

# COMMERCIAL HVAC COMPONENTS

Selection guide for valves, actuators and VFDs



Honeywell

# THE HVAC PERFORMANCE YOU TRUST

At Honeywell, an HVAC component is never “just a part,” because we never stop looking for ways to improve the value each one brings to your operations. Throughout the world, hundreds of utilities, thousands of industrial facilities, and more than 100 million buildings rely on Honeywell valves, actuators, and electronic field devices for long-lasting efficiency, with hassle-free installation and performance.

Our comprehensive range of components ensures you have the tools you need for any application – and this guide will help you quickly find the ones you need.

## CONTROL VALVES



### PRESSURE INDEPENDENT CONTROL VALVES

Deliver high efficiency in less time

#### VRN Threaded Pressure Independent Control Ball Valves

- Maintains flow under varying differential pressures; increases coil differential temperature which improves the efficiency of the system
- Integrated pressure control cartridge combines circuit balancing and control functions in one package, resulting in consistent temperature and comfort
- Field serviceable stem and pressure regulating cartridge allow for easy serviceability for reduced life cycle costs
- 5-year warranty

- ZONE CONTROL
- RTU/AHU
- MECH ROOM



#### VRW Flanged Pressure-Regulating Control Valves

- Combination ANSI/ASME Class 150/300 flange connections
- Positive pressure, rolling diaphragm regulator design for long service life provides flow control accuracy of  $\pm 5\%$
- 50 discrete, selectable flow rates available per valve size

- RTU/AHU
- MECH ROOM

### PRESSURE INDEPENDENT CONTROL VALVE SELECTION GUIDE

| Name | Size/Connection                         | Medium                           | Cv             | Valve Body Pattern | Actuation                                                                         | Close-off |
|------|-----------------------------------------|----------------------------------|----------------|--------------------|-----------------------------------------------------------------------------------|-----------|
| VRN  | 1/2" to 3" NPT                          | Closed loop chilled or hot water | 1 to 95 GPM    | 2-way              | Modulating, floating and two position control in both fail-safe and fail-in-place | 100 psi   |
| VRW  | 2 1/2" to 6" ANSI 150/300 wafer-flanged | Closed loop chilled or hot water | 113 to 468 GPM | 2-way              | Modulating and floating control in both fail-safe and fail-in-place               | 100 psi   |

## CONTROL BALL VALVES

Cover every application with one control valve brand



### VN Zone Valves

- Class leading specifications for temperature, close-off pressure, static pressure and leakage
- Extremely compact design with removable actuator
- 1/2 inch to 1 inch offering designed for optimum flow-rates
- Quick response actuators, available in non-fail-safe and electronic fail-safe versions
- 5-year warranty

● ZONE CONTROL



### VBN Threaded Control Ball Valves

- Characterized insert is integral to the ball, not outside the ball: results in longer service life and higher operating differential pressure capabilities
- Weather-proof enclosures available for outdoor rooftop applications
- Packless field-replaceable stem for easy service in pipe
- 5-year warranty

● ZONE CONTROL

● RTU/AHU

● MECH ROOM



### VB6 6-way Control Ball Valves

- Class-leading specifications for temperature, close-off pressure, static pressure, and leakage
- Extremely compact, side-by-side design with zero leakage close-off
- Modular configuration providing 80 combinations of Cvs in 1/2 and 3/4 inch sizes
- 5-year warranty

● ZONE CONTROL



### VBF Flanged Control Ball Valves

- Parabolic flow insert provides equal percentage flow for better control
- Weather-proof enclosures available for outdoor rooftop applications
- Globe valve layout with side B-port allows for easy retrofit

● RTU/AHU

● MECH ROOM

## CONTROL BALL VALVE SELECTION GUIDE

| Name      | Size/Connection               | Medium                           | Cv Range    | Valve Body Pattern | Actuation                                                                         | Close-off                                                  |
|-----------|-------------------------------|----------------------------------|-------------|--------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------|
| VN Series | 1/2 to 1" inch                | Closed loop chilled or hot water | 3.5 to 9    | 2-way or 3-way     | Modulating and two-position control in both fail-safe and fail-in-place           | 87psi                                                      |
| VBN       | 1/2" to 3" NPT                | Closed loop chilled or hot water | 0.33 to 266 | 2-way or 3-way     | Modulating, floating and two-position control in both fail-safe and fail-in-place | 100 to 130 psi (2-way),<br>40 to 50 psi (3-way)<br>200 psi |
| VB6       | 1/2" and 3/4" NPT             | Closed loop chilled or hot water | 0.3 to 14   | 6-way              | Modulating fail-in-place                                                          | 200 psi                                                    |
| VBF       | 4" to 6" ANSI 125/150 flanged | Closed loop chilled or hot water | 91 to 650   | 2-way or 3-way     | Modulating, floating and two-position control in both fail-safe and fail-in-place | 70 psi                                                     |



## CARTRIDGE GLOBE VALVES

High performance in a compact design

### V58 Series Cartridge Globe Valves

- Linear valve operation offers greater control, with constant load on the stem yielding decreased hysteresis
- Brass body and stainless-steel stem
- Field replaceable cartridges rebuilds valves in-pipe

● ZONE CONTROL



## GLOBE VALVES

Precise control for any application Valves

### V5011N 2-way and V5013N 3-way Threaded Globe Valves

- Excellent control
- Equal percentage flow characteristic available for water service and linear flow characteristic available for steam
- Offers best in class size, Cv range and close-off pressure
- Available with brass or stainless steel trim

● ZONE CONTROL

● RTU/AHU

● MECH ROOM



### VGF Flanged Globe Valves

- ANSI Class 125 and Class 250 flanged cast iron bodies
- Differential pressure of 175 psi, ANSI Class IV leakage on pressure-balanced models
- Stainless steel trim
- Equal percentage and linear flow characteristics to ensure precise control in a variety of applications

● RTU/AHU

● MECH ROOM

## GLOBE VALVE SELECTION GUIDE

| Name           | Size/Connection                          | Medium                                             | Cv Range     | Valve Body Pattern | Actuation                                                                         | Close-off                                |
|----------------|------------------------------------------|----------------------------------------------------|--------------|--------------------|-----------------------------------------------------------------------------------|------------------------------------------|
| V58            | 1/2" to 1 1/2" NPT or Sweat              | Closed loop chilled or hot water                   | 0.19 to 25   | 2-way or 3-way     | Modulating, floating and two-position control in both fail-safe and fail-in-place | 6.25–232 psi                             |
| V5011N, V5013N | 1/2" to 2" NPT                           | Closed loop chilled or hot water and steam (2-way) | 0.73 to 46.8 | 2-way or 3-way     | Modulating, floating and two-position control in both fail-safe and fail-in-place | up to 230 psi water, up to 100 psi steam |
| VGF            | 2 1/2" to 6" ANSI 125 or ANSI 250 flange | Closed loop chilled or hot water and steam (2-way) | 70 to 370    | 2-way or 3-way     | Modulating, floating and two-position control in both fail-safe and fail-in-place | up to 175 psi water, up to 100 psi steam |



## BUTTERFLY VALVES

Powerful performance with impressive features

### VR Series Resilient Seated Butterfly Valves

- Full Cut Disc with bubble tight 200psi close-off (150psi for 14 inch valves and larger)
- MB Series Actuators available separately for retrofit and repair
- Fail-Safe Options with NEMA4X enclosure available to 12-inch valve size, both 2-way and 3-way
- Ductile iron valve body for superior strength
- 5-Year Warranty on valves up to 12 inch size, 2-year warranty on larger sizes

MECH ROOM



### VH Series High Performance Butterfly Valves

- ANSI Class 150 High Performance valves with 285psi maximum pressure rating for high rise applications
- Can be used in saturated steam applications up to 50psi pressure
- Fail-Safe Actuation available up to 6-inch valve size in 2-Way, and 3-inch valve size in 3-Way
- 5-Year Warranty on 2-way valves up to 6 inch size, and 3-way valves up to 4-inch size, 2-Year Warranty on larger sizes

MECH ROOM

## BUTTERFLY VALVE SELECTION GUIDE

| Name | Size/Connection                                                     | Medium                                    | Cv Range     | Valve Body Pattern | Actuation                                                                                                       | Close-off             |
|------|---------------------------------------------------------------------|-------------------------------------------|--------------|--------------------|-----------------------------------------------------------------------------------------------------------------|-----------------------|
| VR   | 2"-24" (2-way) and 2"-18" (3-way)<br>ANSI 125/150 compatible lugged | Chilled, hot or condenser water           | 115 to 43116 | 2-way or 3-way     | Modulating, floating and two-position control in both fail-safe (up to 12") and fail-in-place                   | 150 to 200 psi        |
| VH   | 2"-24" (2-way) and 2"-16" (3-way)<br>ANSI 150 lugged                | Chilled, hot or condenser water and steam | 102 to 22050 | 2-way or 3-way     | Modulating, floating and two-position control in both fail-safe (up to 6" 2-way and 3" 3-way) and fail-in-place | 150 psi, 50 psi steam |

# VALVE AND DAMPER ACTUATORS



## MVN ACTUATORS

Get the job done on time and under budget

- Click-on assembly cuts installation time - no tools needed
- Position indicator shows the open or closed position of the stem or ball valve for easy commissioning
- Compact design saves space allowing installation in confined areas
- Use with control ball valves & pressure independent control ball valves up to 1-1/4 inch
- Available with optional one or three meter cables for flexible installations
- 5-year warranty



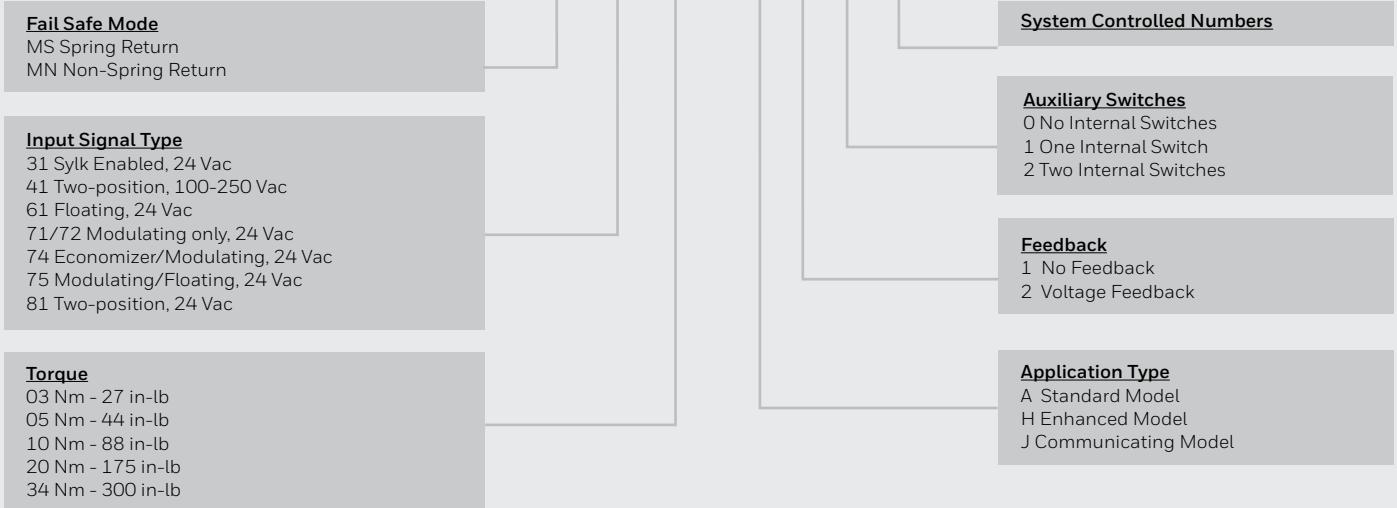
## MS AND MN ACTUATORS

Precise, reliable performance. Lasting value

- Self centering shaft adaptor reduces installation time and provides greater clamping force
- Reduce inventory and selection time with control signal selector that configures models for two position, floating or modulating applications
- Increase control and accuracy with more than 200 reposition steps on modulating models
- 5-year warranty

### MS and MN SERIES NAMING STRUCTURE

MS 75 10 A 2 2 XX



# 3G SMART VFD

Easy installation. Easy commissioning. Great energy savings.



## EASY COMMUNICATION

- **Start-Up Wizards** — SmartStart and Automatic Motor Adaptation make commissioning easy for all motor types, enter nominal information and let the drive measure motor characteristics to optimize performance.
- **Graphic Interface** — Using the graphical keypad makes navigating parameters easy. INFO key provides easy access to help information in the onboard manual. BACK and OK buttons simplify programming.
- **Embedded Communications** — Standard BACnet, Modbus, FLN and N2 allow monitoring and control of serial communications, reducing installation cost.
- **Dedicated for HVAC** — The 3G SmartVFD includes intelligent functions for pumps fans and compressors.
- **Built-in logic** — Smart logic controller and four auto-tuning PID controllers can control HVAC functions reducing the need for control tasks in the building management system.

## 3G SMART VFD NAMING STRUCTURE

HVFD3D 3 C 0100 G 1 00 C

### Drive Family

HVFDSD = Honeywell 3G SmartVFD

### Input Phase

3 = Three Phase (3~in, 3~out)

### Nominal Voltage

A = 208/230 Vac

C = 460 Vac

D = 600 Vac

### Nominal Horsepower

|               |               |
|---------------|---------------|
| 0015 = 1.5 HP | 0600 = 60 HP  |
| 0020 = 2 HP   | 0750 = 75 HP  |
| 0030 = 3 HP   | 1000 = 100 HP |
| 0050 = 5 HP   | 1250 = 125 HP |
| 0075 = 7.5 HP | 1500 = 150 HP |
| 0100 = 10 HP  | 2000 = 200 HP |
| 0150 = 15 HP  | 2500 = 250 HP |
| 0200 = 20 HP  | 3000 = 300 HP |
| 0250 = 25 HP  | 3500 = 350 HP |
| 0300 = 30 HP  | 4000 = 400 HP |
| 0400 = 40 HP  | 4500 = 450 HP |
| 0500 = 50 HP  |               |

### Control Board

C = 3rd Generation Branded Drive

### Options

00 = Drive Only

### Enclosure Type

1 = NEMA 1

2 = NEMA 12

### Keyboard

G = Graphic Keypad

# SMARTVFD HVAC2



## SmartVFD HVAC2 Spins Big Energy Savings

The SmartVFD HVAC2 drive is a micro drive designed to fit in your enclosure or become a NEMA 1 enclosure – whichever is required for your smaller frequency drive applications.

### Modular Design

- NEMA 1 kit available
- Optional EMC filter
- Accessory PC interface

### Easy to Install

- DIN-rail or screw mounting
- Zero clearance side-by-side mounting

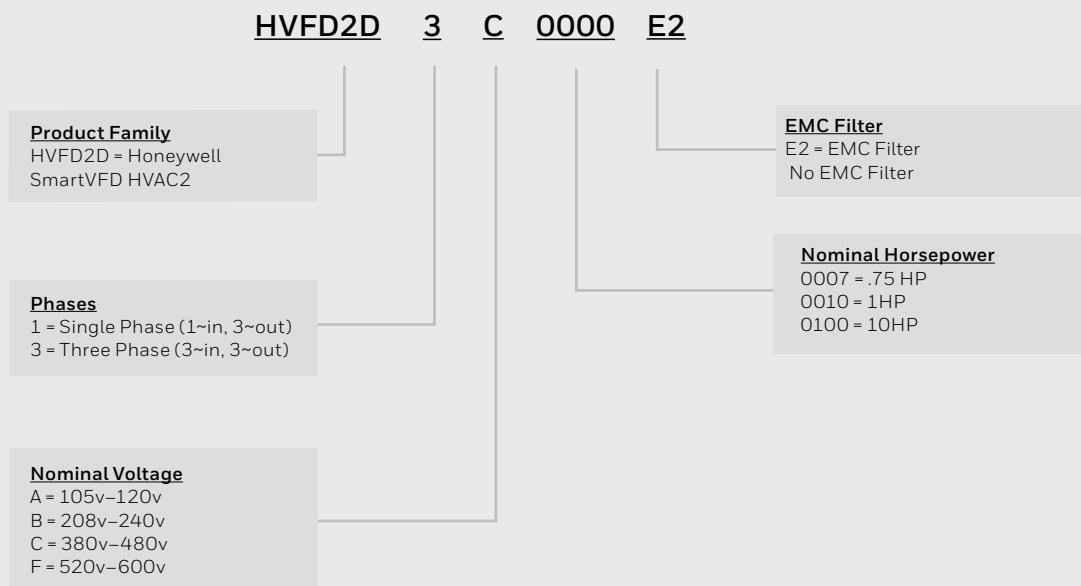
### Easy Communication

- Intuitive user interface
- Accessory PC interface
- Free PC Tool with optional adaptor turns your computer into a programming window to setup, control, monitor and diagnose in real time or for off-line editing and backup
- PI control
- Modbus RTU

### Rugged, High Performance



## SMARTVFD HVAC2 NAMING STRUCTURE



# SPECIFICATION TAKE-OFF SERVICE

Put our product experts to work for you.

## CREATED FOR YOU

With Honeywell's Specification Take-Off Service, you can submit your building drawings, specifications or schedules to have a take-off performed by our field device product experts.

The team will analyze your project and develop a completed schedule that includes base pricing and product specifications. The project schedule is provided to you at no cost, leaving you more time to get more work done.

**Any Honeywell contractor or distributor in North America can use the Take-Off Service.**

## WE PROVIDE

Documents included with most takeoffs:

- Product schedule
- Part numbers
- Submittal documents
- Honeywell base price
- Quote ID
- Ordering instructions

## EASY TO USE

The Honeywell Take-Off Service can create product schedules from:

- Product specifications
- Existing schedules
- Drawings
- Obsolete or competitive schedules

Whether your project is large and complex or as simple as a few line items, our goal is to provide you with the best possible solution for each job.

## EASY TO USE

Commercial water and steam valves, pressure independent control valves, valve and damper actuators (electric and pneumatic), variable frequency drives.

The Take-off Service can also provide quotes for valves that are not standard Honeywell products. Contact us for details.



## CREATED FOR YOU

Submit your information to [takeoff.service@honeywell.com](mailto:takeoff.service@honeywell.com). Please include:

- Product schedule
- Part numbers
- Submittal documents

Our technical team will perform the Take-Off Service and send you a quote.

Please note, however, that the quality of the submitted information largely determines the turn-around time. We will work closely with you to ensure that we have enough information to move forward as quickly as possible.

## SPECIFICATION TAKE-OFF SERVICE

Email: [takeoff.service@honeywell.com](mailto:takeoff.service@honeywell.com)

### Hours:

Monday thru Friday  
7:30 a.m. to 3:30 p.m. CST

## CONTACT INFORMATION AND WEBSITES

### Customer eCommerce Site

[mybuildings.honeywell.com](https://mybuildings.honeywell.com)

### Literature Ordering

[literature.honeywell.com](https://literature.honeywell.com)

### Commercial Components Technical Hotline

888-516-9347

[BuildingsProductSupport@Honeywell.com](mailto:BuildingsProductSupport@Honeywell.com)

### Specification Take-Off Service

[takeoff.service@honeywell.com](mailto:takeoff.service@honeywell.com)

### Learn More

[buildings.honeywell.com/bms](https://buildings.honeywell.com/bms)

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