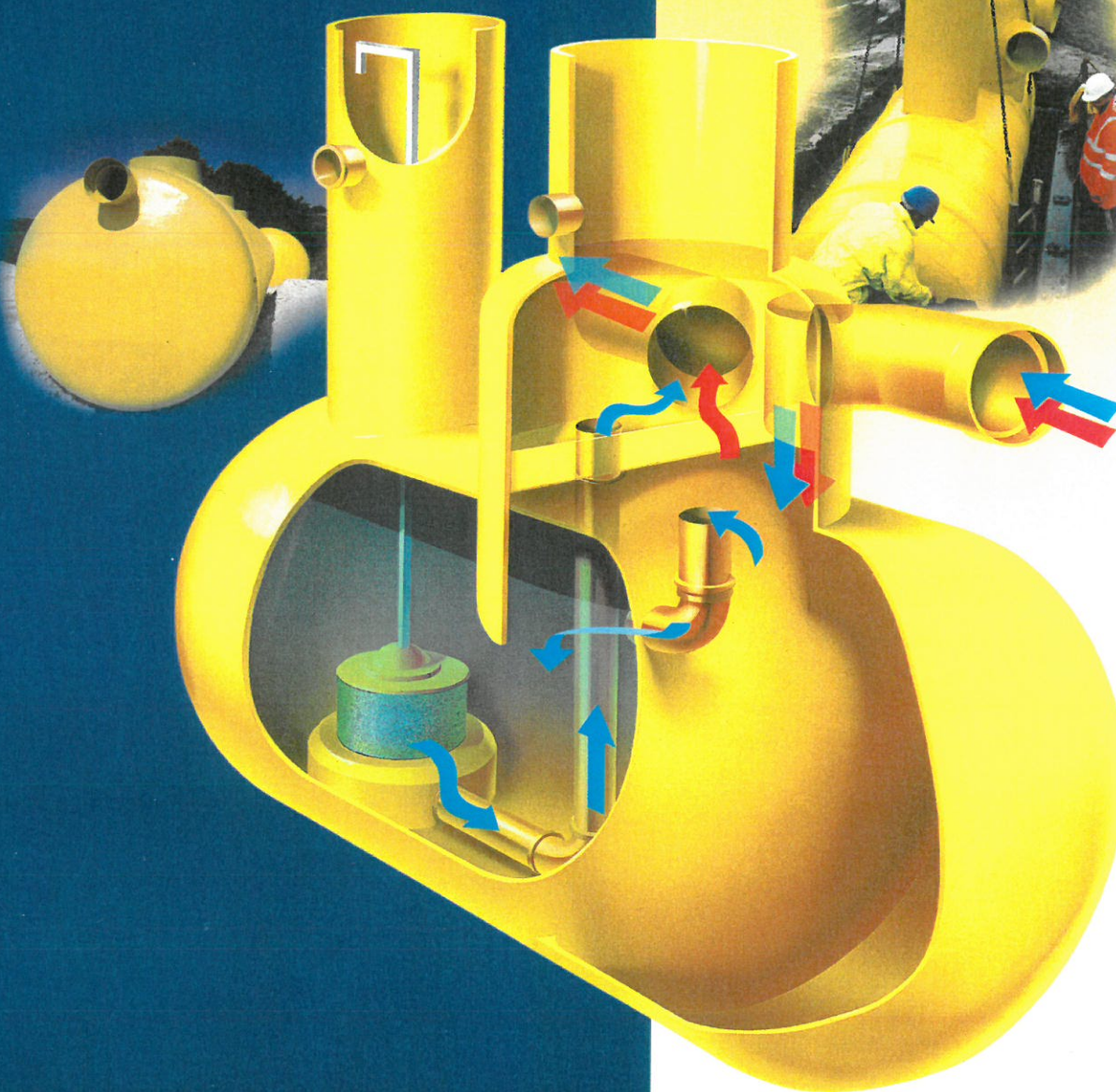


SEPARATORS

PRODUCT & SPECIFICATION GUIDE

SEPARATORS, BYPASS & FULL RETENTION

- ROADS & HARD STANDING
- CAR PARKING AREAS
- FUEL STATION FORECOURTS
- CAR WASH FACILITIES



Cnder
PRODUCTS



Certificate No.: FM13561
ISO 9001 Design & Build

CREATING YOUR ADVANTAGE IN THE ENVIRONMENT

BYPASS SEPARATORS

Coalescing Filter – designed for easy removal

During initial storm stages any pollutants present on site are washed off and carried in rainwater to the Separator retention chamber.

At storm height, when flows may exceed 5mm/hr, uncontaminated stormwater overflows directly to the outlet. Pollutants held in the retention chamber are undisturbed.

Silt Traps and Sedimentation Units



- large quantities of silt can be associated with Separator operations, particularly in car wash facilities. Separator capacity may need to be increased to accommodate this, or a sedimentation unit or silt trap can be installed nearby, upstream to prevent blockages
- a wide range of products are available from Conder with heavy duty access hatches for easy sediment removal by hand or tanker
- a special 530mm trap is available for use with automatic systems with under chassis washing. This model is generally installed between the chassis wash arms. For particularly large capacities, a sedimentation tank can perform the same function

APPLICATION AREAS:

- car parks, hard standings, roads and similar areas of low risk where it is not required to provide full treatment for rare high flows

PERFORMANCE:

- full treatment of rainfall flows of up to 5mm/hr (99% of rainfall events)
- automatic closures are not appropriate for bypass Separators, but filters for Class 1 models, and monitors for both Classes, are usually fitted
- single shaft access on Class 2 models allows improved cost savings
- Conder capability and proven track record

Class 1 Bypass Unit



Bypass Separator – Core Range . Class 1 and Class 2.

Larger models to 4m diameter are available

Technical Data

Unit Reference	Nominal Size	Area Drained sq.m	Nett Capacity Litres	Length excl. Silt	Diameter	Silt Capacity Litres	Length incl. Silt	Overall Height	Inlet to Base	Outlet to Base	Max Pipe
NSB1.5/2*	1.5	833	1000	1400	1000	150	1807	2150	1150	1100	300
NSB3/2*	3	1667	1000	1650	1000	300	2250	2150	1150	1100	300
NSB4.5/2*	4.5	2500	1485	2020	1000	450	2594	2150	1150	1100	300
NSB6/2*	6	3333	1980	2650	1000	600	3414	2150	1150	1100	300
NSB7.5/2*	7.5	4167	2475	2343	1200	750	3007	2400	1400	1350	300
NSB10/2*	10	5556	3300	3073	1200	1000	3957	2400	1400	1350	300
NSB15/2*	15	8333	4950	2995	1500	1500	3844	2750	1750	1700	450
NSB20/2*	20	11111	6600	3929	1500	2000	5060	2750	1750	1700	450
NSB25/2*	25	13889	8250	3542	1800	2500	4524	3200	2100	2050	600
NSB30/2*	30	16667	9900	4190	1800	3000	5369	3200	2100	2050	600
NSB40/2*	40	22222	13200	5487	1800	4000	7059	3200	2100	2050	600
NSB50/2*	50	27778	16500	3978	2500	5000	4992	3900	2650	2600	600
NSB60/2*	60	33333	19800	4450	2500	6000	5673	3900	2650	2600	600
NSB70/2*	70	38889	23100	5323	2500	7000	6749	3900	2650	2600	600
NSB80/2*	80	44444	26400	5795	2500	8000	7425	3900	2650	2600	600
NSB90/2*	90	50000	29700	6467	2500	9000	8301	3900	2650	2600	600
NSB100/2*	100	55556	33000	7139	2500	10000	9177	3900	2650	2600	600

Separator selection example:

NSB3/21/225/CF

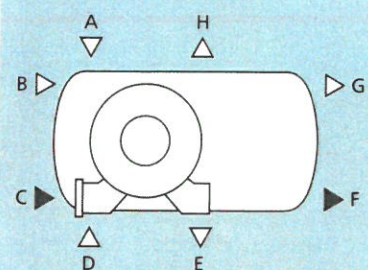
- Separator ref.
- Class selected
- Pipework size
- Pipework configuration

N.B. All dimensions are in mm. *Add class of separator required i.e. class 1 or class 2.

Shaded area's indicate additional capacity and increased length to provide integral silt capacity – add 'S' suffix in front of forward slash in reference code (e.g. NSB3/21 becomes NSB3S/21).

Max. pipe sizes refer to standard models – larger sizes available to request.

Inlet/Outlet Pipework Configurations



C/F is the standard arrangement. Alternative arrangements shall be specified on instruction.

CAPABILITY & QUALITY

Conder Products Ltd is the UK No.1 in GRP tank manufacture and a European leader in the design, testing and supply of Separators. With over 30 years expertise in the sector, the company now has over 120 models and variants in its Separator range providing solutions for all types of commercial, retail and industrial projects.

This product choice is backed by:

- Europe's largest automated production facilities
- innovative design and build experience to strict quality standards – certified to ISO 9001 Design & Build – to meet the requirements of any drainage system layout or site topography
- industry leading, state-of-the-art mandrels from 1m-4m diameter to create Separators with up to 275,000 litre capacity
- PPG3 compliance (Pollution Prevention Guideline for 'Use & design of oil Separators in surface water drainage systems')
- in-house BSI Accredited Test Rig
- all units independently tested at major assessment centres in France and Germany
- BS 4994 Cats 1 & 2 certification
- in-depth technical service and maintenance support for every project
- full compliance with latest regulations through management collaboration in industry and environmental committees
- 1000's of successful installations around the UK
- full 12 month warranty on all products subject to installation in accordance with our guidelines

This brochure contains all the information needed to select and specify the Conder Separator required for a project. For further advice or assistance with your specification or to enquire about our range of accessories, or to discuss complex site requirements, simply call 02380 - 687100.

SEPARATORS FEATURES & BENEFITS

- fully PPG3 compliant and designed in accordance with draft European Standard prEN 858
- proven high performance
- multi-directional inlet and outlet pipework for easy compliance with drainage scheme layout
- certified to ISO 9001 Design & Build
- stainless steel lifting handles for ergonomic access to filter and automatic closure devices
- largest range of models available
- easy to install – full guide with every unit
- full technical and product support, now extends to maintenance contracts
- standard models suitable for concrete surround, granular surround models also available



PIPEWORK & ACCESS SHAFTS

- Virtually any size inlet/outlet pipework and orientation can be manufactured.
- Standard sizes are 100 or 150mm uPVC with larger sizes fabricated in GRP
- All Separators must be vented and a standard 100mm diameter socket is provided in the access shaft. Extended shafts are available to cover any depth of installation – up to 1m supplied as standard

MAINTENANCE

- Conder provide industry leading Service Contracts for all Separators. These are modelled on the requirements detailed in the Environmental Alliance' Pollution Prevention Guideline document PPG3 and the draft European Standard prEN858-2
- The Service Contract is designed to protect assets and eliminate risk, whilst adopting a regime where emptying is only carried out when needed

SIZING FORMULA

In line with PPG3 and recommended testing procedures, the Conder Separators shown here have been allocated a 'Nominal Size'. Use the tables to make your selection. Nominal size is expressed as NS for Full Retention Separators, and NSB for Bypass Separators.

Normal Method

- Multiply the square meterage of the area drained by 0.018 for Full Retention Separators, or by 0.0018 for Bypass Separators
- Your resulting NS/NSB figure should equate to the maximum treated flow rate in litres per second under test conditions.
- To determine silt capacity (either integral or separate upstream device), multiply your NS/NSB by 100
- Minimum oil storage should not be less than NS x 10 for Full Retention Separators with closure devices or NS x 15 for those without; or NSB x 15 for Bypass Separators

FULL RETENTION SEPARATORS

Contaminated rainwater enters the unit

Lighter density pollutants separate and rise to the surface, heavier silt and grit settle at the base

the decontaminated water is now displaced and discharged

(Class 2 without ACD)

(Class 1 with ACD)

APPLICATION AREAS:

- for high risk applications such as petrol filling stations and heavily contaminated industrial areas where it is possible to have a constant stream or major spillage of pollutants

PERFORMANCE:

- full flow treatment of rainfall intensity up to 50mm/hr
- standard range covers Class 1 and 2 specifications from NS 1.5 to NS 100, but larger models are available
- Conder capability and proven track record

FORECOURT SEPARATORS:

- must have a minimum storage capacity of 7600 litres to contain spillage from a full road tanker compartment
- can be Class 1 or 2 and may not need a coalescing filter if discharging, with water authority agreement, into a foul sewer
- an automatic closure and pollutant level monitor are normally required

CAR WASH SEPARATORS

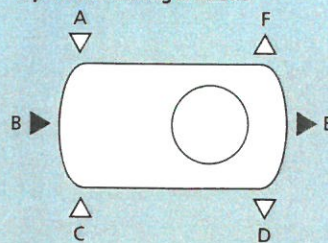
- type of washing system, average vehicle through-put and impediment factor of detergents will influence Separator size
- recycling systems with pumps for held water can be installed in Conder Full Retention Separators – please call for details
- also see silt trap sedimentation unit advice

Full Retention Separator – Core Range . Class 1 and Class 2 . Inc.Silt and Exc.Silt. Technical Data

Larger models to 4m diameter are available

Unit Reference	Nominal Size	Area Drained sq.m	Nett Capacity Litres	Length excl. Silt	Diameter	Silt Capacity Litres	Length incl. Silt	Overall Height	Inlet to Base	Outlet to Base	Max Pipe
NS4/1*	4	222	1320	1810	1000	400	2319	1300	1075	1025	300
NS6/1*	6	333	1980	2650	1000	600	3414	1300	1075	1025	300
NS8/1*	8	444	2640	2489	1200	800	3197	1500	1275	1225	300
NS10/1*	10	556	3300	3073	1200	1000	3957	1500	1275	1225	300
NS15/1*	15	833	4950	2995	1500	1500	3844	1800	1550	1500	450
NS20/1*	20	1111	6600	3929	1500	2000	5060	1800	1550	1500	450
NS30/1*	30	1667	9900	4190	1800	3000	5369	2100	1850	1800	600
NS40/1*	40	2222	13200	5487	1800	4000	7059	2100	1850	1800	600
NS50/1*	50	2778	16500	3778	2500	5000	4797	2800	2550	2500	600
NS60/1*	60	3333	19800	4450	2500	6000	5673	2800	2550	2500	600
NS70/1*	70	3889	23100	5123	2500	7000	6549	2800	2550	2500	600
NS80/1*	80	4444	26400	5795	2500	8000	7425	2800	2550	2500	600
NS90/1*	90	5000	29700	6467	2500	9000	8301	2800	2550	2500	600
NS100/1*	100	5556	33000	7139	2500	10000	9177	2800	2550	2500	600

Inlet/Outlet Pipework Configurations



B/E is the standard arrangement. Alternative arrangements shall be specified on instruction.

Separator selection example:

NS4/11/150/BE

- Separator ref.
- Class selected
- Pipework size
- Pipework configuration

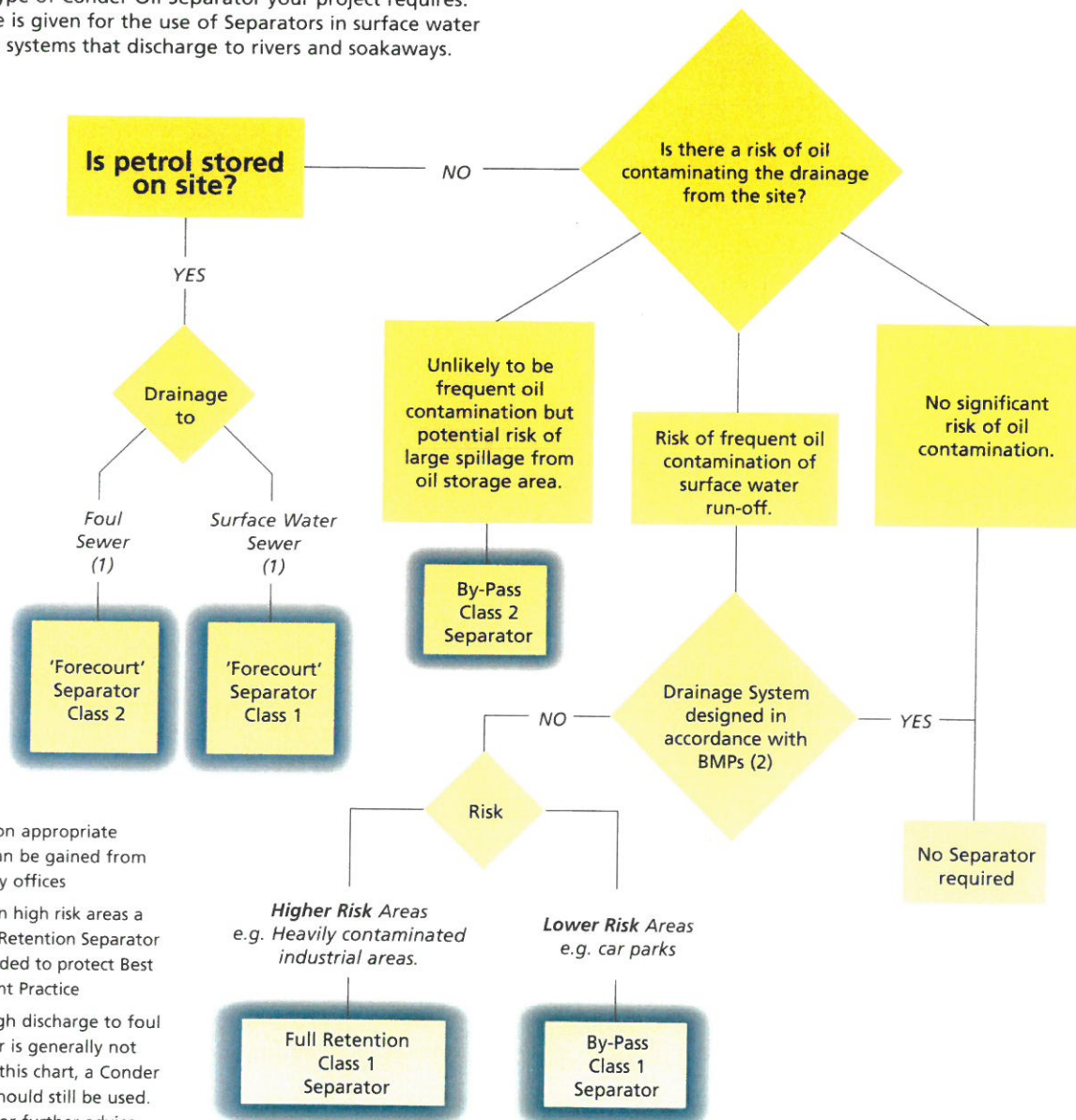
N.B. All dimensions are in mm. *Add class of separator required i.e. class 1 or class 2.

Shaded area's indicate additional capacity and increased length to provide integral silt capacity – add 'S' suffix in front of forward slash in reference code (e.g. NS4/11 becomes NS4S/11).

Max. pipe sizes refer to standard models – larger sizes available to request.

PRODUCT SELECTOR

This chart, prepared by the Environment Agency and other Environmental alliance members can be used to identify the correct type of Conder Oil Separator your project requires. Guidance is given for the use of Separators in surface water drainage systems that discharge to rivers and soakaways.



SEPARATOR TYPES

There are two types of Separator – Bypass and Full Retention – with two performance classes for each type.

CLASS 1 MODELS

Generally incorporate a coalescing filter and are designed to achieve a concentration of less than 5mg/litre of oil under test conditions. They should be specified when discharging to the surface water drainage system, water courses or soakaways.

CLASS 2 MODELS

These are designed to achieve a concentration of less than 100mg/litre of oil under test conditions, and generally discharge into a foul water sewer.

Working Capacity

The minimum working capacity of any Separator, regardless of area drained, should not be less than 1000 litres. However, petrol filling station Separators require a minimum capacity of 7600 litres. Separators should also provide adequate capacity for silt collection, unless an appropriate device is installed upflow of the Separator.

ACCESSORIES

AUTOMATIC CLOSURE DEVICES

- compulsory for all PPG3 compliant Full Retention Separators. The ACD prevents accumulated pollutants flowing through the unit when maximum storage level is reached
- Conder ACD's comprise a floating disc or ball and plate in a cylindrical shaft over the outlet duct which will be balanced to suit the specific gravity of pollutants
- in major spillages, or when the maximum oil retention capacity is retained, the ACD is forced down over the aperture to prevent discharge

COALESCING FILTERS

- this filter (a cylindrical cartridge of open cell material – with handle for easy removal and cleaning) separates residual oil in already separated Oil/Water and ensures discharge quality of less than 5mg/litre of oil in water under test conditions
- simple to maintain and replace

OIL LEVEL ALARMS

- recommended on all PPG3 compliant Separators to provide early warning of the need to empty a unit and avoid potentially costly accidental discharge
- comprises an electronic or radio linked control with probe placed in the separation chamber. Audible and visual alarms signal when the unit requires emptying
- solar powered models with radio links available to avoid hard wiring
- alarms also available for monitoring silt levels and warning of flow back-up in the system



Europe's largest automated production facilities

ACTION

To find out more about Conder Separators, or other Conder products or for advice on specification, simply contact us at the address below.



Certificate No.: FM13561
ISO 9001 Design & Build

Conder Products Ltd

Pullman House, Barton Park, Chickenhall Lane,
Eastleigh, Hampshire SO50 6RR.

Tel: 023 8068 7100 Fax: 023 8068 7101

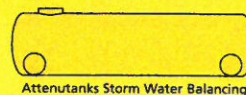
email: Sales@conderproducts.com

www.conderproducts.com

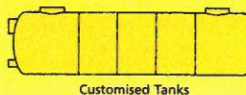
Conder Products Ltd is part of Conder Environmental plc

Conder Products reserve the right to alter specification without prior notice.

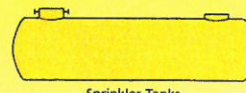
OTHER CONDER PRODUCTS



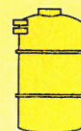
Attenuation Storm Water Balancing



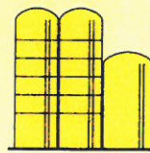
Customised Tanks



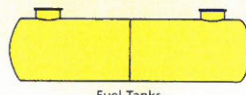
Sprinkler Tanks



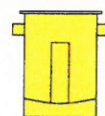
Rainwater Harvesting System



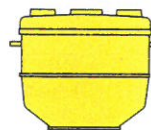
Above Ground Engineered Vessels



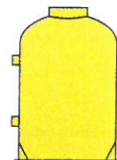
Fuel Tanks



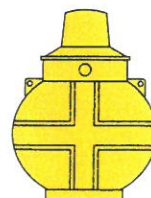
Catering Grease and Oil Separators



Packaged Sewage Treatment Systems



Packaged Pumping Stations



Septic Tanks



Cesspools/Holding Tanks