	991	1130	1140
18	450	-	-	-	-	-	-	914	-	1219	1232
20	500	-	**1150	-	**1150	-	914	990	1194	1321	1334
24	600	-	-	-	-	-	1067	1143	1397	1549	1568
30	750	-	-	-	-	-	-	1397	1651	-	-
36	900	-	-	-	-	-	1524	-	2083	-	-

* Ball valve in stainless steel material

** Ball valves in carbon steel casting GP240-GH+N resp. stainless steel casting ss DIN 1.4408

ARGUS SEAT Sealing Systems:

- PTFE/ss; POM/ss; spring loaded, cavity relief
- PTFE/Graphite, O-Ring acc. to TA-Luft VDI 2440
- LYTON seats, Chambered version DN 80 - 900
- Secondary sealing system on seats (Emergency stem sealing injection points as option available)
- Soft seat version DN 80 up to DN 900; PTFE; POM; PTFE-POM-LYTON gekammert/O-Ring; Sekundär
- Metal seated systems: bi-directional sealing, spring loaded, cavity relief, DN80-DN900

e.g. Special designs: Steam jacketed valves, Powder, Fines or Granular service

- High temperature stuffing box, - DIN ISO Topplate version -
- Pocket seated design, Pockets keep the seats free from media build up and blocking
- Topwork DIN ISO "419 / 519" for severe automated application- (details on request)

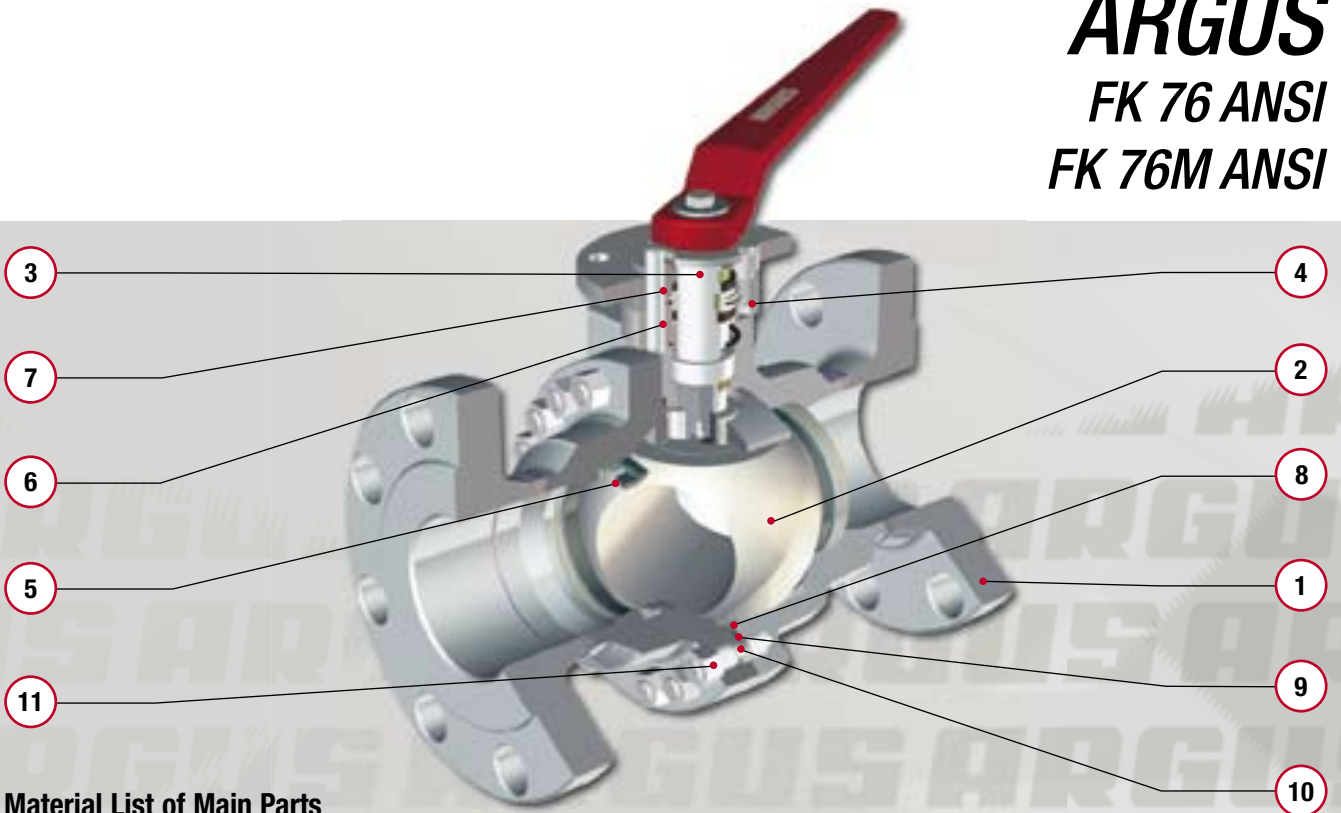
ARGUS Metal to metal coatings:

- **Metal coating Standard ENP / Nikadur:**
 - 1) **ENP:** Coating method: Ni , ball electroless nickel plated and hardened;
Coating thickness / hardness: 50 - 80m / > 70 HRC,
Max. allowable temperature: + 350°C / + 660 F
 - 2) **NIKADUR:** Coating method: Ni + SiC, ball resp. seats electroless nickel plated and hardened;
Coating thickness / hardness: 50 - 80m / > 75 HRC;
Max. allow. temperature: + 350°C /+ 660 F
- **Metal coating Standard ARGULOY**
 - 1) **ARGULOY:** Coating method: Ni-Basis + Cr + others, ball resp. seats coating by plasma spraying and bonding;
Coating thickness / hardness: > 500m / 62 HRC
Max. allowable temperature: + 550°C / + 1000 F
- **Metal coating Standard CRABIDE**
 - 1) **CRABIDE (Hardlayer)**
Hardlayer process: Cr3Cr2-sprayed hardlayer of chromium-carbides bonded to the base material with a nickel-chromium bond which produces a homogenous hard, corrosion and wear resistant layer;
Temperature range: up to + 650°C / + 1202° F
Layer thickness: 150 – 200 microns; Hardness: approx. 68 HRC
Corrosion resistance: CRABIDE has a good chemical resistance in most environments, due to the high chromium content, and has a good resistance to minor abrasive and adhesive wear.
- **Optional coatings available on demand**

Item	Description	PED description	Material Specification	Nearest Typical ASTM Equivalent	
1A	Body	P355NL1+N	LCS TSTE 355N DIN 1.0566	A350LF2	
		G20Mn5	LCS Casting DIN 1.6220	A352LCB	
		X6CrNiMoTi17-12-2	SS DIN 1.4571	A182 Gr. F 316	
		GX5CrNiMo19-11-2	SS DIN 1.4408	A351 Gr. CF8M	
		GX2CrNiMoN18 10	SS DIN 1.4404	A182 Gr. F 316L	
		GX5CrNiMoNb19-11-2	SS DIN 1.4581	A351 Gr. CF10C	
1B	Flanges	P355NL1+N	A350LF2 (ANSI)	A350 Gr. LF2	
		P250GH+N	C22.8 [DIN]	A105	
		P355NL1+N	TSTE 355N DIN 1.0566 [DIN]	A350 Gr. LF2	
		X6CrNiMoTi17-12-2	SS DIN 1.4571	A351 Gr. CF8M	
		GX5CrNiMo19-11-2	SS DIN 1.4408	A351 Gr. CF8M	
2	Ball	GX20Cr14	CR 13 DIN 1.4027	A217 Gr. CA15	
		X6CrNiMoTi17-12-2	SS DIN 1.4571	A182 Gr. F 316	
		P355NL1+N + ENP	LCS TSTE 355N DIN 1.0566 ENP	A350LF2	
		X2CrNiMoN22-5-3	Duplex DIN 1.4462	A182 F51	
		GX5CrNiMo19-11-2	SS DIN 1.4408	A351 Gr. CF8M	
		NiCu30FE	Monel K 400 DIN 2.4360	B564-99 resp. B164-98	
		X2CrNiMoN22-5-3 ENP	Duplex DIN 1.4462 ENP	A182 F51 ENP	
		X2CrNiMoN22-5-3 CRABIDE	Duplex DIN 1.4462 CRABIDE	A182 F51 CRABIDE	
		X2CrNiMoN22-5-3 ARGULOY	Duplex DIN 1.4462 ARGULOY	A182 F51 ARGULOY	
		GX5CrNiMo19-11-2 ENP	SS DIN 1.4408 ENP	A351 Gr. CF8M ENP	
		GX5CrNiMo19-11-2 CRABIDE	SS DIN 1.4408 CRABIDE	A351 Gr. CF8M CRABIDE	
		GX5CrNiMo19-11-2 ARGULOY	SS DIN 1.4408 ARGULOY	A351 Gr. CF8M ARGULOY	
3	Stem	X2CrNiMoN22-5-3	Duplex DIN 1.4462	A182 F51	
		X5CrNiCuNB16-4	17-4 PH DIN 1.4542	17-4 PH	
		X2CrNiMoN22-5-3	Nitronic DIN 1.3964	Nitronic 50	
4	Stem seals		PTFE; FPM, Graphite		
5	Ball seats		PTFE, POM, LYTON		
			PTFE/ss, POM/ss; LYTON/ss		
			spring loaded, cavity relief		
			X2CrNiMoN22-5-3 ENP	Duplex DIN 1.4462 ENP	A182 F51 ENP
			X2CrNiMoN22-5-3 CRABIDE	Duplex DIN 1.4462 CRABIDE	A182 F51 CRABIDE
			X2CrNiMoN22-5-3 ARGULOY	Duplex DIN 1.4462 ARGULOY	A182 F51 ARGULOY
6	Body seals		PTFE ; FPM, Graphite		
7	Bolts		A193 B7; A194 8M; A4-70, A193 B7M		
8	Nuts		A194 Gr.4, A194 8M, A4-70		
Remarks : Special Alloys like Inconel, Alloy 20, SUPER-Duplex, Hastelloy, special Bronze (Marine) on request					

ARGUS

FK 76 ANSI
FK 76M ANSI



Material List of Main Parts

Item	Description	Material Specification	Nearest Typical ASTM-Equivalent
1	Body / Flange	CS Low Temp. 1.0566 CS Low Temp. A350 LF2 (ASTM) SS 1.4571 SS 1.4581	A350 LF2 A182 F316Ti
2	Ball	CS LowTemp. 1.0566 (>DN 200) CR13 1.4027 SS 1.4408 SS / CR13 / Duplex hardfaced	A350 LF 2 A217 Gr. CA15 A351 CF8M
3	Stem	CR13 1.4104 Duplex SS 17-4 PH	Type 430 A182 F51
4	Gland Bolts	5.6 A4-70	
5	Ball Seats	PTFE; POM; Lyton CR13 / Duplex; SS hardfaced	
6	Primary Stem Seal	PTFE; FPM; FVMQ	
7	Secondary Stem Seal	Celastic	
8	Primary Body Seal	PTFE; FPM; FVMQ	
9	Secondary Body Seal	Celastic	
10	Bolts	A193 B7 (ASTM) A193 B8MN (ASTM)	
11	Nuts	A194 Gr.4 (ASTM) A194 8M (ASTM)	



**ARGUS
FK 76 / FK 76M**

**DN 65-400 ANSI Cl. 150, 300, 600 Full Bore
DN 80-600 ANSI Cl. 150, 300, 600 Reduced Bore**

Description:

The FK 76M ball valve with its many innovative design features represents the highest standard in valve technology and is designed to meet the API6D, ANSI B16.34 and BS5351 requirements. Long lifetime and low operating torques due to the clear separation of the sealing and bearing functions, on both stem and ball.

Design:

Split body design with superfine finished trunnion mounted ball, anti-blow-out stem, spring loaded ball seats, cavity relief and anti-static device. Long life double stem seal system and stem supported in bearings to ensure seals are free from operating loads. Stem sealing construction complies with the latest TA-Luft and EPA (method 21, EN ISO 10497 LBS 6755) fugitive emissions requirements. Fire safe to EN ISO 10497 (BS 6755) und API 607.

DIN/ISO 5211 mounting plate for easy assembly with actuators included for up to DN 200, above please name your requirements.

Accessories and Options:

- Limit switches
- Locking devices
- Extended wrenches
- Stem extensions
- Steam jacket for indirect process heating
- Metal seats
- Drain and vent/bleed connections

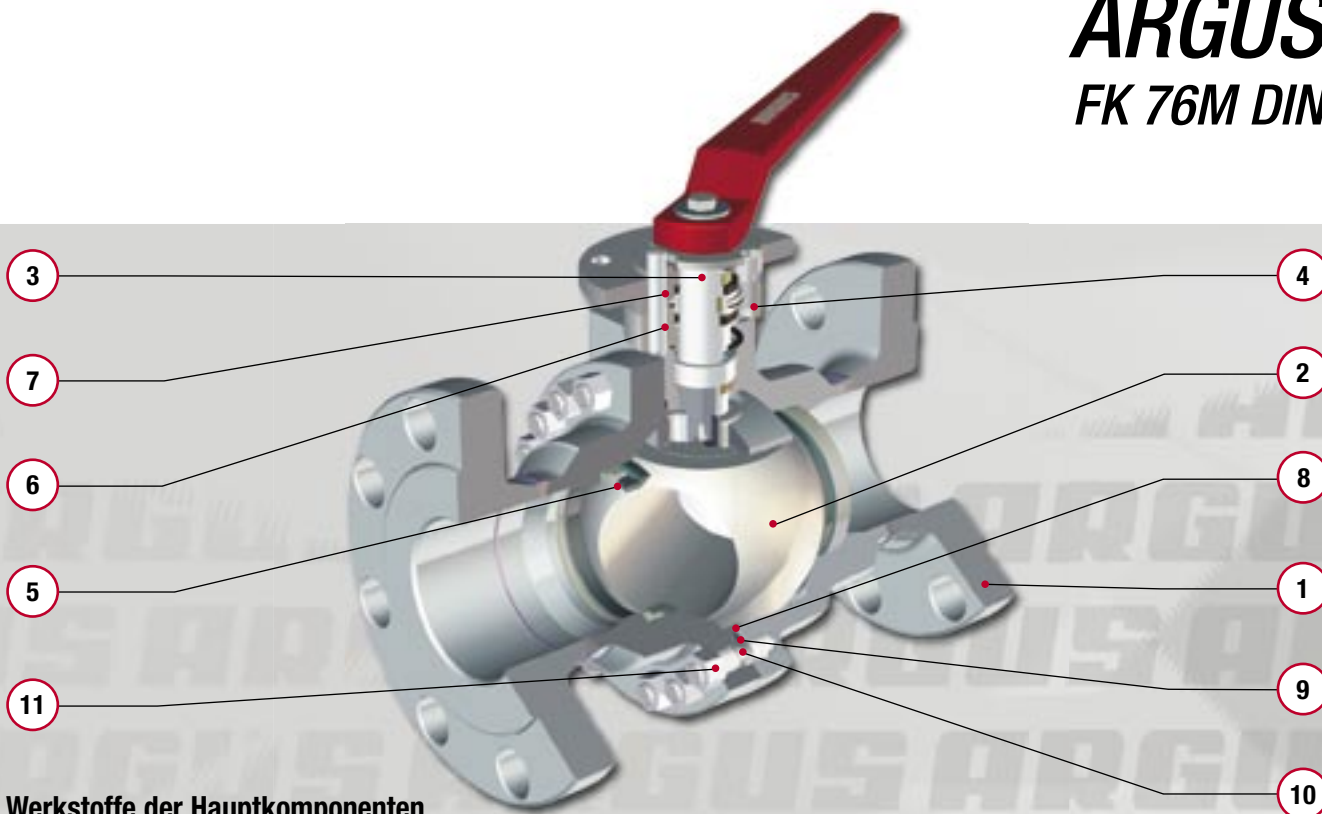
Standard Material Combinations (preferably to order – short delivery time):

ANSI	Cl. 150-600 Mat.-Code 1805408552	Cl. 150-600 Mat.-Code 140540D552	Cl. 150-600 Mat.-Code 440540D552	Cl. 150-600 Mat.-Code 1ADADFD552
Body	CS Low Temp.	CS Low Temp.	SS	CS Low Temp.
Ball/Stem	CR13*	SS/Duplex SS	SS/Duplex SS	Duplex SS hardfaced/Duplex SS
Ball Seats	PTFE (POM Cl. 600)	PTFE (POM Cl. 600)	PTFE (POM Cl. 600)	Duplex SS hardfaced
Stem Seals	PTFE/Celastic	PTFE/Celastic	PTFE/Celastic	PTFE/Celastic
Body Seals	PTFE/Celastic	PTFE/Celastic	PTFE/Celastic	PTFE/Celastic
Seat Springs	SS	SS	SS	SS

* DN 250-400 Ball CS-ENP

ARGUS

FK 76M DIN



Werkstoffe der Hauptkomponenten

Nr.	Bezeichnung	Werkstoffbezeichnung	Vergleichbarer ASTM-Werkstoff
1	Gehäuse / Flansch	P355NL1 (TStE355N) C22G2 (C22.8N) 1.4571 1.4581	A350 LF2 A105 A182 F316Ti
2	Kugel	P355NL1 (TStE355N) (>DN200) 1.4027 1.4408 CrNi-Stahl hartbeschichtet	A350 LF2 A217 Gr. CA15 A351 CF8M
3	Schaltwelle	1.4104 1.4462 (Duplex) 17-4 PH	Type 430 A182 F51
4	Schrauben	5.6 A4-70	
5	Kugeldichtung	PTFE; POM; Lyton CrNi-Stahl hartbeschichtet	
6	Primäre Schaltwellenabdichtung	FPM; PTFE; MFQ	
7	Sekundäre Schalwellenabdichtung	Celastic	
8	Primäre Gehäuseabdichtung	PTFE; FPM; MFQ	
9	Sekundäre Gehäuseabdichtung	Celastic	
10	Schrauben	A193 B7 (ASTM) A193 B8MN (ASTM)	
11	Muttern	A194 Gr.4 (ASTM) A194 8M (ASTM)	

ARGUS FK 76M

DN 80-400 DIN PN 10-100

Beschreibung:

Der Kugelhahn FK 76M steht aufgrund seiner besonderen, innovativen Konstruktion für den höchsten Standard in der Kugelhahntechnologie. Er entspricht den geltenden technischen Regeln für Druckbehälter (TRB) und den in Bezug stehenden AD-Merkblättern sowie DIN-Normen.

Die Trennung der Dichtungs- und Lagerungsfunktion sowohl bei der Kugel als auch bei der Schaltwelle ergibt eine ausgezeichnete Betriebszeit und geringe Drehmomente.

Konstruktionsmerkmale:

Zweiteiliges Gehäuse (split body), zapfengelagerte Kugel, Anti-blow-out-Schaltwelle, federunterstützte Kugeldichtung, Anit-static und druckentlastend.

Die spezielle Lagerung der Schaltwelle verhindert das Auftreten schädlicher Kräfte im Bereich der Schaltwellenabdichtung. Das ARGUS Doppeldichtsystem an der Schaltwelle ist so ausgeführt, dass es die neuesten Anforderungen nach TA Luft und EPA (method 21, USA) erfüllt.

Fire safe nach BS 6755 und API 607.

Anschlußplatte gemäß DIN/ISO 5211 ermöglicht eine genormte Antriebsadaption

Zubehör und Optionen:

- Endlagenrückmeldung
- Abschließvorrichtung
- Schaltwellenverlängerung
- Heizmantel
- Sekundäres Dichtsystem
- Metallisches Dichtung und/oder Hochtemperaturstopfbuchsen für sehr hohe/niedrige Temperaturen und/oder abrasive Medien und/oder Anwendungen mit sehr hoher Schalzhäufigkeit
- Anschlüsse für Entleerung/Belüftung und zum Spülen

Standardwerkstoffe:

DIN	PN 10-100	PN 10-100	PN 10-100	PN 10-100
	Mat.-Code	Mat.-Code	Mat.-Code	Mat.-Code
	1805408552	140540D552	440540D552	1ADADFD552
Gehäuse	C-Stahl	C-Stahl	CrNi-Stahl	C-Stahl
Kugel/Schaltwelle	Cr-Stahl*	CrNi-Stahl	CrNi-Stahl	CrNi-Stahl hartbeschichtet/ CrNi-Stahl
Kugeldichtung	PTFE (POM PN 100)	PTFE (POM PN 100)	PTFE (POM PN 100)	CrNi-Stahl hartbeschichtet
Schaltwellenabdichtung	PTFE/Celastec	PTFE/Celastec	PTFE/Celastec	PTFE/Celastec
Gehäuseabdichtung	PTFE/Celastec	PTFE/Celastec	PTFE/Celastec	PTFE/Celastec
Tellerfedern	CrNi-Stahl	CrNi-Stahl	CrNi-Stahl	CrNi-Stahl

* DN 250-400 Kugel C-Stahl