

SmartLine[®] VersaFlow Vortex 200 VM20 Size 1/2" to 12" Flange

Model Selection Guide

Model Selection Guide
36-VM-16-03 Issue 4

Honeywell Proprietary

- Secondary pressure containment around sensor
- Easily drained and easy to clean
- Regardless of type of installation and external factors
- Excellent zero stability
- Low energy consumption, low operating and installation costs
- Rapid signal processing even with product and temperature changes and sudden changes in density
- Modular electronics concept: electronics and sensor easy to replace
- Data redundancy: accurate plug & play replacement of electronics

Instructions

Select the desired key number. The arrow to the right marks the selection available.
Make the desired selections from Tables I through VIII using the column below the proper arrow. An Asterisk (*) denotes availability.

Table	I	II	III	IV	V	VI	VII	VIII
VM20	4F							



List Price equals the sum of prices for all selections

KEY NUMBER	Description	Selection	Availability
VM20		VM20	↓

TABLE I		
Instrument Code	4F	*

TABLE II	General Information	
Sensor Material	316LSS	
	1	*

TABLE III				
a. Flange Connection size	DN 15 / 1/2"		2	a
	DN 25 / 1"		4	b
	DN 40 / 1 1/2"		6	c
	DN 50 / 2"		7	d
	DN 80 / 3"		A	e
	DN 100 / 4"		B	f
	DN 150 / 6"		D	g
	DN 200 / 8"		E	h
DN 250 / 10"		F	j	
DN 300 / 12"		G	k	
b. Pressure Class	PN 10 EN 1092-1		2	*
	PN 16 EN 1092-1		3	*
	PN 25 EN 1092-1		4	*
	PN 40 EN 1092-1		5	*
	PN 63 EN 1092-1		6	*
	PN 100 EN 1092-1		7	*
	ASME 150 lb		A	*
	ASME 300 lb		B	*
ASME 600 lb		D	*	
c. Flange faces	Shape B1 EN 1092-1		1	u
	Shape B2 EN 1092-1		2	u
	Shape D EN 1092-1 (Groove)		3	u
	Shape E EN 1092-1 (Nose)		5	u
	Shape C EN 1092-1 (Tongue)		8	u
	Shape RF ASME		A	v
	Shape RJ ASME		C	v
	Shape FF Flat face (up to DN150/6", larger sizes on request)		F	r
	Shape SF Smooth finish (up to DN150/6", larger sizes on request)		H	r
	125 AARH-250 AARH (up to DN150/6", larger sizes on request)		N	r
d. Sensor Size	DN 15 / 1/2" C Conical Pick-up		2	*
	DN 15 / 1/2" C Conical Pick-up		3	*
	DN 25 / 1" C Conical Pick-up		4	*
	DN 25 / 1" C Conical Pick-up		5	*
	DN 40 / 1 1/2"		6	*
	DN 50 / 2"		7	*
	DN 80 / 3"		A	*
	DN 100 / 4"		B	*
	DN 150 / 6"		D	*
	DN 200 / 8"		E	*
DN 250 / 10"		F	*	
DN 300 / 12"		G	*	

The minimum value of orders acceptable for Honeywell is USD 500. Handling fee is the amount of the difference between USD 500 and the actual purchase price.

TABLE IV

		Selection	Availability
a. Pressure sensor options	None	0 ---	*
	Pressure Sensor max. 1 bar	1 ---	*
	Pressure Sensor max. 2 bar	2 ---	*
	Pressure Sensor max. 4 bar	3 ---	*
	Pressure Sensor max. 6 bar	4 ---	*
	Pressure Sensor max. 10 bar	5 ---	*
	Pressure Sensor max. 16 bar	6 ---	*
	Pressure Sensor max. 25 bar	7 ---	*
	Pressure Sensor max. 40 bar	8 ---	*
	Pressure Sensor max. 60 bar	A ---	*
	Pressure Sensor max. 100 bar	B ---	*
	Pressure Sensor max. 1 bar with isolation valve	C ---	*
	Pressure Sensor max. 2 bar with isolation valve	D ---	*
	Pressure Sensor max. 4 bar with isolation valve	E ---	*
	Pressure Sensor max. 6 bar with isolation valve	F ---	*
	Pressure Sensor max. 10 bar with isolation valve	G ---	*
	Pressure Sensor max. 16 bar with isolation valve	H ---	*
	Pressure Sensor max. 25 bar with isolation valve	K ---	*
	Pressure Sensor max. 40 bar with isolation valve	L ---	*
	Pressure Sensor max. 60 bar with isolation valve	M ---	*
Pressure Sensor max. 100 bar with isolation valve	N ---	*	
Be certain to select Pressure Sensor in accordance with pressure requirements on customer's application data sheet			
b. Gasket material pressure sensor	None	--0	*
	FPM	--1	*
	FFKM	--2	*
c. Approval	None	--0	*
	ATEX II2 G - Ex ia	--1	*
	ATEX II2 G - Ex d	--2	*
	ATEX II3 G - Ex nA	--3	*
	ATEX II2 D - Ex tb	--4	*
	IECEX II2 G - Ex ia	--5	*
	IECEX II2 G - Ex d	--6	*
	IECEX II3 G - Ex nA	--7	*
	IECEX II2 D - Ex tb	--8	*
	QPS IS Class I US/C AEx i	--A	*
	QPS XP Class I US/C AEx d	--B	*
	QPS NI Class I US/C AEx nA	--C	*
	QPS DIP Class II US/C AEx tb	--D	*
	QPS non-Ex (Ordinary Loc.) US and CAN	--E	*
d. Converter housing	Standard aluminum	---1	*
	Aluminum, silicone free (Non Ex and Exi only)	---4	i
	Aluminum with weather protection cover (Compact Version)	---7	o
	Dual Version, Aluminum	---A	s
	Dual Version, Aluminum, silicone free (Non Ex and Exi only)	---D	t

TABLE V

a. System design and Cable length	Compact without cable	0 ---	*
	5 m / 16 ft.	1 ---	*
	10 m / 32 ft.	2 ---	*
	15 m / 49 ft.	3 ---	*
	20 m / 65 ft.	4 ---	*
	25 m / 82 ft.	5 ---	*
	30 m / 98 ft.	6 ---	*
	35 m / 114 ft.	7 ---	*
	40 m / 131 ft.	8 ---	*
	45 m / 147 ft.	A ---	*
	50 m / 164 ft.	B ---	*
	5 m / 16 ft. UV-Resistant	E ---	*
	10 m / 32 ft. UV-Resistant	F ---	*
	15 m / 49 ft. UV-Resistant	G ---	*
	20 m / 65 ft. UV-Resistant	H ---	*
	25 m / 82 ft. UV-Resistant	K ---	*
	30 m / 98 ft. UV-Resistant	L ---	*
	35 m / 114 ft. UV-Resistant	M ---	*
	40 m / 131 ft. UV-Resistant	N ---	*
	45 m / 147 ft. UV-Resistant	P ---	*
50 m / 164 ft. UV-Resistant	R ---	*	
b. Display	With	--1	*
	Without	--0	*
c. Cable connection	1pc. M20 x 1,5 grey	--1	*
	2pc. M20 x 1,5 grey	--2	*
	3pc. M20 x 1,5 grey	--3	*
	1pc. M20 x 1,5 blue	--4	*
	2pc. M20 x 1,5 blue	--5	*
	3pc. M20 x 1,5 blue	--6	*
	1 Stk. M20x1,5 brass Ex-d/t/nA	--7	*
	2 Stk. M20x1,5 brass Ex-d/t/nA	--8	*
	3 Stk. M20x1,5 brass Ex-d/t/nA	--A	*
	1pc. M20 x 1,5 s.s. Ex-d/t	--E	*
	2pc. M20 x 1,5 s.s. Ex-d/t	--F	*
	3pc. M20 x 1,5 s.s. Ex-d/t	--G	*
	1pc. 1/2" NPT	--H	*
	2pc. 1/2" NPT	--K	*
	3pc. 1/2" NPT	--L	*
	1pc. G 1/2	--M	*
	2pc. G 1/2	--N	*
3pc. G 1/2	--P	*	
d. Software version	Standard; uncompensated for gases, steam and liquids + saturated steam compensation	---0	m
	Standard + gross/net heat for saturated steam and water	---1	m
	Standard + steam + gross/net heat for saturated steam and superheated steam + gases	---2	n
	Standard + steam + gross/net heat for saturated and superheated steam + gases + FAD	---3	n

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TABLE VI

		Selection	Availability
a. Programming language	English	1__	*
	German	2__	*
	French	3__	*
	Italian	4__	*
	Turkish	5__	*
	Spanish	6__	*
	Slovenian	A__	*
	Czech	B__	*
	Danish	H__	*
	Polish	K__	*
	Swedish	M__	*
	Chinese	T__	*
	Russian	U__	*
	b. Communication	HART (Pactware Communication)	--0
c. Identification	None	--0	*
	Stainless steel tag 40 x 20 mm	--1	*
	Stainless steel tag 120 x 46 mm	--2	*
	Cardboard 90 x 45 mm	--3	*
	Stainless steel tag 40 x 20 mm + cardboard	--4	*
Stainless steel tag 120 x 46 mm + cardboard	--5	*	

TABLE VII

a. General confirmation	None	0__	*
	Certificate of compliance 2.1 acc. EN 10204	1__	*
b. Calibration	3 point calibration certificate	--0	*
	5 point calibration certificate	--1	*
c. Pressure test	None	--0	*
	Pressure test + inspection certificate 3.1	--1	*

TABLE VIII

a. Material test / Certificates	None	0----	*
	List of material certificates of pressure bearing metal parts with copies of 3.1 material certificates	1----	*
	Material according to NACE MR 0175/ ISO 15156	4----	*
	PMI of pressure bearing metal parts + 3.1 certificate	7----	*
	List of material certificates of pressure bearing metal parts with copies of 3.1 material certificates + PMI	B----	*
b. Hardness test	None	--0---	*
	Hardness test of pressure bearing parts +3.1 certificate	--1---	*
c. Cleaning	None	--0--	*
	Final clean. "Standard" + 2.1 CoC	--K--	*
	Final clean. "Standard" + 3.1 insp. Cert.	--L--	*
	Final clean for oxygen services +2.1 CoC	--N--	*
	Final clean for oxygen services + 3.1 Insp. Cert.	--P--	*
d. X-ray and dye penetration test	None	---0-	*
	X-ray on pressurized weldings	---4-	*
	Dye penetration test on pressurized weldings	---5-	*
e. Manual	German	----1	*
	English	----3	*
	French	----4	*

Certificates

General arrangement drawing (Contact Honeywell for price and availability)
Inspection & test plan ITP (Contact Honeywell for price and availability)
Welding procedure, welding plan, welder qualification (Contact Honeywell for price and availability)
X-ray test of pressure bearing weldings (See Table VIII)
Dye penetration test of pressure bearing weldings (See Table VIII)
Stress Calculation (Contact Honeywell for price and availability)

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RESTRICTIONS

Restriction Letter	Available only with		Not Available with	
	Table	Selection	Table	Selection
a	IIIb	_ 5 _ _ 7 _ _ , _ A _ _ , _ B _ _ , _ D _ _		
	IIIId	_ _ _ 2 , _ _ _ 3		
b	IIIb	_ 5 _ _ , _ 7 _ _ , _ A _ _ , _ B _ _ , _ D _ _		
	IIIId	_ _ _ 2 , _ _ _ 3 , _ _ _ 4 , _ _ _ 5		
c	IIIb	_ 5 _ _ 7 _ _ , _ A _ _ , _ B _ _ , _ D _ _		
	IIIId	_ _ _ 2 , _ _ _ 3 , _ _ _ 4 , _ _ _ 5 , _ _ _ 6		
d	IIIb	_ 3 _ _ 5 _ _ , _ 6 _ _ 7 _ _ , _ A _ _ , _ B _ _ , _ D _ _		
	IIIId	_ _ _ 4 , _ _ _ 5 , _ _ _ 6 , _ _ _ 7		
e	IIIb	_ 3 _ _ 5 _ _ , _ 6 _ _ 7 _ _ , _ A _ _ , _ B _ _ , _ D _ _		
	IIIId	_ _ _ 6 , _ _ _ 7 , _ _ _ A		
f	IIIb	_ 3 _ _ 5 _ _ , _ 6 _ _ 7 _ _ , _ A _ _ , _ B _ _ , _ D _ _		
	IIIId	_ _ _ 7 , _ _ _ A , _ _ _ B		
g	IIIb	_ 3 _ _ 5 _ _ , _ 6 _ _ 7 _ _ , _ A _ _ , _ B _ _ , _ D _ _		
	IIIId	_ _ _ A , _ _ _ B , _ _ _ D		
h	IIIb	_ 2 _ _ 3 _ _ , _ 4 _ _ 5 _ _ , _ A _ _ , _ B _ _		
	IIIId	_ _ _ B , _ _ _ D , _ _ _ E		
j	IIIb	_ 2 _ _ 3 _ _ , _ 4 _ _ 5 _ _ , _ A _ _ , _ B _ _		
	IIIId	_ _ _ D , _ _ _ E , _ _ _ F		
k	IIIb	_ 2 _ _ 3 _ _ , _ 4 _ _ 5 _ _ , _ A _ _ , _ B _ _		
	IIIId	_ _ _ E , _ _ _ F , _ _ _ G		
m	IVa	0 _ _ _		
n			IVa	0 _ _ _
r	IIIa	2 _ _ _ , 4 _ _ _ , 6 _ _ _ , 7 _ _ _ , _ A _ _ _ , _ B _ _ _ , _ D _ _ _		
i	IVc	_ _ 0 _ _ , _ _ 1 _ _ , _ _ 5 _ _ , _ _ A _ _ , _ _ E _ _		
o	Va	0 _ _ _		
s			IIIa	2 _ _ _
			IIIId	_ _ _ 2 , _ _ _ 3
t	IVc	_ _ 0 _ _ , _ _ 1 _ _ , _ _ 5 _ _ , _ _ A _ _ , _ _ E _ _	IIIa	2 _ _ _
			IIIId	_ _ _ 2 , _ _ _ 3
u	IIIb	_ 2 _ _ , _ 3 _ _ , _ 4 _ _ , _ 5 _ _ , _ 6 _ _ , _ 7 _ _		
v	IIIb	_ A _ _ , _ B _ _ , _ D _ _		

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TABLE I													
Flange Table:				Flange/Housing									
Flange Version EN1092-1 / ASME				PN 10	PN 16	PN 25	PN 40	PN 63	PN 100	150 lb	300 lb	600 lb	
Flange		Table III	Sensor	Table III	2	3	4	5	6	7	A	B	D
DN	Inch	Table III	Sensor	Table III	USD	USD	USD	USD	USD	USD	USD	USD	USD
15	1/2"	2	Single	2									
15	1/2"	2	Single	3									
25	1"	4	Single	2									
25	1"	4	Single	3									
25	1"	4	Single	4									
25	1"	4	Single	5									
40	1 1/2"	6	Single	2									
40	1 1/2"	6	Single	3									
40	1 1/2"	6	Single	4									
40	1 1/2"	6	Single	5									
40	1 1/2"	6	Single	6									
50	2"	7	Single	4									
50	2"	7	Single	5									
50	2"	7	Single	6									
50	2"	7	Single	7									
80	3"	A	Single	6									
80	3"	A	Single	7									
80	3"	A	Single	A									
100	4"	B	Single	7									
100	4"	B	Single	A									
100	4"	B	Single	B									
150	6"	D	Single	A									
150	6"	D	Single	B									
150	6"	D	Single	D									
200	8"	E	Single	B									
200	8"	E	Single	D									
200	8"	E	Single	E									
250	10"	F	Single	D									
250	10"	F	Single	E									
250	10"	F	Single	F									
300	12"	G	Single	E									
300	12"	G	Single	F									
300	12"	G	Single	G									

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TABLE II						
Flange			Dual Sensor	Table III	Table IV	Table IV
DN	Inch	Table III	Table IV		___ A	___ D
25	1"	4 ___	Dual	___ 4		
25	1"	4 ___	Dual	___ 5		
40	1 1/2"	6 ___	Dual	___ 4		
40	1 1/2"	6 ___	Dual	___ 5		
40	1 1/2"	6 ___	Dual	___ 6		
50	2"	7 ___	Dual	___ 4		
50	2"	7 ___	Dual	___ 5		
50	2"	7 ___	Dual	___ 6		
50	2"	7 ___	Dual	___ 7		
80	3"	A ___	Dual	___ 6		
80	3"	A ___	Dual	___ 7		
80	3"	A ___	Dual	___ A		
100	4"	B ___	Dual	___ 7		
100	4"	B ___	Dual	___ A		
100	4"	B ___	Dual	___ B		
150	6"	D ___	Dual	___ A		
150	6"	D ___	Dual	___ B		
150	6"	D ___	Dual	___ D		
200	8"	E ___	Dual	___ B		
200	8"	E ___	Dual	___ D		
200	8"	E ___	Dual	___ E		
250	10"	F ___	Dual	___ D		
250	10"	F ___	Dual	___ E		
250	10"	F ___	Dual	___ F		
300	12"	G ___	Dual	___ E		
300	12"	G ___	Dual	___ F		
300	12"	G ___	Dual	___ G		

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