

SPECIAL FLOW METER

Wedge Meter

Wedge Meter

MODEL : DHWM-F / DHWM-BW / DHWM-T



※ Cutaway image for illustration — the pipe wall is cut away to show the internal V-wedge; the actual product is a closed pipe spool.

DHWM-F

DHWM-BW

DHWM-T

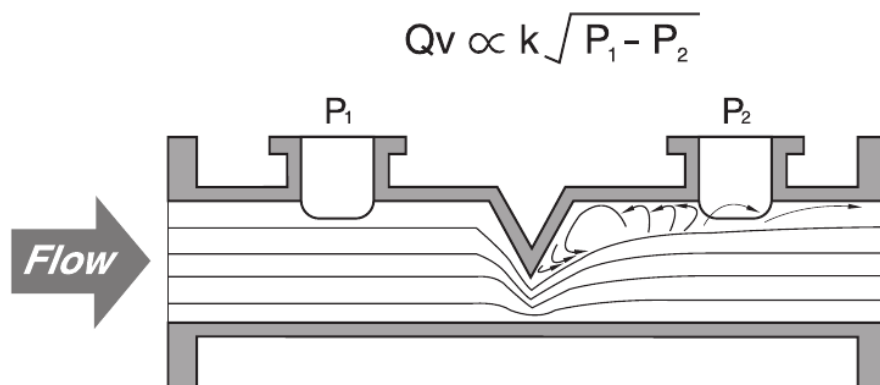
The DHWM-F / DHWM-BW / DHWM-T series wedge meters are flow meters for measuring flow under harsh conditions.

The DHWM-F series can measure the flow of liquids, gases and steam as well as fluids containing sludge, and is particularly suitable for measuring high-viscosity fluids.

Bidirectional (forward and reverse) flow measurement is possible.

25A ~ 600A Flange 150# ~ 1500# H/D 0.2 ~ 0.5 Up to 538 °C

Measurement principle



Principle of differential pressure generation across the wedge

The DHWM series installs a V-shaped wedge inside the pipe.

Flow is measured from the pressure difference across the wedge ($P_1 - P_2$). $Q_v \propto k \cdot \sqrt{P_1 - P_2}$

Types · model configuration



DHWM-F Cutaway rendering for illustration

Flanged type — cutaway image showing the internal V-wedge



DHWM-BW

Cutaway rendering for illustration

Butt-weld type — cutaway image showing the internal V-wedge



DHWM-T

Chemical Tee remote-seal type — actual product

The DHWM-F and DHWM-BW images are cutaway renderings with the pipe wall removed to show the internal wedge; the actual product is a closed pipe spool.

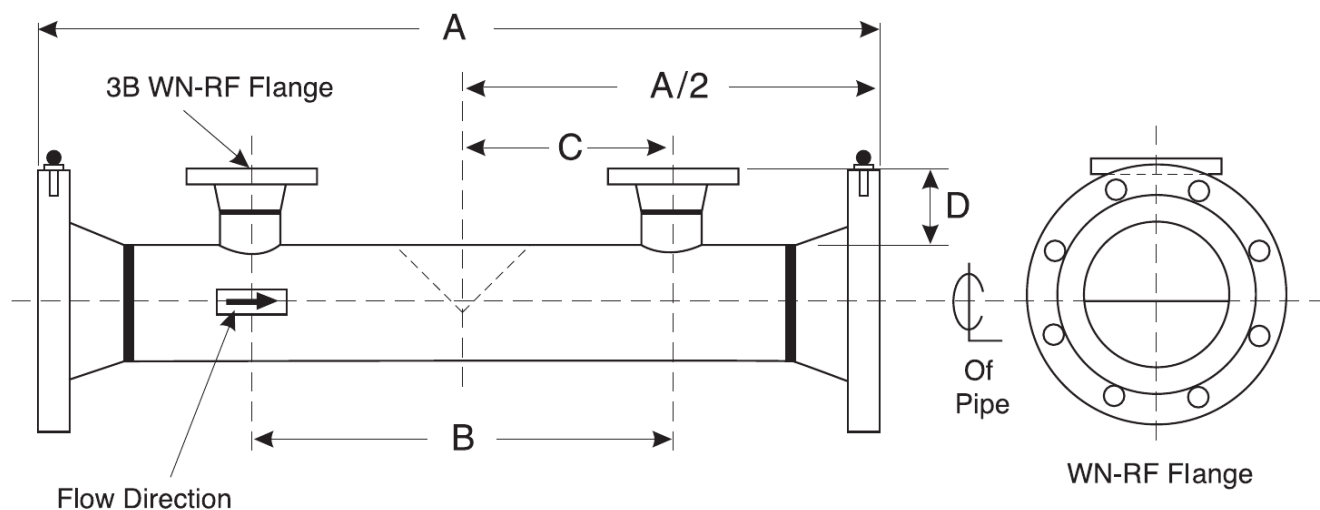
Item	DHWM-F Flanged connection	DHWM-BW Welded connection (Butt Weld)	DHWM-T Chemical Tee remote seal type
Features	Suitable for high-viscosity liquids and liquids containing sludge · Remote Seal Type D/P Transmitter	Suitable for high-viscosity liquids and liquids containing sludge · welded directly to the piping	Suitable for high-viscosity liquids and liquids containing sludge · Remote Seal Chemical Tee Type D/P Transmitter
Turndown	6:1	6:1	6:1
Materials	Carbon Steel, STS304, STS316, Inconel, Monel, Hastelloy, Tungsten carbide coating	Carbon Steel, STS304, STS316, Inconel, Monel, Hastelloy, Tungsten carbide coating	Carbon Steel, STS304, STS316, Inconel, Monel, Hastelloy, Tungsten carbide coating
Connection	Flange 150#, 300#, 600#, 900#, 1500#	Butt Weld	Flange 150#, 300#, 600#, 900#, 1500#
Applicable piping	2B ~ 24B (50A ~ 600A) Pipe	2B ~ 24B (50A ~ 600A) Pipe	2B ~ 24B (50A ~ 600A) Pipe
Standards	DHQ1023 (in-house standard)	DHQ1023 (in-house standard)	DHQ1023 (in-house standard)
Accuracy	±2.0% (±0.5% when calibrated)	±2.0% (±0.5% when calibrated)	±2.0% (±0.5% when calibrated)

Technical Specifications

Item	Value
Accuracy	±0.5% of reading after calibration (±3% before calibration)
Repeatability	±0.2
Maximum operating temperature	538 °C
Measuring range (Range)	10:1
H/D ratio (wedge height / pipe diameter)	0.2 ~ 0.5
Applicable pipe sizes	25A ~ 600A
Required straight run	Upstream 6 ~ 10D / downstream 3D
Materials	Carbon Steel, STS304, STS316, Inconel, Monel, Hastelloy, Tungsten carbide coating
Flange rating	ANSI 150#, 300#, 600#, 900#, 1500# (SORF / WNRF / RTJ)
DP tap connection	Chemical Tee / ANSI 2B / ANSI 3B / ANSI 4B

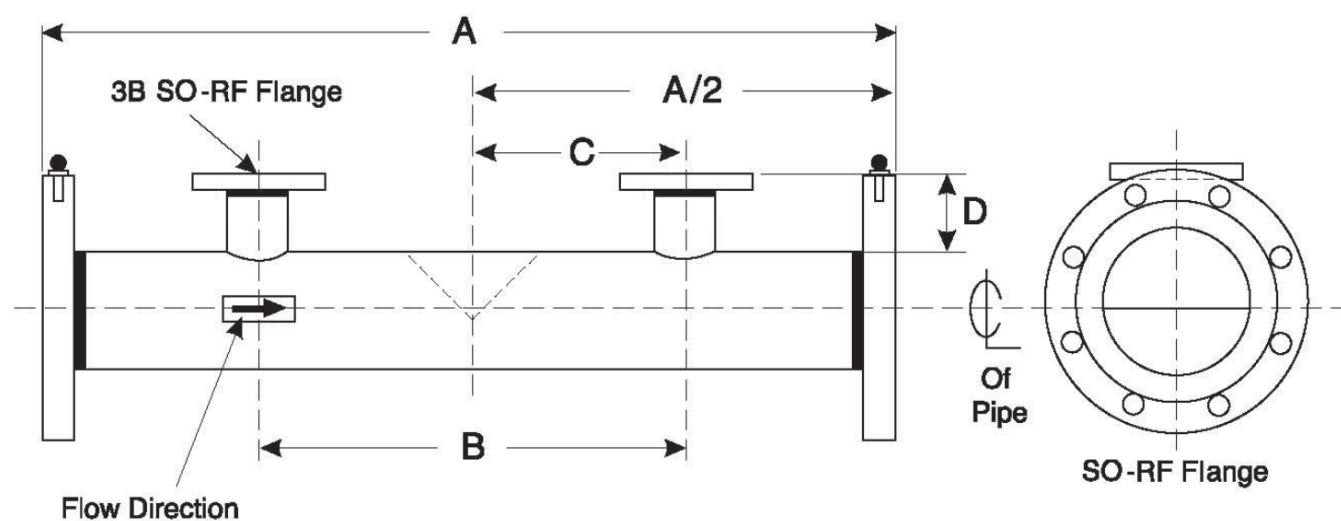
Dimensions · drawings

Unit: mm. Actual manufacturing dimensions are based on the approved drawing.

WN-RF type dimensions (mm)

Pipe Size	A (150#)	A (300#)	A (600#)	B	C	D (150#)	D (300#)	D (600#)
40A	530	543	559	292	146	208	214	213
50A	546	559	578	292	146	216	222	232
80A	622	641	660	311	156	156	167	175
100A	902	921	965	381	191	114	125	133
125A	965	972	1005	419	210	114	125	133
150A	1029	1048	1099	457	229	114	125	133
200A	1092	1111	1168	521	260	114	125	133
250A	1143	1175	1257	597	298	114	125	133
300A	1321	1353	1416	673	337	114	125	133
350A	1397	1429	1486	711	356	114	125	133
400A	1473	1511	1588	775	387	114	125	133
450A	1575	1613	1676	851	425	114	125	133
500A	1686	1721	1791	940	470	114	125	133
600A	1854	1886	1969	1067	533	114	125	133

A: face-to-face length (by flange rating), B: DP tap spacing, C: center-to-center distance, D: tap flange height. Tap flanges are 3B WN-RF.

SO-RF type dimensions (mm)

Pipe Size	A	B	C	D (150#)	D (300#)	D (600#)
25A	495	272	136	208	214	214
40A	529	292	146	208	214	214
50A	546	292	146	216	222	232
65A	580	300	150	216	222	232
80A	622	311	156	156	167	175
100A	762	381	191	114	125	133
125A	813	419	210	114	125	133
150A	864	457	229	114	125	133
200A	914	521	260	114	125	133
250A	965	597	298	114	125	133
300A	1118	673	337	114	125	133
350A	1168	711	356	114	125	133
400A	1245	775	387	114	125	133
450A	1321	851	425	114	125	133
500A	1422	940	470	114	125	133
600A	1575	1067	533	114	125	133

Tap flanges are 3B SO-RF.

Installation requirements

- Provide a straight run of 6 ~ 10D upstream and at least 3D downstream.
- For slurries and viscous fluids, a Remote Seal type (DHWM-F) or Chemical Tee type (DHWM-T) DP transmitter is recommended.
- Selecting the Jacket model allows use with fluids that require insulation or heating.

Ordering information (How to Order)

1 Series	
DHWM-F	Flanged connection
DHWM-BW	Welded connection
DHWM-T	Chemical Tee remote seal type

2 Pipe Size	
025A ~ 600A	25, 40, 50, 65, 80, 100, 125, 150, 200, 250, 300, 350, 400, 450, 500, 600 (mm)

3 Material (Wedge / Pipe / Flange)	
Z	SS316 / SS316 / SS316
Y	SS304 / SS304 / SS304
V	SS316 / C.S / C.S
X	SS304 / C.S / C.S
W	Other (etc.)

4 Process Connection	
MS	ANSI 150# SORF
MW	ANSI 150# WNRF
NS	ANSI 300# SORF
NW	ANSI 300# WNRF
OS	ANSI 600# SORF
OW	ANSI 600# WNRF
PS	ANSI 900# SORF
PW	ANSI 900# WNRF
QS	ANSI 600# SORTJ
QW	ANSI 600# WNRTJ
RS	ANSI 900# SORTJ
RW	ANSI 900# WNRTJ
S	Other

5 D/P Connection	
1	Chemical Tee
2	ANSI 2B
3	ANSI 3B
4	ANSI 4B
5	Other

6 Option	
0	Non Jacket Model
1	Jacket Model

Ordering example: **DHWM-F-350AZMS30**

DHWM-F, 350A, all SS316 (Z), ANSI 150# SORF (MS), D/P connection ANSI 3B (3), no jacket (0)