

CLAIMS

1. Hairdryer (1) comprising
 - a casing (2) provided with a handle (3) and a main body (4) having a main through cavity (13) provided with at least one rear suction opening (5) and a front outlet opening (6);
 - at least one electric motor (20) and a fan (21) enclosed in said main through cavity (13), said fan (21) being drivable in rotation by said electric motor (20) to generate an air flow (F) with a settled speed inside said main through cavity (13);
 - an inner diffuser (15) arranged inside said main through cavity (13) at said front outlet opening (6) and provided with a respective through cavity (14) having a passage section decreasing towards said front outlet opening (6) in order to increase the speed of said air flow (F), said main body (4) comprising at least one side opening (7) at said front outlet opening (6) to enable air from outside coming into said main through cavity (13) due to drag effect generated by said air flow (F) coming out from said inner diffuser (15) at high speed so that an air output flow rate (Q2) from said front outlet opening (6) is increased;

characterized in that it comprises an outer outlet element (30) that can be reversibly coupled to said front outlet opening (6) of said main body (4) in an assembly configuration (A) and comprising an outflow tubular portion (31) of the air flow (F) and a coupling tubular portion (32) adapted to be inserted in said front outlet opening (6) and long enough to close said at least one side opening (7) in order to prevent air from entering in said main through cavity (13) due to drag effect and to have an air output flow rate from the outflow tubular portion (31) that is substantially equal to an air initial flow rate (Q1) generated by said fan (21).
2. Hairdryer (1) according to claim 1, wherein said inner diffuser (15) comprises an inner tubular portion (17) provided with an inlet opening (17a) having a first transversal passage section for said air flow (F) entering and an outer tubular portion (18) having at least an outflow mouth (16) with a second transversal passage section for said air flow (F) coming out, said second transversal passage section having a surface equal to 30-50% of a surface of said first transversal passage section.
3. Hairdryer according to claim 2, wherein said outer tubular portion (18) of said inner diffuser (15) comprises a plurality of outflow mouths (16) arranged angularly spaced about a longitudinal axis (X) of said main body (4), transversal passage sections of each

outflow mouth (16) having overall surface equal to a surface of said second transversal passage section.

4. Hairdryer (1) according to claim 3, wherein said outer tubular portion (18) of said inner diffuser (15) comprises a plurality of outflow ducts (26) provided with respective outflow mouths (16) and arranged radially around said longitudinal axis (X), two adjacent outflow ducts (26) being separated by a respective groove (19), in particular convergent towards said front outlet opening (6).
5. Hairdryer (1) according to any preceding claim, wherein said main body (4) comprises a plurality of side openings (7) made on a side wall of a front portion (4a) of said main body (4).
6. Hairdryer (1) according to any preceding claim, wherein said outflow tubular portion (31) of said outer outlet element (30) has inner section decreasing and convergent towards a respective outflow opening (31a).
7. Hairdryer (1) according to any of claims 1 to 5, wherein said outflow tubular portion (31) of said outer outlet element (30) has inner section increasing and divergent towards at least one respective outflow opening.
8. Hairdryer (1) according to any preceding claim, wherein said main body (4) comprises a plurality of rear suction first openings (5) made on a respective rear portion (4b) of said main body (4).
9. Hairdryer (1) according to any preceding claim, wherein said main body (4) is substantially cylindrical shaped and extends along a longitudinal axis (X).
10. Hairdryer (1) according to any preceding claim, comprising air heating means (22), in particular comprising resistive wire means adapted to produce heat when supplied by an electric current.
11. Hairdryer (1) according to claim 10, wherein said heating means (22) are located inside said main body (4) downstream said electric motor (20) and said fan (21) with reference to the air flow (F).
12. Hairdryer (1) according to claim 10, when appended to claim 3, wherein said heating means (22) are located in said inner tubular portion (17) of said inner diffuser (15).
13. Hairdryer (1) according to any preceding claim, comprising control means (25) to control at least one rotation speed of said electric motor (20) and adjust the speed of said air flow (F) inside the main through cavity (13) before the inner diffuser (15).