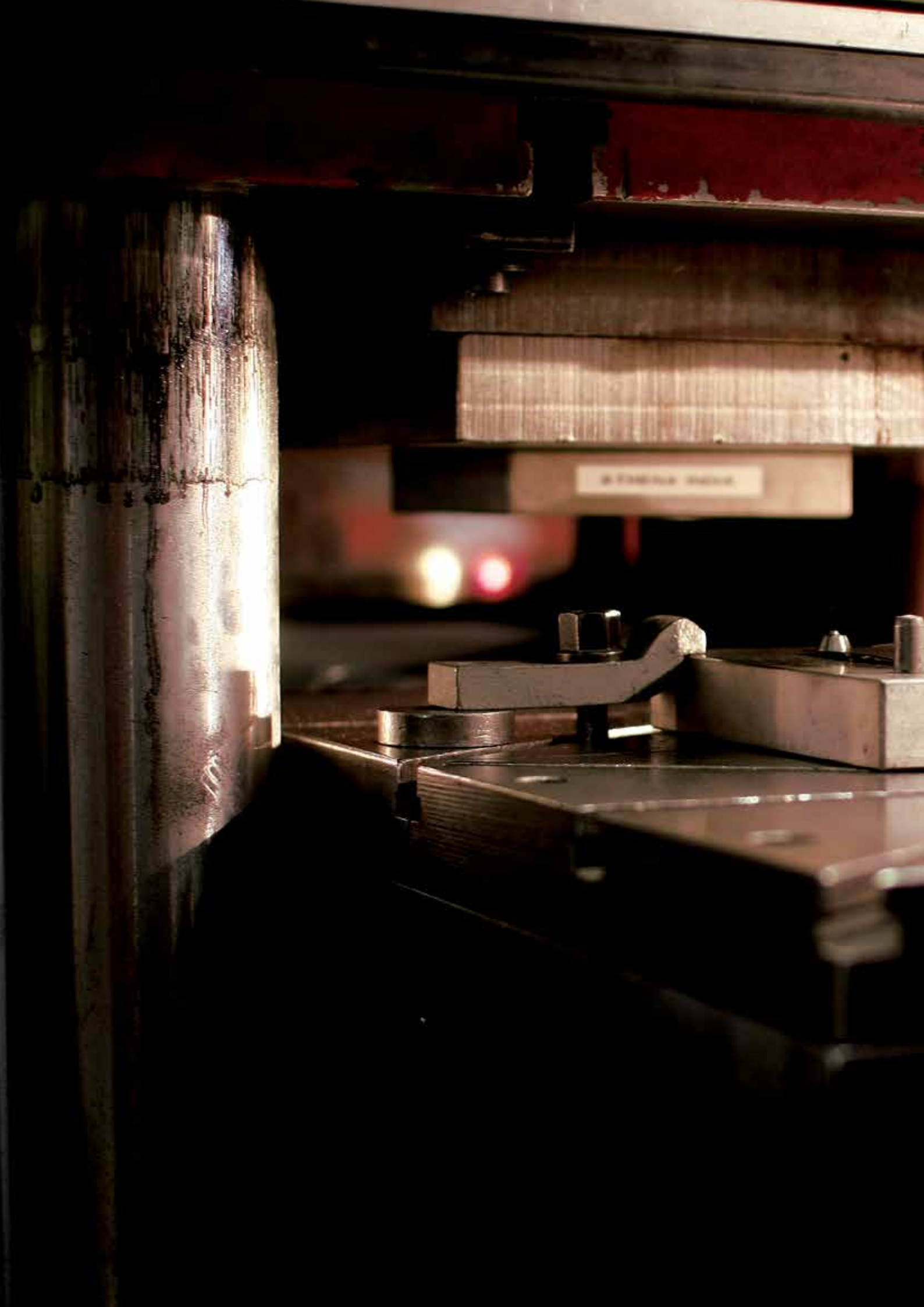
CUSTOM SPEED

ATHENA

RACING GASKET LINE

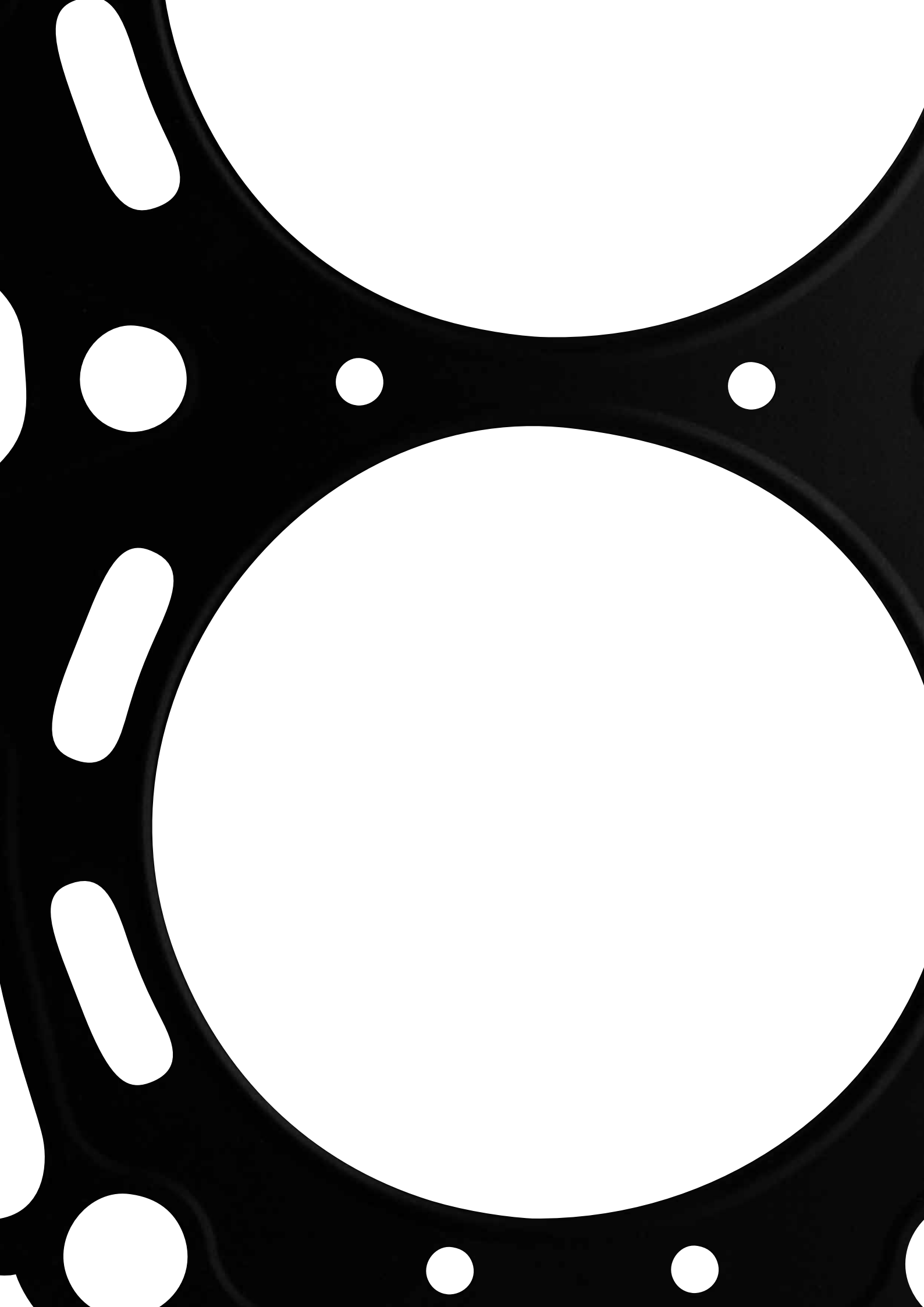
ENGLISH VERSION



ATHENA

RACING GASKET LINE

2016 CATALOGUE



SUMMARY

contents

THIS IS THE STORY OF THE ENTREPRENEUR GIOVANNI MANCASSOLA AND HIS COMPANY ATHENA. FROM A "GARAGE-LIKE" WORKSHOP TO A MANUFACTURING REALITY WITH 550 EMPLOYEES AND 10 BRANCHES AROUND THE WORLD, FROM BRASIL TO INDIA, WITH A GLOBAL TURNOVER EXCEEDING 70 MILION EUROS. ATHENA HAS BEEN IN THE MARKET SINCE 1973. NOWADAYS, IT IS A LEADER IN THE PRODUCTION OF GASKETS IN ITALY AND EUROPE, FOR MANY INDUSTRIAL APPLICATIONS: THE COMPANY IS CONSIDERED AS A BENCHMARK NOT ONLY FOR THE TRADITIONAL SPARE PARTS MARKET, BUT ALSO FOR RACING VEHICLES APPLICATIONS. "WITH THE PASSING OF TIME, WE HAVE ADDED ELECTRONIC UNITS AND DATA ACQUISITION SYSTEMS TO OUR MECHANICAL PART PRODUCTION, ENABLING THE DRIVER TO ACCESS ALL NECESSARY INFORMATION ON THE TRACK, RACE AND VEHICLE", STATES THE CEO GIOVANNI MANCASSOLA. THANKS TO OUR DATA ACQUISITION SYSTEMS THE DRIVER KNOWS HOW TO BETTER MANAGE THE RACE OR THE TEST HE IS CONDUCTING. FURTHERMORE, WE DECIDED TO ADD PRESTIGIOUS BRANDS TO BE DISTRIBUTED ALONGSIDE OUR TRADITIONAL PRODUCT RANGE, IN ORDER TO OFFER OUR CUSTOMERS A WIDER RANGE OF SOLUTIONS. THE NEW BRANDS PERFECTLY EMBRACE THE CORE PHILOSOPHY OF OUR COMPANY: SERIOUSNESS, RELIABILITY, TECHNICAL EVOLUTION AND CONTINUOUS IMPROVEMENT, KEY FEATURES TO MEET THE EXPECTATIONS OF AN ALWAYS MORE DEMANDING, INFORMED AND QUALIFIED CONSUMER.

“Our aim is to offer more and more products for the racing market. In our opinion a car is not simply a means of transport, but a world introducing us to sport in general”.

Giovanni Mancassola

Athena 338146 FR

338
MULTI LAYER GASKET

MATERIAL

- MLS cylinder head gaskets are being fitted by many vehicle manufacturers as original equipment. Modern engines imply higher cylinder pressures and higher temperatures and MLS gaskets have been realized in order to cope with these new realities.
- ATHENA MLS gaskets feature a combination of 3 to 5 layers made of different types of raw materials.
- Outer and inner layers combination is designed to perform at higher compression levels than stock configuration and type of steels that are used may vary upon the engine requirements.
- ATHENA MLS gaskets provide an even torque load across the sealing surface to compensate any type of bore distortion.
- ATHENA MLS gasket is the best solution for both aluminum heads to cast iron blocks and aluminum heads to aluminum blocks.

MANUFACTURING PROCESS

- Our New Design MLS Head Gaskets are made from high grade 301 stainless steel full hard material.
- Each layer is individually formed using a state of the art laser cutting and embossed with an optimized formation process.
- All head gasket layers go through a stress relieving process to significantly reduce embossment forming induced stress.
- Proprietary two part polymer coating is applied after the stress relieving process and ensures uniform coverage of the outer layers providing no break in the coating. This process ensures the micro seal of engine coolant/oil fluids.
- Athena MLS gaskets are tested and analysed on Engine Dynos and endurance performances.

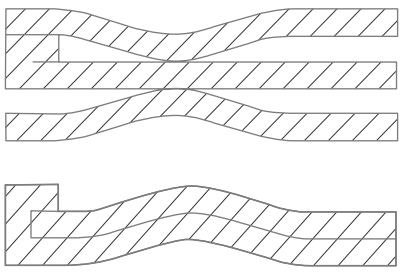
GAS STOPPER

Gas stopper technology is a key design factor of racing MLS head gaskets. The stainless steel stopper layer features a state of the art "active fold", which delivers a high pressure seal around the cylinder bore when tightening the cylinder head. Gas stopper is located around the combustion chamber, allowing cylinder head and engine block to clamp tighter and preventing gases to leak out of the combustion chamber. This also avoids component distortion by means of a quicker equalization of the various components temperature.

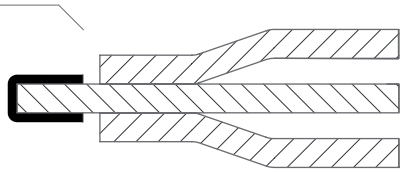
Benefits

- Superior sealing properties under high pressure conditions
- Higher elasticity and constant load resistance
- Optimized load balance
- Improved engine performance
- Longer durability

DIFFERENT TYPES OF GAS STOPPER

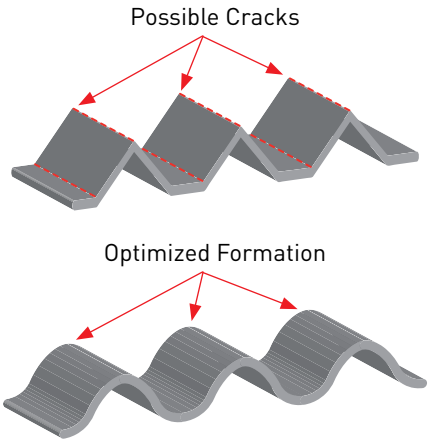


FIRE RING STOPPER



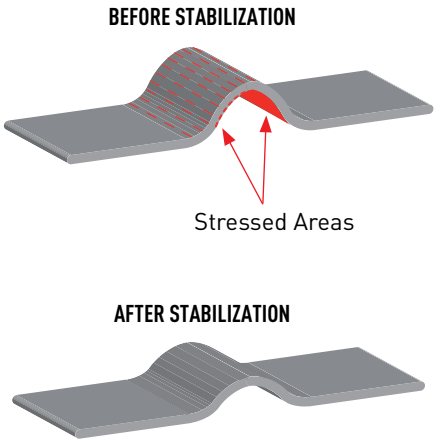
OPTIMIZED RADIUS

- Our unique embossment formation process uses soft radius forming to optimize the embossment radius in critical areas.
- This solution improves gaskets conformability, reducing stress points.
- It also provides uniform clamp load distribution across the engine block deck and increases embossment surface contact area between engine block and cylinder head surfaces.



STRESS STABILIZATION & RELAXATION

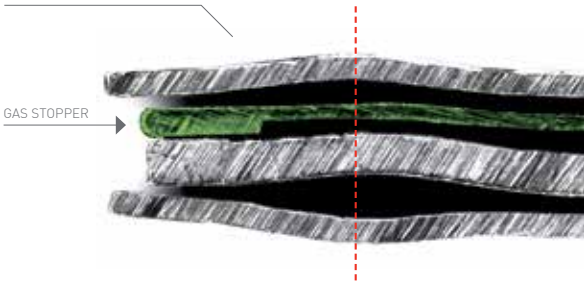
- All head gasket layers go through a stress relieving process to significantly reduce forming induced stress.
- Pre-coated metals (used by some competitors) would not be able to survive this stabilization process.
- Advantages of tempered metal are reduced hardness and brittleness, increased flexibility and deformation retention. Also relax stress points in the gasket after the embossment forming process. This stabilizes the gasket, resulting in reduced cylinder bore distortion and improved combustion seal around cylinder bore (embossment profile) to seal extreme pressure.



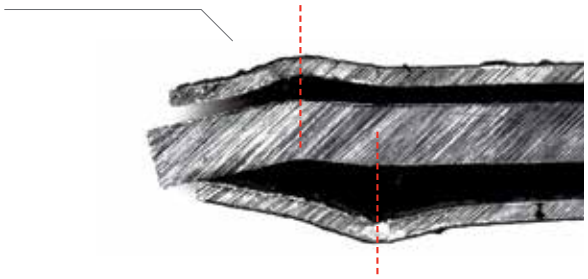
PROPRIETARY COATING TECHNOLOGY

- Our two part polymer coating is applied after the stress relieving process and ensures uniform coverage of the outer layers providing no break in the coating. This process ensures the micro seal of engine coolant/oil fluids, and meets the demands of a variety of harsh environments.
- The first layer is a high temperature compound that will conform to fill engine block deck surface and cylinder head surface irregularities. (Typical MLS head gaskets require a surface finish of 30 Ra, while Athena's will seal surface finishes up to 60 Ra).
- The second layer itself releases easily and will not stick to mating surfaces when disassembling the engine, in order to prevent scratching or gasket corrosion.

Athena



Competitors

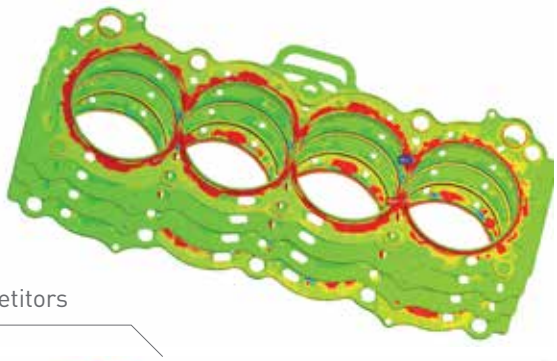


COMPARISON OF STEREOSCOPIC DIGITAL IMAGES

ATHENA VS COMPETITORS

1. Production burrs2. Embossment alignment3. “GAS STOPPER” technology

Athena



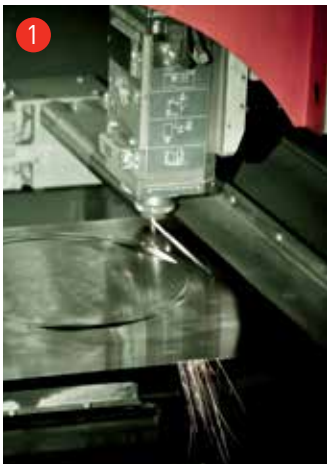
Competitors

FEM TEST

FEM (Finite Element Method) allows our cylinder head gasket to be constructed and optimized before realizing their design and manufacturing. Benefits of FEM include increased accuracy, enhanced design and better insight into critical design parameters as well as virtual prototyping. FEM allows detailed visualization of the points where structures bend or twist, and indicates the distribution of stresses and displacements. FEM helps tremendously in producing stiffness and strength visualizations. Our FEM software provides a wide range of simulation options for controlling the complexity of both modeling and analysis of the system.

VALUE		CLASSIFICATION	
	10	HIGH	SEALING PRESSURE
	9		
	8	GOOD	
	7		
	6	SUFFICIENT	
	5		
	4	INSUFFICIENT	
	3		

Here above, colors indicate different material properties for each zone of the gasket comparing Athena racing cylinder head gaskets with the ones of our competitors. Parts underlined in red/orange demonstrate that gaskets with the Athena gas stopper exercise higher pressure against the cylinder head and cylinder block, ensuring better sealing, Competitor gaskets without gas stopper reveal lack of sealing (colors green and blue).



MLS MANUFACTURING PROCESS

1 LASER PROCESS

State of the art laser allows high precision gasket cut from raw material. For specific reinforced materials in-house die cutting machines are used.

2 EMBOSSING

Single gasket layers are embossed as per Athena specific drawing, in order to seal liquid and combustion gas.

3 RIVET ASSEMBLING

Each head gasket layer is assembled and fixed with rivets, for perfect layer alignment.

4 FINISHING

The application of different superficial coatings enables the gasket to better performance, prevent sticking phenomena and enhance high temperature resistance.

Athena MLS gaskets are designed to suit the requirements of today's competition engines offering enhanced sealing compared to the OEM product.
The gaskets are constructed from 2 - 5 layers of high quality stainless and spring steels. These have various types of beading for sealing of the oil and water ways and advanced stopper technology is used to seal the combustion gases around the cylinder hole. Finally a special coating on the gasket surfaces provides sealing against minor imperfections in the sealing faces.

330
COOPER RING GASKET

FEATURES

→ For specific high horsepower applications, engine performance can be significantly improved by using Athena Cooper Ring gaskets, that are supplied with INOX steel rings.

→ This technology outperforms conventional fire ring solutions. Reinforced material M0115 (see features below): asbestos free composite raw material OE approved.

→ Stainless steel ring (AISI 304) separate stainless steel rings assure maximum sealing around cylinder bore also on NOS and/or turbo charges engines where boost is over 2 bars. No head and block machining required.

→ Silicon beading: Silicon-based beading is applied on critical areas to improve sealing around all cooling water and oil passages.

GENERAL INSTALLATION NOTES

→ Be sure the engravings of the ring are placed facing the engine head.

MATERIAL

M0115 MOTOR GASKET

Nominal thickness: 1.20 mm
Other possible thiknesses from 1.00 mm to 2.00 mm

→ Description

MOTORGASKET M0115 is composed of a pegged steel core. An asbestos-free soft material, which contains a blend of inorganic fillers and a high grade of aramide fibres and NBR as binder, is applied to both sides of the core.

→ Application

MOTORGASKET M0115 is suitable for cylinder head gaskets in internal combustion engines; intake and exhaust manifolds; other sealing areas exposed to high mechanical and thermal stress.

→ Properties

MOTORGASKET M0115 has a good mechanical and thermal stress, conforms well to sealing faces.
MOTORGASKET M0115 is resistant to oils, fuels, mixtures of water and antifreeze or corrosion inhibitors

→ Surfaces

Coloured: Grey
Top coating: /
Treatment: For stressed application special coatings are applied, e.g. a PTFE anti-stick coating or a special silicon coating which improves micro-sealing and silicon beading.

PROPERTY/PROCEDURE	RESULT
Weight per surface unit (kg/m²):	3.48
Thickness of steel core (mm):	0.20 until 1.30 mm total thickness 0.25 ≥ 1.40 mm total thickness
Stress Relaxation acc. to DIN 52913: 16 h, 175 °C - N/mm²:	≥ 23
Compressibility and recovery acc. to ASTM F36J	
Compressibility %:	8-12
Recovery %:	≤ 55
Swelling acc. to ASTM F 146 In IRM 903 oil: Thick.incr. %:	≤ 10
Swelling acc. to ASTM F 146 In fuel B 23°C /5 h Thick.incr. %:	≤ 10
Swelling acc. to ASTM F 146 In water / antifreeze (50:50) Thick.incr. %:	≤ 6
Peak temperature:	400°C
Surface pressure: Maximum at 300°C (N/mm²):	100

COOPER RING MANUFACTURING PROCESS

1 PRESSING PROCESS

Each gasket is pressed to reach the perfect flatness according to the required tolerances.

2 SILICON BEADING

This working process adds a silicon bead over specific gasket areas to increase sealing around liquid passages (water and oil).

3 FINISHING

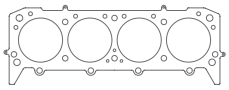
The application of different superficial coatings enables the gasket to better performance, prevent sticking phenomena and enhance high temperature resistance.


motor GASKET MOI15
1.20 mm

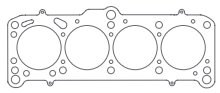
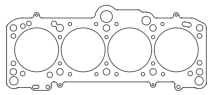
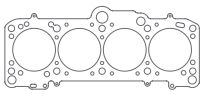
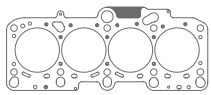
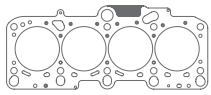
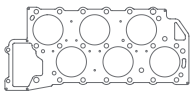
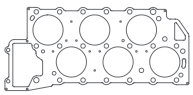
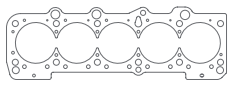
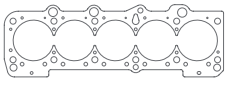
Application list

AMC
AUDI / VOLKSWAGEN/SEAT
BMW
BUIK
CHEVROLET
CHRYSLER
FERRARI
FIAT / LANCIA / ALFA ROMEO
FORD
HONDA
MITSUBISHI
NISSAN
OLDSMOBILE
OPEL / VAUXHALL
PEUGEOT / CITROËN
PORSCHE
RENAULT
ROVER
SAAB
SUBARU
TOYOTA
VOLVO

AMC

CC	ENGINE#	MAJOR APPLICATIONS*	YEAR	GASKET BORE (mm.)	TOP END GASKET KIT WITHOUT HEAD GASKET#	BOTTOM END GASKET KIT#	HEAD GASKET#	THICKNESS (mm.)	PICTURE
-	390-401	AMC	70-74	107.95 111.25	N.A.	N.A.	338365R 338366R	1.0	

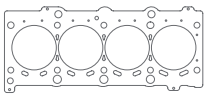
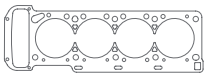
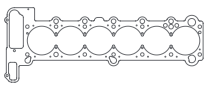
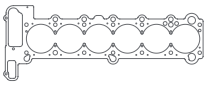
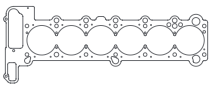
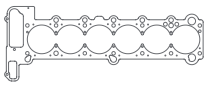
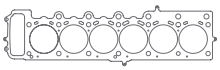
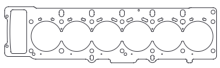
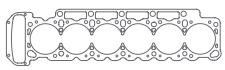
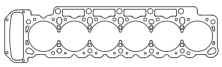
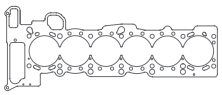
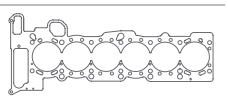
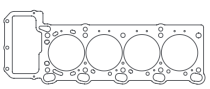
AUDI / VOLKSWAGEN / SEAT

CC	ENGINE#	MAJOR APPLICATIONS*	YEAR	GASKET BORE (mm.)	TOP END GASKET KIT WITHOUT HEAD GASKET#	BOTTOM END GASKET KIT#	HEAD GASKET#	THICKNESS (mm.)	PICTURE
1.781 1.595	AAM/ABS/ ADZ/ADA	VOLKSWAGEN GOLF 1.8 8V VOLKSWAGEN PASSAT 1.8 8V VOLKSWAGEN VENTO 1.8 8V SEAT CORDOBA SEAT IBIZA SEAT TOLEDO 1.8 8V AUDI 80 1.6-1.8 8V	78-UP 92-UP 93-UP 91-UP	81 83	044757-1000R	084750-1051R NEW!	338419R 338003R	1.4	 
1.781	KR PL	VOLKSWAGEN PASSAT 1.8i 16V VOLKSWAGEN GOLF 1.8i 16V VOLKSWAGEN JETTA 1.8i 16V VOLKSWAGEN PASSAT 1.8i 16V SEAT SCIROCCO 1.8 16V SEAT CORDOBA SEAT IBIZA SEAT TOLEDO 1.8 16V	78-UP 85-UP 91-UP	83.8	044744-1000R	084717-1000R	338004R	1.4	
1.800	ADR/AEB/ AFY/ARG/ ANB/APU/ AEB/AJL	VOLKSWAGEN PASSAT 1.8i 20V AUDI A4 1.8i 20V AUDI A4 1.8i 20V TURBO AUDI A6 1.8 20V AUDI CABRIOLET 1.8 20V VOLKSWAGEN PASSAT 1.8i 20V	96-05 94-UP 95-UP 95-UP 97-UP 96-05	83 83.8	044767-1000R	084767-1000R	338253R 338254R	1.4 1.4	 
2.792	AES/AFP/ AMY	VOLKSWAGEN SHARAN 2.8 VR6 (1a S.)	-	84.1	044911-1000R	084911-1000R	338320R	0.65	
2.861	AAA	VOLKSWAGEN GOLF 2.8 VR6 VOLKSWAGEN PASSAT 2.8 VR6 VOLKSWAGEN VENTO 2.8 VR6	92-UP						
	ABV	VOLKSWAGEN CORRADO 2.8 VR6 VOLKSWAGEN GOLF 2.9 VR6	92-UP						
2.792	AES/AFP/ AMY	VOLKSWAGEN CORRADO 2.9 VR6 VOLKSWAGEN GOLF III 2.8 VR6 VOLKSWAGEN GOLFIII 2.9 VR6 VOLKSWAGEN VENTO 2.8 VR6	91-95 92-97 94-97 92-98	82.5 83			338314R 338321R	0.65 1.65	
2.200	GV/JY/KE/ KF/KG/KH/ KJ/KK/KL/ WB/WC/WE/ WG/WH/WJ	AUDI 80 2,2 QUATTRO AUDI COUPE 1,9 AUDI COUPE 2,1 AUDI GT QUATTRO 2,1 TURBO	81-85	83.5 82	N.A.	N.A. NEW! NEW!	330047R NEW! 330048R	1.6	 

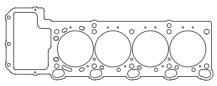
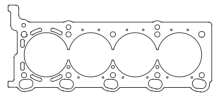
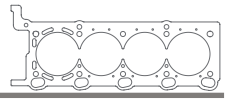
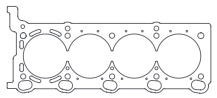
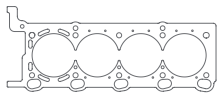
* Please note this application list is only listing the most popular models. For a full list of applications covered by gasktes please check engine #.

N.B: codes starting with 338 refer to MLS gaskets, those beginning with 330 to Cooper Ring gaskets.

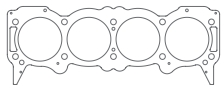
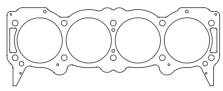
BMW

CC	ENGINE#	MAJOR APPLICATIONS*	YEAR	GASKET BORE (mm.)	TOP END GASKET KIT WITHOUT HEAD GASKET#	BOTTOM END GASKET KIT#	HEAD GASKET#	THICKNESS (mm.)	PICTURE
1.796	M42 B18	318is 1.8 16V	89-92	87	042238-1000R	082238-1000R	338287R	1.6	
			92-94	87	042239-1000R	082238-1000R			
			94-97	87	042240-1000R	082240-1000R			
1.990	S14 204 EA	320is 16V	86-91	95	042243-1000R	082243-1000R	330021R	2.0	
2.303	S14 B23 S14 B23 (EVO 1)	M3 16V - M3 (EVO1) 16V			042243-1000R				
2.494	M50 SERIES E36 E34	320i 24V 520i 24V	89-92	84.5	042244-1000R	082244-1000R	330012R	2.0	
				86			330011R	1.6	
		520i 24V	92-96	86	042245-1000R	082245-1000R	330013R	2.0	
				87			330014R	2.0	
2.494	M20 SERIES B25	325i 525i 12V	N.A.	85.5	042254-1000R	082254-1000R	330015R	2.0	
2.693	M20 SERIES B27	325e-525e-528e 12V			042255-1000R				
2.990	B30	M3 24V	92-01	87.1	042256-1000R	082256-1000R	330020R	1.8	
2.990	S50 B30 S52 B32 (EURO ONLY)	M3 24V	92-99	87			338081R	1.8	
3.201	B 32	M3 24V - Z3 24V	92-01	87.1	042257-1000R		330020R	1.8	
3.246	S54 326 S4 S54 B32 S54 B32 (32 6 S4) S54N 326 S4	M3-COUPE CABRIO 3,2 24V Z3 COUPE' ROADSTSTER 3.2 24V	00-UP	87.5	N.A.	N.A.	330037R	1.2	
3.453	M30 B35	635csi-735i	78-80	93.1	042258-1000R	082258-1000R	330016R	2.0	
			80-82	95.6	042259-1000R		330017R	2.0	
2.494	M52 B25 M52 B28 M54 B25 M54 B30 M54 256 S5 M54 306 S3	320i 24V	Up to 09/02	85.1	042260-1000R	082260-1000R	330022R	1.5	
		325i-330i 24V-320-325-330 Ci 24V	00-02						
		320i 24V	From 10/02	87.6	042261-1000R		330023R	1.5	
		325i-330i 24V-320-325-330 Ci 24V	02-UP						
3.982	M60 B40 Right	540i V8 740i V8 530i V8 730i V8	92-01	90.6	042262-1000R	082260-1000R	330024R	2.0	

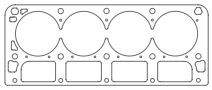
BMW

CC	ENGINE#	MAJOR APPLICATIONS*	YEAR	GASKET BORE (mm.)	TOP END GASKET KIT WITHOUT HEAD GASKET#	BOTTOM END GASKET KIT#	HEAD GASKET#	THICKNESS (mm.)	PICTURE
3.982	M60 B40 Left	540i V8 740i V8 530i V8 730i V8	92-01	90.6	042262-1000	082260-1000	330025R	2.0	
4.398	M62 448 S2 M62 B44 M62 B44 TU Right	535i 540i 735i 740i 840Ci	Up to 09/89	93.6	042263-1000	082262-1000	330026R	2.0	
	M62 448 S2 M62 B44 M62 B44 TU Left						330027R		
4.398	M62 448 S2 M62 B44 M62 B44 TU Right	535i 540i 735i 40i 840Ci	From 10/89	93.6	042264-1000	N.A.	330026R	2.0	
	M62 448 S2 M62 B44 M62 B44 TU Left						330027R		

BUICK

CC	ENGINE#	MAJOR APPLICATIONS*	YEAR	GASKET BORE (mm.)	TOP END GASKET KIT WITHOUT HEAD GASKET#	BOTTOM END GASKET KIT#	HEAD GASKET#	THICKNESS (mm.)	PICTURE
-	400-455	BUICK	67-76	107.95	N.A.	N.A.	338367R	1.0	
				111.38			338368R		

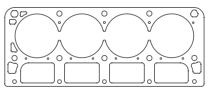
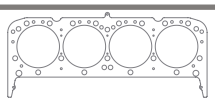
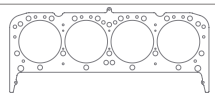
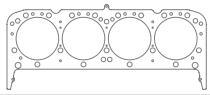
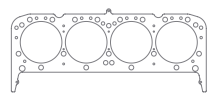
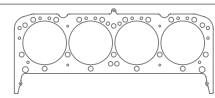
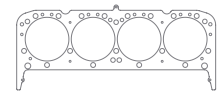
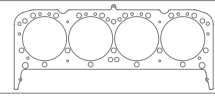
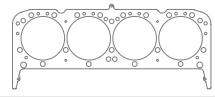
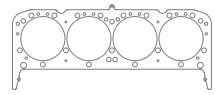
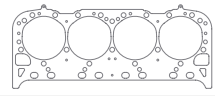
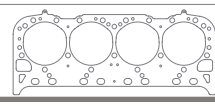
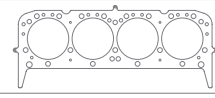
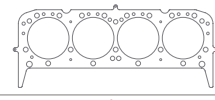
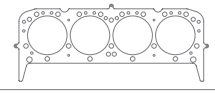
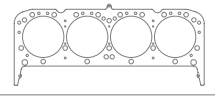
CHEVROLET

CC	ENGINE#	MAJOR APPLICATIONS*	YEAR	GASKET BORE (mm.)	TOP END GASKET KIT WITHOUT HEAD GASKET#	BOTTOM END GASKET KIT#	HEAD GASKET#	THICKNESS (mm.)	PICTURE
6.000	364 (6.0L) VIN U	-	99-00	103	N.A.	N.A.	330018R	1.5	

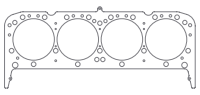
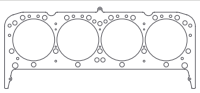
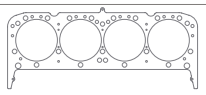
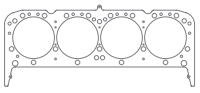
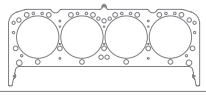
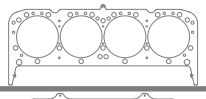
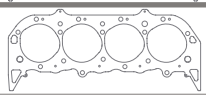
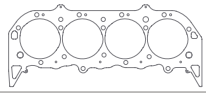
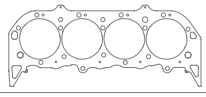
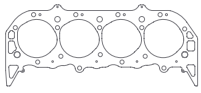
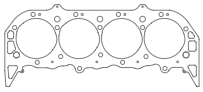
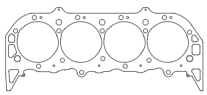
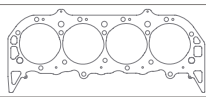
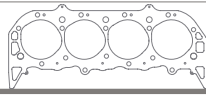
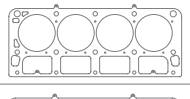
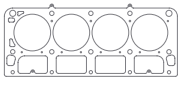
* Please note this application list is only listing the most popular models. For a full list of applications covered by gasktes please check engine #.

N.B: codes starting with 338 refer to MLS gaskets, those beginning with 330 to Cooper Ring gaskets.

CHEVROLET

CC	ENGINE#	MAJOR APPLICATIONS*	YEAR	GASKET BORE (mm.)	TOP END GASKET KIT WITHOUT HEAD GASKET#	BOTTOM END GASKET KIT#	HEAD GASKET#	THICKNESS (mm.)	PICTURE
6.000	364 (6.0L) VIN U	-	99-00	105.4	N.A.	N.A.	330019R	1.5	
-	350 Small Block Chevy V8	-	55-91	103.2	N.A.	N.A.	338380R	0.7	
-				103.2	N.A.	N.A.	338381R	0.75	
-				103.2	N.A.	N.A.	338382R	1.0	
-				103.2	N.A.	N.A.	338383R	1.3	
-				106	N.A.	N.A.	338384R	0.76	
-				106	N.A.	N.A.	338338R	1.0	
-				107	N.A.	N.A.	338339R	1.0	
-				106	N.A.	N.A.	338385R	1.3	
-				107	N.A.	N.A.	338386R	1.3	
-	LT1/LT4 350 CI V8	-	92-96	102.6	N.A.	N.A.	338299R	1.0	
-				104.4	N.A.	N.A.	338305R		
-	V8 Small Block 262, 265, 283, 302, 307, 327, 350, 400	-	55-91	103.1	N.A.	N.A.	338328R	0.7	
-				103.1	N.A.	N.A.	338327R	1.0	
-				103.1	N.A.	N.A.	338329R	1.3	
-				104.7	N.A.	N.A.	338291R	1.0	

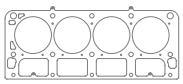
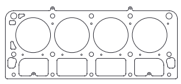
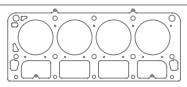
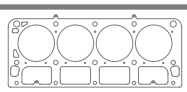
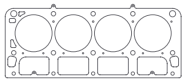
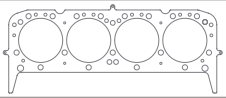
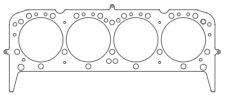
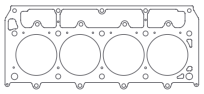
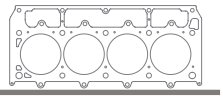
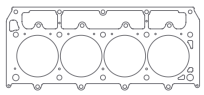
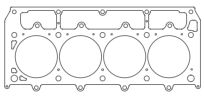
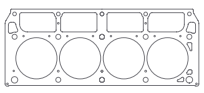
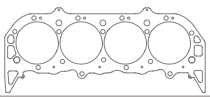
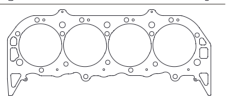
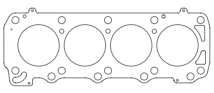
CHEVROLET

CC	ENGINE#	MAJOR APPLICATIONS*	YEAR	GASKET BORE (mm.)	TOP END GASKET KIT WITHOUT HEAD GASKET#	BOTTOM END GASKET KIT#	HEAD GASKET#	THICKNESS (mm.)	PICTURE
-	V8 Small Block 262, 265, 283, 302, 307, 327, 350, 400	-	55-91	104.7	N.A.	N.A.	338330R	1.3	
-				105.7	N.A.	N.A.	338331R	0.7	
-				105.8	N.A.	N.A.	338292R	1.0	
-				106	N.A.	N.A.	338332R	1.9	
-				106.7	N.A.	N.A.	338293R	1.9	
-				106.7	N.A.	N.A.	338333R	1.7	
-	BIG BLOCK 396, 402, 427, 454, 502 Mark IV & Bow Tie Hi-Perf. 2 Each End Lower 3 Open	-	N.A.	111.1	N.A.	N.A.	338310R	1.0	
-				115.3	N.A.	N.A.	338309R	1.0	
-				117.6	N.A.	N.A.	338312R	1.0	
-				111.1	N.A.	N.A.	338288R	1.0	
-				115.3	N.A.	N.A.	338289R	1.0	
-				115.3	N.A.	N.A.	338335R	1.3	
-				115.3	N.A.	N.A.	338336R	1.9	
-				117.6	N.A.	N.A.	338290R	1.0	
-	LS1/LS6 5.7L & LS2 6.0L	-	N.A.	105.7	N.A.	N.A.	338308R	1.3	
-				105	N.A.	N.A.	338304R	1.0	

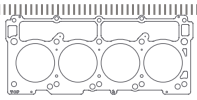
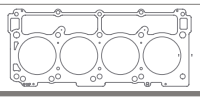
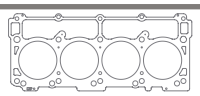
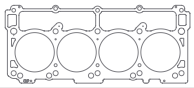
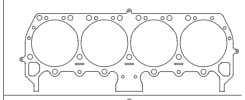
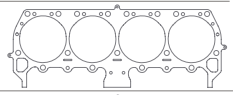
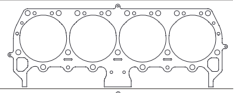
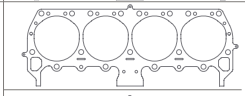
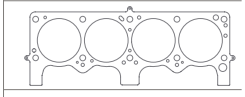
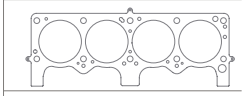
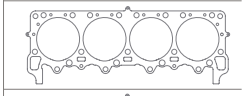
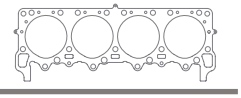
* Please note this application list is only listing the most popular models. For a full list of applications covered by gasktes please check engine #.

N.B: codes starting with 338 refer to MLS gaskets, those beginning with 330 to Cooper Ring gaskets.

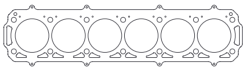
CHEVROLET

CC	ENGINE#	MAJOR APPLICATIONS*	YEAR	GASKET BORE (mm.)	TOP END GASKET KIT WITHOUT HEAD GASKET#	BOTTOM END GASKET KIT#	HEAD GASKET#	THICKNESS (mm.)	PICTURE
-	LS1/LS6 5.7L & LS2 6.0L	-	N.A.	105	N.A.	N.A.	338334R	1.0	
-	LS1 5.7L	-	97-05	100.2	N.A.	N.A.	338342R	1.3	
-							338344R	1.0	
-	LS2/3 6.0L/6.2L	-	05-11	104.1	N.A.	N.A.	338343R	1.3	
-							338345R	1.0	
-	283-350	-	57-96	102.5	N.A.	N.A.	338352R	1.0	
-				111.3	N.A.	N.A.	338353R	1.0	
-	LSX 376-L	-	N.A.	104.7	N.A.	N.A.	338354R	1.3	
-	LSX 376-R	-	N.A.	104.7	N.A.	N.A.	338355R	1.3	
-	LSX 454-L	-	N.A.	106.7	N.A.	N.A.	338356R	1.3	
-	LSX 454-R	-	N.A.	106.7	N.A.	N.A.	338357R	1.3	
-	LS7	-	06-UP	105.7	N.A.	N.A.	338358R	1.3	
-	BIG BLOCK M39a6r,k 4 I0V2 &, 4B2o7w, 4T5ie4 ,H 5i-0P2e r f.2 Each End Lower 3 Open	GEN. IV	55-91	117.6	N.A.	N.A.	338389R	1.15	
-							338390R	1.3	
2.000	-	CHEVROLET COSWORTH VEGA	75-76	91	N.A.	N.A. NEW!	338425R	1.0	

CHRYSLER

CC	ENGINE#	MAJOR APPLICATIONS*	YEAR	GASKET BORE (mm.)	TOP END GASKET KIT WITHOUT HEAD GASKET#	BOTTOM END GASKET KIT#	HEAD GASKET#	THICKNESS (mm.)	PICTURE
-	HEMI 5.7L - L	-	02-11	102.8	N.A.	N.A.	338361R	1.0	
-	HEMI 5.7L- R	-	02-11	102.8	N.A.	N.A.	338362R	1.0	
-	HEMI 6.1L	-	05-11	104.1	N.A.	N.A.	338363R	1.0	
				106.3			338364R		
-	361, 383, 400, 413, 426 & 440	-	N.A.	114.3	N.A.	N.A.	338307R	1.0	
				111.3			338306R		
				111.3			338377R	1.5	
				112.1			338300R	1.0	
	318, 340 & 360			104.8			338297R		
				103.6			338296R		
	426 Hemi			111.1			338313R		
				108.7			338311R		

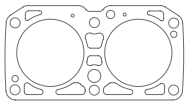
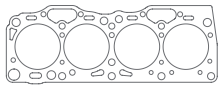
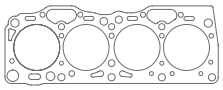
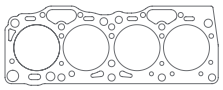
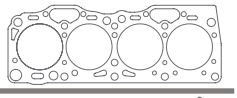
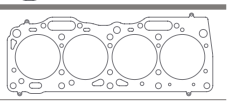
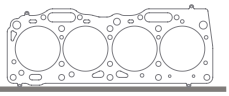
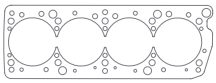
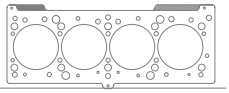
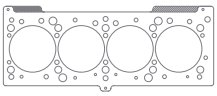
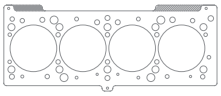
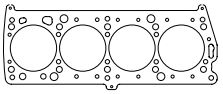
FERRARI

CC	ENGINE#	MAJOR APPLICATIONS*	YEAR	GASKET BORE (mm.)	TOP END GASKET KIT WITHOUT HEAD GASKET#	BOTTOM END GASKET KIT#	HEAD GASKET#	THICKNESS (mm.)	PICTURE
5.474		550	96-02	90.5	N.A.	N.A.	338404R	1.5	
5.748		575 GT	02-06						

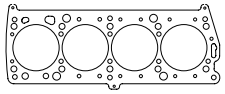
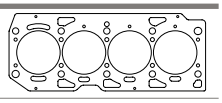
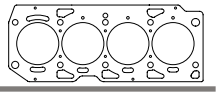
* Please note this application list is only listing the most popular models. For a full list of applications covered by gasktes please check engine #.

N.B: codes starting with 338 refer to MLS gaskets, those beginning with 330 to Cooper Ring gaskets.

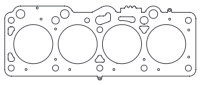
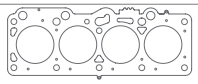
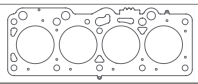
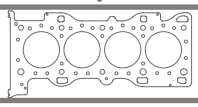
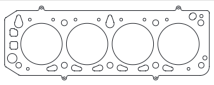
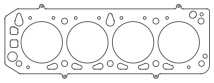
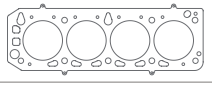
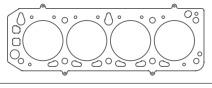
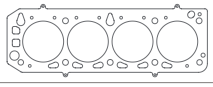
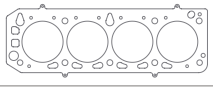
FIAT / LANCIA / ALFA ROMEO

CC	ENGINE#	MAJOR APPLICATIONS*	YEAR	GASKET BORE (mm.)	TOP END GASKET KIT WITHOUT HEAD GASKET#	BOTTOM END GASKET KIT#	HEAD GASKET#	THICKNESS (mm.)	PICTURE
1.186	AR 30100 AR30102	ALFA SUD -ARNA 1.2	72-84	85.4	010313-1000R		330008R	1.5	
1.286	AR30104	ALFA SUD 1.3	77-84						
1.351	AR 30168	ALFA 33 1.4	84-90						
	AR30160 AR30164 AR30168	ALFA SUD 1350	79-84						
1.490	AR 30140 AR30146	ALFA 33 1.5	83-89						
	AR30124 AR30128 AR30146	ALFA SUD 1350	79-84						
1.372	146 A8.000	FIAT PUNTO 1.4 TURBO	89-99	81.5	011027-1000R		330003R	1.8	
				82			330010R		
				82.5			338006R	1.3	
							338005R	1.7	
1.600	159 A.000 159B9.000 176 A9.000	FIAT PUNTO 1.6 LANCIA DEDRA 1.6 ie	93-99	88	011028-1000R		338251R	1.3	
							338252R	1.7	
1.995	835 A8.000 831 B5.000 831 C5.000 831 C5.046 835 A7.000	LANCIA DELTA 2.0 ie 4WD 8V DEDRA 2.0 TURBO ie 8V 4X4	87-94	85.5	011030-1000R		330039R	1.8	
				85.3			338396R	1.6	
	836 A2.000 836 A3.000 838 A4.000 834 F1.000 834 F2.000 831 D5.000 831 E5.000 831 E5.046 154 E1.000	LANCIA DELTA I 2.0 16V HF Integrale LANCIA DELTA I 2.0 16V HF EVO Integrale LANCIA DELTA II 2.0 16V LANCIA KAPPA 2.0 16V TURBO LANCIA NUOVA DELTA 2.0 16V ie LANCIA THEMA 2.0 16V FIAT COUPE 2.0 16V FIAT TIPO 2.0 i.e. 16V Sport FIAT CROMA 2.0 16V	89-96	87	041040-1000R	081040-1000R	338397R	1.6	
				86			338398R	0.65	
1.756	124C.000	FIAT 124 SPORT 1.8 FIAT 124 SPYDER (USA) 1.8	72-78 70-82	85.5	010556-1000R		338412R	1.3	
1.995	131B2/C4.000	FIAT 131 RACING 2000 FIAT 131 SPORT 2000 TC FIAT 131 SUPER 2000	72-78 70-82						
1.585	131B1.000	FIAT 131 SPORT 1600	79-81						
1.756	828AB1.000	LANCIA BETA 1.8 - COUPE' - SPYDER	72-76						
1.995	828B1.000	LANCIA BETA 2000 R/79	79-82						

FIAT / LANCIA / ALFA ROMEO

CC	ENGINE#	MAJOR APPLICATIONS*	YEAR	GASKET BORE (mm.)	TOP END GASKET KIT WITHOUT HEAD GASKET#	BOTTOM END GASKET KIT#	HEAD GASKET#	THICKNESS (mm.)	PICTURE
1.585	828B.000	LANCIA BETA 1.6 COUPE' - HPE - R/79	76-82	85.5	010571-1000R		338412R	1.3	
1.995	828B4.000	LANCIA BETA 2000 R/79 INIEZ.	78-82		010567-1000R				
1.997	672.04-672.99 323.01 323.03 162.01-323.01 162.01-323.01	ALFA 155 (167) 2.0 T.S 16V ALFA 156 (932) 2.0 16V T.S ALFA 156 (932) 2.0 T.S ALFA GTV (916C) 2.0 T.S 16V SPIDER (916S) 2.0 T.S 16V		85.8	N.A.	N.A.	338408R	0.85	
	N.A.	FIAT GRANDE PUNTO S 2000 FIAT PUNTO S 1600	06-	84	N.A.	N.A.	338409R	1.55	

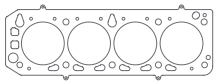
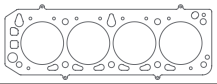
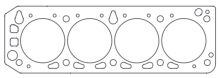
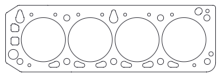
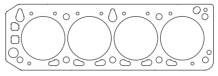
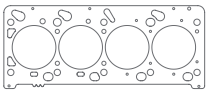
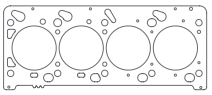
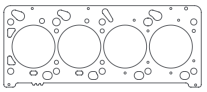
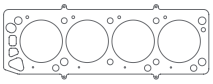
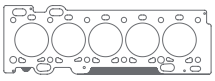
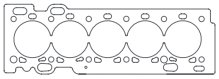
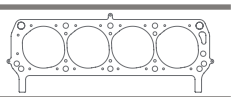
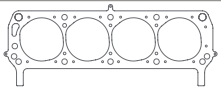
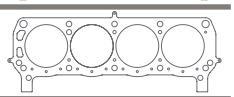
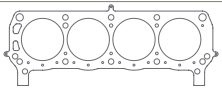
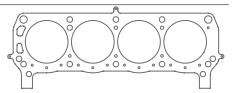
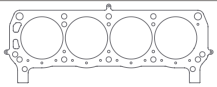
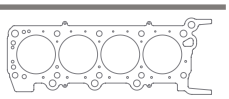
FORD

CC	ENGINE#	MAJOR APPLICATIONS*	YEAR	GASKET BORE (mm.)	TOP END GASKET KIT WITHOUT HEAD GASKET#	BOTTOM END GASKET KIT#	HEAD GASKET#	THICKNESS (mm.)	PICTURE
1.585	LNA LHA LHB	FORD ESCORT -FIESTA 1.6 Turbo ZETEC	N.A.	81	041516-1000R	082536-1000R	338270R	1.3	
							338271R	1.6	
							338272R	1.9	
1.597	-	FORD FIESTA ST	13-	85.5	N.A.	N.A.	338403R	1.35	
1.997	COSWORTH 2,0L DOHC YB / SOHC OHC-NEP	ESCORT RS COSW. 16V	N.A.	92.5	N.A.	082521-1000R	338042R	1.3	
							338045R	1.15	
							338048R	1.0	
				93.5			338041R	1.3	
							338044R	1.15	
							338047R	1.0	

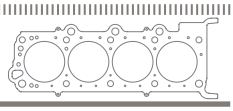
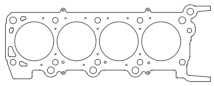
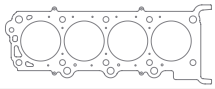
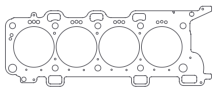
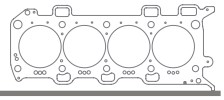
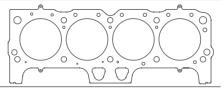
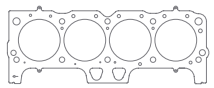
* Please note this application list is only listing the most popular models. For a full list of applications covered by gasktes please check engine #.

N.B: codes starting with 338 refer to MLS gaskets, those beginning with 330 to Cooper Ring gaskets.

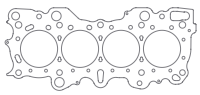
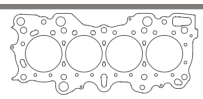
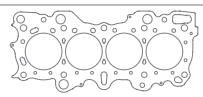
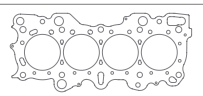
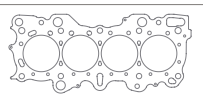
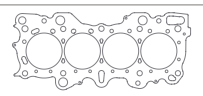
FORD

CC	ENGINE#	MAJOR APPLICATIONS*	YEAR	GASKET BORE (mm.)	TOP END GASKET KIT WITHOUT HEAD GASKET#	BOTTOM END GASKET KIT#	HEAD GASKET#	THICKNESS (mm.)	PICTURE
1.997	COSWORTH 2,0L DOHC YB / SOHC OHC-NEP	ESCORT RS COSW. 16V	N.A.	94.5	N.A.	082521-1000R	338040R	1.3	
							338043R	1.15	
				91.4			330029R	1.3	
				92.1			330030R	1.3	
							330046R	2.0	
1.996	EDBA EDBB EDBC EDBD EDDB EDDC EDDD EDDF NGA NGB NGC NGD	FORD FOCUS 2.0 16V ZETEC	-	86.2	041511-1000R	082591-1000R	338267R	1.0	
							338268R	1.3	
							338269R	1.6	
2.298	2.3L SOHC	RANGER-MAVERICK	-	98	N.A.	N.A.	338301R	1.0	
2.522	HUBA HUWA HYDB JZDA	FOCUS II 2.5 ST FOCUS II 2.5 RS FOCUS II 2.5 RS500	05-09-10-	83	041518-1000R	081518-1000R	338284R	1.2	
				84			330045R	1.6	
-	302 351W SVO w/ Valve Pockets Yates Style Right Side	-	-	104.1	N.A.	N.A.	338302R	1.0	
							338303R	1.0	
-	289 302 351W Non SVO	-	-	104.6	N.A.	N.A.	338295R	1.0	
				104.8			338337R	0.7	
							338294R	1.0	
				105.5			338379R	1.0	
-	4.6/5.4-Left (V2)	-	91-04	92.2	N.A.	N.A.	338346R	1.0	

FORD

CC	ENGINE#	MAJOR APPLICATIONS*	YEAR	GASKET BORE (mm.)	TOP END GASKET KIT WITHOUT HEAD GASKET#	BOTTOM END GASKET KIT#	HEAD GASKET#	THICKNESS (mm.)	PICTURE
-	4.6/5.4-Right (V2)	-	91-04	92.2	N.A.	N.A.	338347R	1.0	
-	4.6/5.4-Left (V2)	-	05-10	92.2	N.A.	N.A.	338348R	1.0	
-	4.6/5.4-Right (V2)	-	05-10	92.2	N.A.	N.A.	338349R	1.0	
-	5.0-Left COYOTE	-	11-UP	95.3	N.A.	N.A.	338351R	1.55	
-	5.0-Right COYOTE	-	11-UP	95.3	N.A.	N.A.	338350R	1.55	
-	F 429/460	-	68-88	111.7	N.A.	N.A.	338359R	1.0	
				114.3			338360R		

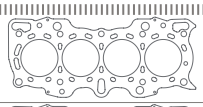
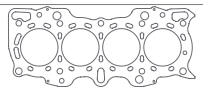
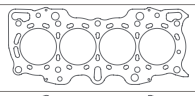
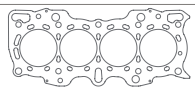
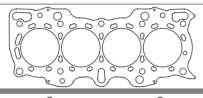
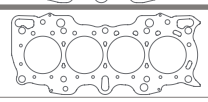
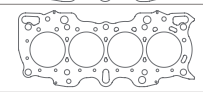
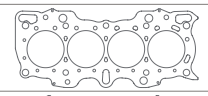
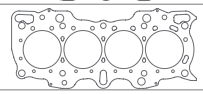
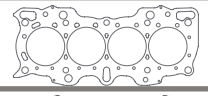
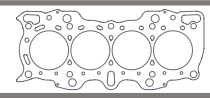
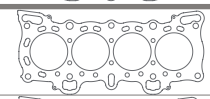
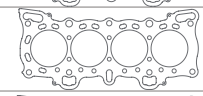
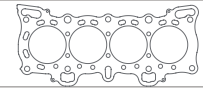
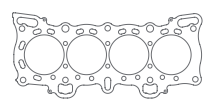
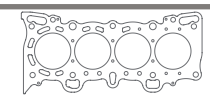
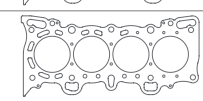
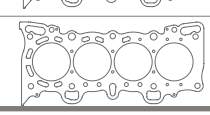
HONDA

CC	ENGINE#	MAJOR APPLICATIONS*	YEAR	GASKET BORE (mm.)	TOP END GASKET KIT WITHOUT HEAD GASKET#	BOTTOM END GASKET KIT#	HEAD GASKET#	THICKNESS (mm.)	PICTURE
1.595 1.683 1.797	B16A2-A3 B17A1 VTEC B18C1-C5 VTEC	CIVIC-CRX 1.6i vtec 16V	99-00	81.5	042723-1000R	082723-1000R	338085R	0.85	
1.797	B18C1 C5 VTEC	INTEGRA 1.8i 16V	99-00	81.5	042723-1000R	082723-1000R	338402R	0.6	
				82			338086R	0.85	
				83			338087R		
				84			338088R		
				85			338089R		

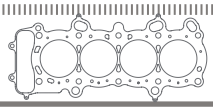
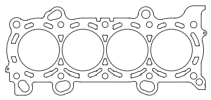
* Please note this application list is only listing the most popular models. For a full list of applications covered by gasktes please check engine #.

N.B: codes starting with 338 refer to MLS gaskets, those beginning with 330 to Cooper Ring gaskets.

HONDA

CC	ENGINE#	MAJOR APPLICATIONS*	YEAR	GASKET BORE (mm.)	TOP END GASKET KIT WITHOUT HEAD GASKET#	BOTTOM END GASKET KIT#	HEAD GASKET#	THICKNESS (mm.)	PICTURE
1.797	B18A Hybrid non VTEC Block w/VTEC Head	-	N.A.	81	N.A.	N.A.	338090R	0.85	
				82			338092R		
				83			338093R		
				84			338094R		
				85			338096R	0.75	
1.834	B18A1 DOHC Non VTEC	INTEGRA 1.8i 16V	90-93	81	042735-1000R	082723-1000R	338098R	0.85	
				82			338100R		
				83			338101R		
				84			338102R		
				85			338103R		
1.972	B20B4 B20Z2	CRV 2.0i 16V	97-01	85	042718-1000R	082723-1000R	338104R	0.85	
1.343 1.493 1.590	D13B1-B2 D15B1-B2-B6-B7-B8 D16A6-A7 D16Z1 D16Z2	CIVIC-CONCERTO 1.4	87-97 88-95	76	042714-1000R	082714-1000R	338107R	0.85	
				77			338108R		
		CIVIC CONCERTO 1.5	87-97 88-95	78			338109R		
		BALLADE CIVIC CONCERTO CRX INTEGRA 1.6	87-97 88-95	79			338110R		
1.493 1.590	D15Z1 D16Y5 D16Y8	CIVIC 1.5i vtec 16V (91)	91-95	76	042719-1000R	082716-1000R	338112R	0.85	
		CIVIC 1.5i vtec 16V (96)	96-00	77			338113R		
		CIVIC-CRX-HR-V 1.6i vtec 16V	91-95 96-00	78			338114R		

HONDA

CC	ENGINE#	MAJOR APPLICATIONS*	YEAR	GASKET BORE (mm.)	TOP END GASKET KIT WITHOUT HEAD GASKET#	BOTTOM END GASKET KIT#	HEAD GASKET#	THICKNESS (mm.)	PICTURE
1.997	F20C1-C2 / F22C1 DOHC VTEC 2,0L	S2000 vtec 16V	99-03	89	042736-1000R	082736-1000R	338124R	0.85	
1.998 2.354	K20A1 K20A2 K20A3 K24A	CIVIC TYPE-R INTEGRA TYPE-R RSX-S CIVIC SI ACCORD	01- 01- 01-04 01-03	88.5	N.A.	N.A.	338411R	0.85	

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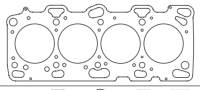
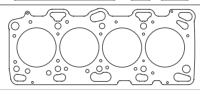
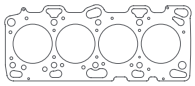
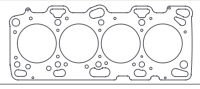
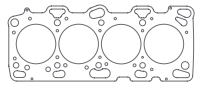
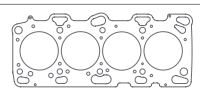
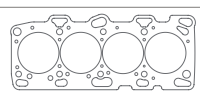
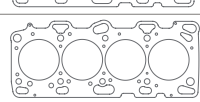
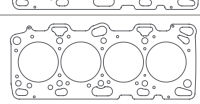
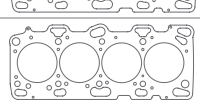
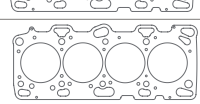
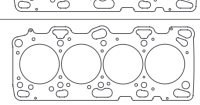
CC	ENGINE#	MAJOR APPLICATIONS*	YEAR	GASKET BORE (mm.)	TOP END GASKET KIT WITHOUT HEAD GASKET#	BOTTOM END GASKET KIT#	HEAD GASKET#	THICKNESS (mm.)	PICTURE
1.997	4G63	LANCER 2.0I GDI EVO IV÷VIII	96-UP	85.3	N.A.	N.A.	338024R	1.0	
							338020R	1.15	
							338016R	1.30	
				86.3			338025R	1.0	
							338021R	1.15	
							338017R	1.30	
							330038R	1.30	
				87.3			338018R	1.30	
				87.5			338026R	1.0	
				87.5			338022R	1.15	
				87.5			330042R	1.20	
				88.3			338023R	1.15	

* Please note this application list is only listing the most popular models. For a full list of applications covered by gasktes please check engine #.

N.B: codes starting with 338 refer to MLS gaskets, those beginning with 330 to Cooper Ring gaskets.

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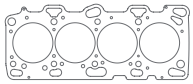
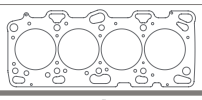
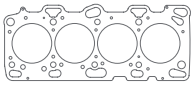
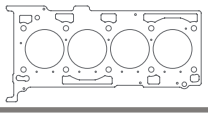
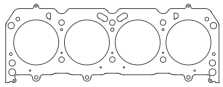
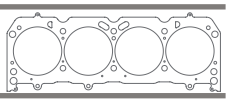
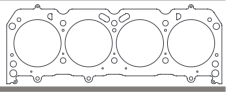
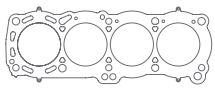
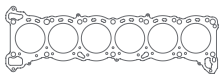
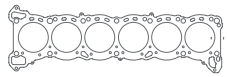
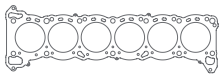
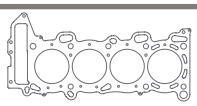
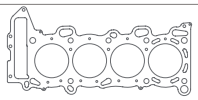
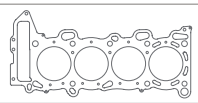
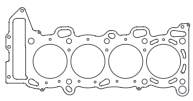
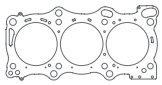
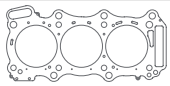
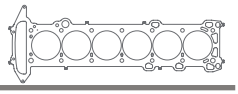
CC	ENGINE#	MAJOR APPLICATIONS*	YEAR	GASKET BORE (mm.)	TOP END GASKET KIT WITHOUT HEAD GASKET#	BOTTOM END GASKET KIT#	HEAD GASKET#	THICKNESS (mm.)	PICTURE
1.997	4G63	LANCER 2.0I GDI EVO IV÷VIII	96-UP	88.3	N.A.	N.A.	338027R	1.0	
				88.3			338019R	1.30	
1.997	4G63T	LANCER 2.0 EVO IX	05-07	86.3	N.A.	N.A.	338421R	1.0	
1.998	4B11T	LANCER 2.0 EVO X	07-UP	87.5	N.A.	N.A.	338422R	1.0	

OLDSMOBILE

CC	ENGINE#	MAJOR APPLICATIONS*	YEAR	GASKET BORE (mm.)	TOP END GASKET KIT WITHOUT HEAD GASKET#	BOTTOM END GASKET KIT#	HEAD GASKET#	THICKNESS (mm.)	PICTURE
-	330-400	OLDSMOBILE	64-69	104.1	N.A.	N.A.	338369R	1.0	
-	403	OLDSMOBILE	77-79	104.1	N.A.	N.A.	338370R	1.0	
-	455	OLDSMOBILE	68-76	104.1	N.A.	N.A.	338371R	1.0	

Athena 338146 FR

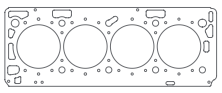
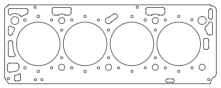
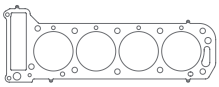
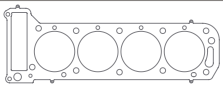
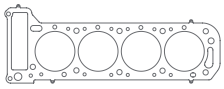
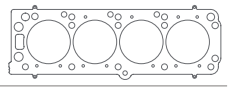
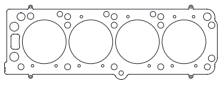
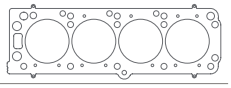
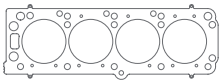
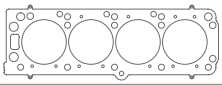
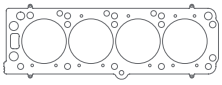
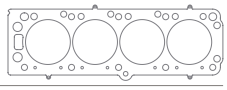
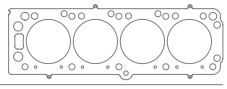
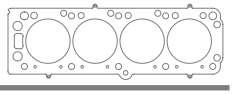
NISSAN

CC	ENGINE#	MAJOR APPLICATIONS*	YEAR	GASKET BORE (mm.)	TOP END GASKET KIT WITHOUT HEAD GASKET#	BOTTOM END GASKET KIT#	HEAD GASKET#	THICKNESS (mm.)	PICTURE
1.809	CA18 DE	BLUEBIRD 1.8i 16V	83-90	85	012439-1000R		338135R	1.30	
	CA18DET TURBO	200-BLUEBIRD-SUNNY 1.8 16V TURBO	88-93						
2.498	RB25 2,5L 6cyl. Inline	PATROL 89-93 SKYLINE 89-93 SKYLINE GT-R 89-02	89-93 89-02	87	N.A.	N.A.	338144R	1.30	
							338414R	1.50	
2.568	RB26 2,6L 6cyl. Inline	SKYLINE 89-93 SKYLINE GT-R 89-02	89-93 89-02	87.5	N.A.	N.A.	338146R	1.20	
				88			338146FR	1.20	
				87.5			338315R	1.50	
1.998	SR20DE/DET DOHC 16V. 2,0L no extra oil holes/ with 2 oil holes	100-200-PRIMERA-SERENA 2.0i 16V NX 2000 91-93 INFINITY G20 91-02	92-96	88.5	012420-1000R		338150R	0.85	
				87.5			338415R	1.50	
							338151R	1.50	
							338152R	1.0	
3.799	VR38DETT	GT-R 3,8L V6	08-	100.5	N.A.	N.A.	338406R (RIGHT SIDE)	0.95	
							338407R (LEFT SIDE)	0.95	
4.759	TB48DE	PATROL DOHC Y61	01-09	102.5	N.A.	N.A.	NEW! 338426R	1.2	

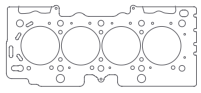
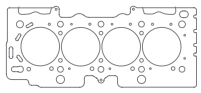
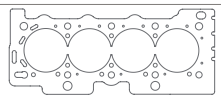
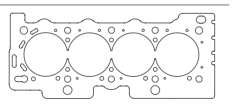
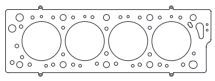
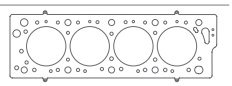
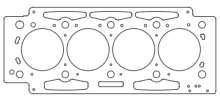
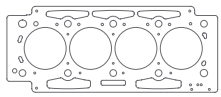
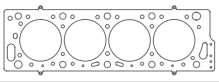
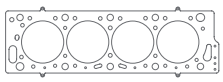
* Please note this application list is only listing the most popular models. For a full list of applications covered by gasktes please check engine #.

N.B: codes starting with 338 refer to MLS gaskets, those beginning with 330 to Cooper Ring gaskets.

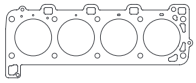
OPEL / VAUXHALL

CC	ENGINE#	MAJOR APPLICATIONS*	YEAR	GASKET BORE (mm.)	TOP END GASKET KIT WITHOUT HEAD GASKET#	BOTTOM END GASKET KIT#	HEAD GASKET#	THICKNESS (mm.)	PICTURE
1.598	A16LEL A16LER Z16LET Z16LEL Z16LER Z18LET	ASTRA CORSA INSIGNIA MERIVA 1.6 TURBO	07-UP	80	043591-1000R	083591-1000R	338286R	1.0	
1.796	Z18LER Z18XER	ASTRA INSIGNIA 1.8 SIGNUM VECTRA ZAFIRA 1.8	05-UP	80	043592-1000R	083592-1000R	338286R	1.0	
1.979	CIH-E 2,0L CIH-S 2,0L	ASCONA KADETT MANTA REKORD 2.0i 8V	77-88	97	043539-1051R	083520-1000R	338239R	1.45	
				98			338298R	1.5	
1.897	19N (CIH)	ASCONA B KADETT C MANTA B REKORD C-D 1.9 8V	76-81	97	043522-1000R	083520-1000R	338340R	1.5	
1.998	X20XEV	ASTRA CALIBRA VECTRA ZAFIRA 2.0i 16V	95-00	87.5	043560-1000R	083558-1000R	338260R	1.9	
							338058R	1.3	
							338060R	1.15	
							338062R	1.0	
				88.5			338059R	1.3	
							338061R	1.15	
1.998	C20XE	ASTRA CALIBRA KADETT VECTRA 2.0i 16V	91-	88.5	043559-1000R	083559-1000R	338316R	1.3	
				87.5			338317R	1.3	
							338318R	1.9	

PEUGEOT / CITROËN

CC	ENGINE#	MAJOR APPLICATIONS*	YEAR	GASKET BORE (mm.)	TOP END GASKET KIT WITHOUT HEAD GASKET#	BOTTOM END GASKET KIT#	HEAD GASKET#	THICKNESS (mm.)	PICTURE
1.587	TU5JP4 TU5J4 (16V)	PEUGEOT 106 PEUGEOT 1.6i PEUGEOT 16V Dal 1996- CITROEN SAXO 1.6i PEUGEOT 16V	93-03	80	043682-1000R	083663-1000R	338008R	1.0	
							338010R	1.3	
							330006R	1.0	
							330007R	1.4	
1.905	XU9J4/J4Z	PEUGEOT 309 1.9 GTI 16V	90-93	84	043653-1099R	083650-1051R	338399R	1.3	
	XU9J4/J4Z	PEUGEOT 405 1.9 MI 16V 4X4	90-93						
	XU9J4	CITROEN BX 1.9 GTI 16V	87-93				338400R	1.6	
1.997	EW10J4S EW10J4/L4 EW10J4-4S EW10J4	PEUGEOT 206 2.0 RC 16V	03-	86	043676-1099R	083676-1000R	338265R	1.0	
		PEUGEOT 206 2.0i 16V	00-12						
		PEUGEOT 206 2.0i 16V GT-S16	99-00						
		CITROEN C4 2.0 16V	04-				338266R	1.3	
		CITROEN C4-Coupé 2.0i 16V	04-10						
1.998	XU10J4	PEUGEOT 306 2.0i Coupé S16-GTI 16V	93-95	87	043656-1099R	083650-1051R	338263R	1.3	
		PEUGEOT 405 2.0 T16 4X4 16V	93-95						
	XU10J4D/Z	CITROEN ZX 2.0i 16V	92-97				338264R	1.6	

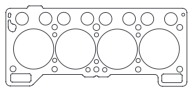
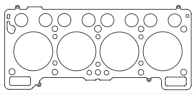
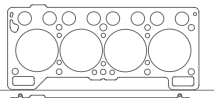
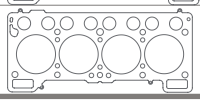
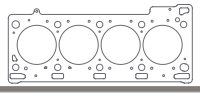
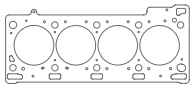
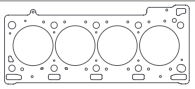
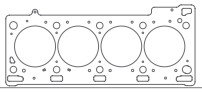
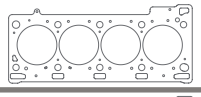
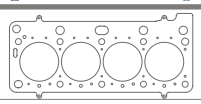
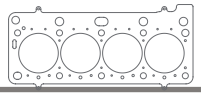
PORSCHE

CC	ENGINE#	MAJOR APPLICATIONS*	YEAR	GASKET BORE (mm.)	TOP END GASKET KIT WITHOUT HEAD GASKET#	BOTTOM END GASKET KIT#	HEAD GASKET#	THICKNESS (mm.)	PICTURE
2.990	M 44.43	968 3.0	91-95	105	N.A.	N.A.	330043R	1.6	
	M 44.44	968 Cabriolet 3.0	91-95						

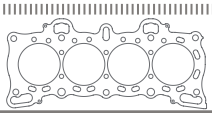
* Please note this application list is only listing the most popular models. For a full list of applications covered by gasktes please check engine #.

N.B: codes starting with 338 refer to MLS gaskets, those beginning with 330 to Cooper Ring gaskets.

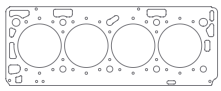
RENAULT

CC	ENGINE#	MAJOR APPLICATIONS*	YEAR	GASKET BORE (mm.)	TOP END GASKET KIT WITHOUT HEAD GASKET#	BOTTOM END GASKET KIT#	HEAD GASKET#	THICKNESS (mm.)	PICTURE
1.397	840 726, C6J 750	R9 1.4 R11 1.4 R5 1.4 SUPERCINQUE 1.4 R19 1.4 R21 1.4 R5 TURBO 1.4 L	81-85	77	043728-1000R	083727-1000R	330005R	1.8	
				77			338249R	1.8	
				77.5			330009R	1.8	
				78			338250R	1.8	
1.783	F4P 1,8L	LAGUNA MEGANE 1.8i 16V	99-03	83	043762-1000R	083758-1000R	338245R	0.85	
1.998	F4R 2,0L	CLIO 2.0i 16V LAGUNA 2.0i 16V MEGANE 2.0i 16V	99-03	84.5	043762-1000R	083758-1000R	338246R	0.85	
							338375R	1.0	
							338376R	1.3	
							338256R	1.6	
1.765	F7P F7R	CLIO R19 1.8i 16V CLIO WILLIAMS 2.0 16V	91-96	83	043746-1000R	083733-1000R	338247R	1.3	
				84			338248R	1.3	

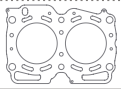
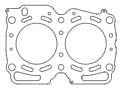
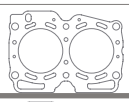
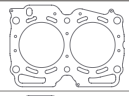
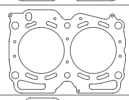
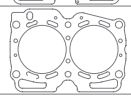
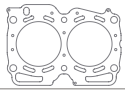
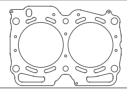
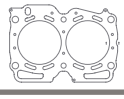
ROVER

CC	ENGINE#	MAJOR APPLICATIONS*	YEAR	GASKET BORE (mm.)	TOP END GASKET KIT WITHOUT HEAD GASKET#	BOTTOM END GASKET KIT#	HEAD GASKET#	THICKNESS (mm.)	PICTURE
1.590	D16A6 D16A7	216-416 1,6i 16V	89-96	79	042714-1000R	082714-1000R	338110R	0.85	

SAAB

CC	ENGINE#	MAJOR APPLICATIONS*	YEAR	GASKET BORE (mm.)	TOP END GASKET KIT WITHOUT HEAD GASKET#	BOTTOM END GASKET KIT#	HEAD GASKET#	THICKNESS (mm.)	PICTURE
1.598	A16LEL A16LER Z16LET Z16LEL Z16LER Z18LET	SAAB 9-5 1.6 TURBO	10-UP	80	043591-1000R	083591-1000R	338286R	1.0	

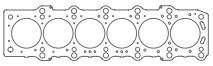
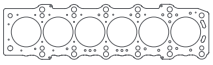
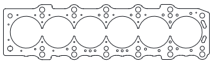
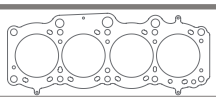
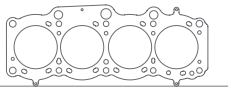
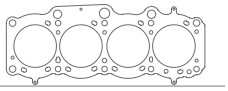
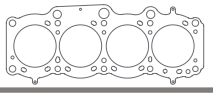
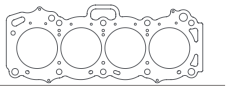
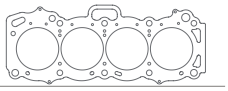
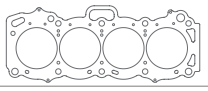
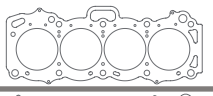
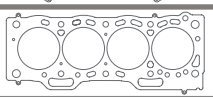
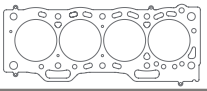
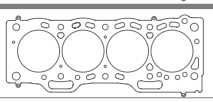
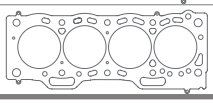
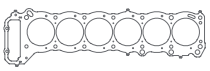
SUBARU

CC	ENGINE#	MAJOR APPLICATIONS*	YEAR	GASKET BORE (mm.)	TOP END GASKET KIT WITHOUT HEAD GASKET#	BOTTOM END GASKET KIT#	HEAD GASKET#	THICKNESS (mm.)	PICTURE
1.994	EJ20-GN (EJ27) EJ20EN SOHC	FORESTER IMPREZA LEGACY 2.0i 16V (97)	92-00	94	015411-1099R		338001R	1.3	
							338002R	1.0	
				93.5			330041R	1.2	
2.457	EJ25 EJ257	IMPREZA LEGACY OUTBACK 2.5i 16V	98-03	100	015414-1099R		338235R	1.0	
							338255R	1.3	
							330040R	1.2	
							338325R	1.5	
				102.3			338372R	1.0	
							338405R	1.3	

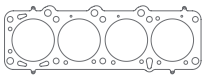
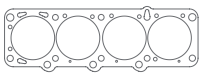
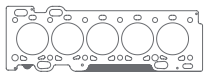
* Please note this application list is only listing the most popular models. For a full list of applications covered by gasktes please check engine #.

N.B: codes starting with 338 refer to MLS gaskets, those beginning with 330 to Cooper Ring gaskets.

TOYOTA

CC	ENGINE#	MAJOR APPLICATIONS*	YEAR	GASKET BORE (mm.)	TOP END GASKET KIT WITHOUT HEAD GASKET#	BOTTOM END GASKET KIT#	HEAD GASKET#	THICKNESS (mm.)	PICTURE
2.997	2JZ-GE 3,0L 2JZ-GTE 3,0L	SUPRA 3.0 24V	93-UP	87.7	N.A.	N.A.	338204R	1.0	
				87			338416R	1.5	
						NEW!	330044R	1.6	
1.998	3S-GE 2,0L 3S-GTE 16V. TURBO 2,0L	CELICA MR2 2.0i 16V TURBO	89-97	87	014435-1000R		338212R	1.0	
							338257R	1.2	
							338326R	1.3	
							338258R	1.4	
1.587	4A-GE 1,6L 4A-GEC 1,6L	CARINA COROLLA SPRINTER 1.6i	84-92	87	014438-1000R		338213R	1.0	
				83			338214R	1.0	
							338323R	1.3	
							338324R	1.9	
1.332	4E-FE TURBO 1,4L	COROLLA 1.3	92-97	75.5	014425-1000R		338374R	0.85	
							338007R	1.2	
1.496	5E-FE TURBO 1,4L	COROLLA PASEO TERCEL 1.3	92-97	75.5	014461-1000R		338011R	1.4	
							338259R	1.9	
4.477	1FZ-FE	LAND CRUISER 80 24V (FZJ80)	92-97	103	N.A.	N.A. NEW!	338423R	1.15	

VOLVO

CC	ENGINE#	MAJOR APPLICATIONS*	YEAR	GASKET BORE (mm.)	TOP END GASKET KIT WITHOUT HEAD GASKET#	BOTTOM END GASKET KIT#	HEAD GASKET#	THICKNESS (mm.)	PICTURE
2.316	B230A B230E B230F B230FT	244-245 2.3i	84-86	97	044824-1000R	084812-1000R	338244R	1.15	
2.316	B23 A/E/ ET/F/FT B230 E/ET/F// FB/FD/FK/ FT/G/GK/GT/K B234F/G	240-242 2.3 GLE	78-92	97.1	044815-1000R	084812-1000R	330028R	2.0	
2.521	B5254 T	C30 – T5 2521cc. S40 II T5 V40 – T5 V50 – T5 V70 – 2.5 T S80 – 2.5 T	04-12	83	N.A.	N.A.	338284R	1.2	

* Please note this application list is only listing the most popular models. For a full list of applications covered by gasktes please check engine #.

N.B: codes starting with 338 refer to MLS gaskets, those beginning with 330 to Cooper Ring gaskets.

GASKET INSTALLATION NOTES

This leaflet is to aid the purchaser of Athena MLS gaskets. The values below are not a substitute for a professional engine builder experience with particular applications. Always seek advice from a professional engine builder if in doubt.

→ General Installation Notes

1. Carefully clean and degrease the block deck and cylinder head sealing faces.

2. The sealing faces need to be checked for flatness and surface finish. The specifications for these are below.

IT IS VERY IMPORTANT FOR GOOD SEALING THAT THESE SPECIFICATIONS ARE ADHERED TO.

If the sealing faces are out of specification, then the block or cylinder head needs to be machined to suit by a suitable engine builder. Excess machining will affect the compression ratio, piston to valve clearance and camshaft timing on OHC engines. Therefore the engine manufacturer's limits on cylinder head thickness should be observed.

3. If machining work has been carried out, the block or cylinder head needs to have any sharp edges and burrs removed and washed clean of any debris.

4. Dirt, oil and corrosion should be cleaned out from the cylinder head bolt holes in the block.

IT IS IMPORTANT FOR THESE THREADS TO BE CLEAN OR THE CORRECT BOLT PRELOAD WILL NOT BE ACHIEVED WHICH WILL RESULT IN GASKET FAILURE.

5. Lightly oil the cylinder head studs/bolts and screw them by hand into the block until snug. Using a steel rule, measure the height of the stud/bolt length out of the block. All lengths should be the same (unless different length studs/bolts are used). Longer lengths may indicate that threads are not clean. Inspect threads and re-clean if necessary so that all stud/bolt lengths are the same.

FAILURE TO DO THIS MAY MEAN THAT SOME OF THE STUDS/BOLTS DO NOT HAVE FULL THREAD ENGAGEMENT AND DAMAGE TO THE BLOCK MAY OCCUR DURING TIGHTENING OR ENGINE RUNNING.

Remove studs/bolts and clean after checking installed length.

6. Check that sealing surfaces and threads are all clean, dry and free of debris/burrs and sharp edges. If cylinder head studs are being used, install them as per manufacturer's instructions. Centre the MLS gasket on the block and gently lower over any locating dowels ensuring that the coating on the gasket does not get scratched.

7. Gently lower the cylinder head onto the block making sure that no debris falls onto the gasket and that the coating on the gasket does not get scratched.

8. Install nuts/bolts as per manufacturer's instructions. Pay attention to any lubrication instructions provided and tightening torques or sequences.

FAILURE TO DO THIS MAY PREVENT THE FULL STUD/BOLT PRELOAD BEING ACHIEVED WHICH WILL RESULT IN GASKET FAILURE. AFTER EVERY HEAD DISMANTLING PROCESS, IT IS STRONGLY SUGGESTED TO USE NEW BOLTS.

9. Re-install any other components then refill engine oil and coolant systems. Check for any leaks and investigate if found.

10. Start engine and allow it to reach operating temperature. Check for any leaks. If found, stop the engine. Allow cooling and investigate.

11. After warm up, if no leaks are found, it may be necessary to re-torque the cylinder head studs/bolts. Check with the manufacturer's instructions.

→ Specifications

There should be no scratches, gouges, pitting, corrosion or cracks on the sealing surfaces as these all present a leakage path. For sealing surfaces that are to be machined the following maximum values for finishing of sealing surfaces should be observed:

Rz 11µm

Rmax 15µm

Wt 8 -10µm

These values can be measured with a surface finish probe such as a "Mitutoyo Surftest".

The following Ra values are roughly equivalent to the preceding values achieved in practice with machines from Rottler, Robbi, Serdi, etc:

Ra 0.8µm for vertical machining (with cutting tips)

Ra 1.6µm for surface grinding

These values are given for use with a surface finish comparator such as those produced by "Flexbar" etc.

MAXIMUM VALUES FOR OUT-OF-FLATNESS:

Using a straightedge and feeler gauges the maximum gap in the longitudinal direction is:

For a length of 100mm, 0.03mm maximum

For a length of 400mm, 0.05mm maximum

The maximum gap in the transverse direction for a length of 100mm, 0.03mm

OVERALL IT IS BEST TO TRY TO ACHIEVE THE FLATTEST SEALING SURFACES POSSIBLE. THIS WILL ENSURE THE BEST SEALING WITH AN MLS GASKET.

CUSTOM GASKET ORDER FORM

POWERTRAIN REQUIREMENTS

Engine specification + Technical data

Date: _____
Customer: _____
Address: _____
Contact: _____

Sample Gasket Information:

Gasket MFG: _____ Make: _____ Model: _____
Additional Information: _____

Engine specifications:

Engine Make: _____ Model: _____ Engine Year Range: _____
Engine Code: _____ Displacement (cc): _____
Engine Cylinders: _____ Cylinders Per Head Gasket: _____
Block Material: _____ Cyl. Head Material: _____
Max RPM: _____ Max HP: _____
Cylinder Bore (mm): _____ Compression Ratio: _____
Number of Valves per Cylinder: ___ Engine Cooling System: _____
Cylinders Distance (mm): _____ Cylinder Head Bolt Diameter: ____

Engine Use:
☐ Circle Track ☐ Drag Race ☐ Marine ☐ Street/Strip
☐ Off-road ☐ Rally ☐ Road Race ☐ Other (please specify): _____

Aspiration: ☐ Nitrous ☐ Naturally Aspirated ☐ Turbocharged (Psi/Bar): _____
Fuel Type: ☐ Gasoline ☐ Diesel ☐ Alcohol Nitromethane ☐ Others: _____

Requested Gasket Specifications:

Gasket Thickness (mm): _____
Gasket Bore (mm): _____
Gasket Type: ☐ MLS ☐ Cooper Ring ☐ Other (please specify): _____
Gas Stopper: ☐ Yes ☐ No
Gasket Direction: ☐ Right ☐ Left ☐ Right and Left ☐ All Same

Estimated Units/Year: Year 1: _____ Year 2: _____ Year 3: _____ Year 4: _____
Main Applications: _____ _____ _____
_____ _____ _____

Notes: _____
_____

Athena Sales Approval: _____ Date: _____

GENERAL CONDITION OF SALE

Article 1

CONTRACT PROVISIONS

1.1.The present general conditions, exception made for any written derogation/waiver, shall regulate all present and future contracts of sale between the parties. Any general conditions of the purchaser shall not apply to any relationship between the parties if not expressly accepted in writing.
Nevertheless, in this case, exception made for any written derogation/waiver, the general conditions of the purchaser shall not prejudice the efficacy of the present general conditions and shall have to be coordinated therewith.
1.2.The reference that may be made to commercial terms (Ex Works, FOB, CIF, etc.) is understood to be made according to the Incoterms of the International Chamber of Commerce in the text in force at the moment of entering the contract.
1.3.All contract of sales between the parties as well as the present general conditions, shall be governed by the Italian law and in particular by the Uniform Law on international sale of goods, ratified by the Law of 21.6.1971, as well as the Uniform Law on the formation of contracts for the international sale of goods ratified on the same day. Any derogation or reference made by the parties to specific articles of the Italian law do not imply an exclusion of the enforcement of the Uniform Laws hereinabove, to the extent of their accordance with the contractual discipline.
1.4.The adhesion to the present general conditions, as well as all subsequent contracts and behaviour of the parties regulated hereby, if not otherwise agreed upon in writing, do not imply the granting to the purchaser of any exclusive right, the existence of any distributorship relation, commission or mandate, with or without agency, nor the granting to the purchaser of the right to use, in any form, the trade-marks or distinctive signs of the purchaser.

Article 2

EXECUTION AND OBJECT OF THE CONTRACT

2.1. No offer made by agents, representatives and commercial intermediaries of Athena S.p.A. shall be binding if not confirmed by Athena itself.
2.2. During negotiations, the mere sending of the present general conditions shall not imply the acceptance of any offer; nevertheless the general conditions substitute and cancel any general conditions previously proposed by one of the parties.
2.3. The sending by Athena of a price-list or descriptive material of the product not expressly bearing the diction “offer” or an equivalent one, shall not be considered as a proposal.
The diction “not binding”, “if available” or similar ones inserted by Athena in an offer shall not bind the seller to the terms of the offer even in case of acceptance of said offer by the purchaser, exception made for subsequent written confirmation or conformable execution by Athena.
Athena’s offer shall be considered firm or irrevocable only if qualified as such in writing by Athena and if containing a validity term of the clause.
2.4. The acceptance of the contract by the purchaser, however effected, shall involve its adhesion to the present general conditions. In case Athena issues an order confirmation, even after entering the contract, it shall be presumed that the terms of the contract correspond to the terms of the order confirmation, except if the purchaser immediately communicates in writing the differences thereof.
2.5. The acceptance, with no expressed reserves by the purchaser of non conformable products for type or quantity shipped different from the terms contained in the purchaser’s request, shall imply acceptance by the latter of both the supply and the conditions proposed by Athena.
The reserves hereinabove (even if formulated as specifications or modifications of the delivery conditions) shall have no force if not given in writing by the purchaser, immediately after receiving the merchandise.
2.6. All recordings and registrations requested by the state of each party or in the country of destination of the goods, in order to give full efficacy to the contracts governed by the general conditions hereinabove or to one of their clauses, shall have to be carried out by the purchaser at its own care and charge.

Article 3

SAMPLES, TECHNICAL DRAWINGS AND DOCUMENTS

3.1. It is agreed that weights, dimensions, capacities, prices, performances, colors and other data contained in catalogs, prospects, circulars, advertisements, illustrations, price-lists or other illustrative Athena’s documents, as well as the characteristics of samples and models sent by Athena to the purchaser, shall all constitute an approximate guide only. These data shall have binding value only if expressly mentioned as binding in the offer or in the written confirmation from Athena.
3.2. Unless otherwise agreed upon in writing, in case the offer or the acceptance of the purchaser refers to a sample offered by Athena, the latter shall be deemed committed to the characteristics of the sample only within the limits indicated in art. 3.1.
3.3. In case Athena bases its supply to a sample given by the purchaser, it shall be deemed responsible – unless otherwise agreed upon in writing – for the compliance of its services (within the limits set forth in art. 3.1.) only with the apparent characteristics of the sample.
3.4. Any technical drawing or document enabling the processing or assembling of the products sold or of parts of them given to the purchaser, whether before or after entering the contract, shall remain exclusive property of Athena. The drawing or documents hereinabove shall not be used by the purchaser nor copied, reproduced or transmitted to third parties without the Athena’s consent.

Article 4

WARRANTY

4.1. Save as in this general conditions expressed and unless otherwise agreed upon in writing from time to time, Athena shall guarantee the conformity of the supplied products to what expressly agreed. The warranty for defects shall be limited to the defects of products deriving from defects in planning, material or manufacturing attributable to Athena and shall not be valid in absence of the purchaser’s proof of its correct use, maintenance and conservation and of no modification or repair to the products without Athena’s consent.
4.2. The warranty shall have a limited duration of 12 months, beginning from the date of delivery and shall be subject to the regular claim made by the purchaser according to the following article, as well as the written request to the seller to carry out a warranty intervention. In order to comply with the request hereinabove, the Athena shall be committed (at its own option), within a reasonable period of the time according to the extent of the claim, alternatively:

a) to supply the purchaser with products of the same kind and quantity of those proved defective or not in compliance with the agreement, free of charge and freight. In this case, Athena shall have the right to demand, at the expenses of the purchaser, the return of the defective goods, which become its own property;
b) to repair, at its own expenses, the defective product or modify the product not in compliance with the agreement, carrying out said operation where the products are located or in its own factory. In these cases, all costs relating to the transportation of the products shall be at the purchaser’s charge;
c) to pay compensation for damages to the purchaser by crediting the purchaser an amount equal to the cost of repairing or modifying the products in its own factory;
d) to declare in writing the termination of the contract, offering to refund the price paid against the return of the supplied products.

Except for fraud or gross negligence of Athena, any compensation for damages to the purchaser shall not exceed the invoiced price of the claimed products.
4.3. All “Racing” products designed for competition are sold without any express or implied warranty and Athena declines any responsibility.
4.4. The warranty hereinabove shall absorb and substitute the legal warranty for defects and lack of compliance and exclude any other seller’s responsibility, however originated by the supplied products; in particular, the purchaser shall have no right to put forth any other claim for damages, reduction of the price or resolution of the contract. Upon the expiry of the warranty, no request can be made to Athena.

Article 5

CLAIMS

5.1. The provisions of the Law of 21.6.1971, mentioned in art. 1 still remaining in force:

a) all claims regarding quantity, weight, color, or quality defects or lack of compliance that the purchaser could notice at the moment of receiving the goods, shall have to be carried out by the purchaser within a short time from the moment the goods reached their destination, however, under penalty of forfeiture, not beyond 15 days from said moment;
b) all hidden defects and non-conformities (more precisely all non-visible defects on the basis of the verification demanded to the seller by law and by the paragraph hereinabove) shall have to be denounced within a short time from their discovery and, however, under penalty of forfeiture, not beyond 12 months from the date of delivery.

5.2. All claims shall be sent via registered letter addressed to Athena and shall indicate in detail all defects or non conformities. Furthermore, they shall contain a cost estimation for repair or modification of the products on the spot, whenever possible. In absence of the requisites hereinabove, no claim shall be effective.
5.3. Should the claim be found groundless, the purchaser shall have to refund Athena with all the expenses made for the investigation (trips, appraisals, etc.). The same applies in the event that the claim result only partially grounded, up to a percentage not higher than 30% of the claim originally made.
5.4. Items returned for mistaken orders are subject to a 15% re-stocking fee to be deducted from the credit note, with a minimum charge of 20€.

Article 6

TECHNICAL SPECIFICATIONS AND MANUFACTURER’S RESPONSIBILITY

6.1. Being stated that, as far as the characteristics of the products are concerned, Athena shall follow the laws and technical rules in force in Italy and the purchaser shall assume the whole risk of any difference between the Italian provisions and the provisions of the country of destination of the products, holding Athena harmless.
6.2. Athena shall be responsible for damages to both persons and property caused by the products sold only in case of gross negligence in manufacturing the products hereinabove is proved; in no case shall Athena be deemed responsible for indirect or consequential damages, loss of production or lack of profit.
6.3. Exception made for the provisions hereinabove, the purchaser shall hold Athena harmless in case of third parties’ actions based on responsibilities originated by the products sold to the purchaser and shall pay compensation for the damages resulting from such actions. Athena shall have the right to involve the purchaser who, for its part, shall take all necessary steps to intervene, in any legal action brought by third parties in connection with the products supplied.

Article 7

DELIVERY

7.1. If not otherwise agreed upon in writing, any sale shall be deemed to be Ex Works, even if expressly agreed upon that the shipment (or part of it) shall effected by Athena; in this case, the latter shall act as agent of the purchaser, being agreed that the transportation shall be done at the risk and charge of the purchaser.

7.2. In case of delayed delivery, the purchaser shall have the right to cancel the undelivered part of the order only after giving notice thereof to Athena by means of a registered letter with return receipt and after having granted Athena a period of 15 working days beginning from the receipt of such notice, within which Athena shall have the possibility of delivering all the products specified in the request and not yet delivered. However, any responsibility for damages caused by delay or lack of delivery, both total or partial, shall be excluded.

7.3. If not otherwise agreed upon, the Ex Works delivery of the products shall take place by means of a written notice thereof (even by telex) to the purchaser that the products are at its disposal; the purchaser shall have a period of time of 3 days from the sending of such notice to take delivery of the products.

7.4. Should the purchaser not take delivery of the merchandise within the terms set forth in the paragraph hereinabove, the purchaser shall have to reimburse all storage charges to Athena fixed in a lump sum equal to 10% of the amount of the invoice concerning said products for each week of delay. Furthermore, upon the expiry of a 30 days term, Athena shall have the right to sell the products on behalf of the purchaser, at any price, deducting from the return the whole amount due (regardless to the payment terms agreed upon), as well as any expenses borne thereof.

Article 8

PAYMENT

8.1. Unless otherwise agreed upon in writing, payments shall be made at time of delivery or following the terms and conditions set forth from time to time in the offer. In case of payment by letter of credit, it shall have to be opened within a short time from the entering of the contract in the easiest form and in accordance with the provisions of the contract and shall have to be irrevocable and confirmed by a leading Italian bank. Any payment made to agents, representatives or commercial intermediaries of Athena shall not be deemed to have been carried out until the relevant sums are collected by Athena.

8.2. Any delay or irregularity in the payment shall grant Athena the right to suspend deliveries or to terminate the outstanding contracts even if not relevant to the payments at issue, as well as the right to claim damages. However, the seller shall have the right, beginning from due date of the payment, with no need for any intimation to pay, to obtain interests for delayed payment corresponding to the discount rate of the country of the seller increased by 7 points.

8.3. The purchaser shall be bound to fulfill its obligations of entire payment even in case of claims or controversy. In case of disputed amounts, the purchaser may, at its option, deposit the sums object of the controversy in an Italian bank until the controversy has been settled, binding the bank to transfer said sums to Athena should the controversy be settled in its favor. No compensation with any credit however arisen towards Athena shall be accepted.

Article 9

RESERVATION OF TITLE

9.1. Should the payment be made – in whole or in part – after delivery, the delivered products remain property of the seller until the payment obligations have been entirely fulfilled, within the limits of the law of the country where said products are located.

9.2. The purchaser shall have the obligation to take all necessary steps to constitute, in the country where the products are located, a valid property reservation in the most extensive form permitted or to create a similar form of guarantee in favor of Athena.

Article 10

FORCE MAJEURE

10.1. Should fires, collapses, floods, lack of supplies, transportation difficulties, strikes, lock-outs or any events beyond control of the respective parties hinder or sensibly reduce the production in the factories of one of the parties, or prevent the transportation between the factories and the place of destination of the products, the injured party shall have the right to obtain a prorogation of the delivery or collection terms of the products of 45 days, provided that timely notice of such event of force majeure is given to the other party. The prorogation term may be extended in the most critical cases to 90 days.

10.2. Upon the expiry of the terms hereinabove in the continuation of the event of force majeure, the other party shall have the right to terminate the contract by giving written notice thereof to the defaulting party by registered letter with return receipt. The defaulting party shall in this case have no obligation to pay damages.

10.3. Should the fulfillment of Athena's commitments, owing to any reason unforeseeable by an entrepreneur of the field with normal experience, have become – before their fulfillment – excessively onerous compared with the contractual obligation originally agreed upon, such as to modify the ratio by over 20 per cent, Athena shall have the right to request a revision of the contractual conditions or, failing such revision, to terminate the contract. In case of termination, all expenses borne by the purchaser for terminating the contract, shall have to be reimbursed to the purchaser.

Article 11

ASSIGNMENT OF THE CONTRACT

11.1. The purchaser shall have no right to assign his position in the contract or in individual binding relationships deriving from the contract without Athena's written consent thereof. The purchaser remains, however, jointly and severally responsible with the assignee for the assigned obligations.

Article 12

INTERPRETATION, MODIFICATION, INVALID CLAUSES

12.1. The Italian text of the present general conditions shall be the only authentic text for the interpretation thereof.

12.2. Any exhibit or preamble shall be considered part of the contracts they refer to. Any reference made to price-list, general conditions or other material either by Athena or by third parties, shall be deemed made to the documents in force at the moment of said reference, unless otherwise specified. All correspondent texts previously in force between the parties shall have to be considered cancelled.

12.3. The statements made or the behavior held by the parties during the execution of the contract may contribute to the interpretation only of the contract they refer to and only where not in contrast with the present general conditions or with the written agreements made by the parties at the time of entering the contract at issue.

12.4. Excepting the provisions set forth in articles 2.4. and 2.5., any modification or integration made by the parties to the contracts in connection with the present general conditions, shall be void unless set forth in writing. Any derogations to one or more dispositions of the present general conditions shall not be interpreted extensively or for analogy and shall not imply the will to disregard all present general conditions.

12.5. Unless otherwise agreed upon in writing, no variation to the contractual conditions between the parties shall constitute modification of the contract.

12.6. In case of invalidity or ineffective contractual provisions, the whole contract shall have to be integrated and interpreted as containing all the clauses that allow reaching, in compliance with the law, the essential aim pursued by the agreement containing the provisions hereinabove.

Article 13

COMPETENT JURISDICTION

13.1. Any dispute relating to or however in connection with the contracts governed by the present general conditions shall be settled by the courts of Vicenza as the exclusive competent jurisdiction. The seller shall however have the right to take action in the Purchaser's Court.

Date ……..

The seller

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The purchaser

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The provisions set forth in the articles hereunder are expressly accepted.

Art. 2 – Execution and Object of the Contract
Art. 4 – Guarantee
Art. 5 – Claims
Art. 6 – Manufacturer's Responsibility
Art. 7 – Delivery
Art. 8 – Payment
Art. 9 - Reservation of Title
Art. 10 – Force Majeure
Art. 11 – Assignment of the Contract
Art. 13 – Competent Jurisdiction

The purchaser

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