



Universal Gas Valve



| TRADE REPLACEMENTS (DOUBLE-CHECK SPECIFICATIONS BEFORE REPLACEMENT) | | SPECIFICATIONS | | | | | ACCESSORIES | | | | | | | COMPETITIVE REPLACEMENT (DOUBLE-CHECK SPECIFICATIONS BEFORE REPLACEMENT) | | |
|---|---------------------------------|--|-------------------|---|-------------------------------|-------------------|-----------------------------|------------------------------|----------------------|-------------|-----------------------------|--------------------|---|--|--|--|
| UNIVERSAL SERVICE PART | DIRECT SERVICE PART REPLACEMENT | OPENING CHARACTERISTICS (STANDARD, STEP) | INLET/OUTLET SIZE | PRESSURE REGULATOR SETTING (PSI) | TEMPERATURE RANGE | INCLUDES | | | | | | | RESIDEO OEM | WHITE-RODGERS | ROBERTSHAW | |
| | | | | | | Q340 THERMOCOUPLE | 3/4" X 1/2" REDUCER BUSHING | NATURAL TO LP CONVERSION KIT | 3/4" STRAIGHT FLANGE | ECO ADAPTER | 1/2" X 3/8" REDUCER BUSHING | REMOTE ROD ADAPTER | | | | |
| VR8300A4516 | VR8300A4508 | Standard | 3/4" x 3/4" | 3.5 in wc (0.87 kPa) | 0 to 175 °F (-18 to +79 °C) | None | Two | One | None | None | None | None | VR8300A4003, VR8300A4011, VR8300A4037, VR8300A4045, VR8300A4516, VR8300A4557, VR8300A4564 | 36C01-405 | 720-406 (7200ER) | |
| | VR8300A4516 | Standard | 3/4" x 3/4" | 3.5 in wc (0.87 kPa) | 0 to 175 °F (-18 to +79 °C) | One | Two | One | None | One | None | None | | | 700-400 | |
| | VR8300A3500 | Standard | 1/2" x 3/4" | 3.5 in wc (0.87 kPa) | 0 to 175 °F (-18 to +79 °C) | None | One | One | None | None | None | None | VR8300A3104, VR8300A3120, VR8300A3153, VR8300A3161, VR8300A3203, VR8300A3500, VR8300A3559, VR8300A3567, VR8300A3575 | 36C03-300, 36C03-400, 36C03-433, 36C03-258 | 720-404 (7200ER) | |
| VR8245M2530 | VR8204A2076 | Standard | 1/2" x 1/2" | 3.5 in wc (0.87 kPa) | 0 to 175 °F (-18 to +79 °C) | None | None | One | One | None | One | None | VR8204A1201, VR8204A1219, VR8204A2175, VR8204A2803 | | | |
| | VR8204M1091 | Standard | 1/2" x 1/2" | 3.5 in wc (0.87 kPa) | -40 to 175 °F (-40 to +79 °C) | None | None | One | One | None | One | None | VR8204M1075 | 36E01-204, 36E01-205, 36E01-206, 36E01-305, 36E93-304 | 722-079 (2000IPERHC) | |
| | VR8205A2024 | Standard | 1/2" x 1/2" | 3.5 in wc (0.87 kPa) | 0 to 175 °F (-18 to +79 °C) | None | None | One | One | None | One | None | | 36G22-214 | 722-051 (2000DERHC) | |
| | VR8245M2530 | Standard | 1/2" x 1/2" | 3.5 in wc (0.87 kPa) | -40 to 175 °F (-40 to +79 °C) | None | None | One | None | None | One | None | VR8205M1106, VR8205M2310, VR8205M2443, VR8205M2450, VR8205M2476 | 36E36-304, 36E22-214 | 720-079 (7200IPER), 720-080 (7200IPER-LP) | |
| VR8345H4555 | VR8205H1003 | Slow | 1/2" x 1/2" | 3.5 in wc (0.87 kPa) | 0 to 175 °F (-18 to +79 °C) | None | None | None | None | None | None | None | VR8305H4013, VR8305H4039 | | | |
| | VR8304H4503 | Slow | 3/4" x 3/4" | 3.5 in wc (0.87 kPa) | 0 to 175 °F (-18 to +79 °C) | None | None | One | None | None | None | None | VR8204H1006 | 36E93-304 | 720-070 (7200IPER-S7C), 720-071 (7200IPER-S7C), 720-072 (7200IPER-S7C), 720-073 (7200IPERLP-S7C) | |
| | VR8345H4555 | Slow | 3/4" x 3/4" | 3.5 in wc (0.87 kPa) | -40 to 175 °F (-40 to +79 °C) | None | Two | One | None | None | None | None | | 36E98-304, 36E24-214, 36E52-214 | 700-052 | |
| VR8345M4302 | VR8304M3509 | Standard | 1/2" x 3/4" | 3.5 in wc (0.87 kPa) | -40 to 175 °F (-40 to +79 °C) | None | One | One | None | None | None | None | VR8304M4002 | | | |
| | VR8304M4507 | Standard | 3/4" x 3/4" | 3.5 in wc (0.87 kPa) | -40 to 175 °F (-40 to +79 °C) | None | Two | One | None | None | None | None | | | | |
| | VR8305M3506 | Standard | 1/2" x 3/4" | 3.5 in wc (0.87 kPa) | -40 to 175 °F (-40 to +79 °C) | None | One | One | One | None | None | None | VR8305M4066, VR8305M4165, VR8305M4231 | 36E36-304, 36G22-214, 36C68-423, 36C74-413 | 720-051 (7200DER) | |
| | VR8345M4302 | Standard | 3/4" x 3/4" | 3.5 in wc (0.87 kPa) | -40 to 175 °F (-40 to +79 °C) | None | Two | One | None | None | None | None | | 36C68-423 | | |
| VR8345Q4563 | VR8205Q2555 | 2-Stage | 1/2" x 1/2" | 1.7 in. wc Low Fire; 3.5 in. wc High Fire | -40 to 175 °F (-40 to +79 °C) | None | None | One | None | None | One | None | VR8205Q2662, VR8205Q2746, VR8205Q2787, VR8205Q2381 | 36E54-214 | | |
| | VR8304Q4511 | 2-Stage | 3/4" x 3/4" | 1.7 in. wc Low Fire; 3.5 in. wc High Fire | -40 to 175 °F (-40 to +79 °C) | None | Two | One | None | None | None | None | | 36C76-406, 36C76-420, 36C76-463 | | |
| | VR8305Q4500 | 2-Stage | 3/4" x 3/4" | 1.7 in. wc Low Fire; 3.5 in. wc High Fire | -40 to 175 °F (-40 to +79 °C) | None | One | One | None | None | None | None | VR8305Q4146 | 36D13-208, 36D13-405, 36G54-214 | | |
| | VR8345Q4563 | 2-Stage | 3/4" x 3/4" | 1.7 in. wc Low Fire; 3.5 in. wc High Fire | -40 to 175 °F (-40 to +79 °C) | None | Two | One | None | None | None | None | | 36E96-314 | 720-082 (7200IPER2-4) | |
| VR8200A2744 | VR8200A2124 | Standard | 1/2" x 1/2" | 3.5 in wc (0.87 kPa) | 0 to 175 °F (-18 to +79 °C) | One | None | One | One | None | One | None | VR8200A2116, VR8200A2264 | | 720-400 (7200ER), 720-402 (7200ER) | |
| | VR8200A2132 | Standard | 1/2" x 1/2" | 3.5 in wc (0.87 kPa) | 0 to 175 °F (-18 to +79 °C) | None | None | One | One | None | One | None | | | 720-400 (7200ER), 720-402 (7200ER) | |
| | VR8200A2744 | Standard | 1/2" x 1/2" | 3.5 in wc (0.87 kPa) | 0 to 175 °F (-18 to +79 °C) | None | None | One | One + One Elbow | None | One | None | | | | |
| VS820A1088 | VS820A1054 | Standard | 3/4" x 3/4" | 3.5 in wc (0.87 kPa) | 32 to 175 °F (0 to 79 °C) | None | Two | None | None | None | One | None | VS820A1005, VS820A1013, VS820A1047, VS820A1278, VS820A5204, VS820A1922 | 36C03U-300, 36C03U-333, 36C03U-400, 36C03U-433 | | |
| | VS820A1336 | Standard | 3/4" x 3/4" | 10.0 in. wc (2.49 kPa) | 32 to 175 °F (0 to 79 °C) | None | Two | None | None | None | One | None | VS820A1211, VS820A1740, VS820A1120, VS820A1898, VS820A1872, VS820A1906 | | | |
| | VS820A1088 | Standard | 3/4" x 3/4" | 3.5 in wc (0.87 kPa) | 32 to 175 °F (0 to 79 °C) | None | Two | One | None | None | One | Yes | VS820A1807, VS820A2003, VS820A1815, VS820A1039, VS820A2011 | | | |

Universal Ignition Module Selection/Cross-Reference Guide



| APPLICATIONS | | | TIMINGS | | | | FEATURES AND FUNCTIONS | | | | | CROSS-REFERENCE | | | | |
|----------------|--------------------------------|--------------|----------------------------|-------------------------------------|-----------------------------------|---------------------------------|--------------------------------|-------------|-----------------|------------------------------------|--|-------------------------|--|--|--|---|
| PRODUCT NUMBER | IGNITION SYSTEM | FLAME SENSER | IGNITION SEQUENCE (NOTE 1) | IGNITION TRIALS TO LOCKOUT (NOTE 1) | IGNITION TRIAL TIME (NOTE 1) | BETWEEN TRIAL TIME (NOTE 5) | FLAME FAILURE RESPONSE TIME | TYPE OF GAS | IGNITION SOURCE | PREPURGE | TYPICAL IGNITION HARDWARE | INCLUDES | RESIDEO | WHITE-RODGERS | ROBERTSHAW | JOHNSON CONTROLS |
| S8910U1000 | Line volt hot surface ignition | 1 or 2 Rods | P | 1 or 3 | 4 or 7 sec. | (2) 96 sec. - 3 trial mode only | 1.5 sec. | Nat or LP | Switched Mains | 32 sec. | Norton 201, Norton 271, Hot surface elements, Q354 flame rod | | S89C1004, S89C1007, S89C1012, S89C1046, S89C1087, S89C1103, S89D1002, S89G1005, S89G1011, S89G1013, S89G1021, S89G1029, S89G1047, S89H1003, S89H1011, S89H1029, S89J1008, S89OD1006, S89OG1003, S89OG1037, S89OH1002, S89OH1010 | 50E47 1-79, 101-179, 201-279, 301-379, 5047F 1-79, 101-179, 201-279, 301-379 | HS780-17NL, 104A, 306A, 308A, HS780-17NR 104A, 306A, 308A, HS780-34NL 108A, 304A, 306A, 308A, 312A, HS780-34NR 104A, 306A, 308A, 312A, HS780-34PL 308A | |
| S8610U3009 | Intermittent Pilot | 1 or 2 Rods | C | C | 15 sec. or 90 sec. field selected | 2.0 sec. max | 0.8 sec. @1.0 mA flame current | Nat or LP | Internal | 0 sec. or 30 sec. field selectable | Q345, Q3451, Q3452 | Integral damper control | S8600A1001, S8600B1009, S8600C1015, S8600F1000, S8600F1034, S8600F1042, S8600H1006, S8600H1022, S8600H1048, S8600H1071, S8600H1089, S8600H1097, S8600M1013, S8600M1021, S8610A1009, S8610B1007, S8610B1015, S8610C1005, S8610C1013, S8610F1008, S8610F1016, S8610F1024, S8610F1032, S8610F1032, S8610H1012, S8610H1038, S8610H1046, S8610H1053, S8610H1079, S8610M1079, S8610M1003, S8610M1029, S8620H1002, S8620H1028 | | 780-701, 710-713, 715, 735-737, SP710, SP715, SP720, SP730, SP735, SP750 Series | CSA42, 43, 44, 45, 46, 48, 49, G60, G65, G67, G770 Series |

1. Ignition Sequence
 C Continuous retry
 P The number of trials for ignition and trial time is determined by the selection tab. If a selection tab is not installed, the module will operate at four seconds trial time and one ignition trial.

SmartValve Selector/Cross-Reference Guide

| SPECIFICATIONS | | | | CROSS-REFERENCE | | | | | |
|---|---------------------------------|-------------------------|--------------------------------|---|---|---|---|---|---|
| IGNITION/APPLICATION | UNIVERSAL SERVICE PART | OPENING CHARACTERISTICS | AMBIENT TEMPERATURE RANGE | INCLUDES NATURAL TO LP CONVERSION KIT | 3/4" X 1/2" REDUCER BUSHING | EXTENSION HARNESS | OEM BRANDS | REPLACES | |
| HSI/ Water Heaters | SV9570A2518 SV9570A2526 (LP) | Standard Opening | 0 to 150 °F | No | None | No | AO Smith AO Smith | SV9570A2054, SV9570A2070, SV9570A2096, SV9570A2161 SV9570A2062, SV9570A2088, SV9570A2187, SV9570A2179 | |
| Intermittent HSI Pilot with Combustion Air Control and Limit Monitoring/Forced Air Furnance | SV9541Q2561 | 2-Stage | -40 to +175 °F (-40 to +79 °C) | Yes | None | No | ICP, Heil, Tempstar, Arcoaire, Comfortmaker, KeepRite | SV9540Q2464, SV9541Q3098 | |
| | SV9641M4510 | Standard Opening | | Yes | Two | No | ICP, Heil, Tempstar, Arcoaire, Comfortmaker, KeepRite, Mestek, SlantFin | SV9541M2094, SV9540M2229, SV9540M2260, SV9640M4116, SV9640M4124, SV9540M2278, SV9540M2245, SV9640M3126, SV9640M4132 | |
| Direct Ignition/ General Application | SV9510M2511 SV9520M2536 | Standard Opening | -40 to +175 °F (-40 to +79 °C) | Yes | None | No | Modine | SV9510M2347, SV9510M2362, SV9410M2902, SV9510M2412, SV9510M2354, SV9410M2910, SV9510M2388, SV9510M2420 SV9420M2331, SV9520M2403, SV9420M2323 | |
| | SV9510K2539 | Slow Opening | -40 to +175 °F (-40 to +79 °C) | | | | Roberts Gordon | SV9510H2228, SV9510K2133, SV9510K2158, SV9510K2141, SV9510K2166 | |
| | SV9520H8513 | Fast-Slow Opening | 0 to 175 °F (-18 to +79 °C) | | | | Armstrong, Concord, Aire Ease | SV9520H8042, SV9520H8034, SV9520H8067, SV9520H8026 | |
| Intermittent HSI Pilot/ General Application | SV9601M4571 | Standard Opening | -40 to +175 °F (-40 to +79 °C) | Yes | None | No | ICP, Heil, Tempstar, Arcoaire, Comfortmake | SV9501M2080, SV9601M4167, SV9601M3003, SV9601M4225 SV9501M2056, SV9501M2718, SV9501M2726, SV9501M2031, SV9501M2049, SV9501M2239, SV9501M2700, SV9501M2734, SV9501M2742, SV9501M2064 SV9501M8103 | |
| | SV9501M2528 | | | | | | | Fast-Fast | |
| | SV9501M8129 | Slow Opening | 0 to 175 °F (-18 to +79 °C) | | Laars, Utica, Armstrong, Concord, Aire Ease | SV9501H3415, SV9501H2417, SV9501H2409, SV9502H1706, SV9502H2704, SV9501H3423, SV9501H2425 | | | |
| | SV9502H2522 | | | | | | | | |
| | SV9602P4816 | Step Opening | -40 to +175 °F (-40 to +79 °C) | | None | Two | Yes | Burnham, ICP, Heil, Tempstar, Arcoaire, Comfortmaker, KeepRite | SV9501P2004, SV9601P4107, SV9501P2053, SV9502P2101, SV9602P4105 |
| | SV9602P4824 | | | | | | | Burnham | SV9501P2087, SV9601P4172, SV9502P2127, SV9602P4121 |
| SV9602P4832 SV9602P4840 | Burnham | | | SV9501P2020, SV9501P2046, SV9601P4149, SV9601P4164, SV9502P2119, SV9502P2135, SV9602P4113, SV9602P4139 SV9601P4115 | | | | | |

LP Conversion kit included except for SV9570 & SV9602 models.

Thermopile Selection Guide

| MODEL | ITEM | LEAD LENGTH (IN.) | CONNECTION | TRADELINE/ SUPER TRADELINE | NOTES |
|-------|-------------|-------------------|-----------------------|----------------------------|----------------------------------|
| Q313 | Q313A1022/U | 35 | Nut & Spade Terminal | Tradeline | |
| | Q313A1139/U | 35 | Clip & Spade Terminal | Super Tradeline | Push-in clip |
| | Q313A1170/U | 35 | Clip & Spade Terminal | Super Tradeline | PG9 Adapter (393948) |
| | Q313A1188/U | 35 | Nut & Spade Terminal | Super Tradeline | Push-in clip, 1/2" attaching nut |
| | Q313A1055/U | 47 | Nut & Spade Terminal | Tradeline | 1/2" attaching nut |
| | Q313A1105/B | 75 | Nut & Spade Terminal | Tradeline | 1/2" attaching nut |



Thermocouple Selection Guide

| LEAD LENGTH (IN.) | SUPER TRADELINE | TRADELINE | WHITE-RODGERS | ROBERTSHAW | HUSKY | JOHNSON CONTROLS |
|-------------------|-----------------|-------------|---------------|------------------|----------|------------------|
| 18 | Q340A1066/U | Q390A1095/U | H06E-518 | | K16BT-18 | K19AT-18 |
| 24 | Q340A1074/U | Q390A1046/U | H06E-524 | 1970-24, 1980-24 | K16BT-24 | K19AT-24 |
| 30 | Q340A1082/U | Q390A1053/U | H06E-530 | 1970-30 | K16BT-30 | K19AT-30 |
| 36 | Q340A1090/U | Q390A1061/U | H06E-536 | 1970-36, 1980-36 | K16BT-36 | K19AT-36 |
| 48 | Q340A1108/U | Q390A1103/U | H06E-548 | | K16BT-48 | K19AT-48 |



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