

DS-W10.5

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DS-W 10.5 diamond wire

Safety precautions 01



The operator and all other persons must remain at a safe distance while the saw is running. The safe distance from the saw corresponds to a radius of at least twice the free length of the wire.

Cutting direction 02



Important: The connectors must be fitted, relative to the cutting direction, as shown in the illustration.

The diamond wire must be used to cut in one direction only (see arrows).

Preparations for the first cut

Connectors are already fitted to new diamond wires.
The diamond wire must be twisted before joining the connectors by inserting the pin. Twist the diamond wire, approx. 1–1.5 turns per metre length of wire, in a counter-clockwise direction (to the left) as seen when looking straight at the cut face of the end of the wire.

• The corners on the workpiece should be rounded off to a radius of approx. 10 cm (using a hammer and chisel or a Hilti combihammer) and/or the diamond wire pulled through by hand.

• Mount the water supply nozzle at the point where the wire enters the workpiece. Depending on the length of the cut, it may be necessary to apply cooling water at several points. It is essential that the wire is cooled perfectly if good cutting results are to be achieved.

• Use the advance movement to tighten the wire. Move away from the machine to a safe distance and start the motor. Start the saw gently and then increase the running speed gradually until the optimum drive speed (r.p.m.) and cutting speed is reached.

The sawing operation must be monitored continuously.
The wire saw must be stopped before making adjustments to the water supply nozzles.

General information

• Do not kink or bend the wire sharply.

• Do not join diamond wires of different diameters together.

• To ensure even wear of the beads, the diamond wire must be retwisted after each long cut, applying a different number of turns, before beginning the next cut.

Accessories for Hilti diamond wires

Description	Comments / uses	Package contents	Ordering designation	Item no.
Crimping pliers	for crimping connectors / sleeves	1	DS-WSTHY	235845/5
Connector	quick-release type	1	DS-WCMV	340427/4
Connector set	quick-release type	5	DS-WCMV	371383/1
Pin	replacement pin for connectors	10	DS-WP	235842/2
Sleeve	repair sleeve	5	DS-WS	235841/4
O-ring	fitted between connector / bead	10	0-Ring 10/4.7×2.5	235844/8
Crimping jaws	replacement jaws for crimping pliers	2	DS-WJ	340426/6
Cutter	for cutting diamond wire	1	DC 125-S	000000/0

Instructions for fitting DS-WC connectors (Item no. 340427/4)

Fitting the connector (first end, clevis piece)

Clamp the diamond wire in the vice with the cutting direction as shown (see arrow) and use an angle grinder to cut off the end 13 mm from the first bead.

2 Use pliers to remove the spring (pull out).

3 Remove the rubber neatly over a length of 10 mm (using a knife, cigarette lighter or wire brush).

Fit an O-ring ① (Item no. 235844/8) pushing it onto the wire until seated against the bead. Fit the clevis piece ② onto the wire so that the end of the bare wire section contacts the base of the hole.

5 Use the crimping pliers ③ (Item no. 235845/5) and the corresponding crimping jaws to crimp the connector fully in one operation. When doing so, the crimping jaws should be positioned 1 mm from the 0-ring. Worn or deformed crimping jaws should not be used.

Important: The connectors must be fitted, relative to the cutting direction, as shown in the illustration. The diamond wire must be used to cut in one direction only (see arrows).

Fitting the connector (second end, opposite piece) and joining the connectors

 To fit and crimp the second part of the connector (opposite piece) proceed as described at steps 1 to 5.
Joining the connectors.

Twist the diamond wire, approx. 1–1.5 turns per metre length of wire, in a counterclockwise direction (to the left) as seen when looking straight at the cut face of the end of the wire. Bring the connectors together and insert the pin (replacement pin, item no. 235842/2) using a hammer to drive it in flush.

Opening the connectors

■ Use a punch to drive the pin out of the connector. Replace the pin if it is badly worn (replacement pin, item no. 235842/2).

Instructions for fitting DS-WS repair sleeves (Item no. 235841/4)

Fitting a repair sleeve (first end)

Important: The service life of the connectors is several times that of the repair sleeve.

(a) Clamp the diamond wire in the vice and use an angle grinder to cut off the end 13 mm from the first bead.

^(B) Use pliers to remove the spring (pull out).

• Remove the rubber neatly over a length of 10 mm (using a knife, cigarette lighter or wire brush).

● Fit an O-ring ① (Item no. 235844/8) pushing it onto the wire until seated against the bead. Fit a repair sleeve ③ onto the wire so that the end of the bare wire section contacts the base of the hole.

G Use the crimping pliers ③ (Item no. 235845/5) and the corresponding crimping jaws to crimp the connector fully in one operation. When doing so, the crimping jaws should be positioned 1 mm from the O-ring. Worn or deformed crimping jaws should not be used.

Fitting a repair sleeve (second end)

Proceed as described at steps (A) to (C).

■ Twist the diamond wire, approx. 1–1.5 turns per metre length of wire, in a counterclockwise direction (to the left) as seen when looking straight at the cut face of the end of the wire.

■ Proceed as described at steps **D** to **G**.



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