

FCW 308L/MVR-PW

For welding steels such as Outokumpu	EN	ASTM	BS	NF	SS
4301	1.4301	304	304S31	Z7 CN 18-09	2333
4307	1.4307	304L	304S11	Z3 CN 18-10	2352
4311	1.4311	304LN	304S61	Z3 CN 18-10 Az	2371
4541	1.4541	321	321S31	Z6 CNT 18-10	2337

Standard designations

EN ISO 17633 T 19 9 L P M/C 1

AWS A5.22 E308LT1-4/-1

Characteristics and welding directions

AVESTA FCW 308L/MVR-PW is designed for welding austenitic stainless steel type 19 Cr 10 Ni or similar. The filler metal is also suitable for welding titanium and niobium stabilised steels such as ASTM 321 and ASTM 347 in cases where the construction will be operating at temperatures below 400°C. For higher temperatures a niobium stabilised consumable such as AVESTA FCW 347/MVNB is required.

AVESTA FCW 308L/MVR-PW is designed for all-round welding and can be used in all positions without changing the parameter settings.

Welding data

Diameter mm	Welding position	Current A	Voltage V
1.20	Flat, horizontal	150 – 240	24 – 32
	Vertical-up	130 – 160	23 – 28
	Overhead	150 – 200	24 – 29
	Vertical-down	120 – 180	22 – 27

Shielding gas

Ar + 15 – 25% CO₂ offers the best weldability, but 100% CO₂ can also be used (voltage should be increased by 2V).

Gas flow rate 20 – 25 l/min.

Chemical composition, all weld metal (typical values, %)

C	Si	Mn	Cr	Ni
0.03	0.7	1.6	19.2	10.2
Ferrite	6 FN 9 FN	DeLong WRC-92		

Mechanical properties	Typical values (IIW)	Min. values EN ISO 17633
Yield strength R _{p0,2}	390 N/mm ²	320 N/mm ²
Tensile strength R _m	570 N/mm ²	510 N/mm ²
Elongation A ₅	39 %	30 %
Impact strength KV +20°C	60 J	
Hardness	200 Brinell	

Interpass temperature: Max. 150°C.

Heat input: Max. 2.0 kJ/mm.

Heat treatment: Generally none (in special cases quench annealing at 1050°C).

Structure: Austenite with 5 – 10% ferrite.

Scaling temperature: Approx. 850°C (air).

Corrosion resistance: Corresponding to ASTM 304, i.e. fairly good under severe conditions such as in oxidising and cold dilute reducing acids.

Approvals

- CWB
- DB
- TÜV