



Pneumatic Double Acting Automated Ball Valve Package

Series 22
Direct Mount

316SST Body, Ball & Stem
Sizes 1/4" – 3"

Full Port Valve
Threaded Ends

1000 psi WOG
NACE MR-0175

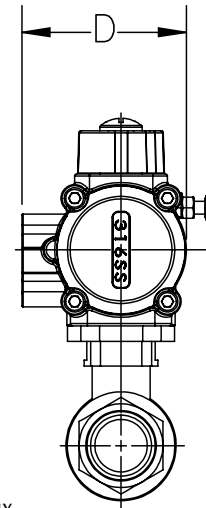
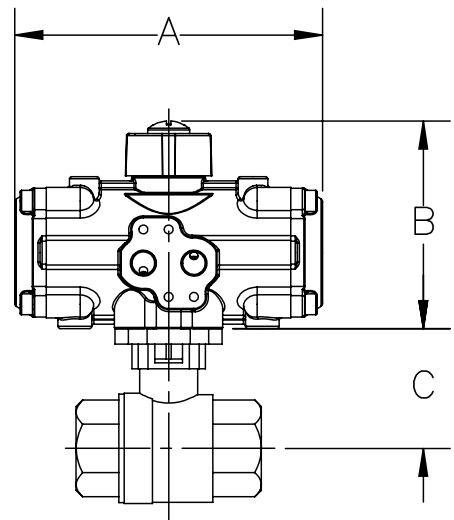
2-piece High Cycle Design
Blowout Proof Stem w/ Dual
Anti-Static Devices
RTFE Seats Standard
Pyramidal Stem Seal Design

STANDARDS

DESIGN	ANSI/ASME B16.34
END CONNECTIONS	ASME B1.20.1
SULFIDE STRESS PROTECTION	NACE MR0175
MOUNTING	ISO 5211
MARKING SYSTEM FOR VALVES	MSS SP-25, MSS SP-55
SAFETY INTEGRITY	IEC 61508:2010; SIL 3
MATERIAL CERTIFICATION	EN 10204-3.1 MTR
QUALITY ASSURANCE	ISO 9001:2015



Direct Mount to TRIAC® S2 Series
Stainless Steel Actuator



DIMENSIONS (IN)

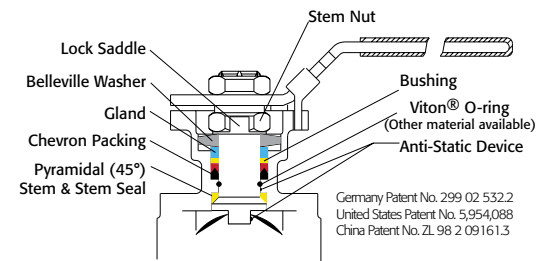
VALVE SIZE	A	B	C	D	VALVE Cv
1/4"	5.75	3.88	1.53	3.07	7
3/8"	5.75	3.88	1.53	3.07	8
1/2"	5.75	3.88	1.60	3.07	15
3/4"	5.75	3.88	1.82	3.07	40
1"	5.75	3.88	2.24	3.07	70
1-1/4"	5.75	3.88	2.40	3.07	110
1-1/2"	6.81	4.49	3.06	3.58	250
2"	8.03	5.30	3.35	4.42	350
2-1/2"	8.03	5.30	4.31	4.42	600
3"	10.63	6.32	4.63	5.31	900

DIMENSIONS SHOWN ARE FOR ASSEMBLIES SIZED FOR 80 PSI SUPPLY

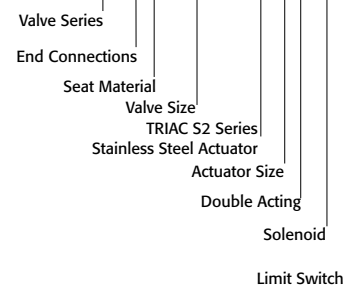
SERIES 22 2-Piece Direct Mount "Painless Stainless"

SIZED FOR 80 psi AIR SUPPLY	
SIZE	MODEL
1/4"	22-TX-025/S21D-XX
3/8"	22-TX-038/S21D-XX
1/2"	22-TX-050/S21D-XX
3/4"	22-TX-075/S21D-XX
1"	22-TX-100/S21D-XX
1-1/4"	22-TX-125/S21D-XX
1-1/2"	22-TX-150/S22D-XX
2"	22-TX-200/S23D-XX
2-1/2"	22-TX-250/S23D-XX
3"	22-TX-300/S24D-XX

SIZED FOR 60 psi AIR SUPPLY	
SIZE	MODEL
1/4"	22-TX-025/S21D-XX
3/8"	22-TX-038/S21D-XX
1/2"	22-TX-050/S21D-XX
3/4"	22-TX-075/S21D-XX
1"	22-TX-100/S21D-XX
1-1/4"	22-TX-125/S22D-XX
1-1/2"	22-TX-150/S22D-XX
2"	22-TX-200/S23D-XX
2-1/2"	22-TX-250/S24D-XX
3"	22-TX-300/S24D-XX



SAMPLE PART # 22-TX-150/S22D-XX



See valve part number matrix for complete part number and options.



OPTIONS

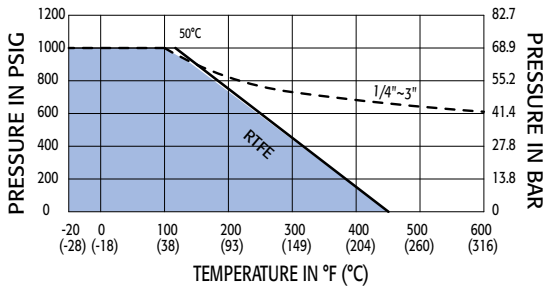
DESCRIPTION	PART NO. SUFFIX	DESCRIPTION	PART NO. SUFFIX
Type 4 Aluminum Solenoid	(A)	Type 4 Aluminum Limit Switch (2) spdt	(A)
Type 7 Aluminum Solenoid	(B)	Type 7 Aluminum Limit Switch (2) spdt	(B)
Type 4 Stainless Steel Solenoid	(Q)	Type 4 Stainless Steel Limit Switch	(Q)
Type 7 Stainless Steel Solenoid	(M)	Type 7 Stainless Steel Limit Switch	(M)

Actuators are sized based on clean/clear fluid. Other options available - call for details

Series 22

Direct Mount High Cycle Full Port Ball Valve

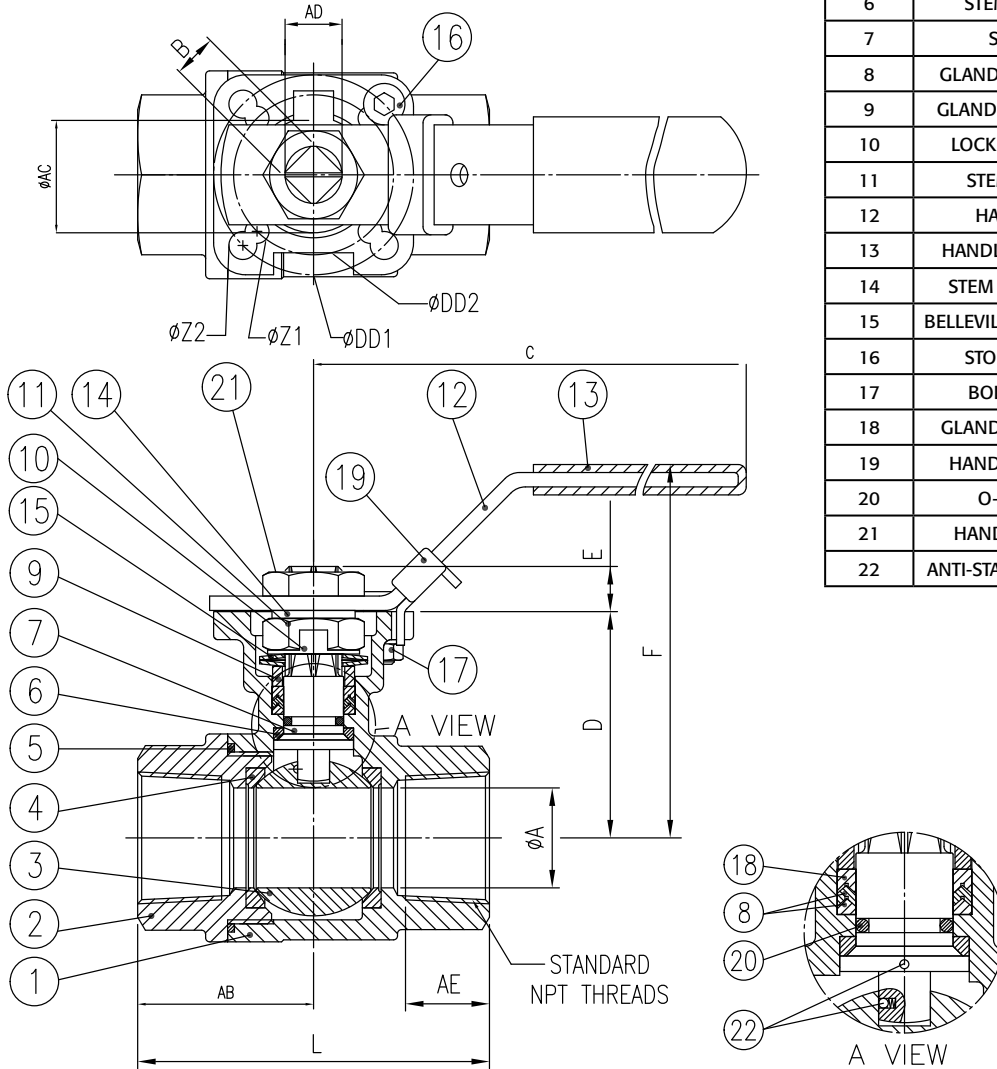
Pressure vs. Temperature Chart



NOTE: Dotted line shows the rating for valve body. Solid line shows the rating for valve seat. Both ratings need to be considered when determining the limitation of the valve for specific application. Consult factory for other seat materials.

MATERIALS LIST

NO.	PART NAME	QTY	MATERIAL
1	BODY	1	ASTM A351 GRADE CF8M
2	END CAP	1	ASTM A351 GRADE CF8M
3	BALL	1	1/4" THRU 3/8" ASTM A276 SS316
3	BALL	1	1/2" THRU 3" ASTM A351 GRADE CF8M
4	SEAT	2	RTFE
5	JOINT GASKET	1	PTFE
6	STEM SEAL	1	RTFE
7	STEM	1	ASTM A276 SS316
8	GLAND PACKING	1	PTFE
9	GLAND BUSHING	1	AISI 304
10	LOCK SADDLE	1	AISI 304
11	STEM NUT	1	AISI 304
12	HANDLE	1	AISI 304
13	HANDLE SLEEVE	1	VINYL
14	STEM WASHER	1	AISI 304
15	BELLEVILLE WASHER	2	AISI 301
16	STOP BOLT	1	AISI 304
17	BOLT NUT	1	AISI 304
18	GLAND WASHER	1	RTFE
19	HANDLE LOCK	1	AISI 304
20	O-RING	1	VITON®
21	HANDLE NUT	1	AISI 304
22	ANTI-STATIC DEVICE	2	AISI 316



Break Away Torque for RTFE Seats

SIZE	IN-LBS.
1/4"	62
3/8"	62
1/2"	62
3/4"	71
1"	124
1-1/4"	159
1-1/2"	230
2"	319
2-1/2"	487
3"	770

NOTE: For other seat material, consult factory

DIMENSIONS (IN)

SIZE	A	B	C	D	E	F	L	Z1	Z2	AB	AC	AD	AE	DD1	DD2	LBS	ISO 5211
1/4"	0.45	0.354	5.88	1.53	0.26	2.99	2.56	0.26	0.28	1.28	0.92	0.43	0.55	1.417	1.969	1.23	F03/F04/F05
3/8"	0.49	0.354	6.12	1.52	0.26	2.99	2.56	0.26	0.28	1.28	0.92	0.43	0.53	1.417	1.969	1.23	F03/F04/F05
1/2"	0.59	0.354	5.83	1.60	0.26	3.05	2.56	0.26	0.28	1.28	0.92	0.43	0.53	1.417	1.969	1.23	F03/F04/F05
3/4"	0.79	0.354	5.88	1.82	0.28	3.23	2.94	0.26	0.28	1.47	0.91	0.43	0.61	1.417	1.969	1.32	F03/F04/F05
1"	0.98	0.433	6.77	2.24	0.43	3.74	3.46	0.26	0.28	1.73	1.26	0.56	0.72	1.654	1.969	2.40	F04/F05
1-1/4"	1.26	0.433	6.77	2.40	0.43	3.92	4.02	0.24	0.27	2.01	1.26	0.56	0.81	1.654	1.969	3.31	F04/F05
1-1/2"	1.50	0.551	8.51	3.06	0.55	4.00	4.33	0.29	0.35	2.17	1.53	0.75	0.76	1.969	2.756	5.62	F05/F07
2"	1.97	0.551	8.51	3.35	0.56	5.16	4.92	0.29	0.35	2.46	1.53	0.75	0.89	1.969	2.756	7.93	F05/F07
2-1/2"	2.56	0.669	10.53	4.31	0.67	6.18	6.32	0.39	0.48	3.16	2.07	0.88	1.09	2.756	4.016	16.38	F07/F10
3"	3.15	0.669	11.88	4.63	0.71	6.80	7.01	0.39	0.48	3.51	2.08	0.88	1.19	2.756	4.016	22.81	F07/F10

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Pneumatic Spring Return Automated Ball Valve Package

Series 22
Direct Mount

316SST Body, Ball & Stem

Sizes 1/4" – 3"

Full Port Valve

Threaded Ends

1000 psi WOG

NACE MR-0175

2-piece High Cycle Design

Blowout Proof Stem w/ Dual
Anti-Static Devices

RTFE Seats Standard

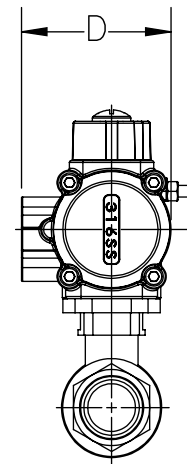
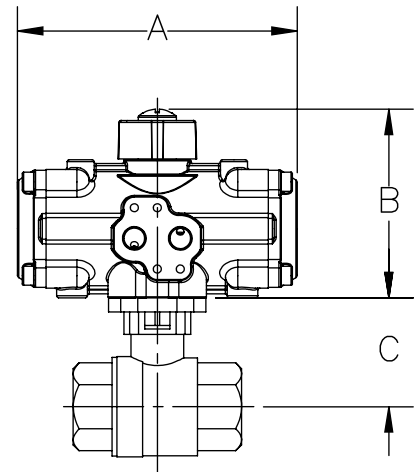
Pyramidal Stem Seal Design

STANDARDS

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SAFETY INTEGRITY	IEC 61508:2010; SIL 3
MATERIAL CERTIFICATION	EN 10204-3.1 MTR
QUALITY ASSURANCE	ISO 9001:2015



Direct Mount to TRIAC® S2 Series
Stainless Steel Actuator



DIMENSIONS (IN)

VALVE SIZE	A	B	C	D	VALVE Cv
1/4"	5.75	3.88	1.53	3.07	7
3/8"	5.75	3.88	1.53	3.07	8
1/2"	5.75	3.88	1.60	3.07	15
3/4"	6.81	4.49	1.82	3.58	40
1"	6.81	4.49	2.24	3.58	70
1-1/4"	8.03	5.30	2.40	4.42	110
1-1/2"	8.03	5.30	3.06	4.42	250
2"	10.63	6.32	3.35	5.31	350
2-1/2"	10.63	6.32	4.31	5.31	600
3"	11.89	7.14	4.63	6.12	900

DIMENSIONS SHOWN ARE FOR ASSEMBLIES SIZED FOR 80 PSI SUPPLY

SIZED FOR 80 psi AIR SUPPLY	
SIZE	MODEL
1/4"	22-TX-025/S21S-XX
3/8"	22-TX-038/S21S-XX
1/2"	22-TX-050/S21S-XX
3/4"	22-TX-075/S22S-XX
1"	22-TX-100/S22S-XX
1-1/4"	22-TX-125/S23S-XX
1-1/2"	22-TX-150/S23S-XX
2"	22-TX-200/S24S-XX
2-1/2"	22-TX-250/S24S-XX
3"	22-TX-300/S25S-XX

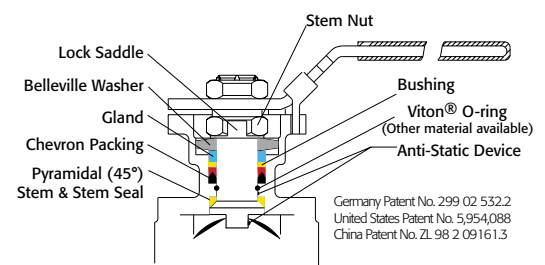
SIZED FOR 60 psi AIR SUPPLY	
SIZE	MODEL
1/4"	22-TX-025/S21S4-XX
3/8"	22-TX-038/S21S4-XX
1/2"	22-TX-050/S21S4-XX
3/4"	22-TX-075/S22S4-XX
1"	22-TX-100/S22S4-XX
1-1/4"	22-TX-125/S23S4-XX
1-1/2"	22-TX-150/S23S4-XX
2"	22-TX-200/S24S4-XX
2-1/2"	22-TX-250/S25S4-XX
3"	22-TX-300/S26S4-XX

For spring return assemblies, all 80 psi assemblies will have 5 springs, and all 60 psi assemblies will have 4 springs (indicated by the 4-XX).

OPTIONS

DESCRIPTION	PART NO. SUFFIX	DESCRIPTION	PART NO. SUFFIX
Type 4 Aluminum Solenoid	(A)	Type 4 Aluminum Limit Switch (2) spdt	(A)
Type 7 Aluminum Solenoid	(B)	Type 7 Aluminum Limit Switch (2) spdt	(B)
Type 4 Stainless Steel Solenoid	(Q)	Type 4 Stainless Steel Limit Switch	(Q)
Type 7 Stainless Steel Solenoid	(M)	Type 7 Stainless Steel Limit Switch	(M)

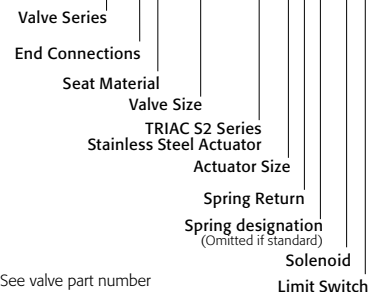
Actuators are sized based on clean/clear fluid. Other options available - call for details



Germany Patent No. 299 02 532.2
United States Patent No. 5,954,088
China Patent No. ZL 98 2 09161.3

SAMPLE PART

22-TX-125/S23S4-XX



See valve part number matrix for complete part number and options.



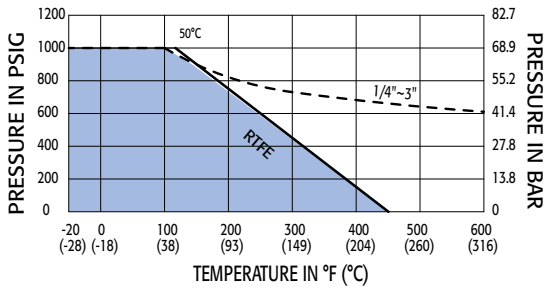
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Series 22

Direct Mount High Cycle Full Port Ball Valve

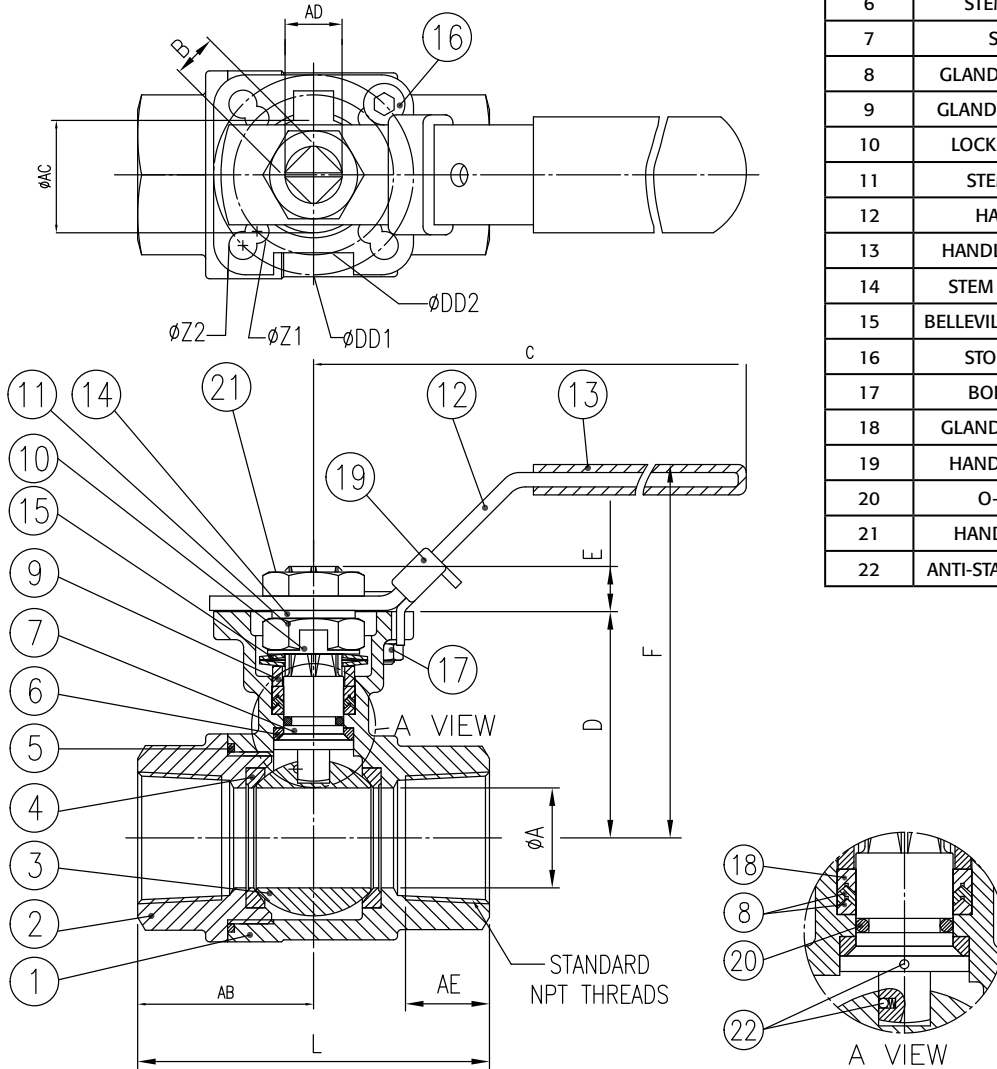
Pressure vs. Temperature Chart



NOTE: Dotted line shows the rating for valve body. Solid line shows the rating for valve seat. Both ratings need to be considered when determining the limitation of the valve for specific application. Consult factory for other seat materials.

MATERIALS LIST

NO.	PART NAME	QTY	MATERIAL
1	BODY	1	ASTM A351 GRADE CF8M
2	END CAP	1	ASTM A351 GRADE CF8M
3	BALL	1	1/4" THRU 3/8" ASTM A276 SS316
3	BALL	1	1/2" THRU 3" ASTM A351 GRADE CF8M
4	SEAT	2	RTFE
5	JOINT GASKET	1	PTFE
6	STEM SEAL	1	RTFE
7	STEM	1	ASTM A276 SS316
8	GLAND PACKING	1	PTFE
9	GLAND BUSHING	1	AISI 304
10	LOCK SADDLE	1	AISI 304
11	STEM NUT	1	AISI 304
12	HANDLE	1	AISI 304
13	HANDLE SLEEVE	1	VINYL
14	STEM WASHER	1	AISI 304
15	BELLEVILLE WASHER	2	AISI 301
16	STOP BOLT	1	AISI 304
17	BOLT NUT	1	AISI 304
18	GLAND WASHER	1	RTFE
19	HANDLE LOCK	1	AISI 304
20	O-RING	1	VITON®
21	HANDLE NUT	1	AISI 304
22	ANTI-STATIC DEVICE	2	AISI 316



Break Away Torque for RTFE Seats

SIZE	IN-LBS.
1/4"	62
3/8"	62
1/2"	62
3/4"	71
1"	124
1-1/4"	159
1-1/2"	230
2"	319
2-1/2"	487
3"	770

NOTE: For other seat material, consult factory

DIMENSIONS (IN)

SIZE	A	B	C	D	E	F	L	Z1	Z2	AB	AC	AD	AE	DD1	DD2	LBS	ISO 5211
1/4"	0.45	0.354	5.88	1.53	0.26	2.99	2.56	0.26	0.28	1.28	0.92	0.43	0.55	1.417	1.969	1.23	F03/F04/F05
3/8"	0.49	0.354	6.12	1.52	0.26	2.99	2.56	0.26	0.28	1.28	0.92	0.43	0.53	1.471	1.969	1.23	F03/F04/F05
1/2"	0.59	0.354	5.83	1.60	0.26	3.05	2.56	0.26	0.28	1.28	0.92	0.43	0.53	1.417	1.969	1.23	F03/F04/F05
3/4"	0.79	0.354	5.88	1.82	0.28	3.23	2.94	0.26	0.28	1.47	0.91	0.43	0.61	1.417	1.969	1.32	F03/F04/F05
1"	0.98	0.433	6.77	2.24	0.43	3.74	3.46	0.26	0.28	1.73	1.26	0.56	0.72	1.654	1.969	2.40	F04/F05
1-1/4"	1.26	0.433	6.77	2.40	0.43	3.92	4.02	0.24	0.27	2.01	1.26	0.56	0.81	1.654	1.969	3.31	F04/F05
1-1/2"	1.50	0.551	8.51	3.06	0.55	4.00	4.33	0.29	0.35	2.17	1.53	0.75	0.76	1.969	2.756	5.62	F05/F07
2"	1.97	0.551	8.51	3.35	0.56	5.16	4.92	0.29	0.35	2.46	1.53	0.75	0.89	1.969	2.756	7.93	F05/F07
2-1/2"	2.56	0.669	10.53	4.31	0.67	6.18	6.32	0.39	0.48	3.16	2.07	0.88	1.09	2.756	4.016	16.38	F07/F10
3"	3.15	0.669	11.88	4.63	0.71	6.80	7.01	0.39	0.48	3.51	2.08	0.88	1.19	2.756	4.016	22.81	F07/F10

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