

# DY Vortex

Den nya generationen av Digital Vortex flödesmätare från Yokogawa

DY Vortex flödesmätare klarar att mäta de flesta fluider som vätska, ånga och gaser i volymflöde  $m^3$  eller som massflöde i  $Nm^3$  eller kg.

## Enkel

- Storlekar DN 15 till DN 300
- Mediaberörda delar i 316L samt Hastelloy C
- Temperatur område -200 till + 450 gr Celsius
- 1 analog och 1 digital utsignal som standard
- Färdig kalibrerad vid leverans

## Ekonomisk

- Volym eller Massflöde
- Integrerat eller separerat utförande
- Enkelt montage därmed låg installationskostnad
- Klarar korta raksträckor
- Finns med reducerat genomlopp
- Ex klassad enl. EEx i eller Eex d

## Noggrann

- Onoggrannheten är 0.75 % av aktuellt flöde på vätska och 1.0 % av aktuellt volym flöde på gas eller ånga.
- Modell YF är SIP-testad



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## Model and Suffix Codes

DY Vortex Flowmeter (Integral Type, Remote Type detector)

Model	Suffix Codes	Description
DY015	.....	Size 15 mm (½ inch)
DY025	.....	Size 25 mm (1 inch)
DY040	.....	Size 40 mm (1½ inch)
DY050	.....	Size 50 mm (2 inch)
DY080	.....	Size 80 mm (3 inch)
DY100	.....	Size 100 mm (4 inch)
DY150	.....	Size 150 mm (6 inch)
DY200	.....	Size 200 mm (8 inch)
Output Signal /Communication *1*12	-D .....	4 to 20 mA DC, Pulse, BRAIN Communication
	-E .....	4 to 20 mA DC, Pulse, HART Communication
	-F .....	Digital communication (FOUNDATION Fieldbus protocol)
	-N .....	Remote type detector
Body Material *2*14	B .....	Stainless steel (CF8M / equiv. 1.4408)
	C .....	Stainless steel (1.4552)
	W .....	Carbon steel (WCB) *15
	X .....	Others
Shedder bar Material *4*14	L .....	Standard
	X .....	Others
Process Connection *3 *5 *17  RF: Raised Face SF: Smooth Finish*16 RJ: Ring Joint	AA1 .....	ANSI Class 150 Wafer
	AA2 .....	ANSI Class 300 Wafer
	AA4 .....	ANSI Class 600 Wafer
	AD2 .....	DIN PN16 Wafer
	AD4 .....	DIN PN40 Wafer
	BA1 .....	ANSI Class 150 Flange (RF)
	BA2 .....	ANSI Class 300 Flange (RF)
	BA4 .....	ANSI Class 600 Flange (RF)
	BA5 .....	ANSI Class 900 Flange (RF)
	BD1 .....	DIN PN10 Flange (RF)
	BD2 .....	DIN PN16 Flange (RF)
	BD3 .....	DIN PN25 Flange (RF)
	BD4 .....	DIN PN40 Flange (RF)
	BD5 .....	DIN PN64 Flange (RF)
	BD6 .....	DIN PN100 Flange (RF)
	BD7 .....	DIN PN160 Flange (RF)
	CA4 .....	ANSI Class 600 Flange (RJ)
CA5 .....	ANSI Class 900 Flange (RJ)	
Electrical Connection *11	-2.....	ANSI ½ NPT Female *6
	-4.....	ISO M20 x1.5 Female
Indicator *7	D .....	With Indicator
	N .....	None Indicator, Remote type detector
Options	/□	Refer to Option Specifications

DYFTab-01

DYA Vortex Flowmeter Converter (Remote Type)

Model	Suffix Code	Description
DYA	.....	Vortex Flowmeter Converter (Remote Type)
Output Signal /Communication *1 *13	-D.....	4 to 20 mA DC, Pulse BRAIN Communication
	-E.....	4 to 20 mA DC, Pulse HART Communication
	-F.....	Digital communication (FOUNDATION Fieldbus protocol)
Electrical Connection *11	2.....	ANSI 1/2 NPT Female *6
	4.....	ISO M20 x1.5 Female
Indicator	D .....	With Indicator
	N .....	None Indicator
Options	/□	Refer to Option Specifications

DYC Signal Cable

Model	Suffix Code	Description
DYC	.....	Signal Cable
Cable End	-0.....	Without End finish *8
	-1.....	With End finish
Cable Length	-05.....	5 m
	-10.....	10 m
	-15.....	15 m
	-20.....	20 m
	-25.....	25 m
	-30.....	30 m
	-□□	□□ m *9
Options	/C□	Cable End Finish Parts *10
	/MV	Signal cable for temperature sensor type *13

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- \* 1 : Nominal size, Fluid (Liquid, Gas, Steam), Density, Viscosity, Pressure, Temperature, Flow range, Parameters are set at the factory before shipment.
- \* 2 : Refer to table 1.  
In case of /NC or /HY or /HT or /LT select X for CF8M or W for WCB or C for 1.4552.
- \* 3 : Process connection BA5, BD7, CA4, CA5 and DY150-BA4 only with body material CF8M.
- \* 4 : Refer to table 1.  
In case of /NC or /HY or /HT or /LT, select X (others).  
The shedder bar material (1.4517 (1.4462 for DN15), DCS1 (15mm is DSD1-H)) varies according to each manufacturing area. Please contact YOKOGAWA sales person.
- \* 5 : Refer to Table 2.
- \* 6 : In case of /FF1, the screw length is deeper than ANSI standard for 0.5 to 3.5 threads.
- \* 7 : Indicator is not available for remote type detector.
- \* 8 : One set of end finish part is attached.
- \* 9 : Fill in two digit figure per 5 m unit (e.g. 35 m, 40 m etc.). The cable can be cut to required length within 30 m at customer side. In this case, select Cable End Code [-0].
- \*10: An entered digit figure shows required set quantity. Only for Cable End Code [-0]
- \*11: In case of an explosion protect type, it depends for an electrical connection on the kind of an explosion protect type. Refer to "OPTION SPECIFICATION (HAZARDOUS AREA CLASSIFICATIONS)"
- \*12: For FOUNDATION Fieldbus protocol, refer to GS 01F06F01-01E. For Fieldbus communication type, there are no setting keys on the display board.
- \*13: Essentially, DYA-□□□□ /MV and DY□□□□ -N\*\*\*/MV should be combined.
- \*14: Users must consider the characteristics of selected wetted parts material and the influence of process fluids. The use of inappropriate materials can result in the leakage of corrosive process fluids and cause injury to personnel and/or damage to plant facilities. It is also possible that the instrument itself can be damaged and that fragments from the instrument can contaminate the user's process fluids.  
Be very careful with highly corrosive process fluids such as hydrochloric acid, sulfuric acid, hydrogen sulfide, sodium hypochlorite, and high-temperature steam (150 °C [302 °F] or above). Contact Yokogawa for detailed information of the wetted parts material.
- \*15: Body material carbon steel (WCB): Due to wet calibration DY will always generate superficial rust in the flow path and on the surface during shipping to customer site. The superficial oxidation has no influence on the accuracy of the flowmeter. Unfortunately the oxidation can not be avoided with carbon steel body material.
- \*16: Flange surface in standard roughness without grooves.
- \*17: For process connection BD: Flanges with hole pattern, flange diameter, flange facing according EN 1092-1 can be used. Standard surface Ra 3.2 - 6.3. For process connection BA: Flanges with hole pattern, flange diameter, flange facing according ASME B16.5 can be used.

Gällande optioner och Ex klassningar se original datablad eller kontakta OmniProcess AB