Claims

1. Embolic protection device (1) for insertion into an aortic arch, comprising a filter unit (3), a frame (5) and a feed unit (7), whereby the frame (5) has an oval two-dimensional area, wherein the filter unit (3) is arranged at the frame (5), and the frame (5) provides at one end (tip of the frame) a distal area (2) and at an opposite end (end of the frame) a proximal area (9), the proximal area (9) comprising a proximal shape (11), which is arranged in an inner area of the frame (5) and is connected to the feed unit (7), wherein the proximal shape (11) is defined by the two ends (17, 19) of the frame (5), and wherein the proximal shape (11) comprises a first part (13) and a second part (15), wherein the second part (15) is formed at one end of the first part (13) and wherein the first and the second parts (13, 15) form the proximal shape (11), and wherein the proximal shape (11) protrudes above and/or below the oval two-dimensional area of the frame (5).

2. Embolic protection device (1) according to claim 1, characterised in that the first part (13) of the proximal shape (11) is at a first angle (W1) to the plane of the frame (5) and the second part (15) is at a second angle (W2) to the first part (13) of the proximal shape (11).

3. Embolic protection device (1) for insertion into an aortic arch, comprising a filter unit (3), a frame (5) and a feed unit (7), whereby the frame (5) has an oval two-dimensional area, wherein the filter unit (3) is arranged at the frame (5), and the frame (5) has at one end (tip of the frame) a distal area (2) and at an opposite end (end of the frame) a proximal area (9), the proximal area (9) comprising a proximal shape (11) which is arranged in an inner area of the frame (5) and is connected to the feed unit (7) wherein the proximal shape (11) is defined by the two ends (17, 19) of the frame (5), and wherein the proximal shape (11) comprises a first part (13) and a second part (15) wherein the first and second parts (13, 15) are arranged to each other such that they form a spring mechanism, and wherein the first and the second parts (13, 15) form the proximal shape (11), and wherein the proximal shape (11) protrudes above and/or below the oval two-dimensional area of the frame (5).

4. Embolic protection device (1) according to any one of claims 1-3, characterised in that the proximal shape (11) can be set under tension via the feed unit (7).

5. Embolic protection device (1) according to any one of the preceding claims, characterised in that the proximal shape (11) comprises two ends (17, 19) of the frame (5), which extend parallel to each other in the inner area of the frame (5).

6. Embolic protection device (1) according to any one of the preceding claims, characterised in that the frame (5) has a distal area (2) comprising a distal shape (4), which is arranged in an inner area of the frame (5).

7. Embolic protection device (1) according to claim 6, characterised in that the distal shape (4) provides a constriction (12) towards the inside of the frame (5).

8. Embolic protection device (1) according to claim 6 or 7, characterised in that the filter unit (3) is connected to the frame (5) outside the proximal and/or distal area(s) (9, 2).

9. Method for unfolding the embolic protection device according to any one of claims 1-8, when the embolic protection device leaves a catheter containing it, comprising
pushing the embolic protection device out of the catheter,
folding a distal shape (4) back into an inner area of the frame (5), when a distal area (2) of the frame of the embolic protection device leaves the catheter.

10. Method according to claim 9, comprising indicating the direction of the frame (5) by one or more markers, when the distal area (2) leaves the catheter, wherein the distal area (2) indicates the orientation of the frame (5).

11. Method according to any one of claims 9-10, characterised in that, due to the pre-bending of the distal shape as well as the proximal shape, a torsion is generated in the wire of the frame (5), having a preferred direction, when leaving the catheter, from the distal area (2) towards the distal shape.