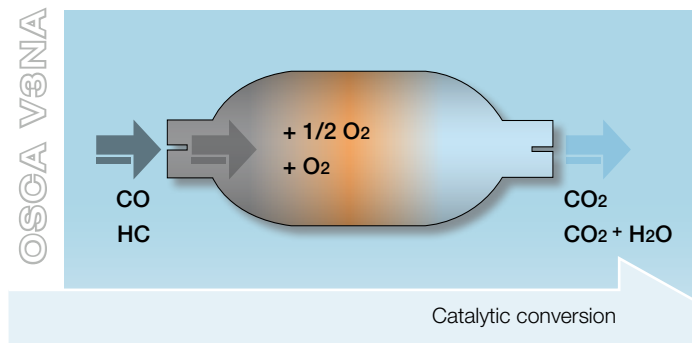


Exhaust gases produced by internal combustion engines employing unleaded petrol, diesel and gas, contain unburned hydrocarbons, carbon monoxide and aldehydes. When these fumes exit the combustion chamber, they are released into the atmosphere and add significantly to atmospheric pollution. Nausea, tiredness, slow reflexes, irritation to the eyes and to the respiratory organs are amongst the symptoms most commonly reported by operators who work in closed or partly enclosed environments (e.g. mines, tunnels, warehouses, ports, ships etc). The OSCA catalytic converter is employed on forklift trucks, stand-by power generators, earth movers bulldozers, cement mixers etc. To resolve these problems, the OSCA catalytic exhaust utilises the chemical conversion performed by catalysis and transforms unburned hydrocarbons (HC), carbon monoxide (CO) and the aldehydes

- Smaller overall size since the reduced internal structure facilitates the use of a reduced catalytic mass.
- In contrast to ceramic honeycomb, metallic honeycomb is far more robust and does not suffer from irreparable fractures or breaks created by impact.
- Metallic honeycomb reaches higher temperatures more quickly than ceramic due to the higher conductivity of metal. This provides high efficiency even in the event of intermittent use of the unit.

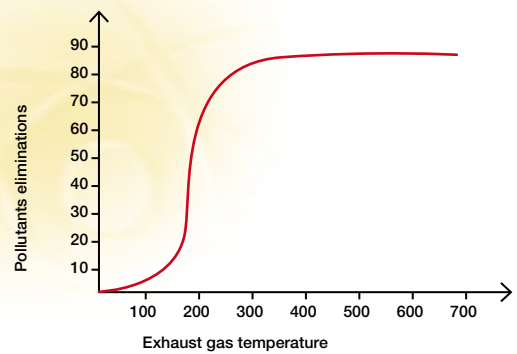
Due to the small size of the OSCA V3NA, it is easily employed on many mobile or partially mobile machines such as forklift trucks, auxiliary motors, earth moving machines, electrical power generators, road sweepers etc. Since the OSCA catalyst does not act as a silencer, the original silencer is left in place.



into non-toxic carbon dioxide and water as illustrated by the diagram below.

The OSCA catalyst is entirely supported on a metallic honeycomb to which optimised amounts of noble metals are employed (platinum, palladium and rhodium). Bersy employs metallic honeycomb structures in preference to ceramic supports due to several advantages:

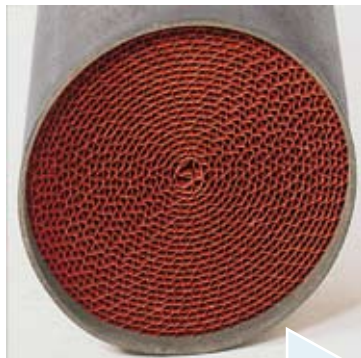
- Reduced back pressure since the metallic honeycomb walls are thinner (0.04mm) as compared with the ceramic version (0.15mm).



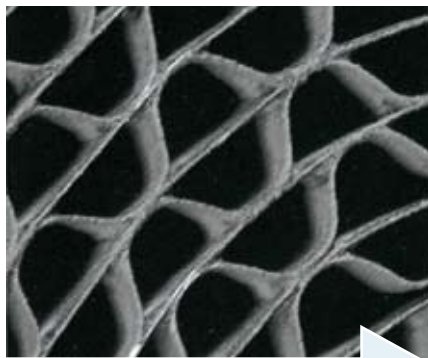
Efficiency curve

The OSCA purifier is installed as close as possible to the exhaust manifold where the exhaust temperature is highest.

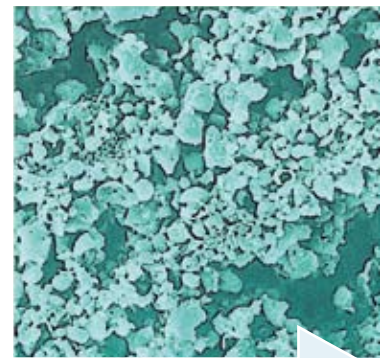
The catalyst becomes operational at 180/200 °C and at 250 °C, a 90% elimination of pollutants is achieved.



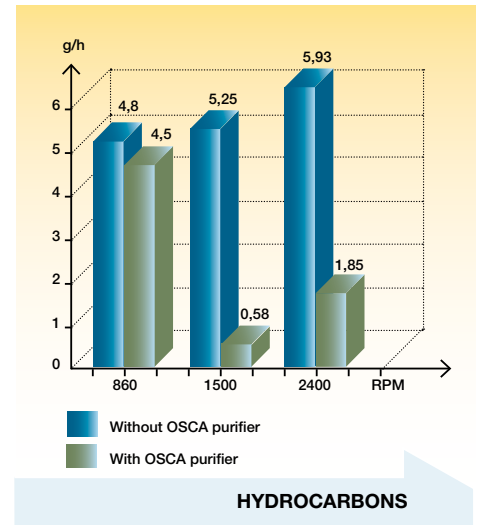
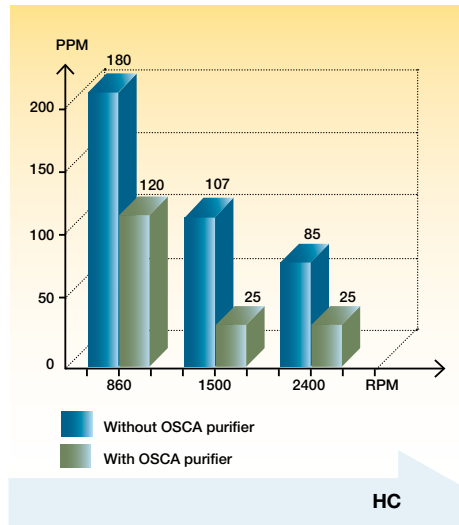
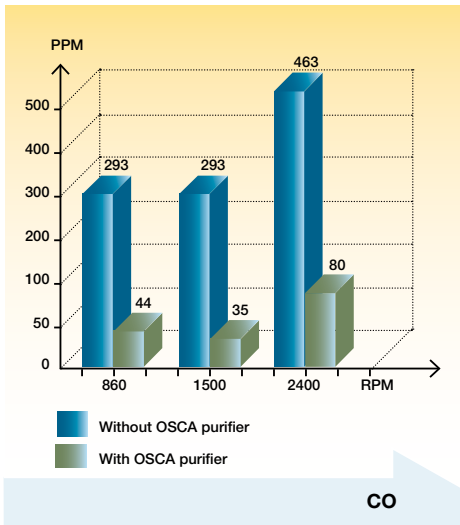
Metallic support



Detail of metallic support



Catalyst under magnification



Bersy is Italy's leader in the field of catalytic exhausts and has been manufacturing solutions for pollution abatement since 1972. Bersy adheres to guidelines issued by the Italian Experimental Laboratory of Combustible products in Milan and as such, is able to exhibit certified data confirming efficiency of our products as the graphs show.

INSTALLATION

It is essential that the OSCA V3NA catalytic converter is installed as close as possible to the exhaust manifold since the high temperature is essential for high catalytic efficiency. Install the catalyst in the exhaust line. There is no particular direction for the exhaust flow through the purifier. As the catalyst doesn't act as a silencer, the original silencer system is left in place. Accessories are provided with the catalyst.



PRODUCT LIFE

Since the OSCA catalyst employs a catalytic reaction, the life of the catalyst is theoretically unlimited. However, since operating conditions are not ideal; poorly tuned engines, engine vibration and abrasive action of fumes to the honeycomb support all reduce the life of the catalyst. As a result, the OSCA V3NA requires replacement after approximately 10,000 hours of use.

MAINTENANCE

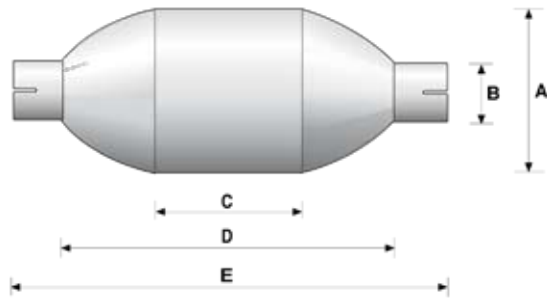
Due to high temperature, the OSCA V3NA catalyst does not need planned maintenance. However it is suggest to clean the catalyst every 500 hours. This requires dismounting of the purifier and soaking the catalyst in hot soapy water for 5 hours. The catalyst may be re-installed after it has dried thoroughly.

In order to meet all possible types of installation, Bersy produces four different standard models together with numerous models designed for particular makes of engines/trucks.



Catalyst application with a C8 valve

OSCA V3NA STANDARD MODEL



COD.	MOD.	CUBIC CAPACITY	Ø A	Ø B	C	D	E
060006	D 6	0 - 300	60	35	80	126	166
060010	D 10	300 - 700	76	35	85	147	197
060020	D 20	700 - 1500	94	45	85	160	220
060050	D 50	1500 - 2500	108	50	105	200	270
060080	D 80	2500 - 4100	130	50	105	205	283
060110	D 110	4100 - 6500	153	80	105	200	290
060150	D 150	6500 - 9800	177	80	105	245	345
060200	D 200	9800 - 13100	205	102	105	255	375
060250	D 250	13100 - 19700	255	102	105	325	445
060350	D 350	19700 - 25000	305	130	105	325	445
060400	D 400	25000 - 35000	355	154	105	355	475
060500	D 500	35000 - 45000	405	154	105	355	475

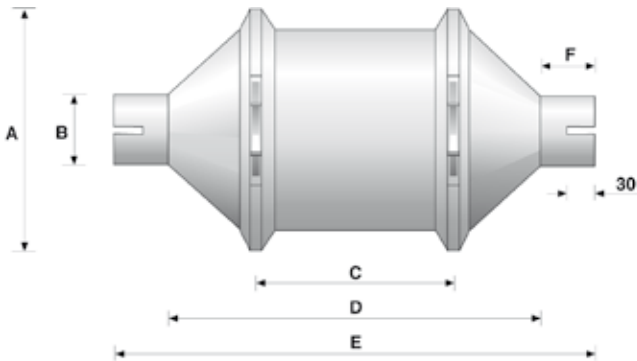
all dimensions in mm

Supplied with clamps and reducers

In order to choose the correct OSCA model, proceed as follows

- For 4 stroke engines** read directly from the table
- For turbo engines** multiply the appropriate cubic capacity by **1.4** before reading the table
- For 2 stroke engines** multiply the appropriate cubic capacity by **2** before reading the table.

OSCA V3NA MODEL FLANGED



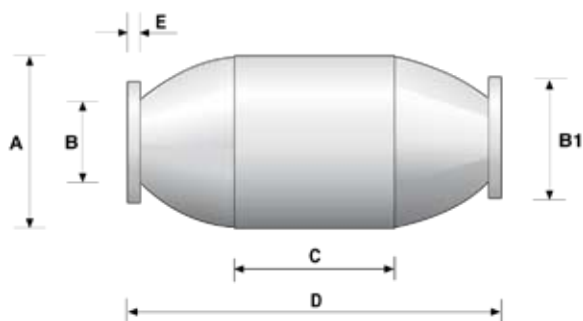
COD.	MOD.	CUBIC CAPACITY	Ø A	Ø B	C	D	E	F
080050FL	D 50	0 - 2500	135	50	102	180	280	50
080080FL	D 80	2500 - 4100	156	50*-60	102	200	300	50
080110FL	D 110	4100 - 6500	180	76-80*-89	102	210	310	50
080150FL	D 150	6500 - 9800	202	76-89*-102	102	220	320	50
080200FL	D 200	9800 - 13100	230	89-102*-114	102	230	330	50
080250FL	D 250	13100 - 19700	280	102*-114-130	102	240	340	50
080350FL	D 300	19700 - 25000	305	130	102	270	370	50
080400FL	D 400	25000 - 35000	355	154	102	320	420	50
080500FL	D 500	35000 - 45000	405	154	102	350	450	50

all dimensions in mm

Supplied with clamps and reducers

* Standard model

OSCA V3NA WITH FLANGES

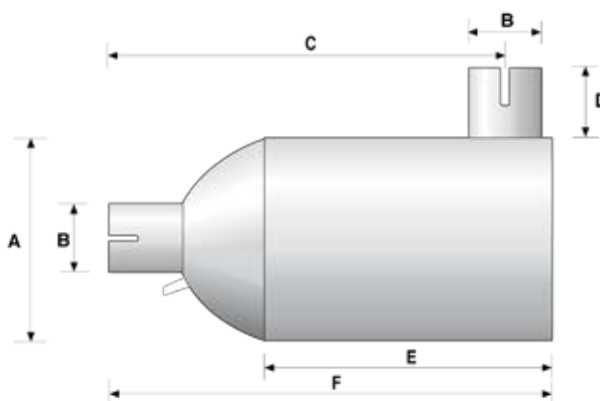


COD.	MOD.	CUBIC CAPACITY	Ø A	Ø B	Ø B1	C	D	E
060006F	D 6	0 - 300	60	35	75	80	146	6
060010F	D 10	300 - 700	76	35	75	85	170	6
060020F	D 20	700 - 1500	94	45	105	85	180	8
060050F	D 50	1500 - 2500	108	50	105	105	250	8
060080F	D 80	2500 - 4100	130	50	105	105	260	8
060110F	D 110	4100 - 6500	153	80	135	105	260	8
060150F	D 150	6500 - 9800	177	80	135	105	300	8
060200F	D 200	9800 - 13100	205	102	160	105	310	8
060250F	D 250	13100 - 19700	255	102	160	105	350	8
060350F	D 350	19700 - 25000	305	120	180	105	350	10
060400F	D 400	25000 - 35000	355	141	240	105	410	10
060500F	D 500	35000 - 45000	405	141	240	105	410	10

all dimensions in mm

Supplied with counter-flanges, nuts and bolts

OSCA V3NA ENTRY SIDE



COD.	MOD.	CUBIC CAPACITY	Ø A	Ø B	C	D	E	F
070006L	D 6	0 - 300	63	35	145	25	130	173
070010L	D 10	300 - 700	80	35	175	35	140	195
070020L	D 20	700 - 1500	97	45	188	50	150	218
070050L	D 50	1500 - 2500	112	50	230	55	175	260
070080L	D 80	2500 - 4100	133	50	235	55	175	264
070110L	D 110	4100 - 6500	156	80	230	80	200	293
070150L	D 150	6500 - 9800	180	80	270	80	200	320
070200L	D 200	9800 - 13100	210	102	290	100	220	355
070250L	D 250	13100 - 19700	260	102	320	100	220	390
070350L	D 350	19700 - 25000	310	130	335	120	250	420
070400L	D 400	25000 - 35000	360	154	380	154	275	460
070500L	D 500	35000 - 45000	410	154	380	154	275	460

all dimensions in mm

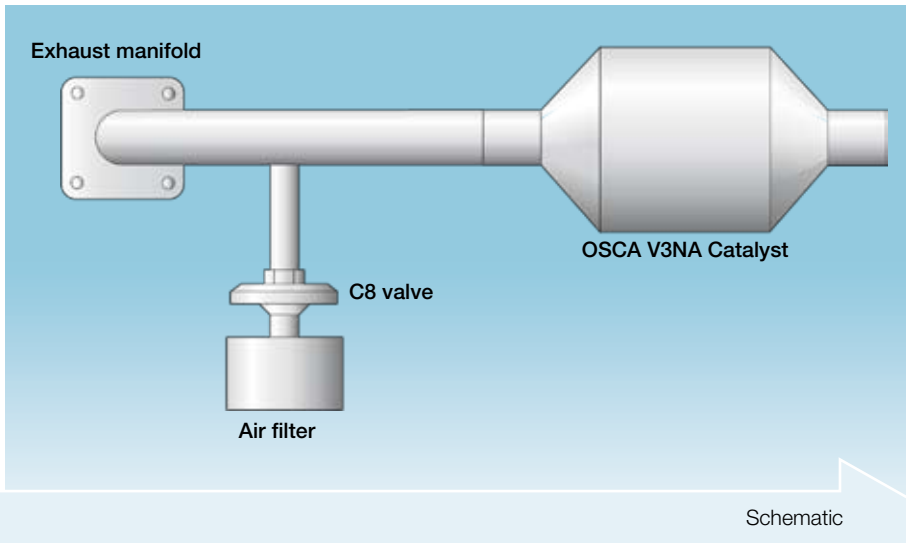
Supplied with clamps and reducers

In order to choose the correct OSCA model, proceed as follows

1. **For 4 stroke engines** read directly from the table

2. **For turbo engines** multiply the appropriate cubic capacity by **1.4** before reading the table

3. **For 2 stroke engines** multiply the appropriate cubic capacity by **2** before reading the table.



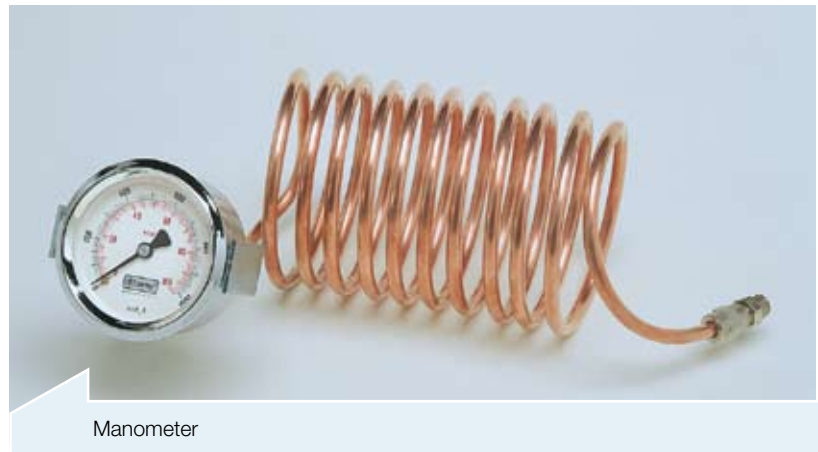
C8 VALVE

In gas and petrol engines, the exhaust gas contain insufficient oxygen for efficient catalytic action. The C8 valve is a vital accessory to ensure that sufficient oxygen is supplied. It is positioned between the exhaust manifold and the catalyst.

MANOMETER

The manometer may be used to established if an OSCA V3NA requires maintenance by measuring the back-pressure.

The manometer consists of an instrument on a coiled tube which is attached to the purifier body. On demand, the purifier is supplied with the connector for the manometer.





Catalytic silencers



Catalytic silencer for FIAT-HITACHI

SPECIAL APPLICATIONS

Bersy also manufactures catalytic silencers which take the same shape and dimension of the original silencer, but perform both silencing and catalytic action.

Models available for: CATERPILLAR, HITACHI, KOMATSU, MERLO, HANOMAG, CASE KUBOTA, JCB, IVECO, ASTRA, MAN.MERCEDES, VOLVO, HATZ, HITACHI, BOBCAT, LIEBHERR.



Special models



Catalyst for DAEWOO

The OSCA V3NA catalytic converter is manufactured in various different dimensions related to specific needs. Several special models are already available for: OM, LINDE, STILL, NISSAN, DETAS, MITSUBISHI, CLARK, CESAB, TOYOTA, TCM, KOMATSU, CATERPILLAR, DAEWOO