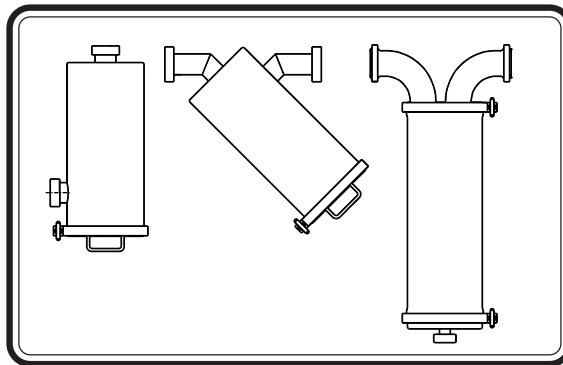




# INSTRUCTION MANUAL

## Strainer models

**K210 K220 K230 K245 K260 K630**



Model	
Serial no. <sup>1</sup>	
Data sheet	

1) Please quote the serial number when ordering spares.

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## Introduction

Thank you for purchasing the MDM PUMPS LTD stainless steel strainer.

This instruction manual describes how to install, assemble, maintain, repair and dismantle your strainer. **Please retain it safely for future reference.**

## Application

The strainer should only be used for the conditions as specified in the data sheet, ie duty and liquid details. In addition it has been designed for use with industry recognised cleaning solutions.

Unless otherwise stated in the data sheet, the maximum allowable working pressure of the strainer is 7 bar and the water jacket (where fitted) is 3.5 bar (the strainer is hydrostatically pressure tested to 1.5 times these values).

## Safety

Safety instructions given in this manual noncompliance with which would affect safety are identified by the following symbol:



Safety instructions which shall be considered for reasons of safe operation of the strainer and/or protection of the strainer itself are marked by the sign:

ATTENTION



If the strainer is located in a potentially explosive atmosphere, the user is to ensure that:

- 1) the strainer body (stainless steel 316L) is corrosion resistant to the fluids used;
- 2) all fluids are compatible with the seals and that the seals are replaced if damaged;
- 3) there is integrity of the static seal and it is changed at appropriate intervals;
- 4) there is no build up of explosive gases in the strainer;
- 5) the fluid temperature and therefore the strainer's surface temperature is within suitable limits to avoid risk of ignition of the surrounding atmosphere; and
- 6) there is suitable earthing.

## Design & Function

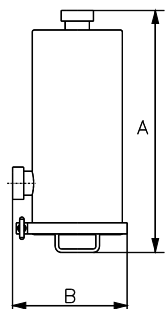
The hygienic range of stainless steel pipeline strainers are ideal for applications where ease of cartridge removal and a robust construction are required. They are designed to:

- Prevent foreign bodies damaging or blocking process equipment, eg flow meters, valves and pumps.
- Remove undesirable material eg pips, fruit skins, wasps and gaskets.
- Control the maximum size of solids and undissolved ingredients.

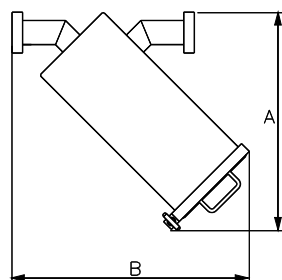
The strainers are available in various sizes and for either a right-angle or in-line flow. They can be supplied to a specified internal finish, and with standard interchangeable filtering cartridges of either mesh or wedge wire from 3mm to 0.07mm aperture, or with 2mm or 3mm diameter holes.

## Dimensions

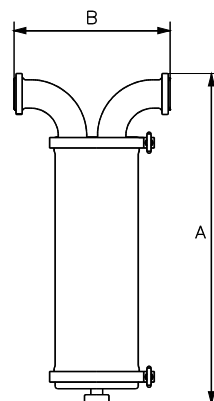
Right-angle  
K210/K220/K230/  
K245/K260



In-line  
K210/K220/K230

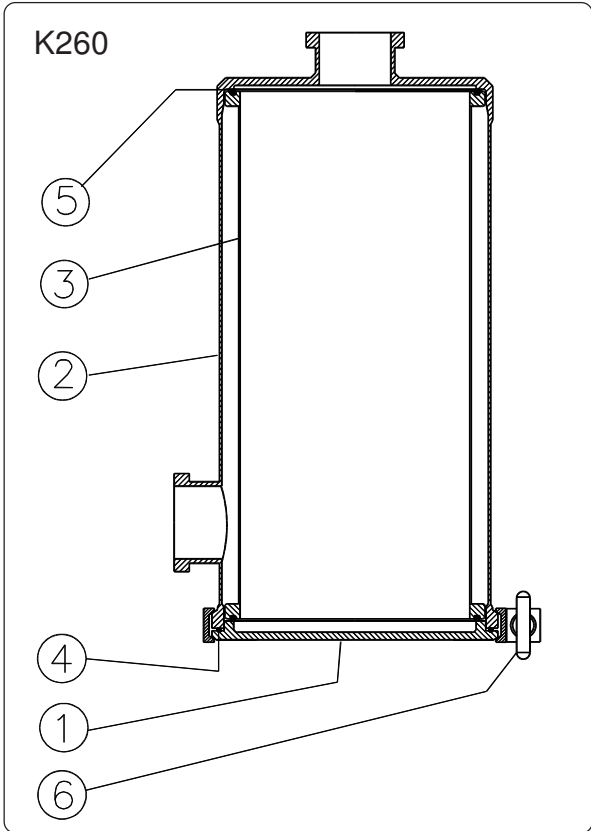
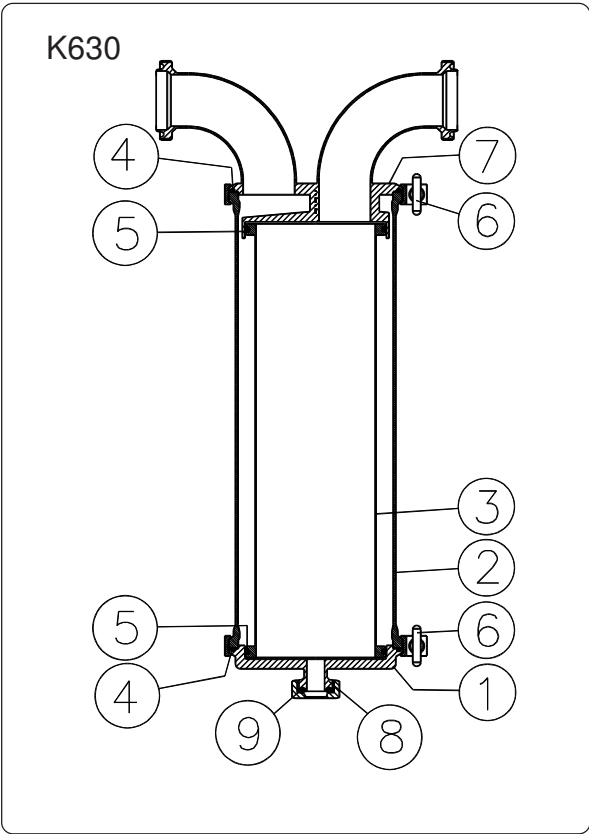
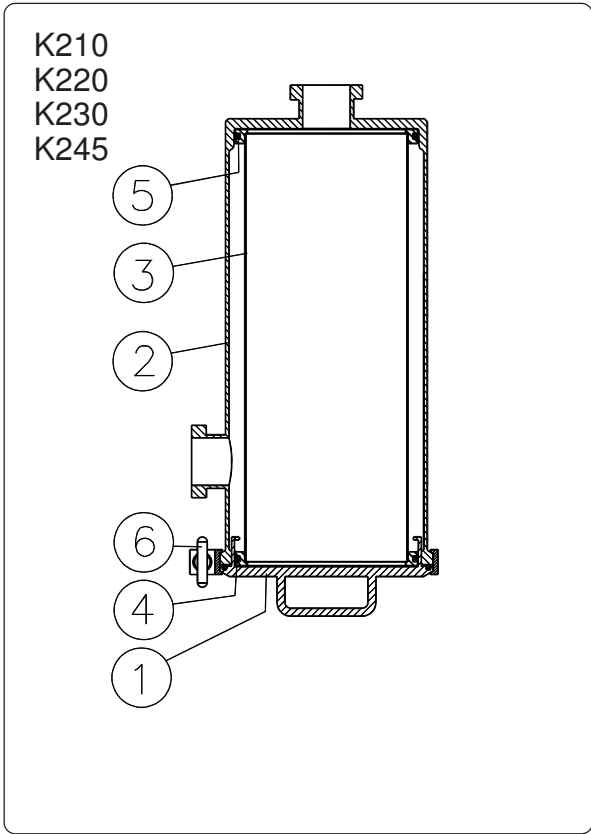


K630



Model	'A' mm	'B' mm
K210 right-angle	280	120
in-line	200	220
K220 right-angle	470	170
in-line	425	420
K230 right-angle	550	250
in-line	500	550
K245 right-angle	720	340
K260 right-angle	880	450
K630	825	374

These diagrams show the approximate overall dimensions. If you require more detailed information, please contact MDM PUMPS LTD.



Item	Description
1	Lid
2	Body
3	Cartridge
4	Lid joint ring
5	Cartridge joint ring
6	Clamp ring
7	Port assembly lid (K630 only)
8	Drain (K630 only)
9	Drain joint ring (K630 only)

Notes: - For product codes of the above items, please refer to the parts list on page A4.

## Installation

Before installation check that the strainer is in good condition and that there are no signs of damage or deterioration. Connect the strainer so that it is mounted vertically with the lid at the lowest point. This will allow the debris collected within the cartridge to drain out of the strainer when the lid is removed, so reducing the possibility of spillage into the outlet pipe.

- 1) Connect the inlet and outlet pipelines, ensuring that they are adequately supported and aligned with brackets - the strainer is **not** designed to support or take the weight of pipework. The outlet is indicated by a label on the strainer body.

### ATTENTION

The strainer cartridge can be damaged by back flow through it - ensure that the liquid flows through the strainer in the correct direction (see the outlet label).

- 2) For strainers fitted with water jackets, connect the jacket inlet and outlet pipes. Ensure that the liquid is flowing through at the correct pressure (maximum pressure 3.5 bar).
- 3) Ensure that all pipe connections and clamp ring handle(s) are tight, and any drains (where fitted) are closed.

## Operation



- Warnings:
- Ensure that the strainer is correctly installed before operation.
  - If the lid and the inlet/outlet connections are not correctly fitted, there is a risk of contact with the fluid and of the fluid being ejected.
  - Do not exceed the maximum allowable working pressure of the strainer or the water jacket (where fitted).
  - Wear the appropriate personal protection equipment.

## Cleaning

The frequency of cleaning depends on the level of contamination. As an initial guide, the cartridge should be cleaned at the end of each shift. This can then be adjusted to suit the particular process.

### ATTENTION

The cartridge must never be allowed to block up with debris as this will seriously damage it.

The type of cleaning chemicals to be used, their concentration, temperature and period of contact will be determined by:

- a) The product.
- b) The level of contamination.
- c) The method of cleaning.
- d) Compatibility with the materials inside strainer:
  - SS316L
  - Seal materials (see the data sheet).

- 1) Remove the cartridge from the strainer.
- 2) Wash off loose debris under a low pressure tap.
- 3) If the debris is difficult to remove, soak the cartridge in a caustic solution bath, then wash off the debris when loose.

### ATTENTION

To avoid damage to the cartridge do **not** use high pressure hoses, backflushing or metal implements to remove debris.



When hazardous chemicals are handled, the appropriate personal protection equipment should be worn.

## Monitoring

Monthly: Check the strainer for leaks.

## Spare Parts

The following parts may need replacing during the lifetime of the strainer:

LINE	PART	AVERAGE EXPECTED LIFE	SIGNS OF FAILURE
1 <sup>st</sup>	Lid joint ring(s)	2 years *	Leaking from around the clamp ring.
1 <sup>st</sup>	Cartridge joint rings	2 years *	Poor straining/damage to the joint rings.
1 <sup>st</sup>	Drain joint ring (where applicable)	2 years *	Leaking from around the drain.
2 <sup>nd</sup>	Cartridge	2 years *	Poor straining/damage to the cartridge.

- Notes:
- \* The average expected lives are subject to the full service conditions being disclosed, the seals being appropriately selected and approved parts being used.
  - For Stock Codes of the above items, please refer to the parts list on page A4.
  - When ordering spare parts, please quote the strainer serial number, which is stamped on the lid and the nameplate. It is also written on the front of these instructions and the data sheet.

## Dismantling the strainer

If the strainer is in contact with hazardous liquids, then it must be decontaminated before dismantling. The appropriate personal protection equipment should be used.

1) Disconnect the strainer.



Risk of contact with liquid.

2) Unscrew the clamp ring handle by several turns and lift the clamp ring off the strainer body.

3) Remove the cartridge. The cartridge and seals are now exposed and can be cleaned and inspected.

## Reassembling the strainer

Please refer to page A3 for the assembly drawing.

To ease the fitting of the cartridge, lubricate the cartridge joint rings with a very slight smear of diluted soft soap solution.

## Faults - causes & remedies

This section lists the common faults. For further advice please contact MDM PUMPS LTD or your supplier.

PROBLEM	CAUSE	REMEDY
1) Leaking lid joint ring.	Clamp ring not located correctly. Incorrectly fitted seal. Damaged seal. Violent pressure fluctuations in the system.	Ensure that the clamp ring is correctly located and is tight. Check that the seal is correctly fitted and is clean. Replace the seal. Reduce the violent pressure fluctuations.
2) Leaking cartridge joint ring.	Incorrectly fitted seal. Damaged seal.	Check that the seal is correctly fitted and is clean. Replace the seal.
3) Debris passing through strainer.	Incorrectly fitted cartridge. Damaged cartridge.	Check that the cartridge is correctly fitted. Replace the cartridge.
4) Reduced flow.	Cartridge blocked.	Clean or replace the cartridge.



Manufacturers of Stainless Steel Pumps,  
Vent Valves & Strainers for hygienic applications

Founded in 1922, MDM PUMPS LTD is registered to BS EN ISO 9001

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