



SmartHeat[®]

电动快速除污器 Rapid Electric Dirt Separator



概述

Overview

电动快速除污器是供暖系统中用来清除和过滤管道中杂质和污垢，保持系统内水质洁净，减少阻力，保护和防止管道堵塞的设备。在电动快速除污器中，原水由进水口进入筒体，经过滤网过滤后，水流由出水口流出并进入系统，污垢则沉积于除污器底部，经由排污口排出。电动快速除污器根据流体动力学原理，采用最为合理的结构形式研发设计而成，使之运行阻力减到最小，可在系统不停机的情况下进行反冲洗和排污，确保系统的正常运行。目前，电动快速除污器采用定时、压差和手动三种控制方式，应用户要求也可生产手柄式操作的快速除污器。

Rapid electric dirt separator is intended for the filtration and removal of impurities and dirt in the pipelines of heating system, in order to maintain clean water in the system, thereby reducing pipe resistance and preventing blockage. The electric dirt separator runs a flow process like this: raw water flows from the inlet into the cylinder, going through the strainer, and outflows from the port and into the system, while the dirt settles to the bottom of the dirt separator and discharges from the port. The rapid electric dirt separator is designed with an optimum construction based on the principles of fluid dynamics, with minimal operating resistance, so the dirt separator can make back flush and discharge while the system is in operation, thus ensuring the normal operation of the system. Currently, rapid electric dirt separator takes three modes of control: timing, differential pressure and manual control, and the rapid dirt separator featuring handle operation can also be supplied to user's requirements.

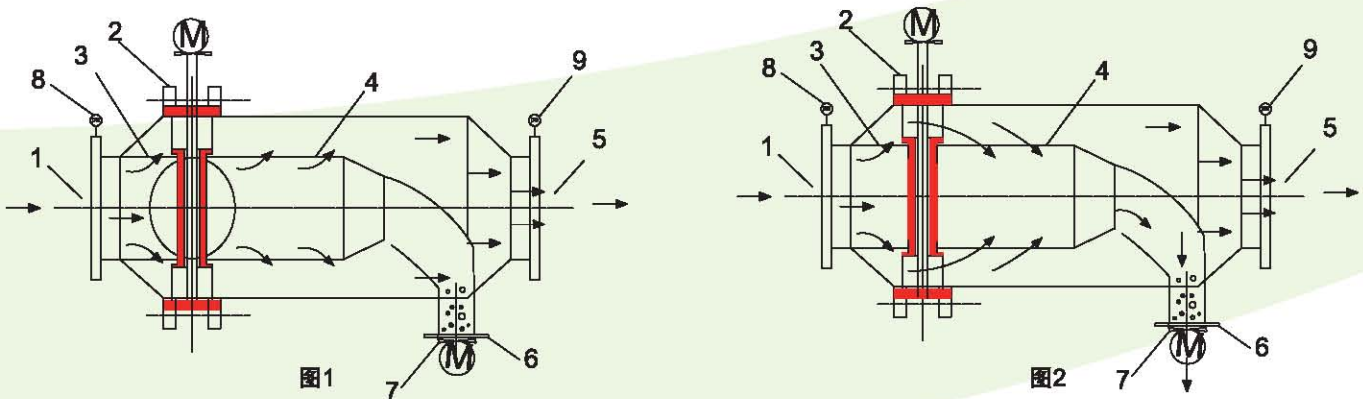
特点 Features

- 安装方便，可直接安装在管道上，适用于多种工艺条件。
 - 产品小体积，低造价，易于维修。
 - 滤网可拆卸，方便维护。
 - 自动化程度高，便于管理，可实现无人监管运行。
 - 利用主管道水压进行反冲洗，无须设反冲洗水源，压力损失小，节约用水量。
 - 应用广泛，是保证用水设备安全运行的一种实用、简便、可靠的解决方案。
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- Easy installation; it can be directly installed on pipelines, and fit for operating in a variety of process conditions.
 - Small size, low cost, and easy maintenance.
 - Removable strainer for easy maintenance.
 - Highly automatic operation for the ease of management – operation without monitoring.
 - Back flush by using the pressure of water header, so there is no need to provide the water supply for backwash, and little pressure loss, thus reducing water usage.
 - Widely used; it's a practical, simple and reliable solution to ensure the safe operation of water equipment.

性能参数 Performance Data

- 设计压力：1.6Mpa
 - 设计温度：180°C
 - 过滤精度：2mm
 - 法兰标准：GB/T 9119
 - 设计流量：≤1160m³/h
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- Design Pressure: 1.6Mpa
 - Design Temperature: 180°C
 - Filtration Precision: 2mm
 - Flange Standard: GB/T 9119
 - Design Flow: ≤1160m³/h

工作原理 Operating Principle



正常工作过程 Normal Operating Process

见图1，含有杂质的原水从进水口1进入前过滤网3，此时电动异型阀2处于开启状态，排污阀7处于关闭状态，一部分水通过前滤网3流向出水口5，一部分水通过蝶阀2进入后滤网，经后滤网过滤后流向出水口5。杂质集中沉积在排污口6处。

Refer to Fig.1, where the raw water with impurities flows from inlet 1# into the pre-strainer 3#, when the electric alien valve 2# is open and the drain valve 7# is closed, and then part of the water flows through the pre-strainer 3# to the port 5# for discharge, while the remaining part is flowing through the butterfly valve 2# into the post-strainer, before to the water port 5#, and the Impurities is deposited at the port 6# for discharge.

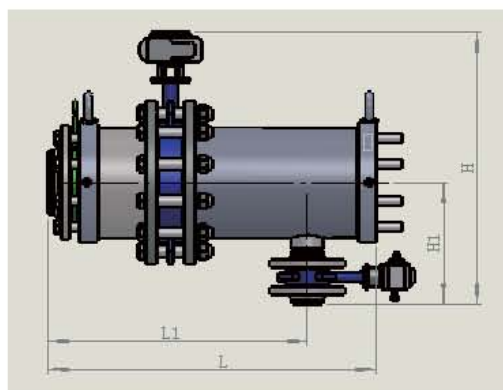
自动反冲洗及排污过程 The process of automatic back flush and discharge

见图2，当工作一段时间后，排污口6处杂质增多，阻力增大，进、出水口的压力传感器8、9将压差信号传至于控制器，当压差达到设定值时，控制器控制电动排污阀7开启，电动异型蝶阀2关闭。此时，水从进水口1进入前滤网3，全部经3过滤后，一部分水流向出口5，一部分水在差压作用下，由后滤网4外侧流入内侧，起到反冲洗作用，将杂质和污物冲向排污口6并排出。整个排污过程中，大部分介质仍然经过出口5进入供暖管路系统，无需停机。排污结束后，进入正常过滤工作过程。

Refer to Fig.2, after the separator has operated for some time, the amount of impurities increases at the discharge port 6#, resulting in resistance increase, where the water inlet and port pressure sensors 8# and 9# transmits the signal of differential pressure to the controller. When the differential pressure reaches the setting value, the controller shall open the electric discharge valve 7# and close the electric butterfly valve 2#. At this point of time, the water flows from inlet 1# into the pre-strainer 3#, and then part of the water flows to port 5#, while the remaining part, under the action of the differential pressure, flows from the outside of post-strainer 4# into the inside for backflushing the impurities and dirt toward the port 6# for discharge. In the discharge process, most of the media is still going through port 5# and into the heating pipeline system, with no need to shut down the system. After the discharge is completed, returns to normal operation of the filtration process.

基本型号及尺寸 Typical Models and Dimensions

型号 Model	L mm	L1 mm	H mm	H1 mm	额定流量m³/h Rated Flow m³/h	重量 Kg Weight Kg
KC-D80P16	638	495	585	272	67	83
KC-D100P16	712	544	615	272	88	114
KC-D125P16	705	582	633	290	149	125
KC-D150P16	820	647	680	304	212	150
KC-D200P16	922	709	834	388	367	176
KC-D250P16	1037	819	974	427	592	213
KC-D300P16	1104	891	1076	468	858	259
KC-D350P16	1231	1008	1123	486	1160	334



CLEAN TECHNOLOGY

BENEFITTING THE ENVIRONMENT



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