# BÖHLER FOX EV 85

Stick electrode low-alloyed, high strength

## Classifications

| EN ISO 18275-A | EN ISO 18275-B | AWS A5.5 | AWS A5.5M |
|---|---|---|---|
| E 69 6 Mn2NiCrMo B 4 2 H5 | E7618-G A H5 | E11018-GH4R | E7618-GH4R |
| | | E11018MH4R (mod.) | E7618MH4R (mod.) |

## Characteristics and typical fields of application

Basic Mn-Ni-Mo-alloyed electrode with high ductility and crack resistant for high-strength fine-grained constructional steels. Low-temperature ductility at –60 °C and resistant to ageing.

Easy weld ability in all positions except vertical-down. Very low hydrogen content (acc. AWS condition HD < 4 ml/100 g).

## Base materials

Quenched and tempered fine-grained steels up to 690 MPa yield strength

S620Q, S620QL, S690Q, S690QL, S620QL1-S690QL1, alform plate 620 M, 700 M, aldur 620 Q, 620 QL, 620 QL1, aldur 700 Q, 700 QL, 700 QL1

ASTM A 514 Gr. F, H, Q; A 709 Gr. 100 Type B, E, F, H, Q; A 709 Gr. HPS 100W

## Typical analysis of all-weld metal (wt.-%)

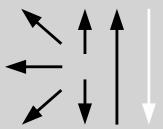
| | C | Si | Mn | Cr | Ni | Mo |
|---|---|---|---|---|---|---|
| wt.-% | 0.05 | 0.4 | 1.7 | 0.4 | 2.1 | 0.5 |

## Mechanical properties of all-weld metal

| Condition | Yield strength $R_{p0,2}$ | Tensile strength $R_m$ | Elongation A ($L_0$=5$d_0$) | Impact work ISO-V KV J | |
|---|---|---|---|---|---|
| | MPa | MPa | % | +20 °C | –50 °C |
| u | **780** (≥ 690) | **840** (760 – 960) | **20** (≥ 17) | **110** | **60** (≥ 47) |
| s | **750** | **800** | **20** | **80** | |
| v | **750** | **790** | **20** | **80** | |

u untreated, as-welded
s stress relieved 580 °C/2h / furnace down to 300 °C / air
v quenched/tempered 920 °C/1h / air and 600 °C/2h / furnace down to 300 °C / air

## Operating data



| Polarity: | Redrying if necessary: | Electrode identification: | ø (mm) | L mm | Amps A |
|---|---|---|---|---|---|
| DC ( + ) | 300 – 350 °C, min. 2 h | FOX EV 85 11018-G<br>E 69 6 Mn2NiCrMo B | 2.5 | 350 | 70– 100 |
| | | | 3.2 | 350 | 100 – 140 |
| | | | 4.0 | 450 | 140 – 180 |
| | | | 5.0 | 450 | 190 – 230 |

Preheat, interpass temperature and post weld heat treatment as required by the base metal.

## Approvals

TÜV (4313.), DB (10.014.22), SEPROZ, BV, CE