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OBSOLETE DOCUMENT
Technical Reference Only

NORGREN

®OLYMPIAN OIL REMOVING FILTERS

SERIES F51

TYPES CDS4 AND CDS8
'PURAIRE' PLUG-IN DESIGN FOR ¼ & ⅜
(8mm & 10mm) NOMINAL BORE PIPING INSTALLATIONS

Max Pd 10 Bar.

FEATURES

- Olympian Design permits units to be removed from the line for extremely rapid servicing or replacement without disturbing connected pipework.
- Very High Efficiency—PURAIRE FILTERS are capable of a high degree of oil mist removal. Independent Tests carried out in accordance with BS 3928: 1969 show that the penetration of the PURAIRE filter is less than 0.001% (efficiency 99.999%). The oil removal efficiency is of the same order and oil mist contamination in outlet air will normally comply with the limits specified in BS 4275: 1974.
  Pre-Filter element removes dirt.
  Filtration/Separation Element converts oil and water mist to liquid form and removes sub-micron particles. Liquids built up inside element are eventually forced through to outer wall. A porous plastic sock is fitted to prevent re-transmission of these larger droplets as they drain off the outer surface of the element and fall into a quiet zone at the bottom of the bowl.
- Automatic-Drain or Manual-Drain Models available.
- Low-Maintenance—Filter elements intended to provide full protection for a period of up to 12 months depending on operating conditions and flow rate.

FOR SITUATIONS WITH HEAVY WATER CONTAMINATION FIT F13 PREFILTER. SEE PAGE 3.

ORDER TABLE

REDIMOUNT FILTERS ready for immediate installation.
For Basic Units see separate table on page 3.

PORT SIZE	TRANSPARENT BOWL		FLOW RATING @ 6.3 bar
	Automatic Drain	Manual Drain	
G¼ *	F51-204-A0TD	F51-204-M0TD	7 dm³/s
G⅜	F51-308-A0TD	F51-308-M0TD	11 dm³/s
	METAL BOWL		
G¼ *	F51-204-A0MD	Not Recommended	7 dm³/s
G⅜	F51-308-A0MD		11 dm³/s

** If ⅜ porting required substitute 3 for 2 at 4th digit.*

SPECIFICATIONS

PORT SIZES: G¼, G⅜
Standard ports to ISO 1179. Accepts ISO 228 (BS 2779) Parallel or ISO 7 (BS 21). For alternative threads and special tubing connectors, consult factory.

BOWLS: CLEAR TRANSPARENT PLASTIC (Standard) *
METAL (Optional) †

MAXIMUM PRESSURE:
Transparent Bowl: 10 bar (150 p.s.i.) Standard
Metal Bowl 16 bar (250 p.s.i.) Optional

MAXIMUM TEMPERATURE:
Transparent Bowl: 50°C (120°F)
Metal Bowl: 80°C (175°F)

MINIMUM TEMPERATURE:
Manual Drain: −6°C (20°F)
Automatic Drain: 2°C (38°F)

MAXIMUM AIR FLOW RATE at 6.3 bar (90 p.s.i.)
Type CDS4: 7 dm³/s (14 c.f.m.)
Type CDS8: 11 dm³/s (22 c.f.m.)

AUTOMATIC OR MANUAL DRAIN
**To BS 6005: 1981*

†In addition to optional metal bowls, bodies with figure 3 cast below outlet port will accept Orientable metal bowls.

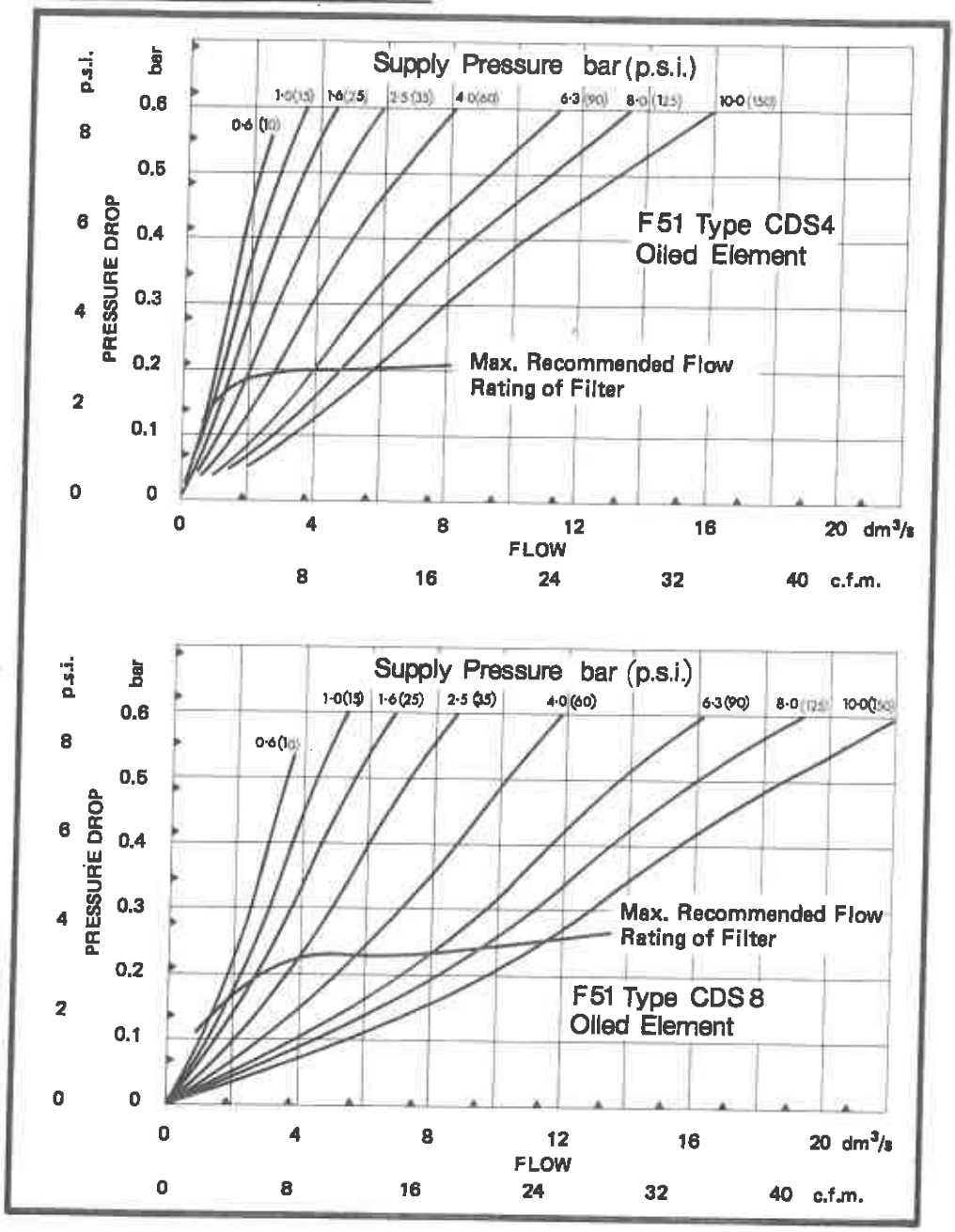
WHERE TO USE

For compressed air and certain non-corrosive gases where exceptionally clean air is required free from oil. Consult factory for gases other than air or nitrogen.

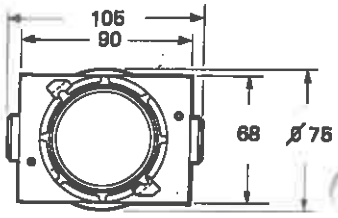
Applications include:
- Paint Spraying
- Protection of Air Bearings
- Pneumatic Control Instrumentation
- Protection of Fluidic Elements
- Printing and Paper Separation
- Blow Guns and Ejection Nozzles for scientific equipment.
- Processing Compressed Air Supply to Blow Moulding Plastics
- Gas Burners
- Adsorption Air Dryers
- Vacuum Pumps
- Production and Packaging of fine chemicals, photographic materials and electrical components.

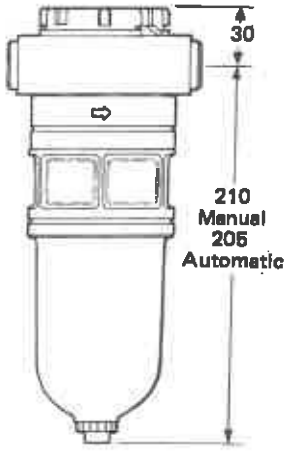
Use metal bowl in situations where the unit may be exposed either internally or externally to substances that are incompatible with polycarbonate.

TYPICAL FLOW CHARACTERISTICS

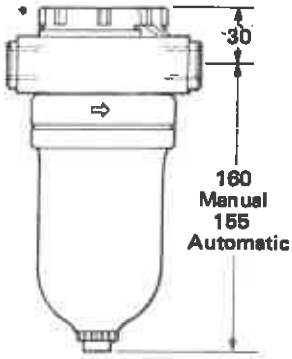


DIMENSIONS (mm)





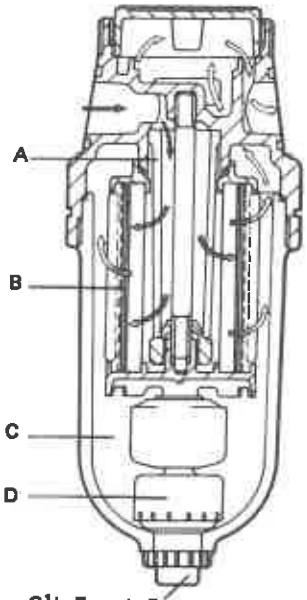
TYPE CDS8



TYPE CDS4

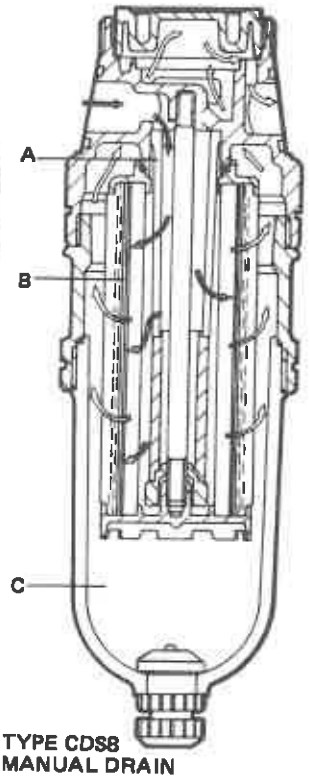
OPERATION

The 5 micrometre Pre-Filter element (A) removes coarse contaminants and the main Filtration/Separation element (B) converts oil and water mist to liquid form and removes sub-micron particles. Liquids built up inside element are eventually forced through to outer wall. A porous plastic sock is fitted to prevent retransmission of these larger droplets as they drain off the outer surface of the element and fall into a quiet zone (C) at the bottom of the bowl. The drain mechanism, on auto-drain models, is contained in a sealed unit (D) and is designed to open even when there is no air pressure in the line, permitting overnight draining. The liquid level is automatically dumped when it reaches a predetermined level. Liquid may also be dumped manually on auto-drain models by pushing up the needle inside the drain outlet using a blunt ended rod. On manual-drain models it is removed by simply opening the manual drain-cock.



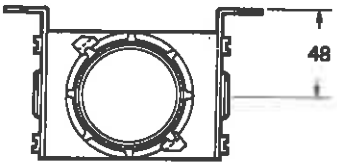
G¹/₈ Female Pipe Thread for 5mm minimum bore waste pipe and connector.

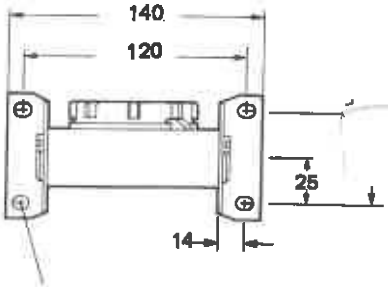
TYPE CDS4
AUTOMATIC DRAIN



TYPE CDS8
MANUAL DRAIN

BRACKET MOUNTING (mm)





SUITABLE FOR
ø8 or ⁵/₁₆" BOLTS

THE OLYMPIAN SYSTEM – HOW IT WORKS

Provides a unique method of stocking, installing and replacing compressed air equipment.

Principal Components are:

1. BASIC UNITS

Filter, Filter-Regulator, Regulator, Oil-Fog or Micro-Fog Lubricator with UNTHREADED inlet and outlet ports.

2. UNIDAPTORS

Single, Double or Treble Unidaptors with selected pipe thread provide the frame ready to receive the Basic Unit. Unidaptors can be installed in a pipe system being fitted or extended before the final selection of Basic Units is made.

3. REDIMOUNTS

Comprise Single Unidaptor with selected Basic Unit installed ready for immediate assembly onto a machine or into a pipe system.

The Basic Unit can be very quickly removed from the UNIDAPTOR for servicing.

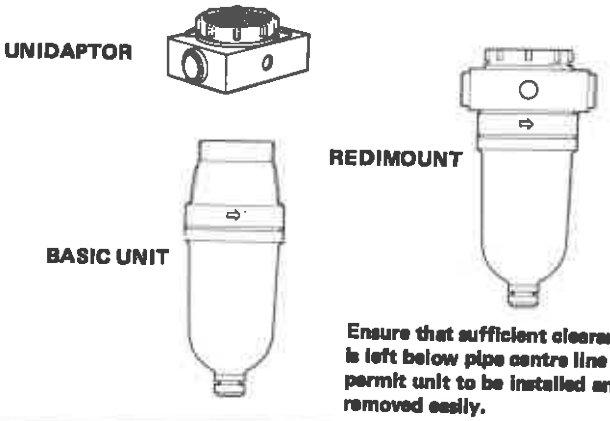
a. Shut off and bleed down the air supply.
b. Remove Pressure Gauge (if fitted).
c. Unscrew the clamp ring which jacks down the unit through the Unidaptor.
d. Remove the unit.

To replace the Unit – A matter of moments!

*a. Ensure clamp ring is in position under retaining lugs.
b. Check Unit 'O' Ring Seals are in position at inlet and outlet ports.
c. Check air flow directional arrows line up.
†d. PLUG IN UNIT. Screw up clamp ring hand tight to make the seal.
e. Replace Pressure Gauge (if required).
f. Turn on the air supply.

**The lugs cause the Basic Unit to be forced out of the Unidaptor when unscrewed so avoiding the possibility of friction Hang-Up in the line – an important safety feature.*

†*An interference fit prevents the units being installed incorrectly.*



Ensure that sufficient clearance is left below pipe centre line to permit unit to be installed and removed easily.

ACCESSORIES AND REPAIR KIT

T13 SHUT-OFF VALVE Exhaust Type with provision for locking in OPEN or CLOSED position. Exhaust Safety Features.	G¼ T13-200-E2AD G⅜ T13-300-E2AD G½ T13-400-E2AD
REAR ENTRY BRACKET KIT Two brackets, flush inserts and necessary screws. Enables Control Unit to be fixed neatly to a machine, eliminating untidy pipework.	18-026-997
WALL BRACKET KIT Two brackets and necessary screws and nuts for mounting Redimount to vertical surface.	18-001-987
MAINTENANCE KITS For Type CDS4 For Type CDS8	 F51-100A F51-120A
AUTO-DRAIN KIT For simple conversion from manual to automatic drain.	3000-04
BOWL GUARD KITS (Bowl Guard and Retainer) Auto Drain Models Manual Drain Models (Kit includes metal draincock and insert to replace plastic drain).	 18-012-983 18-012-982

BASIC FILTERS –

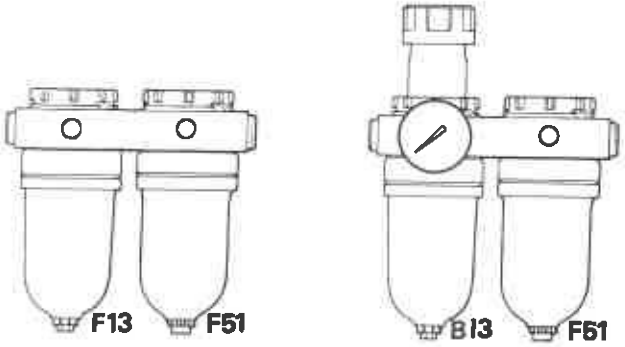
(For Replacement, also Build-Up of Combination Units)

The main component of a Redimount Filter. The Basic Filter has plain UNTHREADED inlet and outlet ports with 'O' ring seals on its tapered faces. These seal on mating faces in the Unidaptor when the filter is 'plugged-in'. THESE BASIC FILTERS CAN BE USED IN ¼ OR ⅜ UNIDAPTORS RESULTING IN A VERY SUBSTANTIAL REDUCTION IN NECESSARY SPARES HOLDINGS IN LARGE PLANTS.

ORDER TABLE

FLOW RATING	TRANSPARENT BOWL	
	Automatic Drain	Manual Drain
7 dm³/s 11 dm³/s	F51-004-A0TO F51-008-A0TO	F51-004-M0TO F51-008-M0TO
	METAL BOWL	
7 dm³/s 11 dm³/s	F51-004-A0MO F51-008-A0MO	Not Recommended

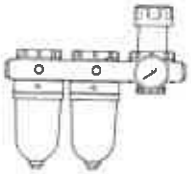
NORGREN OLYMPIAN INSTRUMENT AIR SETS



Norgren Olympian Instrument Air Sets consist of an F13 Filter (25 micrometre element) or a B13 Filter-Regulator (25 micrometre element) and F51 Puraire Filter in double yoke with optional Shut-Off Valve and Mounting Brackets. Coarse contaminants are removed by the Filter and the Regulator section regulates the primary air pressure to the required operating pressure. The Puraire Filter carries out the very fine filtration described in this brochure.

INTERNATIONAL PNEUMATIC SYMBOLS

CAUTION: If it becomes necessary to reduce the supply pressure to below 6.3 bar on Filter/Regulator/Oil Removing Filter Combinations the Regulator should be sited downstream of the Oil Removing Filter.



MAINTENANCE

It is recommended that any basic unit requiring maintenance or servicing be unplugged from the air line and replaced with a stand-by unit. This keeps machine or plant downtime to an absolute minimum and permits servicing to be carried out at the workbench unhurriedly and when convenient. To remove unit, shut off air and bleed down the air supply. Unscrew the clamp ring to jack down the unit through the Unidaptor. Ensure on assembly that the inlet and outlet port 'O' ring seals (1) have a light smear of grease.

Unscrew bowl (12) by hand and remove complete with gasket (11). Unscrew the main element (6 or 7) and remove complete with 'O' ring (5). Unscrew the pre-filter element retaining nut (4) and remove the pre-filter element (2) and also the spacer (3) on Type CDS8. Wash pre-filter element in paraffin and blow out thoroughly with compressed air. Renew if badly choked. Fit a new 'O' ring (5) and re-assemble main and pre-filter elements (also spacer on Type CDS8).

The main element may need renewing after one years service or if pressure drop becomes excessive. It is not designed to be cleaned. On automatic-drain models, the automatic-drain mechanism (9) and float (8) are not considered repairable items and should be replaced if defective. The float is not attached to the lower bowl and will drop out when the bowl is inverted. To remove mechanism, unscrew retaining ring (14) and withdraw from bowl. When replacing, ensure gasket (10) at bottom of mechanism is in place.

Clean bowl thoroughly in soapy water. DO NOT USE SOLVENTS AS THEY WILL DESTROY THE BOWL.

Note: Should the filter performance deteriorate after a short period, the 'O' ring (5) may be faulty and should be renewed. It is recommended that a new pre-filter element (2) is fitted whenever the main filter (6 or 7) is replaced.

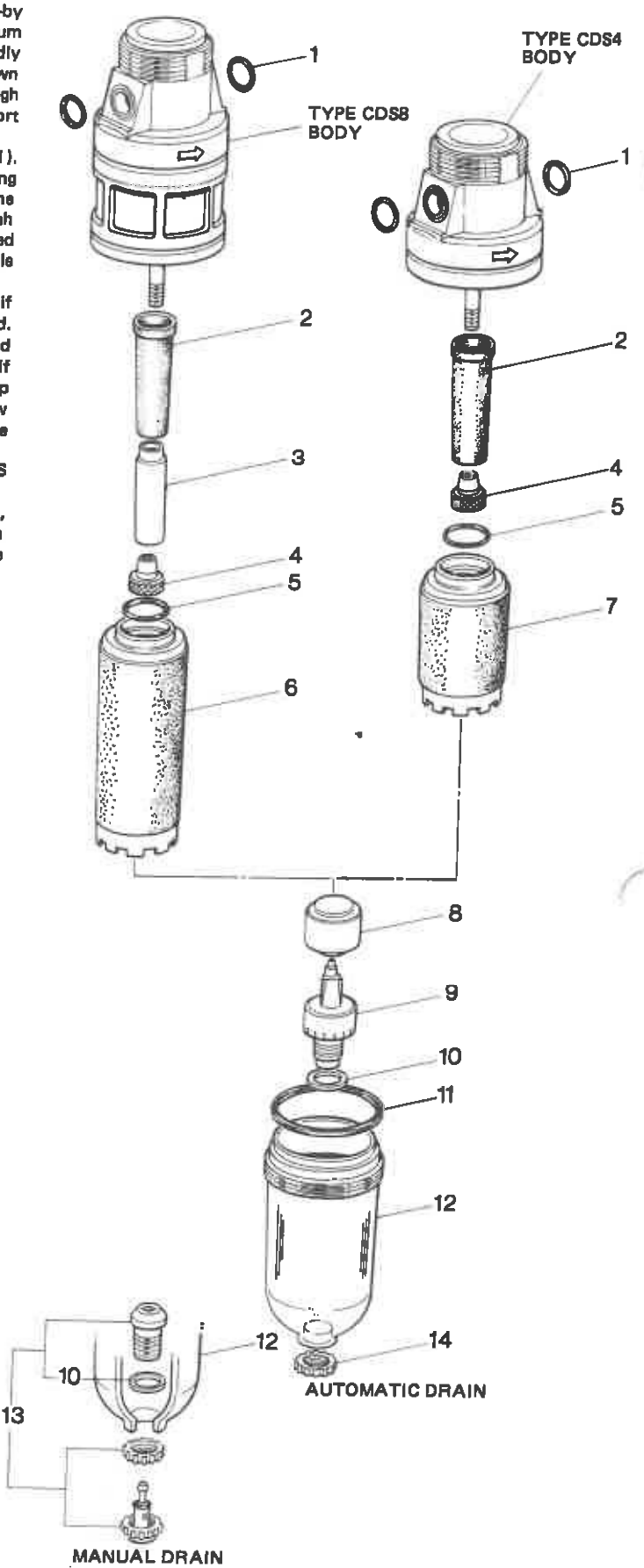
PARTS

Gasket Kit		F51-GK
Comprises:		
1	'O' Ring, port seals (2 off)	2306-18
5	'O' Ring, filter element	1602-01
10	Gasket, drain	2811-01
11	Gasket, bowl	2811-37
Maintenance Kit		
	Type CDS4	F51-100A
Comprises:		
	Gasket Kit	F51-GK
2	Pre-Filter Element	3698-02
—	Element Kit	5350-99
Maintenance Kit		
	Type CDS8	F51-120A
	As F51-100A but with Element Kit in place of 5350-99	5350-98
Auto-Drain Kit		3000-04
Comprises:		
8	Float	3003-52
9	Automatic-Drain (incl. Gasket 10)	3000-03
14	Retaining Ring	2797-01
Element Kit		
	Type CDS4	5350-99
Comprises:		
7	Main Filter Element	
5	'O' Ring	
Element Kit		
	Type CDS8	5350-98
Comprises:		
6	Main Filter Element	
5	'O' Ring	

FURTHER REPLACEMENT PARTS

3	Spacer	5565-01
4	Nut	5566-01
12	Transparent Bowl	5229-99
—	Transparent Bowl and Draincock	5229-50
—	Metal Bowl	5285-97
13	Draincock Assembly Kit	664-84

WHEN ORDERING SPARES QUOTE MODEL NUMBER AND KIT OR PART DESCRIPTION.



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