

Spark Arrestors

A Range of Low Back Pressure ATEX Certified Spark Arrestors

Designed to prevent the emission of high energy sparks from diesel engine exhaust systems.

ATEX
Certified



wyndham|page

About Wyndham Page Ltd

Based in the UK Wyndham Page specialise in the design and manufacture of safety equipment for diesel engines.

Our product range of Air Intake Shutdown Valves includes our E Series Automatic Valves and our F Series Butterfly Valves with solenoid, pneumatic or manual actuation options. We offer Speedswitch kits for the F Series valves and a range of Spark Arresters designed to prevent the emission of high energy sparks from diesel exhaust systems.

Wyndham Page is headed by Freddy Page-Roberts who brings over 20 years' experience in the diesel safety industry and was previously managing director of Chalwyn Ltd.

All members of the senior management team have considerable experience in organisations specialising in the design and manufacture of hazardous area equipment for diesel engines.

Quality Assurance

Wyndham Page Valves are manufactured and tested under our EN ISO 9001: 2015 quality management system.

Wyndham Page Ltd are certified to supply ATEX equipment under Quality assurance Certificate CML ATEXQ11003.

- Equipment supplied with an EC Type Examination Certificate is CE marked and meets the provision of the ATEX directive 2014/34/EU.
- Self-certified equipment supplied with an EU Type Examination Certificate is CE marked and meets the provision of the ATEX directive 2014/34/EU.

Spark Arrestors: Application

Diesel Engine exhaust Spark Arrestors are a basic, but key safety feature for both hazardous areas and lower risk applications such as agriculture or forestry where a spark from the exhaust system may cause ignition of combustible material. Virtually all legislation regarding the operation of a diesel engine in a hazardous area includes a mandatory requirement to fit an approved exhaust Spark Arrestor.

Wyndham Page Spark Arrestors are designed as a safety device specifically for preventing the spread of sparks emitted from diesel engines. All diesel engines have the potential to emit sparks, even the latest clean engines. This is due to the high carbon particulate content, carbon build up and the high ratio of free oxygen in the exhaust gas when on and off load. The energy carried by these sparks and the risk of them being transmitted over large areas in the presence of flammable materials, gases or dust can significantly increase the chances of igniting fires or causing explosions.

Under Health and Safety guidelines and legislation, such as ATEX, this potential risk has been identified as the cause of many catastrophic fires and the fitting of a Spark Arrestor alongside other protective measures has been mandated as an important means of reducing this. For this reason Spark Arrestors are mandatory equipment in many industries where potentially explosive environments are common.

Wyndham Page Spark Arrestors have been type tested in accordance with relevant standards for arresting incandescent carbon particles (sparks) from the exhaust gas discharge of diesel engines. (They are not certified for any other type of spark suppression applications). The user must ensure that the Spark Arrestor is suitable for its intended application, and that it is correctly sized to the engine specification and power rating. If necessary, noise levels, back pressure and temperature requirements must be assessed. Reference should be made to product data sheets available through the company's web site or check with Wyndham Page or their representative and if necessary, the engine manufacturer. N.B. The operation of an engine in a hazardous environment may require additional safety precautions. A Spark Arrestor is a SAFETY DEVICE and should be treated accordingly.

Principle of Operation [centrifugal]

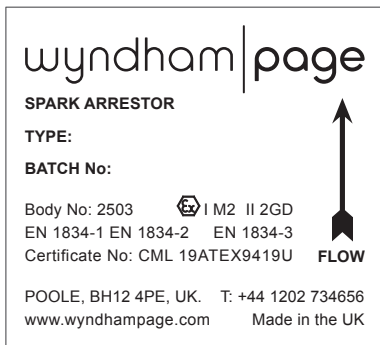
All of our Spark Arrestors operate on the principle of a centrifuge whereby the exhaust gas is made to spin rapidly as it passes down the cylindrical body. This causes carbon particles present in the exhaust gas to make repeated contact with the inner wall of the body and in the process heat energy is dissipated to a safe level.

ATEX Certification and Marking

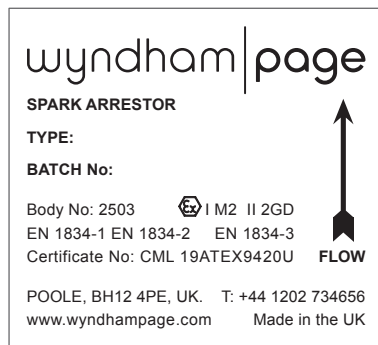
Our Spark Arrestors are tested and certified to the following standards:
EN1834-1 EN1834-2 EN1834-3

They are marked using I.D plates as shown below which include the following information:

- Type and size
- Batch No and Year of Manufacture
- ATEX certificate and certification details
- Gas flow direction arrow.



WT1L & WT2L SERIES



NT SERIES

Spark Arrestor Selection

To enable Wyndham Page to select the most suitable Spark Arrestor for a given application the following data is required:

- Engine power rating (KW/HP)
- Outside diameter of exhaust pipe (OD in mm)
- Engine type,model & application (vehicle, generator etc)
- Exhaust emission control/cleaning devices: DPF, DOC, SCR or Ad Blue.

Ranges & Description

All Wyndham Page Spark Arrestors are of 100% stainless steel construction. They are available in 3 ranges. Detailed technical information on each range is given on pages 6 to 8.

WT1L - Auxiliary Spark Arrestors. Are designed to be fitted at the end of the exhaust system in addition to the existing silencer. This range is ideal for short term or temporary installations or where there is limited space. Designed for modern and conventional diesel engines with an output of up to 123KW (165 HP) they can also be used for permanent installations if required.

- Single centrifuge type
- Minimal back pressure
- Good silencing
- Swelled and slotted pipe on inlet

WT2L - Standard Spark Arrestors. Are designed for permanent installation in the exhaust system as a replacement for the existing silencer. Designed for modern and conventional diesel engines with an output of up to 560KW (750 HP).

- Twin centrifuge type
- Minimal back pressure
- Good silencing
- Swelled and slotted pipe on inlet and outlet

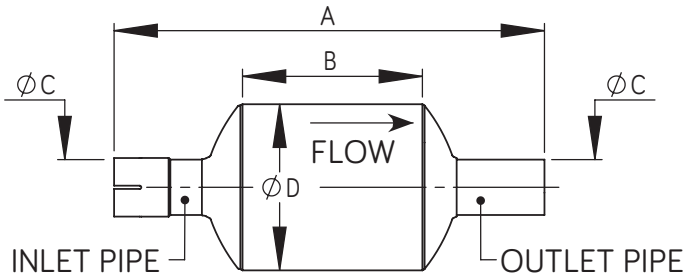
NT - Ultra Low Back Pressure Spark Arrestors. Are designed for low emission diesel engines. They are suitable for temporary or permanent installation in the exhaust system and can be used alongside or as a replacement for the existing silencer. This range can cover engines with an output of up to 750KW (1006HP).

- Stage IIIA, Euro V, Tier 4 and better
- Turbine type spin blades and improved gas flow dynamics
- Ultra low back pressure
- Good silencing, no noise regeneration
- Can be used with DPF, DOC and SCR
- Swelled and slotted pipe on inlet (and outlet on larger models)

WT1L - Auxiliary Spark Arrestors: Data

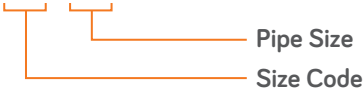
METRIC TABLE		ENGINE POWER (KW)			DIMENSIONS (MM)			
MODEL	SIZE CODE	MIN	MAX	WEIGHT KG	A	B	C (PIPE SIZE)	D
WT1L	092	4	19	1.6	313	135	32-44	92
	125	11	26	2.5	334	145	38-51	127
	152	15	37	3	352	165	44-63	152
	175	22	52	4	384	200	51-63	177
	205	30	67	5	391	205	57-70	202
	235	52	97	5	427	235	63-89	233
	270	67	123	8	508	275	89-102	273

IMPERIAL TABLE		ENGINE POWER (HP)			DIMENSIONS (INCHES)			
MODEL	SIZE CODE	MIN	MAX	WEIGHT LB	A	B	C (PIPE SIZE)	D
WT1L	092	5	25	3.5	12.3	5.3	1.25-1.75	3.6
	125	15	35	5.5	13.1	5.7	1.50-2.00	5.0
	152	20	50	6.6	13.9	6.5	1.75-2.50	6.0
	175	30	70	8.8	15.1	7.9	2.00-2.50	7.0
	205	40	90	11	15.4	8.1	2.25-2.75	8.0
	235	70	130	11	16.8	9.3	2.50-3.50	9.2
	270	90	165	17.6	20.0	10.8	3.50-4.00	10.7



Order Coding

WT1L - XXX - XXX

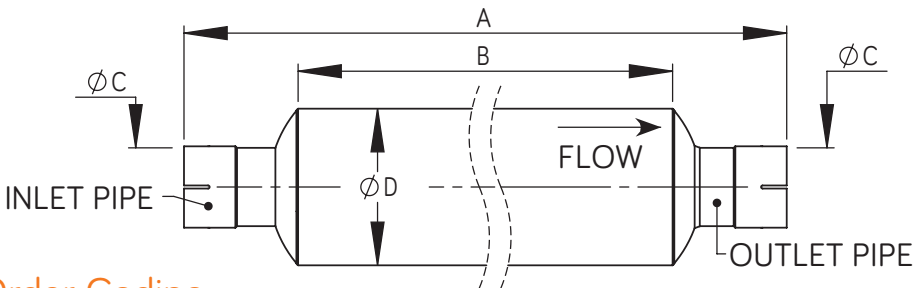


Use metric value for pipe size, add zero to make 3 digit code
e.g. 63 = 063

WT2L - Auxiliary Spark Arrestors: Data

METRIC TABLE		ENGINE POWER (KW)			DIMENSIONS (MM)			
MODEL	SIZE CODE	MIN	MAX	WEIGHT KG	A	B	C (PIPE SIZE)	D
WT2L	090	15	37	3	640	455	25-51	92
	125	22	60	4	680	500	38-64	127
	150	37	90	6	885	665	51-76	152
	150X	37	90	5.5	728	507	51-76	152
	175	71	149	8	971	750	76-102	177
	175X	71	149	7.5	865	645	76-102	177
	200	112	254	11	1145	910	102-127	202
	235	186	336	15	1335	1110	114-152	233
	300	242	410	25	1490	1250	140-178	305
360	354	560	47	1758	1500	152-203	356	

IMPERIAL TABLE		ENGINE POWER (HP)			DIMENSIONS (INCHES)			
MODEL	SIZE CODE	MIN	MAX	WEIGHT LB	A	B	C (PIPE SIZE)	D
WT2L	090	20	50	6.6	25.2	17.9	1.00-2.00	3.6
	125	30	80	8.8	26.8	19.7	1.50-2.50	5.0
	150	50	120	13.2	34.8	26.2	2.00-3.00	6.0
	150X	50	120	12.1	28.7	20.0	2.00-3.00	6.0
	175	95	200	17.6	38.2	29.5	3.00-4.00	7.0
	175X	95	200	16.5	34.1	25.5	3.00-4.00	7.0
	200	150	340	24.3	45.1	35.8	4.00-5.00	8.0
	235	240	450	33.1	52.6	43.7	4.50-6.00	9.2
	300	325	550	55.1	58.7	49.2	5.50-7.00	12.0
360	475	750	103.6	69.2	59.1	6.00-8.00	14.0	



Order Coding

WT2L - XXX - XXX

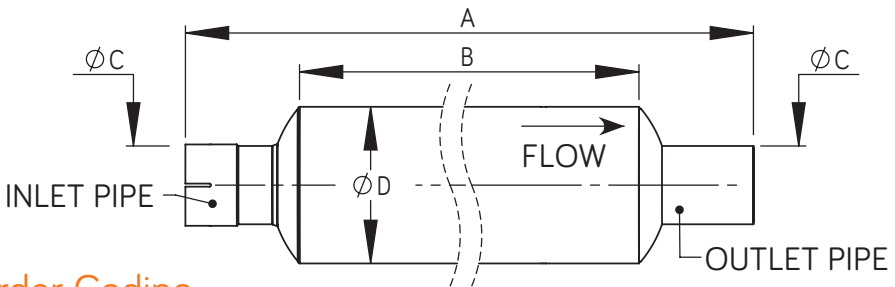
Pipe Size
 Size Code

Use metric value for pipe size, add zero to make 3 digit code e.g. 63 = 063

NT - Ultra Low Back Pressure Spark Arrestors: Data

METRIC TABLE		ENGINE POWER (KW)			DIMENSIONS (MM)			
MODEL	SIZE CODE	MIN	MAX	WEIGHT KG	A	B	C (PIPE SIZE)	D
NT	092	10	34	1.75	455	269	32-45	92
	125	23	60	3.2	545	364	51-57	125
	152	30	104	4.5	658	438	51-76	152
	175	55	149	5.7	696	475	76-101	177
	200	75	242	8.7	885	650	89-114	202
	235	100	313	11.8	1020	795	101-129	232
	270	145	384	18.0	1157	932	127-152	272
	300	150	429	23.0	1270	1030	127-165	305
	360	240	559	40.0	1533	1275	152-202	357
400	400	750	53.0	1760	1500	202-255	398	

IMPERIAL TABLE		ENGINE POWER (HP)			DIMENSIONS (INCHES)			
MODEL	SIZE CODE	MIN	MAX	WEIGHT LB	A	B	C (PIPE SIZE)	D
NT	092	13	45	3.9	17.9	10.6	1.30-1.80	3.6
	125	30	80	7.1	21.5	14.3	2.00-2.20	4.9
	152	40	140	9.9	22.4	17.2	2.00-3.00	6.0
	175	75	200	12.6	27.4	18.7	3.00-4.00	7.0
	200	100	325	19.2	34.8	25.6	3.50-4.50	8.0
	235	135	420	26.0	40.2	31.3	4.00-5.10	9.1
	270	195	515	37.7	45.6	36.7	5.00-6.00	10.7
	300	200	575	50.7	50.0	40.6	5.00-6.50	12.0
	360	320	750	88.2	60.4	50.2	6.00-8.00	14.1
400	536	1006	116.9	69.3	59.1	8.00-10.00	15.7	



Order Coding

NT - XXX - XXX

Pipe Size
 Size Code

Use metric value for pipe size, add zero to make 3 digit code e.g. 63 = 063

Spark Arrestor Installation

1. Refer to product I.D. plate for type and see product data sheet to ensure suitability for engine size and power.
2. Ensure that the Spark Arrestor is installed with the gas flow in the direction of the flow arrow.
3. Fit the Spark Arrestor into the exhaust pipe at a convenient point, as close to the end of the system as practical, after any other devices such as cleaners or silencers. Attention should be paid to the safe positioning of the tail pipe. It may be possible to replace the silencer with the spark arrestor if adequate silencing is achieved, however emission products should be left in place, or check with the engine manufacturer.
4. Ensure the exhaust system is in good condition with no leaks and that the spark arrestor is adequately supported; extra brackets may be required, fit flexible joints as appropriate.
5. Ensure all the joints are gas tight (if necessary use a proprietary exhaust system sealant).
6. Where surface temperature may form a hazard, consideration must be given to suitable positioning and/or guarding.
7. Test run the engine in a safe, darkened environment, with varying load conditions and examine the exhaust discharge for any sparks, if any are observed do not use, but consult W.P. (NB If running an engine in an enclosed space adequate precautions must be taken to avoid exhaust gas fumes /carbon monoxide poisoning).

ATEX Installations: In order to fully comply with the directive, the Spark Arrestor must be suitable for its intended purpose and shall be included in the temperature assessment of the completed engine prior to commissioning in accordance with the following clauses as appropriate to the particular application:

EN1834-1:2000 clause 5.3

EN1834-2:2000 clause 5.2

EN1834-3:2000 clause 5.1

Maintenance

Wyndham Page spark arrestors contain no serviceable parts and require minimal maintenance.

1. Spark arrestors should be examined daily whilst in use for any signs of damage, to ensure that the outer case is intact with no cracks, holes, dents or evidence of corrosion. The condition of the rest of the exhaust system should also be checked.
2. In normal conditions, the spark arrestor is self-cleaning. However, after prolonged use, particularly if the engine spends a long-time idling, or is sooty; the unit may be cleaned, in a safe area, by bringing the engine to operating temperature, then whilst running at high revs, the spark arrestor case should be lightly tapped to loosen any accumulated carbon; this will then be blown out by the exhaust.
3. Normally the first sign of deterioration in the spark arrestor will be visible externally or audibly, however we recommend that approximately every 500 hours it is removed and examined for damage. Tap the casing lightly as above and shake out any loose soot deposits and check for loose or damaged internal baffles. The spark arrestor may be washed through with water or a mild detergent, but do not clean with a flammable degreaser. Reinstall and run a spark check as above. If large soot deposits have accumulated check the root causes before putting the equipment back into service.

N.B: The year of manufacture is marked next to the Batch Code: age, condition and usage will determine the product's longevity.

Any Defective, Damaged or Suspect Spark Arrestor must be removed from service and replaced. **IF IN DOUBT CONSULT WYNDHAM PAGE.**

Notes:

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