

DIASTAR 10 and DIASTAR 16 High Flow Pneumatically Actuated Diaphragm Valve

Standard Features

- **Size**
1/2–2" (larger sizes available in 025 & 028 series)
- **Valve assembly**
Threaded connection without bolts
- **Lower body (wetted)**
PVC, CPVC, PP, Natural PP, PVDF, ABS
- **Actuator body**
Glass-filled polypropylene
- **Diaphragm material (wetted)**
EPDM, FPM, PTFE with FPM backing, PTFE with EPDM backing, NBR
- **Pressure**
DIASTAR 10: 150 PSI
DIASTAR 16: 240 PSI
(some configurations have a reduced pressure rating on one side, see catalog)
- **Lockable handle**

Optional Features

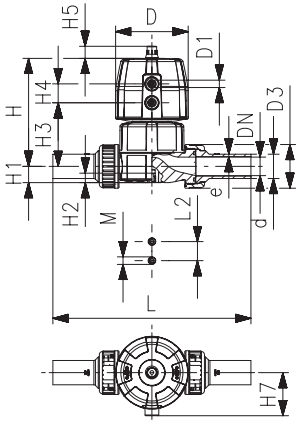
- **Electro pneumatic positioner**
- **Electric feedback switches (Q1 2011)**
- **Manual override**



General

The DIASTAR 10 and 16 valves from GF Piping Systems incorporate several innovative features. The valve has Cv values that average at least double the conventional design. This high-flow design allows the valve to be used where diaphragm valves were previously not possible due to flow restriction. In addition, the new design eliminates the four bolts used to hold the valve together, which eliminates a corrosive weak point. The valve is available in PVC, CPVC, PP, PP-n, and PVDF. The DIASTAR 10 is designed to handle pressures up to 150 PSI and the DIASTAR 16 can handle up to 240 PSI. A modular design allows easy field installation of an actuator to a manual valve as well as other accessories such as position feedback switches.

Dimensions Diaphragm Valves

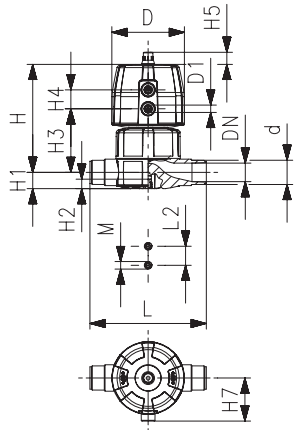


Type 514

DIASTAR Ten FC/F0/DA (Type 514-517)

Inch	d	DN	D	D1	D4	D5	L(1)	L(2)	L(3)	L(4)	L(5)	L(6)	L(7)	L(8)
1/2	20	15	68	1/8"	65	14	136	128	128	224	196	124	124	124
3/4	25	20	96	1/8"	75	14	160	152	150	250	221	144	144	144
1	32	25	96	1/8"	85	14	176	166	162	262	234	154	154	154
1 1/4	40	32	120	1/8"	100	18	198	192	184	296	260	174	174	174
1 1/2	50	40	150	1/4"	110	18	232	222	210	328	284	194	194	194
2	63	50	150	1/4"	125	18	268	266	248	370	321	224	224	224

Inch	d	DN	L(9)	L2	H	H1	H2	H3	H4	H5	H7	M	z	z for L(3)	Hx
1/2	20	15	130	25	101	14	12	60	24	16	43	M6	96	100	7
3/4	25	20	150	25	132	18	12	73	25	16	57	M6	114	118	10
1	32	25	160	25	143	22	12	84	25	16	57	M6	122	126	13
1 1/4	40	32	180	45	173	26	15	99	26	26	69	M8	140	144	15
1 1/2	50	40	200	45	214	32	15	119	36	26	88	M8	160	164	19
2	63	50	230	45	226	39	15	132	36	26	88	M8	190	194	23

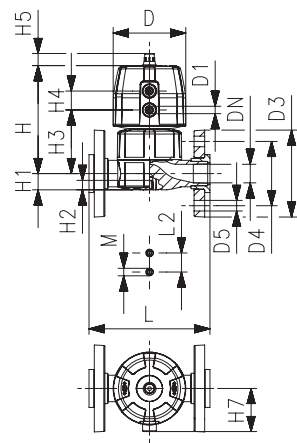


Type 515

DIASTAR Sixteen FC (Type 514-517)

Inch	d	DN	D	D1	D4	D5	L(1)	L(2)	L(3)	L(4)	L(5)	L(6)	L(7)	L(8)
1/2	20	15	96	1/8"	65	14	128	128	128	224	196	124	124	124
3/4	25	20	96	1/8"	75	14	152	152	150	250	221	144	144	144
1	32	25	120	1/8"	85	14	166	166	162	262	234	154	154	154
1 1/4	40	32	150	1/4"	100	18	192	192	184	296	260	174	174	174
1 1/2	50	40	180	1/4"	110	18	222	222	210	328	284	194	194	194
2	63	50	180	1/4"	125	18	266	266	248	370	321	224	224	224

Inch	d	DN	L(9)	L2	H	H1	H2	H3	H4	H5	H7	M	z	z for L(3)	Hx
1/2	20	15	130	25	127	14	12	68	25	16	57	M6	96	100	7
3/4	25	20	150	25	132	18	12	73	25	16	57	M6	114	118	10
1	32	25	160	25	167	22	12	93	26	26	69	M6	122	126	13
1 1/4	40	32	180	45	196	26	15	101	36	26	88	M8	140	144	15
1 1/2	50	40	200	45	239	32	15	124	37	26	103	M8	160	164	19
2	63	50	230	45	251	39	15	137	37	26	103	M8	190	194	23



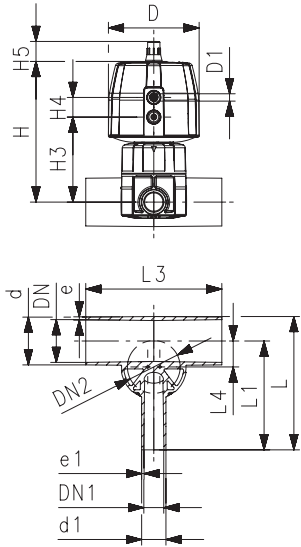
Type 517

Legend

- L(1) PVC & CPVC socket union
- L(2) PVC & CPVC NPT
- L(3) Union with fusion socket
- L(4) Union with butt fusion spigot
- L(5) Union with butt fusion spigot (PVDF)
- L(6) Butt fusion spigot
- L(7) PVC & CPVC metric spigot
- L(8) Socket fusion spigot
- L(9) ANSI flanged

All data in millimeter [mm] unless otherwise indicated

DIASTAR Sixteen FC (Type 519)



Type 519

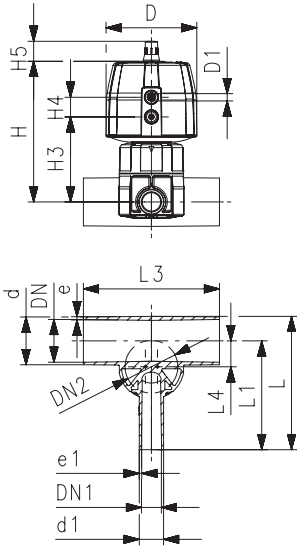
d	d1	DN	DN1	DN2	D	D1	L(6)	L1	L3	L4	H	H3	H4	H5	Hx
20	20	15	15	15	96	1/8"	117	96	162	12	130	71	25	16	7
25	20	20	15	20	96	1/8"	133	108	162	16	131	72	25	16	10
25	25	20	20	20	96	1/8"	133	108	162	16	131	72	25	16	10
32	20	25	15	20	96	1/8"	142	120	162	19	135	76	25	16	10
32	25	25	20	20	96	1/8"	142	120	162	19	135	76	25	16	10
32	32	25	25	25	120	1/8"	145	120	160	19	167	93	26	26	13
40	20	32	15	25	120	1/8"	149	128	180	23	175	101	26	26	13
40	25	32	20	25	120	1/8"	149	128	180	23	175	101	26	26	13
40	32	32	25	25	120	1/8"	149	128	180	23	175	101	26	26	13
40	40	32	32	25	120	1/8"	174	153	180	23	175	101	26	26	13
50	20	40	15	20	96	1/8"	160	134	180	27	148	90	25	16	10
50	25	40	20	25	120	1/8"	160	134	180	28	180	106	26	26	13
50	32	40	25	25	120	1/8"	160	134	180	28	180	106	26	26	13
50	40	40	32	50	180	1/4"	209	169	209	33	249	135	37	26	23
50	50	40	40	50	180	1/4"	209	169	209	33	249	135	37	26	23
63	20	50	15	20	96	1/8"	177	144	180	33	155	96	25	16	10
63	25	50	20	25	120	1/8"	177	144	180	35	187	113	26	26	13
63	32	50	25	25	120	1/8"	177	144	180	35	187	113	26	26	13
63	40	50	32	50	180	1/4"	225	192	220	39	255	141	37	26	23
63	50	50	40	50	180	1/4"	225	192	220	39	255	141	37	26	23
63	63	50	50	50	180	1/4"	225	192	220	39	255	141	37	26	23
90	20	80	15	25	120	1/8"	205	159	190	47	200	126	26	26	13
90	25	80	20	25	120	1/8"	205	159	190	47	200	126	26	26	13
90	32	80	25	25	120	1/8"	205	159	190	47	200	126	26	26	13
90	50	80	40	50	180	1/4"	254	207	250	51	269	155	37	26	23
90	63	80	50	50	180	1/4"	254	207	250	51	269	155	37	26	23
110	20	100	15	25	120	1/8"	227	171	190	56	209	135	26	26	13
110	25	100	20	25	120	1/8"	227	171	190	56	209	135	26	26	13
110	32	100	25	25	120	1/8"	227	171	190	56	209	135	26	26	13
110	50	100	40	50	180	1/4"	276	219	250	60	279	165	37	26	23
110	63	100	50	50	180	1/4"	276	219	250	60	279	165	37	26	23

Legend

- L(1) PVC & CPVC socket union
- L(2) PVC & CPVC NPT
- L(3) Union with fusion socket
- L(4) Union with butt fusion spigot
- L(5) Union with butt fusion spigot (PVDF)
- L(6) Butt fusion spigot
- L(7) PVC & CPVC metric spigot
- L(8) Socket fusion spigot
- L(9) ANSI flanged

All data in millimeter [mm] unless otherwise indicated

DIASTAR Ten F0/DA (Type 519)



Type 519

d	d1	DN	DN1	DN2	D	D1	L(6)	L1	L3	L4	H	H3	H4	H5	Hx
20	20	15	15	15	68	1/8"	117	96	162	12	104	63	24	16	7
25	20	20	15	20	96	1/8"	133	108	162	16	131	73	25	16	10
25	25	20	20	20	96	1/8"	133	108	162	16	131	73	25	16	10
32	20	25	15	20	96	1/8"	142	120	162	19	135	76	25	16	10
32	25	25	20	20	96	1/8"	142	120	162	19	135	76	25	16	10
32	32	25	25	25	96	1/8"	145	120	160	19	143	84	25	16	13
40	20	32	15	25	96	1/8"	149	128	180	23	151	92	25	16	13
40	25	32	20	25	96	1/8"	149	128	180	23	151	92	25	16	13
40	32	32	25	25	96	1/8"	149	128	180	23	151	92	25	16	13
40	40	32	32	25	96	1/8"	174	153	180	23	151	92	25	16	13
50	20	40	15	20	96	1/8"	160	134	180	27	148	90	25	16	10
50	25	40	20	25	96	1/8"	160	134	180	28	156	97	25	16	13
50	32	40	25	25	96	1/8"	160	134	180	28	156	97	25	16	13
50	40	40	32	50	150	1/4"	209	169	209	33	224	129	36	26	23
50	50	40	40	50	150	1/4"	209	169	209	33	224	129	36	26	23
63	20	50	15	20	96	1/8"	177	144	180	33	155	96	25	16	10
63	25	50	20	25	96	1/8"	177	144	180	35	163	104	25	16	13
63	32	50	25	25	96	1/8"	177	144	180	35	163	104	25	16	13
63	40	50	32	50	150	1/4"	225	192	220	39	230	136	36	26	23
63	50	50	40	50	150	1/4"	225	192	220	39	230	136	36	26	23
63	63	50	50	50	150	1/4"	225	192	220	39	230	136	36	26	23
90	20	80	15	25	96	1/8"	205	159	190	47	176	117	25	16	13
90	25	80	20	25	96	1/8"	205	159	190	47	176	117	25	16	13
90	32	80	25	25	96	1/8"	205	159	190	47	176	117	25	16	13
90	50	80	40	50	150	1/4"	254	207	250	51	244	150	36	26	23
90	63	80	50	50	150	1/4"	254	207	250	51	244	150	36	26	23
110	20	100	15	25	96	1/8"	227	171	190	56	185	126	25	16	13
110	25	100	20	25	96	1/8"	227	171	190	56	185	126	25	16	13
110	32	100	25	25	96	1/8"	227	171	190	56	185	126	25	16	13
110	50	100	40	50	150	1/4"	276	219	250	60	254	160	36	26	23
110	63	100	50	50	150	1/4"	276	219	250	60	254	160	36	26	23

Legend

- L(1) PVC & CPVC socket union
- L(2) PVC & CPVC NPT
- L(3) Union with fusion socket
- L(4) Union with butt fusion spigot
- L(5) Union with butt fusion spigot (PVDF)
- L(6) Butt fusion spigot
- L(7) PVC & CPVC metric spigot
- L(8) Socket fusion spigot
- L(9) ANSI flanged

All data in millimeter [mm] unless otherwise indicated

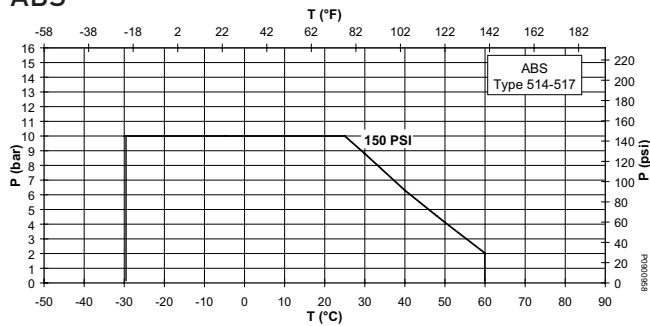
Technical Data Diaphragm Valves

Pressure/Temperature Charts

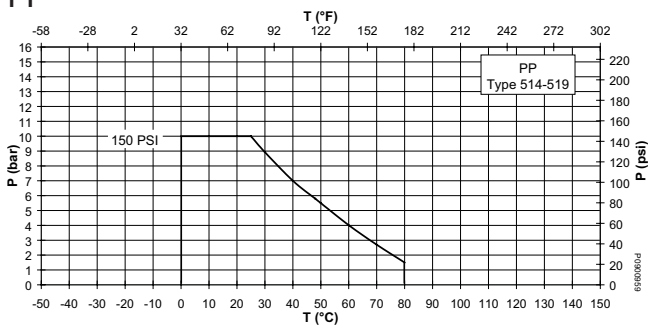
The following pressure/temperature charts are based on a lifetime of 25 years with water or similar media.

P = Permissible pressure in bar, psi
T = Temperature in °C, °F

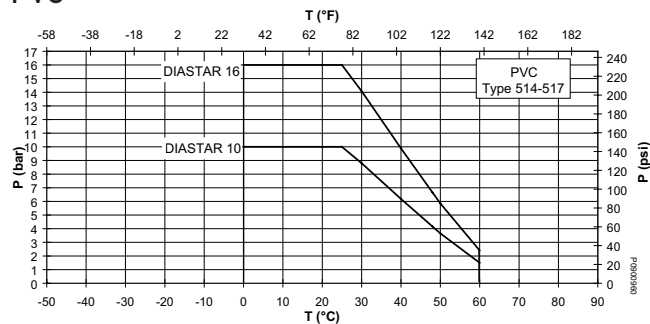
ABS



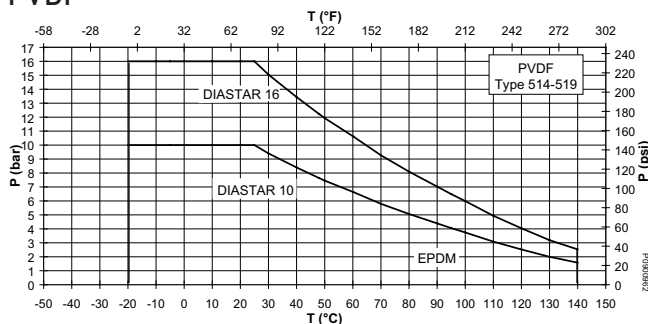
PP



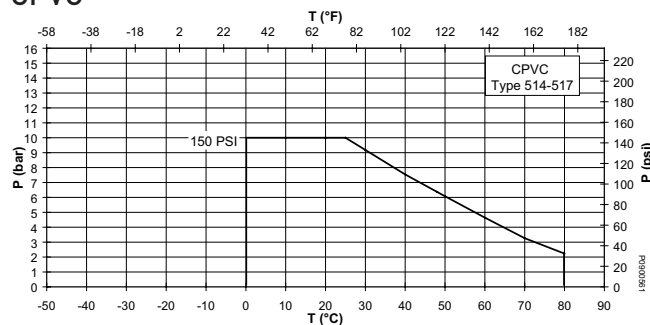
PVC



PVDF

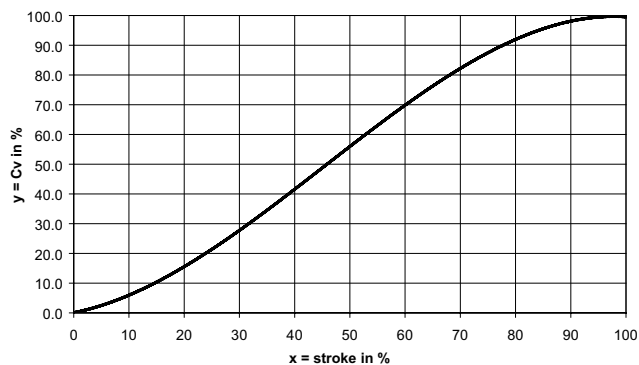


CPVC

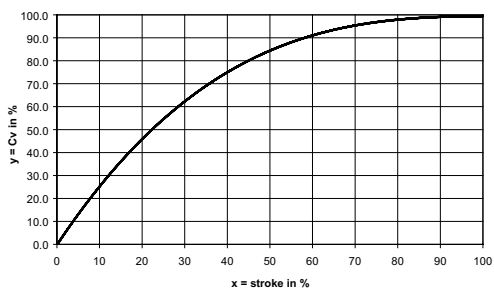


Flow Characteristics

Type 514-517



Type 519



Cv Values

Type 514-517

d [mm]	Inch	Cv
20	1/2	8.4
25	3/4	18.3
32	1	32.5
40	1 1/4	51.3
50	1 1/2	85.3
63	2	116.8

Type 519

d [mm]	d1 [mm]	DN [mm]	DN1 [mm]	Cv
20	20	15	15	3.9
25	20	20	15	6.0
25	25	20	20	8.0
32	20	25	15	5.4
32	25	25	20	7.1
32	32	25	25	15.6
40	20	32	15	5.7
40	25	32	20	8.0
40	32	32	25	10.3
40	40	32	32	12.6
50	20	40	15	5.8
50	25	40	20	10.8
50	32	40	25	13.9
50	40	40	32	35.4
50	50	40	40	45.1
63	20	50	15	5.7
63	25	50	20	10.1
63	32	50	25	12.4
63	40	50	32	31.8
63	50	50	40	41.2
63	63	50	50	50.5

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