

GF Piping Systems

+GF+

Valves & Actuation Catalog 2022



NEW

The New 565 Butterfly Valve PACKS A PUNCH!

- Replaces Metal Valves
- 232 PSI @ 174°F
- Stainless Steel Shaft
- 1/3 the Weight of Metal Valves
- PVDF Disc
- 2"-12"

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NEW!

Now That's THIN!



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Electrically Actuated Valves

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24 Hour Valves



C

Type 182 Electrically Actuated Ball Valve

Size [inch]	Socket/Threaded NPT			
	100-230 V AC			
	PVC		CPVC	
	EPDM	FKM	EPDM	FKM
½	199 182 003	199 182 013	199 182 403	199 182 413
1	199 182 005	199 182 015	199 182 405	199 182 415
1 ½	199 182 007	199 182 017	199 182 407	199 182 417
2	199 182 008	199 182 018	199 182 408	199 182 418



C

Type 127 Electrically Actuated Ball Valve

Size [inch]	Socket/Threaded NPT			
	100-230 V AC			
	PVC		CPVC	
	EPDM	FKM	EPDM	FKM
½	199 127 203	199 127 213	199 127 303	199 127 313
1	199 127 205	199 127 215	199 127 305	199 127 315
1 ½	199 127 207	199 127 217	199 127 307	199 127 317
2	199 127 208	199 127 218	199 127 308	199 127 318

Type 104 Electrically Actuated Ball Valve



C

PVC

Size [inch]	With Manual Override			
	Socket/Threaded NPT			
	110 V		24 V	
	EPDM	FKM	EPDM	FKM
½	150 104 403	150 104 413	150 104 223	150 104 233
1	150 104 405	150 104 415	150 104 225	150 104 235
1 ½	150 104 407	150 104 417	150 104 227	150 104 237
2	150 104 408	150 104 418	150 104 228	150 104 238

CPVC

C

Size [inch]	With Manual Override			
	Socket/Threaded NPT			
	110 V		24 V	
	EPDM	FKM	EPDM	FKM
½	150 104 503	150 104 513	150 104 323	150 104 333
1	150 104 505	150 104 515	150 104 325	150 104 335
1 ½	150 104 507	150 104 517	150 104 327	150 104 337
2	150 104 508	150 104 518	150 104 328	150 104 338

24 Hour Valves



C

Type 23M Pneumatically Actuated Ball Valve

Size [inch]	Fail Safe to Close (FC)			
	Socket/Threaded NPT			
	PVC		CPVC	
	EPDM	FKM	EPDM	FKM
1/2	150 162 063	150 162 073	150 162 363	150 162 373
3/4	150 162 064	150 162 074	150 162 364	150 162 374
1	150 162 065	150 162 075	150 162 365	150 162 375
1 1/4	150 162 066	150 162 076	150 162 366	150 162 376
1 1/2	150 162 067	150 162 077	150 162 367	150 162 377
2	150 162 068	150 162 078	150 162 368	150 162 378

Type 546 Pro with PPA Pneumatically Actuated Ball Valve



C

PVC

Size [inch]	Without Manual Override			
	Socket/Threaded NPT			
	Fail Safe to Close (FC)		Double Acting (DA)	
	EPDM	FKM	EPDM	FKM
1/2	199 253 063	199 253 073	199 253 103	199 253 113
1	199 253 065	199 253 075	199 253 105	199 253 115
1 1/2	199 253 067	199 253 077	199 253 107	199 253 117
2	199 253 068	199 253 078	199 253 108	199 253 118

CPVC

C

Size [inch]	Without Manual Override			
	Socket/Threaded NPT			
	Fail Safe to Close (FC)		Double Acting (DA)	
	EPDM	FKM	EPDM	FKM
1/2	199 253 363	199 253 373	199 253 403	199 253 413
1	199 253 365	199 253 375	199 253 405	199 253 415
1 1/2	199 253 367	199 253 377	199 253 407	199 253 417
2	199 253 368	199 253 378	199 253 408	199 253 418

DIASTAR Ten PVC Pneumatically Actuated Diaphragm Valve

Size [inch]	Fail Safe to Close (FC)		
	Socket		
	EPDM	FKM	PTFE/EPDM
1/2	161 624 612	161 624 662	161 624 632
1	161 624 614	161 624 664	161 624 634
1 1/2	161 624 616	161 624 666	161 624 636
2	161 624 617	161 624 667	161 624 637



24 Hour Valves

eDiastar Electrically Actuated Diaphragm Valve

PVC



Size [inch]	Socket			
	100-230V		24V	
	EPDM	PTFE/EPDM	EPDM	PTFE/EPDM
1	161 714 614	161 714 634	161 704 614	161 704 634
2	161 714 617	161 714 637	161 704 617	161 704 637

CPVC

Size [inch]	Socket			
	100-230V		24V	
	EPDM	PTFE/EPDM	EPDM	PTFE/EPDM
1	150 714 714	150 714 734	150 704 714	150 704 734
2	150 714 717	150 714 737	150 704 717	150 704 737

PROGEF® Standard PP

Size [inch]	Socket Fusion Union			
	100-230V		24V	
	EPDM	PTFE/EPDM	EPDM	PTFE/EPDM
1	167 714 014	167 714 034	167 704 014	167 704 034
2	167 714 017	167 714 037	167 704 017	167 704 037

Size [inch]	IR/Butt Fusion Union			
	100-230V		24V	
	EPDM	PTFE/EPDM	EPDM	PTFE/EPDM
1	150 714 214	150 714 234	150 704 214	150 704 234
2	150 714 217	150 714 237	150 704 217	150 704 237

Size [inch]	IR/Butt Fusion Spigot			
	100-230V		24V	
	EPDM	PTFE/EPDM	EPDM	PTFE/EPDM
1	150 715 014	150 715 034	150 705 014	150 705 034
2	150 715 017	150 715 037	150 705 017	150 705 037

PROGEF® Standard PP

Size [inch]	Socket Fusion Union			
	100-230V		24V	
	EPDM	FKM	EPDM	FKM
1	185 714 034	185 714 054	185 704 034	185 704 054
2	185 714 037	185 714 057	185 704 037	185 704 057

Size [inch]	IR/Butt Fusion Union			
	100-230V		24V	
	EPDM	FKM	EPDM	FKM
1	150 714 334	150 714 354	150 704 334	150 704 354
2	150 714 337	150 714 357	150 704 337	150 704 357

Size [inch]	IR/Butt Fusion Spigot			
	100-230V		24V	
	EPDM	FKM	EPDM	FKM
1	150 714 434	150 714 454	150 704 434	150 704 454
2	150 714 437	150 714 457	150 704 437	150 704 457

24 Hour Valves



240 Wafer



244 Lug



145 Wafer



147 Lug

Type 240 PVC PA Wafer Style Butterfly Valve

C

d - Size [mm]-[inch]	Fail Safe to Close (FC)		Double Acting (DA)	
	EPDM	FKM	EPDM	FKM
90 - 3	199 240 004	199 240 024	199 240 084	199 240 104
110 - 4	199 240 005	199 240 025	199 240 085	199 240 105
160 - 6	199 240 007	199 240 027	199 240 087	199 240 107
225 - 8	199 240 008	199 240 028	199 240 048	199 240 108

Type 244 PVC PA Lug Butterfly Valve

C

Size [inch]	Fail Safe to Close (FC)		Double Acting (DA)	
	EPDM	FKM	EPDM	FKM
3	199 244 004	199 244 024	199 244 084	199 244 104
4	199 244 005	199 244 025	199 244 085	199 244 105
6	199 244 007	199 244 027	199 244 087	199 244 107
8	199 244 008	199 244 028	199 244 088	199 244 108

Type 145/147 PVC EA Butterfly Valve

C

d - Size [mm]-[inch]	100-230 V AC			
	Without Manual Override			
	Type 140 Wafer Style Butterfly Valve		Type 144 Lug Style Butterfly Valve	
	EPDM	FKM	EPDM	FKM
90 - 3	199 145 044	199 145 064	199 147 044	150 147 064
110 - 4	199 145 045	199 145 065	199 147 045	150 147 065
160 - 6	199 145 047	199 145 067	199 147 047	150 147 067
225 - 8	199 145 048	199 145 068	199 147 048	150 147 068



Lever



Gear

A

Type 565 Wafer Style Butterfly Valve

d - Size [mm]-[inch]	Lever		Standard Gear (Cast Iron)	
	EPDM	FKM	EPDM	FKM
63 - 2	199 565 000	199 565 020	150 565 200	150 565 220
75 - 2 ½	199 565 001	199 565 021	150 565 201	150 565 221
90 - 3	199 565 002	199 565 022	150 565 202	150 565 222
110 - 4	199 565 003	199 565 023	150 565 203	150 565 223
140 - 5	199 565 004	199 565 024	150 565 204	150 565 224
160 - 6	199 565 005	199 565 025	150 565 205	150 565 225
225 - 8	199 565 006	199 565 026	150 565 206	150 565 226
280 - 10	-	-	150 565 207	150 565 227
315 - 12	-	-	150 565 208	150 565 228

Type 546 Pro True Union Ball Valve



Socket/Threaded NPT



ANSI Flanged


A

PVC

Size [inch]	Socket (3/8" - 2" Socket/Threaded NPT)		ANSI Flanged	
	EPDM	FKM	EPDM	FKM
3/8	161 546 341	161 546 351	-	-
1/2	161 546 342	161 546 352	161 546 582	161 546 592
3/4	161 546 343	161 546 353	161 546 583	161 546 593
1	161 546 344	161 546 354	161 546 584	161 546 594
1 1/4	161 546 345	161 546 355	161 546 585	161 546 595
1 1/2	161 546 346	161 546 356	161 546 586	161 546 596
2	161 546 347	161 546 357	161 546 587	161 546 597
2 1/2	161 546 348	161 546 358	161 546 168	161 546 178
3	161 546 349	161 546 359	161 546 169	161 546 179
4	161 546 350	161 546 360	161 546 170	161 546 180
Size [inch]	Threaded NPT			
	EPDM	FKM		
2 1/2	161 546 648	161 546 658		
3	161 546 649	161 546 659		
4	161 546 650	161 546 660		

Vented Ball for Sodium Hypochlorite Use

A

Size [inch]	PVC		
	EPDM	FKM	
3/8	151 546 341	151 546 351	
1/2	151 546 342	151 546 352	
3/4	151 546 343	151 546 353	
1	151 546 344	151 546 354	
1 1/4	151 546 345	151 546 355	
1 1/2	151 546 346	151 546 356	
2	151 546 347	151 546 357	
2 1/2	151 546 348	151 546 358	
3	151 546 349	151 546 359	
4	151 546 350	151 546 360	

All Type 546 Pro Ball Valves can be vented.

Type 546 Pro True Union Ball Valve



Socket/Threaded NPT



ANSI Flanged

CPVC


A

Size [inch]	Socket (3/8" - 2" Socket/Threaded NPT)		ANSI Flanged	
	EPDM	FKM	EPDM	FKM
3/8	163 546 341	163 546 351	-	-
1/2	163 546 342	163 546 352	163 546 582	163 546 592
3/4	163 546 343	163 546 353	163 546 583	163 546 593
1	163 546 344	163 546 354	163 546 584	163 546 594
1 1/4	163 546 345	163 546 355	163 546 585	163 546 595
1 1/2	163 546 346	163 546 356	163 546 586	163 546 596
2	163 546 347	163 546 357	163 546 587	163 546 597
2 1/2	163 546 348	163 546 358	163 546 588	163 546 598
3	163 546 349	163 546 359	163 546 589	163 546 599
4	163 546 350	163 546 360	163 546 590	163 546 600
Size [inch]	Threaded NPT			
	EPDM	FKM		
2 1/2	150 546 348	150 546 358		
3	150 546 149	150 546 359		
4	150 546 150	150 546 360		

All Type 546 Pro Ball Valves can be vented.

Vented Ball for Sodium Hypochlorite Use

A

Size [inch]	CPVC		
	EPDM	FKM	
3/8	153 546 341	153 546 351	
1/2	153 546 342	153 546 352	
3/4	153 546 343	153 546 353	
1	153 546 344	153 546 354	
1 1/4	153 546 345	153 546 355	
1 1/2	153 546 346	153 546 356	
2	153 546 347	153 546 357	
2 1/2	153 546 348	153 546 358	
3	153 546 349	153 546 359	
4	153 546 350	153 546 360	

All Type 546 Pro Ball Valves can be vented.

Type 546 Pro True Union Ball Valve



Socket Fusion



IR/Butt Fusion



Threaded NPT



ANSI Flanged

PROGEF® Standard PP

A

d [mm]	Socket Fusion		IR/Butt Fusion	
	EPDM	FKM	EPDM	FKM
16	167 546 401	167 546 411	-	-
20	167 546 442*	167 546 452*	167 546 442*	167 546 452*
25	167 546 443*	167 546 453*	167 546 443*	167 546 453*
32	167 546 444*	167 546 454*	167 546 444*	167 546 454*
40	167 546 405	167 546 415	167 546 445	167 546 455
50	167 546 406	167 546 416	167 546 446	167 546 456
63	167 546 407	167 546 417	167 546 447	167 546 457
75	167 546 408	167 546 418	167 546 448	167 546 458
90	167 546 409	167 546 419	167 546 449	167 546 459
110	167 546 410	167 546 420	167 546 450	167 546 460
Size [inch]	Threaded NPT		ANSI Flanged	
	EPDM	FKM	EPDM	FKM
3/8	167 546 321	167 546 331	-	-
1/2	167 546 322	167 546 332	167 546 582	167 546 592
3/4	167 546 323	167 546 333	167 546 583	167 546 593
1	167 546 324	167 546 334	167 546 584	167 546 594
1 1/4	167 546 325	167 546 335	167 546 585	167 546 595
1 1/2	167 546 326	167 546 336	167 546 586	167 546 596
2	167 546 327	167 546 337	167 546 587	167 546 597
2 1/2	-	-	167 546 588	167 546 598
3	-	-	167 546 589	167 546 599
4	-	-	167 546 590	167 546 600

*Valves include both Socket Fusion and IR/Butt Fusion ends

PROGEF® Natural PP

A

d [mm]	PP Valve with PPn IR/Butt Fusion Ends	
	EPDM	FKM
20	157 546 442	157 546 452
25	157 546 443	157 546 453
32	157 546 444	157 546 454
40	157 546 445	157 546 455
50	157 546 446	157 546 456
63	157 546 447	157 546 457







PROGEF® Standard PP valve body with PROGEF® Natural PP (PPn) valve ends

Type 546 Pro True Union Ball Valve

SYGEF® Standard PVDF

A

d [mm]	Socket Fusion	IR/Butt Fusion	 Socket Fusion	 IR/Butt Fusion
	FKM	FKM		
16	175 546 411	-		
20	175 546 412	175 546 272		
25	175 546 413	175 546 273		
32	175 546 414	175 546 274		
40	175 546 415	175 546 275		
50	175 546 416	175 546 276		
63	175 546 417	175 546 277		
75	175 546 418	175 546 278		
90	175 546 419	175 546 279		
110	175 546 420	175 546 280		
Size [inch]	Threaded NPT	ANSI Flanged	 Threaded NPT	 ANSI Flanged
	FKM	FKM		
3/8	175 546 331	-		
1/2	175 546 332	175 546 592		
3/4	175 546 333	175 546 593		
1	175 546 334	175 546 594		
1 1/4	175 546 335	175 546 595		
1 1/2	175 546 336	175 546 596		
2	175 546 337	175 546 597		
2 1/2	-	175 546 818		
3	-	175 546 819		
4	-	175 546 820		

Type 546 Pro Control Ball



A

Size [inch]	Control Ball Only			
	PVC	CPVC	PP	PVDF
3/8	161 491 032	163 482 231	167 483 419	175 483 379
1/2	161 491 032	163 482 231	167 483 419	175 483 379
3/4	161 491 033	163 482 232	167 483 420	175 483 380
1	161 491 034	163 482 233	167 483 421	175 483 381
1 1/4	161 491 035	163 482 234	167 483 422	175 483 382
1 1/2	161 491 036	163 482 235	167 483 423	175 483 383
2	161 491 037	163 482 236	167 483 424	175 483 384

When used with an actuated valve, a positioner is required.

Tee Valve

PVC and CPVC



A

Size [inch]	Socket		Socket
	PVC/EPDM	PVC/FKM	CPVC/EPDM
¾ x ¾	150 319 122	150 319 222	-
1 x ½	150 319 100	150 319 200	153 319 100
1 x ¾	150 319 132	150 319 232	-
1 ¼ x ½	150 319 101	150 319 201	153 319 101
1 ¼ x ¾	-	-	153 319 118
1 ¼ x 1	150 319 102	150 319 202	153 319 102
1 ½ x ½	150 319 103	150 319 203	153 319 103
1 ½ x ¾	150 319 119	150 319 219	153 319 119
1 ½ x 1	150 319 104	150 319 204	153 319 104
1 ½ x 1 ½	150 319 131	150 319 231	-
2 x ½	150 319 105	150 319 205	153 319 105
2 x ¾	150 319 106	150 319 206	153 319 106
2 x 1	150 319 107	150 319 207	153 319 107
2 x 1 ½	150 319 108	150 319 208	153 319 108
3 x ½	150 319 109	150 319 209	153 319 109
3 x ¾	150 319 120	150 319 220	-
3 x 1	150 319 110	150 319 210	153 319 110
3 x 1 ½	150 319 111	150 319 211	153 319 111
3 x 2	150 319 112	150 319 212	153 319 112
4 x ¾	150 319 121	150 319 221	-
4 x 1	150 319 113	150 319 213	153 319 113
4 x 1 ½	150 319 114	150 319 214	153 319 114
4 x 2	150 319 115	150 319 215	153 319 115
6 x 1	150 319 123	150 319 223	-
6 x 2	150 319 116	150 319 216	153 319 116
6 x 2 ½	150 319 125	150 319 225	153 319 124
6 x 3	150 319 126	150 319 226	153 319 128
6 x 4	150 319 127	150 319 227	153 319 126
8 x 2	150 319 117	150 319 217	153 319 117
8 x 2 ½	150 319 128	150 319 228	153 319 125
8 x 3	150 319 129	150 319 229	153 319 123
8 x 4	150 319 130	150 319 230	153 319 127

PROGEF® Standard PP

A

d [mm]	IR/Butt Fusion	
	EPDM	FKM
63 x 25	157 319 106	157 319 206
63 x 32	157 319 107	157 319 207
90 x 25	157 319 120	157 319 220
90 x 32	157 319 110	157 319 210
110 x 25	157 319 121	157 319 221
110 x 32	157 319 113	157 319 213
160 x 32	157 319 123	157 319 223
160 x 63	157 319 124	157 319 224

Type 546 Pro accessories and spare parts can be used with Tee Valves.
Other sizes available upon request.

Accessories Type 546 Pro Ball Valve



C

Feedback Sensor

Size [inch]	PNP - 0.15A		NPN - 0.15A	
	Close - Green	Close - Red	Close - Green	Close - Red
3/8 - 2	198 546 001	198 546 002	198 546 005	198 546 006
Size [inch]	NAMUR (ATEX) - 0.15A			
	Close - Green	Close - Red		
3/8 - 2	198 546 003	198 546 004		

Feedback Sensor compatible with 546 Pro using an Interface Module for Manual Valve.

Interface Module for Manual Valve

C

d - d [mm]	Size [inch]	Part No.
16 - 20	3/8 - 1/2	198 546 102
25 - 32	3/4 - 1	198 546 103
40 - 50	1 1/4 - 1 1/2	198 546 105
63	2	198 546 107



Feedback Sensor Connector

C

Part No.	Model
Connector without cable	198 546 150
Connector with cable (5m PVC)	198 546 151
Connector with cable (10m PVC)	198 546 152
Connector with cable (5m PUR)	198 546 153
Connector with cable (10m PUR)	198 546 154



Handle Extension



Upper/Lower Adapters

PVC Handle Extension

C

d - d [mm]	Size [Inch]	Part No.
16 - 20	3/8 - 1/2	161 486 443
25 - 32	3/4 - 1	161 486 444
40 - 50	1 1/4 - 1 1/2	161 486 445
63	2	161 486 446
75-90	2 1/2 - 3	161 490 920
110	4	161 490 921

Mounting Plate

C

d - d [mm]	Size [Inch]	Part No.
16 - 32	3/8 - 1	167 484 110
40 - 63	1 1/4 - 2	167 484 111



Includes upper and lower socket extension adapters. Does not include 3/4" pipe.

Transparent Handle Inserts

C

d - d [mm]	Size [Inch]	Packet Size	Part No.
16 - 20	3/8 - 1/2	10ea	198 807 221
25 - 32	3/4 - 1	10ea	198 807 222
40 - 50	1 1/4 - 1 1/2	5ea	198 807 223
63	2	5ea	198 807 224

Characterized Stroke Indicator

C

d - d [mm]	Size [Inch]	Part No.
16 - 20	3/8 - 1/2	167 483 145
25 - 32	3/4 - 1	167 483 146
40 - 50	1 1/4 - 1 1/2	167 483 147
63	2	167 483 148

Ball Scale

C

d - d [mm]	Size [Inch]	Part No.
16 - 20	3/8 - 1/2	167 485 252
25 - 32	3/4 - 1	167 485 254
40 - 50	1 1/4 - 1 1/2	167 485 256
63	2	167 485 258

Accessories Type 546 Pro Ball Valve



C

Multifunction Module (MFM) with Switches

d - d [mm]	Size [Inch]	Mechanical Limit Switches	
		250 V AC / DC 6 A	4 - 30 V DC 100 mA
		Ag Ni	Au
16 - 20	3/8 - 1/2	167 482 626	167 482 635
25 - 32	3/4 - 1	167 482 627	167 482 636
40 - 50	1 1/4 - 1 1/2	167 482 628	167 482 637
63	2	167 482 629	167 482 638
75 - 90	2 1/2 - 3	167 482 630	167 482 639
110	4	167 482 631	167 482 640



C

Deadman Spring Return

d - d [mm]	Size [Inch]	Manual Part No.
16 - 20	3/8 - 1/2	198 546 082
25 - 32	3/4 - 1	198 546 083

Ball Valve Handle Labels

d - d [mm]	Size [Inch]	Label and Paper Clip Kit Part No.	10 Sheet Packets		100 Sheet Packets	
			Total	Part No.	Total	Part No.
16 - 20	3/8 - 1/2	150 807 221	480	150 807 231	4800	198 807 251
25 - 32	3/4 - 1	150 807 222	240	150 807 232	2400	198 807 252
40 - 50	1 1/4 - 1 1/2	150 807 223	180	150 807 233	1800	198 807 253
63	2	150 807 224	110	150 807 234	1100	198 807 254

Alternative Seal Set

C

d - d [mm]	Size [Inch]	Teflon Encaps. FKM	Chemraz 505	Chemraz 570
16-20	3/8 - 1/2	150 486 400	150 486 410	150 486 420
25	3/4	150 486 401	150 486 411	150 486 421
32	1	150 486 402	150 486 412	150 486 422
40	1 1/4	150 486 403	150 486 413	150 486 423
50	1 1/2	150 486 404	150 486 414	150 486 424
63	2	150 486 405	150 486 415	150 486 425
75	2 1/2	150 486 406	150 486 416	150 486 426
90	3	150 486 407	150 486 417	150 486 427
110	4	150 486 408	150 486 418	150 486 428

d - d [mm]	Size [Inch]	Aflas
16-20	3/8 - 1/2	150 486 600
25	3/4	150 486 601
32	1	150 486 602
40	1 1/4	150 486 603
50	1 1/2	150 486 604
63	2	150 486 605
75	2 1/2	150 486 606
90	3	150 486 607
110	4	150 486 608



Seal set consists of: backing-, body-, face-, and stem seal

Teflon encaps. FKM seal kit stem seals are Chemraz 505.

Some Chemraz seal kits may include Teflon encaps. FKM backing orings

Type 373 Single Union Ball Valve



A

PVC

Size [inch]	Socket (Single Union) EPDM
1/2	161 373 022
3/4	161 373 023
1	161 373 024
1 1/4	161 373 025
1 1/2	161 373 026
2	161 373 027

Type 375 True Union Ball Valve



A

PVC

Size [inch]	Socket (1/2" - 2" Socket/Threaded NPT)		ANSI Flanged	
	EPDM	FKM	EPDM	FKM
1/2	161 375 002	161 375 017	161 375 062	161 375 077
3/4	161 375 003	161 375 018	161 375 063	161 375 078
1	161 375 004	161 375 019	161 375 064	161 375 079
1 1/4	161 375 005	161 375 020	161 375 065	161 375 080
1 1/2	161 375 006	161 375 021	161 375 066	161 375 081
2	161 375 007	161 375 022	161 375 067	161 375 082
2 1/2	161 375 008	161 375 023	161 375 068	161 375 083
3	161 375 009	161 375 024	161 375 069	161 375 084
4	161 375 010	161 375 025	161 375 070	161 375 085

Size [inch]	Vented	
	EPDM	FKM
1/2	151 375 002	151 375 017
3/4	151 375 003	151 375 018
1	151 375 004	151 375 019
1 1/4	151 375 005	151 375 020
1 1/2	151 375 006	151 375 021
2	151 375 007	151 375 022
2 1/2	151 375 008	151 375 023
3	151 375 009	151 375 024
4	151 375 010	151 375 025

CPVC

A

Size [inch]	Socket/Threaded NPT		ANSI Flanged	
	EPDM	FKM	EPDM	FKM
1/2	163 375 002	163 375 017	163 375 062	163 375 077
3/4	163 375 003	163 375 018	163 375 063	163 375 078
1	163 375 004	163 375 019	163 375 064	163 375 079
1 1/4	163 375 005	163 375 020	163 375 065	163 375 080
1 1/2	163 375 006	163 375 021	163 375 066	163 375 081
2	163 375 007	163 375 022	163 375 067	163 375 082
2 1/2	163 375 008	163 375 023	163 375 068	163 375 083
3	163 375 009	163 375 024	163 375 069	163 375 084
4	163 375 010	163 375 025	163 375 070	163 375 085

Size [inch]	Vented	
	EPDM	FKM
1/2	153 375 002	153 375 017
3/4	153 375 003	153 375 018
1	153 375 004	153 375 019
1 1/4	153 375 005	153 375 020
1 1/2	153 375 006	153 375 021
2	153 375 007	153 375 022



Type 523 Metering Ball Valve



A

PVC and CPVC

Size [inch]	Socket/Threaded NPT			
	PVC		CPVC	
	EPDM	FKM	EPDM	FKM
3/8	161 523 521	161 523 531	163 523 521	163 523 531
1/2	161 523 522	161 523 532	163 523 522	163 523 532



A

PROGEF® Standard PP

d [mm]	Socket Fusion		IR/Butt Fusion	
	EPDM	FKM	EPDM	FKM
16	167 523 401	167 523 411	-	-
20	167 523 402	167 523 412	167 523 482	167 523 492

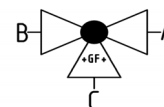


A

SYGEF® Standard PVDF

d [mm]	Socket Fusion	IR/Butt Fusion
	FKM	FKM
16	175 523 411	-
20	175 523 412	175 523 492

Type 543 Pro Vertical 3-Way Ball Valve



A

PVC

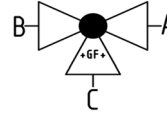
Size [inch]	L-port			
	Socket		Threaded NPT	
	EPDM	FKM	EPDM	FKM
3/8	161 543 661	161 543 671	161 543 681	161 543 691
1/2	161 543 662	161 543 672	161 543 682	161 543 692
3/4	161 543 663	161 543 673	161 543 683	161 543 693
1	161 543 664	161 543 674	161 543 684	161 543 694
1 1/4	161 543 665	161 543 675	161 543 685	161 543 695
1 1/2	161 543 666	161 543 676	161 543 686	161 543 696
2	161 543 667	161 543 677	161 543 687	161 543 697

Size [inch]	Socket Union	
	EPDM	FKM
3/8	150 543 661	150 543 671
1/2	150 543 662	150 543 672
3/4	150 543 663	150 543 673
1	150 543 664	150 543 674
1 1/4	150 543 665	150 543 675
1 1/2	150 543 666	150 543 676
2	150 543 667	150 543 677

Diverter ball option available in Type 543 Vertical Spare Parts section under Ball Sets

Metric spigot branch standard - Metric by ASTM coupling included with valve - Socket union versions cemented with IPS branch outlet

Type 543 Pro Horizontal 3-Way Ball Valve



A

PVC

Size [inch]	L-port			
	Socket		Threaded NPT	
	EPDM	FKM	EPDM	FKM
3/8	161 543 081	161 543 091	161 543 101	161 543 111
1/2	161 543 082	161 543 092	161 543 102	161 543 112
3/4	161 543 083	161 543 093	161 543 103	161 543 113
1	161 543 084	161 543 094	161 543 104	161 543 114
1 1/4	161 543 085	161 543 095	161 543 105	161 543 115
1 1/2	161 543 086	161 543 096	161 543 106	161 543 116
2	161 543 087	161 543 097	161 543 107	161 543 117

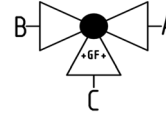
PVC



A

Size [inch]	T-port			
	Socket		Threaded NPT	
	EPDM	FKM	EPDM	FKM
3/8	161 543 281	161 543 291	161 543 301	161 543 311
1/2	161 543 282	161 543 292	161 543 302	161 543 312
3/4	161 543 283	161 543 293	161 543 303	161 543 313
1	161 543 284	161 543 294	161 543 304	161 543 314
1 1/4	161 543 285	161 543 295	161 543 305	161 543 315
1 1/2	161 543 286	161 543 296	161 543 306	161 543 316
2	161 543 287	161 543 297	161 543 307	161 543 317

CPVC

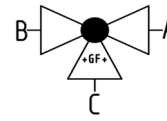
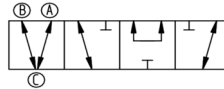


A

Size [inch]	L-port			
	Socket Fusion		Threaded NPT	
	EPDM	FKM	EPDM	FKM
3/8	163 543 081	163 543 091	163 543 101	163 543 111
1/2	163 543 082	163 543 092	163 543 102	163 543 112
3/4	163 543 083	163 543 093	163 543 103	163 543 113
1	163 543 084	163 543 094	163 543 104	163 543 114
1 1/4	163 543 085	163 543 095	163 543 105	163 543 115
1 1/2	163 543 086	163 543 096	163 543 106	163 543 116
2	163 543 087	163 543 097	163 543 107	163 543 117

Type 543 Pro Horizontal 3-Way Ball Valve

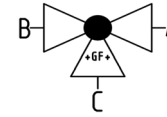
CPVC



A

Size [inch]	T-port			
	Socket Fusion		Threaded NPT	
	EPDM	FKM	EPDM	FKM
3/8	163 543 281	163 543 291	163 543 301	163 543 311
1/2	163 543 282	163 543 292	163 543 302	163 543 312
3/4	163 543 283	163 543 293	163 543 303	163 543 313
1	163 543 284	163 543 294	163 543 304	163 543 314
1 1/4	163 543 285	163 543 295	163 543 305	163 543 315
1 1/2	163 543 286	163 543 296	163 543 306	163 543 316
2	163 543 287	163 543 297	163 543 307	163 543 317

PROGEF® Standard PP



A

d [mm]	L-port			
	Socket Fusion		IR/Butt Fusion	
	EPDM	FKM	EPDM	FKM
16	167 543 001	167 543 011	-	-
20	167 543 002	167 543 012	167 543 062	167 543 072
25	167 543 003	167 543 013	167 543 063	167 543 073
32	167 543 004	167 543 014	167 543 064	167 543 074
40	167 543 005	167 543 015	167 543 065	167 543 075
50	167 543 006	167 543 016	167 543 066	167 543 076
63	167 543 007	167 543 017	167 543 067	167 543 077

Size [inch]	Threaded NPT	
	EPDM	FKM
3/8	167 543 161	167 543 171
1/2	167 543 162	167 543 172
3/4	167 543 163	167 543 173
1	167 543 164	167 543 174
1 1/4	167 543 165	167 543 175
1 1/2	167 543 166	167 543 176
2	167 543 167	167 543 177



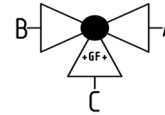
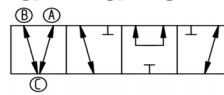
Socket Fusion/Threaded NPT



IR/Butt Fusion

Type 543 Pro Horizontal 3-Way Ball Valve

PROGEF® Standard PP

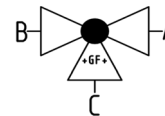


A

d [mm]	T-port			
	Socket Fusion		IR/Butt Fusion	
	EPDM	FKM	EPDM	FKM
16	167 543 201	167 543 211	-	-
20	167 543 202	167 543 212	167 543 262	167 543 272
25	167 543 203	167 543 213	167 543 263	167 543 273
32	167 543 204	167 543 214	167 543 264	167 543 274
40	167 543 205	167 543 215	167 543 265	167 543 275
50	167 543 206	167 543 216	167 543 266	167 543 276
63	167 543 207	167 543 217	167 543 267	167 543 277

Size [inch]	Threaded NPT		Socket Fusion/Threaded NPT	IR/Butt Fusion
	EPDM	FKM		
3/8	167 543 361	167 543 371		
1/2	167 543 362	167 543 372		
3/4	167 543 363	167 543 373		
1	167 543 364	167 543 374		
1 1/4	167 543 365	167 543 375		
1 1/2	167 543 366	167 543 376		
2	167 543 367	167 543 377		

SYGEF® Standard PVDF



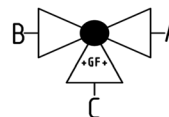
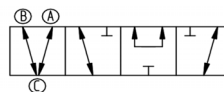
A

d - Size [mm]-[Inch]	L-port		
	Socket Fusion FKM	IR/Butt Fusion FKM	Threaded NPT FKM
16 - 3/8	175 543 011	-	175 543 071
20 - 1/2	175 543 012	175 543 052	175 543 072
25 - 3/4	175 543 013	175 543 053	175 543 073
32 - 1	175 543 014	175 543 054	175 543 074
40 - 1 1/4	175 543 015	175 543 055	175 543 075
50 - 1 1/2	175 543 016	175 543 056	175 543 076
63 - 2	175 543 017	175 543 057	175 543 077

d [mm]	T-port		
	Socket Fusion FKM	IR/Butt Fusion FKM	Threaded NPT FKM
16	175 543 111	-	175 543 171
20	175 543 112	175 543 152	175 543 172
25	175 543 113	175 543 153	175 543 173
32	175 543 114	175 543 154	175 543 174
40	175 543 115	175 543 155	175 543 175
50	175 543 116	175 543 156	175 543 176
63	175 543 117	175 543 157	175 543 177



SYGEF® Standard PVDF



A

d [mm]	T-port		
	Socket Fusion FKM	IR/Butt Fusion FKM	Threaded NPT FKM
16	175 543 111	-	175 543 171
20	175 543 112	175 543 152	175 543 172
25	175 543 113	175 543 153	175 543 173
32	175 543 114	175 543 154	175 543 174
40	175 543 115	175 543 155	175 543 175
50	175 543 116	175 543 156	175 543 176
63	175 543 117	175 543 157	175 543 177

d [mm]	T-port		
	Socket Fusion FKM	IR/Butt Fusion FKM	Threaded NPT FKM
16	175 543 111	-	175 543 171
20	175 543 112	175 543 152	175 543 172
25	175 543 113	175 543 153	175 543 173
32	175 543 114	175 543 154	175 543 174
40	175 543 115	175 543 155	175 543 175
50	175 543 116	175 543 156	175 543 176
63	175 543 117	175 543 157	175 543 177



Accessories Type 543 Pro 3-Way Ball Valve



C

Feedback Sensor

Size [inch]	PNP - 0.15A		NPN - 0.15A	
	Close - Green	Close - Red	Close - Green	Close - Red
3/8 - 2	198 546 001	198 546 002	198 546 005	198 546 006

Size [inch]	NAMUR (ATEX) - 0.15A	
	Close - Green	Close - Red
3/8 - 2	198 546 003	198 546 004

Feedback Sensor compatible with 543 Pro using an Interface Module for Manual Valve.

Interface Module for Manual Valve

C

d - d [mm]	Size [inch]	Part No.
16 - 20	3/8 - 1/2	198 546 102
25 - 32	3/4 - 1	198 546 103
40 - 50	1 1/4 - 1 1/2	198 546 105
63	2	198 546 107



3-Way Interface Module Adapter required for use with 3-Way Valve.

Feedback Sensor Connector

C

Part No.	Model
Connector without cable	198 546 150
Connector with cable (5m PVC)	198 546 151
Connector with cable (10m PVC)	198 546 152
Connector with cable (5m PUR)	198 546 153
Connector with cable (10m PUR)	198 546 154

3-Way Interface Module Adapter

C

d - d [mm]	Size [inch]	Part No.
16 - 20	3/8 - 1/2	198 543 000
25	3/4 - 1	198 543 001
32	1 1/4 - 1 1/2	198 543 002
40	2	198 543 003

Mounting Plate



C

d - d [mm]	Size [Inch]	Part No.
16 - 32	3/8 - 1	167 484 110
40 - 63	1 1/4 - 2	167 484 111



Handle Extension



Upper/Lower Adapters

PVC Handle Extension

C

d - d [mm]	Size [Inch]	Part No.
16 - 20	3/8 - 1/2	161 486 443
25 - 32	3/4 - 1	161 486 444
40 - 50	1 1/4 - 1 1/2	161 486 445
63	2	161 486 446
75-90	2 1/2 - 3	161 490 920
110	4	161 490 921

Transparent Handle Inserts

C

d - d [mm]	Size [Inch]	Packet Size	Part No.
16 - 20	3/8 - 1/2	10ea	198 807 221
25 - 32	3/4 - 1	10ea	198 807 222
40 - 50	1 1/4 - 1 1/2	5ea	198 807 223
63	2	5ea	198 807 224

Includes upper and lower socket extension adapters. Does not include 3/4" pipe.

Ball Valve Handle Labels

d - d [mm]	Size [Inch]	Label and Paper Clip Kit		10 Sheet Packets		100 Sheet Packets	
		Part No.	Total	Part No.	Total	Part No.	Total
16 - 20	3/8 - 1/2	150 807 221	480	150 807 231	4800	150 807 251	4800
25 - 32	3/4 - 1	150 807 222	240	150 807 232	2400	150 807 252	2400
40 - 50	1 1/4 - 1 1/2	150 807 223	180	150 807 233	1800	150 807 253	1800
63	2	150 807 224	110	150 807 234	1100	150 807 254	1100

Turn Limiter 543 Pro

C

d - d [mm]	Size [inch]	90 Degrees Part No.	180 Degrees Part No.
16 - 20	3/8 - 1/2	167 482 479	167 482 489
25	3/4 - 1	167 482 480	167 482 490
32	1 1/4 - 1 1/2	167 482 481	167 482 491
40	2	167 482 482	167 482 942



3/8" and 1/2" 180° turn limiters require a special handle. Please contact Inside Sales for more information.

Type 567 Wafer Style Butterfly Valve



A

PVC

d - Size [mm]-[inch]	Lever		Gear	
	EPDM	FKM	EPDM	FKM
63 - 2	161 567 002	161 567 022	161 567 042	161 567 062
75 - 2 ½	161 567 003	161 567 023	161 567 043	161 567 063
90 - 3	161 567 004	161 567 024	161 567 044	161 567 064
110 - 4	161 567 005	161 567 025	161 567 045	161 567 065
140 - 5	161 567 006	161 567 026	161 567 046	161 567 066
160 - 6	161 567 007	161 567 027	161 567 047	161 567 067
225 - 8	161 567 008	161 567 028	161 567 048	161 567 068
280 - 10	161 567 009	161 567 029	161 567 049	161 567 069
315 - 12	161 567 010	161 567 030	161 567 050	161 567 070

The Type 567 is compatible with ANSI 150, DIN and JIS bolt patterns

CPVC

A

d - Size [mm]-[inch]	Lever		Gear	
	EPDM	FKM	EPDM	FKM
63 - 2	163 567 002	163 567 022	163 567 042	163 567 062
75 - 2 ½	163 567 003	163 567 023	163 567 043	163 567 063
90 - 3	163 567 004	163 567 024	163 567 044	163 567 064
110 - 4	163 567 005	163 567 025	163 567 045	163 567 065
140 - 5	163 567 006	163 567 026	163 567 046	163 567 066
160 - 6	163 567 007	163 567 027	163 567 047	163 567 067
225 - 8	163 567 008	163 567 028	163 567 048	163 567 068
280 - 10	163 567 009	163 567 029	163 567 049	163 567 069
315 - 12	163 567 010	163 567 030	163 567 050	163 567 070

PTFE seals available upon request.

The Type 567 is compatible with ANSI 150, DIN and JIS bolt patterns.

Type 567 Wafer Style Butterfly Valve



A

PROGEF® Standard PP

d - Size [mm]-[inch]	Lever		Gear	
	EPDM	FKM	EPDM	FKM
63 - 2	167 567 002	167 567 022	167 567 042	167 567 062
75 - 2 ½	167 567 003	167 567 023	167 567 043	167 567 063
90 - 3	167 567 004	167 567 024	167 567 044	167 567 064
110 - 4	167 567 005	167 567 025	167 567 045	167 567 065
140 - 5	167 567 006	167 567 026	167 567 046	167 567 066
160 - 6	167 567 007	167 567 027	167 567 047	167 567 067
225 - 8	167 567 008	167 567 028	167 567 048	167 567 068
280 - 10	167 567 009	167 567 029	167 567 049	167 567 069
315 - 12	167 567 010	167 567 030	167 567 050	167 567 070
355 - 14	-	-	167 567 051	167 567 071
400 - 16	-	-	167 567 052	167 567 072
450 - 18	-	-	167 567 053	167 567 073
500 - 20	-	-	167 567 054	167 567 074
630 - 24	-	-	167 567 055	167 567 075

d - Size [mm]-[inch]	Bare Shaft	
	EPDM	FKM
355 - 14	167 567 811	167 567 831
400 - 16	167 567 812	167 567 832
450 - 18	167 567 813	167 567 833
500 - 20	167 567 814	167 567 834
630 - 24	167 567 815	167 567 835



PTFE seals available 2"-12" upon request.

The Type 567 is compatible with ANSI 150, DIN and JIS bolt patterns.

SYGEF® Standard PVDF

A

d - Size [mm]-[inch]	Lever		Lever	
	FKM	PTFE/FKM	FKM	PTFE/FKM
63 - 2	175 567 002	175 567 202	175 567 022	175 567 222
75 - 2 ½	175 567 003	175 567 203	175 567 023	175 567 223
90 - 3	175 567 004	175 567 204	175 567 024	175 567 224
110 - 4	175 567 005	175 567 205	175 567 025	175 567 225
140 - 5	175 567 006	175 567 206	175 567 026	175 567 226
160 - 6	175 567 007	175 567 207	175 567 027	175 567 227
225 - 8	175 567 008	175 567 208	175 567 028	175 567 228
280 - 10	175 567 009	175 567 209	175 567 029	175 567 229
315 - 12	175 567 010	175 567 210	175 567 030	175 567 230

The Type 567 is compatible with ANSI 150, DIN and JIS bolt patterns.

Type 565 Wafer Style Butterfly Valve



A

d - Size [mm]-[inch]	Lever		Gear	
	EPDM	FKM	EPDM	FKM
63 - 2	199 565 000	199 565 020	150 565 200	150 565 220
75 - 2 ½	199 565 001	199 565 021	150 565 201	150 565 221
90 - 3	199 565 002	199 565 022	150 565 202	150 565 222
110 - 4	199 565 003	199 565 023	150 565 203	150 565 223
140 - 5	199 565 004	199 565 024	150 565 204	150 565 224
160 - 6	199 565 005	199 565 025	150 565 205	150 565 225
225 - 8	199 565 006	199 565 026	150 565 206	150 565 226
280 - 10	-	-	150 565 207	150 565 227
315 - 12	-	-	150 565 208	150 565 228

The Type 565 is compatible with ANSI 150, DIN and JIS bolt patterns.

Type 039 Wafer Style Butterfly Valve



A

Gear

Size [inch]	Stainless Steel		Epoxy Coated Ductile Iron	
	EPDM	FKM	EPDM	FKM
14	198 039 030	198 039 070	198 039 020	198039060
16	198 039 031	198 039 071	198 039 021	198039061
18	198 039 032	198 039 072	198 039 022	198039062
20	198 039 033	198 039 073	198 039 023	198039063
24	198 039 034	198 039 074	198 039 024	198039064

The Type 039 is compatible with ANSI 150 and DIN bolt patterns.

Type 578 ANSI Lug Style Butterfly Valve



A

PVC

Size [inch]	Lever		Gear	
	EPDM	FKM	EPDM	FKM
2	161 578 102	161 578 122	161 578 142	161 578 162
2 ½	161 578 103	161 578 123	161 578 143	161 578 163
3	161 578 104	161 578 124	161 578 144	161 578 164
4	161 578 105	161 578 125	161 578 145	161 578 165
5	161 578 106	161 578 126	161 578 146	161 578 166
6	161 578 107	161 578 127	161 578 147	161 578 167
8	161 578 108	161 578 128	161 578 148	161 578 168
10	161 578 109	161 578 129	161 578 149	161 578 169
12	161 578 110	161 578 130	161 578 150	161 578 170

CPVC

A

Size [inch]	Lever		Gear	
	EPDM	FKM	EPDM	FKM
2	163 578 102	163 578 122	163 578 142	163 578 162
2 ½	163 578 103	163 578 123	163 578 143	163 578 163
3	163 578 104	163 578 124	163 578 144	163 578 164
4	163 578 105	163 578 125	163 578 145	163 578 165
5	163 578 106	163 578 126	163 578 146	163 578 166
6	163 578 107	163 578 127	163 578 147	163 578 167
8	163 578 108	163 578 128	163 578 148	163 578 168
10	163 578 109	163 578 129	163 578 149	163 578 169
12	163 578 110	163 578 130	163 578 150	163 578 170

PTFE seals available upon request.



A

PROGEF® Standard PP

Size [inch]	Lever		Gear	
	EPDM	FKM	EPDM	FKM
2	167 578 102	167 578 122	167 578 142	167 578 162
2 ½	167 578 103	167 578 123	167 578 143	167 578 163
3	167 578 104	167 578 124	167 578 144	167 578 164
4	167 578 105	167 578 125	167 578 145	167 578 165
5	167 578 106	167 578 126	167 578 146	167 578 166
6	167 578 107	167 578 127	167 578 147	167 578 167
8	167 578 108	167 578 128	167 578 148	167 578 168
10	167 578 109	167 578 129	167 578 149	167 578 169
12	167 578 110	167 578 130	167 578 150	167 578 170

PTFE seals available upon request.

SYGEF® Standard PVDF



A

Size [inch]	Lever		Gear	
	FKM	PTFE/FKM	FKM	PTFE/FKM
2	175 578 102	175 578 302	175 578 122	175 578 322
2 ½	175 578 103	175 578 303	175 578 123	175 578 323
3	175 578 104	175 578 304	175 578 124	175 578 324
4	175 578 105	175 578 305	175 578 125	175 578 325
5	175 578 106	175 578 306	175 578 126	175 578 326
6	175 578 107	175 578 307	175 578 127	175 578 327
8	175 578 108	175 578 308	175 578 128	175 578 328
10	175 578 109	175 578 309	175 578 129	175 578 329
12	175 578 110	175 578 310	175 578 130	175 578 330

Type 065 HP ANSI Lug Style Butterfly Valve

PFA/PTFE

B

Size [inch]	Lever Part No.	Gear Part No.
2	160 065 000	160 065 200
3	160 065 002	160 065 202
4	160 065 003	160 065 203
6	160 065 004	160 065 204
8	-	160 065 205
10	-	160 065 206
12	-	160 065 207
14	-	160 065 208



Lever

Type 065 Butterfly Valve is available up to 36".

Accessories Butterfly Valve

Integrated Position Indicator

C

d [mm]	Size [inch]	Mechanical Limit Switches	
		250 V AC / DC 6 A Ag Ni	4 - 30 V DC 100 mA Au
63 - 90	2 - 3	161 486 859	161 486 858
110 - 140	4 - 5	161 486 305	161 486 304
160 - 225	6 - 8	161 486 010	161 486 009

d [mm]	Size [inch]	Inductive Limit Switches		
		1 - 8 V NAMUR	5 - 30 V DC 100 mA PNP	5 - 30 V DC 100 mA NPN
63 - 90	2 - 3	161 486 855	161 486 856	161 486 857
110 - 140	4 - 5	161 486 301	161 486 302	161 486 303
160 - 225	6 - 8	161 486 006	161 486 007	161 486 008



For Type 567/578 Butterfly Valves only.

Accessories Butterfly Valve

Feedback Sensor



C

Size [inch]	PNP - 0.15A		NPN - 0.15A	
	Close - Green	Close - Red	Close - Green	Close - Red
3/8 - 2	198 546 001	198 546 002	198 546 005	198 546 006
Size [inch]	NAMUR (ATEX) - 0.15A			
	Close - Green	Close - Red		
3/8 - 2	198 546 003	198 546 004		

Feedback Sensor is compatible with Type 565. Switching Ring is required.

Switching Ring for Feedback Sensor

C

Size [inch]	Part No.
2 - 3	199 565 900
4 - 5	199 565 901
6 - 8	199 565 902
10 - 12	199 565 903



Switching Ring is for Type 565 only.

Feedback Sensor Connector

C

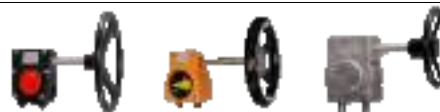
Model	Part No.
Connector without cable	198 546 150
Connector with cable (5m PVC)	198 546 151
Connector with cable (10m PVC)	198 546 152
Connector with cable (5m PUR)	198 546 153
Connector with cable (10m PUR)	198 546 154



Butterfly Valve Chain Operator

C

d [mm]	Size [inch]	Description	Painted Ductile Iron
63 - 315	2 - 12	Chain Operator Kit	150 101 626
63 - 315	2 - 12	Wheel	150 101 609
280 - 315	10 - 12	Chain Operator for Type 065 Valve	160 065 323
all sizes		Chain per Foot	150 101 618
all sizes		Masterlink	150 101 616



Cast Iron

Aluminum

Stainless Steel

C

Gear Operator

d [mm]	Size [inch]	Cast Iron	Aluminum	Stainless Steel
63 - 225	2 - 8	150 483 472	161 483 471	150 483 491
280 - 315	10 - 12	150 483 473	161 483 472	150 483 492

For Type 565/567/578 Butterfly Valves only.

Intermediate Kit required to convert a lever valve to gear.

Accessories Butterfly Valve



Lever

Standard Lever

Fine Adjustment Lever

Type 565 Lever

A

d [mm]	Size [inch]	Type 567/578		Type 565
		Standard	with Fine Adjustment	Part No.
63	2	161 486 690	161 486 325	199 565 906
75	2 ½	161 486 690	161 486 325	199 565 906
90	3	161 486 690	161 486 325	199 565 906
110	4	161 486 691	161 486 326	199 565 907
140	5	161 486 691	161 486 326	199 565 907
160	6	161 486 694	161 486 327	199 565 908
225	8	161 486 695	161 486 328	199 565 908
280	10	161 486 697	-	-
315	12	161 486 697	-	-

Two Piece Handle Extension

C

d [mm]	Size [inch]	Description	SS316/SS316
63 - 90	2 - 3	1st foot	150 567 001
110 - 140	4 - 5	1st foot	150 567 002
160	6	1st foot	150 567 003
225	8	1st foot	150 567 004
280 - 315	10 - 12	1st foot	150 567 005

Minimum length of 6 inches.



Direct Mount

Gear Op. Mount

C

Direct Mount 2" Square Operating Nut

d [mm]	Size [inch]	Anodized Aluminum
63 - 90	2 - 3	150 900 454
110 - 140	4 - 5	150 900 456
160 - 225	6 - 8	150 900 457
280 - 315	10 - 12	150 900 459

Gear Op Mount 2" Square Operating Nut

C

d [mm]	Size [inch]	Anodized Aluminum
63 - 315	2 - 12	150 901 454

For Gear AL gear op only.

PVC Diaphragm Valve



A

Type 514 Socket

Size [inch]	Socket			
	EPDM	FKM	PTFE/EPDM	PTFE/FKM
1/2	161 514 612	161 514 662	161 514 632	150 514 612
3/4	161 514 613	161 514 663	161 514 633	150 514 613
1	161 514 614	161 514 664	161 514 634	150 514 614
1 1/4	161 514 615	161 514 665	161 514 635	150 514 615
1 1/2	161 514 616	161 514 666	161 514 636	150 514 616
2	161 514 617	161 514 667	161 514 637	150 514 617

Type 517/317 ANSI Flanged

A

Size [inch]	ANSI Flanged		
	EPDM	FKM	PTFE/EPDM
1/2	161 517 612	161 517 662	161 517 632
3/4	161 517 613	161 517 663	161 517 633
1	161 517 614	161 517 664	161 517 634
1 1/4	161 517 615	161 517 665	161 517 635
1 1/2	161 517 616	161 517 666	161 517 636
2	161 517 617	161 517 667	161 517 637
2 1/2	161 317 623	161 317 668	161 317 638
3	161 317 024	161 317 069	161 317 039
4	161 317 025	161 317 070	161 317 040
6	161 317 027	161 317 072	161 317 042



CPVC Diaphragm Valve



A

Type 514 Socket

Size [inch]	Socket			
	EPDM	FKM	PTFE/EPDM	PTFE/FKM
1/2	163 514 612	163 514 662	163 514 632	153 514 612
3/4	163 514 613	163 514 663	163 514 633	153 514 613
1	163 514 614	163 514 664	163 514 634	153 514 614
1 1/4	163 514 615	163 514 665	163 514 635	153 514 615
1 1/2	163 514 616	163 514 666	163 514 636	153 514 616
2	163 514 617	163 514 667	163 514 637	153 514 617

Type 517/317 ANSI Flanged

A

Size [inch]	ANSI Flanged		
	EPDM	FKM	PTFE/EPDM
1/2	163 517 712	163 517 762	163 517 732
3/4	163 517 713	163 517 763	163 517 733
1	163 517 714	163 517 764	163 517 734
1 1/4	163 517 715	163 517 765	163 517 735
1 1/2	163 517 716	163 517 766	163 517 736
2	163 517 717	163 517 767	163 517 737
2 1/2	163 317 623	163 317 668	163 317 638
3	163 317 024	163 317 069	163 317 039
4	163 317 025	163 317 370	163 317 040



PROGEF® Standard PP Diaphragm Valve



514 Socket Fusion Union



514 IR/Butt Fusion Union



515 IR/Butt Fusion

Type 514 Union

A

d [mm]	Socket Fusion Union			
	NBR	EPDM	FKM	PTFE/EPDM
20	167 514 002	167 514 012	167 514 062	167 514 032
25	167 514 003	167 514 013	167 514 063	167 514 033
32	167 514 004	167 514 014	167 514 064	167 514 034
40	167 514 005	167 514 015	167 514 065	167 514 035
50	167 514 006	167 514 016	167 514 066	167 514 036
63	167 514 007	167 514 017	167 514 067	167 514 037

d [mm]	IR/Butt Fusion Union			
	NBR	EPDM	FKM	PTFE/EPDM
20	167 514 102	167 514 112	167 514 162	167 514 132
25	167 514 103	167 514 113	167 514 163	167 514 133
32	167 514 104	167 514 114	167 514 164	167 514 134
40	167 514 105	167 514 115	167 514 165	167 514 135
50	167 514 106	167 514 116	167 514 166	167 514 136
63	167 514 107	167 514 117	167 514 167	167 514 137

Type 515 Spigot

A

d [mm]	IR/Butt Fusion			
	NBR	EPDM	FKM	PTFE/EPDM
20	167 515 102	167 515 112	167 515 162	167 515 132
25	167 515 103	167 515 113	167 515 163	167 515 133
32	167 515 104	167 515 114	167 515 164	167 515 134
40	167 515 105	167 515 115	167 515 165	167 515 135
50	167 515 106	167 515 116	167 515 166	167 515 136
63	167 515 107	167 515 117	167 515 167	167 515 137

Type 517/317 ANSI Flanged

A

Size [inch]	ANSI Flanged	
	EPDM	PTFE/EPDM
½	167 517 712	167 517 732
¾	167 517 713	167 517 733
1	167 517 714	167 517 734
1 ¼	167 517 715	167 517 735
1 ½	167 517 716	167 517 736
2	167 517 717	167 517 737
2 ½	167 317 523	167 317 538
3	167 317 024	167 317 039
4	167 317 025	167 317 040
6	167 317 027	167 317 042



PROGEF® Standard PP Diaphragm Valve

Type 519 Zero Static

A

Main Size [mm]	Branch Size [mm]	Valve Size [mm]	IR/Butt Fusion	
			EPDM	PTFE/EPDM
20	20	20	167 519 101	167 519 301
25	20	25	167 519 103	167 519 303
25	25	25	167 519 104	167 519 304
32	20	25	167 519 107	167 519 307
32	25	25	167 519 108	167 519 308
32	32	32	167 519 109	167 519 309
40	20	32	167 519 112	167 519 312
40	40	32	167 519 115	167 519 315
50	20	25	167 519 118	167 519 318
50	25	32	167 519 119	167 519 319
50	32	32	167 519 120	167 519 320
63	20	25	167 519 125	167 519 325
63	25	32	167 519 126	167 519 326
63	32	32	167 519 127	167 519 327



PROGEF® Natural PP Diaphragm Valve

Type 515 Spigot

A

d [mm]	IR/Butt Fusion	
	EPDM	PTFE/EPDM
20	168 515 112	168 515 132
25	168 515 113	168 515 133
32	168 515 114	168 515 134
40	168 515 115	168 515 135
50	168 515 116	168 515 136
63	168 515 117	168 515 137



Type 519 Zero Static

A

Main Size [mm]	Branch Size [mm]	Valve Size [mm]	IR/Butt Fusion	
			EPDM	PTFE/EPDM
20	20	20	168 519 101	168 519 301
25	20	25	168 519 103	168 519 303
25	25	25	168 519 104	168 519 304
32	20	25	168 519 107	168 519 307
32	25	25	168 519 108	168 519 308
32	32	32	168 519 109	168 519 309
40	20	32	168 519 112	168 519 312
40	40	32	168 519 115	168 519 315
50	20	25	168 519 118	168 519 318
50	25	32	168 519 119	168 519 319
50	32	32	168 519 120	168 519 320
63	20	25	168 519 125	168 519 325
63	25	32	168 519 126	168 519 326
63	32	32	168 519 127	168 519 327



SYGEF® Standard PVDF Diaphragm Valve



514 Socket Fusion Union



514 IR/Butt Fusion Union



515 IR/Butt Fusion

Type 514 Union

A

d [mm]	Socket Fusion Union	IR/Butt Fusion Union
	PTFE/EPDM	PTFE/EPDM
20	185 514 032	185 514 132
25	185 514 033	185 514 133
32	185 514 034	185 514 134
40	185 514 035	185 514 135
50	185 514 036	185 514 136
63	185 514 037	185 514 137

Type 515 Spigot

A

d [mm]	515 IR/Butt Fusion
	PTFE/EPDM
20	185 515 132
25	185 515 133
32	185 515 134
40	185 515 135
50	185 515 136
63	185 515 137

Type 517/317 ANSI Flanged

A

Size [inch]	517 ANSI Flanged	317 ANSI Flanged
	PTFE/EPDM	PTFE
1/2	185 517 732	-
3/4	185 517 733	-
1	185 517 734	-
1 1/4	185 517 735	-
1 1/2	185 517 736	-
2	185 517 737	-
2 1/2	175 317 538	175 317 568
3	175 317 009	175 317 054
4	175 317 340	175 317 355
6	175 317 012	175 317 057



514 IR/Butt Fusion Union

SYGEF® Plus PVDF-HP Diaphragm Valve

Type 514 Union

A

d [mm]	514 IR/Butt Fusion Union	
	PTFE/EPDM	PTFE/FKM
20	181 514 132	181 514 152
25	181 514 133	181 514 153
32	181 514 134	181 514 154
40	181 514 135	181 514 155
50	181 514 136	181 514 156
63	181 514 137	181 514 157



Type 515 Spigot

A

d [mm]	515 IR/Butt Fusion	
	PTFE/EPDM	PTFE/FKM
20	181 515 132	181 515 152
25	181 515 133	181 515 153
32	181 515 134	181 515 154
40	181 515 135	181 515 155
50	181 515 136	181 515 156
63	181 515 137	181 515 157



SYGEF® Plus PVDF-HP Diaphragm Valve

Type 519 Zero Static

A

Main Size [mm]	Branch Size [mm]	Valve Size [mm]	IR/Butt Fusion	
			PTFE/EPDM	PTFE/FKM
20	20	20	181 519 301	181 519 501
25	20	25	181 519 303	181 519 503
25	25	25	181 519 304	181 519 504
32	20	25	181 519 307	181 519 507
32	25	25	181 519 308	181 519 508
32	32	32	181 519 309	181 519 509
40	20	32	181 519 312	181 519 512
40	25	32	181 519 313	181 519 513
40	32	32	181 519 314	181 519 514
40	40	32	181 519 315	181 519 515
50	20	25	181 519 318	181 519 518
50	25	32	181 519 319	181 519 519
50	32	32	181 519 320	181 519 520
50	40	63	181 519 321	181 519 521
50	50	63	181 519 322	181 519 522
63	20	25	181 519 325	181 519 525
63	25	32	181 519 326	181 519 526
63	32	32	181 519 327	181 519 527
63	40	63	181 519 328	181 519 528
63	50	63	181 519 329	181 519 529
63	63	63	181 519 330	181 519 530
75	40	32	181 519 336	181 519 536
75	50	63	181 519 337	181 519 537
75	63	63	181 519 338	181 519 538
90	20	32	181 519 341	181 519 541
90	25	32	181 519 342	181 519 542
90	32	32	181 519 343	181 519 543
90	50	63	181 519 345	181 519 545
90	63	63	181 519 346	181 519 546
110	20	32	181 519 351	181 519 551
110	25	32	181 519 352	181 519 552
110	32	32	181 519 353	181 519 553
110	50	63	181 519 355	181 519 555
110	63	63	181 519 356	181 519 556
140	32	32	181 519 363	181 519 563
140	40	63	181 519 364	181 519 564
140	50	63	181 519 365	181 519 565
140	63	63	181 519 366	181 519 566
160	32	32	181 519 373	181 519 573
160	40	63	181 519 374	181 519 574
160	50	63	181 519 375	181 519 575
160	63	63	181 519 376	181 519 576



HP Union O-Rings

A

Size [inch]	Threaded NPT	
	EPDM	FKM
20	749 411 005	167 561 111
25	749 411 006	167 561 112
32	749 411 120	167 561 113
40	749 411 062	167 561 114
50	749 411 172	167 561 115
63	749 411 054	167 561 116

Type 561 Cone Check Valve

For vertical installation - No spring included



PVC and CPVC

PVC Socket/Threaded NPT

CPVC Socket/Threaded NPT



A

Size [inch]	PVC Socket/Threaded NPT		CPVC Socket/Threaded NPT	
	EPDM	FKM	EPDM	FKM
3/8	161 561 101	161 561 111	163 561 101	163 561 111
1/2	161 561 102	161 561 112	163 561 102	163 561 112
3/4	161 561 103	161 561 113	163 561 103	163 561 113
1	161 561 104	161 561 114	163 561 104	163 561 114
1 1/4	161 561 105	161 561 115	163 561 105	163 561 115
1 1/2	161 561 106	161 561 116	163 561 106	163 561 116
2	161 561 107	161 561 117	163 561 107	163 561 117
2 1/2	161 561 108	161 561 118	163 561 108	163 561 118
3	161 561 109	161 561 119	163 561 109	163 561 119
4	161 561 110	161 561 120	163 561 110	163 561 120

PROGEF® Standard PP

A

d [mm]	Socket Fusion		IR/Butt Fusion	
	EPDM	FKM	EPDM	FKM
16	167 561 001	167 561 011	-	-
20	167 561 002	167 561 012	167 561 082	167 561 092
25	167 561 003	167 561 013	167 561 083	167 561 093
32	167 561 004	167 561 014	167 561 084	167 561 094
40	167 561 005	167 561 015	167 561 085	167 561 095
50	167 561 006	167 561 016	167 561 086	167 561 096
63	167 561 007	167 561 017	167 561 087	167 561 097
75	167 561 008	167 561 018	167 561 088	167 561 098
90	167 561 009	167 561 019	167 561 089	167 561 099
110	167 561 010	167 561 020	167 561 090	167 561 100

Size [inch]	Threaded NPT		Socket Fusion/Threaded NPT	IR/Butt Fusion
	EPDM	FKM		
3/8	167 561 101	167 561 111		
1/2	167 561 102	167 561 112		
3/4	167 561 103	167 561 113		
1	167 561 104	167 561 114		
1 1/4	167 561 105	167 561 115		
1 1/2	167 561 106	167 561 116		
2	167 561 107	167 561 117		

Socket Fusion/Threaded NPT



IR/Butt Fusion

Type 561 Cone Check Valve

For vertical installation - No spring included

SYGEF® Standard PVDF

A

d [mm]	Socket Fusion	IR/Butt Fusion	 Socket Fusion	 IR/Butt Fusion
	FKM	FKM		
16	175 561 011	-		
20	175 561 012	175 561 092		
25	175 561 013	175 561 093		
32	175 561 014	175 561 094		
40	175 561 015	175 561 095		
50	175 561 016	175 561 096		
63	175 561 017	175 561 097		
75	175 561 018	175 561 098		
90	175 561 019	175 561 099		
110	175 561 020	175 561 100		

Type 562 Cone Check Valve

For vertical or horizontal installation - Includes SS spring
Alternative spring materials available



PVC Socket/Threaded NPT

CPVC Socket/Threaded NPT

A

PVC and CPVC



Size [inch]	PVC Socket/Threaded NPT		CPVC Socket/Threaded NPT	
	EPDM	FKM	EPDM	FKM
3/8	161 562 101	161 562 111	163 562 101	163 562 111
1/2	161 562 102	161 562 112	163 562 102	163 562 112
3/4	161 562 103	161 562 113	163 562 103	163 562 113
1	161 562 104	161 562 114	163 562 104	163 562 114
1 1/4	161 562 105	161 562 115	163 562 105	163 562 115
1 1/2	161 562 106	161 562 116	163 562 106	163 562 116
2	161 562 107	161 562 117	163 562 107	163 562 117
2 1/2	161 562 108	161 562 118	163 562 108	163 562 118
3	161 562 109	161 562 119	163 562 109	163 562 119
4	161 562 110	161 562 120	163 562 110	163 562 120

Type 562 Cone Check Valve

For vertical or horizontal installation - Includes SS spring
Alternative spring materials available



PROGEF® Standard PP

A

d [mm]	Socket Fusion		IR/Butt Fusion	
	EPDM	FKM	EPDM	FKM
16	167 562 001	167 562 011	-	-
20	167 562 002	167 562 012	167 562 082	167 562 092
25	167 562 003	167 562 013	167 562 083	167 562 093
32	167 562 004	167 562 014	167 562 084	167 562 094
40	167 562 005	167 562 015	167 562 085	167 562 095
50	167 562 006	167 562 016	167 562 086	167 562 096
63	167 562 007	167 562 017	167 562 087	167 562 097
75	167 562 008	167 562 018	167 562 088	167 562 098
90	167 562 009	167 562 019	167 562 089	167 562 099
110	167 562 010	167 562 020	167 562 090	167 562 100
Size [inch]	Threaded NPT			
	EPDM	FKM		
3/8	167 562 101	167 562 111	 Socket Fusion/Threaded NPT	 IR/Butt Fusion
1/2	167 562 102	167 562 112		
3/4	167 562 103	167 562 113		
1	167 562 104	167 562 114		
1 1/4	167 562 105	167 562 115		
1 1/2	167 562 106	167 562 116		
2	167 562 107	167 562 117		

SYGEF® Standard PVDF

A

d [mm]	Socket Fusion	IR/Butt Fusion		
	FKM	FKM		
16	175 562 011	-	 Socket Fusion	 IR/Butt Fusion
20	175 562 012	175 562 092		
25	175 562 013	175 562 093		
32	175 562 014	175 562 094		
40	175 562 015	175 562 095		
50	175 562 016	175 562 096		
63	175 562 017	175 562 097		
75	175 562 018	175 562 098		
90	175 562 019	175 562 099		
110	175 562 020	175 562 100		

Type 591 Ventilating and Vacuum Breaker Valve



PVC Socket/Threaded NPT



PVC Socket/Threaded NPT



PP Socket Fusion



PP IR/Butt Fusion

Does not include spring

PVC and CPVC

A

Size [inch]	PVC Socket/Threaded NPT		CPVC Socket/Threaded NPT	
	EPDM	FKM	EPDM	FKM
3/8	161 591 101	161 591 111	163 591 101	163 591 111
1/2	161 591 102	161 591 112	163 591 102	163 591 112
3/4	161 591 103	161 591 113	163 591 103	163 591 113
1	161 591 104	161 591 114	163 591 104	163 591 114
1 1/4	161 591 105	161 591 115	163 591 105	163 591 115
1 1/2	161 591 106	161 591 116	163 591 106	163 591 116
2	161 591 107	161 591 117	163 591 107	163 591 117
2 1/2	161 591 108	161 591 118	163 591 108	163 591 118
3	161 591 109	161 591 119	163 591 109	163 591 119
4	161 591 110	161 591 120	163 591 110	163 591 120



PROGEF® Standard PP

A

d [mm]	Socket Fusion		IR/Butt Fusion	
	EPDM	FKM	EPDM	FKM
16	167 591 001	167 591 011	167 591 041	167 591 051
20	167 591 002	167 591 012	167 591 042	167 591 052
25	167 591 003	167 591 013	167 591 043	167 591 053
32	167 591 004	167 591 014	167 591 044	167 591 054
40	167 591 005	167 591 015	167 591 045	167 591 055
50	167 591 006	167 591 016	167 591 046	167 591 056
63	167 591 007	167 591 017	167 591 047	167 591 057
75	167 591 008	167 591 018	167 591 048	167 591 058
90	167 591 009	167 591 019	167 591 049	167 591 059
110	167 591 010	167 591 020	167 591 050	167 591 060

SYGEF® Standard PVDF

A

d [mm]	Socket Fusion	IR/Butt Fusion	 PVDF Socket Fusion	 PVDF IR/Butt Fusion
	FKM	FKM		
16	175 591 011	175 591 031		
20	175 591 012	175 591 032		
25	175 591 013	175 591 033		
32	175 591 014	175 591 034		
40	175 591 015	175 591 035		
50	175 591 016	175 591 036		
63	175 591 017	175 591 037		
75	175 591 018	-		
90	175 591 019	-		
110	175 591 020	-		

Type 595 Vacuum Breaker Valve



PVC Socket/Threaded NPT



CPVC Socket/Threaded NPT



PP Socket Fusion



PP IR/Butt Fusion

Includes SS spring. Alternative spring materials available

PVC and CPVC

A

Size [inch]	PVC Socket/Threaded NPT		CPVC Socket/Threaded NPT	
	EPDM	FKM	EPDM	FKM
3/8	161 595 101	161 595 111	163 595 101	163 595 111
1/2	161 595 102	161 595 112	163 595 102	163 595 112
3/4	161 595 103	161 595 113	163 595 103	163 595 113
1	161 595 104	161 595 114	163 595 104	163 595 114
1 1/4	161 595 105	161 595 115	163 595 105	163 595 115
1 1/2	161 595 106	161 595 116	163 595 106	163 595 116
2	161 595 107	161 595 117	163 595 107	163 595 117
2 1/2	161 595 108	161 595 118	163 595 108	163 595 118
3	161 595 109	161 595 119	163 595 109	163 595 119
4	161 595 110	161 595 120	163 595 110	163 595 120



PROGEF® Standard PP

A

d [mm]	Socket Fusion		IR/Butt Fusion	
	EPDM	FKM	EPDM	FKM
16	167 595 001	167 595 011	167 595 041	167 595 051
20	167 595 002	167 595 012	167 595 042	167 595 052
25	167 595 003	167 595 013	167 595 043	167 595 053
32	167 595 004	167 595 014	167 595 044	167 595 054
40	167 595 005	167 595 015	167 595 045	167 595 055
50	167 595 006	167 595 016	167 595 046	167 595 056
63	167 595 007	167 595 017	167 595 047	167 595 057
75	167 595 008	167 595 018	167 595 048	167 595 058
90	167 595 009	167 595 019	167 595 049	167 595 059
110	167 595 010	167 595 020	167 595 050	167 595 060

SYGEF® Standard PVDF

A

d [mm]	Socket Fusion	IR/Butt Fusion	 PVDF Socket Fusion	 PVDF IR/Butt Fusion
	FKM	FKM		
16	175 595 011	175 595 031		
20	175 595 012	175 595 032		
25	175 595 013	175 595 033		
32	175 595 014	175 595 034		
40	175 595 015	175 595 035		
50	175 595 016	175 595 036		
63	175 595 017	175 595 037		
75	175 595 018	-		
90	175 595 019	-		
110	175 595 020	-		

Accessories Cone Check Valve

Spring

A

d - Size [mm]-[inch]	Stainless Steel Part No.	NIMONIC 90 Part No.	Halar coated Stainless Steel Part No.
16 - 3/8	161 485 132	161 485 152	161 485 142
20 - 1/2	161 485 132	161 485 152	161 485 142
25 - 3/4	161 485 132	161 485 152	161 485 142
32 - 1	161 485 133	161 485 153	161 485 143
40 - 1 1/4	161 485 134	161 485 154	161 485 144
50 - 1 1/2	161 485 135	161 485 155	161 485 145
63 - 2	161 485 136	161 485 156	161 485 146
75 - 2 1/2	161 485 137	161 485 157	161 485 147
90 - 3	161 485 138	161 485 158	161 485 148
110 - 4	161 485 139	161 485 159	161 485 149



Type 050 PVC Screen Assembly

A

Size [inch]	Socket / Barrel Nipple Part No.	Size [inch]	Socket Only Part No.
1/2	161 050 186	3	161 050 053
3/4	161 050 187		
1	161 050 188		
1 1/4	161 050 189		
1 1/2	161 050 190		
2	161 050 191		




Type 369 PVC Wafer Check Valve

Size [inch]	Without Spring		With SS-316 Spring	
	EPDM	FKM	EPDM	FKM
1 1/2	161 369 003	161 369 023	161 369 043	161 369 063
2	161 369 004	161 369 024	161 369 044	161 369 064
2 1/2	161 369 005	161 369 025	161 369 045	161 369 065
3	161 369 006	161 369 026	161 369 046	161 369 066
4	161 369 007	161 369 027	161 369 047	161 369 067
6	161 369 010	161 369 030	161 369 050	161 369 070
8	161 369 011	161 369 031	161 369 051	161 369 071
10	161 369 012	161 369 032	161 369 052	161 369 072
12	161 369 013	161 369 033	161 369 053	161 369 073

Size [inch]	With Hastelloy-C Spring	
	EPDM	FKM
1 1/2	161 369 083	161 369 103
2	161 369 084	161 369 104
2 1/2	161 369 085	161 369 105
3	161 369 086	161 369 106
4	161 369 087	161 369 107
6	161 369 090	161 369 110
8	161 369 091	161 369 111
10	161 369 092	161 369 112
12	161 369 093	161 369 113



Spacer 

Size [inch]	PP
4	150 369 340
6	150 369 360
8	150 369 380
10	150 369 310
12	150 369 312

A

Spacer ensures valve opens when used with certain kinds of flanges

PP and PVDF Type 369 Wafer Check Valves available upon request.

For sizes 3" and below use the next larger flange size (i.e. 2" valves require a 2 1/2" flange)

Type 522 Needle Valve



Angle Body



Globe Body

PVC and CPVC

Size [inch]	Threaded NPT			
	PP		CPVC	
	Globe Body PTFE	Angle Body PTFE	Globe Body PTFE	Angle Body PTFE
¼	150 522 101	150 522 111	150 522 201	150 522 211
⅜	150 522 102	150 522 112	150 522 202	150 522 212
½	150 522 103	150 522 113	150 522 203	150 522 213

PP and PVDF

Size [inch]	Threaded NPT			
	PP		PVDF	
	Globe Body PTFE	Angle Body PTFE	Globe Body PTFE	Angle Body PTFE
¼	157 522 554	-	155 522 554	155 522 579
⅜	-	-	155 522 555	155 522 580
½	157 522 556	157 522 581	155 522 556	155 522 581

PVDF-HP

Size [inch]	Threaded NPT	
	PVDF-HP	
	Globe Body PTFE	Angle Body PTFE
¼	150 900 117	150 900 113
⅜	150 900 116	-
½	150 900 122	150 900 120

Angle Seat Valves

Type 304 Y-Check Valve Translucent PVC

A

Size [inch]	IPS Spigot	
	EPDM	FKM
½	192 304 006	192 304 031
¾	192 304 007	192 304 032
1	192 304 008	192 304 033
1 ¼	192 304 009	192 304 034
1 ½	192 304 010	192 304 035
2	192 304 011	192 304 036
3	192 304 013	192 304 038



Type 305 Line Strainer PP

A

Size [inch]	Socket Fusion		IR/Butt Fusion	
	EPDM	FKM	EPDM	FKM
½	167 305 000	167 305 049	167 305 300	167 305 349
¾	167 305 050	167 305 099	167 305 350	167 305 399
1	167 305 100	167 305 149	167 305 400	167 305 449
1 ¼	167 305 150	167 305 199	167 305 450	167 305 499
1 ½	167 305 200	167 305 249	167 305 500	167 305 549
2	167 305 250	167 305 299	167 305 550	167 305 599

Type 306 Line Strainer Translucent PVC and CPVC

A

Size [inch]	PVC		CPVC	
	IPS Spigot		Socket	
	EPDM	FKM	EPDM	FKM
½	192 306 300	192 306 349	150 306 302	150 306 317
¾	192 306 350	192 306 399	150 306 303	150 306 318
1	192 306 400	192 306 449	150 306 304	150 306 319
1 ¼	192 306 450	192 306 499	150 306 305	150 306 320
1 ½	192 306 500	192 306 549	150 306 306	150 306 321
2	192 306 550	192 306 599	150 306 307	150 306 322
3	192 306 650	192 306 699	-	-

Standard valve includes 20 Mesh Screen

Accessories Type 306 Line Strainer

Perforation

A

Size [inch]	PVC			
	8 Mesh, 3/32" Hole Part No.	12 Mesh, 1/16" Hole Part No.	20 Mesh, 1/32" Hole Part No.	30 Mesh, 1/64" Hole Part No.
1/2	161 305 336	161 305 337	161 305 338	161 305 339
3/4	161 305 386	161 305 387	161 305 388	161 305 389
1	161 305 436	161 305 437	161 305 438	161 305 439
1 1/4	161 305 486	161 305 487	161 305 488	161 305 489
1 1/2	161 305 536	161 305 537	161 305 538	161 305 539
2	161 305 586	161 305 587	161 305 588	161 305 589
3	161 305 686	161 305 687	161 305 688	161 305 689
Stainless Steel				
Size [inch]	30 Mesh, 1/64" Hole Part No.			
1/2	161 486 100			
3/4	161 486 101			
1	161 486 102			
1 1/4	161 486 103			
1 1/2	161 486 104			
2	161 486 105			
3	161 486 107			



Screen Set

A

Size [inch]	PVC
1/2	161 483 126
3/4	161 483 127
1	161 483 128
1 1/4	161 483 129
1 1/2	161 483 130
2	161 483 131
3	161 483 133

Screen set (1/2 - 2") consists of: screen, screen support ring, and circlip

Screen set (3") consists of: screen and screen support ring.

Circlip

A

Size [inch]	PP
1/2	161 482 017
3/4	161 482 018
1	161 482 019
1 1/4	161 482 020
1 1/2	161 482 021
2	161 482 022

Plug

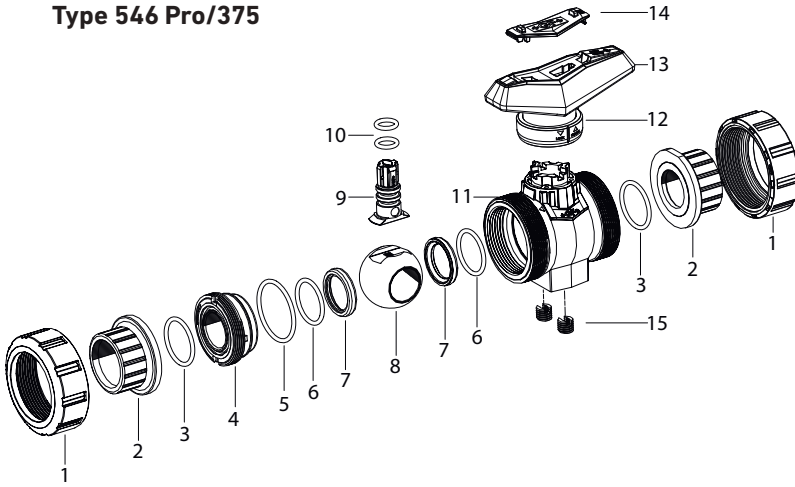
A

Size [inch]	PVC
3	161 305 654

Valve Spare Parts

Spare parts are listed on the following pages of the price list. The below tables are the available spare parts for the shown valves, not all of them are shown in this book. Please contact inside sales for part numbers and pricing if a desired part is not listed.

Type 546 Pro/375



Type 546 Pro

Spare Part No.	Description	Note
1	Valve nut	-
2	Valve end	-
3	Face seal	-
8	Ball	-
9	Stem	-
12	Locking Ring	-
13	Handle	-
5-10	Ball Set	-
3, 5-7, 10	Seal Set	-
4-15	Core	-

Type 375

Spare Part No.	Description	Note
4	Valve nut	PVC only
3	Valve end	PVC only

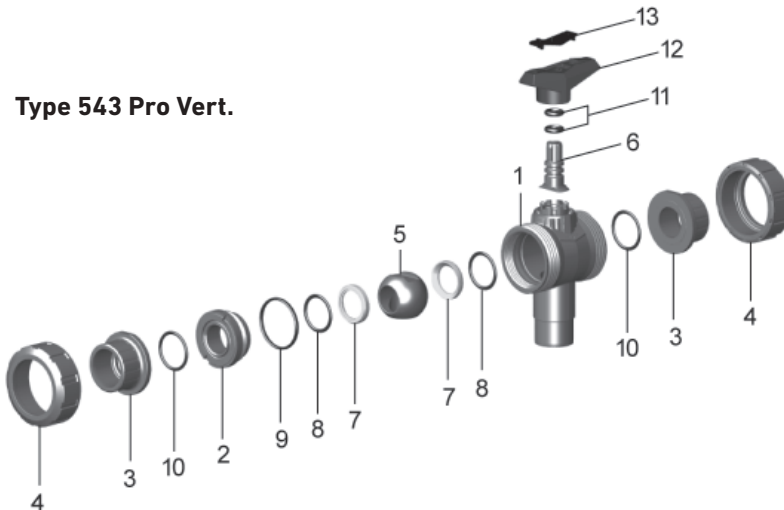
Type 523



Type 523

Spare Part No.	Description	Note
4	Valve nut	Same as 546 Pro
3	Valve end	Same as 546 Pro
10	Face seal	Same as 546 Pro
6	Stem	Same as 546 Pro
12-13	Handle	-
7-9, 11	Seal set	Same as 546 Pro
16	Index plate	-
15	Indicator insert	-
1-2, 5-14	Core	-

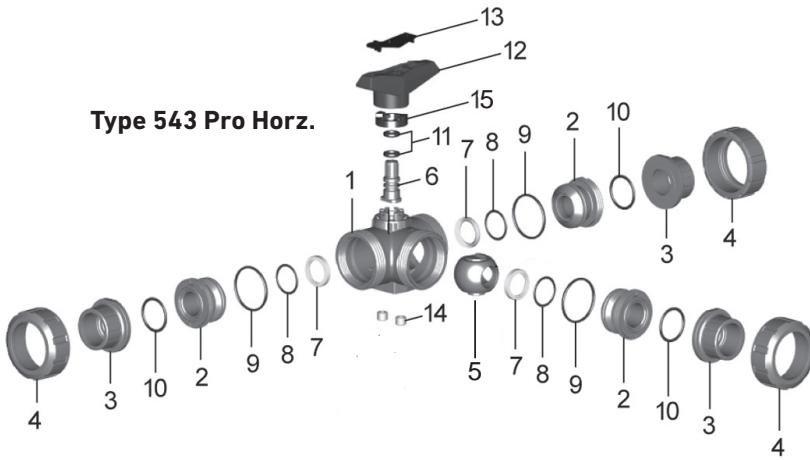
Type 543 Pro Vert.



Type 543 Pro Vertical

Spare Part No.	Description	Note
4	Valve nut	Same as 546 Pro
3	Valve end	Same as 546 Pro
10	Face seal	Same as 546 Pro
12-13	Handle	Same as 546 Pro
5-9, 11	Ball set	-
7-9, 11	Seal set	Same as 546 Pro
1-2, 5-13	Core	-

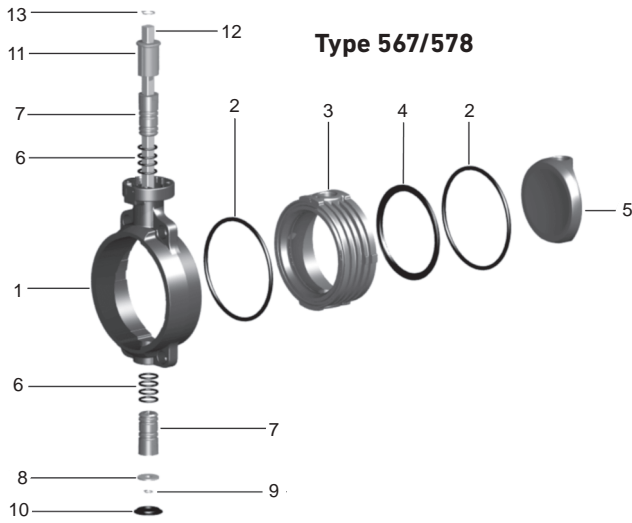
Type 543 Pro Horz.



Type 543 Pro Horizontal

Spare Part No.	Description	Note
4	Valve nut	Same as 546 Pro
3	Valve end	Same as 546 Pro
10	Face seal	Same as 546 Pro
12-13	Handle	Same as 546 Pro
5-9, 11	Ball set	-
7-9, 11	Seal set	-
15	Turn limiter	-
1-2, 5-14	Core	-

Type 567/578



Type 567/578

Spare Part No.	Description	Note
5	Disc	-
2	Face seal	Sold as 1 pc
3-4	Inner body/disc seal	Not sold separate
6-7	Shaft bushing with seals	Sold in set
11	End stop	-
-	Lever/index plate	Not shown
-	Gear op	Not shown

Type 561/562/591/591



Type 561/562/591/595

Spare Part No.	Description	Note
1	Valve end	Same as 546 Pro
2	Valve end	Same as 546 Pro
3	Face seal	Same as 546 Pro
5	Profile seal	-
7	Cone	-
8	Spring	-
3-9	Core	-
-	Cap 591-595	Not shown

Diaphragm Valve



Diaphragm Valves

Spare Part No.	Description	Note
1	Body	-
2	Union end	Standard non-vinyl union
3	Union nut	Standard non-vinyl union
-	Face seal (not shown)	Standard non-vinyl union
4-5	Diaphragm	-
6	Compressor	-
7-9	Spindle	-
6-13	Bonnet assembly	-
9	Position indicator	-
12-13	Handle	-

Valve Spare Parts



Socket



Socket Fusion



IR/Butt Fusion



Threaded NPT

Valve End Type 546 Pro, 523, 543 Pro, 561/562, 591/595

A

Size [inch]	PVC		CPVC	
	Socket	Threaded NPT	Socket	Threaded NPT
3/8	161 490 712	161 490 723	163 481 311	163 481 322
1/2	161 490 713	161 490 724	163 481 312	163 481 323
3/4	161 490 714	161 490 725	163 481 313	163 481 324
1	161 490 715	161 490 726	163 481 314	163 481 325
1 1/4	161 490 716	161 490 727	163 481 315	163 481 326
1 1/2	161 490 717	161 490 728	163 481 316	163 481 327
2	161 490 718	161 490 729	163 481 317	163 481 328
2 1/2	161 490 719	161 490 730	163 481 318	163 481 329
3	161 490 720	161 490 731	163 481 319	163 481 330
4	161 490 721	161 490 732	163 481 320	163 481 331
d - Size [mm]-[inch]	PP		PPn	
	Socket Fusion	IR/Butt Fusion	Threaded NPT	IR/Butt Fusion
16 - 3/8	167 482 900	-	167 482 966	-
20 - 1/2	167 482 901	167 482 945	167 482 967	168 480 260
25 - 3/4	167 482 902	167 482 946	167 482 968	168 480 261
32 - 1	167 482 903	167 482 947	167 482 969	168 480 262
40 - 1 1/4	167 482 904	167 482 948	167 482 970	168 480 263
50 - 1 1/2	167 482 905	167 482 949	167 482 971	168 480 264
63 - 2	167 482 906	167 482 950	167 482 972	168 480 265
75 - 2 1/2	167 482 907	167 482 951	-	-
90 - 3	167 482 908	167 482 952	-	-
110 - 4	167 482 909	167 482 953	-	-
d - Size [mm]-[inch]	PVDF		304 SS	
	Socket Fusion	IR/Butt Fusion	Threaded NPT	Threaded NPT
16 - 3/8	175 483 025	-	175 483 058	-
20 - 1/2	175 483 026	175 483 048	175 483 059	-
25 - 3/4	175 483 027	175 483 049	175 483 060	150 481 025
32 - 1	175 483 028	175 483 050	175 483 061	150 481 032
40 - 1 1/4	175 483 029	175 483 051	175 483 062	150 481 040
50 - 1 1/2	175 483 030	175 483 052	175 483 063	150 481 050
63 - 2	175 483 031	175 483 053	175 483 064	150 481 063
75 - 2 1/2	175 483 032	175 483 054	-	-
90 - 3	175 483 033	175 483 055	-	-
110 - 4	175 483 034	175 483 056	-	-

Please call Inside Sales for information on ANSI Flanged valve ends

Valve Spare Parts

Valve End Type 375

A

Size [inch]	PVC	
	Socket	Threaded NPT
3/8	161 375 427	161 375 437
1/2	161 375 428	161 375 438
3/4	161 375 429	161 375 439
1	161 375 430	161 375 440
1 1/4	161 375 431	161 375 441
1 1/2	161 375 432	161 375 442
2	161 375 433	161 375 443
2 1/2	161 375 434	161 375 444
3	161 375 435	161 375 445
4	161 375 436	161 375 446



Valve Nut Type 546 Pro, 523, 543 Pro, 561/562, 591/595

A

d - Size [mm]-[inch]	PVC	CPVC	PP	PVDF
16 - 3/8	161 490 538	163 481 226	167 482 712	175 482 937
20 - 1/2	161 490 538	163 481 226	167 482 712	175 482 937
25 - 3/4	161 490 539	163 481 227	167 482 713	175 482 938
32 - 1	161 490 540	163 481 228	167 482 714	175 482 939
40 - 1 1/4	161 490 541	163 481 229	167 482 715	175 482 940
50 - 1 1/2	161 490 542	163 481 230	167 482 716	175 482 941
63 - 2	161 490 543	163 481 231	167 482 717	175 482 942
75 - 2 1/2	161 490 544	163 481 232	167 482 718	-
90 - 3	161 490 545	163 481 233	167 482 719	-
110 - 4	161 490 546	163 481 234	167 482 720	-

3/8" (16mm) and 1/2"(20mm) Type 546 valves both use the same valve nut

Valve Face Seal Type 546 Pro, 523, 543 Pro, 561/562, 591/595

A

d - Size [mm]-[inch]	EPDM	FKM
16 - 3/8	748 410 059	749 410 059
20 - 1/2	748 410 059	749 410 059
25 - 3/4	748 410 106	749 410 106
32 - 1	748 410 151	749 410 151
40 - 1 1/4	748 410 062	749 410 062
50 - 1 1/2	748 410 003	749 410 003
63 - 2	748 410 231	749 410 231
75 - 2 1/2	748 410 119	749 410 119
90 - 3	748 410 023	749 410 023
110 - 4	748 410 254	749 410 254



Valve Spare Parts

Seal Set Type Type 546 Pro, 523, 543 Pro Vertical

A

d - Size [mm]-[inch]	EPDM	FKM
16 - 3/8	161 486 400	161 486 410
20 - 1/2	161 486 400	161 486 410
25 - 3/4	161 486 401	161 486 411
32 - 1	161 486 402	161 486 412
40 - 1 1/4	161 486 403	161 486 413
50 - 1 1/2	161 486 404	161 486 414
63 - 2	161 486 405	161 486 415
75 - 2 1/2	161 486 406	161 486 416
90 - 3	161 486 407	161 486 417
110 - 4	161 486 408	161 486 418



Seal Set consists of: backing-, body-, face-, and stem seals

Seal Set Type 543 Pro Horizontal

C

d - Size [mm]-[inch]	EPDM	FKM
16 - 3/8	161 488 242	161 488 248
20 - 1/2	161 488 242	161 488 248
25 - 3/4	161 488 243	161 488 249
32 - 1	161 488 244	161 488 250
40 - 1 1/4	161 488 245	161 488 251
50 - 1 1/2	161 488 246	161 488 252
63 - 2	161 488 247	161 488 253



Seal set consists of: backing-, body-, face-, and stem seal

Valve Spare Parts

Ball Set Type 546 Pro

A

Size [inch]	PVC/EPDM	PVC/FKM	CPVC/EPDM	CPVC/FKM
	3/8	161 486 375	161 486 385	163 481 375
1/2	161 486 375	161 486 385	163 481 375	163 481 385
3/4	161 486 376	161 486 386	163 481 376	163 481 386
1	161 486 377	161 486 387	163 481 377	163 481 387
1 1/4	161 486 378	161 486 388	163 481 378	163 481 388
1 1/2	161 486 379	161 486 389	163 481 379	163 481 389
2	161 486 380	161 486 390	163 481 380	163 481 390
2 1/2	161 486 381	161 486 391	163 481 381	163 481 391
3	161 486 382	161 486 392	163 481 382	163 481 392
4	161 486 383	161 486 393	163 481 383	163 481 393
d [mm]	PP/EPDM	PP/FKM	PVDF/FKM	
	16	167 484 125	167 484 135	175 483 275
20	167 484 125	167 484 135	175 483 275	
25	167 484 126	167 484 136	175 483 276	
32	167 484 127	167 484 137	175 483 277	
40	167 484 128	167 484 138	175 483 278	
50	167 484 129	167 484 139	175 483 279	
63	167 484 130	167 484 140	175 483 280	
75	167 484 131	167 484 141	175 483 281	
90	167 484 132	167 484 142	175 483 282	
110	167 484 133	167 484 143	175 483 283	

Ball set consists of: ball, stem, seats, and internal seals

Ball Set Type 543 Pro Vertical

A

Size [inch]	L-Port		Diverter	
	PVC/EPDM	PVC/FKM	PVC/EPDM	PVC/FKM
3/8	161 488 202	161 488 212	161 488 222	161 488 232
1/2	161 488 202	161 488 212	161 488 222	161 488 232
3/4	161 488 203	161 488 213	161 488 223	161 488 233
1	161 488 204	161 488 214	161 488 224	161 488 234
1 1/4	161 488 205	161 488 215	161 488 225	161 488 235
1 1/2	161 488 206	161 488 216	161 488 226	161 488 236
2	161 488 207	161 488 217	161 488 227	161 488 237

Ball set consists of: handle, ball, stem, ball-, backing-, body- and stem seal

Valve Spare Parts

Ball Set Type 543 Pro Horizontal / L-port

C

Size [inch]	PVC/EPDM	PVC/FKM	CPVC/EPDM	CPVC/FKM
3/8	161 488 162	161 488 172	163 481 982	163 481 992
1/2	161 488 162	161 488 172	163 481 982	163 481 992
3/4	161 488 163	161 488 173	163 481 983	163 481 993
1	161 488 164	161 488 174	163 481 984	163 481 994
1 1/4	161 488 165	161 488 175	163 481 985	163 481 995
1 1/2	161 488 166	161 488 176	163 481 986	163 481 996
2	161 488 167	161 488 177	163 481 987	163 481 997
d [mm]	PP/EPDM	PP/FKM	PVDF/FKM	
16	167 484 882	167 484 892	175 483 642	
20	167 484 882	167 484 892	175 483 642	
25	167 484 883	167 484 893	175 483 643	
32	167 484 884	167 484 894	175 483 644	
40	167 484 885	167 484 895	175 483 645	
50	167 484 886	167 484 896	175 483 646	
63	167 484 887	167 484 897	175 483 647	

Ball set consists of ball, stem, seats, and internal seals

Ball Set Type 543 Pro Horizontal / T-port

C

Size [inch]	PVC/EPDM	PVC/FKM	CPVC/EPDM	CPVC/FKM
3/8	161 488 182	161 488 192	163 482 002	163 482 012
1/2	161 488 182	161 488 192	163 482 002	163 482 012
3/4	161 488 183	161 488 193	163 482 003	163 482 013
1	161 488 184	161 488 194	163 482 004	163 482 014
1 1/4	161 488 185	161 488 195	163 482 005	163 482 015
1 1/2	161 488 186	161 488 196	163 482 006	163 482 016
2	161 488 187	161 488 197	163 482 007	163 482 017
d [mm]	PP/EPDM	PP/FKM	PVDF/FKM	
16	167 484 902	167 484 912	175 483 652	
20	167 484 902	167 484 912	175 483 652	
25	167 484 903	167 484 913	175 483 653	
32	167 484 904	167 484 914	175 483 654	
40	167 484 905	167 484 915	175 483 655	
50	167 484 906	167 484 916	175 483 656	
63	167 484 907	167 484 917	175 483 657	

Ball set consists of ball, stem, seats, and internal seals

Valve Spare Parts

Pro Handle



Pro Handle



Non-Lockable Handle



Extended Handle

A

d - Size [mm]-[inch]	Part No. Red
16 - 3/8	198 546 400
20 - 1/2	198 546 400
25 - 3/4	198 546 401
32 - 1	198 546 402
40 - 1 1/4	198 546 403
50 - 1 1/2	198 546 404
63 - 2	198 546 405

Pro Handle compatible with all "Pro" Ball Valves.

Non-Lockable Handle

A

d - Size [mm]-[inch]	Type 546 Pro		Type 543 Pro Vertical	
	Red	Black	L-port Red	Diverter Red
16 - 3/8	167 484 088	167 484 076	167 484 688	167 484 788
20 - 1/2	167 484 088	167 484 076	167 484 688	167 484 788
25 - 3/4	167 484 089	167 484 077	167 484 689	167 484 789
32 - 1	167 484 090	167 484 078	167 484 690	167 484 790
40 - 1 1/4	167 484 091	167 484 079	167 484 691	167 484 791
50 - 1 1/2	167 484 092	167 484 080	167 484 692	167 484 792
63 - 2	167 484 093	167 484 081	167 484 693	167 484 793
75 - 2 1/2	167 484 094	167 484 082	-	-
90 - 3	167 484 095	167 484 083	-	-
110 - 4	167 484 096	167 484 084	-	-

d - Size [mm]-[inch]	Type 543 Pro Horizontal			
	L-port Red	L-port Black	T-port Red	T-port Black
16 - 3/8	167 484 488	167 484 376	167 484 588	167 484 576
20 - 1/2	167 484 488	167 484 376	167 484 588	167 484 576
25 - 3/4	167 484 489	167 484 377	167 484 589	167 484 577
32 - 1	167 484 490	167 484 378	167 484 590	167 484 578
40 - 1 1/4	167 484 491	167 484 379	167 484 591	167 484 579
50 - 1 1/2	167 484 492	167 484 380	167 484 592	167 484 580
63 - 2	167 484 493	167 484 381	167 484 593	167 484 581

Extended Handle

A

d - Size [mm]-[inch]	Type 546 Pro	Type 543 Pro Vertical	
	Red	L-Port Red	Diverter Red
16 - 3/8	167 484 100	167 484 642	167 484 742
20 - 1/2	167 484 100	167 484 642	167 484 742
25 - 3/4	167 484 101	167 484 643	167 484 743
32 - 1	167 484 102	167 484 644	167 484 744
40 - 1 1/4	167 484 103	167 484 645	167 484 745
50 - 1 1/2	167 484 104	167 484 646	167 484 746
63 - 2	167 484 105	167 484 647	167 484 747
75 - 2 1/2	167 484 689	-	-
90 - 3	167 484 690	-	-
110 - 4	167 484 691	-	-

d - Size [mm]-[inch]	Type 543 Pro Horizontal	
	L-port Red	T-port Red
16 - 3/8	167 484 442	167 484 542
20 - 1/2	167 484 442	167 484 542
25 - 3/4	167 484 443	167 484 543
32 - 1	167 484 444	167 484 544
40 - 1 1/4	167 484 445	167 484 545
50 - 1 1/2	167 484 446	167 484 546
63 - 2	167 484 447	167 484 547

Valve Spare Parts

Diaphragm 5-Series

C

d - Size [mm]-[inch]	NBR	EPDM	FKM
20 - 1/2	745 500 012	748 500 012	749 500 012
25 - 3/4	745 500 013	748 500 013	749 500 013
32 - 1	745 500 014	748 500 014	749 500 014
40 - 1 1/4	745 500 015	748 500 015	749 500 015
50 - 1 1/2	745 500 016	748 500 016	749 500 016
63 - 2	745 500 017	748 500 017	749 500 017
d - Size [mm]-[inch]	PTFE/EPDM	PTFE/EPDM HP	PTFE/FKM
20 - 1/2	747 502 012	747 502 032	747 503 012
25 - 3/4	747 502 013	747 502 033	747 503 013
32 - 1	747 502 014	747 502 034	747 503 014
40 - 1 1/4	747 502 015	747 502 035	747 503 015
50 - 1 1/2	747 502 016	747 502 036	747 503 016
63 - 2	747 502 017	747 502 037	747 503 017



Diaphragm Type 317

C

d - Size [mm]-[inch]	EPDM	FKM	
75 - 2 1/2	161 481 028	-	
90 - 3	161 481 029	161 481 099	
110 - 4	161 481 030	161 481 100	
160 - 6	161 482 754	161 481 102	
d - Size [mm]-[inch]	PTFE/EPDM	PTFE/EPDM HP	PTFE/FKM
75 - 2 1/2	161 480 240	161 484 458	161 481 932
90 - 3	161 480 241	161 484 459	161 481 933
110 - 4	161 480 242	161 484 460	161 481 934
160 - 6	161 482 760	161 482 760	-

Bonnet Complete 5-Series

A

d - Size [mm]-[inch]	Standard Part No.	Bonnet with Seal Part No.
20 - 1/2	198 151 742	198 151 752
25 - 3/4	198 151 743	198 151 753
32 - 1	198 151 744	198 151 754
40 - 1 1/4	198 151 745	198 151 755
50 - 1 1/2	198 151 746	198 151 756
63 - 2	198 151 747	198 151 757



Without diaphragm

Valve Spare Parts

Union End 355, 5-Series, Angle Seat

B

d - Size [mm]-[inch]	PVC		CPVC	
	Socket	Threaded NPT	Socket	Threaded NPT
20 - 1/2	721 602 006	721 602 656	723 602 006	153 203 620
25 - 3/4	721 602 007	721 602 657	723 602 007	153 203 621
32 - 1	721 602 008	721 602 658	723 602 008	153 203 622
40 - 1 1/4	721 602 009	721 602 659	723 602 009	153 203 623
50 - 1 1/2	721 602 010	721 602 660	723 602 010	153 203 624
63 - 2	721 602 011	721 602 661	723 602 011	153 203 625
d - Size [mm]-[inch]	PP		PPn	
	Socket Fusion	IR/Butt Fusion	Threaded NPT	IR/Butt Fusion
20 - 1/2	727 500 106	727 508 506	157 203 603	728 608 506
25 - 3/4	727 500 107	727 508 507	-	728 608 507
32 - 1	727 500 108	727 508 508	157 203 604	728 608 508
40 - 1 1/4	727 500 109	727 508 509	-	728 608 509
50 - 1 1/2	727 500 110	727 508 510	157 203 606	728 608 510
63 - 2	727 500 111	727 508 511	157 203 607	728 608 511
d - Size [mm]-[inch]	PVDF		304 SS	
	Socket Fusion	IR/Butt Fusion	Threaded NPT	Threaded NPT
20 - 1/2	735 600 106	735 608 606	155 203 611	-
25 - 3/4	735 600 107	735 608 607	-	150 481 025
32 - 1	735 600 108	735 608 608	155 203 612	150 481 032
40 - 1 1/4	735 600 109	735 608 609	-	150 481 040
50 - 1 1/2	735 600 110	735 608 610	155 203 614	150 481 050
63 - 2	735 600 111	735 608 611	155 203 615	150 481 063



A

Union Nut 355, 5-Series, Angle Seat

d - Size [mm]-[inch]	PVC	CPVC	PP	PVDF
20 - 1/2	721 890 006	723 690 006	727 890 406	735 690 406
25 - 3/4	721 890 007	723 690 007	727 890 407	735 690 407
32 - 1	721 890 008	723 690 008	727 890 408	735 690 408
40 - 1 1/4	721 890 009	723 690 009	727 890 409	735 690 409
50 - 1 1/2	721 890 010	723 690 010	727 890 410	735 690 410
63 - 2	721 890 011	723 690 011	727 890 411	735 690 411

Union O-ring 355, 5-Series, Angle Seat

B

d - Size [mm]-[inch]	EPDM	FKM
20 - 1/2	748 410 006	749 410 006
25 - 3/4	748 410 007	749 410 007
32 - 1	748 410 008	749 410 008
40 - 1 1/4	748 410 009	749 410 009
50 - 1 1/2	748 410 010	749 410 010
63 - 2	748 410 011	749 410 011



Type 182 Electrically Actuated Ball Valve



Socket/Threaded

ANSI Flanged

C

PVC

Size [inch]	Socket (3/8" - 2" Socket/Threaded NPT)			
	100-230 V AC		24 V AC/DC	
	EPDM	FKM	EPDM	FKM
3/8	199 182 002	199 182 012	199 182 022	199 182 032
1/2	199 182 003	199 182 013	199 182 023	199 182 033
3/4	199 182 004	199 182 014	199 182 024	199 182 034
1	199 182 005	199 182 015	199 182 025	199 182 035
1 1/4	199 182 006	199 182 016	199 182 026	199 182 036
1 1/2	199 182 007	199 182 017	199 182 027	199 182 037
2	199 182 008	199 182 018	199 182 028	199 182 038
2 1/2	199 182 009	199 182 019	199 182 029	199 182 039
3	199 182 010	199 182 020	199 182 030	199 182 040
4	199 182 011	199 182 021	199 182 031	199 182 041

Size [inch]	ANSI Flanged			
	100-230 V AC		24 V AC/DC	
	EPDM	FKM	EPDM	FKM
1/2	150 182 083	150 182 093	150 182 103	150 182 113
3/4	150 182 084	150 182 094	150 182 104	150 182 114
1	150 182 085	150 182 095	150 182 105	150 182 115
1 1/4	150 182 086	150 182 096	150 182 106	150 182 116
1 1/2	150 182 087	150 182 097	150 182 107	150 182 117
2	150 182 088	150 182 098	150 182 108	150 182 118
2 1/2	150 182 089	150 182 099	150 182 109	150 182 119
3	150 182 090	150 182 100	150 182 110	150 182 120
4	150 182 091	150 182 101	150 182 111	150 182 121

CPVC

C

Size [inch]	Socket (3/8" - 2" Socket/Threaded NPT)			
	100-230 V AC		24 V AC/DC	
	EPDM	FKM	EPDM	FKM
3/8	199 182 402	199 182 412	199 182 422	199 182 432
1/2	199 182 403	199 182 413	199 182 423	199 182 433
3/4	199 182 404	199 182 414	199 182 424	199 182 434
1	199 182 405	199 182 415	199 182 425	199 182 435
1 1/4	199 182 406	199 182 416	199 182 426	199 182 436
1 1/2	199 182 407	199 182 417	199 182 427	199 182 437
2	199 182 408	199 182 418	199 182 428	199 182 438
2 1/2	199 182 409	199 182 419	199 182 429	199 182 439
3	199 182 410	199 182 420	199 182 430	199 182 440
4	199 182 411	199 182 421	199 182 431	199 182 441

Size [inch]	ANSI Flanged			
	100-230 V AC		24 V AC/DC	
	EPDM	FKM	EPDM	FKM
1/2	150 182 483	150 182 493	150 182 503	150 182 513
3/4	150 182 484	150 182 494	150 182 504	150 182 514
1	150 182 485	150 182 495	150 182 505	150 182 515
1 1/4	150 182 486	150 182 496	150 182 506	150 182 516
1 1/2	150 182 487	150 182 497	150 182 507	150 182 517
2	150 182 488	150 182 498	150 182 508	150 182 518
2 1/2	150 182 489	150 182 499	150 182 509	150 182 519
3	150 182 490	150 182 500	150 182 510	150 182 520
4	150 182 491	150 182 501	150 182 511	150 182 521

Type 180 Electrically Actuated Ball Valve



Flanged



Socket Fusion



IR/Butt Fusion

C

PROGEF® Standard PP

d [mm]	Socket Fusion			
	100-230 V AC		24 V AC/DC	
	EPDM	FKM	EPDM	FKM
16	199 180 002	199 180 012	199 180 042	199 180 052
20	199 180 323	150 180 333	199 180 363	199 180 373
25	199 180 324	150 180 334	199 180 364	199 180 374
32	199 180 325	150 180 335	199 180 365	199 180 375
40	199 180 006	199 180 016	199 180 046	199 180 056
50	199 180 007	199 180 017	199 180 047	199 180 057
63	199 180 008	199 180 018	199 180 048	199 180 058
75	199 180 009	199 180 019	199 180 049	199 180 059
90	199 180 010	199 180 020	199 180 050	199 180 060
110	199 180 011	199 180 021	199 180 051	199 180 061
d [mm]	IR/Butt Fusion			
	100-230 V AC		24 V AC/DC	
	EPDM	FKM	EPDM	FKM
20	199 180 323	150 180 333	199 180 363	199 180 373
25	199 180 324	150 180 334	199 180 364	199 180 374
32	199 180 325	150 180 335	199 180 365	199 180 375
40	199 180 326	150 180 336	199 180 366	199 180 376
50	199 180 327	150 180 337	199 180 367	199 180 377
63	199 180 328	150 180 338	199 180 368	199 180 378
75	199 180 329	150 180 339	199 180 369	199 180 379
90	199 180 330	150 180 340	199 180 370	199 180 380
110	199 180 331	150 180 341	199 180 371	199 180 381
d [mm]	Flanged			
	100-230 V AC		24 V AC/DC	
	EPDM	FKM	EPDM	FKM
20	150 180 203	150 180 213	150 180 223	150 180 233
25	150 180 204	150 180 214	150 180 224	150 180 234
32	150 180 205	150 180 215	150 180 225	150 180 235
40	150 180 206	150 180 216	150 180 226	150 180 236
50	150 180 207	150 180 217	150 180 227	150 180 237
63	150 180 208	150 180 218	150 180 228	150 180 238
75	150 180 209	150 180 219	150 180 229	150 180 239
90	150 180 210	150 180 220	150 180 230	150 180 240
110	150 180 211	150 180 221	150 180 231	150 180 241
d [mm]	Socket/Threaded NTP			
	100-230 V AC		24 V AC/DC	
	EPDM	FKM	EPDM	FKM
20	150 180 402	150 180 412	150 180 422	150 180 432
25	150 180 403	150 180 413	150 180 423	150 180 433
32	150 180 404	150 180 414	150 180 424	150 180 434
40	150 180 405	150 180 415	150 180 425	150 180 435
50	150 180 406	150 180 416	150 180 426	150 180 436
63	150 180 407	150 180 417	150 180 427	150 180 437
75	150 180 408	150 180 418	150 180 428	150 180 438

Type 181 Electrically Actuated Ball Valve



Socket Fusion

IR/Butt Fusion

C

SYGEF® Standard PVDF

d [mm]	Socket Fusion		IR/Butt Fusion	
	100-230 V AC FKM	24 V AC/DC FKM	100-230 V AC FKM	24 V AC/DC FKM
16	199 181 012	150 181 052	-	-
20	199 181 013	150 181 053	199 181 113	150 181 153
25	199 181 014	150 181 054	199 181 114	150 181 154
32	199 181 015	150 181 055	199 181 115	150 181 155
40	199 181 016	150 181 056	199 181 116	150 181 156
50	199 181 017	150 181 057	199 181 117	150 181 157
63	199 181 018	150 181 058	199 181 118	150 181 158
75	199 181 019	150 181 059	199 181 119	150 181 159
90	199 181 020	150 181 060	199 181 120	150 181 160
110	199 181 021	150 181 061	199 181 121	150 181 161

d [mm]	Flanged	
	100-230 V AC FKM	24 V AC/DC FKM
16	150 181 213	150 181 233
20	150 181 214	150 181 234
25	150 181 215	150 181 235
32	150 181 216	150 181 236
40	150 181 217	150 181 237
50	150 181 218	150 181 238

Type 127 Electrically Actuated Ball Valve

PVC

C

Size [inch]	Socket/Threaded NPT		ANSI Flanged	
	100-230 V AC		100-230 V AC	
	EPDM	FKM	EPDM	FKM
3/8	199 127 202	199 127 212	-	-
1/2	199 127 203	199 127 213	199 127 283	199 127 293
3/4	199 127 204	199 127 214	199 127 284	199 127 294
1	199 127 205	199 127 215	199 127 285	199 127 295
1 1/4	199 127 206	199 127 216	199 127 286	199 127 296
1 1/2	199 127 207	199 127 217	199 127 287	199 127 297
2	199 127 208	199 127 218	199 127 288	199 127 298

Size [inch]	24 V DC	
	EPDM	FKM
3/8	150 127 222	150 127 232
1/2	150 127 223	150 127 233
3/4	150 127 224	150 127 234
1	150 127 225	150 127 235
1 1/4	150 127 226	150 127 236
1 1/2	150 127 227	150 127 237
2	150 127 228	150 127 238



Socket/Threaded



Flanged

Type 127 Electrically Actuated Ball Valve

CPVC

C

Size [inch]	Socket/Threaded NPT			
	100-230 V AC		24 V DC	
	EPDM	FKM	EPDM	FKM
3/8	199 127 302	199 127 312	199 127 322	199 127 332
1/2	199 127 303	199 127 313	199 127 323	199 127 333
3/4	199 127 304	199 127 314	199 127 324	199 127 334
1	199 127 305	199 127 315	199 127 325	199 127 335
1 1/4	199 127 306	199 127 316	199 127 326	199 127 336
1 1/2	199 127 307	199 127 317	199 127 327	199 127 337
2	199 127 308	199 127 318	199 127 328	199 127 338

If desired configuration is not shown, alternative PVC and CPVC Type 127 valves available upon request

Type 104 Electrically Actuated Ball Valve



PVC

C

Size [inch]	Socket/Threaded NPT			
	110 V AC		220 V AC	
	EPDM	FKM	EPDM	FKM
1/2	150 104 403	150 104 413	150 104 203	150 104 213
3/4	150 104 404	150 104 414	150 104 204	150 104 214
1	150 104 405	150 104 415	150 104 205	150 104 215
1 1/4	150 104 406	150 104 416	150 104 206	150 104 216
1 1/2	150 104 407	150 104 417	150 104 207	150 104 217
2	150 104 408	150 104 418	150 104 208	150 104 218
Size [inch]	24 V DC			
	EPDM	FKM		
	1/2	150 104 223	150 104 233	
3/4	150 104 224	150 104 234		
1	150 104 225	150 104 235		
1 1/4	150 104 226	150 104 236		
1 1/2	150 104 227	150 104 237		
2	150 104 228	150 104 238		

CPVC

C

Size [inch]	Socket/Threaded NPT			
	110 V AC		220 V AC	
	EPDM	FKM	EPDM	FKM
1/2	150 104 503	150 104 513	150 104 303	150 104 313
3/4	150 104 504	150 104 514	150 104 304	150 104 314
1	150 104 505	150 104 515	150 104 305	150 104 315
1 1/4	150 104 506	150 104 516	150 104 306	150 104 316
1 1/2	150 104 507	150 104 517	150 104 307	150 104 317
2	150 104 508	150 104 518	150 104 308	150 104 318
Size [inch]	24 V DC			
	EPDM	FKM		
	1/2	150 104 323	150 104 333	
3/4	150 104 324	150 104 334		
1	150 104 325	150 104 335		
1 1/4	150 104 326	150 104 336		
1 1/2	150 104 327	150 104 337		
2	150 104 328	150 104 338		

Type 182M Electrically Actuated Ball Valve with Metal Actuator Housing



C

PVC

Size [inch]	Socket (3/8" - 2" Socket/Threaded NPT)			
	115V		24V	
	EPDM	FKM	EPDM	FKM
3/8	150 182 002	150 182 012	150 182 022	150 182 032
1/2	150 182 003	150 182 013	150 182 023	150 182 033
3/4	150 182 004	150 182 014	150 182 024	150 182 034
1	150 182 005	150 182 015	150 182 025	150 182 035
1 1/4	150 182 006	150 182 016	150 182 026	150 182 036
1 1/2	150 182 007	150 182 017	150 182 027	150 182 037
2	150 182 008	150 182 018	150 182 028	150 182 038
2 1/2	150 182 009	150 182 019	150 182 029	150 182 039
3	150 182 010	150 182 020	150 182 030	150 182 040
4	150 182 011	150 182 021	150 182 031	150 182 041

CPVC

C

Size [inch]	Socket (3/8" - 2" Socket/Threaded NPT)			
	115V		24V	
	EPDM	FKM	EPDM	FKM
3/8	150 182 402	150 182 412	150 182 422	150 182 432
1/2	150 182 403	150 182 413	150 182 423	150 182 433
3/4	150 182 404	150 182 414	150 182 424	150 182 434
1	150 182 405	150 182 415	150 182 425	150 182 435
1 1/4	150 182 406	150 182 416	150 182 426	150 182 436
1 1/2	150 182 407	150 182 417	150 182 427	150 182 437
2	150 182 408	150 182 418	150 182 428	150 182 438
2 1/2	150 182 409	150 182 419	150 182 429	150 182 439
3	150 182 410	150 182 420	150 182 430	150 182 440
4	150 182 411	150 182 421	150 182 431	150 182 441

NEMA 4X standard (NEMA 7 optional)

Electric Actuator Smart Type



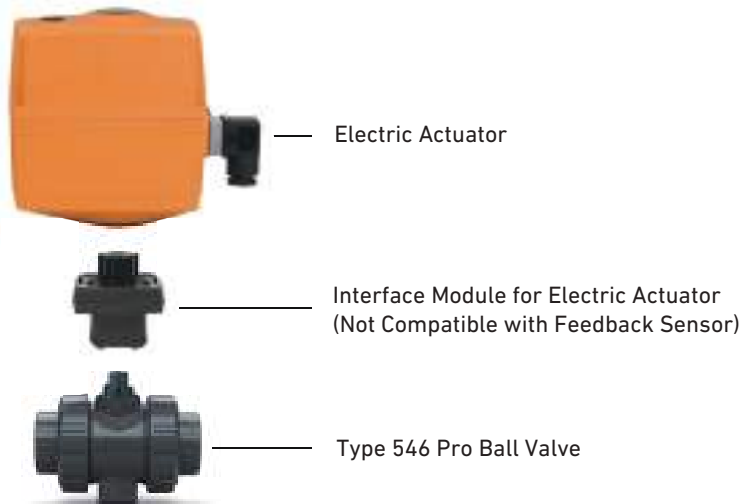
C

Voltage	dEA 25 Part No.	dEA 45 Part No.	dEA 120 Part No.
100-230 V	198 153 192	198 153 194	198 153 196
24 V	198 153 193	198 153 195	198 153 197

Actuated Ball Valves: Accessories and Component Parts

Available components and accessories are on the following pages of the price list. If accessories are to be added and assembled by GF, **please order by adding S in front of the valve part number** and adjust the description to include the desired accessories. Example: Part number **199127205** (1" Type 127 Ball Valve PVC/EPDM) assembled with **199190310** (Fail-safe battery backup) should be ordered:

- PO item 1: **S199127205** 1" Type 127 Ball Valve PVC/EPDM assembled with fail-safe **199190310**
- PO item 2: **199190310** Fail-safe battery backup



Optional Actuator Accessories

Type 127

- Fail-safe battery backup
- External fail-safe board

Type 180-182

- Positioner board
- Monitoring board
- Fail-safe battery backup
- External fail-safe board
- Profibus DP board
- Modbus RTU via RS485

Components by Valve Type

Size [Inch] - [mm]	Type 180 - 182			Type 127	
	Interface Module	Required Components Intermediate Kit Adapter	Actuator	Interface Module	Actuator
3/8" - 16	198546142	- -	EA25	198546142	EA15
1/2" - 20	198546142	- -	EA25	198546142	EA15
3/4" - 25	198546143	- -	EA25	198546143	EA15
1" - 32	198546144	- -	EA25	198546144	EA15
1-1/4" - 40	198546145	- -	EA25	198546145	EA15
1-1/2" - 50	198546146	- -	EA25	198546146	EA15
2" - 63	198546147	- -	EA25	198546147	EA15
2 1/2" - 75	167482684	198000596 150901455	EA45	N/A	N/A
3" - 90	167482684	198000601 -	EA120	N/A	N/A
4" - 110	167482685	198000602 -	EA120	N/A	N/A

N/A - Not Applicable

Electric Actuators (DIN Plugs)

Part Number	Description
198153180	EA15 Electric Actuator w/ DIN Plugs 100-230VAC
198153181	EA15 Electric Actuator w/ DIN Plugs 24VAC/DC
198153182	EA25 Electric Actuator w/ DIN Plugs 100-230VAC
198153183	EA25 Electric Actuator w/ DIN Plugs 24VAC/DC
198153184	EA45 Electric Actuator w/ DIN Plugs 100-230VAC
198153185	EA45 Electric Actuator w/ DIN Plugs 24VAC/DC
198153186	EA120 Electric Actuator w/ DIN Plugs 100-230VAC
198153187	EA120 Electric Actuator w/ DIN Plugs 24VAC/DC

Electric Actuators (Cable Glands)

Part Number	Description
198153200	EA15 Electric Actuator UL Rated w/ Cable Glands 100-230VAC
198153201	EA15 Electric Actuator UL Rated w/ Cable Glands 24VAC/DC
198153202	EA25 Electric Actuator UL Rated w/ Cable Glands 100-230VAC
198153203	EA25 Electric Actuator UL Rated w/ Cable Glands 24VAC/DC
198153204	EA45 Electric Actuator UL Rated w/ Cable Glands 100-230VAC
198153205	EA45 Electric Actuator UL Rated w/ Cable Glands 24VAC/DC
198153206	EA120 Electric Actuator UL Rated w/ Cable Glands 100-230VAC
198153207	EA120 Electric Actuator UL Rated w/ Cable Glands 24VAC/DC
198153192	dEA25 Smart Electric Actuator 100-230VAC
198153193	dEA25 Smart Electric Actuator 24VAC/DC
198153194	dEA45 Smart Electric Actuator 100-230VAC
198153195	dEA45 Smart Electric Actuator 24VAC/DC
198153196	dEA120 Smart Electric Actuator 100-230VAC
198153197	dEA120 Smart Electric Actuator 24VAC/DC

Accessories Electrically Actuated Ball Valve

Multifunction Module (MFM) with Switches



C

d - d [mm]	Size [Inch]	Mechanical Limit Switches	
		250 V AC / DC 6 A	4 - 30 V DC 100 mA
		Ag Ni	Au
16 - 20	3/8 - 1/2	167 482 626	167 482 635
25 - 32	3/4 - 1	167 482 627	167 482 636
40 - 50	1 1/4 - 1 1/2	167 482 628	167 482 637
63	2	167 482 629	167 482 638
75 - 90	2 1/2 - 3	167 482 630	167 482 639
110	4	167 482 631	167 482 640

Intermediate kit required. Type 127 and Type 180-182 Actuated Ball Valves offer open/close feedback switches standard.

Intermediate Kit

C

d - d [mm]	Size [Inch]	Part No.
16 - 20	3/8 - 1/2	198 150 556
25 - 32	3/4 - 1	198 150 557
40 - 50	1 1/4 - 1 1/2	198 150 558
63	2	198 150 559



Intermediate kit required to use MFM with mechanical switches.

Local Control Box



C

Size	Voltage	Lights	Type	Part No.
All	110V AC	Yes	LCB 201	150 300 103
All	24V AC/DC	Yes	LCB 202	150 300 104

Local Control Box Accessories

C

Description	Part No.
5 ft. Lead - 4 conduit connection w/ shield	150 300 050

Declutchable Manual Override

C

Description	Part No.
Lever assembly operates the valve regardless of actuator's state	198 000 501

Electric Actuator UL



C

Voltage	EA 15 Part No.	EA 25 Part No.	EA 45 Part No.	EA 120 Part No.
100-230 V	198 153 200	198 153 202	198 153 204	198 153 206
24 V	198 153 201	198 153 203	198 153 205	198 153 207

Standard EA25-120 actuators IP67 rated

Accessories Electric Actuators

C

Type 127	
Description	Part No.
Internal Fail Safe Return	199 190 610
External Fail Safe Return	199 190 611

Type 180-182	
Description	Part No.
Internal Fail Safe Return	199 190 601
Monitor Board	199 190 602
Positioner Board	199 190 603
External Fail Safe Return	199 190 604
Profibus DP Board	199 190 605
Modbus Interface Module	199 190 617

Type 182M	
Description	Part No.
4M Auxiliary Switches	150 800 215
4M Positioner	150 800 216
4M Position Feedback	150 800 217

Spare Parts Electrically Actuated Ball Valves



C

Electric Actuator

Voltage	EA 15 Part No.	EA 25 Part No.	EA 45 Part No.	EA 120 Part No.
100-230 V	198 153 180	198 153 182	198 153 184	198 153 186
24 V	198 153 181	198 153 183	198 153 185	198 153 187

Standard EA25-120 actuators are IP67 rated.

Interface Module for Electric Actuator

C

d - d [mm]	Size [Inch]	Part No.
16 - 20	3/8 - 1/2	198 546 142
25	3/4	198 546 143
32	1	198 546 144
40	1 1/4	198 546 145
50	1 1/2	198 546 146
63	2	198 546 147
75 - 90	2 1/2 - 3	167 482 684
110	4	167 482 685

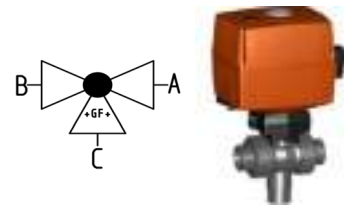
Intermediate Kit		
d - d [mm]	Size [Inch]	For 2 1/2" - 4" Part No.
75	2 1/2	198 000 596
90	3	198 000 601
110	4	198 000 602



C

Feedback Sensor not compatible with Interface Module for Electric Actuator.

Type 170 Electrically Actuated 3-Way Vertical Ball Valve



Socket/Threaded

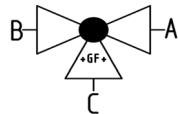
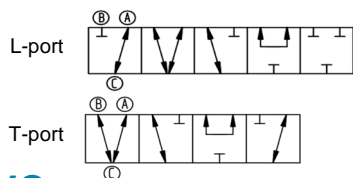
C

PVC

100-230 V AC				
Size [inch]	L-port			
	Socket		Threaded NPT	
	EPDM	FKM	EPDM	FKM
3/8	150 170 572	150 170 582	150 170 692	150 170 702
1/2	150 170 573	150 170 583	150 170 693	150 170 703
3/4	150 170 574	150 170 584	150 170 694	150 170 704
1	150 170 575	150 170 585	150 170 695	150 170 705
1 1/4	150 170 576	150 170 586	150 170 696	150 170 706
1 1/2	150 170 577	150 170 587	150 170 697	150 170 707
2	150 170 578	150 170 588	150 170 698	150 170 708

Diverter				
Size [inch]	Socket		Threaded NPT	
	EPDM	FKM	EPDM	FKM
	3/8	150 170 000	150 170 007	150 170 014
1/2	150 170 001	150 170 008	150 170 015	150 170 022
3/4	150 170 002	150 170 009	150 170 016	150 170 023
1	150 170 003	150 170 010	150 170 017	150 170 024
1 1/4	150 170 004	150 170 011	150 170 018	150 170 025
1 1/2	150 170 005	150 170 012	150 170 019	150 170 026
2	150 170 006	150 170 013	150 170 020	150 170 027

Type 167 Electrically Actuated 3-Way Horizontal Ball Valve



PVC Socket/Threaded



CPVC Socket/Threaded

C

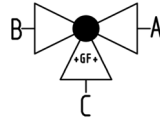
PVC

100-230 V AC				
L-port				
Size [inch]	Socket		Threaded NPT	
	EPDM	FKM	EPDM	FKM
3/8	199 167 382	199 167 392	150 167 362	150 167 372
1/2	199 167 383	199 167 393	150 167 363	150 167 373
3/4	199 167 384	199 167 394	150 167 364	150 167 374
1	199 167 385	199 167 395	150 167 365	150 167 375
1 1/4	199 167 386	199 167 396	150 167 366	150 167 376
1 1/2	199 167 387	199 167 397	150 167 367	150 167 377
2	199 167 388	199 167 398	150 167 368	150 167 378
T-port				
Size [inch]	Socket		Threaded NPT	
	EPDM	FKM	EPDM	FKM
3/8	199 167 422	199 167 432	150 167 402	150 167 412
1/2	199 167 423	199 167 433	150 167 403	150 167 413
3/4	199 167 424	199 167 434	150 167 404	150 167 414
1	199 167 425	199 167 435	150 167 405	150 167 415
1 1/4	199 167 426	199 167 436	150 167 406	150 167 416
1 1/2	199 167 427	199 167 437	150 167 407	150 167 417
2	199 167 428	199 167 438	150 167 408	150 167 418

CPVC

100-230 V AC				
L-port				
Size [inch]	Socket		Threaded NPT	
	EPDM	FKM	EPDM	FKM
3/8	150 167 462	150 167 472	150 167 442	150 167 452
1/2	150 167 463	150 167 473	150 167 443	150 167 453
3/4	150 167 464	150 167 474	150 167 444	150 167 454
1	150 167 465	150 167 475	150 167 445	150 167 455
1 1/4	150 167 466	150 167 476	150 167 446	150 167 456
1 1/2	150 167 467	150 167 477	150 167 447	150 167 457
2	150 167 468	150 167 478	150 167 448	150 167 458
T-port				
Size [inch]	Socket		Threaded NPT	
	EPDM	FKM	EPDM	FKM
3/8	150 167 502	150 167 512	150 167 482	150 167 492
1/2	150 167 503	150 167 513	150 167 483	150 167 493
3/4	150 167 504	150 167 514	150 167 484	150 167 494
1	150 167 505	150 167 515	150 167 485	150 167 495
1 1/4	150 167 506	150 167 516	150 167 486	150 167 496
1 1/2	150 167 507	150 167 517	150 167 487	150 167 497
2	150 167 508	150 167 518	150 167 488	150 167 498

Type 168 Electrically Actuated 3-Way Horizontal Ball Valve



Socket Fusion/Threaded

IR/Butt Fusion

C

PROGEF® Standard PP

Size [mm]	24 V			
	L-port			
	Socket		IR/Butt Fusion	
	EPDM	FKM	EPDM	FKM
16	199 168 182	199 168 192	-	-
20	199 168 183	199 168 193	199 168 243	199 168 253
25	199 168 184	199 168 194	199 168 244	199 168 254
32	199 168 185	199 168 195	199 168 245	199 168 255
40	199 168 186	199 168 196	199 168 246	199 168 256
50	199 168 187	199 168 197	199 168 247	199 168 257
63	199 168 188	199 168 198	199 168 248	199 168 258
Size [mm]	Threaded NTP			
	EPDM	FKM		
3/8	150 168 362	150 168 372		
1/2	150 168 363	150 168 373		
3/4	150 168 364	150 168 374		
1	150 168 365	150 168 375		
1 1/4	150 168 366	150 168 376		
1 1/2	150 168 367	150 168 377		
2	150 168 368	150 168 378		
Size [mm]	T-port			
	Socket		IR/Butt Fusion	
	EPDM	FKM	EPDM	FKM
16	199 168 222	199 168 232	-	-
20	199 168 223	199 168 233	199 168 263	199 168 273
25	199 168 224	199 168 234	199 168 264	199 168 274
32	199 168 225	199 168 235	199 168 265	199 168 275
40	199 168 226	199 168 236	199 168 266	199 168 276
50	199 168 227	199 168 237	199 168 267	199 168 277
63	199 168 228	199 168 238	199 168 268	199 168 278
Size [mm]	Threaded NTP			
	EPDM	FKM		
3/8	150 168 382	150 168 392		
1/2	150 168 383	150 168 393		
3/4	150 168 384	150 168 394		
1	150 168 385	150 168 395		
1 1/4	150 168 386	150 168 396		
1 1/2	150 168 387	150 168 397		
2	150 168 388	150 168 398		

Type 168 Electrically Actuated 3-Way Horizontal Ball Valve

PROGEF® Standard PP

C

		100-230 V AC			
		L-port			
d [mm]	Socket Fusion		IR/Butt Fusion		
	EPDM	FKM	EPDM	FKM	
16	199 168 022	199 168 032	-	-	
20	199 168 023	199 168 033	199 168 083	199 168 093	
25	199 168 024	199 168 034	199 168 084	199 168 094	
32	199 168 025	199 168 035	199 168 085	199 168 095	
40	199 168 026	199 168 036	199 168 086	199 168 096	
50	199 168 027	199 168 037	199 168 087	199 168 097	
63	199 168 028	199 168 038	199 168 088	199 168 098	
Size [inch]	Threaded NPT				
	EPDM	FKM			
3/8	150 168 322	150 168 332			
1/2	150 168 323	150 168 333			
3/4	150 168 324	150 168 334			
1	150 168 325	150 168 335			
1 1/4	150 168 326	150 168 336			
1 1/2	150 168 327	150 168 337			
2	150 168 328	150 168 338			
		100-230 V AC			
		T-port			
d [mm]	Socket Fusion		IR/Butt Fusion		
	EPDM	FKM	EPDM	FKM	
16	199 168 062	199 168 072	-	-	
20	199 168 063	199 168 073	199 168 103	199 168 113	
25	199 168 064	199 168 074	199 168 104	199 168 114	
32	199 168 065	199 168 075	199 168 105	199 168 115	
40	199 168 066	199 168 076	199 168 106	199 168 116	
50	199 168 067	199 168 077	199 168 107	199 168 117	
63	199 168 068	199 168 078	199 168 108	199 168 118	
Size [inch]	Threaded NPT				
	EPDM	FKM			
3/8	150 168 342	150 168 352			
1/2	150 168 343	150 168 353			
3/4	150 168 344	150 168 354			
1	150 168 345	150 168 355			
1 1/4	150 168 346	150 168 356			
1 1/2	150 168 347	150 168 357			
2	150 168 348	150 168 358			

Type 169 Electrically Actuated 3-Way Horizontal Ball Valve



Socket Fusion/Threaded

IR/Butt Fusion

C

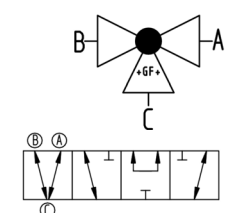
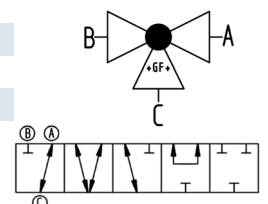
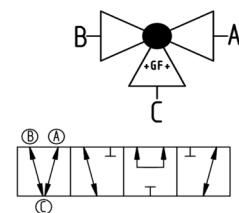
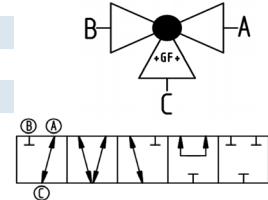
SYGEF® Standard PVDF

100-230 V AC			
L-port			
d - Size [mm]-[Inch]	Socket Fusion FKM	IR/Butt Fusion FKM	Threaded NPT FKM
16 - 3/8	199 169 092	-	199 169 242
20 - 1/2	199 169 093	150 169 053	199 169 243
25 - 3/4	199 169 094	150 169 054	199 169 244
32 - 1	199 169 095	150 169 055	199 169 245
40 - 1 1/4	199 169 096	150 169 056	199 169 246
50 - 1 1/2	199 169 097	150 169 057	199 169 247
63 - 2	199 169 098	150 169 058	199 169 248

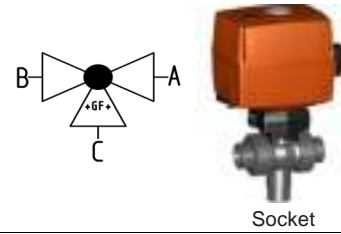
100-230 V AC			
T-port			
d - Size [mm]-[Inch]	Socket Fusion FKM	IR/Butt Fusion FKM	Threaded NPT FKM
16 - 3/8	199 169 112	-	199 169 252
20 - 1/2	199 169 113	150 169 073	199 169 253
25 - 3/4	199 169 114	150 169 074	199 169 254
32 - 1	199 169 115	150 169 075	199 169 255
40 - 1 1/4	199 169 116	150 169 076	199 169 256
50 - 1 1/2	199 169 117	150 169 077	199 169 257
63 - 2	199 169 118	150 169 078	199 169 258

24V			
L-port			
d - Size [mm]-[Inch]	Socket Fusion FKM	IR/Butt Fusion FKM	Threaded NPT FKM
16 - 3/8	199 169 212	-	199 169 262
20 - 1/2	199 169 213	199 169 173	199 169 263
25 - 3/4	199 169 214	199 169 174	199 169 264
32 - 1	199 169 215	199 169 175	199 169 265
40 - 1 1/4	199 169 216	199 169 176	199 169 266
50 - 1 1/2	199 169 217	199 169 177	199 169 267
63 - 2	199 169 218	199 169 178	199 169 268

24 V			
T-port			
d - Size [mm]-[Inch]	Socket Fusion FKM	IR/Butt Fusion FKM	Threaded NPT FKM
16 - 3/8	199 169 232	-	150 169 252
20 - 1/2	199 169 233	199 169 193	150 169 253
25 - 3/4	199 169 234	199 169 194	150 169 254
32 - 1	199 169 235	199 169 195	150 169 255
40 - 1 1/4	199 169 236	199 169 196	150 169 256
50 - 1 1/2	199 169 237	199 169 197	150 169 257
63 - 2	199 169 238	199 169 198	150 169 258



Type 128 Electrically Actuated 3-Way Vertical Ball Valve



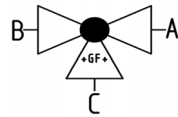
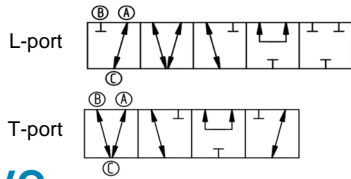
PVC

C

Size [inch]	100-230 V AC			
	Socket			
	L-port		Diverter	
	EPDM	FKM	EPDM	FKM
3/8	150 128 572	150 128 582	150 128 000	150 128 007
1/2	150 128 573	150 128 583	150 128 001	150 128 008
3/4	150 128 574	150 128 584	150 128 002	150 128 009
1	150 128 575	150 128 585	150 128 003	150 128 010
1 1/4	150 128 576	150 128 586	150 128 004	150 128 011
1 1/2	150 128 577	150 128 587	150 128 005	150 128 012
2	150 128 578	150 128 588	150 128 006	150 128 013

Type 170 assembled with EA 25 - Type 128 assembled with EA 15.

Type 125 Electrically Actuated 3-Way Horizontal Ball Valve



PVC

C

Size [inch]	100-230 V AC			
	Socket			
	L-port		T-port	
	EPDM	FKM	EPDM	FKM
3/8	150 125 382	150 125 392	150 125 422	150 125 432
1/2	150 125 383	150 125 393	150 125 423	150 125 433
3/4	150 125 384	150 125 394	150 125 424	150 125 434
1	150 125 385	150 125 395	150 125 425	150 125 435
1 1/4	150 125 386	150 125 396	150 125 426	150 125 436
1 1/2	150 125 387	150 125 397	150 125 427	150 125 437
2	150 125 388	150 125 398	150 125 428	150 125 438

Type 167 assembled with EA 25 - Type 125 assembled with EA 15.

Actuated Ball Valves: Accessories and Component Parts

Available components and accessories are on the following pages of the price list. If accessories are to be added and assembled by GF, **please order by adding an "S" in front of the valve part number** and adjust the description to include the desired accessories. Example : Part number **199167385** (1" Type 167 Ball Valve PVC/EPDM) assembled with 199190603 (EA25-250 Positioner Board) should be ordered:

- PO item 1: **S199167385** 1" Type 167 Ball Valve PVC/EPDM assembled with positioner 199190603
- PO item 2: **199190603** EA25-250 Positioner Board



Optional Actuator Accessories

Type 125-128

- Fail-safe battery backup
- Fail-safe return board

Type 167-170

- Positioner board
- Monitoring board
- Fail-safe battery backup
- External fail-safe board
- Profibus DP board
- Modbus RTU via RS485

Components by Valve Type

Size [Inch] - [mm]	Type 167 - 170			Type 125 & 128		
	Interface Module	3 - Way Adapter	Electric Actuator	Interface Module	3 - Way Adapter	Electric Actuator
3/8" - 63	198546142	198543000	EA25	198546142	198543000	EA15
1/2" - 75	198546142	198543000	EA25	198546142	198543000	EA15
3/4" - 90	198546143	198543001	EA25	198546143	198543001	EA15
1" - 110	198546144	198543001	EA25	198546144	198543001	EA15
1 1/4" - 140	198546145	198543002	EA25	198546145	198543002	EA15
1 1/2" - 160	198546146	198543002	EA25	198546146	198543002	EA15
2" - 225	198546147	198543003	EA25	198546147	198543003	EA15

Electric Actuators

Part number	Description
198153180	EA15 Electric Actuator w/ DIN Plugs 100-230VAC
198153181	EA15 Electric Actuator w/ DIN Plugs 24VAC/DC
198153182	EA25 Electric Actuator w/ DIN Plugs 100-230VAC
198153183	EA25 Electric Actuator w/ DIN Plugs 24VAC/DC
198153200	EA15 Electric Actuator UL w/ Cable Glands 100-230VAC
198153201	EA15 Electric Actuator UL w/ Cable Glands 24VAC/DC
198153202	EA25 Electric Actuator UL w/ Cable Glands 100-230VAC
198153203	EA25 Electric Actuator UL w/ Cable Glands 24VAC/DC
198153192	dEA25 Smart Electric Actuator 100-230VAC
198153193	dEA25 Smart Electric Actuator 24VAC/DC

Accessories 3-Way Electrically Actuated Ball Valve

Actuator Accessories

C

Type 125-128

Description	Part No.
Internal Fail Safe Return	199 190 610
External Fail Safe Return	199 190 611

Type 167-170

Description	Part No.
Fail Safe Battery Backup	199 190 601
Monitor Board	199 190 602
Positioner Board	199 190 603
External Fail Safe Return	199 190 604
Profibus DP Board	199 190 605
Modbus Interface Module	199 190 617



C

Electric Actuator UL

Voltage	EA 15	EA 25
	Part No.	Part No.
100-230 V	198 153 200	198 153 202
24 V	198 153 201	198 153 203

Spare Parts 3-Way Electrically Actuated Ball Valve



C

Electric Actuator

Voltage	EA 15	EA 25
	Part No.	Part No.
100-230 V	198 153 180	198 153 182
24 V	198 153 181	198 153 183

Standard actuators IP65 rated

Interface Module for Electric Actuator

C

d - d [mm]	Size [Inch]	Part No.
16 - 20	3/8 - 1/2	198 546 142
25	3/4	198 546 143
32	1	198 546 144
40	1 1/4	198 546 145
50	1 1/2	198 546 146
63	2	198 546 147



3-Way Interface Module Adapter required for use with 3-Way Valve. Feedback Sensor not compatible with Interface Module for Electric Actuator.

3-Way Interface Module Adapter

C

d - d [mm]	Size [inch]	Part No.
16 - 20	3/8 - 1/2	198 543 000
25 - 32	3/4 - 1	198 543 001
40 - 50	1 1/4 - 1 1/2	198 543 002
63	2	198 543 003

Type 145 Electrically Actuated Wafer Butterfly Valve



C

PVC

100-230 V AC				
d - Size [mm]-[inch]	Without Manual Override		With Manual Override	
	EPDM	FKM	EPDM	FKM
63 - 2	199 145 042	199 145 062	199 145 002	199 145 022
75 - 2 ½	199 145 043	199 145 063	199 145 003	199 145 023
90 - 3	199 145 044	199 145 064	199 145 004	199 145 024
110 - 4	199 145 045	199 145 065	199 145 005	199 145 025
140 - 5	199 145 046	199 145 066	199 145 006	199 145 026
160 - 6	199 145 047	199 145 067	199 145 007	199 145 027
225 - 8	199 145 048	199 145 068	199 145 008	199 145 028
280 - 10	199 145 049	199 145 069	-	-
315 - 12	199 145 050	199 145 070	-	-
24 V AC/DC				
d - Size [mm]-[inch]	Without Manual Override		With Manual Override	
	EPDM	FKM	EPDM	FKM
63 - 2	199 145 122	199 145 142	199 145 082	150 145 102
75 - 2 ½	199 145 123	199 145 143	199 145 083	150 145 103
90 - 3	199 145 124	199 145 144	199 145 084	150 145 104
110 - 4	199 145 125	199 145 145	199 145 085	150 145 105
140 - 5	199 145 126	199 145 146	199 145 086	150 145 106
160 - 6	199 145 127	199 145 147	199 145 087	150 145 107
225 - 8	199 145 128	199 145 148	199 145 088	150 145 108
280 - 10	199 145 129	199 145 149	-	-
315 - 12	199 145 130	199 145 150	-	-

CPVC

C

100-230 V AC				
d - Size [mm]-[inch]	Without Manual Override		With Manual Override	
	EPDM	FKM	EPDM	FKM
63 - 2	199 145 202	199 145 222	199 145 162	150 145 182
75 - 2 ½	199 145 203	199 145 223	199 145 163	150 145 183
90 - 3	199 145 204	199 145 224	199 145 164	150 145 184
110 - 4	199 145 205	199 145 225	199 145 165	150 145 185
140 - 5	199 145 206	199 145 226	199 145 166	150 145 186
160 - 6	199 145 207	199 145 227	199 145 167	150 145 187
225 - 8	199 145 208	199 145 228	199 145 168	150 145 188
280 - 10	199 145 209	199 145 229	-	-
315 - 12	199 145 210	199 145 230	-	-
24 V AC/DC				
d - Size [mm]-[inch]	Without Manual Override		With Manual Override	
	EPDM	FKM	EPDM	FKM
63 - 2	199 145 282	150 145 302	199 145 242	150 145 262
75 - 2 ½	199 145 283	150 145 303	199 145 243	150 145 263
90 - 3	199 145 284	150 145 304	199 145 244	150 145 264
110 - 4	199 145 285	150 145 305	199 145 245	150 145 265
140 - 5	199 145 286	150 145 306	199 145 246	150 145 266
160 - 6	199 145 287	150 145 307	199 145 247	150 145 267
225 - 8	199 145 288	150 145 308	199 145 248	150 145 268
280 - 10	199 145 289	150 145 309	-	-
315 - 12	199 145 290	150 145 310	-	-

PTFE seals available upon request.

Type 145 Electrically Actuated Wafer Butterfly Valve



Without MO

With MO

C

PROGEF® Standard PP

d - Size [mm]-[inch]	100-230 V AC			
	Without Manual Override		With Manual Override	
	EPDM	FKM	EPDM	FKM
63 - 2	199 145 362	150 145 382	199 145 322	150 145 342
75 - 2 ½	199 145 363	150 145 383	199 145 323	150 145 343
90 - 3	199 145 364	150 145 384	199 145 324	150 145 344
110 - 4	199 145 365	150 145 385	199 145 325	150 145 345
140 - 5	199 145 366	150 145 386	199 145 326	150 145 346
160 - 6	199 145 367	150 145 387	199 145 327	150 145 347
225 - 8	199 145 368	150 145 388	199 145 328	150 145 348
280 - 10	199 145 369	150 145 389	-	-
315 - 12	199 145 370	150 145 390	-	-

d - Size [mm]-[inch]	24 V AC/DC			
	Without Manual Override		With Manual Override	
	EPDM	FKM	EPDM	FKM
63 - 2	199 145 442	150 145 462	199 145 402	150 145 422
75 - 2 ½	199 145 443	150 145 463	199 145 403	150 145 423
90 - 3	199 145 444	150 145 464	199 145 404	150 145 424
110 - 4	199 145 445	150 145 465	199 145 405	150 145 425
140 - 5	199 145 446	150 145 466	199 145 406	150 145 426
160 - 6	199 145 447	150 145 467	199 145 407	150 145 427
225 - 8	199 145 448	150 145 468	199 145 408	150 145 428
280 - 10	199 145 449	150 145 469	-	-
315 - 12	199 145 450	150 145 470	-	-

PTFE seals available upon request.

SYGEF® Standard PVDF

C

d - Size [mm]-[inch]	100-230 V AC		
	Without Manual Override		With Manual Override
	FKM	PTFE/FKM	FKM
63 - 2	150 145 582	150 145 642	199 145 562
75 - 2 ½	150 145 583	150 145 643	199 145 563
90 - 3	150 145 584	150 145 644	199 145 564
110 - 4	150 145 585	150 145 645	199 145 565
140 - 5	150 145 586	150 145 646	199 145 566
160 - 6	150 145 587	150 145 647	199 145 567
225 - 8	150 145 588	150 145 648	199 145 568
280 - 10	150 145 589	150 145 649	-
315 - 12	150 145 590	150 145 650	-

d - Size [mm]-[inch]	24 V AC/DC		
	Without Manual Override		With Manual Override
	FKM	PTFE/FKM	FKM
63 - 2	150 145 622	150 145 662	150 145 602
75 - 2 ½	150 145 623	150 145 663	150 145 603
90 - 3	150 145 624	150 145 664	150 145 604
110 - 4	150 145 625	150 145 665	150 145 605
140 - 5	150 145 626	150 145 666	150 145 606
160 - 6	150 145 627	150 145 667	150 145 607
225 - 8	150 145 628	150 145 668	150 145 608
280 - 10	150 145 629	150 145 669	-
315 - 12	150 145 630	150 145 670	-



Without MO

With MO

Type 145M Electrically Actuated Wafer Butterfly Valve with Metal Actuator Housing



C

PVC

Size [inch]	Without Manual Override			
	115V		24V	
	EPDM	FKM	EPDM	FKM
2	150 145 042	150 145 062	150 145 122	150 145 142
2 ½	150 145 043	150 145 063	150 145 123	150 145 143
3	150 145 044	150 145 064	150 145 124	150 145 144
4	150 145 045	150 145 065	150 145 125	150 145 145
5	150 145 046	150 145 066	150 145 126	150 145 146
6	150 145 047	150 145 067	150 145 127	150 145 147
8	150 145 048	150 145 068	150 145 128	150 145 148
10	150 145 049	150 145 069	150 145 129	150 145 149
12	150 145 050	150 145 070	150 145 130	150 145 150

CPVC

C

Size [inch]	Without Manual Override			
	115V		24V	
	EPDM	FKM	EPDM	FKM
2	150 145 202	150 145 222	150 145 282	150 145 292
2 ½	150 145 203	150 145 223	150 145 283	150 145 293
3	150 145 204	150 145 224	150 145 284	150 145 294
4	150 145 205	150 145 225	150 145 285	150 145 295
5	150 145 206	150 145 226	150 145 286	150 145 296
6	150 145 207	150 145 227	150 145 287	150 145 297
8	150 145 208	150 145 228	150 145 288	150 145 298
10	150 145 209	150 145 229	150 145 289	150 145 299
12	150 145 210	150 145 230	150 145 290	150 145 300

NEMA 4X standard (NEMA 7 optional)

Type 565 Electrically Actuated Wafer Butterfly Valve



C

Size [inch]	100-230 V AC		24 V AC/DC	
	EPDM	FKM	EPDM	FKM
2	199 565 300	199 565 320	199 565 400	199 565 420
2 ½	199 565 301	199 565 321	199 565 401	199 565 421
3	199 565 302	199 565 322	199 565 402	199 565 422
4	199 565 303	199 565 323	199 565 403	199 565 423
5	199 565 304	199 565 324	199 565 404	199 565 424
6	199 565 305	199 565 325	199 565 405	199 565 425
8	199 565 306	199 565 326	199 565 406	199 565 426
10	199 565 307	199 565 327	199 565 407	199 565 427
12	199 565 308	199 565 328	199 565 408	199 565 428

Type 147 Electrically Actuated Lug Butterfly Valve



C

PVC

Size [inch]	100-230 V AC			
	Without Manual Override		With Manual Override	
	EPDM	FKM	EPDM	FKM
2	199 147 042	150 147 062	199 147 002	199 147 022
2 ½	199 147 043	150 147 063	199 147 003	199 147 023
3	199 147 044	150 147 064	199 147 004	199 147 024
4	199 147 045	150 147 065	199 147 005	199 147 025
5	199 147 046	150 147 066	199 147 006	199 147 026
6	199 147 047	150 147 067	199 147 007	199 147 027
8	199 147 048	150 147 068	199 147 008	199 147 028
10	199 147 049	150 147 069	-	-
12	199 147 050	150 147 070	-	-

Size [inch]	24 V AC/DC			
	Without Manual Override		With Manual Override	
	EPDM	FKM	EPDM	FKM
2	150 147 122	150 147 142	150 147 082	150 147 102
2 ½	150 147 123	150 147 143	150 147 083	150 147 103
3	150 147 124	150 147 144	150 147 084	150 147 104
4	150 147 125	150 147 145	150 147 085	150 147 105
5	150 147 126	150 147 146	150 147 086	150 147 106
6	150 147 127	150 147 147	150 147 087	150 147 107
8	150 147 128	150 147 148	150 147 088	150 147 108
10	150 147 129	150 147 149	-	-
12	150 147 130	150 147 150	-	-

CPVC

C

Size [inch]	100-230 V AC			
	Without Manual Override		With Manual Override	
	EPDM	FKM	EPDM	FKM
2	199 147 202	150 147 222	150 147 162	150 147 182
2 ½	199 147 203	150 147 223	150 147 163	150 147 183
3	199 147 204	150 147 224	150 147 164	150 147 184
4	199 147 205	150 147 225	150 147 165	150 147 185
5	199 147 206	150 147 226	150 147 166	150 147 186
6	199 147 207	150 147 227	150 147 167	150 147 187
8	199 147 208	150 147 228	150 147 168	150 147 188
10	199 147 209	150 147 229	-	-
12	199 147 210	150 147 230	-	-

Size [inch]	24 V AC/DC			
	Without Manual Override		With Manual Override	
	EPDM	FKM	EPDM	FKM
2	199 147 282	150 147 302	150 147 242	150 147 262
2 ½	199 147 283	150 147 303	150 147 243	150 147 263
3	199 147 284	150 147 304	150 147 244	150 147 264
4	199 147 285	150 147 305	150 147 245	150 147 265
5	199 147 286	150 147 306	150 147 246	150 147 266
6	199 147 287	150 147 307	150 147 247	150 147 267
8	199 147 288	150 147 308	150 147 248	150 147 268
10	199 147 289	150 147 309	-	-
12	199 147 290	150 147 310	-	-

All Type 147 valves have ANSI bolt pattern.

PTFE seals available upon request.

Type 147 Electrically Actuated Lug Butterfly Valve



Without MO With MO

C

PROGEF® Standard PP

d [mm]	100-230 V AC			
	Without Manual Override		With Manual Override	
	EPDM	FKM	EPDM	FKM
2	199 147 362	150 147 382	150 147 322	150 147 342
2 ½	199 147 363	150 147 383	150 147 323	150 147 343
3	199 147 364	150 147 384	150 147 324	150 147 344
4	199 147 365	150 147 385	150 147 325	150 147 345
5	199 147 366	150 147 386	150 147 326	150 147 346
6	199 147 367	150 147 387	150 147 327	150 147 347
8	199 147 368	150 147 388	150 147 328	150 147 348
10	199 147 369	150 147 389	-	-
12	199 147 370	150 147 390	-	-

d [mm]	24 V AC/DC			
	Without Manual Override		With Manual Override	
	EPDM	FKM	EPDM	FKM
2	150 147 442	150 147 462	150 147 402	150 147 422
2 ½	150 147 443	150 147 463	150 147 403	150 147 423
3	150 147 444	150 147 464	150 147 404	150 147 424
4	150 147 445	150 147 465	150 147 405	150 147 425
5	150 147 446	150 147 466	150 147 406	150 147 426
6	150 147 447	150 147 467	150 147 407	150 147 427
8	150 147 448	150 147 468	150 147 408	150 147 428
10	150 147 449	150 147 469	-	-
12	150 147 450	150 147 470	-	-

PTFE seals available upon request.

SYGEF® Standard PVDF

C

d [mm]	100-230 V AC		
	Without Manual Override		With Manual Override
	FKM	PTFE/FKM	FKM
2	199 147 582	199 147 642	150 147 562
2 ½	199 147 583	199 147 643	150 147 563
3	199 147 584	199 147 644	150 147 564
4	199 147 585	199 147 645	150 147 565
5	199 147 586	199 147 646	150 147 566
6	199 147 587	199 147 647	150 147 567
8	199 147 588	199 147 648	150 147 568
10	199 147 589	150 147 649	-
12	199 147 590	150 147 650	-

d [mm]	24 V AC/DC		
	Without Manual Override		With Manual Override
	FKM	PTFE/FKM	FKM
2	150 147 622	150 147 662	150 147 602
2 ½	150 147 623	150 147 663	150 147 603
3	150 147 624	150 147 664	150 147 604
4	150 147 625	150 147 665	150 147 605
5	150 147 626	150 147 666	150 147 606
6	150 147 627	150 147 667	150 147 607
8	150 147 628	150 147 668	150 147 608
10	150 147 629	150 147 669	-
12	150 147 630	150 147 670	-



Without MO With MO

All Type 147 valves have ANSI bolt pattern.

Type 147M Electrically Actuated Lug Butterfly Valve with Metal Actuator Housing



C

PVC

Size [inch]	115V		24V	
	EPDM	FKM	EPDM	FKM
2	150 147 042	150 147 052	150 147 112	150 147 132
2 ½	150 147 043	150 147 053	150 147 113	150 147 133
3	150 147 044	150 147 054	150 147 114	150 147 134
4	150 147 045	150 147 055	150 147 115	150 147 135
5	150 147 046	150 147 056	150 147 116	150 147 136
6	150 147 047	150 147 057	150 147 117	150 147 137
8	150 147 048	150 147 058	150 147 118	150 147 138
10	150 147 049	150 147 059	150 147 119	150 147 139
12	150 147 050	150 147 060	150 147 120	150 147 140

CPVC

C

Size [inch]	115V		24V	
	EPDM	FKM	EPDM	FKM
2	150 147 202	150 147 212	150 147 282	150 147 292
2 ½	150 147 203	150 147 213	150 147 283	150 147 293
3	150 147 204	150 147 214	150 147 284	150 147 294
4	150 147 205	150 147 215	150 147 285	150 147 295
5	150 147 206	150 147 216	150 147 286	150 147 296
6	150 147 207	150 147 217	150 147 287	150 147 297
8	150 147 208	150 147 218	150 147 288	150 147 298
10	150 147 209	150 147 219	150 147 289	150 147 299
12	150 147 210	150 147 230	150 147 290	150 147 300

NEMA 4X standard (NEMA 7 optional)

Actuated Butterfly Valves: Accessories and Component Parts

Available components and accessories are on the following pages of the price list. If accessories are to be added and assembled by GF, **please order by adding an "S" in front of the valve part number** and adjust the description to include the desired accessories. **Example:** Part number **199145047** (6" Type 145 Butterfly Valve PVC/EPDM) assembled with **199190603** (EA25-250 Positioner Board) should be ordered:

- PO item 1: **S199145047** 6" Type 145 Butterfly Valve PVC/EPDM assembled with positioner 199190603
- PO item 2: **199190603** EA25-250 Positioner Board



Optional Actuator Accessories

Type 145-147

- Positioner board
- Monitoring board
- Fail-safe battery backup
- External fail-safe board
- Profibus DP board
- Modbus RTU via RS485

Components by Valve Type

Size [Inch] - [mm]	Type 145 - 147			
	Intermediate Kit w/ MO	Intermediate Kit w/o MO	Actuator w/ MO	Actuator w/o MO
2" - 63	198000623	198000601	EA120	EA45
2½" - 75	198000623	198000601	EA120	EA45
3" - 90	198000623	198000601	EA120	EA120
4" - 110	198000624	198000602	EA120	EA120
5" - 140	198000624	198000602	EA120	EA120
6" - 160	198000625	198000600	EA120	EA120
8" - 225	198000627	198000603	EA250	EA250
10" - 280	N/A	198000732	EA250	EA250
12" - 315	N/A	198000732	EA250	EA250

N/A - Not Applicable

Electric Actuators (Cable Glands)

Part Number	Description
198153184	EA45 Electric Actuator w/ DIN Plugs 100-230VAC
198153185	EA45 Electric Actuator w/ DIN Plugs 24VAC/DC
198153186	EA120 Electric Actuator w/ DIN Plugs 100-230VAC
198153187	EA120 Electric Actuator w/ DIN Plugs 24VAC/DC
198153188	EA250 Electric Actuator w/ DIN Plugs 100-230VAC
198153189	EA250 Electric Actuator w/ DIN Plugs 24VAC/DC
198153204	EA45 Electric Actuator w/ Cable Glands 100-230VAC
198153205	EA45 Electric Actuator w/ Cable Glands 24VAC/DC
198153206	EA120 Electric Actuator w/ Cable Glands 100-230VAC
198153207	EA120 Electric Actuator w/ Cable Glands 24VAC/DC
198153208	EA250 Electric Actuator w/ Cable Glands 100-230VAC
198153209	EA250 Electric Actuator w/ Cable Glands 24VAC/DC
198153193	dEA25 Smart Electric Actuator 24VAC/DC
198153194	dEA45 Smart Electric Actuator 100-230VAC
198153195	dEA45 Smart Electric Actuator 24VAC/DC
198153196	dEA120 Smart Electric Actuator 100-230VAC
198153197	dEA120 Smart Electric Actuator 24VAC/DC
198153198	dEA250 Smart Electric Actuator 100-230VAC
198153199	dEA250 Smart Electric Actuator 24VAC/DC

Accessories Electrically Actuated Butterfly Valves



C

Integrated Position Indicator

Size [inch]	Mechanical Limit Switch Kit		
	250 V AC / DC 6 A Ag Ni	4 - 30 V DC 100 mA Au	
2 - 3	161 486 859	161 486 858	
4 - 5	161 486 305	161 486 304	
6 - 8	161 486 010	161 486 009	
Size [inch]	Inductive Limit Switch Kit		
	1 - 8 V NAMUR	5 - 30 V DC 100 mA PNP	5 - 30 V DC 100 mA NPN
2 - 3	161 486 855	161 486 856	161 486 857
4 - 5	161 486 301	161 486 302	161 486 303
6 - 8	161 486 006	161 486 007	161 486 008

For Type 567/578 Butterfly Valves only.



C

Feedback Sensor

Size [inch]	PNP - 0.15A		NPN - 0.15A	
	Close - Green	Close - Red	Close - Green	Close - Red
3/8 - 2	198 546 001	198 546 002	198 546 005	198 546 006
Size [inch]	NAMUR (ATEX) - 0.15A			
	Close - Green	Close - Red		
3/8 - 2	198 546 003	198 546 004		

Feedback Sensor compatible with Type 565 only.

Actuators Accessories

C

Type 145, 147, 565	
Description	Part No.
Fail Safe Battery Backup	199 190 601
Monitor Board	199 190 602
Positioner Board	199 190 603
External Fail Safe Return	199 190 604
Profibus DP Board	199 190 605
Modbus Interface Module	199 190 617
Type 145M & 147M	
Description	Part No.
4M Auxiliary Switches	150 800 215
4M Positioner	150 800 216
4M Position Feedback	150 800 217



C

Local Control Box

Size	Voltage	Lights	Type	Part No.
All	110V AC	Yes	LCB 201	150 300 103
All	24V AC/DC	Yes	LCB 202	150 300 104

Local Control Box Accessories

C

Description	Part No.
5 ft. Lead - 4 conduit connection w/ shield	150 300 050

Accessories Electrically Actuated Butterfly Valves

Stem Extension

C

Size [inch]	Description	SS 316
2 - 3	1st foot SS316	150 567 001
4 - 5	1st foot SS316	150 567 002
6	1st foot SS316	150 567 003
8	1st foot SS316	150 567 004
10 - 12	1st foot SS316	150 567 005



Minimum length of 6 inches

Electric Actuator UL



C

Voltage	EA 25 Part No.	EA 45 Part No.	EA 120 Part No.	EA 250 Part No.
100-230 V	198 153 202	198 153 204	198 153 206	198 153 208
24 V	198 153 203	198 153 205	198 153 207	198 153 209

Spare Parts Electrically Actuated Butterfly Valve



C

Electric Actuator

Voltage	EA 25 Part No.	EA 45 Part No.	EA 120 Part No.	EA 250 Part No.
100-230 V	198 153 182	198 153 184	198 153 186	198 153 188
24 V	198 153 183	198 153 185	198 153 187	198 153 189

Intermediate Kit

C

d - Size [mm]-[inch]	Type	Without Manual Override Part No.	With Manual Override Part No.
63 - 2	EA 45	198 000 601	198 000 623
75 - 2 ½	EA 45	198 000 601	198 000 623
90 - 3	EA 120	198 000 601	198 000 623
110 - 4	EA 120	198 000 602	198 000 624
140 - 5	EA 120	198 000 602	198 000 624
160 - 6	EA 120	198 000 600	198 000 625
225 - 8	EA 250	198 000 603	198 000 627
280 - 10	EA 250	198 000 732	-
315 - 12	EA 250	198 000 732	-



eDIASTAR Electrically Actuated Diaphragm Valve



C

PVC

Size [inch]	Socket			
	100-230V		24V	
	EPDM	PTFE/EPDM	EPDM	PTFE/EPDM
1	161 714 614	161 714 634	161 704 614	161 704 634
2	161 714 617	161 714 637	161 704 617	161 704 637

CPVC

C

Size [inch]	Socket			
	100-230V		24V	
	EPDM	PTFE/EPDM	EPDM	PTFE/EPDM
1	150 714 714	150 714 734	150 704 714	150 704 734
2	150 714 717	150 714 737	150 704 717	150 704 737

PP

C

Size [inch]	Socket Fusion Union			
	100-230V		24V	
	EPDM	PTFE/EPDM	EPDM	PTFE/EPDM
1	167 714 014	167 714 034	167 704 014	167 704 034
2	167 714 017	167 714 037	167 704 017	167 704 037

Size [inch]	IR/Butt Fusion Union			
	100-230V		24V	
	EPDM	PTFE/EPDM	EPDM	PTFE/EPDM
1	150 714 214	150 714 234	150 704 214	150 704 234
2	150 714 217	150 714 237	150 704 217	150 704 237

Size [inch]	IR/Butt Fusion Spigot			
	100-230V		24V	
	EPDM	PTFE/EPDM	EPDM	PTFE/EPDM
1	150 715 014	150 715 034	150 705 014	150 705 034
2	150 715 017	150 715 037	150 705 017	150 705 037

PVDF

C

Size [inch]	Socket Fusion Union			
	100-230V		24V	
	EPDM	FKM	EPDM	FKM
1	185 714 034	185 714 054	185 704 054	185 704 034
2	185 714 037	185 714 057	185 704 057	185 704 037

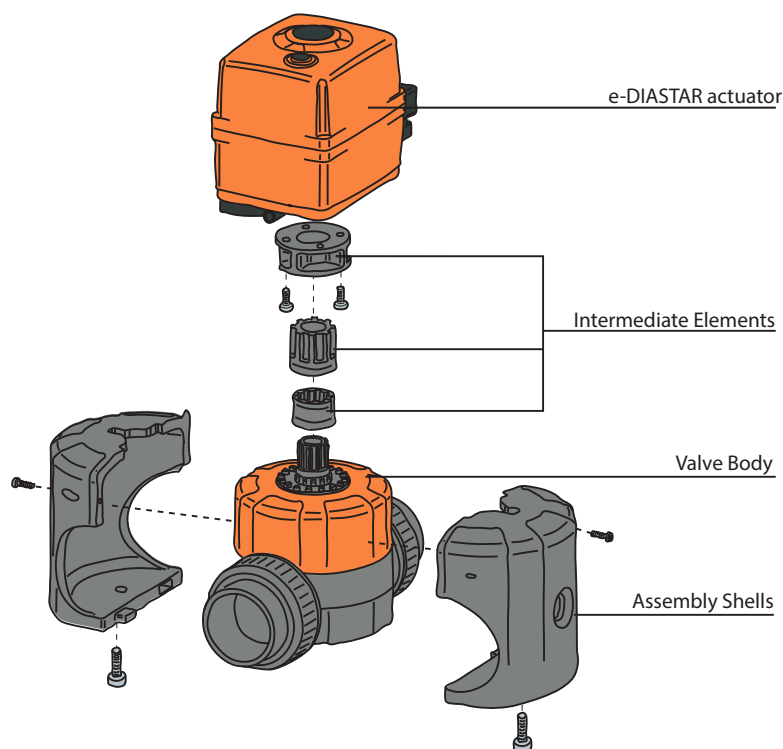
Size [inch]	IR/Butt Fusion Union			
	100-230V		24V	
	EPDM	FKM	EPDM	FKM
1	150 714 334	150 714 354	150 704 354	150 704 334
2	150 714 337	150 714 357	150 704 357	150 704 337

Size [inch]	IR/Butt Fusion Spigot			
	100-230V		24V	
	EPDM	FKM	EPDM	FKM
1	150 714 434	150 714 454	150 704 454	150 704 434
2	150 714 437	150 714 457	150 704 457	150 704 437

Actuated Diaphragm Valves: Accessories and Component Parts

Available components and accessories are on the following pages of the price list. If accessories are to be added and assembled by GF, **please order by adding S in front of the valve part number** and adjust the description to include the desired accessories.
Example: Part number **161714614** (1" e-DIASTAR Valve PVC/EPDM) assembled with **199190603** (Mechanical Limit Switches Au) should be ordered:

- PO item 1: **S161714614** 1" Type 546 Pro Ball Valve with PPA with limit switch **199190603**
- PO item 2: **199190603** Mechanical Limit Switches Au



Optional Actuator Accessories

e-DIASTAR

- Limit Switch
- Positioner
- Local control box
- Manual Override
- Stroke Limiter
- Pilot Valve

Components by Valve Type

Size [inch - mm]	e-DIASTAR	
	100-230V	24V AC/DC
1 - 32	161714614	161714634
2 - 63	161714617	161714637

eDIASTAR EA Diaphragm Valve Accessories

EA 25-250	Part No.
Fail-Safe Battery Backup	199 190 601
Monitoring Board	199 190 602
Positioner Board	199 190 603
External Fail Safe Board	199 190 604

eDIASTAR EA Diaphragm Valve Spare Parts

Adapter Kit

Size [inch]	100-230V	24V
1	198 153 210	198 153 211
2	198 153 212	198 153 213

Type 23M Pneumatically Actuated Ball Valve





C

Size [inch]	Fail Safe to Close (FC)			
	Socket/Threaded NPT			
	PVC		CPVC	
	EPDM	FKM	EPDM	FKM
½	150 162 063	150 162 073	150 162 363	150 162 373
¾	150 162 064	150 162 074	150 162 364	150 162 374
1	150 162 065	150 162 075	150 162 365	150 162 375
1 ¼	150 162 066	150 162 076	150 162 366	150 162 376
1 ½	150 162 067	150 162 077	150 162 367	150 162 377
2	150 162 068	150 162 078	150 162 368	150 162 378

Type 546 Pro Ball Valve with PPA Pneumatic Actuator

PVC

C



Size [inch]	With Manual Override			
	Socket/Threaded NPT			
	Fail Safe to Close (FC)		Fail Safe to Open (FO)	
	EPDM	FKM	EPDM	FKM
3/8	199 253 002	199 253 012	199 253 022	199 253 032
1/2	199 253 003	199 253 013	199 253 023	199 253 033
3/4	199 253 004	199 253 014	199 253 024	199 253 034
1	199 253 005	199 253 015	199 253 025	199 253 035
1 1/4	199 253 006	199 253 016	199 253 026	199 253 036
1 1/2	199 253 007	199 253 017	199 253 027	199 253 037
2	199 253 008	199 253 018	199 253 028	199 253 038
Size [inch]	Double Acting (DA)			
		EPDM		
3/8	199 253 042	199 253 052		
1/2	199 253 043	199 253 053		
3/4	199 253 044	199 253 054		
1	199 253 045	199 253 055		
1 1/4	199 253 046	199 253 056		
1 1/2	199 253 047	199 253 057		
2	199 253 048	199 253 058		
Size [inch]	Without Manual Override			
	Socket/Threaded NPT (3/8" - 2")			
	Fail Safe to Close (FC)		Fail Safe to Open (FO)	
	EPDM	FKM	EPDM	FKM
3/8	199 253 062	199 253 072	199 253 082	199 253 092
1/2	199 253 063	199 253 073	199 253 083	199 253 093
3/4	199 253 064	199 253 074	199 253 084	199 253 094
1	199 253 065	199 253 075	199 253 085	199 253 095
1 1/4	199 253 066	199 253 076	199 253 086	199 253 096
1 1/2	199 253 067	199 253 077	199 253 087	199 253 097
2	199 253 068	199 253 078	199 253 088	199 253 098
2 1/2	199 253 069	199 253 079	199 253 089	199 253 099
3	199 253 070	199 253 080	199 253 090	199 253 100
4	199 253 071	199 253 081	199 253 091	199 253 101
Size [inch]	Double Acting (DA)			
		EPDM		
3/8	199 253 102	199 253 112		
1/2	199 253 103	199 253 113		
3/4	199 253 104	199 253 114		
1	199 253 105	199 253 115		
1 1/4	199 253 106	199 253 116		
1 1/2	199 253 107	199 253 117		
2	199 253 108	199 253 118		
2 1/2	199 253 109	199 253 119		
3	199 253 110	199 253 120		
4	199 253 111	199 253 121		

2-1/2" to 4" Threaded NPT available upon request.

Type 546 Pro Ball Valve with PPA Pneumatic Actuator

PVC



C

With Manual Override				
ANSI Flanged				
Size [inch]	Fail Safe to Close (FC)		Fail Safe to Open (FO)	
	EPDM	FKM	EPDM	FKM
1/2	199 253 123	199 253 133	199 253 143	199 253 153
3/4	199 253 124	199 253 134	199 253 144	199 253 154
1	199 253 125	199 253 135	199 253 145	199 253 155
1 1/4	199 253 126	199 253 136	199 253 146	199 253 156
1 1/2	199 253 127	199 253 137	199 253 147	199 253 157
2	199 253 128	199 253 138	199 253 148	199 253 158
Size [inch]	Double Acting (DA)			
	EPDM	FKM		
1/2	199 253 163	199 253 173		
3/4	199 253 164	199 253 174		
1	199 253 165	199 253 175		
1 1/4	199 253 166	199 253 176		
1 1/2	199 253 167	199 253 177		
2	199 253 168	199 253 178		
				
Without Manual Override				
ANSI Flanged				
Size [inch]	Fail Safe to Close (FC)		Fail Safe to Open (FO)	
	EPDM	FKM	EPDM	FKM
1/2	199 253 723	199 253 733	199 253 743	199 253 753
3/4	199 253 724	199 253 734	199 253 744	199 253 754
1	199 253 725	199 253 735	199 253 745	199 253 755
1 1/4	199 253 726	199 253 736	199 253 746	199 253 756
1 1/2	199 253 727	199 253 737	199 253 747	199 253 757
2	199 253 728	199 253 738	199 253 748	199 253 758
2 1/2	199 253 729	199 253 739	199 253 749	199 253 759
3	199 253 730	199 253 740	199 253 750	199 253 760
4	199 253 731	199 253 741	199 253 751	199 253 761
Size [inch]	Double Acting (DA)			
	EPDM	FKM		
1/2	199 253 763	199 253 773		
3/4	199 253 764	199 253 774		
1	199 253 765	199 253 775		
1 1/4	199 253 766	199 253 776		
1 1/2	199 253 767	199 253 777		
2	199 253 768	199 253 778		
2 1/2	199 253 769	199 253 779		
3	199 253 770	199 253 780		
4	199 253 771	199 253 781		
				

Type 546 Pro Ball Valve with PPA Pneumatic Actuator

CPVC

C



Size [inch]	With Manual Override			
	Socket/Threaded NPT			
	Fail Safe to Close (FC)		Fail Safe to Open (FO)	
	EPDM	FKM	EPDM	FKM
3/8	199 253 302	199 253 312	199 253 322	199 253 332
1/2	199 253 303	199 253 313	199 253 323	199 253 333
3/4	199 253 304	199 253 314	199 253 324	199 253 334
1	199 253 305	199 253 315	199 253 325	199 253 335
1 1/4	199 253 306	199 253 316	199 253 326	199 253 336
1 1/2	199 253 307	199 253 317	199 253 327	199 253 337
2	199 253 308	199 253 318	199 253 328	199 253 338
Size [inch]	Double Acting (DA)			
	EPDM	FKM		
3/8	199 253 342	199 253 352		
1/2	199 253 343	199 253 353		
3/4	199 253 344	199 253 354		
1	199 253 345	199 253 355		
1 1/4	199 253 346	199 253 356		
1 1/2	199 253 347	199 253 357		
2	199 253 348	199 253 358		
Size [inch]	Without Manual Override			
	Socket/Threaded NPT (3/8" - 2")			
	Fail Safe to Close (FC)		Fail Safe to Open (FO)	
	EPDM	FKM	EPDM	FKM
3/8	199 253 362	199 253 372	199 253 382	199 253 392
1/2	199 253 363	199 253 373	199 253 383	199 253 393
3/4	199 253 364	199 253 374	199 253 384	199 253 394
1	199 253 365	199 253 375	199 253 385	199 253 395
1 1/4	199 253 366	199 253 376	199 253 386	199 253 396
1 1/2	199 253 367	199 253 377	199 253 387	199 253 397
2	199 253 368	199 253 378	199 253 388	199 253 398
2 1/2	199 253 369	199 253 379	199 253 389	199 253 399
3	199 253 370	199 253 380	199 253 390	199 253 400
4	199 253 371	199 253 381	199 253 391	199 253 401
Size [inch]	Double Acting (DA)			
	EPDM	FKM		
3/8	199 253 402	199 253 412		
1/2	199 253 403	199 253 413		
3/4	199 253 404	199 253 414		
1	199 253 405	199 253 415		
1 1/4	199 253 406	199 253 416		
1 1/2	199 253 407	199 253 417		
2	199 253 408	199 253 418		
2 1/2	199 253 409	199 253 419		
3	199 253 410	199 253 420		
4	199 253 411	199 253 421		

2-1/2" to 4" Threaded NPT available upon request.

Type 546 Pro Ball Valve with PPA Pneumatic Actuator

CPVC



C

With Manual Override				
ANSI Flanged				
Size [inch]	Fail Safe to Close (FC)		Fail Safe to Open (FO)	
	EPDM	FKM	EPDM	FKM
1/2	199 253 443	199 253 453	199 253 463	199 253 473
3/4	199 253 444	199 253 454	199 253 464	199 253 474
1	199 253 445	199 253 455	199 253 465	199 253 475
1 1/4	199 253 446	199 253 456	199 253 466	199 253 476
1 1/2	199 253 447	199 253 457	199 253 467	199 253 477
2	199 253 448	199 253 458	199 253 468	199 253 478
Size [inch]	Double Acting (DA)			
	EPDM	FKM		
1/2	199 253 483	199 253 493		
3/4	199 253 484	199 253 494		
1	199 253 485	199 253 495		
1 1/4	199 253 486	199 253 496		
1 1/2	199 253 487	199 253 497		
2	199 253 488	199 253 498		
				
Without Manual Override				
ANSI Flanged				
Size [inch]	Fail Safe to Close (FC)		Fail Safe to Open (FO)	
	EPDM	FKM	EPDM	FKM
1/2	199 253 803	199 253 813	199 253 823	199 253 833
3/4	199 253 804	199 253 814	199 253 824	199 253 834
1	199 253 805	199 253 815	199 253 825	199 253 835
1 1/4	199 253 806	199 253 816	199 253 826	199 253 836
1 1/2	199 253 807	199 253 817	199 253 827	199 253 837
2	199 253 808	199 253 818	199 253 828	199 253 838
2 1/2	199 253 809	199 253 819	199 253 829	199 253 839
3	199 253 810	199 253 820	199 253 830	199 253 840
4	199 253 811	199 253 821	199 253 831	199 253 841
Size [inch]	Double Acting (DA)			
	EPDM	FKM		
1/2	199 253 843	199 253 853		
3/4	199 253 844	199 253 854		
1	199 253 845	199 253 855		
1 1/4	199 253 846	199 253 856		
1 1/2	199 253 847	199 253 857		
2	199 253 848	199 253 858		
2 1/2	199 253 849	199 253 859		
3	199 253 850	199 253 860		
4	199 253 851	199 253 861		
				

Type 546 Pro Ball Valve with PPA Pneumatic Actuator

PROGEF® Standard PP



C

With Manual Override				
Socket Fusion				
d [mm]	Fail Safe to Close (FC)		Fail Safe to Open (FO)	
	EPDM	FKM	EPDM	FKM
16	199 251 002	199 251 012	199 251 042	199 251 052
20	199 251 623	199 251 633	199 251 643	199 251 653
25	199 251 624	199 251 634	199 251 644	199 251 654
32	199 251 625	199 251 635	199 251 645	199 251 655
40	199 251 006	199 251 016	199 251 046	199 251 056
50	199 251 007	199 251 017	199 251 047	199 251 057
63	199 251 008	199 251 018	199 251 048	199 251 058
Double Acting (DA)				
d [mm]	EPDM	FKM		
	EPDM	FKM		
16	199 251 082	199 251 092		
20	199 251 663	199 251 673		
25	199 251 664	199 251 674		
32	199 251 665	199 251 675		
40	199 251 086	199 251 096		
50	199 251 087	199 251 097		
63	199 251 088	199 251 098		
Without Manual Override				
Socket Fusion				
d [mm]	Fail Safe to Close (FC)		Fail Safe to Open (FO)	
	EPDM	FKM	EPDM	FKM
16	199 251 122	199 251 132	199 251 162	199 251 172
20	199 251 833	199 251 843	199 251 853	199 251 863
25	199 251 834	199 251 844	199 251 854	199 251 864
32	199 251 835	199 251 845	199 251 855	199 251 865
40	199 251 126	199 251 136	199 251 166	199 251 176
50	199 251 127	199 251 137	199 251 167	199 251 177
63	199 251 128	199 251 138	199 251 168	199 251 178
75	199 251 129	199 251 139	199 251 169	199 251 179
90	199 251 130	199 251 140	199 251 170	199 251 180
110	199 251 131	199 251 141	199 251 171	199 251 181
Double Acting (DA)				
d [mm]	EPDM	FKM		
	EPDM	FKM		
16	199 251 202	199 251 212		
20	199 251 873	199 251 883		
25	199 251 874	199 251 884		
32	199 251 875	199 251 885		
40	199 251 206	199 251 216		
50	199 251 207	199 251 217		
63	199 251 208	199 251 218		
75	199 251 209	199 251 219		
90	199 251 210	199 251 220		
110	199 251 211	199 251 221		

Type 546 Pro Ball Valve with PPA Pneumatic Actuator

PROGEF® Standard PP

C

With Manual Override				
IR/Butt Fusion				
d [mm]	Fail Safe to Close (FC)		Fail Safe to Open (FO)	
	EPDM	FKM	EPDM	FKM
20	199 251 623	199 251 633	199 251 643	199 251 653
25	199 251 624	199 251 634	199 251 644	199 251 654
32	199 251 625	199 251 635	199 251 645	199 251 655
40	199 251 626	199 251 636	199 251 646	199 251 656
50	199 251 627	199 251 637	199 251 647	199 251 657
63	199 251 628	199 251 638	199 251 648	199 251 658
d [mm]	Double Acting (DA)			
	EPDM	FKM		
20	199 251 663	199 251 673		
25	199 251 664	199 251 674		
32	199 251 665	199 251 675		
40	199 251 666	199 251 676		
50	199 251 667	199 251 677		
63	199 251 668	199 251 678		
				
Without Manual Override				
IR/Butt Fusion				
d [mm]	Fail Safe to Close (FC)		Fail Safe to Open (FO)	
	EPDM	FKM	EPDM	FKM
20	199 251 833	199 251 843	199 251 853	199 251 863
25	199 251 834	199 251 844	199 251 854	199 251 864
32	199 251 835	199 251 845	199 251 855	199 251 865
40	199 251 836	199 251 846	199 251 856	199 251 866
50	199 251 837	199 251 847	199 251 857	199 251 867
63	199 251 838	199 251 848	199 251 858	199 251 868
75	199 251 839	199 251 849	199 251 859	199 251 869
90	199 251 840	199 251 850	199 251 860	199 251 870
110	199 251 841	199 251 851	199 251 861	199 251 871
d [mm]	Double Acting (DA)			
	EPDM	FKM		
20	199 251 873	199 251 883		
25	199 251 874	199 251 884		
32	199 251 875	199 251 885		
40	199 251 876	199 251 886		
50	199 251 877	199 251 887		
63	199 251 878	199 251 888		
75	199 251 879	199 251 889		
90	199 251 880	199 251 890		
110	199 251 881	199 251 891		
				

Type 546 Pro Ball Valve with PPA Pneumatic Actuator

SYGEF® Standard PVDF

C

With Manual Override			
Socket Fusion			
d [mm]	Fail Safe to Close (FC) FKM	Fail Safe to Open (FO) FKM	Double Acting (DA) FKM
16	199 252 012	199 252 052	199 252 092
20	199 252 013	199 252 053	199 252 093
25	199 252 014	199 252 054	199 252 094
32	199 252 015	199 252 055	199 252 095
40	199 252 016	199 252 056	199 252 096
50	199 252 017	199 252 057	199 252 097
63	199 252 018	199 252 058	199 252 098



Without Manual Override			
Socket Fusion			
d [mm]	Fail Safe to Close (FC) FKM	Fail Safe to Open (FC) FKM	Double Acting (DA) FKM
16	199 252 132	199 252 172	199 252 212
20	199 252 133	199 252 173	199 252 213
25	199 252 134	199 252 174	199 252 214
32	199 252 135	199 252 175	199 252 215
40	199 252 136	199 252 176	199 252 216
50	199 252 137	199 252 177	199 252 217
63	199 252 138	199 252 178	199 252 218
75	199 252 139	199 252 179	199 252 219
90	199 252 140	199 252 180	199 252 220
110	199 252 141	199 252 181	199 252 221



With Manual Override			
IR/Butt Fusion			
d [mm]	Fail Safe to Close (FC) FKM	Fail Safe to Open (FC) FKM	Double Acting (DA) FKM
20	199 252 713	199 252 753	199 252 793
25	199 252 714	199 252 754	199 252 794
32	199 252 715	199 252 755	199 252 795
40	199 252 716	199 252 756	199 252 796
50	199 252 717	199 252 757	199 252 797
63	199 252 718	199 252 758	199 252 798



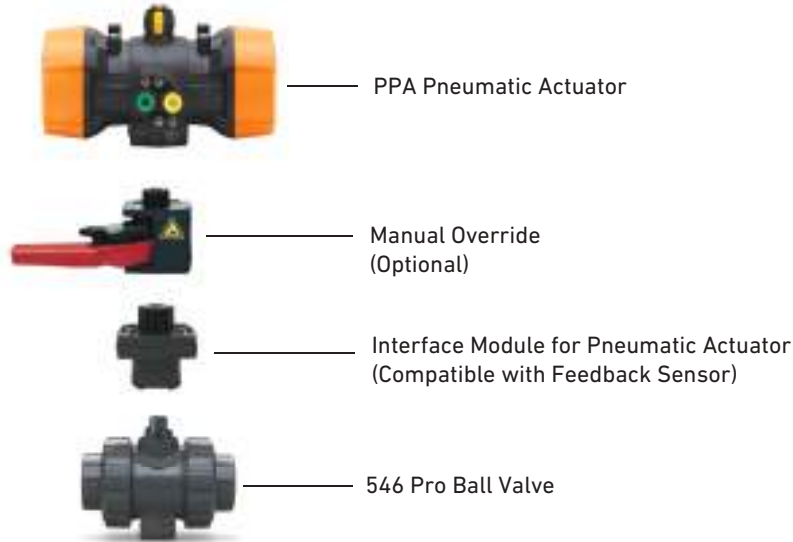
Without Manual Override			
IR/Butt Fusion			
d [mm]	Fail Safe to Close (FC) FKM	Fail Safe to Open (FC) FKM	Double Acting (DA) FKM
20	199 252 833	199 252 873	199 252 913
25	199 252 834	199 252 874	199 252 914
32	199 252 835	199 252 875	199 252 915
40	199 252 836	199 252 876	199 252 916
50	199 252 837	199 252 877	199 252 917
63	199 252 838	199 252 878	199 252 918
75	199 252 839	199 252 879	199 252 919
90	199 252 840	199 252 880	199 252 920
110	199 252 841	199 252 881	199 252 921



Actuated Ball Valves: Accessories and Component Parts

Available components and accessories are on the following pages of the price list. If accessories are to be added and assembled by GF, **please order by adding S in front of the valve part number** and adjust the description to include the desired accessories. Example: Part number **199253005** (1" Type 546 Pro Ball Valve with PPA) assembled with **198546001** (3/8 to 2 - Double Sensor Close-Green/Open-Red) should be ordered:

- PO item 1: **S199253005** 1" Type 546 Pro Ball Valve with PPA assembled with double sensor **198546001**
- PO item 2: **198546001** 3/8 to 2 - Double Sensor Close-Green/Open-Red



Optional Actuator Accessories PPA08 - PPA80

- Double Sensor
- Limit Switch Reading off Actuator
- Limit Switch Reading off Valve (within MFM)
- Positioner
- LCB Local control station
- Pilot Valve
- Stroke Limiter

Components by Valve Type

Size [Inch] - [mm]	Type 546 Pro with PPA							
	Actuator			Interface Module	Adaption Kit		Manual Override	
	FC	FO	DA		FC/FO	DA	FC/FO	DA
3/8" - 16	199155081	199155082	198155083	198546162	-	-	198000501	198000501
1/2" - 20	199155081	199155082	198155083	198546162	-	-	198000501	198000501
3/4" - 25	199155081	199155082	198155083	198546163	-	-	198000501	198000501
1" - 32	198155154	198155155	198155083	198546134	-	-	198000501	198000501
1-1/4" - 40	198155154	198155155	198155153	198546135	-	-	198000501	198000501
1-1/2" - 50	198155401	198155402	198155153	198546136	-	-	198000501	198000501
2" - 63	198155401	198155402	198155403	198546137	-	-	198000501	198000501
2 1/2" - 75	198155801	198155802	198155403	167482684	198546138	198546139	198000630	198000630
3" - 90	198155801	198155802	198155403	167482684	198546138	198546139	198000631	198000630
4" - 110	198155801	198155802	198155803	167482685	198546140	198546140	198000628	198000628

Pneumatic Actuators

Part Number	Description
198155081	PPA08 FC
198155082	PPA08 FO
198155083	PPA08 DA
198155154	PPA15 FC
198155155	PPA15 FO
198155153	PPA15 DA
198155401	PPA40 FC
198155402	PPA40 FO
198155403	PPA40 DA
198155801	PPA80 FC
198155802	PPA80 FO
198155803	PPA80 DA

Accessories Pneumatically Actuated Ball Valves



C

Feedback Sensor

Size [inch]	PNP - 0.15A		NPN - 0.15A	
	Close - Green	Close - Red	Close - Green	Close - Red
3/8 - 2	198 546 001	198 546 002	198 546 005	198 546 006
Size [inch]	NAMUR (ATEX) - 0.15A			
	Close - Green	Close - Red		
3/8 - 2	198 546 003	198 546 004		

Feedback Sensor compatible with 546 Pro with Interface Module for Pneumatic Actuator.



C

Multifunction Module (MFM) with Switches

d - d [mm]	Size [Inch]	Mechanical Limit Switches		PPA Adapter
		250 V AC / DC 6 A	4 - 30 V DC 100 mA	Part No.
		Ag Ni	Au	
16 - 20	3/8 - 1/2	167 482 626	167 482 635	198 151 346
25 - 32	3/4 - 1	167 482 627	167 482 636	198 151 346
40 - 50	1 1/4 - 1 1/2	167 482 628	167 482 637	-
63	2	167 482 629	167 482 638	-
75 - 90	2 1/2 - 3	167 482 630	167 482 639	-
110	4	167 482 631	167 482 640	-

Intermediate kit required to use MFM with mechanical switches.

Intermediate Kit

C

d - d [mm]	Size [Inch]	Part No.
16 - 20	3/8 - 1/2	198 150 556
25 - 32	3/4 - 1	198 150 557
40 - 50	1 1/4 - 1 1/2	198 150 558
63	2	198 150 559

Intermediate kit required to use MFM with mechanical switches.

Limit Switch Box with Namur Mounting Flange

C

Voltage	Limit Switch Box with 2 Auxiliary Switches	
	Description	Part No.
250 V, 10 A	Ag Ni	199 190 282
10 - 30 V, 0.1 A	Inductive NPN	199 190 283
10 - 30 V, 0.1 A	Inductive PNP	199 190 284
5 - 15 V	Intrinsically Safe	199 190 285
250 V, 5 A	Explosion Proof	199 190 286
30 V, 1 - 100 mA	Au	199 190 287



Does not require additional adapter kits.

Pilot Solenoid Valve

C

Voltage	Solenoid PV94	Solenoid PV95 3/2-way	Voltage	Type MNL532 3/2-5/2-way
	FC/FO	FC/FO		Part No.
24 V DC	199 190 546	199 190 554	110 V, AC	199 190 359
110 V, 50-60 Hz	199 190 547	199 190 555	230 V, AC	199 190 360
Voltage	Type 5470 4/2-way		48 V, AC	199 190 361
	DA		24 V, AC	199 190 358
230 V, AC/DC	199 190 302		24 V, DC	199 190 357
115 V, AC/DC	199 190 303		Speed control pilot solenoid	
24 V, AC/DC	199 190 304			

Electro-Pneumatic Positioner Type RPC

Type	Part No.
RPC - No Display	199 190 640
RPC D - with Display	199 190 641
RPC PID - with Display	199 190 644



Type RPC Adapter

Description	Part No.
Type RPC	199 190 647

Required for RPC Positioner

RPC/SPC Multi-Pin Connector

Model	5m PUR Cable	
	Description	Part No.
M12 8-pin, power & signal	For all RPC/SPC positioners	199 190 649
M12 4-pin, power only	For RPC/SPC with display	199 190 650
M8 4-pin, signal only	For RPC/SPC with PID only	199 190 651

Pneumatic Actuator Type PA 11 / PA 21 with Stroke Limiter

C

Type	Size [inch]	Fail Safe to Close (FC) Part No.	Fail Safe to Open (FO) Part No.	Double Acting (DA) Part No.
PA 11	3/8 - 1	198 150 144	198 150 145	198 150 146
PA 21	1 1/4 - 2	198 150 147	198 150 148	198 150 149

Limit stroke up to 45°. Required Intermediate Kits: 198150556 for 3/8"-1/2" and 198150557 for 3/4"-1".

Spare Parts Pneumatically Actuated Ball Valves



FC/FO

DA

C

Type PPA08 - PPA80 Pneumatic Actuator

Type	FC/FO Size [inch]	Fail Safe to Close (FC) Part No.	Fail Safe to Open (FO) Part No.	DA Size [inch]	Double Acting (DA) Part No.
PPA08	3/8 - 3/4	198 155 081	198 155 082	3/8 - 1	198 155 083
PPA15	1 - 1 1/4	198 155 154	198 155 155	1 1/4 - 1 1/2	198 155 153
PPA40	1 1/2 - 2	198 155 401	198 155 402	2 - 3	198 155 403
PPA80	2 1/2 - 4	198 155 801	198 155 802	4	198 155 803

Interface Module for Pneumatic Actuator

C

d - d [mm]	Size [inch]	Part No.
16 - 20	3/8 - 1/2	198 546 162
25	3/4	198 546 163
32	1	198 546 164
40	1 1/4	198 546 135
50	1 1/2	198 546 136
63	2	198 546 137
75 - 90	2 1/2 - 3	167 482 684
110	4	167 482 685



Intermediate Kit

C

d - d [mm]	Size [Inch]	FC/FO Part No.	DA Part No.
75 - 90	2 1/2 - 3	198 546 138	198 546 139
110	4	198 546 140	198 546 140

Declutchable Manual Override



C

d - d [mm]	Size [inch]	PPA08 - PPA40 Part No.
16 - 63	3/8 - 2	198 000 501

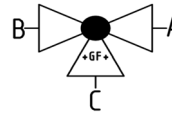
BSPT to NPT Brass Adapter

C

Size	Part No.
1/8" male BSPT to 1/8" female NPT	150 101 038
1/4" male BSPT to 1/4" female NPT	150 101 037

Comes standard with pneumatically actuated ball valves

Type 543 Pro with PPA Pneumatic Actuator Vertical

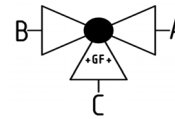
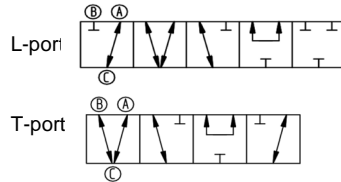


C

PVC

Size [inch]	Socket - With Manual Override			
	Fail Safe to Close (FC)		Fail Safe to Open (FO)	
	EPDM	FKM	EPDM	FKM
3/8	199 298 492	199 298 502	199 298 512	199 298 522
1/2	199 298 493	199 298 503	199 298 513	199 298 523
3/4	199 298 494	199 298 504	199 298 514	199 298 524
1	199 298 495	199 298 505	199 298 515	199 298 525
1 1/4	199 298 496	199 298 506	199 298 516	199 298 526
1 1/2	199 298 497	199 298 507	199 298 517	199 298 527
2	199 298 498	199 298 508	199 298 518	199 298 528
Size [inch]	Double Acting (DA)			
	EPDM	FKM		
	3/8	199 298 532	199 298 542	
1/2	199 298 533	199 298 543		
3/4	199 298 534	199 298 544		
1	199 298 535	199 298 545		
1 1/4	199 298 536	199 298 546		
1 1/2	199 298 537	199 298 547		
2	199 298 538	199 298 548		
Size [inch]	Socket - Without Manual Override			
	Fail Safe to Close (FC)		Fail Safe to Open (FO)	
	EPDM	FKM	EPDM	FKM
3/8	199 298 552	199 298 562	199 298 572	199 298 582
1/2	199 298 553	199 298 563	199 298 573	199 298 583
3/4	199 298 554	199 298 564	199 298 574	199 298 584
1	199 298 555	199 298 565	199 298 575	199 298 585
1 1/4	199 298 556	199 298 566	199 298 576	199 298 586
1 1/2	199 298 557	199 298 567	199 298 577	199 298 587
2	199 298 558	199 298 568	199 298 578	199 298 588
Size [inch]	Double Acting (DA)			
	EPDM	FKM		
	3/8	199 298 592	199 298 602	
1/2	199 298 593	199 298 603		
3/4	199 298 594	199 298 604		
1	199 298 595	199 298 605		
1 1/4	199 298 596	199 298 606		
1 1/2	199 298 597	199 298 607		
2	199 298 598	199 298 608		

Type 543 Pro with PPA Pneumatic Actuator Horizontal



C

PVC

Size [inch]	L-port: Socket			
	Fail Safe to Close (FC)		Double Acting (DA)	
	EPDM	FKM	EPDM	FKM
3/8	199 295 382	199 295 392	199 295 542	199 295 552
1/2	199 295 383	199 295 393	199 295 543	199 295 553
3/4	199 295 384	199 295 394	199 295 544	199 295 554
1	199 295 385	199 295 395	199 295 545	199 295 555
1 1/4	199 295 386	199 295 396	199 295 546	199 295 556
1 1/2	199 295 387	199 295 397	199 295 547	199 295 557
2	199 295 388	199 295 398	199 295 548	199 295 558

Size [inch]	T-port: Socket			
	Fail Safe to Close (FC)		Double Acting (DA)	
	EPDM	FKM	EPDM	FKM
3/8	199 295 422	199 295 432	199 295 582	199 295 592
1/2	199 295 423	199 295 433	199 295 583	199 295 593
3/4	199 295 424	199 295 434	199 295 584	199 295 594
1	199 295 425	199 295 435	199 295 585	199 295 595
1 1/4	199 295 426	199 295 436	199 295 586	199 295 596
1 1/2	199 295 427	199 295 437	199 295 587	199 295 597
2	199 295 428	199 295 438	199 295 588	199 295 598

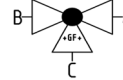
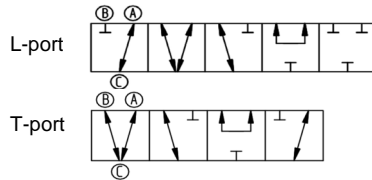
CPVC

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Size [inch]	L-port: Socket			
	Fail Safe to Close (FC)		Double Acting (DA)	
	EPDM	FKM	EPDM	FKM
3/8	199 295 462	199 295 472	199 295 942	199 295 952
1/2	199 295 463	199 295 473	199 295 943	199 295 953
3/4	199 295 464	199 295 474	199 295 944	199 295 954
1	199 295 465	199 295 475	199 295 945	199 295 955
1 1/4	199 295 466	199 295 476	199 295 946	199 295 956
1 1/2	199 295 467	199 295 477	199 295 947	199 295 957
2	199 295 468	199 295 478	199 295 948	199 295 958

Size [inch]	T-port: Socket			
	Fail Safe to Close (FC)		Double Acting (DA)	
	EPDM	FKM	EPDM	FKM
3/8	199 295 502	199 295 512	199 295 982	199 295 992
1/2	199 295 503	199 295 513	199 295 983	199 295 993
3/4	199 295 504	199 295 514	199 295 984	199 295 994
1	199 295 505	199 295 515	199 295 985	199 295 995
1 1/4	199 295 506	199 295 516	199 295 986	199 295 996
1 1/2	199 295 507	199 295 517	199 295 987	199 295 997
2	199 295 508	199 295 518	199 295 988	199 295 998

Type 543 Pro with PPA Pneumatic Actuator Horizontal

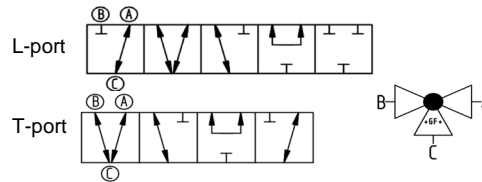


C

PROGEF® Standard PP

L-port: Socket Fusion				
d [mm]	Fail Safe to Close (FC)		Double Acting (DA)	
	EPDM	FKM	EPDM	FKM
16	199 296 022	199 296 032	199 296 182	199 296 192
20	199 296 023	199 296 033	199 296 183	199 296 193
25	199 296 024	199 296 034	199 296 184	199 296 194
32	199 296 025	199 296 035	199 296 185	199 296 195
40	199 296 026	199 296 036	199 296 186	199 296 196
50	199 296 027	199 296 037	199 296 187	199 296 197
63	199 296 028	199 296 038	199 296 188	199 296 198
L-Port: IR/Butt Fusion				
d [mm]	Fail Safe to Close (FC)		Double Acting (DA)	
	EPDM	FKM	EPDM	FKM
20	199 296 083	199 296 093	199 296 243	199 296 253
25	199 296 084	199 296 094	199 296 244	199 296 254
32	199 296 085	199 296 095	199 296 245	199 296 255
40	199 296 086	199 296 096	199 296 246	199 296 256
50	199 296 087	199 296 097	199 296 247	199 296 257
63	199 296 088	199 296 098	199 296 248	199 296 258
T-port: Socket Fusion				
d [mm]	Fail Safe to Close (FC)		Double Acting (DA)	
	EPDM	FKM	EPDM	FKM
16	199 296 062	199 296 072	199 296 222	199 296 232
20	199 296 063	199 296 073	199 296 223	199 296 233
25	199 296 064	199 296 074	199 296 224	199 296 234
32	199 296 065	199 296 075	199 296 225	199 296 235
40	199 296 066	199 296 076	199 296 226	199 296 236
50	199 296 067	199 296 077	199 296 227	199 296 237
63	199 296 068	199 296 078	199 296 228	199 296 238
T-port: IR/Butt Fusion				
d [mm]	Fail Safe to Close (FC)		Double Acting (DA)	
	EPDM	FKM	EPDM	FKM
20	199 296 103	199 296 113	199 296 263	199 296 273
25	199 296 104	199 296 114	199 296 264	199 296 274
32	199 296 105	199 296 115	199 296 265	199 296 275
40	199 296 106	199 296 116	199 296 266	199 296 276
50	199 296 107	199 296 117	199 296 267	199 296 277
63	199 296 108	199 296 118	199 296 268	199 296 278

Type 543 Pro with PPA Pneumatic Actuator Horizontal



C

SYGEF® Standard PVDF

d - Size [mm]-[inch]	Horizontal / L-port	
	Socket Fusion - FC FKM	IR/Butt Fusion - FC FKM
16 - 3/8	199 297 092	-
20 - 1/2	199 297 093	199 297 053
25 - 3/4	199 297 094	199 297 054
32 - 1	199 297 095	199 297 055
40 - 1 1/4	199 297 096	199 297 056
50 - 1 1/2	199 297 097	199 297 057
63 - 2	199 297 098	199 297 058
d [mm]	Socket Fusion - DA FKM	IR/Butt Fusion - DA FKM
16 - 3/8	199 297 212	-
20 - 1/2	199 297 213	199 297 173
25 - 3/4	199 297 214	199 297 174
32 - 1	199 297 215	199 297 175
40 - 1 1/4	199 297 216	199 297 176
50 - 1 1/2	199 297 217	199 297 177
63 - 2	199 297 218	199 297 178
d - Size [mm]-[inch]	Horizontal / T-port	
	Socket Fusion - FC FKM	IR/Butt Fusion - FC FKM
16 - 3/8	199 297 112	-
20 - 1/2	199 297 113	199 297 073
25 - 3/4	199 297 114	199 297 074
32 - 1	199 297 115	199 297 075
40 - 1 1/4	199 297 116	199 297 076
50 - 1 1/2	199 297 117	199 297 077
63 - 2	199 297 118	199 297 078
d [mm]	Socket Fusion - DA FKM	IR/Butt Fusion - DA FKM
16 - 3/8	199 297 232	-
20 - 1/2	199 297 233	199 297 193
25 - 3/4	199 297 234	199 297 194
32 - 1	199 297 235	199 297 195
40 - 1 1/4	199 297 236	199 297 196
50 - 1 1/2	199 297 237	199 297 197
63 - 2	199 297 238	199 297 198

Actuated Ball Valves: Accessories and Component Parts

Available components and accessories are on the following pages of the price list. If accessories are to be added and assembled by GF, **please order by adding an "S" in front of the valve part number** and adjust the description to include the desired accessories.

Example : Part number **199295385** (1" Type 543 Pro Ball Valve PVC/EPDM with PPA) assembled with 199190603 (EA25-250 Positioner Board) should be ordered:

- PO item 1: **S199295385** 1" Type 543 Pro Ball Valve PVC/EPDM with PPA assembled with positioner 199190603
- PO item 2: **199190603** EA25-250 Positioner Board



PPA Pneumatic Actuator



Interface Module for Pneumatic Actuator (Compatible with Feedback Sensor)



3-Way Interface Module Adapter



Horizontal 543 Pro

Optional Actuator Accessories

PPA08 - PPA80

- Double Sensor
- Limit Switch
- Positioner
- LCB Local control station
- Pilot Valve
- Stroke Limiter

Components by Valve Type

Size [Inch] - [mm]	Type 543 Pro with PPA				
	Interface Module	3 - Way Adapter	Pneumatic Actuator		
			FC/FO	DA	
3/8" - 15	198546162	198543000	PPA08	PPA08	
1/2" - 20	198546162	198543000	PPA08	PPA08	
3/4" - 25	198546163	198543001	PPA08	PPA08	
1" - 32	198546164	198543001	PPA15	PPA08	
1 1/4" - 40	198546135	198543002	PPA15	PPA15	
1 1/2" - 50	198546136	198543002	PPA40	PPA15	
2" - 63	198546137	198543003	PPA40	PPA40	

Pneumatic Actuators	
Part Number	Description
198155081	PPA08 FC
198155082	PPA08 FO
198155083	PPA08 DA
198155154	PPA15 FC
198155155	PPA15 FO
198155153	PPA15 DA
198155401	PPA40 FC
198155402	PPA40 FO
198155403	PPA40 DA
198155801	PPA80 FC
198155802	PPA80 FO
198155803	PPA80 DA

Accessories Pneumatically Actuated 3-Way Ball Valves



C

Feedback Sensor

Size [inch]	PNP - 0.15A		NPN - 0.15A	
	Close - Green	Close - Red	Close - Green	Close - Red
3/8 - 2	198 546 001	198 546 002	198 546 005	198 546 006
Size [inch]	NAMUR (ATEX) - 0.15A			
	Close - Green	Close - Red		
3/8 - 2	198 546 003	198 546 004		

Feedback Sensor compatible with 546 Pro with Interface Module for Pneumatic Actuator.



C

Multifunction Module (MFM) with Switches

d - d [mm]	Size [Inch]	Mechanical Limit Switches		PPA Adapter
		250 V AC / DC 6 A	4 - 30 V DC 100 mA	Part No.
		Ag Ni	Au	
16 - 20	3/8 - 1/2	167 482 626	167 482 635	198 151 346
25 - 32	3/4 - 1	167 482 627	167 482 636	198 151 346
40 - 50	1 1/4 - 1 1/2	167 482 628	167 482 637	-
63	2	167 482 629	167 482 638	-

3-Way Intermediate kit required to use MFM with mechanical switches.

3-Way Intermediate Kit

C

d - d [mm]	Size [Inch]	Horizontal	Vertical
16 - 20	3/8 - 1/2	167 484 941	167 484 945
25 - 32	3/4 - 1	167 484 942	167 484 946
40 - 50	1 1/4 - 1 1/2	167 484 943	167 484 947
63	2	167 484 944	167 484 948

3-Way Intermediate kit required to use MFM with mechanical switches.

Limit Switches with NAMUR Mounting Flange

C

Voltage	Limit Switch Box with 2 Auxiliary Switches	
	Description	Part No.
250 V, 10 A	Ag Ni	199 190 282
10 - 30 V, 0.1 A	Inductive NPN	199 190 283
10 - 30 V, 0.1 A	Inductive PNP	199 190 284
5 - 15 V	Intrinsically Safe	199 190 285
250 V, 5 A	Explosion Proof	199 190 286
30 V, 1 - 100 mA	Au	199 190 287



Does not require additional adapter kits.

Electro-Pneumatic Positioner Type RPC

Type	Part No
RPC - No Display	199 190 640
RPC D - with Display	199 190 641
RPC PID - with Display	199 190 644



Type RPC Adapter

Description	Part No
Type RPC	199 190 647

Required for RPC Positioner

RPC/SPC Multi-Pin Connector

Model	5m PUR Cable	
	Description	Part No.
M12 8-pin, power & signal	For all RPC/SPC positioners	199 190 649
M12 4-pin, power only	For RPC/SPC with display	199 190 650
M8 4-pin, signal only	For RPC/SPC with PID only	199 190 651

Accessories Pneumatically Actuated 3-Way Ball Valves

Pneumatic Actuator Type PA 11 / PA 21 with Stroke Limiter

C

Type	Size [inch]	Fail Safe to Close (FC) Part No.	Fail Safe to Open (FO) Part No.	Double Acting (DA) Part No.
PA 11	3/8 - 1	198 150 144	198 150 145	198 150 146
PA 21	1 1/4 - 2	198 150 147	198 150 148	198 150 149

Limit stroke up to 45°. Required Intermediate Kits: 198150556 for 3/8"-1/2" and 198150557 for 3/4"-1"



C

Pilot Solenoid Valve

Voltage	Solenoid PV94 FC/FO	Solenoid PV95 3/2-way FC/FO	Voltage	Type MNL532 3/2-5/2-way Part No.
24 V DC	199 190 546	199 190 554	110 V, AC	199 190 359
110 V, 50-60 Hz	199 190 547	199 190 555	230 V, AC	199 190 360
Voltage	Type 5470 4/2-way DA		48 V, AC	199 190 361
230 V, AC/DC	199 190 302		24 V, AC	199 190 358
115 V, AC/DC	199 190 303		24 V, DC	199 190 357
24 V, AC/DC	199 190 304		Speed control pilot solenoid	

Spare Parts Pneumatically Actuated 3-Way Ball Valves

Interface Module for Pneumatic Actuator

C

d - d [mm]	Size [inch]	Part No.
16 - 20	3/8 - 1/2	198 546 162
25	3/4	198 546 163
32	1	198 546 164
40	1 1/4	198 546 135
50	1 1/2	198 546 136
63	2	198 546 137

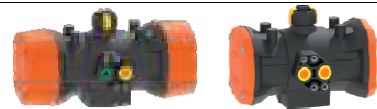


3-Way Interface Module Adapter required for use with 3-Way Valve.

3-Way Interface Module Adapter

C

d - d [mm]	Size [inch]	Part No.
16 - 20	3/8 - 1/2	198 543 000
25 - 32	3/4 - 1	198 543 001
40 - 50	1 1/4 - 1 1/2	198 543 002
63	2	198 543 003



FC/FO

DA

C

Type PPA08 - PPA80 Pneumatic Actuator

Type	FC/FO Size [inch]	Fail Safe to Close (FC) Part No.	Fail Safe to Open (FO) Part No.	DA Size [inch]	Double Acting (DA) Part No.
PPA08	3/8 - 3/4	198 155 081	198 155 082	3/8 - 1	198 155 083
PPA15	1 - 1 1/4	198 155 154	198 155 155	1 1/4 - 1 1/2	198 155 153
PPA40	1 1/2 - 2	198 155 401	198 155 402	2 - 3	198 155 403
PPA80	2 1/2 - 4	198 155 801	198 155 802	4	198 155 803

BSPT to NPT Brass Adapter

C

Size	Part No.
1/8" male BSPT to 1/8" female NPT	150 101 038
1/4" male BSPT to 1/4" female NPT	150 101 037

Comes standard with pneumatically actuated ball valves

Type 240 Pneumatically Actuated Wafer Butterfly Valve

PVC

C

d - Size [mm]-[inch]	Fail Safe to Close (FC)		Fail Safe to Open (FO)	
	EPDM	FKM	EPDM	FKM
63 - 2	199 240 002	199 240 022	199 240 042	199 240 062
75 - 2 ½	199 240 003	199 240 023	199 240 043	199 240 063
90 - 3	199 240 004	199 240 024	199 240 044	199 240 064
110 - 4	199 240 005	199 240 025	199 240 045	199 240 065
140 - 5	199 240 006	199 240 026	199 240 046	199 240 066
160 - 6	199 240 007	199 240 027	199 240 047	199 240 067
225 - 8	199 240 008	199 240 028	199 240 048	199 240 068
280 - 10	199 240 009	199 240 029	199 240 049	199 240 069
315 - 12	199 240 010	199 240 030	199 240 050	199 240 070

d - Size [mm]-[inch]	Double Acting (DA)	
	EPDM	FKM
63 - 2	199 240 082	199 240 102
75 - 2 ½	199 240 083	199 240 103
90 - 3	199 240 084	199 240 104
110 - 4	199 240 085	199 240 105
140 - 5	199 240 086	199 240 106
160 - 6	199 240 087	199 240 107
225 - 8	199 240 088	199 240 108
280 - 10	199 240 089	199 240 109
315 - 12	199 240 090	199 240 110



CPVC

C

d - Size [mm]-[inch]	Fail Save to Close (FC)		Fail Safe to Open (FO)	
	EPDM	FKM	EPDM	FKM
63 - 2	199 240 162	199 240 182	199 240 202	199 240 222
75 - 2 ½	199 240 163	199 240 183	199 240 203	199 240 223
90 - 3	199 240 164	199 240 184	199 240 204	199 240 224
110 - 4	199 240 165	199 240 185	199 240 205	199 240 225
140 - 5	199 240 166	199 240 186	199 240 206	199 240 226
160 - 6	199 240 167	199 240 187	199 240 207	199 240 227
225 - 8	199 240 168	199 240 188	199 240 208	199 240 228
280 - 10	150 240 169	150 240 189	150 240 209	150 240 229
315 - 12	150 240 170	150 240 190	150 240 210	150 240 230

d - Size [mm]-[inch]	Double Acting (DA)	
	EPDM	FKM
63 - 2	199 240 242	199 240 262
75 - 2 ½	199 240 243	199 240 263
90 - 3	199 240 244	199 240 264
110 - 4	199 240 245	199 240 265
140 - 5	199 240 246	199 240 266
160 - 6	199 240 247	199 240 267
225 - 8	199 240 248	199 240 268
280 - 10	150 240 249	150 240 269
315 - 12	150 240 250	150 240 270



PTFE seals available upon request.

Type 240 Pneumatically Actuated Wafer Butterfly Valve

PROGEF® Standard PP

C

d - Size [mm]-[inch]	Fail Safe to Close (FC)		Fail Safe to Open (FO)	
	EPDM	FKM	EPDM	FKM
63 - 2	199 240 282	199 240 302	199 240 322	199 240 342
75 - 2 ½	199 240 283	199 240 303	199 240 323	199 240 343
90 - 3	199 240 284	199 240 304	199 240 324	199 240 344
110 - 4	199 240 285	199 240 305	199 240 325	199 240 345
140 - 5	199 240 286	199 240 306	199 240 326	199 240 346
160 - 6	199 240 287	199 240 307	199 240 327	199 240 347
225 - 8	199 240 288	199 240 308	199 240 328	199 240 348
280 - 10	199 240 289	199 240 309	199 240 329	199 240 349
315 - 12	199 240 290	199 240 310	199 240 330	199 240 350

d - Size [mm]-[inch]	Double Acting (DA)	
	EPDM	FKM
63 - 2	199 240 362	199 240 382
75 - 2 ½	199 240 363	199 240 383
90 - 3	199 240 364	199 240 384
110 - 4	199 240 365	199 240 385
140 - 5	199 240 366	199 240 386
160 - 6	199 240 367	199 240 387
225 - 8	199 240 368	199 240 388
280 - 10	199 240 369	199 240 389
315 - 12	199 240 370	199 240 390



PTFE seals available upon request.

SYGEF® Standard PVDF

C

d - Size [mm]-[inch]	Fail Safe to Close (FC)		Fail Safe to Open (FO)	
	FKM	PTFE/FKM	FKM	PTFE/FKM
63 - 2	199 240 462	199 240 522	199 240 482	199 240 542
75 - 2 ½	199 240 463	199 240 523	199 240 483	199 240 543
90 - 3	199 240 464	199 240 524	199 240 484	199 240 544
110 - 4	199 240 465	199 240 525	199 240 485	199 240 545
140 - 5	199 240 466	199 240 526	199 240 486	199 240 546
160 - 6	199 240 467	199 240 527	199 240 487	199 240 547
225 - 8	199 240 468	199 240 528	199 240 488	199 240 548
280 - 10	199 240 469	199 240 529	199 240 489	199 240 549
315 - 12	199 240 470	199 240 530	199 240 490	199 240 550

d - Size [mm]-[inch]	Double Acting (DA)	
	FKM	PTFE/FKM
63 - 2	199 240 502	199 240 562
75 - 2 ½	199 240 503	199 240 563
90 - 3	199 240 504	199 240 564
110 - 4	199 240 505	199 240 565
140 - 5	199 240 506	199 240 566
160 - 6	199 240 507	199 240 567
225 - 8	199 240 508	199 240 568
280 - 10	199 240 509	199 240 569
315 - 12	199 240 510	199 240 570



Type 565 Pneumatically Actuated Wafer Butterfly Valve

C

d - Size [mm]-[inch]	Fail Safe to Close (FC)		Fail Safe to Open (FO)	
	EPDM	FKM	EPDM	FKM
63 - 2	199 565 500	199 565 520	199 565 540	199 565 560
75 - 2 ½	199 565 501	199 565 521	199 565 541	199 565 561
90 - 3	199 565 502	199 565 522	199 565 542	199 565 562
110 - 4	199 565 503	199 565 523	199 565 543	199 565 563
140 - 5	199 565 504	199 565 524	199 565 544	199 565 564
160 - 6	199 565 505	199 565 525	199 565 545	199 565 565
225 - 8	199 565 506	199 565 526	199 565 546	199 565 566
280 - 10	199 565 507	199 565 527	199 565 547	199 565 567
315 - 12	199 565 508	199 565 528	199 565 548	199 565 568

d - Size [mm]-[inch]	Double Acting (DA)	
	EPDM	FKM
63 - 2	199 565 600	199 565 620
75 - 2 ½	199 565 601	199 565 621
90 - 3	199 565 602	199 565 622
110 - 4	199 565 603	199 565 623
140 - 5	199 565 604	199 565 624
160 - 6	199 565 605	199 565 625
225 - 8	199 565 606	199 565 626
280 - 10	199 565 607	199 565 627
315 - 12	199 565 608	199 565 628



Type 244 Pneumatically Actuated Lug Butterfly Valve

PVC

C

Size [inch]	Fail Safe to Close (FC)		Fail Safe to Open (FO)	
	EPDM	FKM	EPDM	FKM
2	199 244 002	199 244 022	199 244 042	199 244 062
2 ½	199 244 003	199 244 023	199 244 043	199 244 063
3	199 244 004	199 244 024	199 244 044	199 244 064
4	199 244 005	199 244 025	199 244 045	199 244 065
5	199 244 006	199 244 026	199 244 046	199 244 066
6	199 244 007	199 244 027	199 244 047	199 244 067
8	199 244 008	199 244 028	199 244 048	199 244 068
10	199 244 009	199 244 029	199 244 049	199 244 069
12	199 244 010	199 244 030	199 244 050	199 244 070

Size [inch]	Double Acting (DA)	
	EPDM	FKM
2	199 244 082	199 244 102
2 ½	199 244 083	199 244 103
3	199 244 084	199 244 104
4	199 244 085	199 244 105
5	199 244 086	199 244 106
6	199 244 087	199 244 107
8	199 244 088	199 244 108
10	199 244 089	199 244 109
12	199 244 090	199 244 110



CPVC

C

Size [inch]	Fail Safe to Close (FC)		Fail Safe to Open (FO)	
	EPDM	FKM	EPDM	FKM
2	199 244 162	199 244 182	199 244 202	199 244 222
2 ½	199 244 163	199 244 183	199 244 203	199 244 223
3	199 244 164	199 244 184	199 244 204	199 244 224
4	199 244 165	199 244 185	199 244 205	199 244 225
5	199 244 166	199 244 186	199 244 206	199 244 226
6	199 244 167	199 244 187	199 244 207	199 244 227
8	199 244 168	199 244 188	199 244 208	199 244 228
10	199 244 169	199 244 189	199 244 209	199 244 229
12	199 244 170	199 244 190	199 244 210	199 244 230

Size [inch]	Double Acting (DA)	
	EPDM	FKM
2	199 244 242	199 244 262
2 ½	199 244 243	199 244 263
3	199 244 244	199 244 264
4	199 244 245	199 244 265
5	199 244 246	199 244 266
6	199 244 247	199 244 267
8	199 244 248	199 244 268
10	199 244 249	199 244 269
12	199 244 250	199 244 270




PTFE seals available upon request.

Type 244 Pneumatically Actuated Lug Butterfly Valve

PROGEF® Standard PP


C

Size [inch]	Fail Safe to Close (FC)		Fail Safe to Open (FO)	
	EPDM	FKM	EPDM	FKM
2	199 244 282	199 244 302	199 244 322	199 244 342
2 ½	199 244 283	199 244 303	199 244 323	199 244 343
3	199 244 284	199 244 304	199 244 324	199 244 344
4	199 244 285	199 244 305	199 244 325	199 244 345
5	199 244 286	199 244 306	199 244 326	199 244 346
6	199 244 287	199 244 307	199 244 327	199 244 347
8	199 244 288	199 244 308	199 244 328	199 244 348
10	199 244 289	199 244 309	199 244 329	199 244 349
12	199 244 290	199 244 310	199 244 330	199 244 350
Size [inch]	Double Acting (DA)			
	EPDM	FKM		
2	199 244 362	199 244 382		
2 ½	199 244 363	199 244 383		
3	199 244 364	199 244 384		
4	199 244 365	199 244 385		
5	199 244 366	199 244 386		
6	199 244 367	199 244 387		
8	199 244 368	199 244 388		
10	199 244 369	199 244 389		
12	199 244 370	199 244 390		

PTFE seals available upon request.

SYGEF® Standard PVDF

C

Size [inch]	Fail Safe to Close (FC)		Fail Safe to Open (FO)	
	FKM	PTFE/FKM	FKM	PTFE/FKM
2	199 244 462	199 244 522	199 244 482	199 244 542
2 ½	199 244 463	199 244 523	199 244 483	199 244 543
3	199 244 464	199 244 524	199 244 484	199 244 544
4	199 244 465	199 244 525	199 244 485	199 244 545
5	199 244 466	199 244 526	199 244 486	199 244 546
6	199 244 467	199 244 527	199 244 487	199 244 547
8	199 244 468	199 244 528	199 244 488	199 244 548
10	199 244 469	199 244 529	199 244 489	199 244 549
12	199 244 470	199 244 530	199 244 490	199 244 550
Size [inch]	Double Acting (DA)			
	FKM	PTFE/FKM		
2	199 244 502	199 244 562		
2 ½	199 244 503	199 244 563		
3	199 244 504	199 244 564		
4	199 244 505	199 244 565		
5	199 244 506	199 244 566		
6	199 244 507	199 244 567		
8	199 244 508	199 244 568		
10	199 244 509	199 244 569		
12	199 244 510	199 244 570		

Actuated Butterfly Valves: Accessories and Component Parts

Available components and accessories are on the following pages of the price list. If accessories are to be added and assembled by GF, please order by adding an "S" in front of the valve part number and adjust the description to include the desired accessories.

Example: Part number 199240007 (6" Type 240 Ball Valve PVC/EPDM) assembled with 199190282 (Mechanical Limit Switches Ag-Ni) should be ordered:

- PO item 1: S199240007 6" Type 240 Ball Valve PVC/EPDM assembled with limit switch 199190282
- PO item 2: 199190282 Mechanical Limit Switches Ag-Ni



Optional Actuator Accessories Type 240-244

- Limit Switch Reading off Actuator
- Integrated Limit Switch Reading off Valve
- Positioner
- LCB Local control station
- Stem Extension
- Pilot Valve
- Declutchable Manual Override

Components by Valve Type

Size [inch - mm]	Type 240-244			
	Action	Intermediate Kit w/o MO	Intermediate Kit w/ MO	Actuator
2 - 63	FC - FO	198000791	198000630	PA30
2 - 63	DA	198000595	198000630	PA35
2½ - 75	FC - FO	198000791	198000630	PA30
2½ - 75	DA	198000595	198000630	PA35
3 - 90	FC - FO	198000793	198000631	PA35
3 - 90	DA	198000791	198000630	PA40
4 - 110	FC - FO	198000794	198000628	PA40
4 - 110	DA	198000797	198000628	PA45
5 - 140	FC - FO	198000795	198000629	PA45
5 - 140	DA	198000797	198000628	PA45
6 - 160	FC - FO	198000796	198000625	PA50
6 - 160	DA	198000796	198000625	PA55
8 - 225	FC - FO	198000798	198000627	PA55
8 - 225	DA	198000796	198000625	PA55
10 - 280	FC	198000730	N/A	PA65
10 - 280	FO	198153225	N/A	PA70
10 - 280	DA	198000731	N/A	PA65
12 - 315	FC	198000730	N/A	PA70
12 - 315	FO	198153225	N/A	PA70
12 - 315	DA	198000731	N/A	PA70

N/A = Not Applicable

Pneumatic Actuators


Part number	Description
198811627	PA30 FO Pneumatic Actuator
198811617	PA30 FC Pneumatic Actuator
198811628	PA35 FO Pneumatic Actuator
198811601	PA35 FC Pneumatic Actuator
198811618	PA35 DA Pneumatic Actuator
198811628	PA40 FO Pneumatic Actuators
198811609	PA40 FC Pneumatic Actuator
198811619	PA40 DA Pneumatic Actuator
198811630	PA45 FO Pneumatic Actuator
198811603	PA45 FC Pneumatic Actuator
198800604	PA45 DA Pneumatic Actuator
198811631	PA50 FO Pneumatic Actuator
198811610	PA50 FC Pneumatic Actuator
198811632	PA55 FO Pneumatic Actuator
198811605	PA55 FC Pneumatic Actuator
198811606	PA55 DA Pneumatic Actuator
198811607	PA65 FC Pneumatic Actuator
198811608	PA65 DA Pneumatic Actuator
198811634	PA70 FO Pneumatic Actuator
198811612	PA70 FC Pneumatic Actuator
198811615	PA70 DA Pneumatic Actuator

Accessories Pneumatically Actuated Butterfly Valves

Integrated Limit Switches

C

Size [inch]	Mechanical	
	250 V AC/DC 6A Ag Ni	4 - 30 V DC 100 mA Au
2 - 3	161 486 859	161 486 858
4 - 5	161 486 305	161 486 304
6 - 8	161 486 010	161 486 009



Size [inch]	Inductive		
	1 - 8 V NAMUR	5 - 30 V DC 100 mA PNP	5 - 30 V DC 100 mA NPN
2 - 3	161 486 855	161 486 856	161 486 857
4 - 5	161 486 301	161 486 302	161 486 303
6 - 8	161 486 006	161 486 007	161 486 008

For Type 567/578 Butterfly Valves only.

Feedback Sensor



C

Size [inch]	PNP - 0.15A		NPN - 0.15A	
	Close - Green	Close - Red	Close - Green	Close - Red
3/8 - 2	198 546 001	198 546 002	198 546 005	198 546 006

Size [inch]	NAMUR (ATEX) - 0.15A	
	Close - Green	Close - Red
3/8 - 2	198 546 003	198 546 004

Feedback Sensor compatible with Type 565 only.

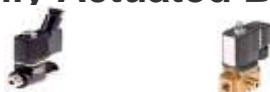
Limit Switches with NAMUR Mounting Flange

C

Voltage	Limit Switch Box with 2 Auxiliary Switches	
	Description	Part No.
250 V, 10 A	Ag Ni	199 190 282
10 - 30 V, 0.1 A	Inductive NPN	199 190 283
10 - 30 V, 0.1 A	Inductive PNP	199 190 284
5 - 15 V	Intrinsically Safe	199 190 285
250 V, 5 A	Explosion Proof	199 190 286
30 V, 1 - 100 mA	Au	199 190 287

Does not require additional adapter kits.

Accessories Pneumatically Actuated Butterfly Valves



C

Pilot Solenoid Valve

Voltage	Solenoid PV94 FC/FO	Solenoid PV95 3/2-way FC/FO
24 V DC	199 190 546	199 190 554
110 V, 50-60 Hz	199 190 547	199 190 555
Voltage	Type 5470 4/2-way DA	
230 V, AC/DC	199 190 302	
115 V, AC/DC	199 190 303	
24 V, AC/DC	199 190 304	

Voltage	Type MNL532 3/2-5/2-way Part No.
110 V, AC	199 190 359
230 V, AC	199 190 360
48 V, AC	199 190 361
24 V, AC	199 190 358
24 V, DC	199 190 357

Speed control pilot solenoid

PV94 used to reduce open/close speed of PA butterfly valves

PV95 used for standard open/close applications

NAMUR Connector Plate

C

d [mm]	Size [Inch]	Series PA 30-55 Part No.
63 - 315	2 - 12	199 190 275

Required for Type 5470 and MLN532 Pilot Solenoid Valve

Stem Extension

C

Size [inch]	Description	SS 316/SS 316
2 - 3	1st Foot	150 567 001
4 - 5	1st Foot	150 567 002
6	1st Foot	150 567 003
6	1st Foot	150 567 004
10 - 12	1st Foot	150 567 005

Minimum length of 6 inches

Declutchable Manual Override

C

d - Size [mm]-[inch]	FC/FO	DA
63 - 2	198 000 630	198 000 630
75 - 2 ½	198 000 630	198 000 630
90 - 3	198 000 631	198 000 630
110 - 4	198 000 628	198 000 628
140 - 5	198 000 629	198 000 628
160 - 6	198 000 625	198 000 625
225 - 8	198 000 627	198 000 625



Spare Parts Pneumatically Actuated Butterfly Valves

Type PA 30 - 70 Pneumatic Actuator

C

Type	Fail Safe to Close/Fail Safe to Open (FC/FO) Part No.	Type	Double Acting (DA) Part No.
PA 30 FC	198 811 617	PA 30 DA	198 811 633
PA 30 FO	198 811 627	PA 35 DA	198 811 618
PA 35 FC	198 811 601	PA 40 DA	198 811 619
PA 35 FO	198 811 628	PA 45 DA	198 811 604
PA 40 FC	198 811 609	PA 50 DA	198 811 613
PA 40 FO	198 811 629	PA 55 DA	198 811 606
PA 45 FC	198 811 603	PA 60 DA	198 811 614
PA 45 FO	198 811 630	PA 65 DA	198 811 608
PA 50 FC	198 811 610	PA 70 DA	198 811 615
PA 50 FO	198 811 631		
PA 55 FC	198 811 605		
PA 55 FO	198 811 632		
PA 60 FC	198 811 611		
PA 65 FC	198 811 607		
PA 70 FC	198 811 612		
PA 70 FO	198 811 634		



Intermediate Kit

C

d - Size [mm]-[inch]	Without Manual Override		Double Acting (DA)	
	Actuator	Part No.	Actuator	Part No.
63 - 2	PA 30	198 000 595	PA 35	198 000 595
75 - 2 ½	PA 30	198 000 595	PA 35	198 000 595
90 - 3	PA 35	198 000 596	PA 40	198 000 595
110 - 4	PA 40	198 000 600	PA 45	198 000 600
140 - 5	PA 45	198 000 597	PA 45	198 000 600
160 - 6	PA 50	198 000 600	PA 55	198 000 600
225 - 8	PA 55	198 000 598	PA 55	198 000 600
280 - 10	PA 65	198 000 730	PA 65	198 000 731
315 - 12	PA 70	198 000 730	PA 70	198 000 731

BSPT to NPT Brass Adapter

C

Size	Part No.
1/8" male BSPT to 1/8" female NPT	150 101 038
1/4" male BSPT to 1/4" female NPT	150 101 037

Comes standard with pneumatically actuated butterfly valves

DIASTAR Pneumatically Actuated Diaphragm Valve

DIASTAR Six PVC

C

Size [inch]	Fail Safe to Close (FC)	
	Socket	EPDM
½	-	-
¾	161 614 613	-
1	161 614 614	-
1 ¼	161 614 615	-
1 ½	161 614 616	-
2	161 614 617	-



DIASTAR 604 PVC

C

Size [inch]	Fail Safe to Close (FC)	
	Socket	EPDM
½	161 604 612	-

The DIASTAR 604 is rated for 6 bar combined pressure

CANNOT USE FEEDBACK/POSITIONER



The DIASTAR Six is rated for 6 bar combined pressure

CANNOT USE FEEDBACK/POSITIONER

DIASTAR Ten PVC

Size [inch]	Fail Safe to Close (FC)		
	EPDM	Socket FKM	PTFE/EPDM
½	161 624 612	161 624 662	161 624 632
¾	161 624 613	161 624 663	161 624 633
1	161 624 614	161 624 664	161 624 634
1 ¼	161 624 615	161 624 665	161 624 635
1 ½	161 624 616	161 624 666	161 624 636
2	161 624 617	161 624 667	161 624 637

Size [inch]	ANSI Flanged		
	EPDM	FKM	PTFE/EPDM
½	161 627 612	161 627 662	161 627 632
¾	161 627 613	161 627 663	161 627 633
1	161 627 614	161 627 664	161 627 634
1 ¼	161 627 615	161 627 665	161 627 635
1 ½	161 627 616	161 627 666	161 627 636
2	161 627 617	161 627 667	161 627 637



The DIASTAR Ten is rated for 10 bar combined pressure

DIASTAR Pneumatically Actuated Diaphragm Valve

DIASTAR Ten PVC

C

Size [inch]	Fail Safe to Open (FO)		
	EPDM	Socket FKM	PTFE/EPDM
1/2	161 644 612	161 644 662	161 644 632
3/4	161 644 613	161 644 663	161 644 633
1	161 644 614	161 644 664	161 644 634
1 1/4	161 644 615	161 644 665	161 644 635
1 1/2	161 644 616	161 644 666	161 644 636
2	161 644 617	161 644 667	161 644 637

Size [inch]	ANSI Flanged		
	EPDM	FKM	PTFE/EPDM
1/2	161 647 612	161 647 662	161 647 632
3/4	161 647 613	161 647 663	161 647 633
1	161 647 614	161 647 664	161 647 634
1 1/4	161 647 615	161 647 665	161 647 635
1 1/2	161 647 616	161 647 666	161 647 636
2	161 647 617	161 647 667	161 647 637

Size [inch]	Double Acting (DA)		
	EPDM	Socket FKM	PTFE/EPDM
1/2	161 654 612	161 654 662	161 654 632
3/4	161 654 613	161 654 663	161 654 633
1	161 654 614	161 654 664	161 654 634
1 1/4	161 654 615	161 654 665	161 654 635
1 1/2	161 654 616	161 654 666	161 654 636
2	161 654 617	161 654 667	161 654 637

Size [inch]	ANSI Flanged		
	EPDM	FKM	PTFE/EPDM
1/2	161 657 612	161 657 662	161 657 632
3/4	161 657 613	161 657 663	161 657 633
1	161 657 614	161 657 664	161 657 634
1 1/4	161 657 615	161 657 665	161 657 635
1 1/2	161 657 616	161 657 666	161 657 636
2	161 657 617	161 657 667	161 657 637



The DIASTAR Ten is rated for 10 bar combined pressure

DIASTAR Pneumatically Actuated Diaphragm Valve

DIASTAR TenPlus PVC

C

Size [inch]	Fail Safe to Close (FC)		
	EPDM	FKM	PTFE/EPDM
1/2	161 684 612	161 684 662	161 684 632
3/4	161 684 613	161 684 663	161 684 633
1	161 684 614	161 684 664	161 684 634
1 1/4	161 684 615	161 684 665	161 684 635
1 1/2	161 684 616	161 684 666	161 684 636
2	161 684 617	161 684 667	161 684 637

Size [inch]	ANSI Flanged		
	EPDM	FKM	PTFE/EPDM
1/2	161 687 612	161 687 662	161 687 632
3/4	161 687 613	161 687 663	161 687 633
1	161 687 614	161 687 664	161 687 634
1 1/4	161 687 615	161 687 665	161 687 635
1 1/2	161 687 616	161 687 666	161 687 636
2	161 687 617	161 687 667	161 687 637



The DIASTAR TenPlus is rated for 10 bar bidirectional pressure



C

DIASTAR 025 PVC

Size [inch]	ANSI Flanged		
	Fail Safe to Close (FC)		
	EPDM	FKM	PTFE/EPDM
2 1/2	199 025 007	199 025 067	199 025 037
3	199 025 128	199 025 068	199 025 158
4	199 025 129	199 025 069	199 025 159
6	199 025 130	199 025 070	-

Size [inch]	Fail Safe to Open (FO)		
	EPDM	FKM	PTFE/EPDM
2 1/2	199 025 017	199 025 077	199 025 047
3	199 025 138	199 025 078	199 025 168
4	199 025 139	199 025 079	199 025 169
6	199 025 140	199 025 080	199 025 170

Size [inch]	Double Acting (DA)		
	EPDM	FKM	PTFE/EPDM
2 1/2	199 025 027	199 025 087	199 025 057
3	199 025 148	199 025 088	199 025 178
4	199 025 149	199 025 089	199 025 179
6	199 025 150	199 025 090	199 025 180

The DIASTAR 025 is rated for 10 bar bidirectional pressure

DIASTAR Pneumatically Actuated Diaphragm Valve

DIASTAR Six CPVC

C

Size [inch]	Fail Safe to Close (FC)	
	Socket EPDM	
½	-	
¾	163 614 613	
1	163 614 614	
1 ¼	163 614 615	
1 ½	163 614 616	
2	163 614 617	



The DIASTAR Six is rated for 6 bar combined pressure

CANNOT USE FEEDBACK/POSITIONER

DIASTAR 604 CPVC

C

Size [inch]	Fail Safe to Close (FC)	
	Socket EPDM	
½	163 604 612	

The DIASTAR 604 is rated for 6 bar combined pressure

CANNOT USE FEEDBACK/POSITIONER



DIASTAR Ten CPVC

Size [inch]	Fail Safe to Close (FC)		
	EPDM	Socket FKM	PTFE/EPDM
½	163 624 612	163 624 662	163 624 632
¾	163 624 613	163 624 663	163 624 633
1	163 624 614	163 624 664	163 624 634
1 ¼	163 624 615	163 624 665	163 624 635
1 ½	163 624 616	163 624 666	163 624 636
2	163 624 617	163 624 667	163 624 637

Size [inch]	ANSI Flanged		
	EPDM	FKM	PTFE/EPDM
½	163 627 712	163 627 762	163 627 732
¾	163 627 713	163 627 763	163 627 733
1	163 627 714	163 627 764	163 627 734
1 ¼	163 627 715	163 627 765	163 627 735
1 ½	163 627 716	163 627 766	163 627 736
2	163 627 717	163 627 767	163 627 737



The DIASTAR Ten is rated for 10 bar combined pressure

DIASTAR Pneumatically Actuated Diaphragm Valve

DIASTAR Ten CPVC

C

Size [inch]	Fail Safe to Open (FO)		
	EPDM	Socket FKM	PTFE/EPDM
1/2	163 644 612	163 644 662	163 644 632
3/4	163 644 613	163 644 663	163 644 633
1	163 644 614	163 644 664	163 644 634
1 1/4	163 644 615	163 644 665	163 644 635
1 1/2	163 644 616	163 644 666	163 644 636
2	163 644 617	163 644 667	163 644 637

Size [inch]	ANSI Flanged		
	EPDM	FKM	PTFE/EPDM
1/2	163 647 712	163 647 662	163 647 732
3/4	163 647 713	163 647 663	163 647 733
1	163 647 714	163 647 664	163 647 734
1 1/4	163 647 715	163 647 665	163 647 735
1 1/2	163 647 716	163 647 666	163 647 736
2	163 647 717	163 647 667	163 647 737

Size [inch]	Double Acting (DA)		
	EPDM	Socket FKM	PTFE/EPDM
1/2	163 654 612	163 654 662	163 654 632
3/4	163 654 613	163 654 663	163 654 633
1	163 654 614	163 654 664	163 654 634
1 1/4	163 654 615	163 654 665	163 654 635
1 1/2	163 654 616	163 654 666	163 654 636
2	163 654 617	163 654 667	163 654 637

Size [inch]	ANSI Flanged		
	EPDM	FKM	PTFE/EPDM
1/2	163 657 712	163 657 762	163 657 732
3/4	163 657 713	163 657 763	163 657 733
1	163 657 714	163 657 764	163 657 734
1 1/4	163 657 715	163 657 765	163 657 735
1 1/2	163 657 716	163 657 766	163 657 736
2	163 657 717	163 657 767	163 657 737




The DIASTAR Ten is rated for 10 bar combined pressure

DIASTAR Pneumatically Actuated Diaphragm Valve

DIASTAR TenPlus CPVC

C

Size [inch]	Fail Safe to Close (FC)			
	EPDM	Socket FKM	PTFE/EPDM	
1/2	163 684 612	163 684 662	163 684 632	
3/4	163 684 613	163 684 663	163 684 633	
1	163 684 614	163 684 664	163 684 634	
1 1/4	163 684 615	163 684 665	163 684 635	
1 1/2	163 684 616	163 684 666	163 684 636	
2	163 684 617	163 684 667	163 684 637	
Size [inch]	ANSI Flanged			
EPDM	FKM	PTFE/EPDM		
1/2	163 687 712	163 687 762	163 687 732	
3/4	163 687 713	163 687 763	163 687 733	
1	163 687 714	163 687 764	163 687 734	
1 1/4	163 687 715	163 687 765	163 687 735	
1 1/2	163 687 716	163 687 766	163 687 736	
2	163 687 717	163 687 767	163 687 737	

The DIASTAR TenPlus is rated for 10 bar bidirectional pressure



DIASTAR 025 CPVC

C

Size [inch]	ANSI Flanged			
	Fail Safe to Close (FC)			
EPDM	FKM	PTFE/EPDM		
2 1/2	199 025 637	199 025 471	199 025 667	
3	199 025 698	199 025 472	199 025 728	
4	199 025 699	199 025 473	199 025 729	
Size [inch]	Fail Safe to Open (FO)			
EPDM	FKM	PTFE/EPDM		
2 1/2	199 025 647	-	199 025 677	
3	199 025 708	199 025 475	199 025 738	
4	199 025 709	199 025 476	199 025 679	
Size [inch]	Double Acting (DA)			
EPDM	FKM	PTFE/EPDM		
2 1/2	199 025 657	199 025 477	199 025 687	
3	199 025 718	199 025 478	199 025 748	
4	199 025 719	199 025 479	199 025 749	

The DIASTAR 025 is rated for 10 bar bidirectional pressure

DIASTAR Pneumatically Actuated Diaphragm Valve



IR/Butt Fusion



ANSI Flanged



Socket Fusion Union



IR/Butt Fusion Union

DIASTAR Ten PROGEF® Standard PP

C

d [mm]	Fail Safe to Close (FC)			
	IR/Butt Fusion		ANSI Flanged	
	EPDM	PTFE/EPDM	EPDM	PTFE/EPDM
20	167 625 112	167 625 132	167 627 712	167 627 732
25	167 625 113	167 625 133	167 627 713	167 627 733
32	167 625 114	167 625 134	167 627 714	167 627 734
40	167 625 115	167 625 135	167 627 715	167 627 735
50	167 625 116	167 625 136	167 627 716	167 627 736
63	167 625 117	167 625 137	167 627 717	167 627 737

d [mm]	Socket Fusion Union		IR/Butt Fusion Union	
	EPDM	PTFE/EPDM	EPDM	PTFE/EPDM
20	167 624 012	167 624 032	167 624 112	167 624 132
25	167 624 013	167 624 033	167 624 113	167 624 133
32	167 624 014	167 624 034	167 624 114	167 624 134
40	167 624 015	167 624 035	167 624 115	167 624 135
50	167 624 016	167 624 036	167 624 116	167 624 136
63	167 624 017	167 624 037	167 624 117	167 624 137

d [mm]	Socket Fusion Union	IR/Butt Fusion Union
	FKM	FKM
20	167 624 062	167 624 162
25	167 624 063	167 624 163
32	167 624 064	167 624 164
40	167 624 065	167 624 165
50	167 624 066	167 624 166
63	167 624 067	167 624 167

d [mm]	Fail Safe to Open (FO)			
	IR/Butt Fusion		ANSI Flanged	
	EPDM	PTFE/EPDM	EPDM	PTFE/EPDM
20	167 645 112	167 645 132	167 647 712	167 647 732
25	167 645 113	167 645 133	167 647 713	167 647 733
32	167 645 114	167 645 134	167 647 714	167 647 734
40	167 645 115	167 645 135	167 647 715	167 647 735
50	167 645 116	167 645 136	167 647 716	167 647 736
63	167 645 117	167 645 137	167 647 717	167 647 737

d [mm]	Socket Fusion Union		IR/Butt Fusion Union	
	EPDM	PTFE/EPDM	EPDM	PTFE/EPDM
20	167 644 012	167 644 032	167 644 112	167 644 132
25	167 644 013	167 644 033	167 644 113	167 644 133
32	167 644 014	167 644 034	167 644 114	167 644 134
40	167 644 015	167 644 035	167 644 115	167 644 135
50	167 644 016	167 644 036	167 644 116	167 644 136
63	167 644 017	167 644 037	167 644 117	167 644 137

The DIASTAR Ten is rated for 10 bar combined pressure

DIASTAR Pneumatically Actuated Diaphragm Valve



IR/Butt Fusion



ANSI Flanged



Socket Fusion Union



IR/Butt Fusion Union

DIASTAR Ten PROGEF® Standard PP

C

d [mm]	Double Acting (DA)			
	IR/Butt Fusion		ANSI Flanged	
	EPDM	PTFE/EPDM	EPDM	PTFE/EPDM
20	167 655 112	167 655 132	167 657 712	167 657 732
25	167 655 113	167 655 133	167 657 713	167 657 733
32	167 655 114	167 655 134	167 657 714	167 657 734
40	167 655 115	167 655 135	167 657 715	167 657 735
50	167 655 116	167 655 136	167 657 716	167 657 736
63	167 655 117	167 655 137	167 657 717	167 657 737
d [mm]	Socket Fusion Union		IR/Butt Fusion Union	
	EPDM	PTFE/EPDM	EPDM	PTFE/EPDM
	20	167 654 012	167 654 032	167 654 112
25	167 654 013	167 654 033	167 654 113	167 654 133
32	167 654 014	167 654 034	167 654 114	167 654 134
40	167 654 015	167 654 035	167 654 115	167 654 135
50	167 654 016	167 654 036	167 654 116	167 654 136
63	167 654 017	167 654 037	167 654 117	167 654 137

The DIASTAR Ten is rated for 10 bar combined pressure

DIASTAR TenPlus PROGEF® Standard PP

C

d [mm]	Fail Safe to Close (FC)			
	IR/Butt Fusion		ANSI Flanged	
	EPDM	PTFE/EPDM	EPDM	PTFE/EPDM
20	167 685 112	167 685 132	167 687 712	167 687 732
25	167 685 113	167 685 133	167 687 713	167 687 733
32	167 685 114	167 685 134	167 687 714	167 687 734
40	167 685 115	167 685 135	167 687 715	167 687 735
50	167 685 116	167 685 136	167 687 716	167 687 736
63	167 685 117	167 685 137	167 687 717	167 687 737
d [mm]	Socket Fusion Union		IR/Butt Fusion Union	
	EPDM	PTFE/EPDM	EPDM	PTFE/EPDM
	20	167 684 012	167 684 032	167 684 112
25	167 684 013	167 684 033	167 684 113	167 684 133
32	167 684 014	167 684 034	167 684 114	167 684 134
40	167 684 015	167 684 035	167 684 115	167 684 135
50	167 684 016	167 684 036	167 684 116	167 684 136
63	167 684 017	167 684 037	167 684 117	167 684 137
d [mm]	Socket Fusion Union	IR/Butt Fusion Union		
	FKM	FKM		
	20	167 684 062	167 684 162	
25	167 684 063	167 684 163		
32	167 684 064	167 684 164		
40	167 684 065	167 684 165		
50	167 684 066	167 684 166		
63	167 684 067	167 684 167		

The DIASTAR TenPlus is rated for 10 bar bidirectional pressure

DIASTAR Pneumatically Actuated Diaphragm Valve

DIASTAR TenPlus PROGEF® Standard PP

C

Main Size [mm]	Branch Size [mm]	Valve Size [mm]	Zero Static - Fail Safe to Close (FC)	
			IR/Butt Fusion	
			EPDM	PTFE/EPDM
20	20	20	167 689 101	167 689 301
25	20	25	167 689 103	167 689 303
25	25	25	167 689 104	167 689 304
32	20	25	167 689 107	167 689 307
32	25	25	167 689 108	167 689 308
32	32	32	167 689 109	167 689 309
40	20	32	167 689 112	167 689 312
50	20	25	167 689 118	167 689 318
50	25	32	167 689 119	167 689 319
50	32	32	167 689 120	167 689 320
63	20	25	167 689 125	167 689 325
63	25	32	167 689 126	167 689 326
63	32	32	167 689 127	167 689 327



The DIASTAR TenPlus is rated for 10 bar bidirectional pressure



DIASTAR 025 PROGEF® Standard PP

C

Size [inch]	ANSI Flanged			
	Fail Safe to Close (FC)		Fail Safe to Open (FO)	
	EPDM	PTFE/EPDM	EPDM	PTFE/EPDM
2 ½	199 025 207	199 025 237	199 025 217	199 025 247
3	199 025 268	199 025 298	199 025 278	199 025 308
4	199 025 209	199 025 239	199 025 219	199 025 249
6	199 025 270	-	199 025 280	199 025 310
Size [inch]	Double Acting (DA)			
	EPDM	PTFE/EPDM		
	2 ½	199 025 227	199 025 257	
3	199 025 288	199 025 318		
4	199 025 229	199 025 259		
6	199 025 290	199 025 320		

The DIASTAR 025 is rated for 10 bar bidirectional pressure

DIASTAR Pneumatically Actuated Diaphragm Valve

DIASTAR Ten PROGEF® Natural PP

C

d [mm]	IR/Butt Fusion			
	Fail Safe to Close (FC)		Fail Safe to Open (FO)	
	EPDM	PTFE/EPDM	EPDM	PTFE/EPDM
20	168 625 112	168 625 132	168 645 112	168 645 132
25	168 625 113	168 625 133	168 645 113	168 645 133
32	168 625 114	168 625 134	168 645 114	168 645 134
40	168 625 115	168 625 135	168 645 115	168 645 135
50	168 625 116	168 625 136	168 645 116	168 645 136
63	168 625 117	168 625 137	168 645 117	168 645 137

d [mm]	Double Acting (DA)	
	EPDM	PTFE/EPDM
20	168 655 112	168 655 132
25	168 655 113	168 655 133
32	168 655 114	168 655 134
40	168 655 115	168 655 135
50	168 655 116	168 655 136
63	168 655 117	168 655 137



The DIASTAR Ten is rated for 10 bar combined pressure

DIASTAR Ten PROGEF® Natural PP

C

Main Size [mm]	Branch Size [mm]	Valve Size [mm]	Zero Static - Fail Safe to Close (FC)	
			IR/Butt Fusion	
			EPDM	PTFE/EPDM
20	20	20	168 629 101	168 629 301
25	20	25	168 629 103	168 629 303
25	25	25	168 629 104	168 629 304
32	20	25	168 629 107	168 629 307
32	25	25	168 629 108	168 629 308
32	32	32	168 629 109	168 629 309
40	20	32	168 629 112	168 629 312
50	20	25	168 629 118	168 629 318
50	25	32	168 629 119	168 629 319
50	32	32	168 629 120	168 629 320
63	20	25	168 629 125	168 629 325
63	25	32	168 629 126	168 629 326
63	32	32	168 629 127	168 629 327



The DIASTAR Ten is rated for 10 bar combined pressure

DIASTAR Six PROGEF® Natural PP

C

Size [inch]	Fail Safe to Close (FC)	
	IR/Butt Fusion	
	EPDM	
20	168 615 112	
25	168 615 113	
32	168 615 114	
40	168 615 115	
50	168 615 116	
63	168 615 117	

DIASTAR Pneumatically Actuated Diaphragm Valve



IR/Butt Fusion



ANSI Flanged



Socket Fusion Union



IR/Butt Fusion Union

DIASTAR Ten SYGEF® Standard PVDF

C

d [mm]	Fail Safe to Close (FC)			
	IR/Butt Fusion PTFE/EPDM	Socket Fusion Union PTFE/EPDM	IR/Butt Fusion Union PTFE/EPDM	ANSI Flanged PTFE/EPDM
20	185 625 132	185 624 032	185 624 132	185 627 732
25	185 625 133	185 624 033	185 624 133	185 627 733
32	185 625 134	185 624 034	185 624 134	185 627 734
40	185 625 135	185 624 035	185 624 135	185 627 735
50	185 625 136	185 624 036	185 624 136	185 627 736
63	185 625 137	185 624 037	185 624 137	185 627 737
d [mm]	Fail Safe to Open (FO)			
	IR/Butt Fusion PTFE/EPDM	Socket Fusion Union PTFE/EPDM	IR/Butt Fusion Union PTFE/EPDM	ANSI Flanged PTFE/EPDM
20	185 645 132	185 644 032	185 644 132	185 647 732
25	185 645 133	185 644 033	185 644 133	185 647 733
32	185 645 134	185 644 034	185 644 134	185 647 734
40	185 645 135	185 644 035	185 644 135	185 647 735
50	185 645 136	185 644 036	185 644 136	185 647 736
63	185 645 137	185 644 037	185 644 137	185 647 737
d [mm]	Double Acting (DA)			
	IR/Butt Fusion PTFE/EPDM	Socket Fusion Union PTFE/EPDM	IR/Butt Fusion Union PTFE/EPDM	ANSI Flanged PTFE/EPDM
20	185 655 132	185 654 032	185 654 132	185 657 732
25	185 655 133	185 654 033	185 654 133	185 657 733
32	185 655 134	185 654 034	185 654 134	185 657 734
40	185 655 135	185 654 035	185 654 135	185 657 735
50	185 655 136	185 654 036	185 654 136	185 657 736
63	185 655 137	185 654 037	185 654 137	185 657 737

The DIASTAR Ten is rated for 10 bar combined pressure

DIASTAR TenPlus SYGEF® Standard PVDF

C

d [mm]	Fail Safe to Close (FC)			
	IR/Butt Fusion PTFE/EPDM	Socket Fusion Union PTFE/EPDM	IR/Butt Fusion Union PTFE/EPDM	ANSI Flanged PTFE/EPDM
20	185 685 132	185 684 032	185 684 132	185 687 732
25	185 685 133	185 684 033	185 684 133	185 687 733
32	185 685 134	185 684 034	185 684 134	185 687 734
40	185 685 135	185 684 035	185 684 135	185 687 735
50	185 685 136	185 684 036	185 684 136	185 687 736
63	185 685 137	185 684 037	185 684 137	185 687 737

The DIASTAR TenPlus is rated for 10 bar bidirectional pressure

DIASTAR Pneumatically Actuated Diaphragm Valve



IR/Butt Fusion



025 ANSI Flanged



IR/Butt Fusion Union

DIASTAR 025 SYGEF® Standard PVDF

C

Size [inch]	ANSI Flanged		
	Fail Safe to Close (FC)	Fail Safe to Open (FO)	Double Acting (DA)
	PTFE/EPDM	PTFE/EPDM	PTFE/EPDM
2 ½	199 025 327	199 025 337	199 025 347
3	199 025 358	199 025 368	199 025 378
4	199 025 329	199 025 339	199 025 349
6	-	199 025 370	199 025 380

The DIASTAR 025 is rated for 10 bar combined pressure

DIASTAR Ten SYGEF® Plus PVDF-HP

C

d [mm]	IR/Butt Fusion		
	Fail Safe to Close (FC)	Fail Safe to Open (FO)	Double Acting (DA)
	PTFE/EPDM	PTFE/EPDM	PTFE/EPDM
20	180 625 132	180 645 132	180 655 132
25	180 625 133	180 645 133	180 655 133
32	180 625 134	180 645 134	180 655 134
40	180 625 135	180 645 135	180 655 135
50	180 625 136	180 645 136	180 655 136
63	180 625 137	180 645 137	180 655 137

The DIASTAR Ten is rated for 10 bar combined pressure

DIASTAR TenPlus SYGEF® Plus PVDF-HP

C

d [mm]	IR/Butt Fusion		IR/Butt Fusion Union	
	Fail Safe to Close (FC)		Fail Safe to Close (FC)	
	PTFE/EPDM	PTFE/FKM	PTFE/EPDM	PTFE/FKM
20	181 685 132	181 685 152	181 684 132	181 684 152
25	181 685 133	181 685 153	181 684 133	181 684 153
32	181 685 134	181 685 154	181 684 134	181 684 154
40	181 685 135	181 685 155	181 684 135	181 684 155
50	181 685 136	181 685 156	181 684 136	181 684 156
63	181 685 137	181 685 157	181 684 137	181 684 157

The DIASTAR TenPlus is rated for 10 bar bidirectional pressure

DIASTAR 025 SYGEF® Plus PVDF- HP

C

Size [inch]	ANSI Flanged		
	Fail Safe to Close (FC)	Fail Safe to Open (FO)	Double Acting (DA)
	PTFE/EPDM	PTFE/EPDM	PTFE/EPDM
2 ½	199 025 387	199 025 397	199 025 407
3	199 025 448	199 025 458	199 025 468
4	199 025 389	199 025 399	199 025 409
6	-	199 025 460	199 025 470

The DIASTAR 025 is rated for 10 bar combined pressure

5-series DIASTAR TenPlus Valves PVDF-HP

DIASTAR TenPlus SYGEF® Plus PVDF

C

Main Size [mm]	Branch Size [mm]	Valve Size [mm]	Zero Static - Fail Safe to Close (FC)	
			IR/Butt Fusion	
			PTFE/EPDM	PTFE/FKM
20	20	20	181 689 301	181 689 501
25	20	25	181 689 303	181 689 503
25	25	25	181 689 304	181 689 504
32	20	25	181 689 307	181 689 507
32	25	25	181 689 308	181 689 508
32	32	32	181 689 309	181 689 509
40	20	32	181 689 312	181 689 512
40	25	32	181 689 313	181 689 513
40	32	32	181 689 314	181 689 514
40	40	32	181 689 315	181 689 515
50	20	25	181 689 318	181 689 518
50	25	32	181 689 319	181 689 519
50	32	32	181 689 320	181 689 520
50	40	63	181 689 321	181 689 521
50	50	63	181 689 322	181 689 522
63	20	25	181 689 325	181 689 525
63	25	32	181 689 326	181 689 526
63	32	32	181 689 327	181 689 527
63	40	63	181 689 328	181 689 528
63	50	63	181 689 329	181 689 529
63	63	63	181 689 330	181 689 530
90	20	32	181 689 341	181 689 541
90	25	32	181 689 342	181 689 542
90	32	32	181 689 343	181 689 543
90	50	63	181 689 345	181 689 545
90	63	63	181 689 346	181 689 546
110	20	32	181 689 351	181 689 551
110	25	32	181 689 352	181 689 552
110	32	32	181 689 353	181 689 553
110	50	63	181 689 355	181 689 555
110	63	63	181 689 356	181 689 556



The DIASTAR TenPlus is rated for 10 bar bidirectional pressure

Actuated Diaphragm Valves: Accessories and Component Parts

Available components and accessories are on the following pages of the price list. If accessories are to be added and assembled by GF, **please order by adding S in front of the valve part number** and adjust the description to include the desired accessories. Example: Part number **161624614** (1" DIASTAR Ten Valve PVC/EPDM) assembled with **199190305** (Mechanical Limit Switches Ag-Ni) should be ordered:

- PO item 1: **S161624614** 1" DIASTAR Ten Valve PVC/EPDM assembled with limit switch **199190305**
- PO item 2: **199190305** Mechanical Limit Switches Ag-Ni



Optional Actuator Accessories

DIASTAR

- Limit Switch
- Positioner
- Local control box
- Manual Override
- Stroke Limiter
- Pilot Valve

Components by Valve Type

Size [inch - mm]	DIASTAR Ten				DIASTAR TenPlus	
	Compressor	Fail Close Actuator	Fail Open Actuator	Double Acting Actuator	Compressor	Fail Close Actuator
½ - 20	198000872	198151772	198151792	198151802	198000872	198153062
¾ - 25	198000873	198151773	198151793	198151803	198000873	198153063
1 - 32	198000874	198151774	198151794	198151804	198000874	198153064
1¼ - 40	198000875	198151775	198151795	198151805	198000875	198153065
1½ - 50	198000876	198151776	198151796	198151806	198000876	198153066
2 - 63	198000877	198151777	198151797	198151807	198000877	198153067

Accessories DIASTAR Valve

DIASTAR Limit Switches

C

Size [inch]	Type	Voltage	Description	Part No.
1/2 - 2	ER52 - 1	250 V, 6 A	Ag Ni	199 190 305
1/2 - 2	ER52 - 2	4 - 30 V, 1 - 100 mA	Au	199 190 306
1/2 - 2	ER52 - 3	5 - 30 V	NPN	199 190 307
1/2 - 2	ER52 - 4	5 - 30 V	PNP	199 190 308
1/2 - 2	ER52 - 5	8 V	Intrinsically Safe	199 190 309
1/2 - 2	ER52 - 6	250 V, 5 A	Explosion Proof	199 190 405
2 1/2 - 6	ER53 - 1	250 V, 6 A	Ag Ni	199 190 293
2 1/2 - 6	ER53 - 2	4 - 30 V, 1 - 100 mA	Au	199 190 297
2 1/2 - 6	ER53 - 3	10 - 30 V	NPN	199 190 294
2 1/2 - 6	ER53 - 4	10 - 30 V	PNP	199 190 295
2 1/2 - 6	ER53 - 5	8 V	Intrinsically Safe	199 190 296
2 1/2 - 6	ER53 - 6	250 V, 5 A	Explosion Proof	199 190 298



ER53 has 2m cable connection - All other ER53 models have plug connections

Does NOT required additional attachment kits if used without stroke limiter.

Type SPC Electro-Pneumatic Positioner

Type	Part No.
SPC Lite	199 190 619
SPC	199 190 620
SPC*	199 190 621
SPC D	199 190 622
SPC PID	199 190 625



Type SPC Adapter

C

Type	Part No.
SPC Adapter 1 + 2	199 190 628
SPC Adapter 3 + 4	199 190 629
SPC Adapter 5	199 190 630
SPC Adapter 6	199 190 631

Please contact Inside Sales for appropriate adapter.

RPC/SPC Multi-Pin Connector

Model	5m PUR Cable	
	Description	Part No.
M12 8-pin, power & signal	For all RPC/SPC positioners	199 190 649
M12 4-pin, power only	For RPC/SPC with display	199 190 650
M8 4-pin, signal only	For RPC/SPC with PID only	199 190 651

BSPT to NPT Brass Adapter

C

Size	Part No.
1/8" male BSPT to 1/8" female NPT	150 101 038
1/4" male BSPT to 1/4" female NPT	150 101 037

Does not come standard with DIASTAR Valves

Accessories 5-Series DIASTAR



C

Pilot Solenoid Valve

Voltage	Solenoid PV94 FC/FO	Solenoid PV95 3/2-way FC/FO
24 V DC	199 190 546	199 190 554
110 V, 50-60 Hz	199 190 547	199 190 555
Voltage	Type 5470 4/2-way DA	
230 V, AC/DC	199 190 302	
115 V, AC/DC	199 190 303	
24 V, AC/DC	199 190 304	

Voltage	Type MNL532 3/2-5/2-way Part No.
110 V, AC	199 190 359
230 V, AC	199 190 360
48 V, AC	199 190 361
24 V, AC	199 190 358
24 V, DC	199 190 357

Speed control pilot solenoid

NAMUR Connector Plate

C

Size [inch]	Part No.
1/8	199 190 378
1/4	199 190 379

Required for Type 5470 and MLN532 Pilot Solenoid Valve

Stroke Limiter

C

Size [inch]	With Manual Override		Size [inch]	With Manual Override
	DIASTAR Ten	DIASTAR TenPlus		DIASTAR 025
1/2	199 190 381	199 190 382	2 1/2 - 3	199 190 318
3/4	199 190 382	199 190 382		199 190 319
1	199 190 382	199 190 383	4 - 6	
1 1/4	199 190 383	199 190 384		
1 1/2	199 190 384	199 190 385		
2	199 190 384	199 190 385		



Does NOT required additional attachment kits if used without limit switches.

Spare Parts 5-Series DIASTAR



C

Actuator

Size [inch]	DIASTAR Ten			DIASTAR Ten Plus
	Fail Close	Fail Open	Double Acting	Fail Close
1/2	198 151 772	198 151 792	198 151 802	198 153 062
3/4	198 151 773	198 151 793	198 151 803	198 153 063
1	198 151 774	198 151 794	198 151 804	198 153 064
1 1/4	198 151 775	198 151 795	198 151 805	198 153 065
1 1/2	198 151 776	198 151 796	198 151 806	198 153 066
2	198 151 777	198 151 797	198 151 807	198 153 067

Compressor Set

C

Size [inch]	Part No.
1/2	198 000 872
3/4	198 000 873
1	198 000 874
1 1/4	198 000 875
1 1/2	198 000 876
2	198 000 877





Type 582 Pressure Reducing Valve

PVC

A



Size [inch]	Without Gauge			
	Socket		ANSI Flanged	
	EPDM	FKM	EPDM	FKM
1/2	161 582 202	161 582 212	161 582 602	161 582 612
3/4	161 582 203	161 582 213	161 582 603	161 582 613
1	161 582 204	161 582 214	161 582 604	161 582 614
1 1/4	161 582 205	161 582 215	161 582 605	161 582 615
1 1/2	161 582 206	161 582 216	161 582 606	161 582 616
2	161 582 207	161 582 217	161 582 607	161 582 617

Size [inch]	With Gauge			
	Socket		 Socket without Gauge	 Socket with Gauge
	EPDM	FKM		
1/2	161 582 222	161 582 232		
3/4	161 582 223	161 582 233		
1	161 582 224	161 582 234		
1 1/4	161 582 225	161 582 235		
1 1/2	161 582 226	161 582 236		
2	161 582 227	161 582 237		

CPVC

A

Size [inch]	Without Gauge			
	Socket		ANSI Flanged	
	EPDM	FKM	EPDM	FKM
1/2	163 582 202	163 582 212	163 582 602	163 582 612
3/4	163 582 203	163 582 213	163 582 603	163 582 613
1	163 582 204	163 582 214	163 582 604	163 582 614
1 1/4	163 582 205	163 582 215	163 582 605	163 582 615
1 1/2	163 582 206	163 582 216	163 582 606	163 582 616
2	163 582 207	163 582 217	163 582 607	163 582 617



Size [inch]	With Gauge			
	Socket		 Socket without Gauge	 Socket with Gauge
	EPDM	FKM		
1/2	163 582 222	163 582 232		
3/4	163 582 223	163 582 233		
1	163 582 224	163 582 234		
1 1/4	163 582 225	163 582 235		
1 1/2	163 582 226	163 582 236		
2	163 582 227	163 582 237		

Type 582 Pressure Reducing Valve

PROGEF® Standard PP


A

d [mm]	Without Gauge			
	IR/Butt Fusion		Socket Fusion Union	
	EPDM	FKM	EPDM	FKM
20	167 582 002	167 582 012	167 582 102	167 582 112
25	167 582 003	167 582 013	167 582 103	167 582 113
32	167 582 004	167 582 014	167 582 104	167 582 114
40	167 582 005	167 582 015	167 582 105	167 582 115
50	167 582 006	167 582 016	167 582 106	167 582 116
63	167 582 007	167 582 017	167 582 107	167 582 117

d [mm]	IR/Butt Fusion Union		IR/Butt Fusion	Socket Fusion Union
	EPDM	FKM		
20	167 582 502	167 582 512		
25	167 582 503	167 582 513		
32	167 582 504	167 582 514		
40	167 582 505	167 582 515		
50	167 582 506	167 582 516		
63	167 582 507	167 582 517		


SYGEF® Standard PVDF

A

d [mm]	Without Gauge			Fusion Spigot
	IR/Butt Fusion	Socket Fusion Union	IR/Butt Fusion Union	
	FKM	FKM	FKM	
20	185 582 012	185 582 112	185 582 512	
25	185 582 013	185 582 113	185 582 513	
32	185 582 014	185 582 114	185 582 514	
40	185 582 015	185 582 115	185 582 515	
50	185 582 016	185 582 116	185 582 516	
63	185 582 017	185 582 117	185 582 517	

SYGEF® Plus PVDF- HP

A

d [mm]	Without Gauge		IR/Butt Fusion Union
	IR/Butt Fusion	IR/Butt Fusion Union	
	PTFE	PTFE	
20	180 582 012	180 582 512	
25	180 582 013	180 582 513	
32	180 582 014	180 582 514	
40	180 582 015	180 582 515	
50	180 582 016	180 582 516	
63	180 582 017	180 582 517	

Type 586 Pressure Retaining Valve

All Type 586 Pressure Retaining Valves are sold without pressure gauges standard



PVC Socket

CPVC Socket

A

PVC

Size [inch]	Socket		ANSI Flanged	
	EPDM	FKM	EPDM	FKM
1/2	161 586 202	161 586 212	161 586 602	161 586 612
3/4	161 586 203	161 586 213	161 586 603	161 586 613
1	161 586 204	161 586 214	161 586 604	161 586 614
1 1/4	161 586 205	161 586 215	161 586 605	161 586 615
1 1/2	161 586 206	161 586 216	161 586 606	161 586 616
2	161 586 207	161 586 217	161 586 607	161 586 617

CPVC



A

Size [inch]	Socket		ANSI Flanged	
	EPDM	FKM	EPDM	FKM
1/2	163 586 202	163 586 212	163 586 602	163 586 612
3/4	163 586 203	163 586 213	163 586 603	163 586 613
1	163 586 204	163 586 214	163 586 604	163 586 614
1 1/4	163 586 205	163 586 215	163 586 605	163 586 615
1 1/2	163 586 206	163 586 216	163 586 606	163 586 616
2	163 586 207	163 586 217	163 586 607	163 586 617

PROGEF® Standard PP

A

Size [inch]	IR/Butt Fusion		Socket Fusion Union	
	EPDM	FKM	EPDM	FKM
20	167 586 002	167 586 012	167 586 102	167 586 112
25	167 586 003	167 586 013	167 586 103	167 586 113
32	167 586 004	167 586 014	167 586 104	167 586 114
40	167 586 005	167 586 015	167 586 105	167 586 115
50	167 586 006	167 586 016	167 586 106	167 586 116
63	167 586 007	167 586 017	167 586 107	167 586 117


Size [inch]	IR/Butt Fusion Union		IR/Butt Fusion	Socket Fusion Union
	EPDM	FKM		
20	167 586 502	167 586 512		
25	167 586 503	167 586 513		
32	167 586 504	167 586 514		
40	167 586 505	167 586 515		
50	167 586 506	167 586 516		
63	167 586 507	167 586 517		

IR/Butt Fusion

Socket Fusion Union

SYGEF® Standard PVDF

A

Size [inch]	IR/Butt Fusion	Socket Fusion Union	IR/Butt Fusion Union	IR/Butt Fusion Union
	FKM	FKM	FKM	
20	185 586 012	185 586 112	185 586 512	
25	185 586 013	185 586 113	185 586 513	
32	185 586 014	185 586 114	185 586 514	
40	185 586 015	185 586 115	185 586 515	
50	185 586 016	185 586 116	185 586 516	
63	185 586 017	185 586 117	185 586 517	

IR/Butt Fusion Union

Type V82 Pressure Reducing Valve



C

PVC

Size [inch]	Threaded NPT	
	EPDM	PTFE
2 ½	199 041 773	199 041 776
3	199 041 774	199 041 777
4	199 041 775	199 041 778

PROGEF® Standard PP

C

d [mm]	IR/Butt Fusion	
	EPDM	FKM
75	199 041 637	199 041 640
90	199 041 638	199 041 647
110	199 041 639	199 041 648

Type V86 Pressure Retaining Valve



C

PVC

Size [inch]	Threaded NPT	
	EPDM	PTFE
2 ½	199 041 779	199 041 782
3	199 041 780	199 041 783
4	199 041 781	199 041 784

PROGEF® Standard PP

C

d [mm]	IR/Butt Fusion	
	EPDM	PTFE
75	199 041 657	199 041 660
90	199 041 658	199 041 667
110	199 041 659	199 041 668

Accessories Type 582/586 Pressure Regulating Valve

Pressure Gauge

A

Discription	0-150psi	0-45psi
Brass/EPDM/FKM	198 806 651	198 806 963
SS/EPDM/FKM	198 806 652	198 806 962
Brass (HP)/FKM White	198 806 655	-
SS(HP)/FKM White	198 806 656	-



Gauge Guard

A

Discription	Part No.
PVDF/EPDM	198 806 650
PVDF-HP/FKM White	198 806 654



Spare parts Type 582/586 Pressure Regulating Valve

Type 582 Pressure Reducing Valve Cartridge

A

Size [inch]	PVC		CPVC	
	EPDM	FKM	EPDM	FKM
3/8 - 1/2	161 489 131	161 489 231	163 489 131	163 489 231
3/4 - 1	161 489 133	161 489 233	163 489 133	163 489 233
1 1/4 - 2	161 489 136	161 489 236	163 489 136	163 489 236
d [mm]	PP		PVDF	
	EPDM	FKM	EPDM	FKM
16 - 20	167 489 131	167 489 231	185 489 131	
25 - 32	167 489 133	167 489 233	185 489 133	
40 - 63	167 489 136	167 489 236	185 489 136	



Type 586 Pressure Retaining Valve Cartridge

A

Size [inch]	PVC		CPVC	
	EPDM	FKM	EPDM	FKM
3/8 - 1/2	161 489 161	161 489 261	163 489 161	163 489 261
3/4 - 1	161 489 163	161 489 263	163 489 163	163 489 263
1 1/4 - 2	161 489 166	161 489 266	163 489 166	163 489 266
d [mm]	PP		PVDF	
	EPDM	FKM	EPDM	FKM
16 - 20	167 489 161	167 489 261	185 489 161	
25 - 32	167 489 163	167 489 263	185 489 163	
40 - 63	167 489 166	167 489 266	185 489 166	

Rotameters

Type 336 Rotameter PVC Transparent

C

Size [inch]	SK	Scale Range [gal/min]	PVC Socket Ends, EPDM Seal, Standard Tube	
			Standard Float	Magnetic Float
1	10	0.22 - 2.20	150 336 160	150 336 180
1	11	0.44 - 4.40	150 336 161	150 336 181
1¼	15	0.66 - 6.60	150 336 162	150 336 182
1¼	16	1.10 - 11.00	150 336 163	150 336 183
1½	19	0.88 - 8.80	150 336 164	150 336 184
1½	20	1.32 - 13.20	150 336 165	150 336 185
1½	21	2.64 - 26.40	150 336 166	150 336 186
2	29	2.64 - 26.40	150 336 167	150 336 187
2	30	4.40 - 44.00	150 336 168	150 336 188
2	31	6.60 - 66.00	150 336 169	150 336 189
2½	40	8.80 - 88.00	150 336 170	150 336 190
2½	41	13.20 - 132.00	150 336 171	150 336 191
2½	42	35.20 - 264.00	150 336 172	150 336 192

Size [inch]	SK	Scale Range [gal/min]	PVC Socket Ends, FKM Seals, Standard Tube	
			Standard Float	Magnetic Float
1	10	0.22 - 2.20	150 336 200	150 336 220
1	11	0.44 - 4.40	150 336 201	150 336 221
1¼	15	0.66 - 6.60	150 336 202	150 336 222
1¼	16	1.10 - 11.00	150 336 203	150 336 223
1½	19	0.88 - 8.80	150 336 204	150 336 224
1½	20	1.32 - 13.20	150 336 205	150 336 225
1½	21	2.64 - 26.40	150 336 206	150 336 226
2	29	2.64 - 26.40	150 336 207	150 336 227
2	30	4.40 - 44.00	150 336 208	150 336 228
2	31	6.60 - 66.00	150 336 209	150 336 229
2½	40	8.80 - 88.00	150 336 210	150 336 230
2½	41	13.20 - 132.00	150 336 211	150 336 231
2½	42	35.20 - 264.00	150 336 212	150 336 232



Rotameters

Type 336 Rotameter Polysulphone

C

Size [inch]	SK	Scale Range [gal/min]	PVC Socket Ends, EPDM Seal, Standard Tube	
			Standard Float	Magnetic Float
1	10	0.22 - 2.20	150 336 000	150 336 020
1	11	0.44 - 4.40	150 336 001	150 336 021
1¼	15	0.66 - 6.60	150 336 002	150 336 022
1¼	16	1.10 - 11.00	150 336 003	150 336 023
1½	19	0.88 - 8.80	150 336 004	150 336 024
1½	20	1.32 - 13.20	150 336 005	150 336 025
1½	21	2.64 - 26.40	150 336 006	150 336 026
2	29	2.64 - 26.40	150 336 007	150 336 027
2	30	4.40 - 44.00	150 336 008	150 336 028
2	31	6.60 - 66.00	150 336 009	150 336 029
2½	40	8.80 - 88.00	150 336 010	150 336 030
2½	41	13.20 - 132.00	150 336 011	150 336 031
2½	42	35.20 - 264.00	150 336 012	150 336 032

Size [inch]	SK	Scale Range [gal/min]	PVC Socket Ends, FKM Seals, Standard Tube	
			Standard Float	Magnetic Float
1	10	0.22 - 2.20	150 336 040	150 336 060
1	11	0.44 - 4.40	150 336 041	150 336 061
1¼	15	0.66 - 6.60	150 336 042	150 336 062
1¼	16	1.10 - 11.00	150 336 043	150 336 063
1½	19	0.88 - 8.80	150 336 044	150 336 064
1½	20	1.32 - 13.20	150 336 045	150 336 065
1½	21	2.64 - 26.40	150 336 046	150 336 066
2	29	2.64 - 26.40	150 336 047	150 336 067
2	30	4.40 - 44.00	150 336 048	150 336 068
2	31	6.60 - 66.00	150 336 049	150 336 069
2½	40	8.80 - 88.00	150 336 050	150 336 070
2½	41	13.20 - 132.00	150 336 051	150 336 071
2½	42	35.20 - 264.00	150 336 052	150 336 072



Rotameters

Type 336 Rotameter Poyamide

C

Size [inch]	SK	Scale Range [gal/min]	PVC Socket Ends, EPDM Seal, Standard Tube	
			Standard Float	Magnetic Float
1	10	0.22 - 2.20	150 336 080	150 336 100
1	11	0.44 - 4.40	150 336 081	150 336 101
1¼	15	0.66 - 6.60	150 336 082	150 336 102
1¼	16	1.10 - 11.00	150 336 083	150 336 103
1½	19	0.88 - 8.80	150 336 084	150 336 104
1½	20	1.32 - 13.20	150 336 085	150 336 105
1½	21	2.64 - 26.40	150 336 086	150 336 106
2	29	2.64 - 26.40	150 336 087	150 336 107
2	30	4.40 - 44.00	150 336 088	150 336 108
2	31	6.60 - 66.00	150 336 089	150 336 109
2½	40	8.80 - 88.00	150 336 090	150 336 110
2½	41	13.20 - 132.00	150 336 091	150 336 111
2½	42	35.20 - 264.00	150 336 092	150 336 112

Size [inch]	SK	Scale Range [gal/min]	PVC Socket Ends, FKM Seals, Standard Tube	
			Standard Float	Magnetic Float
1	10	0.22 - 2.20	150 336 120	150 336 140
1	11	0.44 - 4.40	150 336 121	150 336 141
1¼	15	0.66 - 6.60	150 336 122	150 336 142
1¼	16	1.10 - 11.00	150 336 123	150 336 143
1½	19	0.88 - 8.80	150 336 124	150 336 144
1½	20	1.32 - 13.20	150 336 125	150 336 145
1½	21	2.64 - 26.40	150 336 126	150 336 146
2	29	2.64 - 26.40	150 336 127	150 336 147
2	30	4.40 - 44.00	150 336 128	150 336 148
2	31	6.60 - 66.00	150 336 129	150 336 149
2½	40	8.80 - 88.00	150 336 130	150 336 150
2½	41	13.20 - 132.00	150 336 131	150 336 151
2½	42	35.20 - 264.00	150 336 132	150 336 152




Rotameters


Type 807 Short Rotameter Polysulphone

C

Size [inch]	SK	Scale Range [gal/min]	PVC Socket Ends, EPDM Seal, Short Tube	
			Standard Float	Magnetic Float
3/8	50	0.01 - 0.11	198 807 550	198 807 576
3/8	51	0.02 - 0.22	198 807 551	198 807 577
3/8	52	0.04 - 0.44	198 807 552	198 807 578
1/2	60	0.03 - 0.33	198 807 553	198 807 579
1/2	61	0.06 - 0.66	198 807 554	198 807 580
1/2	62	0.08 - 0.88	198 807 555	198 807 581
1	70	0.06 - 0.66	198 807 556	198 807 582
1	71	0.13 - 1.32	198 807 557	198 807 583
1	72	0.22 - 2.20	198 807 558	198 807 584
1	73	0.44 - 4.40	198 807 559	198 807 585



Size [inch]	SK	Scale Range [gal/min]	PVC Socket Ends, FKM Seal, Short Tube	
			Standard Float	Magnetic Float
3/8	50	0.01 - 0.11	198 807 602	198 807 612
3/8	51	0.02 - 0.22	198 807 603	198 807 613
3/8	52	0.04 - 0.44	198 807 604	198 807 614
1/2	60	0.03 - 0.33	198 807 605	198 807 615
1/2	61	0.06 - 0.66	198 807 606	198 807 616
1/2	62	0.08 - 0.88	198 807 607	198 807 617
1	70	0.06 - 0.66	198 807 608	198 807 618
1	71	0.13 - 1.32	198 807 609	198 807 619
1	72	0.22 - 2.20	198 807 610	198 807 620
1	73	0.44 - 4.40	198 807 611	198 807 621



Type 807 Polysulphone PVDF-HP UPW Rotameter

C


d [mm]	SK	Scale Range [gal/min]	IR/Butt Fusion FKM
32	70*	0.36 - 1.00	198 807 209
32	71*	0.40 - 1.40	198 807 210
32	73*	0.60 - 3.50	198 807 202

* The only components compatible with this tube are position sensors and limit switches of this SK number.

Type 335 Polysulphone PVDF-HP UPW Rotameter

C

d [mm]	SK	Scale Range [gal/min]	IR/Butt Fusion FKM
32	11	0.44 - 4.40	198 335 160
50	20	1.32 - 13.20	198 335 161
50	21	2.64 - 26.40	198 335 162
63	30*	4.40 - 35.20	198 335 163
63	31	6.60 - 66.00	198 335 164
75	40	8.80 - 88.00	198 335 165
75	41*	13.20 - 127.70	198 335 166



* The only components compatible with this tube are position sensors and limit switches of this SK number.

Rotameter Scales

Type 336 Standard Tube Scale

C

Size [inch]	GPM			l/h		
	SK	Scale Range	Part No.	SK	Scale Range	Part No.
1	10	0.22 - 2.20	199 335 685	10	50 - 500	199 335 861
1	11	0.44 - 4.40	199 335 686	11	100 - 1000	199 335 862
1 ¼	15	0.66 - 6.60	199 335 687	15	150 - 1500	199 335 863
1 ¼	16	1.10 - 11.00	199 335 688	16	250 - 2500	199 335 864
1 ½	19	0.88 - 8.80	199 335 689	19	200 - 2000	199 335 865
1 ½	20	1.32 - 13.20	199 335 690	20	300 - 3000	199 335 866
1 ½	21	2.64 - 26.40	199 335 691	21	600 - 6000	199 335 867
2	29	2.64 - 26.40	199 335 692	29	600 - 6000	199 335 868
2	30	4.40 - 44.00	199 335 693	30	1000 - 10000	199 335 869
2	31	6.60 - 66.00	199 335 694	31	1500 - 15000	199 335 870
2 ½	40	8.80 - 88.00	199 335 695	40	2000 - 20000	199 335 871
2 ½	41	13.20 - 132.00	199 335 696	41	3000 - 30000	199 335 872
2 ½	42	35.20 - 264.00	199 335 697	42	8000-60000	199 335 873

Type 807 Short Tube Scale

C

Size [inch]	GPM			l/h		
	SK	Scale Range	Part No.	SK	Scale Range	Part No.
¾	50	0.01 - 0.11	198 801 961	50	2.5 - 25	198 801 386
¾	51	0.02 - 0.22	198 801 962	51	5 - 50	198 801 387
¾	52	0.04 - 0.44	198 801 963	52	10 - 100	198 801 388
½	60	0.03 - 0.33	198 801 964	60	8 - 80	198 801 389
½	61	0.06 - 0.66	198 801 965	61	15 - 150	198 801 390
½	62	0.08 - 0.88	198 801 966	62	20 - 200	198 801 391
1	70	0.06 - 0.66	198 801 967	70	15 - 150	198 801 392
1	71	0.13 - 1.32	198 801 968	71	30 - 300	198 801 393
1	72	0.22 - 2.20	198 801 969	72	50 - 500	198 801 394
1	73	0.44 - 4.40	198 801 970	73	100 - 1000	198 801 395

Rotameter Spare Parts

Type 336 PVC-Trans. Tube Set with Standard Tube

C

Size [inch]	SK	Scale Range [gal/min]	Standard Float	Magnetic Float
1	10	0.22 - 2.20	199 335 800	199 335 900
1	11	0.44 - 4.40	199 335 801	199 335 901
1 ¼	15	0.66 - 6.60	199 335 802	199 335 902
1 ¼	16	1.10 - 11.00	199 335 803	199 335 903
1 ½	19	0.88 - 8.80	199 335 804	199 335 904
1 ½	20	1.32 - 13.20	199 335 805	199 335 905
1 ½	21	2.64 - 26.40	199 335 806	199 335 906
2	29	2.64 - 26.40	199 335 807	199 335 907
2	30	4.40 - 44.00	199 335 808	199 335 908
2	31	6.60 - 66.00	199 335 809	199 335 909
2 ½	40	8.80 - 88.00	199 335 810	199 335 910
2 ½	41	13.20 - 132.00	199 335 811	199 335 911
2 ½	42	35.20 - 264.00	199 335 812	199 335 912

Type 336 Polysulphone Tube Set with Standard Tube

C

Size [inch]	SK	Scale Range [gal/min]	Standard Float	Magnetic Float
1	10	0.22 - 2.20	199 335 840	199 335 940
1	11	0.44 - 4.40	199 335 841	199 335 941
1 ¼	15	0.66 - 6.60	199 335 842	199 335 942
1 ¼	16	1.10 - 11.00	199 335 843	199 335 943
1 ½	19	0.88 - 8.80	199 335 844	199 335 944
1 ½	20	1.32 - 13.20	199 335 845	199 335 945
1 ½	21	2.64 - 26.40	199 335 846	199 335 946
2	29	2.64 - 26.40	199 335 847	199 335 947
2	30	4.40 - 44.00	199 335 848	199 335 948
2	31	6.60 - 66.00	199 335 849	199 335 949
2 ½	40	8.80 - 88.00	199 335 850	199 335 950
2 ½	41	13.20 - 132.00	199 335 850	199 335 950
2 ½	42	35.20 - 264.00	199 335 851	199 335 951

Type 336 Polyamide Tube Set with Standard Tube

C

Size [inch]	SK	Scale Range [gal/min]	Standard Float	Magnetic Float
1	10	0.22 - 2.20	199 335 820	199 335 920
1	11	0.44 - 4.40	199 335 821	199 335 921
1 ¼	15	0.66 - 6.60	199 335 822	199 335 922
1 ¼	16	1.10 - 11.00	199 335 823	199 335 923
1 ½	19	0.88 - 8.80	199 335 824	199 335 924
1 ½	20	1.32 - 13.20	199 335 825	199 335 925
1 ½	21	2.64 - 26.40	199 335 826	199 335 926
2	29	2.64 - 26.40	199 335 827	199 335 927
2	30	4.40 - 44.00	199 335 828	199 335 928
2	31	6.60 - 66.00	199 335 829	199 335 928
2 ½	40	8.80 - 88.00	199 335 829	199 335 929
2 ½	41	13.20 - 132.00	199 335 830	199 335 930
2 ½	42	35.20 - 264.00	199 335 831	199 335 931

Rotameter Spare Parts

Type 807 Polysulphone Short Tube Set

C

Size [inch]	SK	Flow Range [gal/min]	Standard Float	Magnetic Float
3/8	50	0.01 - 0.11	198 806 100	198 806 110
3/8	51	0.02 - 0.22	198 806 101	198 806 111
3/8	52	0.04 - 0.44	198 806 102	198 806 112
1/2	60	0.03 - 0.33	198 806 103	198 806 113
1/2	61	0.06 - 0.66	198 806 104	198 806 114
1/2	62	0.08 - 0.88	198 806 105	198 806 115
1	70	0.06 - 0.66	198 806 106	198 806 116
1	71	0.13 - 1.32	198 806 107	198 806 117
1	72	0.22 - 2.20	198 806 108	198 806 118
1	73	0.44 - 4.40	198 806 109	198 806 119



PVC



CPVC



PP



PVDF

B

Union Nut

d - Size [mm]-[inch]	PVC	CPVC	PP	PVDF
16 - 3/8	721 890 005	-	727 890 405	735 690 405
20 - 1/2	721 890 006	723 690 006	727 890 406	735 690 406
32 - 1	721 890 008	723 690 008	727 890 408	735 690 408
40 - 1 1/4	721 890 009	723 690 009	727 890 409	735 690 409
50 - 1 1/2	721 890 010	723 690 010	727 890 410	735 690 410
63 - 2	721 890 011	723 690 011	727 890 411	735 690 411
75 - 2 1/2	198 806 429	-	198 806 421	198 806 422

O-Rings

B

d - Size [mm]-[inch]	EPDM	FKM
16 - 3/8	748 410 005	749 410 005
20 - 1/2	748 410 006	749 410 006
32 - 1	748 410 008	749 410 008
40 - 1 1/4	748 410 009	749 410 009
50 - 1 1/2	748 410 010	749 410 010
63 - 2	748 410 011	749 410 011
75 - 2 1/2	748 410 014	749 410 014



Rotameter Spare Parts



PVC Socket/Threaded NPT



PP Socket Fusion



PP IR/Butt Fusion



PVDF IR/Butt Fusion

Union End

B

Size [inch]	PVC Socket Part No.	PVC Threaded NPT Part No.	PP Threaded NPT Part No.	PVDF Threaded NPT Part No.
3/8	721 602 005	-	-	-
1/2	721 602 006	721 602 656	157 203 603	155 203 611
1	721 602 008	721 602 658	157 203 604	155 203 612
1 1/4	721 602 009	721 602 659	-	-
1 1/2	721 602 010	721 602 660	157 203 606	155 203 614
2	721 602 011	721 602 661	157 203 607	155 203 615
2 1/2	700 259 430	-	-	-
Size [inch]	CPVC Socket Part No.	CPVC Threaded NPT Part No.		
1/2	723 602 006	153 203 620		
1	723 602 008	153 203 622		
1 1/4	723 602 009	153 203 623		
1 1/2	723 602 010	153 203 624		
2	723 602 011	153 203 625		
d [mm]	PVC Socket Metric Part No.	PP Socket Fusion Part No.	PVDF Socket Fusion Part No.	
16	721 500 105	727 500 105	735 600 105	
20	721 500 106	727 500 106	735 600 106	
32	721 500 108	727 500 108	735 600 108	
40	721 500 109	727 500 109	735 600 109	
50	721 500 110	727 500 110	735 600 110	
63	721 500 111	727 500 111	735 600 111	
d [mm]	PP IR/Butt Fusion Part No.	PPn IR/Butt Fusion Part No.	PVDF IR/Butt Fusion Part No.	
20	727 508 506	728 608 506	735 608 606	
32	727 508 508	728 608 508	735 608 608	
40	727 508 509	728 608 509	735 608 609	
50	727 508 510	728 608 510	735 608 610	
63	727 508 511	728 608 511	735 608 611	

Part No.	Page	Part No.	Page	Part No.	Page	Part No.	Page	Part No.	Page
150101037	86	150104405	52	150127228	51	150145104	65	150145283	67
150101038	86	150104406	52	150127232	51	150145105	65	150145284	67
150101609	23	150104407	52	150127233	51	150145106	65	150145285	67
150101616	23	150104408	52	150127234	51	150145107	65	150145286	67
150101618	23	150104413	52	150127235	51	150145108	65	150145287	67
150101626	23	150104414	52	150127236	51	150145122	67	150145288	67
150104203	52	150104415	52	150127237	51	150145123	67	150145289	67
150104204	52	150104416	52	150127238	51	150145124	67	150145290	67
150104205	52	150104417	52	150128000	62	150145125	67	150145292	67
150104206	52	150104418	52	150128001	62	150145126	67	150145293	67
150104207	52	150104503	52	150128002	62	150145127	67	150145294	67
150104208	52	150104504	52	150128003	62	150145128	67	150145295	67
150104213	52	150104505	52	150128004	62	150145129	67	150145296	67
150104214	52	150104506	52	150128005	62	150145130	67	150145297	67
150104215	52	150104507	52	150128006	62	150145142	67	150145298	67
150104216	52	150104508	52	150128007	62	150145143	67	150145299	67
150104217	52	150104513	52	150128008	62	150145144	67	150145300	67
150104218	52	150104514	52	150128009	62	150145145	67	150145302	65
150104223	52	150104515	52	150128010	62	150145146	67	150145303	65
150104224	52	150104516	52	150128011	62	150145147	67	150145304	65
150104225	52	150104517	52	150128012	62	150145148	67	150145305	65
150104226	52	150104518	52	150128013	62	150145149	67	150145306	65
150104227	52	150125382	62	150128572	62	150145150	67	150145307	65
150104228	52	150125383	62	150128573	62	150145182	65	150145308	65
150104233	52	150125384	62	150128574	62	150145183	65	150145309	65
150104234	52	150125385	62	150128575	62	150145184	65	150145310	65
150104235	52	150125386	62	150128576	62	150145185	65	150145342	66
150104236	52	150125387	62	150128577	62	150145186	65	150145343	66
150104237	52	150125388	62	150128578	62	150145187	65	150145344	66
150104238	52	150125392	62	150128582	62	150145188	65	150145345	66
150104303	52	150125393	62	150128583	62	150145202	67	150145346	66
150104304	52	150125394	62	150128584	62	150145203	67	150145347	66
150104305	52	150125395	62	150128585	62	150145204	67	150145348	66
150104306	52	150125396	62	150128586	62	150145205	67	150145382	66
150104307	52	150125397	62	150128587	62	150145206	67	150145383	66
150104308	52	150125398	62	150128588	62	150145207	67	150145384	66
150104313	52	150125422	62	150145042	67	150145208	67	150145385	66
150104314	52	150125423	62	150145043	67	150145209	67	150145386	66
150104315	52	150125424	62	150145044	67	150145210	67	150145387	66
150104316	52	150125425	62	150145045	67	150145222	67	150145388	66
150104317	52	150125426	62	150145046	67	150145223	67	150145389	66
150104318	52	150125427	62	150145047	67	150145224	67	150145390	66
150104323	52	150125428	62	150145048	67	150145225	67	150145422	66
150104324	52	150125432	62	150145049	67	150145226	67	150145423	66
150104325	52	150125433	62	150145050	67	150145227	67	150145424	66
150104326	52	150125434	62	150145062	67	150145228	67	150145425	66
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General Terms and Conditions of Sale

These GF Piping Systems USA Terms and Conditions (Rev. 05/2022) supersede all previous Terms and Conditions for Georg Fischer LLC, Georg Fischer Harvel LLC, and Georg Fischer Signet LLC. It is the responsibility of the Distributor, Dealer, or Agent to provide a current copy of these Terms and Conditions to purchasers of Georg Fischer Piping Systems products.

Acceptance of Terms and Conditions

Acceptance by Customer of GF Piping Systems USA, (hereinafter "Seller") offer of Products for sale is hereby expressly conditioned upon Customer's acceptance of these General Terms and Conditions of Sale and these General Terms and Conditions of Sale will be deemed accepted, as written, despite any language in Customer's purchase order and/or other documentation which is either conflicting or supplemental, unless promptly after this offer, Customer specifically advises Seller of each term and condition not so accepted and Seller accepts Customer's conflicting and/or supplemental term(s) in writing.

Order Acceptance

Seller reserves the right to accept or reject any order. Possession of a price list by Customer does not constitute an offer to sell.

Credit Approval and Minimum Order Charge

Customer credit approval is required prior to any shipment. The minimum order is \$100 net.

List Price, Discount or Freight Charges, Price Changes

All prices, discount, and freight terms are subject to change without notice. All prices are F.O.B. Seller's factory or authorized warehouse at Seller's discretion. All orders are accepted subject to Seller's price in effect at the time of shipment.

Quotes

All prices provided by the Seller are in US currency and cover only the goods expressly specified. Quotations are valid for a period of seven (7) days unless otherwise specified. HDPE and PVC Pipe pricing is valid unless there has been fundamental change to our cost exposure within the seven (7) day period. Prices set forth are subject to change in accordance with section "List Price, Discount or Freight Charges, Price Changes."

Payment Terms

Net 30 from date the invoice is issued unless otherwise stated in a specific quotation. No unauthorized deductions allowed, such as deductions for pending Return Material Transactions that are subject to review. Seller reserves the right to apply a finance charge to the balance of any past-due invoice (over 30 days from date of invoice) at a rate of 1.5% per month, 18% per annum. Payment terms on fusion machine rentals net 30. See rental agreement for more details.

Taxes

Seller charges Customer for all sales, excise and other taxes and governmental charges Seller is required to collect from Customer. Customers claiming exemption must furnish documentation required by law, which is satisfactory to Seller to permit Seller to refrain from collecting such charges.

Order Changes or Cancellations

Cancellation or modifications of orders may be possible only with prior written consent from Seller. Since all orders are individually entered for processing immediately upon receipt, Seller reserves the right to charge back to the Customer costs incurred from either order cancellation or order modification. Seller also reserves the right to consider all order additions as new orders and subject to all terms and conditions. Seller will not cancel orders for custom or non-cancelable products if Seller has already produced the product or incurred expenses toward producing the product at the time the Customer seeks to cancel.

Delivery

Seller disclaims liability for damages from late deliveries, including without limitation consequential damages or lost profits unless seller assumes liability for such damages in writing when the order is placed.

Excuse of Performance

Neither party shall be liable in any respect for failure to perform hereunder if hindered or prevented, directly or indirectly, by war, national emergency, inadequate transportation facilities, inability to secure materials, supplies, fuel or power, terrorism, pandemics, fire, flood, windstorm or other act of God, strike, lockout or other labor dispute, order or act of any government, whether foreign, national or local, whether valid or invalid, or any other cause of like or different kind beyond the reasonable control of such party. Strikes, lockouts, or other labor disputes involving employees of either party shall be deemed to be beyond the reasonable control of such party. Any quantity of product so affected shall be deducted from the total quantity purchased by Buyer. Seller, during any period of shortage due to any of the above causes, may allocate its available supply of product among itself and its customers on whatever basis Seller may deem desirable.

Standard Packaging

Seller will accept orders from Customer exclusively in multiples of the standard packaging quantity or boxed quantity. Seller reserves the right to reject any order that is not a standard packaging or boxed quantity of a Product.

Always check for the most current General Terms and Conditions and Warranty Statement at www.gfps.com under "Downloads & Tools," which supersede and replace these General Terms and Conditions and Warranty Statement. If unable to access this website please request a copy at (714) 731-8800.

Freight

Continental US – Full freight will be paid on the following orders:

1. Pipe \$15,000 net or greater in one of the following categories:
 - a. PPro-Seal
 - b. Contain-It
 - c. Fuseal (1 1/2"–6")
 - d. SYGEF
 - e. PROGEF
 - f. PVC and CPVC, including shapes and rods
 - g. PVC and CPVC, metric
 - h. ABS
 - i. ecoFIT (PE100)
 - j. SeaDrain (1 1/2"–6")
 - k. SeaCor

Combination of the above list of products to meet freight allowance is at the sole discretion of the Seller.

2. Fittings, Valves, & Actuation \$3,000 net or greater

3. COOL-FIT

Pipe	\$20,000 net or greater
Fittings	\$5,000 net or greater

4. LOKX \$15,000 net or greater

Freight allowed orders will be sent by a designated carrier of Seller's choice. Additional charges will be invoiced to Customer for special handling and airfreight when requested. Standard Pipe lengths require long truck beds for shipping and may be shipped separately from valves and/or fittings purchased on the same order. Valves and/or fittings will be shipped using practical shipping methods.

Freight will not be paid on the following orders:

- a. Signet Product
- b. Custom Products
- c. PVC and CPVC Fabricated Fittings 14" and larger
- d. Fuseal Squared, Tanks and Accessories, and Special Fabrications
- e. Fuseal Large Diameter Pipe and Fittings 8" and larger
- f. Double-See
- g. International Orders
- h. Fusion Machines and Accessories
- i. HDPE Pipe
- j. Duct Pipe
- k. Large Diameter EF Couplings 14" and larger
- l. HDPE M.J.'s, Flange Adapters and Flange Rings 14" and larger
- m. HDPE Fabricated and/or Mitered Fittings
- n. INSTAFLEX
- o. iFit
- p. JRG
- q. WAGA
- r. Hycleen
- s. Large Diameter Sea Drain Pipe and Fittings 8" and larger
- t. GF Urecon Products
- u. Stress Less

Unless otherwise specified, shipments are surface, un-insured, prepaid and added to invoice.

Will Call Orders

Buyer will pick up the Products within seven (7) days of Seller's notice that the Products are available at Pickup Location. If Buyer fails to pick up the Products within this seven (7) day period, order will be considered cancelled and Products will be returned to Seller's inventory and are subject to a 20% restocking fee.

Mode of Shipment and Packaging

Seller reserves the right to ship orders in the most economical manner, as long as the product is shipped on or before the promised ship date. If product ships after the promised ship date, Seller may automatically adjust the shipping method to help improve delivery of the delayed shipment, at no additional cost. If Seller pays freight, Seller may hold shipment until all items become available. Customer bears extra cost of non-standard packaging or handling requested by Customer.

Transfer of Ownership

All products are FOB Seller's facility and title of merchandise transfers when product is loaded onto carrier. Claims for damaged merchandise should be made to carrier by Customer.

Non-Conforming Shipments

Customer must notify Seller in writing within 7 days after receipt of shipments not conforming with Customer's order, stating specifically Customer's claim of non-conformity, or Customer is deemed to accept the shipment as is. If Seller is satisfied the shipment is non-conforming, Seller will (i) credit Customer for the price of defective goods or goods shipped but not ordered (including allocated outbound and return freight) upon return of goods; (ii) promptly ship omitted items waiving Seller's new order charges. Customer is required to make timely payment to Seller of any amount, which is undisputed, or not subject to such claims.

Return of Goods for Credit

Seller accepts returns of certain Engineered Piping Products, Valve and Actuation Products, Signet Instrumentation Products, Waste and Containment Products, PVC/CPVC/HDPE Fittings and Accessories for a standard restock charge of 25%. Pipe and Custom Products are not returnable. Products denoted with a caret (^) symbol in front of the part number in the current Master Distributor Price List have a 40% restock and products denoted with an asterisk (*) symbol are non-cancelable/non-returnable. Only products purchased within the past six (6) months, in original "like new" packaging (full carton quantities), of current design, and listed in the current Master Distributor Price List shall be considered for returns. All products qualifying for return are subject to review for marketability (quantities in question in relationship to historical stock movement) before issuance of a Return Material Authorization (RMA) number. Returns due to Seller's product warranty or order entry/shipping error will not be charged a restock fee. Product for credit consideration should be returned to location designated by Seller. All returns are subject to inspection upon receipt. No credit will be issued until the returned material has been inspected, accepted, and processed. Customers will be contacted if quantity differences and/or non-acceptable material are found during inspection. Any credit issued will reflect only quantities



actually received and accepted by Seller. Disposition (return to Customer or scrap) of returned product not accepted back by Seller must be provided by Customer within 10 business days, otherwise it will be subject to disposal. All material returns must be accompanied by a valid Return Material Authorization (RMA) number. RMA numbers may be obtained from the Inside Sales Department. When requesting a RMA, the original purchase order number and date of purchase must be provided. All material returns must be received within thirty (30) days of the RMA issuance. All material returns must be shipped freight prepaid and arrive to Seller's location in saleable condition. No collect shipments will be accepted by Seller. Restock charges and prepaid freight do not apply to warranty defective merchandise or returns due to Seller order entry or shipping errors.

Return of Goods for Warranty Evaluation

When requesting a RMA for material evaluation, Customer must first complete and submit a Material Safety Disclosure sheet and Request for Evaluation form obtained from Customer Service. Material arriving to Seller without a valid RMA number will be returned to the customer/distributor, freight collect. RMA numbers must be clearly referenced on all shipping documents and shipping containers.

Technical Documentation and Intellectual Property

Unless specified otherwise, technical documents such as drawings, descriptions, illustrations and the like constitute only an approximate guide. Seller reserves the right to make any changes considered necessary. Seller expressly reserves any and all intellectual property rights therein.

Warranty and Limitations

Seller's Products are carefully inspected for manufacturing defects; however, it is not always possible to detect hidden defects.

Seller warrants that its products and/or services shall conform to the description of such products or services as provided to Customer by Seller through Seller's catalog, analytical data or other literature.

THIS WARRANTY IS EXCLUSIVE, AND SELLER MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OR COURSE OF DEALING OR USAGE OF TRADE – WHICH ARE HEREBY DISCLAIMED.

Seller's warranties made in connection with the sale of Products shall not be effective if Seller has determined, in its sole discretion, that Customer has misused the products in any manner, has failed to use the products in accordance with industry standards and practices, or has failed to use the products in accordance with instructions, if any, furnished by Seller. Seller does not warrant any Products or Services obtained through an unauthorized Distributor, Dealer, or Agent.

Disclaimer of Seller Warranty on Products Manufactured by Others

Products not manufactured by Seller are covered, if at all, by the original manufacturer's warranty, copies of which are available on Buyer's request. Seller makes no warranty or representation whatsoever, express or implied with respect to products not manufactured by Seller. **ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OR COURSE OF DEALING OR USAGE OF TRADE WITH RESPECT TO SUCH PRODUCTS IS HEREBY DISCLAIMED.**

Limitations of Remedy

Seller's sole and exclusive liability and Customer's exclusive remedy with respect to products proved to Seller's satisfaction to be defective or nonconforming shall be repair or replacement of such products without charge or refund of the purchase price, in Seller's sole discretion, upon the return of such products in accordance with Seller's instructions.

SELLER SHALL NOT IN ANY EVENT BE LIABLE FOR INDIRECT, DIRECT, INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES OF ANY KIND RESULTING FROM ANY USE OR FAILURE OF THE PRODUCTS, OR IN CONNECTION WITH ANY SERVICES, EVEN IF SELLER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGE INCLUDING, WITHOUT LIMITATION, LIABILITY FOR LOSS OF USE, LOSS OF WORK IN PROGRESS, DOWN TIME, LOSS OF REVENUE OR PROFITS, FAILURE TO REALIZE SAVINGS, LOSS OF PRODUCTS OF CUSTOMER OR OTHER USE, ANY LIABILITY OF CUSTOMER TO A THIRD PARTY ON ACCOUNT OF SUCH LOSS, OR FOR ANY OTHER EXPENSE, DAMAGE OR LOSS OCCASIONED BY SUCH PRODUCT OR SERVICE, INCLUDING PERSONAL INJURY OR PROPERTY DAMAGE.

Any and all claims of Customer against Seller must be brought within one (1) year of Seller's tender of delivery, regardless of their nature.

Services

In the event Seller provides any technical or other information, advice, suggestions, assistance, work, training, or services of any kind to Buyer ("Services"), whether or not for a fee, **SELLER MAKES NO WARRANTIES, EXPRESS OR IMPLIED, ORAL OR WRITTEN, WITH RESPECT TO SUCH SERVICES, EXCEPT AS STATED IN THESE TERMS AND CONDITIONS.** The willingness of Seller to provide the Services is based upon Buyer's acceptance of and agreement to the terms, conditions, and obligations set forth herein and in any related Service Agreement signed by Buyer.

Welder Certifications

Training and certifications, for example, Level I, II, III (Welder Certifications) are provided based on the agreement of Buyer to follow and conform to all instructions, recommendations, and requirements of such certifications and related training. Buyer shall indemnify, defend and forever hold Seller and its directors, officers, employees, agents, suppliers, parents, affiliates, subsidiaries, successors and assigns harmless from any and all fines, penalties, suits, actions, claims, liabilities, judgments, costs, and expenses (including reasonable attorneys' fees) resulting or arising from the acts or omissions of Buyer, its directors, officers, employees, agents, suppliers, customers, parents, affiliates, subsidiaries, successors and assigns (all collectively referred to herein as "Buyer") related to or arising from Welder Certifications, or the performance of any related work by Buyer. The foregoing shall apply, but shall not be limited to, injury to person (including death) or damage or harm to property or the environment. Buyer shall not be obligated to indemnify Seller for any fine, penalty, suit, action, claim, liability, judgment, cost, or expense to the extent attributable to Seller's negligence or willful misconduct.

Export Law Compliance

Buyer represents that Products will not be diverted, transshipped, exported or re-exported to any country whatsoever, except in accordance with all applicable United States laws and regulations, including, but not limited to the Export Administration Act of 1979, and regulations issued thereunder.

EU GDPR Compliance

Seller affiliates are subject to the European Union's General Data Privacy Regulation [Regulation (EU) 2016/679] (the "GDPR") when acting as a controller or processor of personal data of an individual data subject located in the European Union, as those terms are defined in the GDPR. Buyer acknowledges and agrees that it may be acting as a processor of personal data for Seller or its affiliates and that all

applicable requirements of the GDPR are incorporated by reference herein. Buyer agrees to process personal data received from Seller or its affiliates only in accordance with Seller instructions and only in compliance with GDPR. Buyer further agrees to comply with all applicable requirements of the GDPR to the same extent as required for Seller.

Assignment

Customer may not assign its rights under or interest in any purchase order without the prior written consent of Seller. These terms and conditions of sale shall be binding upon and inure to the benefit of Customer and Seller, their successors and permitted assigns.

Applicable Law

The sale and purchase of Products and/or Services shall be governed by, and these terms and conditions shall be interpreted in accordance with the laws of the State where the Products purchased hereunder are manufactured or Services purchased hereunder are performed. All disputes hereunder shall be resolved in courts of competent jurisdiction located within the State where the Products sold or Services performed hereunder are manufactured or performed. The parties hereby waive the right to trial by jury.

Relationship of the Parties

The relationship between the parties shall be that of Seller and independent contractor. Neither Party shall be the agent of the other or have authority to act on behalf of the other party, except in a manner and to the extent provided herein or otherwise agreed to in writing. There is no special relationship between the parties or between Seller and any customer of Buyer. This Agreement creates a contractual relationship among the parties hereto, and creates no other relationship, including but not limited to a franchise, partnership, dealer, joint venture, agency, or any form of fiduciary or special relationship. Buyer agrees that it will never represent itself to third parties as having any relationship with Seller other than that of independent contractor.

Entire Agreement

These terms and conditions constitute the entire and complete agreement between Seller and Buyer concerning the sale and purchase of Products or Services. Neither party shall claim any modification, amendment or release from any of these terms and conditions unless the parties have entered into a mutual agreement to that effect, signed by Buyer and Seller.

GF Piping Systems

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