## 4. Model KFDB differential pressure indicating controller

### 4-1. KFDB standard type

| | Basic No. | | - | Selection | | | | | | | | | - | Option |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Model No. : KFDB | [ ] | [ ] | - | I | II | III | IV | V | VI | VII | VIII | IX | - | X |

Model No. Ex.: KFDB22 -332244A1T -M67

**Selection I II Element Type / Range**

- 11 High: 25 to 500kPa {2,500 to 50,000 mm H2O}
- 22 Med: 2.5 to 53.9kPa {250 to 5,500 mm H2O}
- 33 Low: 0.5 to 6kPa {50 to 600 mm H2O}
- 44 Lowest: 0.1 to 1.2kPa {10 to 120 mm H2O}
- 81 High Press: 25 to 500 kPa {2500 to 50,000 mm H2O}
- 82 High Press: 2.5 to 53.0kPa {250 to 5,500 mm H2O}

**Selection III to VI Cover & Diaphragm**

| | | |
|---|---|---|
| III | HP Cover Material | 1 : SF45 |
| IV | LP Cover Material | 2 : SUS316 |
| V | HP Diaph. Material | 3 : Monel |
| VI | LP Diaph. Material | 4 : Tantalum |
| | | 5 : Rigid PVC |
| | | 8 : SUS316L |

III HP Cover Material 1 : SF45, 2 : SUS316; IV LP Cover Material 3 : Monel; V HP Diaph. Material 4 : Tantalum, 5 : Rigid PVC; VI LP Diaph. Material 8 : SUS316L

**VII Air piping connect**: A Rc 1/4 internal; B 1/4 NPT internal

**VIII Pneumatic Signal *1**: 1 0.2 to 1.0kgf/cm²; 2 3 to 15psi; 3 0.2 to 1.0 bar; 4 20 to 100 kPa; 8 19.6 to 98.1kPa (equality to 0.2 to 1.0kgf / cm²); A Dual Scale main: Pa (20 to 100 kpa) sub: Kgf/cm² (0.2 to 1.0kgf/cm²); D Dual Scale main: kgf/cm² (0.2 to 1.0kgf/cm²) sub: pa (20 to 100 kpa)

**IX Mounting**: P Panel; T 2-inch Pipe

**X Option**: X No Option; K With External Sp Manual Setting knob; M With Built -in Manual Controller With Auto/Manual Switch; 5 Elevation; 6 Suppression; 7 Pressure regulator with filter; H For high accuracy

**Y -Spec**: 23 Vacuum Service *9; 29 With Steam Block *2; 66 Stainless steel Bolt *3; 138[ ] Corrosion proof/Silver coating *5; 169 With Adjustable Damper *13; 171 Rear Process Pipe Connec. *5; 182 Degreasing for Oxygen Service *6; 183 Chlorine Service *7; 186 Measuring Controller for Small -Flow *10

| Type | Control Model | Basic No. | Price |
|---|---|---|---|
| Indicating Transmitter | Non -Control | KFDB00 | 910 |
| Indicating Controller [ ] =1 Indicating Transmitting Controller [ ] = 2 (Local Type) | P+Manual Reset | KFDB[ ]1 | 906 |
| | PI | KFDB[ ]2 | 914 |
| | PID | KFDB[ ]3 | 962 |
| | PD+Manual Reset | KFDB[ ]4 | 954 |
| | PI + Batch | KFDB[ ]5 | 995 |
| | On -Off | KFDB[ ]6 | 902 |
| | Differential Gap | KFDB[ ]7 | 901 |
| | P + External Reset | KFDB[ ]8 | 911 |
| | PD+External Reset | KFDB[ ]9 | 962 |
| Indicating Controller [ ] =3 Indicating Transmitting Controller [ ] = 4 (Cascade Type) | P+Manual Reset | KFDB[ ]1 | 1,054 |
| | PI | KFDB[ ]2 | 1,037 |
| | PID | KFDB[ ]3 | 1,086 |
| | PD+Manual Reset | KFDB[ ]4 | 1,027 |
| | PI + Batch | KFDB[ ]5 | 1,119 |
| | On -Off | KFDB[ ]6 | 1,026 |
| | Differential Gap | KFDB[ ]7 | 1,027 |
| | P + External Reset | KFDB[ ]8 | 1,037 |
| | PD+External Reset | KFDB[ ]9 | 1,086 |

**Selection I II and III to VI (Model No. / Price)**

| Type / Range | 11 (0) | 22 (0) | 33 (0) | 44 (0) | 81 (0) | 82 (0) | 1122 (0) | 1122 (39) | 1122 (58) | 1122 (97) | 1188 (8) | 1188 (46) | 1188 (102) | 2222 (20) | 2222 (72) | 2222 (102) | 2233 (90) | 2233 (166) | 2233 (179) | 2244 (229) | 2244 (339) | 2244 (351) | 2288 (27) | 2288 (77) | 2288 (141) | 3333 (281) | 3333 (326) | 5533 (102) | 5533 (154) | 5544 (224) | 5544 (306) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Indicating Transmitter – 11 | ✓ | | | | | | ✓ | | | | ✓ | | | ✓ | | | ✓ | | | ✓ | | | ✓ | | | ✓ | | ✓ | | ✓ | |
| Indicating Transmitter – 22 | | ✓ | | | | | ✓ | | | | ✓ | | | ✓ | | | ✓ | | | ✓ | | | ✓ | | | ✓ | | ✓ | | ✓ | |
| Indicating Transmitter – 33 | | | ✓ | | | | | ✓ | | | | ✓ | | | ✓ | | | ✓ | | | ✓ | | | ✓ | | | ✓ | | ✓ | | ✓ |
| Indicating Transmitter – 44 | | | | ✓ | | | | | ✓ | | | | | | | ✓ | | | | | | | | | | | | | | | |
| Indicating Transmitter – 81 | | | | | ✓ | | | | | ✓ | | | ✓ | | | ✓ | | | ✓ | | | ✓ | | | ✓ | | | | | | |
| Indicating Transmitter – 82 | | | | | | ✓ | | | | ✓ | | | ✓ | | | ✓ | | | ✓ | | | ✓ | | | ✓ | | | | | | |
| Local Type – 11 | ✓ | | | | | | ✓ | | | | ✓ | | | ✓ | | | ✓ | | | ✓ | | | ✓ | | | ✓ | | ✓ | | ✓ | |
| Local Type – 22 | | ✓ | | | | | ✓ | | | | ✓ | | | ✓ | | | ✓ | | | ✓ | | | ✓ | | | ✓ | | ✓ | | ✓ | |
| Local Type – 33 | | | ✓ | | | | | ✓ | | | | ✓ | | | ✓ | | | ✓ | | | ✓ | | | ✓ | | | ✓ | | ✓ | | ✓ |
| Local Type – 44 | | | | ✓ | | | | | ✓ | | | | | | | ✓ | | | | | | | | | | | | | | | |
| Local Type – 81 | | | | | ✓ | | | | | ✓ | | | ✓ | | | ✓ | | | ✓ | | | ✓ | | | ✓ | | | | | | |
| Local Type – 82 | | | | | | ✓ | | | | ✓ | | | ✓ | | | ✓ | | | ✓ | | | ✓ | | | ✓ | | | | | | |
| Cascade Type – 11 | ✓ | | | | | | ✓ | | | | ✓ | | | ✓ | | | ✓ | | | ✓ | | | ✓ | | | ✓ | | ✓ | | ✓ | |
| Cascade Type – 22 | | ✓ | | | | | ✓ | | | | ✓ | | | ✓ | | | ✓ | | | ✓ | | | ✓ | | | ✓ | | ✓ | | ✓ | |
| Cascade Type – 33 | | | ✓ | | | | | ✓ | | | | ✓ | | | ✓ | | | ✓ | | | ✓ | | | ✓ | | | ✓ | | ✓ | | ✓ |
| Cascade Type – 44 | | | | ✓ | | | | | ✓ | | | | | | | ✓ | | | | | | | | | | | | | | | |
| Cascade Type – 81 | | | | | ✓ | | | | | ✓ | | | ✓ | | | ✓ | | | ✓ | | | ✓ | | | ✓ | | | | | | |
| Cascade Type – 82 | | | | | | ✓ | | | | ✓ | | | ✓ | | | ✓ | | | ✓ | | | ✓ | | | ✓ | | | | | | |

**Selection VII, VIII, IX and X Option (Model No. / Price)**

| Type / Range / Mounting | VII A (0) / B (0) | VIII 1 (0) / 2 (0) | VIII 3 (20) | VIII 4 (0) | VIII 8 (0) | VIII A / D (20) | IX P (0) | IX T (0) | X (0) | K (8) | M (67) | 5 (17) | 6 (17) | 7 (31) | H (5) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Indicating Transmitter – 11 (P) | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | | ✓ | | | ✓ | ✓ | | ✓ |
| Indicating Transmitter – 11 (T) | | | | | | | | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ |
| Indicating Transmitter – 22 (P) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | | ✓ | ✓ | | |
| Indicating Transmitter – 22 (T) | | | | | | | | ✓ | ✓ | | | ✓ | ✓ | ✓ | |
| Indicating Transmitter – 33 (P) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | | ✓ | ✓ | | |
| Indicating Transmitter – 33 (T) | | | | | | | | ✓ | ✓ | | | ✓ | ✓ | ✓ | |
| Indicating Transmitter – 44 (P) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | | ✓ | ✓ | | |
| Indicating Transmitter – 44 (T) | | | | | | | | ✓ | ✓ | | | ✓ | ✓ | ✓ | |
| Indicating Transmitter – 81 (P) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | | ✓ | ✓ | | |
| Indicating Transmitter – 81 (T) | | | | | | | | ✓ | ✓ | | | ✓ | ✓ | ✓ | |
| Indicating Transmitter – 82 (P) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | | ✓ | ✓ | | |
| Indicating Transmitter – 82 (T) | | | | | | | | ✓ | ✓ | | | ✓ | ✓ | ✓ | |
| Local Type – 11 (P) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ |
| Local Type – 11 (T) | | | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Local Type – 22 (P) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| Local Type – 22 (T) | | | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| Local Type – 33 (P) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| Local Type – 33 (T) | | | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| Local Type – 44 (P) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| Local Type – 44 (T) | | | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| Local Type – 81 (P) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| Local Type – 81 (T) | | | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| Local Type – 82 (P) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| Local Type – 82 (T) | | | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| Cascade Type – 11 (P) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ | ✓ | ✓ | | ✓ |
| Cascade Type – 11 (T) | | | | | | | | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ |
| Cascade Type – 22 (P) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ | ✓ | ✓ | | |
| Cascade Type – 22 (T) | | | | | | | | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | |
| Cascade Type – 33 (P) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ | ✓ | ✓ | | |
| Cascade Type – 33 (T) | | | | | | | | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | |
| Cascade Type – 44 (P) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ | ✓ | ✓ | | |
| Cascade Type – 44 (T) | | | | | | | | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | |
| Cascade Type – 81 (P) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ | ✓ | ✓ | | |
| Cascade Type – 81 (T) | | | | | | | | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | |
| Cascade Type – 82 (P) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ | ✓ | ✓ | | |
| Cascade Type – 82 (T) | | | | | | | | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | |

**Y -Spec (Model No. / Price)**

| Type / Range | 23 (27) | 29 (33) | 66 (16) | 66 (27) | 138[ ] (*4) | 169 (8) | 171 (14) | 182 (46) | 182 (58) | 183 (46) | 183 (58) | 186 (46) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Indicating Transmitter – 11 | ✓ | | ✓ | | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ |
| Indicating Transmitter – 22 | ✓ | | ✓ | | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ |
| Indicating Transmitter – 33 | ✓ | | ✓ | | ✓ | ✓ | | | ✓ | | ✓ | ✓ |
| Indicating Transmitter – 44 | | | | ✓ | ✓ | | | | ✓ | | | ✓ |
| Indicating Transmitter – 81 | ✓ | | | ✓ | ✓ | ✓ | | ✓ | | ✓ | | ✓ |
| Indicating Transmitter – 82 | ✓ | | | ✓ | ✓ | ✓ | | ✓ | | ✓ | | ✓ |
| Local Type – 11 | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ |
| Local Type – 22 | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ |
| Local Type – 33 | ✓ | ✓ | ✓ | | ✓ | ✓ | | | ✓ | | ✓ | ✓ |
| Local Type – 44 | | | | ✓ | ✓ | | | | ✓ | | | ✓ |
| Local Type – 81 | ✓ | | | ✓ | ✓ | ✓ | | ✓ | | ✓ | | ✓ |
| Local Type – 82 | ✓ | | | ✓ | ✓ | ✓ | | ✓ | | ✓ | | ✓ |
| Cascade Type – 11 | ✓ | | ✓ | | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ |
| Cascade Type – 22 | ✓ | | ✓ | | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ |
| Cascade Type – 33 | ✓ | | ✓ | | ✓ | ✓ | | | ✓ | | ✓ | ✓ |
| Cascade Type – 44 | | | | ✓ | ✓ | | | | ✓ | | | ✓ |
| Cascade Type – 81 | ✓ | | | ✓ | ✓ | ✓ | | ✓ | | ✓ | | ✓ |
| Cascade Type – 82 | ✓ | | | ✓ | ✓ | ✓ | | ✓ | | ✓ | | ✓ |

Note * 1. Contact YAMATAKE when engineering units are different between input range pressure and output signal pressure.

* 2 Cannot be featured in the case of Monel and PVC cover for Selection III and IV ; I.e. KFDB[ ][ ] -3333,5533,5544
* 3 Maximum working pressures for stainless steel bolt are as shown in the table below.

| Model No. | Cover Material (Selection III, IV) | | | |
|---|---|---|---|---|
| | SF45 | SUS316 | Monel | PVC |
| KFDB[ ][ ] -11,22 | 60kgf / cm² | 60kgf / cm² | 60kgf / cm² | 15kgf / cm² |
| KFDB[ ][ ] -33 | 25kgf / cm² | 25kgf / cm² | 25kgf / cm² | 10kgf / cm² |
| KFDB[ ][ ] -81,82 | 230kgf / cm² | 230kgf / cm² | - | - |

* 4 Refer to Common Data on KF Series.
* 13 Time constant (continuously adjustable ) is as follows.
  - (1) KFDB[ ][ ] -11,22,81, 82 : 0.5 sec. or less min., 30 sec. or more max.
  - (2) KFDB[ ][ ] -33 : 1.5 sec. or less min., or more max.
  - (3) KFDB[ ][ ] -44 : With adjustable damper as standard. 2 sec. Or less min., 25 sec. Or more max.
* 7 Available for diaphragm material only in Tantalum Fill liquid : Fluoric oil Wetted part : Degreased Working temperature (fluid, ambient) : -10 to 80℃ I.e., KFDB[ ][ ] -[ ][ ]2244, [ ][ ] -5544
* 9 Vacuum Service is not available with Y182, Y183 and Y169.
*10 Applicable Model : KFDB[ ][ ] -22,38,82

## 4. Model KFDB differential pressure indicating controller

### 4-2. KFDB flange type, remote seal diaphragm type

Model No. KFDB [Basic No.: □□] - [Selection: I | II | III | IV | V | VI | VII | VIII | IX | X | XI | XII] - [Option: XIII]

Model No. Ex.

KFDB22 -611122100A1F -M7

KFDB42 -721122503A1T -M7

III to VI Cover & Diaphragm (Standard Flange Type): III HP side Flange material; IV LP side Cover material; V HP side Diaph. material; VI LP side Diaph. material — 1 : SF45, 2 : SUS316, 3 : Monel Lining, 4 : Tantalum, 5 : Rigid PVC, 7 : SUS304, 8 : SUS316L

III to VI Cover & Diaphragm (Standard Flange Type / Extended Flange): III HP side Flange material; IV LP side Cover material; V HP side Diaph. material; VI LP side Diaph. material — 1 : SF45, 2 : SUS316, 3 : Monel, 4 : Tantalum, 5 : Rigid PVC, 7 : SUS304, 8 : SUS316L

**I II Element**

| Type | Control Model | Basic No. | Price | 61 Flange High Range 25 to 500kPa {2,500 to 50,000mmH2O} | 62 Flange Middle Range 2.5 to 53.0kPa {250 to 5,500mmH2O} | 71 Remote Seal Diaphragm High Range 25 to 500kPa {2,500 to 50,000mmH2O} | 72 Remote Seal Diaphragm Middle Range 2.5 to 53.9kPa {250 to 5,500mmH2O} |
|---|---|---|---|---|---|---|---|
| | | | | 0 | 0 | 0 | 0 |
| Indicating Transmitter | Non -Control | KFDB 00 | 892 | ✔ | ✔ | | |
| | | | | | | ✔ | ✔ |
| Indicating Controller [ ] =1 Indicating Transmitting Controller [ ] = 2 (Local Type) | P+Manual Reset | KFDB[ ]1 | 897 | ✔ | ✔ | | |
| | PI | KFDB[ ]2 | 905 | | | | |
| | PID | KFDB[ ]3 | 952 | | | | |
| | PD+Manual Reset | KFDB[ ]4 | 945 | | | | |
| | PI + Batch | KFDB[ ]5 | 987 | | | | |
| | On -Off | KFDB[ ]6 | 898 | | | ✔ | ✔ |
| | Differential Gap | KFDB[ ]7 | 892 | | | | |
| | P + External Reset | KFDB[ ]8 | 905 | | | | |
| | PD+External Reset | KFDB[ ]9 | 952 | | | | |
| Indicating Controller [ ] =3 Indicating Transmitting Controller [ ] = 4 (Cascade Type) | P+Manual Reset | KFDB[ ]1 | 1,005 | ✔ | ✔ | | |
| | PI | KFDB[ ]2 | 1,013 | | | | |
| | PID | KFDB[ ]3 | 1,058 | | | | |
| | PD + Manual Reset | KFDB[ ]4 | 1,056 | | | | |
| | PI + Batch | KFDB[ ]5 | 1,091 | | | | |
| | On -Off | KFDB[ ]6 | 1,009 | | | ✔ | ✔ |
| | Differential Gap | KFDB[ ]7 | 1,002 | | | | |
| | P + External Reset | KFDB[ ]8 | 1,013 | | | | |
| | PD + External Reset | KFDB[ ]9 | 1,058 | | | | |

**III to VI Cover & Diaphragm — Standard Flange Type (Model No. / Price)**

| Row | 1122 | 1122 | 1133 | 1144 | 1188 | 1188 | 1222 | 7222 | 7233 | 7244 | 7288 | 7333 | 7533 | 7544 | 7722 | 7733 | 7744 | 7788 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Price | 0 | 262 | 331 | 466 | 0 | 255 | 8 | 46 | 173 | 242 | 46 | 229 | 160 | 224 | 306 | 439 | 593 | 312 |
| Non -Control (1) | ✔ | | | | ✔ | | ✔ | | | | | | | | | | | |
| Non -Control (2) | | | | | | | | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | | | | |
| Non -Control (3) | | | | | | | | | | | | | | | | | | |
| Non -Control (4) | | | | | | | | | | | | | | | | | | |
| Non -Control (5) | | ✔ | ✔ | ✔ | | ✔ | | | | | | | | | | | | |
| Non -Control (6) | | | | | | | | | | | | | | | ✔ | ✔ | ✔ | ✔ |
| Non -Control (7) | | | | | | | | | | | | | | | | | | |
| Non -Control (8) | | | | | | | | | | | | | | | | | | |
| Local: P+Manual Reset | ✔ | | | | ✔ | | ✔ | | | | | | | | | | | |
| Local: PI | | | | | | | | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | | | | |
| Local: PID | | | | | | | | | | | | | | | | | | |
| Local: PD+Manual Reset | | | | | | | | | | | | | | | | | | |
| Local: PI + Batch | | | | | | | | | | | | | | | | | | |
| Local: On -Off | | ✔ | ✔ | ✔ | | ✔ | | | | | | | | | | | | |
| Local: Differential Gap | | | | | | | | | | | | | | | ✔ | ✔ | ✔ | ✔ |
| Local: P + External Reset | | | | | | | | | | | | | | | | | | |
| Local: PD+External Reset | | | | | | | | | | | | | | | | | | |
| Cascade: P+Manual Reset | ✔ | | | | ✔ | | ✔ | | | | | | | | | | | |
| Cascade: PI | | | | | | | | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | | | | |
| Cascade: PID | | | | | | | | | | | | | | | | | | |
| Cascade: PD + Manual Reset | | | | | | | | | | | | | | | | | | |
| Cascade: PI + Batch | | | | | | | | | | | | | | | | | | |
| Cascade: On -Off | | ✔ | ✔ | ✔ | | ✔ | | | | | | | | | | | | |
| Cascade: Differential Gap | | | | | | | | | | | | | | | ✔ | ✔ | ✔ | ✔ |
| Cascade: P + External Reset | | | | | | | | | | | | | | | | | | |
| Cascade: PD + External Reset | | | | | | | | | | | | | | | | | | |

**III to VI Cover & Diaphragm — Extended Flange (Model No. / Price)**

| Row | 1122 | 1122 | 1188 | 1188 | 1222 | 7222 | 7288 | 7722 | 7788 |
|---|---|---|---|---|---|---|---|---|---|
| Price | 65 | 395 | 65 | 402 | 97 | 135 | 135 | 439 | 439 |
| Non -Control (1) | | | | | | | | | |
| Non -Control (2) | | | | | | | | | |
| Non -Control (3) | ✔ | | ✔ | | ✔ | | | | |
| Non -Control (4) | | | | | | ✔ | ✔ | | |
| Non -Control (5) | | | | | | | | | |
| Non -Control (6) | | | | | | | | | |
| Non -Control (7) | | ✔ | | ✔ | | | | | |
| Non -Control (8) | | | | | | | | ✔ | ✔ |
| Local: P+Manual Reset | | | | | | | | | |
| Local: PI | | | | | | | | | |
| Local: PID | | | | | | | | | |
| Local: PD+Manual Reset | ✔ | | ✔ | | ✔ | | | | |
| Local: PI + Batch | | | | | | ✔ | ✔ | | |
| Local: On -Off | | | | | | | | | |
| Local: Differential Gap | | | | | | | | | |
| Local: P + External Reset | | ✔ | | ✔ | | | | | |
| Local: PD+External Reset | | | | | | | | ✔ | ✔ |
| Cascade: P+Manual Reset | | | | | | | | | |
| Cascade: PI | | | | | | | | | |
| Cascade: PID | | | | | | | | | |
| Cascade: PD + Manual Reset | ✔ | | ✔ | | ✔ | | | | |
| Cascade: PI + Batch | | | | | | ✔ | ✔ | | |
| Cascade: On -Off | | | | | | | | | |
| Cascade: Differential Gap | | | | | | | | | |
| Cascade: P + External Reset | | ✔ | | ✔ | | | | | |
| Cascade: PD + External Reset | | | | | | | | ✔ | ✔ |

**VII Flange Rating** (Standard Flange: 1 = 80mm JIS 10K (RF), 2 = 80mm JIS 30K (RF), 3 = 3in. ANSI 150 (RF), 4 = 3in. ANSI 300 (RF); Extended Flange: 5 = 100mm JIS 10K (RF), 6 = 100mm JIS 30K (RF), 7 = 4in. ANSI 150 (RF), 8 = 4in. ANSI 300 (RF))

| Row | 1 | 2 | 2 | 2 | 3 | 4 | 4 | 4 | 5 | 6 | 6 | 6 | 7 | 8 | 8 | 8 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Price | 0 | 20 | 33 | 46 | 0 | 20 | 33 | 46 | 0 | 20 | 39 | 52 | 0 | 20 | 39 | 52 |
| Non -Control (1) | ✔ | | ✔ | | ✔ | | ✔ | | | | | | | | | |
| Non -Control (2) | ✔ | | | ✔ | ✔ | | | ✔ | | | | | | | | |
| Non -Control (3) | | | | | | | | | ✔ | | ✔ | | ✔ | | ✔ | |
| Non -Control (4) | | | | | | | | | ✔ | | | ✔ | ✔ | | | ✔ |
| Non -Control (5) | ✔ | ✔ | | | ✔ | ✔ | | | | | | | | | | |
| Non -Control (6) | ✔ | | ✔ | | ✔ | | ✔ | | | | | | | | | |
| Non -Control (7) | | | | | | | | | ✔ | ✔ | | | ✔ | ✔ | | |
| Non -Control (8) | | | | | | | | | ✔ | | ✔ | | ✔ | | ✔ | |
| Local: P+Manual Reset | ✔ | | ✔ | | ✔ | | ✔ | | | | | | | | | |
| Local: PI | ✔ | | | ✔ | ✔ | | | ✔ | | | | | | | | |
| Local: PID | | | | | | | | | | | | | | | | |
| Local: PD+Manual Reset | | | | | | | | | ✔ | | ✔ | | ✔ | | ✔ | |
| Local: PI + Batch | | | | | | | | | ✔ | | | ✔ | ✔ | | | ✔ |
| Local: On -Off | ✔ | ✔ | | | ✔ | ✔ | | | | | | | | | | |
| Local: Differential Gap | ✔ | | ✔ | | ✔ | | ✔ | | | | | | | | | |
| Local: P + External Reset | | | | | | | | | ✔ | ✔ | | | ✔ | ✔ | | |
| Local: PD+External Reset | | | | | | | | | ✔ | | ✔ | | ✔ | | ✔ | |
| Cascade: P+Manual Reset | ✔ | | ✔ | | ✔ | | ✔ | | | | | | | | | |
| Cascade: PI | ✔ | | | ✔ | ✔ | | | ✔ | | | | | | | | |
| Cascade: PID | | | | | | | | | | | | | | | | |
| Cascade: PD + Manual Reset | | | | | | | | | ✔ | | ✔ | | ✔ | | ✔ | |
| Cascade: PI + Batch | | | | | | | | | ✔ | | | ✔ | ✔ | | | ✔ |
| Cascade: On -Off | ✔ | ✔ | | | ✔ | ✔ | | | | | | | | | | |
| Cascade: Differential Gap | ✔ | | ✔ | | ✔ | | ✔ | | | | | | | | | |
| Cascade: P + External Reset | | | | | | | | | ✔ | ✔ | | | ✔ | ✔ | | |
| Cascade: PD + External Reset | | | | | | | | | ✔ | | ✔ | | ✔ | | ✔ | |

**VIII Capillary Length / IX Extended Flange Length / X Air Piping connection / XI Pneumatic Signal *1 / XII Mounting**

| Row | 02 (2m) | 03 (3m) | 05 (5m) | 00 (None) | 10 (100mm) | 15 (150mm) | A (Rc 1 / 4 internal) / B (1 / 4 NPT internal) | 1 (0.2 to 1.0kgf/cm2) / 2 (3 to 15psi.) | 3 (0.2 to 1.0 bar) | 4 (20 to 100 kPa) / 8 (19.6 to 98.1kPa (equality to 0.2 to 1.0kgf / cm2 )) | A (Dual Scale main: Pa (20 to 100 kpa) sub: Kgf/cm2(0.2 to 1.0 kgf/cm2)) / D (Dual Scale main: $kgf/cm^2$ (0.2 to $1.0kgf/cm^2$) sub: pa (20 to 100 kpa)) | F (Flange) | T (2 -inch Pipe) | P (Panel) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Price | 0 | 0 | 27 | 0 | 0 | 14 | 0 / 0 | 0 / 0 | 20 | 0 / 0 | 20 | 0 | 0 | 0 |
| Non -Control (1)-(2) | | | | ✔ | | | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | | |
| Non -Control (3)-(4) | | | | | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | | |
| Non -Control (5) | ✔ | ✔ | ✔ | ✔ | | | ✔ | ✔ | ✔ | ✔ | ✔ | | ✔ | |
| Non -Control (6) | | | | | | | | | | | | | | ✔ |
| Non -Control (7) | ✔ | ✔ | ✔ | | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | | ✔ | |
| Non -Control (8) | | | | | | | | | | | | | | ✔ |
| Local: P+Manual Reset – PID | | | | ✔ | | | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | | |
| Local: PD+Manual Reset – PI + Batch | | | | | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | | |
| Local: On -Off | ✔ | ✔ | ✔ | ✔ | | | ✔ | ✔ | ✔ | ✔ | ✔ | | ✔ | |
| Local: Differential Gap | | | | | | | | | | | | | | ✔ |
| Local: P + External Reset | ✔ | ✔ | ✔ | | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | | ✔ | |
| Local: PD+External Reset | | | | | | | | | | | | | | ✔ |
| Cascade: P+Manual Reset – PID | | | | ✔ | | | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | | |
| Cascade: PD + Manual Reset – PI + Batch | | | | | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | | |
| Cascade: On -Off | ✔ | ✔ | ✔ | ✔ | | | ✔ | ✔ | ✔ | ✔ | ✔ | | ✔ | |
| Cascade: Differential Gap | | | | | | | | | | | | | | ✔ |
| Cascade: P + External Reset | ✔ | ✔ | ✔ | | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | | ✔ | |
| Cascade: PD + External Reset | | | | | | | | | | | | | | ✔ |

**XIII Option / Y -Spec**

| Row | X (No Option) | K (Manual setting Knob With External SP) | M (With Built -in Manual Controller With Auto/Manual Switch) | 5 (Elevation) | 6 (Suppression) | 7 (Pressure regulator with filter) | 23 (Vacuum Service * 7) | 62 (High Temp. Service * 2) | 62+ Y23 (High Temp. -Vacuum Service * 7) | 66 (Stainless steel Bolt * 3) | 138[ ] (Corrosion -resistant Silver coating) | 169 (Adjustable Damper *10) | 182 (Degreasing for Oxygen Service * 5) | 183 (Chlorine Service * 6) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Price | 0 | 8 | 67 | 17 | 17 | 31 | 27 | 39 | 39 | 16 | * 4 | 8 | 77 | 77 |
| Non -Control (1) | ✔ | | | ✔ | ✔ | ✔ | ✔ | | | ✔ | ✔ | ✔ | ✔ | ✔ |
| Non -Control (2) | ✔ | | | ✔ | ✔ | ✔ | | | | | | | | |
| Non -Control (3) | ✔ | | | ✔ | ✔ | ✔ | ✔ | | | ✔ | ✔ | ✔ | ✔ | |
| Non -Control (4) | ✔ | | | ✔ | ✔ | ✔ | | | | | | | | |
| Non -Control (5) | ✔ | | | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | | ✔ | ✔ | ✔ | ✔ |
| Non -Control (6) | ✔ | | | ✔ | ✔ | | | | | | | | | |
| Non -Control (7) | ✔ | | | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | | ✔ | ✔ | ✔ | |
| Non -Control (8) | ✔ | | | ✔ | ✔ | | | | | | | | | |
| Local: P+Manual Reset | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | | | ✔ | ✔ | ✔ | ✔ | ✔ |
| Local: PI | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | | | | | | | | |
| Local: PID | | | | | | | | | | | | | | |
| Local: PD+Manual Reset | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | | | ✔ | ✔ | ✔ | ✔ | |
| Local: PI + Batch | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | | | | | | | | |
| Local: On -Off | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | | ✔ | ✔ | ✔ | ✔ |
| Local: Differential Gap | ✔ | ✔ | ✔ | ✔ | ✔ | | | | | | | | | |
| Local: P + External Reset | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | | ✔ | ✔ | ✔ | |
| Local: PD+External Reset | ✔ | ✔ | ✔ | ✔ | ✔ | | | | | | | | | |
| Cascade: P+Manual Reset | ✔ | | ✔ | ✔ | ✔ | ✔ | ✔ | | | ✔ | ✔ | ✔ | ✔ | ✔ |
| Cascade: PI | ✔ | | ✔ | ✔ | ✔ | ✔ | | | | | | | | |
| Cascade: PID | | | | | | | | | | | | | | |
| Cascade: PD + Manual Reset | ✔ | | ✔ | ✔ | ✔ | ✔ | ✔ | | | ✔ | ✔ | ✔ | ✔ | |
| Cascade: PI + Batch | ✔ | | ✔ | ✔ | ✔ | ✔ | | | | | | | | |
| Cascade: On -Off | ✔ | | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | | ✔ | ✔ | ✔ | ✔ |
| Cascade: Differential Gap | ✔ | | ✔ | ✔ | ✔ | | | | | | | | | |
| Cascade: P + External Reset | ✔ | | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | | ✔ | ✔ | ✔ | |
| Cascade: PD + External Reset | ✔ | | ✔ | ✔ | ✔ | | | | | | | | | |

Note : * 1 For Signal in bar or kPa, refer to Common Data

* 2 Working temperature : Fluid : -10 to +200 deg.C, Ambient : -10 to + 80 deg.C
Fill Liquid : Special Silicone Oil

* 3 Maximum working pressures for stainless steel bolt are as shown in the table below.

| Model No. | Material (Selection VI) SF45,SUS | PVC |
|---|---|---|
| KFDB[ ][ ] -61,62 | 60 kgf / $cm^2$ | 15 kgf / $cm^2$ |

* 4 Refer to Common Data.

*5 Available for diaphragm material only in SUS316, SUS316L,
Fill Liquid : Fluoric Oil, Wetted part : Degreased Working temperature (fluid, ambient) : - 10 to 60 deg.C

* 6 Available for diaphragm material only in Tantalum.
Fill Liquid : Fluoric Oil, Wetted part : Degreased
Working temperature (fluid, ambient) : - 10 to +80 deg.C

*10 Time constant (continuously adjustable) : 0.5 sec. Or less min, 30 sec. Or more max.

* 2 Working temperature : Fluid : -10 to +200 deg.C, Ambient : -10 to + 80 deg.C
Fill Liquid : Special Silicone Oil

* 3 Maximum working pressures for stainless steel bolt are as shown in the table below.

| Model No. | Cover Material (Selection VI) SF45,SUS | PVC |
|---|---|---|
| KFDB[ ][ ] -61,62 | 60 kgf / $cm^2$ | 15 kgf / $cm^2$ |

* 4 Refer to Common Data.

*5 Available for diaphragm material only in SUS316, SUS316L,
Fill Liquid : Fluoric Oil, Wetted part : Degreased Working temperature (fluid, ambient) : - 10 to 60 deg.C

* 6 Available for diaphragm material only in Tantalum.
Fill Liquid : Fluoric Oil, Wetted part : Degreased
Working temperature (fluid, ambient) : - 10 to +80 deg.C

*10 Time constant (continuously adjustable) : 0.5 sec. Or less min, 30 sec. Or more max.

* 7 Vacuum Service is not available with Y182, Y183 and Y169.