



FK Butterfly Valve (DN40 - DN300)

- Used for On/Off and control operation
- Size range from DN40 up to DN300
- Pressure rating: Maximum working pressure: up to 16 bar at 20°C (water) - DN50 and above up to 10 bar at 20°C (water)
- Body material GR-PP; UV resistant
- Full flanged body with oval holes to fit various flanging standards. Supplied with hole inserts for bolt hole centralising (up to DN 200; DN 250 & 300 are drilled according to the flange drilling required)
- Lever operated versions are fitted with a handle locking device (with 10 ratchet positions at 10° intervals for regulating flow)
- Option to install gearbox or actuator to the valve upper flange with standard ISO drillings
- Optional fully lugged version with threaded 316 Stainless steel inserts to BS-EN 1092 PN10 (Formerly BS4504) or ANSI 150
- Maintenance can be carried out while the valve body is installed in line
- For more information, please visit our website
www.durapipe.co.uk



Gearbox



Handle

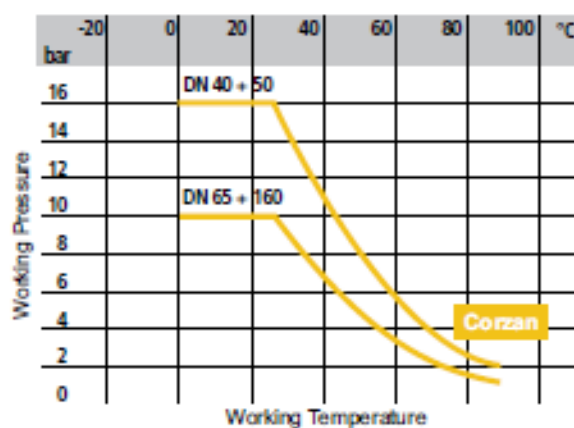
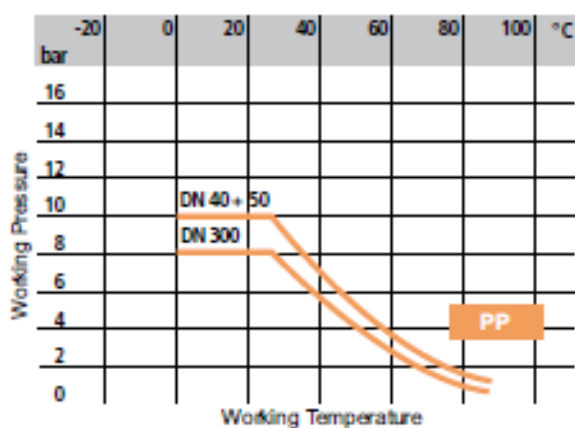
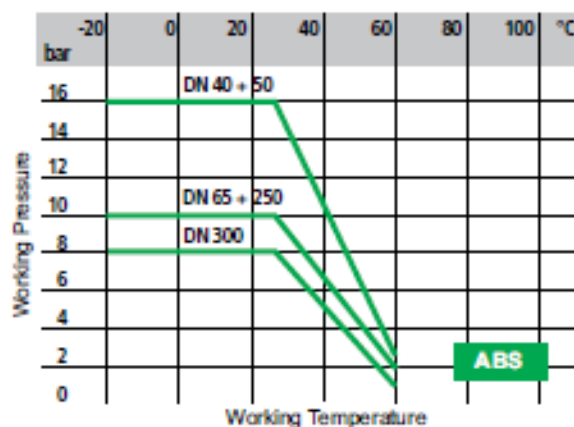
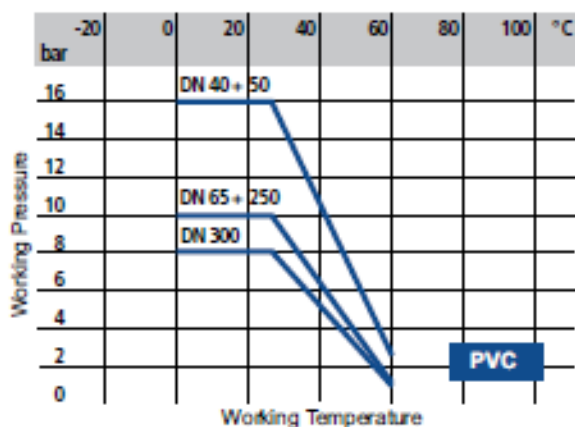
Legend

d	Nominal outside diameter
DN	Nominal internal diameter in mm
R	Nominal size of the thread in inches
PN	Nominal pressure in bar (max. working Pressure at 20°C - water)
gms	Weight in grams
PVC-U	Polyvinyl chloride unplasticised
ABS	Acrylonitrile Butadiene Styrene
PP	Polypropylene
PVC-C	Polyvinyl chloride chlorinated
PP-GR	Glass reinforced Polypropylene
HIPVC	High impact PVC
PE	Polyethylene
PTFE	Polytetrafluoroethylene
EPDM	Ethylene Propylene Diene Monomer (M-class) rubber
FPM	Fluorocarbon Rubber
s	Wall thickness (mm)
SDR	Standard dimension ratio = d/s





Technical Data



Pressure/temperature rating for water and harmless fluids to which the material is RESISTANT.
In other cases a reduction of the PN is required. (25 years with safety factor).

DN	40	50	65	80	100	125	150	200	250	300
bar	1000	1285	1700	3350	5900	9850	18700	30500	53200	81600

Flow coefficient k_{v100}

k_{v100} is the number of litres per minute of water at a temperature of 20°C that will flow through a valve with a one bar pressure differential at a specified rate. The k_{v100} values shown in the table are calculated with the valve fully open.



Dimensions and standards

The overall dimensions of the FK Butterfly valve comply with the following standards:

ISO5752 (DN40 to DN200) Medium 25 series

ISO5752 (DN250 to DN300) Long 16 series

DIN 3202 (DN65 to DN 200) K2

DIN 3202 (DN250 to DN3000) K3

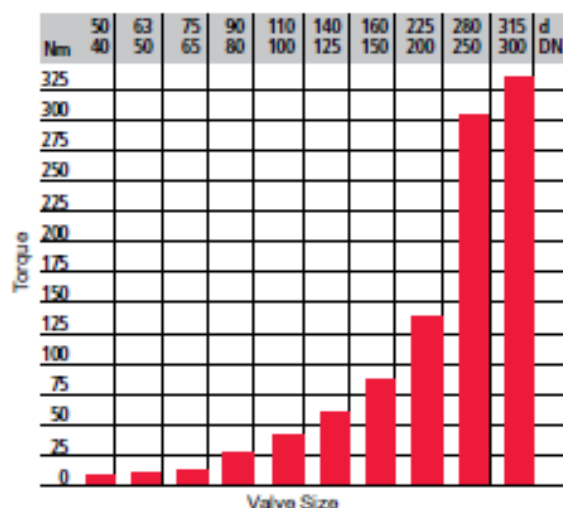
The oval holes in the valve body (DN50 to DN200) allow connection to the following flange drilling standards:

BS-EN 1092 PN10 (Formerly BS4504 PN10)

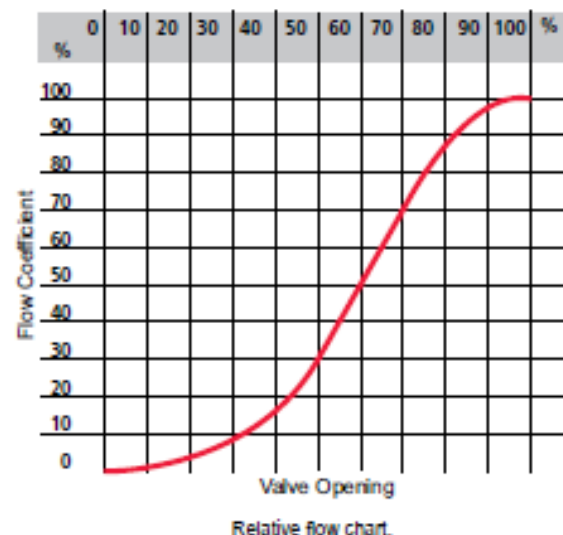
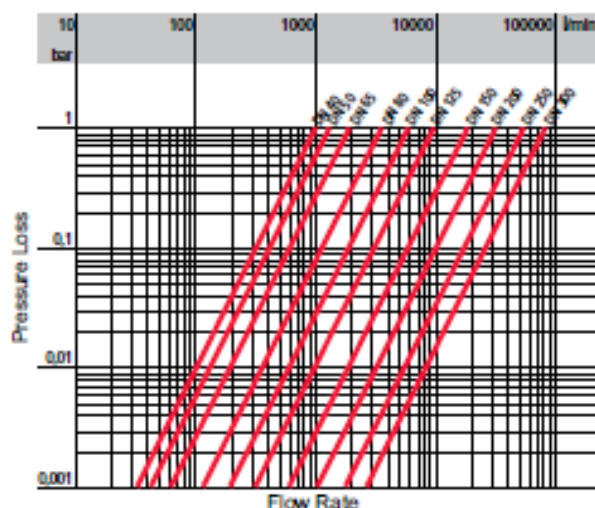
ASA B16.5 class 150

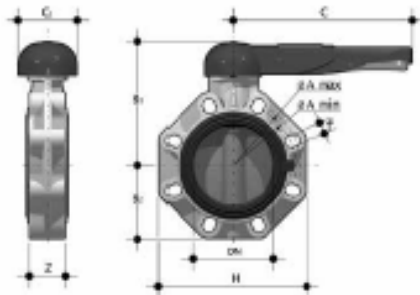
BS10, Table D/E

Technical Data



Maximum torque at maximum working pressure.





FKOV/LM **PVC-U** FKOM/LM **PP**
FKOA/LM **ABS** FKOC/LM **Corzan**

FK Butterfly valve - Lever operated

d	DN	PN	B ₂	B ₁	H	z	A _{min}	A _{max}	F	U	C	C ₁
1½"	50	40	16	60	137	33	99	109	19	4	175	100
2"	63	50	16	70	143	43	115	126	19	4	175	100
2½"	75	65	10	80	164	46	128	144	19	8	175	110
3"	90	80	10	93	178	49	145	160	19	8	272	110
4"	110	100	10	107	192	56	165	190	19	8	272	110
5"	140	125	10	120	212	64	204	215	23	8	330	110
6"	160	150	10	134	225	70	230	242	23	8	330	110
8"	225	200	10	161	272	114	280	298	23	8	420	122

PVC-U				ABS			PP			Corzan		
d	gms	EPDM Code	FPM Code	gms	EPDM Code	FPM Code	gms	EPDM Code	FPM Code	gms	EPDM Code	FPM Code
1½" - 50	900	H0 FKE 106	H0 FKF 106	900	H0 FKA 106	H0 FKB 106	900	H0 FKN 106	H0 FKP 106	900	H0 FKJ 106	H0 FKK 106
2" - 63	1080	H0 FKE 107	H0 FKF 107	1080	H0 FKA 107	H0 FKB 107	1080	H0 FKN 107	H0 FKP 107	1080	H0 FKJ 107	H0 FKK 107
2½" - 75	1470	H0 FKE 108	H0 FKF 108	1470	H0 FKA 108	H0 FKB 108	1470	H0 FKN 108	H0 FKP 108	1470	H0 FKJ 108	H0 FKK 108
3" - 90	1870	H0 FKE 109	H0 FKF 109	1870	H0 FKA 109	H0 FKB 109	1870	H0 FKN 109	H0 FKP 109	1870	H0 FKJ 109	H0 FKK 109
4" - 110	2220	H0 FKE 110	H0 FKF 110	2220	H0 FKA 110	H0 FKB 110	2220	H0 FKN 110	H0 FKP 110	2220	H0 FKJ 110	H0 FKK 110
5" - 140	3100	H0 FKE 111	H0 FKF 111	3100	H0 FKA 111	H0 FKB 111	3100	H0 FKN 111	H0 FKP 111	3100	H0 FKJ 111	H0 FKK 111
6" - 160	3850	H0 FKE 112	H0 FKF 112	3850	H0 FKA 112	H0 FKB 112	3850	H0 FKN 112	H0 FKP 112	3850	H0 FKJ 112	H0 FKK 112
8" - 225	6750	H0 FKE 113	H0 FKF 113	6750	H0 FKA 113	H0 FKB 113	6750	H0 FKN 113	H0 FKP 113	-	-	-

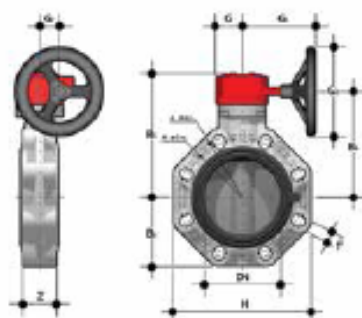


6"	160	150	10	134	225	268	70	230	242	23	8	330	110
8"	225	200	10	161	272	323	114	280	298	23	8	420	122

PVC-U				ABS			PP			Corzan			rated
d	gms	EPDM Code	FPM Code	gms	EPDM Code	FPM Code	gms	EPDM Code	FPM Code	gms	EPDM Code	FPM Code	G _s
1½" - 50	900	H0 FKE 106	H0 FKF 106	900	H0 FKA 106	H0 FKB 106	900	H0 FKN 106	H0 FKP 106	900	H0 FKJ 106	H0 FKK 106	125
2" - 63	1080	H0 FKE 107	H0 FKF 107	1080	H0 FKA 107	H0 FKB 107	1080	H0 FKN 107	H0 FKP 107	1080	H0 FKJ 107	H0 FKK 107	125
2½" - 75	1470	H0 FKE 108	H0 FKF 108	1470	H0 FKA 108	H0 FKB 108	1470	H0 FKN 108	H0 FKP 108	1470	H0 FKJ 108	H0 FKK 108	125
3" - 90	1870	H0 FKE 109	H0 FKF 109	1870	H0 FKA 109	H0 FKB 109	1870	H0 FKN 109	H0 FKP 109	1870	H0 FKJ 109	H0 FKK 109	125
4" - 110	2220	H0 FKE 110	H0 FKF 110	2220	H0 FKA 110	H0 FKB 110	2220	H0 FKN 110	H0 FKP 110	2220	H0 FKJ 110	H0 FKK 110	200
5" - 140	3100	H0 FKE 111	H0 FKF 111	3100	H0 FKA 111	H0 FKB 111	3100	H0 FKN 111	H0 FKP 111	3100	H0 FKJ 111	H0 FKK 111	200
6" - 160	3850	H0 FKE 112	H0 FKF 112	3850	H0 FKA 112	H0 FKB 112	3850	H0 FKN 112	H0 FKP 112	3850	H0 FKJ 112	H0 FKJ 112	200
8" - 225	6750	H0 FKE 113	H0 FKF 113	6750	H0 FKA 113	H0 FKB 113	6750	H0 FKN 113	H0 FKP 113	-	-	-	200

FKOV/RM **PVC-U** FKOM/RM **PP**
FKOA/RM **ABS** FKOC/RM **Corzan**

FK Butterfly valve - Gearbox operated

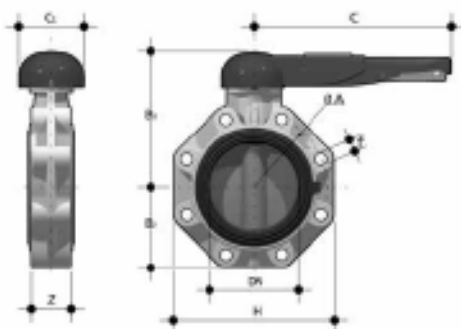


d	DN	PN	B ₂	B ₃	B ₁	H	z	A _{min}	A _{max}	F	U	G	G ₁	G ₂	G ₃
2½"	75	65	10	80	174	146	46	128	144	19	8	48	135	39	125
3"	90	80	10	93	188	160	49	145	160	19	8	48	135	39	125
4"	110	100	10	107	202	174	56	165	190	19	8	48	135	39	125
5"	140	125	10	120	222	194	64	204	215	23	8	48	144	39	200
6"	160	150	10	134	235	207	70	230	242	23	8	48	144	39	200
8"	225	200	10	161	287	256	71	280	298	23	8	65	204	60	200
10"	250	250	10	210	317	281	114	350	-	22	12	88	236	76	250
12"	315	300	8	245	374	338	114	432	-	25	12	88	236	76	250



FKOV/LM LUG ISO-DIN **PVC-U**
FKOA/LM LUG ISO-DIN **ABS**

FKOM/LM LUG ISO-DIN **PP**
FKOC/LM LUG ISO-DIN **Corzan**



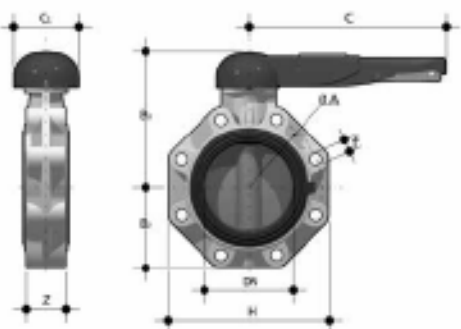
FK Fully Lugged Butterfly valve to BS EN1092 PN10 - Lever operated

d	DN	PN	B ₁	B ₂	H	z	ØA	F	U	C	C ₁
2½" - 75	65	10	80	164	165	46	128	M19	8	175	110
3" - 90	80	10	93	178	185	49	145	M19	8	272	110
4" - 110	100	10	107	192	211	56	165	M19	8	272	110
5" - 140	125	10	120	212	240	64	204	M23	8	330	110
6" - 160	150	10	134	225	268	70	230	M23	8	330	110
8" - 225	200	10	161	272	323	114	280	M23	8	420	122

PVC-U				ABS				PP				Corzan			
d	gms	EPDM Code	FPM Code	gms	EPDM Code	FPM Code		gms	EPDM Code	FPM Code		gms	EPDM Code	FPM Code	
2½" - 75	1870	H0 FKE F08	H0 FKF F08	1870	H0 FKA F08	H0 FKB F08		1870	H0 FKN F08	H0 FKP F08		1870	H0 FKJ F08	H0 FKK F08	
3" - 90	2670	H0 FKE F09	H0 FKF F09	2670	H0 FKA F09	H0 FKB F09		2670	H0 FKN F09	H0 FKP F09		2670	H0 FKJ F09	H0 FKK F09	
4" - 110	3020	H0 FKE F10	H0 FKF F10	3020	H0 FKA F10	H0 FKB F10		3020	H0 FKN F10	H0 FKP F10		3020	H0 FKJ F10	H0 FKK F10	
5" - 140	4700	H0 FKE F11	H0 FKF F11	4700	H0 FKA F11	H0 FKB F11		4700	H0 FKN F11	H0 FKP F11		4700	H0 FKJ F11	H0 FKK F11	
6" - 160	5450	H0 FKE F12	H0 FKF F12	5450	H0 FKA F12	H0 FKB F12		5450	H0 FKN F12	H0 FKP F12		5450	H0 FKJ F12	H0 FKK F12	
8" - 225	8350	H0 FKE F13	H0 FKF F13	8350	H0 FKA F13	H0 FKB F13		8350	H0 FKN F13	H0 FKP F13		-	-	-	

FKOV/LM LUG ANSI **PVC-U**
FKOA/LM LUG ANSI **ABS**

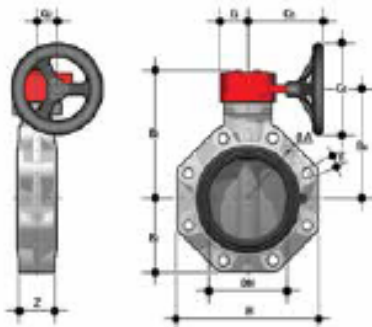
FKOM/LM LUG ANSI **PP**
FKOC/LM LUG ANSI **Corzan**



FK Fully Lugged Butterfly valve to ANSI150

d	DN	PN	B ₁	B ₂	H	z	ØA	F	U	C	C ₁
2½" - 75	65	10	80	164	165	46	140	5/8" UNC	8	175	110
3" - 90	80	10	93	178	185	49	153	5/8" UNC	8	272	110
4" - 110	100	10	107	192	211	56	190	5/8" UNC	8	272	110
5" - 140	125	10	120	212	240	64	216	3/4" UNC	8	330	110
6" - 160	150	10	134	225	268	70	241	3/4" UNC	8	330	110
8" - 225	200	10	161	272	323	114	298	3/4" UNC	8	420	122

PVC-U				ABS				PP				Corzan			
d	gms	EPDM Code	FPM Code	gms	EPDM Code	FPM Code		gms	EPDM Code	FPM Code		gms	EPDM Code	FPM Code	
2½" - 75	1870	H0 FKE X08	H0 FKF X08	1870	H0 FKA X08	H0 FKB X08		1870	H0 FKN X08	H0 FKP X08		1870	H0 FKJ X08	H0 FKK X08	
3" - 90	2670	H0 FKE X09	H0 FKF X09	2670	H0 FKA X09	H0 FKB X09		2670	H0 FKN X09	H0 FKP X09		2670	H0 FKJ X09	H0 FKK X09	
4" - 110	3020	H0 FKE X10	H0 FKF X10	3020	H0 FKA X10	H0 FKB X10		3020	H0 FKN X10	H0 FKP X10		3020	H0 FKJ X10	H0 FKK X10	
5" - 140	4700	H0 FKE X11	H0 FKF X11	4700	H0 FKA X11	H0 FKB X11		4700	H0 FKN X11	H0 FKP X11		4700	H0 FKJ X11	H0 FKK X11	
6" - 160	5450	H0 FKE X12	H0 FKF X12	5450	H0 FKA X12	H0 FKB X12		5450	H0 FKN X12	H0 FKP X12		5450	H0 FKJ X12	H0 FKK X12	
8" - 225	8350	H0 FKE X13	H0 FKF X13	8350	H0 FKA X13	H0 FKB X13		8350	H0 FKN X13	H0 FKP X13		-	-	-	



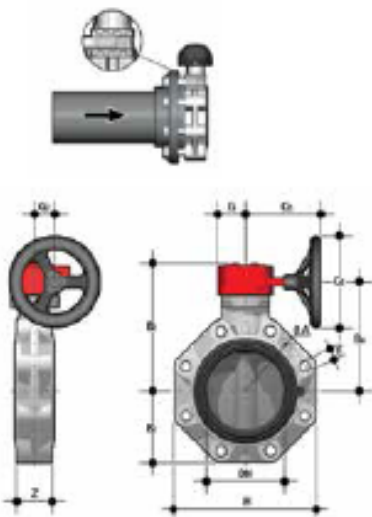
FKOV/RM LUG ISO-DIN **PVC-U**
FKOA/RM LUG ISO-DIN **ABS**

FKOM/RM LUG ISO-DIN **PP**
FKOC/RM LUG ISO-DIN **Corzan**

FK Fully Lugged Butterfly valve to BS EN1092 PN10 - Gearbox operated

d	DN	PN	B ₂	B ₄	B ₆	H	z	ØA	F	U	G	G ₁	G ₂	G ₃
2½" - 75	65	10	80	174	146	165	46	140	M16	8	48	135	39	125
3" - 90	80	10	93	188	160	185	49	153	M16	8	48	135	39	125
4" - 110	100	10	107	202	174	211	56	190	M16	8	48	135	39	125
5" - 140	125	10	120	222	194	240	64	216	M20	8	48	144	39	200
6" - 160	150	10	134	235	207	268	70	241	M20	8	48	144	39	200
8" - 225	200	10	161	287	256	323	71	298	M20	8	65	204	60	200
10" - 250	250	10	210	317	281	405	114	362	M20	12	88	236	76	250
12" - 315	300	8	245	374	338	475	114	432	M20	12	88	236	76	250

PVC-U				ABS				PP				Corzan			
d	gms	EPDM Code	FPM Code	gms	EPDM Code	FPM Code		gms	EPDM Code	FPM Code		gms	EPDM Code	FPM Code	
2½" - 75	2800	HV FKE X08	HV FKF X08	2800	HV FKA X08	HV FKB X08		2800	HV FKN X08	HV FKP X08		2800	HV FKJ X08	HV FKK X08	
3" - 90	3600	HV FKE X09	HV FKF X09	3600	HV FKA X09	HV FKB X09		3600	HV FKN X09	HV FKP X09		3600	HV FKJ X09	HV FKK X09	
4" - 110	3950	HV FKE X10	HV FKF X10	3950	HV FKA X10	HV FKB X10		3950	HV FKN X10	HV FKP X10		3950	HV FKJ X10	HV FKK X10	
5" - 140	6050	HV FKE X11	HV FKF X11	6050	HV FKA X11	HV FKB X11		6050	HV FKN X11	HV FKP X11		6050	HV FKJ X11	HV FKK X11	
6" - 160	6800	HV FKE X12	HV FKF X12	6800	HV FKA X12	HV FKB X12		6800	HV FKN X12	HV FKP X12		6800	HV FKJ X12	HV FKK X12	
8" - 225	10900	HV FKE X13	HV FKF X13	10900	HV FKA X13	HV FKB X13		10900	HV FKN X13	HV FKP X13		-	-	-	
10" - 250	23400	HV FKE X14	HV FKF X14	23400	HV FKA X14	HV FKB X14		23400	HV FKN X14	HV FKP X14		-	-	-	
12" - 315	30400	HV FKE X15	HV FKF X15	30400	HV FKA X15	HV FKB X15		30400	HV FKN X15	HV FKP X15		-	-	-	



FKOV/RM LUG ANSI **PVC-U**
FKOA/RM LUG ANSI **ABS**

FKOM/RM LUG ANSI **PP**
FKOC/RM LUG ANSI **Corzan**

FK Fully Lugged Butterfly valve to ANSI 150 - Gearbox operated

d	DN	PN	B ₂	B ₄	B ₆	H	z	ØA	F	U	G	G ₁	G ₂	G ₃
2½" - 75	65	10	80	174	146	165	46	145	½" UNC	8	48	135	39	125
3" - 90	80	10	93	188	160	185	49	160	½" UNC	8	48	135	39	125
4" - 110	100	10	107	202	174	211	56	180	½" UNC	8	48	135	39	125
5" - 140	125	10	120	222	194	240	64	210	¾" UNC	8	48	144	39	200
6" - 160	150	10	134	235	207	268	70	240	¾" UNC	8	48	144	39	200
8" - 225	200	10	161	287	256	323	71	295	¾" UNC	8	65	204	60	200
10" - 250	250	10	210	317	281	405	114	350	1" UNC	12	88	236	76	250
12" - 315	300	8	245	374	338	475	114	402	1" UNC	12	88	236	76	250

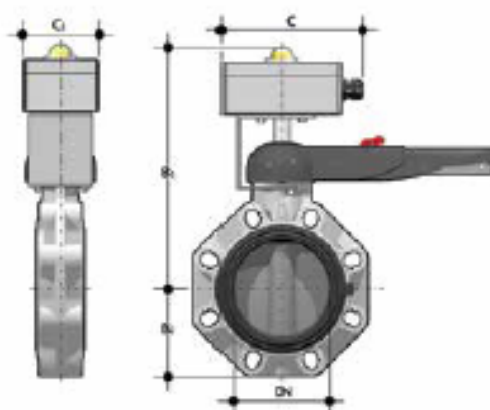
PVC-U				ABS				PP				Corzan			
d	gms	EPDM Code	FPM Code	gms	EPDM Code	FPM Code		gms	EPDM Code	FPM Code		gms	EPDM Code	FPM Code	
2½" - 75	2800	HV FKE F08	HV FKF F08	2800	HV FKA F08	HV FKB F08		2800	HV FKN F08	HV FKP F08		2800	HV FKJ F08	HV FKK F08	
3" - 90	3600	HV FKE F09	HV FKF F09	3600	HV FKA F09	HV FKB F09		3600	HV FKN F09	HV FKP F09		3600	HV FKJ F09	HV FKK F09	
4" - 110	3950	HV FKE F10	HV FKF F10	3950	HV FKA F10	HV FKB F10		3950	HV FKN F10	HV FKP F10		3950	HV FKJ F10	HV FKK F10	
5" - 140	6050	HV FKE F11	HV FKF F11	6050	HV FKA F11	HV FKB F11		6050	HV FKN F11	HV FKP F11		6050	HV FKJ F11	HV FKK F11	
6" - 160	6800	HV FKE F12	HV FKF F12	6800	HV FKA F12	HV FKB F12		6800	HV FKN F12	HV FKP F12		6800	HV FKJ F12	HV FKK F12	
8" - 225	10900	HV FKE F13	HV FKF F13	10900	HV FKA F13	HV FKB F13		10900	HV FKN F13	HV FKP F13		-	-	-	
10" - 250	23400	HV FKE F14	HV FKF F14	23400	HV FKA F14	HV FKB F14		23400	HV FKN F14	HV FKP F14		-	-	-	
12" - 315	30400	HV FKE F15	HV FKF F15	30400	HV FKA F15	HV FKB F15		30400	HV FKN F15	HV FKP F15		-	-	-	



Accessories

FKMS

The FKMS is a limit switch box kit with either mechanical or proximity switches. The switchbox can be used to indicate back to a control panel the position of the valve (max. rotation = 90°). The kit can be retro fitted onto an FK valve that has already been installed. For further details please contact the Durapipe Valve Department.



d	DN	B	B ₁	C ₁
1½" - 50	40	60	253	80
2" - 63	50	70	259	80
2½" - 75	65	80	266	80
3" - 90	80	93	280	80
4" - 110	100	107	294	80
5" - 140	125	120	314	80
6" - 160	150	134	327	80
8" - 225	200	161	374	80

d	DN	Electro-mechanical	Product Code Inductive	Namur
1½" - 50 to 2½" - 75	40 to 65	FKMSK0M	FKMSK0I	FKMSK0N
3" - 90 to 6" - 160	80 to 150	FKMSK1M	FKMSK1I	FKMSK1N
8" - 225	200	FKMSK2M	FKMSK2I	FKMSK2N

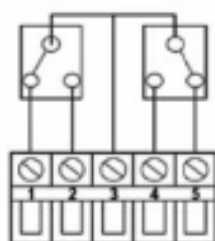


Fig. 1

Electro-Mechanical

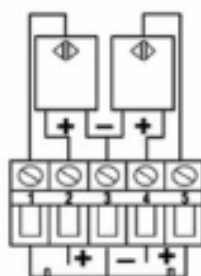


Fig. 2

Inductive

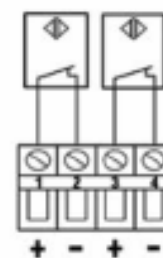


Fig. 3

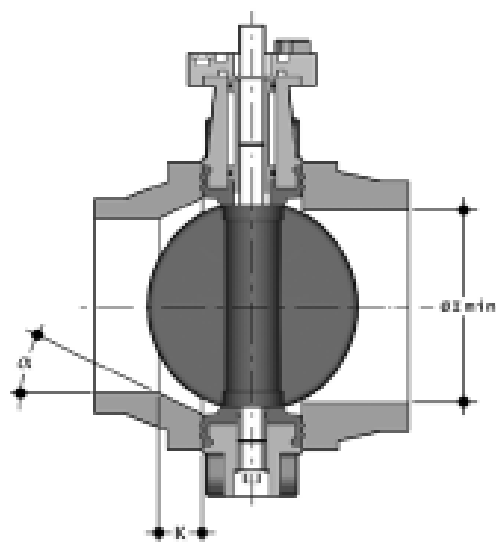
Namur

.CE custom labelling information can be found on Page 52.



Jointing

For Installation with Inch System Socket Weld, Stub and Full Face flanges.



d	DN	I min.
1½" - 50	40	25
2" - 63	50	28
2½" - 75	65	47
3" - 90	80	64
4" - 110	100	84
- 125		108
5" - 140	125	108
6" - 160	150	134
- 200		187
8" - 225	200	187
- 250	250	225
- 315	300	280
10" -	250	225
12" -	300	280

For Installation with Inch System Socket Weld, Stub and Full Face flanges:
PVC-U & ABS

		Valve Size										
Pipe Size	d	DN	1½" 50	2" 63	2½" 75	3" 90	4" 110	5" 140	6" 160	8" 200	10" 250	12" 315
	1½"	40	ü									
	2"	50		ü								
	2½"	65			ü							
	3"	80				ü						
	4"	100					ü					
	5"	125						ü				
	6"	150							ü			
	8"	200								ü		
	10"	250									ü	
	12"	300										ü



Jointing

For Installation with Metric System Socket Weld, Stub and Full Face Flanges PVC-U, ABS, Corzan & PP

For Installation with Metric System Butt Weld, Stub Flanges: PP

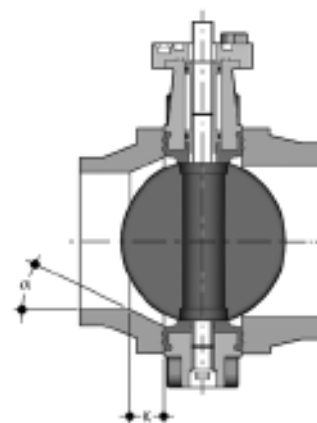
d	DN	Valve Size									
		1 1/2"	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"
50	40	0									
63	50	0									
75	65	0									
90	80	0									
110	100	0									
125	-										
140	125										
160	150										
200	-										
225	200										
250	250										
315	300										

For use with DN200 Valve it is advised to use a d225 stub flange and d225 x d200 reducing bush

d	DN	Valve Size									
		1 1/2"	2"	2 1/2"	3"	4"	5"	6"	8"	10"	
50	40	0									
63	50	0									
75	65		0								
90	80			0							
110	100				0						
125	-					0					
140	125						0				
160	150							0			
200	-								0		
225	200									0	
250	-										0
280	250										
315	300										

For the disc to open on these pipe sizes the stub is required to be chamfered as detailed below:

- | | | |
|----------|---------------------------------|--|
| (1) d160 | PN6 - SDR 17.6
PN10 - SDR 11 | No chamfer required
k = 26.5 a = 20" |
| (2) d200 | PN6 - SDR 17.6
PN10 - SDR 11 | k = 35 a = 20"
k = 35 a = 25" |
| (3) d225 | PN6 - SDR 17.6
PN10 - SDR 11 | No chamfer required
k = 40 a = 15" |
| (4) d250 | PN6 - SDR 17.6
PN10 - SDR 11 | k = 15.5 a = 25"
k = 32.5 a = 25" |
| (5) d315 | PN6 - SDR 17.6
PN10 - SDR 11 | k = 12 a = 25"
k = 35 a = 25" |





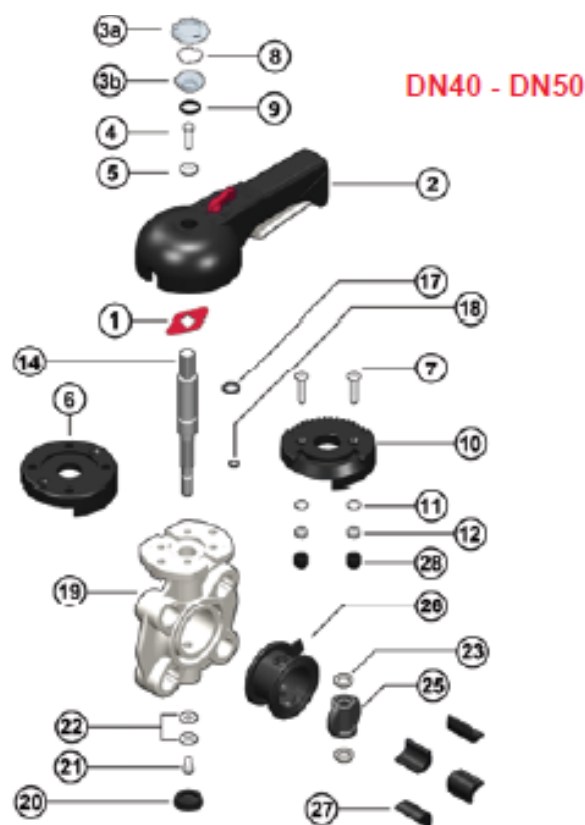
Disassembly (1½" - d40 to 2" - d63)

1. Remove the protection cap (3) and undo and remove the retaining screw (4) and washer (5).
2. Remove the handle (2).
3. Remove the screws, nuts, protection caps and washers (7, 11, 12 & 28) and the ratchet plate (10).
4. Remove the protection cap (20) and undo & remove the screw and washer (21 & 22).
5. Extract the shaft (14) and remove the disc (25).
6. Remove the shaft O-rings (17 & 18) from the shaft (14).
7. Remove the anti-friction rings (23)
8. Remove the primary liner (26) from the valve body (19).

Assembly (1½" - d40 to 2" - d63)

1. Fit the primary liner (26) to the valve body (19).
2. Refit the shaft O-rings (17 & 18) onto the shaft (14).
3. Fit the anti-friction rings (23) onto the disc (25)
4. Lubricate the liner and insert the disc into the valve body (19) / liner (26).
5. Push the shaft (14) into the body (19) and through the disc (25).
6. Refit the screw (21) and washer (21) and tighten. Push in the protection cap (20).
7. Place the ratchet plate (10) onto the body (19) and hold in place with the screws, nuts and washers (7, 11 & 12) push on the protection caps (28).
8. Push the handle (2) onto the stem (14).
9. Fit the screw (4) and washer (5) and tighten. Push in the protection cap (3)

Note: When assembling the valve components, it is advisable to lubricate the O-rings. Do not use mineral oils as they attack EPDM rubber.



Position	Components	Material
1	Position Indicator	PA
2*	Handle	HIPVC
3a	Plug Upper Part	PVC
3b	Plug Lower Part	PVC
4	Screw	Stainless Steel
5	Washer	Stainless Steel
6	Flange	PP-GR
7	Screw	Stainless Steel
8	Tag Holder	PVC-U
9	Seal (O-ring)	NBR
10*	Pad	PP-GR
11	Washer	Stainless Steel
12	Nut	Stainless Steel
13	Seeger Ring	Stainless Steel
14	Shaft	Stainless Steel
15	Bush O-ring	EPDM or FPM
16	Bush	Nylon
17*	Shaft O-ring	EPDM or FPM
18*	Shaft O-ring	EPDM or FPM
19	Body	PP-GR
20	Protection Cap	PE
21	Screw	Stainless Steel
22	Washer	Stainless Steel
23*	Anti-friction Ring	PTFE
24	Disc O-ring	EPDM or FPM
25	Disc	Valve Material
26*	Primary Liner	EPDM or FPM
27	Inserts	ABS
28	Protection Cap	PE

*Spare Parts



Disassembly

(2½" - d75 to 8" - d225)

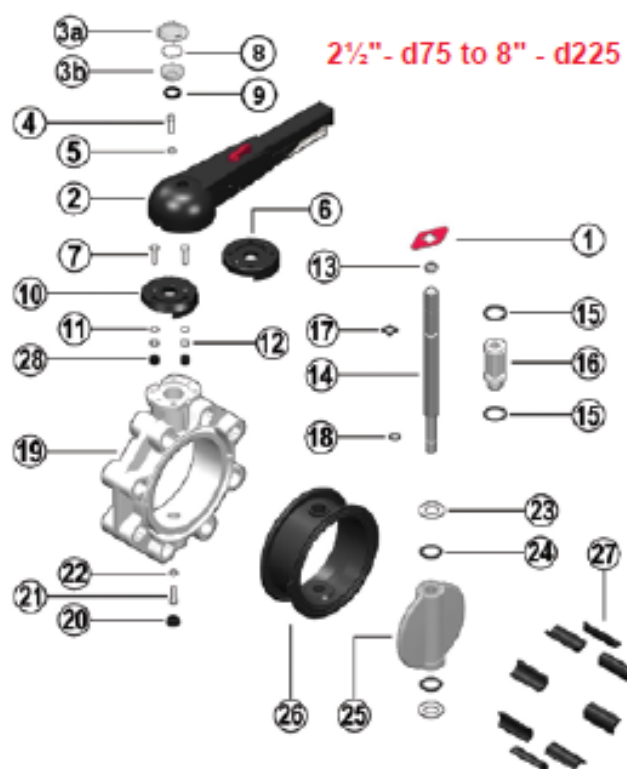
1. Remove the protection cap (3) and undo and remove the retaining screw (4) and washer (5).
2. Remove the handle (2).
3. Remove the screws, nuts, protection caps and washers (7, 11, 12 & 28) and the ratchet plate (10).
4. Remove the protection cap (20) and undo & remove the screw and washer (21 & 22).
5. Extract the shaft (14) and remove the disc (25).
6. Remove the shaft O-rings (17 & 18) from the shaft (14).
7. Remove the anti-friction rings (23) and the O-rings (24).
8. Remove the circlip (13) and the bush (16) and bush O-rings (15).
9. Remove the primary liner (26) from the valve body (19).

Assembly

(2½" - d75 to 8" - d225)

1. Fit the primary liner (26) to the valve body (19).
2. Refit the shaft O-rings (17 & 18) onto the shaft (14).
3. Fit the O-rings (15) to the bush (16). Fit the bush onto the shaft (14) and fix in place with the circlip (13).
4. Fit the anti-friction rings (23) and O-rings (24) onto the disc (25).
5. Lubricate the liner and insert the disc into the valve body (19) / liner (26).
6. Push the shaft (14) into the body (19) and through the disc (25).
7. Refit the screw (21) and washer (21) and tighten. Push in the protection cap (20).
8. Place the ratchet plate (10) onto the body (19) and hold in place with the screws, nuts and washers (7, 11 & 12) push on the protection caps (28).
9. Push the handle (2) onto the shaft (14).
10. Fit the screw (4) and washer (5) and tighten. Push in the protection cap (3).

Note: When assembling the valve components, it is advisable to lubricate the O-rings. Do not use mineral oils as they attack EPDM rubber.



Position	Components	Material
1	Position Indicator	PA
2*	Handle	HIPVC
3a	Plug Upper Part	PVC
3b	Plug Lower Part	PVC
4	Screw	Stainless Steel
5	Washer	Stainless Steel
6	Flange	PP-GR
7	Screw	Stainless Steel
8	Tag Holder	PVC-U
9	Seal (O-ring)	NBR
10*	Pad	PP-GR
11	Washer	Stainless Steel
12	Nut	Stainless Steel
13	Seeger Ring	Stainless Steel
14	Shaft	Stainless Steel
15	Bush O-ring	EPDM or FPM
16	Bush	Nylon
17*	Shaft O-ring	EPDM or FPM
18*	Shaft O-ring	EPDM or FPM
19	Body	PP-GR
20	Protection Cap	PE
21	Screw	Stainless Steel
22	Washer	Stainless Steel
23*	Anti-friction Ring	PTFE
24	Disk O-ring	EPDM or FPM
25	Disc	Valve Material
26*	Primary Liner	EPDM or FPM
27	Inserts	ABS
28	Protection Cap	PE

*Spare Parts



Disassembly (10" - d250 to 12" - d315)

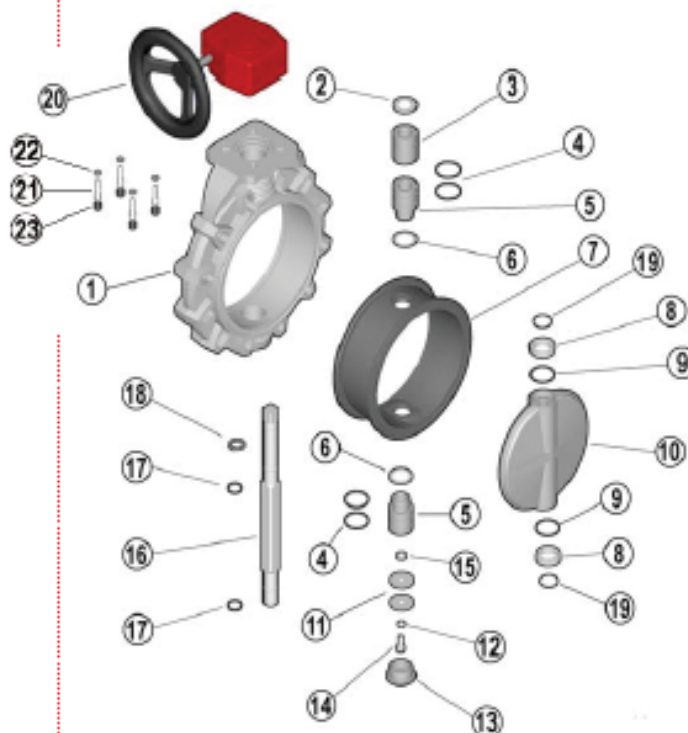
1. Remove the protection caps (23) and undo and remove the screws (21) and washers (22).
2. Extract the gearbox (20) from the shaft (16).
3. Remove the protection cap (13) and undo and remove the retaining screw (14) and washers (11, 12 & 15).
4. Extract the shaft (16) and remove the disc (10).
5. Remove the shaft O-rings (17) from the shaft (16).
6. Remove the anti-friction rings (8) and the O-rings (9 & 19).
7. Remove the circlip (18) and the bushes (3 & 5) with the washer (2).
8. Remove the O-rings (4) and washers (6).
9. Remove the primary liner (7) from the valve body (1).

Assembly (10" - d250 to 12" - d315)

1. Fit the primary liner (7) to the valve body (1).
2. Refit the O-rings (4) and the washers (6) onto the bushes (5).
3. Refit the shaft O-rings (17) onto the shaft (16). Fit the upper bus (5), bush (3) and washer (2) onto the shaft (16) and fix in place with the circlip (18).
4. Fit the anti-friction rings (8) and O-rings (9 & 8) onto the disc (10).
5. Lubricate the liner and insert the disc into the valve body (1) / liner (7).
6. Push the shaft (16) into the body (1) and through the disc (10).
7. Refit the washer (6) and bottom bush (5) into the valve body (1), from the underside.
8. Refit the screw (14) and washers (11, 12 & 15) and tighten. Push in the protection cap (13).
9. Refit the gearbox (20) to the shaft (16), ensuring the gearbox opening position and disc position match.
10. Insert the screws (21) and washers (22) then tighten. Push on the protective caps (23).

Note: When assembling the valve components, it is advisable to lubricate the O-rings. Do not use mineral oils as they attack EPDM rubber.

10" - d250 to 12" - d315



Position	Components	Material
1	Body	PP-GR
2	Washer	Stainless steel
3	Bush	PP
4	Bush O-ring	EPDM or FPM
5	Bush	PP
6	Washer	Stainless steel
7	Primary Liner	EPDM or FPM
8	Anti-friction Ring	PTFE
9	Disc O-ring	EPDM or FPM
10	Disc	Valve Material
11	Washer	Stainless steel
12	Washer	Stainless steel
13	Protection Cap	PE
14	Screw	Stainless steel
15	Washer	Stainless steel
16	Shaft	Stainless steel
17	Shaft O-ring	EPDM or FPM
18	Circlip	Stainless steel
19	O-ring	EPDM or FPM
20	Gearbox	-
21	Screw	Stainless steel
22	Washer	Stainless steel
23	Protection Cap	PE

*Spare Parts