



SERIES M8B

High Performance Three-Piece Ball Valves 1/4" to 4" Full Port 600/1480 PSI



DESIGN ADVANTAGES

- For general industrial and chemical applications.
- Three-piece swing-out design allows in-line maintenance.
- Full port orifice minimizes pressure drop and prolongs life.
- Blow-out proof stem.
- Pyramidal stem packing.
- Available in stainless steel, carbon steel and alloys.
- Investment cast body construction.
- Direct mount.

STANDARDS

DESIGN & CONSTRUCTION: ASME B16.34 | ASME B16.11 | ASME B16.25 | ISO 5211

THREAD & CONNECTION INTERFACES: ASME B1.20.1 | ISO 228-1 (BSPP)
ISO 7-1 (BSPT) | DIN 2999 | EN 1092-1 | ASME B16.5

TESTING & QUALIFICATION: API 598

PERFORMANCE & ENV. COMPLIANCE: NACE MR0175 / ISO 15156 | SIL 3
TA-Luft | ATEX 2014/34/EU

IDENTIFICATION & MARKING: ISO 5209

CERTIFICATION & DOCUMENTATION: EN 10204-3.1
CE 0343 PED 2014/68/EU Cat. II Mod. D1

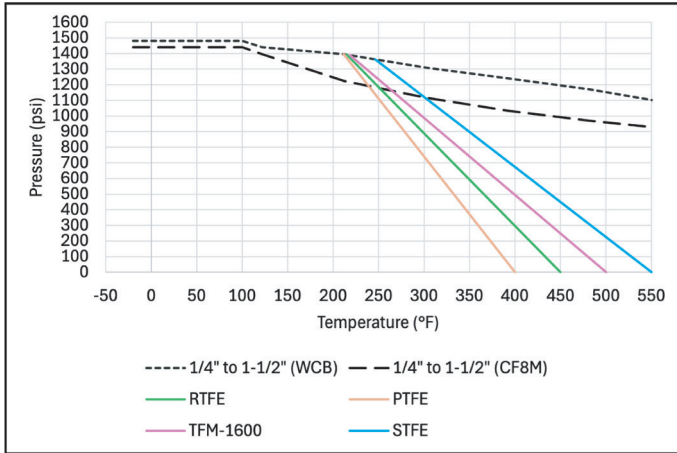
END CONNECTIONS

- Threaded End
- Socket Weld
- Butt Weld
- Extended Butt Weld
- NPT x Extended Butt Weld
- NPT x Socket Weld
- NPT x Butt Weld
- No Ends

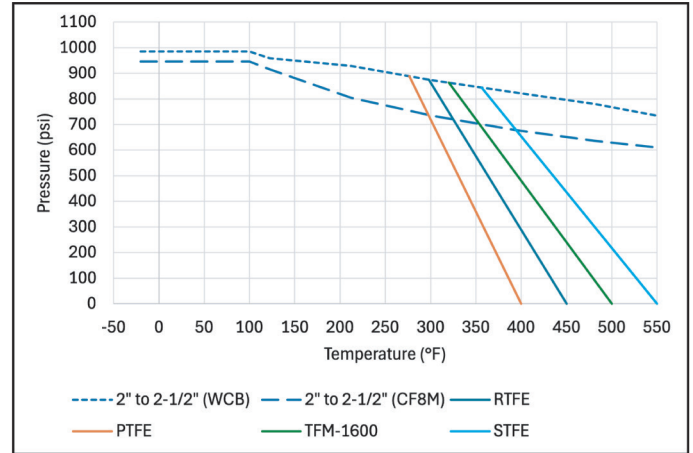
SPECIFICATIONS

CONSTRUCTION: Three-Piece Body, Full Bore
SIZE: 1/4" to 4" **BALL:** 316 S.S. / CF8M **SEAT:** TFM-1600
BODY: CF8M **STEM:** 316 S.S.
PRESSURE RATING: 600/1480 PSI

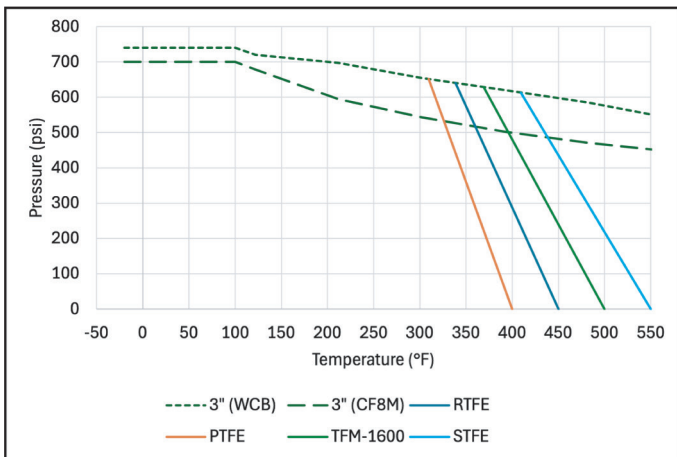
PRESSURE VS. TEMPERATURE SERIES M8B 1/4" TO 1-1/2"



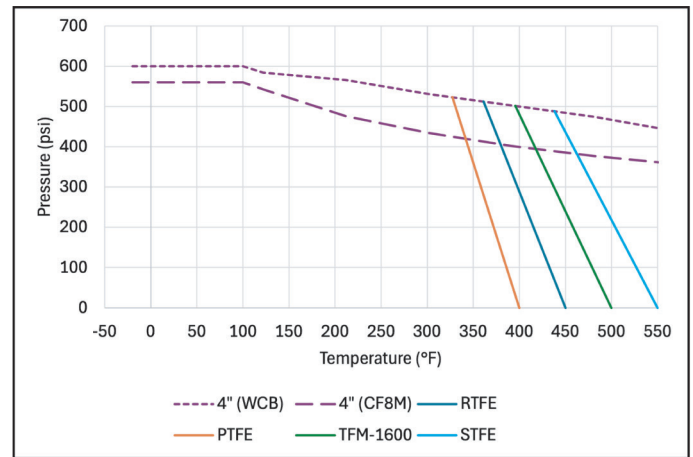
PRESSURE VS. TEMPERATURE SERIES M8B 2" TO 2-1/2"



PRESSURE VS. TEMPERATURE SERIES M8B 3"



PRESSURE VS. TEMPERATURE SERIES M8B 4"



M8B TORQUE

Breakaway Torque (RTFE) & Cv Value

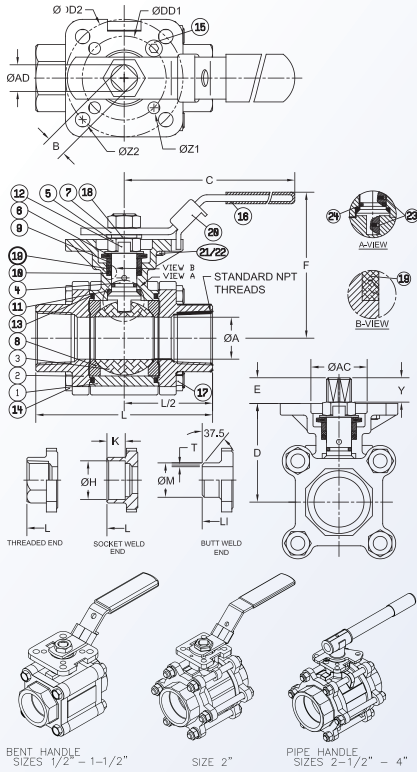
| SIZE | MAX | CV |
|--------|------|------|
| 1/4" | 58 | 7 |
| 3/8" | 58 | 8 |
| 1/2" | 58 | 15 |
| 3/4" | 83 | 40 |
| 1" | 120 | 70 |
| 1-1/4" | 171 | 110 |
| 1-1/2" | 235 | 250 |
| 2" | 398 | 430 |
| 2-1/2" | 595 | 600 |
| 3" | 864 | 1100 |
| 4" | 1509 | 2000 |



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M8B MATERIALS LIST



| NO. | COMPONENT | STANDARD MATERIALS | OPTIONAL MATERIALS | QTY. |
|-----|---|---|---|------|
| 1 | Body | ASTM A351 Grade CF8M, ASTM A216 Grade WCB | ASTM A351 Grade CN7M (Alloy 20), ASTM B575 UNS N10276 (Hastelloy C-276), Electropolished SST, A890 Grade 4A CD3MN (Duplex), A890 Grade 5A CE3MN (Super Duplex) | 1 |
| 2 | Body End Cap (Threaded) | ASTM A351 Grade CF8M, ASTM A216 Grade WCB | ASTM A351 Grade CN7M (Alloy 20), ASTM B575 UNS N10276 (Hastelloy C-276), Electropolished SST, A890 Grade 4A CD3MN (Duplex), A890 Grade 5A CE3MN (Super Duplex) | 2 |
| 2 | Body End Cap Socket (Socket Weld) | ASTM A351 Grade CF8M, ASTM A216 Grade WCB | ASTM A351 Grade CN7M (Alloy 20), ASTM B575 UNS N10276 (Hastelloy C-276), Electropolished SST, A890 Grade 4A CD3MN (Duplex), A890 Grade 5A CE3MN (Super Duplex) | 2 |
| 2 | Body End Cap Butt (Butt Weld) | ASTM A351 Grade CF8M, ASTM A216 Grade WCB | ASTM A351 Grade CN7M (Alloy 20), ASTM B575 UNS N10276 (Hastelloy C-276), Electropolished SST, A890 Grade 4A CD3MN (Duplex), A890 Grade 5A CE3MN (Super Duplex) | 2 |
| 2 | Body End Cap Extended Butt (Extended Butt Weld) | ASTM A351 Grade CF8M, ASTM A216 Grade WCB | ASTM A351 Grade CN7M (Alloy 20), ASTM B575 UNS N10276 (Hastelloy C-276), Electropolished SST, A890 Grade 4A CD3MN (Duplex), A890 Grade 5A CE3MN (Super Duplex) | 2 |
| 3 | Ball | ASTM A276 316SS, ASTM A351 Grade CF8M | A890 Grade 5A CE3MN (Super Duplex), ASTM A351 Grade CN7M (Alloy 20), A890 Grade 4A CD3MN (Duplex), ASTM B575 UNS N10276 (Hastelloy C-276), Monel, AISI 304, Hard Coated (HMF) | 1 |
| 4 | Stem | ASTM A276 316SS | ASTM A351 Grade CN7M (Alloy 20), ASTM B575 UNS N10276, Monel, A890 Grade 4A CD3MN (Duplex), A890 Grade 5A CE3MN (Super Duplex), AISI 304, 17-4 PH, XM-19, Duplex 2205, Inconel® 718 | 1 |
| 5 | Stem Nut | AISI 304 | | 2 |
| 6 | Stem Packing Belleville Washer | AISI 301 | | 2 |
| 7 | Handle | AISI 304 | | 1 |
| 8 | Seat | TFM™-1600 | RTFE, PTFE, UHMEPE, Delrin, STFE, CTFE, STFM, MG1241, PEEK | 2 |
| 9 | Stem Packing Gland | AISI 304 | | * |
| 10 | Stem Packing Washer | AISI 304 | | 1 |
| 11 | Stem Seal | PTFE | TFM™-1600 | 1 |
| 12 | Stem Lock Handle | AISI 304 | | 1 |
| 13 | Body Joint Gasket | PTFE | TFM™-1600 | 2 |
| 14 | Body Bolt | ASTM A193 Grade B8, ISO 3506-1 A4-70 | | * |
| 15 | Handle Stop Bolt | AISI 304, AISI 316 | | 1 |
| 16 | Handle Sleeve | VINYL | | 1 |
| 17 | Body Bolt Nut | ASTM A194 Grade 8, ISO 3506-2 A4-70 | | 1 |
| 18 | Stem Washer | AISI 304, AISI 316 | | 1 |
| 19 | Stem Packing | PTFE, TFM™-1600 | | 1 |
| 20 | Handle Lock | AISI 316, AISI 304 | | 1 |
| 21 | Handle Stop Bolt Nut | AISI 316, AISI 304 | | 1 |
| 22 | Handle Stop Bolt Washer | AISI 316, AISI 304 | | 1 |
| 23 | Anti-Static Device | AISI 316 | | 2 |
| 24 | Stem O-Ring | FKM | MARKEZ Z1028, KALREZ 4079, CHEMRAZ™ 505, KALREZ™ 6375, PERLAST™ G75M, CHEMRAZ™ 564, Low Temp. Buna, EPDM, Silicone | 1 |

14" 1/2" to 1-1/2": 4 Bolts, 2" 6 Bolts, 2-1/2" to 4": 6 Studs
 17" 1/2" to 1-1/2": 4 Nuts, 2" 6 Nuts, 2-1/2" to 4": 12 Nuts

DIMENSIONS (IN)

| SIZE | A | B | C | D | E | F | Y | H | K | L | L1 | M | T | AC | AD | DD1 | DD2 | Z1 | Z2 | ISO 5211 | LBS |
|--------|------|-------|-------|------|------|------|------|------|------|------|------|------|------|------|------|-------|-------|------|------|----------|-----|
| 1/4" | 0.45 | 0.354 | 5.47 | 1.66 | 0.31 | 3 | 0.25 | 0.55 | 0.39 | 2.95 | 2.95 | 0.85 | 0.13 | 1.04 | 0.44 | 1.654 | 1.969 | 0.28 | 0.28 | F04/F05 | 1.6 |
| 3/8" | 0.5 | 0.354 | 5.47 | 1.66 | 0.31 | 3 | 0.25 | 0.69 | 0.39 | 2.95 | 2.95 | 0.85 | 0.11 | 1.04 | 0.44 | 1.654 | 1.969 | 0.28 | 0.28 | F04/F05 | 1.6 |
| 1/2" | 0.59 | 0.354 | 5.47 | 1.66 | 0.31 | 3 | 0.25 | 0.85 | 0.39 | 2.85 | 2.95 | 0.85 | 0.06 | 1.07 | 0.44 | 1.654 | 1.969 | 0.28 | 0.28 | F04/F05 | 2 |
| 3/4" | 0.79 | 0.354 | 5.47 | 1.83 | 0.33 | 3.2 | 0.33 | 1.07 | 0.51 | 3.36 | 3.54 | 1.07 | 0.06 | 1.07 | 0.44 | 1.969 | 2.756 | 0.34 | 0.28 | F05/F07 | 3 |
| 1" | 0.98 | 0.433 | 6.5 | 2.31 | 0.41 | 3.86 | 0.41 | 1.34 | 0.51 | 4.15 | 4.33 | 1.34 | 0.06 | 1.34 | 0.56 | 1.969 | 2.756 | 0.34 | 0.28 | F05/F07 | 4.5 |
| 1-1/4" | 1.26 | 0.433 | 6.5 | 2.46 | 0.41 | 4 | 0.41 | 1.69 | 0.51 | 4.37 | 4.53 | 1.68 | 0.06 | 1.34 | 0.56 | 1.969 | 2.756 | 0.34 | 0.28 | F05/F07 | 6 |
| 1-1/2" | 1.5 | 0.551 | 8.46 | 3.11 | 0.53 | 5.04 | 0.53 | 1.92 | 0.51 | 5.01 | 5.12 | 1.91 | 0.06 | 1.54 | 0.74 | 1.969 | 2.756 | 0.34 | 0.28 | F05/F07 | 10 |
| 2" | 1.97 | 0.551 | 8.46 | 3.42 | 0.53 | 5.35 | 0.53 | 2.4 | 0.63 | 5.62 | 5.62 | 2.38 | 0.06 | 1.54 | 0.74 | 1.969 | 2.756 | 0.35 | 0.3 | F05/F07 | 13 |
| 2-1/2" | 2.56 | 0.669 | 10.31 | 4.28 | 0.66 | 6.6 | 0.66 | 2.89 | 0.63 | 7.28 | 7.28 | 3 | - | 2.09 | 0.94 | 2.756 | 4.016 | 0.47 | 0.39 | F07/F10 | 26 |
| 3" | 3.15 | 0.669 | 10.31 | 4.63 | 0.7 | 6.96 | 0.7 | 3.54 | 0.63 | 8.07 | 8.07 | 3.54 | - | 2.09 | 0.94 | 2.756 | 4.016 | 0.47 | 0.39 | F07/F10 | 34 |
| 4" | 3.94 | 0.669 | 12.28 | 5.26 | 0.66 | 7.59 | 0.66 | 4.54 | 0.79 | 9.45 | 9.45 | 4.57 | - | 2.09 | 0.94 | 2.756 | 4.016 | 0.47 | 0.39 | F07/F10 | 52 |

HOW TO ORDER

| 1) Series | 2) Body Material | 3) Connection | 4) Size | 5) Seats |
|---|--|---|---|---|
| M8B | S - Stainless Steel C - Carbon Steel A - Alloy 20 T - HASTELLOY E - Electropolisher SST G - CE3MN D - CD3MN | TH - Threaded SW - Socket Weld BW - Butt Weld EW - Extended Butt Weld TE - NPT X Extended Butt Weld TS - NPT X Socket Weld TB - NPT X Butt Weld NE - No Ends | 0025 - 1/4" 0250 - 2-1/2" 0038 - 3/8" 0300 - 3" 0050 - 1/2" 0400 - 4" 0075 - 3/4" 0100 - 1" 0125 - 1-1/4" 0150 - 1-1/2" 0200 - 2" | T - TFM™-1600 P - PTFE U - UHMWPE D - DELRIN S - 50/50 STFE C - CTFE R - RTFE A - STFM Z - PEEK |
| 6) Ball | 7) Stem | 8) O-Ring | 9) Operator | |
| X - Stainless Steel A - Alloy 20 T - Hastelloy C-276 R - Monel D - Duplex SST G - Super Duplex SST J - 304SS H - Hard Coated (HMF) V - SST Vented | X - Stainless Steel A - Alloy 20 T - HASTELLOY C-276 R - MONEL D - DUPLEX SS G - SUPER DUPLEX SS J - SS304 B - 17-4 PH® C - XM-19 (NITRONIC 50) E - DUPLEX 2205 N - INCONEL® 718 | V - FKM/VITON | X - Manual Handle G - Gear Operator tL - Stem Extension S - Spring Return Handle B - Bare Stem | |

How to Order: {1}{2}-{3}-{4}-{5}{6}{7}{8}-{9}
 Example: M8BS-TH-0025-TXXV-X

SERIES M8B AUTOMATED ASSEMBLIES

DOUBLE ACTING

60 PSI | STAINLESS STEEL

| SIZE | Part Number |
|--------|-------------------------------|
| 1/4" | M8BS-TH-0025-TXXV/ZPD2DABA-XX |
| 3/8" | M8BS-TH-0038-TXXV/ZPD2DABA-XX |
| 1/2" | M8BS-TH-0050-TXXV/ZPD2DABA-XX |
| 3/4" | M8BS-TH-0075-TXXV/ZPD2DABA-XX |
| 1" | M8BS-TH-0100-TXXV/ZPD2DABA-XX |
| 1-1/4" | M8BS-TH-0125-TXXV/ZPD3DABA-XX |
| 1-1/2" | M8BS-TH-0150-TXXV/ZPD4DABA-XX |
| 2" | M8BS-TH-0200-TXXV/ZPD5DABA-XX |
| 2-1/2" | M8BS-TH-0250-TXXV/ZPD6DABA-XX |
| 3" | M8BS-TH-0300-TXXV/ZPD7DABX-XX |
| 4" | M8BS-TH-0400-TXXV/ZPD8DABX-XX |

80 PSI | STAINLESS STEEL

| SIZE | Part Number |
|--------|-------------------------------|
| 1/4" | M8BS-TH-0025-TXXV/ZPD1DABA-XX |
| 3/8" | M8BS-TH-0038-TXXV/ZPD1DABA-XX |
| 1/2" | M8BS-TH-0050-TXXV/ZPD1DABA-XX |
| 3/4" | M8BS-TH-0075-TXXV/ZPD2DABA-XX |
| 1" | M8BS-TH-0100-TXXV/ZPD2DABA-XX |
| 1-1/4" | M8BS-TH-0125-TXXV/ZPD3DABA-XX |
| 1-1/2" | M8BS-TH-0150-TXXV/ZPD3DABA-XX |
| 2" | M8BS-TH-0200-TXXV/ZPD4DABA-XX |
| 2-1/2" | M8BS-TH-0250-TXXV/ZPD6DABA-XX |
| 3" | M8BS-TH-0300-TXXV/ZPD6DABA-XX |
| 4" | M8BS-TH-0400-TXXV/ZPD8DABX-XX |

SPRING RETURN

60 PSI | STAINLESS STEEL

| SIZE | Part Number |
|--------|-------------------------------|
| 1/4" | M8BS-TH-0025-TXXV/ZPD3S4BA-XX |
| 3/8" | M8BS-TH-0038-TXXV/ZPD3S4BA-XX |
| 1/2" | M8BS-TH-0050-TXXV/ZPD3S4BA-XX |
| 3/4" | M8BS-TH-0075-TXXV/ZPD4S4BA-XX |
| 1" | M8BS-TH-0100-TXXV/ZPD5S4BA-XX |
| 1-1/4" | M8BS-TH-0125-TXXV/ZPD6S4BA-XX |
| 1-1/2" | M8BS-TH-0150-TXXV/ZPD6S4BA-XX |
| 2" | M8BS-TH-0200-TXXV/ZPD8S4BX-XX |
| 2-1/2" | M8BS-TH-0250-TXXV/ZPD9S4BX-XX |
| 3" | M8BS-TH-0300-TXXV/ZPDAS4BX-XX |
| 4" | M8BS-TH-0400-TXXV/ZPDBS4BX-XX |

80 PSI | STAINLESS STEEL

| SIZE | Part Number |
|--------|-------------------------------|
| 1/4" | M8BS-TH-0025-TXXV/ZPD2S5BA-XX |
| 3/8" | M8BS-TH-0038-TXXV/ZPD2S5BA-XX |
| 1/2" | M8BS-TH-0050-TXXV/ZPD2S5BA-XX |
| 3/4" | M8BS-TH-0075-TXXV/ZPD3S5BA-XX |
| 1" | M8BS-TH-0100-TXXV/ZPD4S5BA-XX |
| 1-1/4" | M8BS-TH-0125-TXXV/ZPD5S5BA-XX |
| 1-1/2" | M8BS-TH-0150-TXXV/ZPD6S5BA-XX |
| 2" | M8BS-TH-0200-TXXV/ZPD7S5BX-XX |
| 2-1/2" | M8BS-TH-0250-TXXV/ZPD8S5BX-XX |
| 3" | M8BS-TH-0300-TXXV/ZPD9S5BX-XX |
| 4" | M8BS-TH-0400-TXXV/ZPDBS5BX-XX |

ELECTRIC

ON/OFF | STAINLESS STEEL

| SIZE | Part Number |
|--------|-----------------------------|
| 1/4" | M8BS-TH-0025-TXXV/ZE2XXX-XX |
| 3/8" | M8BS-TH-0038-TXXV/ZE2XXX-XX |
| 1/2" | M8BS-TH-0050-TXXV/ZE2XXX-XX |
| 3/4" | M8BS-TH-0075-TXXV/ZE2XXX-XX |
| 1" | M8BS-TH-0100-TXXV/ZE2XXX-XX |
| 1-1/4" | M8BS-TH-0125-TXXV/ZE2XXX-XX |
| 1-1/2" | M8BS-TH-0150-TXXV/ZE2XXX-XX |
| 2" | M8BS-TH-0200-TXXV/ZE2XXX-XX |
| 2-1/2" | M8BS-TH-0250-TXXV/ZE3XXX-XX |
| 3" | M8BS-TH-0300-TXXV/ZE4XXX-XX |
| 4" | M8BS-TH-0400-TXXV/ZE5XXX-XX |

MODULATING | STAINLESS STEEL

| SIZE | Part Number |
|--------|-----------------------------|
| 1/4" | M8BS-TH-0025-TXXV/ZE2XXX-MX |
| 3/8" | M8BS-TH-0038-TXXV/ZE2XXX-MX |
| 1/2" | M8BS-TH-0050-TXXV/ZE2XXX-MX |
| 3/4" | M8BS-TH-0075-TXXV/ZE2XXX-MX |
| 1" | M8BS-TH-0100-TXXV/ZE2XXX-MX |
| 1-1/4" | M8BS-TH-0125-TXXV/ZE2XXX-MX |
| 1-1/2" | M8BS-TH-0150-TXXV/ZE2XXX-MX |
| 2" | M8BS-TH-0200-TXXV/ZE2XXX-MX |
| 2-1/2" | M8BS-TH-0250-TXXV/ZE3XXX-MX |
| 3" | M8BS-TH-0300-TXXV/ZE4XXX-MX |
| 4" | M8BS-TH-0400-TXXV/ZE5XXX-MX |



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