

Title (en)  
HEAT EXCHANGER

Title (de)  
WÄRMETAUSCHER

Title (fr)  
ÉCHANGEUR DE CHALEUR

Publication  
**EP 3596406 A1 20200122 (EN)**

Application  
**EP 18768251 A 20180319**

Priority  
• US 201762472842 P 20170317  
• US 2018023160 W 20180319

Abstract (en)  
[origin: WO2018170514A1] A heat exchanger for an appliance having a burner includes at least one tubular heat exchanger section extending from an inlet end aligned with the burner and an outlet end. The inlet end includes a first portion having a first inner diameter and a second portion having a second inner diameter greater than the first diameter.

IPC 8 full level  
**F24H 3/00** (2006.01); **F24H 3/02** (2006.01); **F24H 3/06** (2006.01); **F24H 3/08** (2006.01); **F24H 9/00** (2006.01); **F28F 1/00** (2006.01); **F28F 9/00** (2006.01); **F28F 9/02** (2006.01); **F28F 9/04** (2006.01); **F28F 9/16** (2006.01); **F28F 9/18** (2006.01); **F28F 21/00** (2006.01); **F28F 21/04** (2006.01); **F28F 21/08** (2006.01)

CPC (source: EP US)  
**F23D 14/02** (2013.01 - EP US); **F23D 14/126** (2021.05 - EP US); **F24H 3/087** (2013.01 - EP); **F24H 9/1881** (2013.01 - EP); **F28D 1/024** (2013.01 - EP); **F28D 1/0477** (2013.01 - EP); **F28D 7/082** (2013.01 - EP); **F28F 1/006** (2013.01 - EP); **F28F 9/0278** (2013.01 - EP); **F28F 9/028** (2013.01 - EP); **F28F 9/167** (2013.01 - EP); **F28F 9/185** (2013.01 - EP); **F28F 21/04** (2013.01 - EP); **F23D 2203/005** (2013.01 - EP US); **F24H 3/087** (2013.01 - US); **F24H 9/1881** (2013.01 - US); **F28D 2021/0024** (2013.01 - EP); **F28F 9/167** (2013.01 - US); **F28F 21/04** (2013.01 - US); **F28F 2270/00** (2013.01 - EP)

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**WO 2018170514 A1 20180920**; CA 3055303 A1 20180920; CN 110709646 A 20200117; EP 3596406 A1 20200122; EP 3596406 A4 20210428; US 2019368726 A1 20191205

DOCDB simple family (application)  
**US 2018023160 W 20180319**; CA 3055303 A 20180319; CN 201880017558 A 20180319; EP 18768251 A 20180319; US 201816487932 A 20180319