

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 EFS and Non-EFS versions

● 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), 40 to 50 psi (3-way) 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

V58 Series Cartridge Globe 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) 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) 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
- Decreased material cost due to detachable access cover
- Reduce inventory and selection time with signal mode adaptor that adapts models to two position, floating and modulating applications
- Increase control and accuracy with more than 200 reposition steps for modulating models provide precise control
- Select models are available with or without three foot actuator cable
- 5-year warranty

MS and MN SERIES NAMING STRUCTURE

MS 75 10 A 2 2 XX

Fail Safe Mode

MS Spring Return
MN Non-Spring Return

Input Signal Type

31 Sylk Enabled, 24 Vac
41 Two-position, 100-250 Vac
61 Floating, 24 Vac
71/72 Modulating only, 24 Vac
74 Economizer/Modulating, 24 Vac
75 Modulating/Floating, 24 Vac
81 Two-position, 24 Vac

Torque

03 Nm - 27 in-lb
05 Nm - 44 in-lb
10 Nm - 88 in-lb
20 Nm - 175 in-lb
34 Nm - 300 in-lb

System Controlled Numbers

Auxiliary Switches

0 No Internal Switches
1 One Internal Switch
2 Two Internal Switches

Feedback

1 No Feedback
2 Voltage Feedback

Application Type

A Standard Model
H Enhanced Model
J Communicating Model

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 B

Drive Family

HVFDSD = Honeywell 3G SmartVFD

Input Phase

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

Nominal Voltage

A = 208/230 Vac
B = 460 Vac
C = 600 Vac

Nominal Horsepower

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

Control Board

B = 3rd Generation Drive and Control Board

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

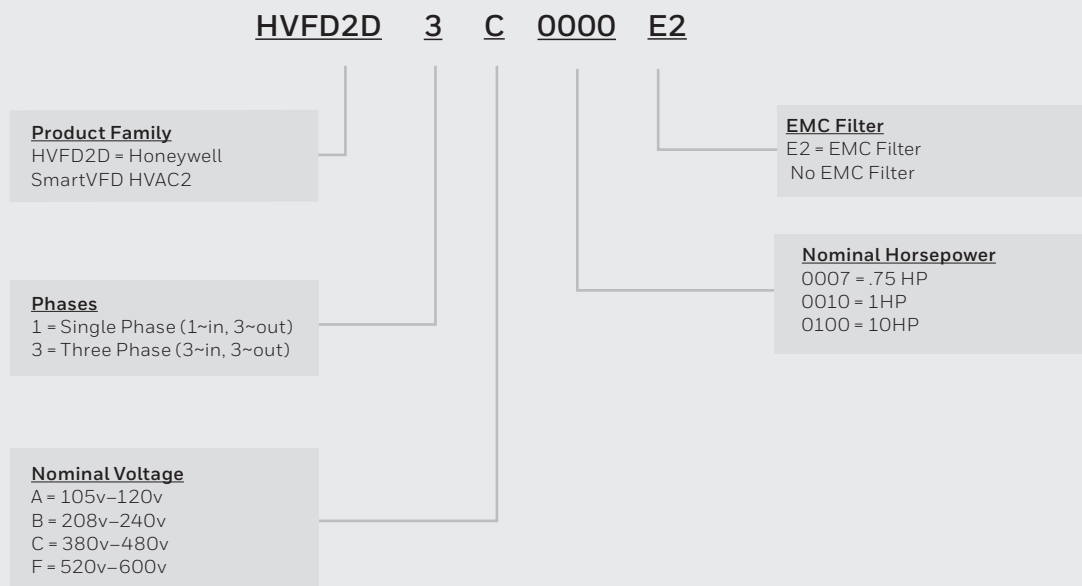
- DIN-rail or screw mounting
- Zero clearance side-by-side mounting

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. 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

Hours:

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

CONFIGURE, PRICE, QUOTE: CPQ SELECT

Configure, price, and quote Honeywell Field Devices from a single, easy-to-use tool.

Easy to Use CPQ Features

- Quickly find and select the right product for your application
- Compare specifications across different products
- View and download technical literature
- Configure and tag valve assemblies
- Create quotations and save automatically to the cloud for future projects
- Export simple quotations or include full submittal documentation

Honeywell Commercial Products Include

- Control Valves & Actuator
- Actuators – Direct Coupled Actuators (DCA) and Foot Mounted
- Variable Frequency Drives (VFDs)
- Sensors
- Submeters
- Standalone Controllers
- Pneumatics
- Thermostats
- Building Automation



CONTACT INFORMATION AND WEBSITES

Customer eCommerce Site

mybuildings.honeywell.com

Commercial Components Technical Hotline

888-516-9347

BuildingsProductSupport@Honeywell.com

Literature Ordering

literature.honeywell.com

Configure, Price, Quote (CPQ)

cpq.honeywell.com

Specification Take-Off Service

takeoff.service@honeywell.com

Learn More

buildings.honeywell.com/bms

Honeywell Building Technologies

715 Peachtree St NE

Atlanta, Georgia 30308

buildings.honeywell.com

BMS-BR-ValveSelectionGuide | 67-7382 | 2022-09-20
© 2022 Honeywell International Inc.

Honeywell