

# COSWORTH

PERFORMANCE PISTONS



2007

## performance pistons

Considering the environment pistons exist in with constant directional changes, massive acceleration and deceleration forces, enormous pressure and temperature, the need for performance and reliability is vitally important.

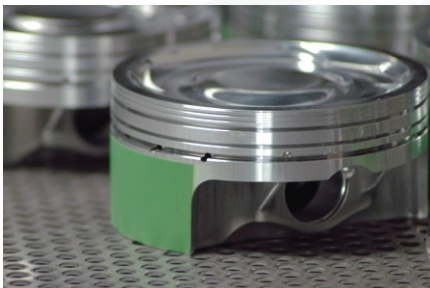
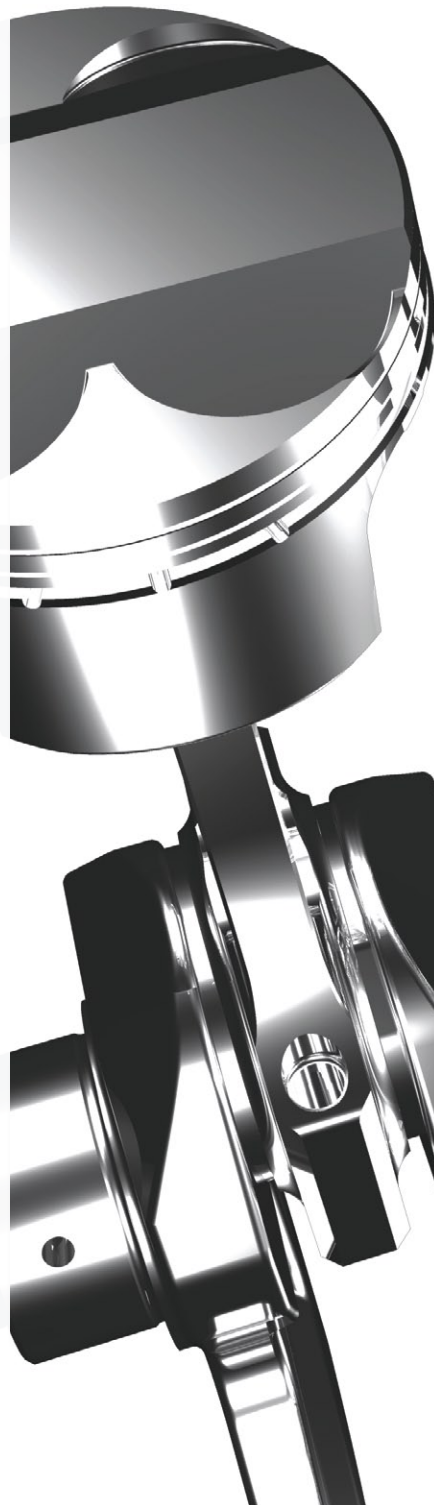
Developed over 50 years in motorsport, our high quality pistons are manufactured to world-class standards to meet customer requirements.

Cosworth has the expertise to design, develop and manufacture pistons for a broad range of petrol and diesel engines. We specialise in supplying pistons for engines used in motorsport, performance cars, aviation, commercial vehicles, rail traction, power generation and marine. Our product range covers high and medium speed applications.

Cosworth appreciates today's market requirements, not only for increased power output but also maximum economy and service life with minimum emissions.

Our products are designed using the latest parametric modelling technology, and are validated using Finite Element Analysis for stress distribution patterns.

Flexibility is our watch word in manufacturing, offering both small and high volume batch sizes.



### Piston features:

- Diameter range: 40 to 185mm
- Forged or cast aluminium
- Xylan/DLC coatings
- 3D profiles
- Gudgeon pin hole profiles
- Valve pockets
- Bowl profiles
- Ring groove customisation

## YB Engine Range

Ford Sierra RS Cosworth, For Sapphire RS Cosworth, Ford Escort RS Cosworth

Piston			Pins		Circlips		Rings		
Part No.	Description	Diameter (mm)	Part No.	Diameter (mm)	Part No.	Diameter (mm)	Part No.	Width (mm)	Engine Pack No.
PA2095	2WD Mahle Replacement Standard Bore Standard 8:1 compression ratio	90.820	PA2066	23.997	PP0207	24.000	PR1050 PR1051 PR1052	1.500 1.750 3.000	KK1017
PA2095+025	2WD Mahle Replacement 1 <sup>st</sup> oversize Standard 8:1 compression ratio	91.070	PA2066	23.997	PP0207	24.000	PR1053 PR1054 PR1055	1.500 1.750 3.000	KK0637
PA2095+050	2WD Mahle Replacement 2 <sup>nd</sup> oversize Standard 8:1 compression ratio	91.320	PA2066	23.997	PP0207	24.000	PR1056 PR1057 PR1058	1.500 1.750 3.000	n/a
PA1167+025	2WD Group A - 1 <sup>st</sup> oversize 7.2:1 compression ratio	91.070	PA1923	23.997	PP0207	24.000	PR1053 PR1054 PR1055	1.500 1.750 3.000	KK0637
PA2062	4WD Mahle Replacement Standard Bore Standard 8:1 compression ratio	90.802	PA2066	23.997	PP0207	24.000	PR1050 PR1051 PR1052	1.500 1.750 3.000	KK1017
PA2062+025	4WD Mahle Replacement 1 <sup>st</sup> oversize Standard 8:1 compression ratio	91.070	PA2066	23.997	PP0207	24.000	PR1053 PR1054 PR1055	1.500 1.750 3.000	KK0637
PA2062+050	4WD Mahle Replacement 2 <sup>nd</sup> oversize Standard 8:1 compression ratio	91.320	PA2066	23.997	PP0207	24.000	PR1056 PR1057 PR1058	1.500 1.750 3.000	n/a
PA1314	4WD Group A - Standard Bore 7.2:1 compression ratio	90.802	PA1923	23.997	PP0207	24.000	PP2525 PR1051 PR1052	1.000 1.750 3.000	KK0508
PA1314+025	4WD Group A 1 <sup>st</sup> oversize 7.2:1 compression ratio	91.320	PA1923	23.997	PP0207	24.000	PP3912 PR1054 PR1055	1.000 1.750 3.000	KK0755
PA1249	Naturally Aspirated YBM Standard Bore 12:1 compression ratio	90.802	PA1858	23.997	PP0207	24.000	PP2525 PR1051 PR1052	1.000 1.750 3.000	KK0508
PA1249+025	Naturally Aspirated YBM 1 <sup>st</sup> oversize 12:1 compression ratio	91.320	PA1858	23.997	PP0207	24.000	PP3912 PR1054 PR1055	1.000 1.750 3.000	KK0755
PA1401	Naturally Aspirated 2331.76cc Standard Bore 14:1 compression ratio	94.000	PA1598	24.000	n/a	n/a	PP2111 PP2111 PP2112	1.000 1.000 4.000	n/a

## DF Engine Range

Formula One

Piston			Pins		Circlips		Rings		
Part No.	Description	Diameter (mm)	Part No.	Diameter (mm)	Part No.	Diameter (mm)	Part No.	Width (mm)	Engine Pack No.
DA1964	DFV 2993cc 11:1 compression ratio	85.674	PA2034	20.630	PP0339	20.620	PP0610 PP0611 PP0612	0.750 1.000 4.000	n/a
PA0640	DFVss for aluminium liners	90.000	PA0846	23.809	PP0207	24.000	PP0398 PP0398 PP1168	1.000 1.000 4.000	n/a
PA1154	DFR	90.000	PA0987	23.810	PP0201	24.000	PP4967 PP4968 PP2400	1.000 1.000 3.000	n/a
PA1335	V3000 Short stroke, long rod	90.000	PA1885	20.630	PP2426	20.620	PA0398 PP2400	1.000 3.000	n/a

## Lotus Twin Cam Engines

Piston			Pins		Circlips		Rings		
Part No.	Description	Diameter (mm)	Part No.	Diameter (mm)	Part No.	Diameter (mm)	Part No.	Width (mm)	Engine Pack No.
TA0081	Lotus Twin Cam 1594cc F3 12:1 compression ratio	83.500	TA0082	20.630	PP1673	21.000	PP0740 PP0740 PP0908	1.000 1.000 4.000	n/a
PA0006	Lotus Twin Cam 1650cc	85.000	FA0240	20.630	PP1673	24.000	PP1097 PP1097 PP1098	1.000 1.000 4.000	n/a

## BD Engine Range

Mk1 & Mk2 Ford Escort RS

Piston			Pins		Circlips		Rings		
Part No.	Description	Diameter (mm)	Part No.	Diameter (mm)	Part No.	Diameter (mm)	Part No.	Width (mm)	Engine Pack No.
BA0125	BDA 1600cc Rally To suit standard Ford rod length 11.8:1 compression ratio	80.962	PA2033	20.630	PP0339	20.620	PP1052 PP1053 PP1033	1.000 1.000 4.000	KK0399
PA0003	BDA 1700cc Rally To suit standard crank and rods 11.4:1 compression ratio	83.500	PA2033	20.630	PP0339	20.620	PP0740 PP0740 PP0908	1.000 1.000 4.000	KK0140
BA0198	BDB & BDC 1700cc To suit Cosworth crank and rods 11.4:1 compression ratio	83.500	PA1922	20.630	PP0339	20.620	PP0740 PP0740 PP0908	1.000 1.000 4.000	KK0140
PA0092	BDD 1600cc Atlantic 11.4:1 compression ratio	80.950	PA2034	20.630	PP0339	20.620	PP0683 PP0683 PP1033	1.000 1.000 4.000	KK0209
PA0204	BDD 1600cc Atlantic high compression ratio	80.950	FA2040	20.630	PP0339	20.620	PP0683 PP0683 PP1033	1.000 1.000 4.000	KK0209
PA0058	BDH 1295cc 12.5:1 compression ratio	80.950	PA2140	20.630	PP1673	21.000	PP0683 PP0683 PP1033	1.000 1.000 4.000	KK0209
PA0112	BDG 1995cc	90.000	PA1838	20.630	PP0339	20.620	PP1166 PP1166 PP3057	1.000 1.000 4.000	KK0174
PA0237	BDG 1995cc Rally Alloy Block	90.335	FA0240	20.630	PP1673	21.000	PP1967 PP1967 PP1968	1.000 1.000 4.000	KK0245
PA0278	BDG 1995cc Alloy Block/Hoyle	90.335	PA2140	20.630	PP1673	21.000	PP1967 PP1967 PP1968	1.000 1.000 4.000	KK0245
PA0152	BDG 1995cc - Oversize 11.7:1 compression ratio	90.424	PA2034	20.630	PP0339	20.620	PP1169 PP1169 PP1900	1.000 1.000 4.000	KK0247

## Duratec Range

Ford Fiesta ST / Focus / Mondeo

Piston			Pins		Circlips		Rings		
Part No.	Description	Diameter (mm)	Part No.	Diameter (mm)	Part No.	Diameter (mm)	Part No.	Width (mm)	Engine Pack No.
YD0280	2.0L piston only 12:1 compression ratio (pins, circlips and rings sold separately)	87.500	YD0602	20.998	PP2720	21.000	PP5919 YD0376 YD8007	1.180 1.000 2.415	KK3462
YD0347	2.3L piston only 13:1 compression ratio (pins, circlips and rings sold separately)	87.500	YD0602	20.998	PP2720	21.000	PP5919 YD0376 YD8007	1.180 1.000 2.415	KK3462
YD0394	2.0L piston only 13:1 compression ratio (pins, circlips and rings sold separately)	87.500	YD0602	20.998	PP2720	21.000	PP5919 YD0376 YD8007	1.180 1.000 2.415	KK3462

## Historic Cosworth Engines

Four cylinder variants

Piston			Pins		Circlips		Rings		
Part No.	Description	Diameter (mm)	Part No.	Diameter (mm)	Part No.	Diameter (mm)	Part No.	Width (mm)	Engine Pack No.
PA0087	SCA 997cc 12.5:1 compression ratio	80.962	FA0240	20.630	PP1673	21.000	PP0683 PP1033	1.000 4.000	KK0151
PA0050	MK XI 1098cc - 105E based	85.000	PA1922	20.630	PP0339	20.620	PP1097 PP1098	1.000 4.000	KK0213
PA0598	MAE 997cc 12.5:1 compression ratio	80.950	DA0674	20.630	PP1673	21.000	PP0683 PP0683 PP1033	1.000 1.000 4.000	KK0209
PA2385 PA2386 (ex PA0178)	Clubman 1700cc (cylinders 2 & 4) Clubman 1700cc (cylinders 1 & 3)	83.500	PA1922	20.630	PP1673	21.000	PP0740 PP0740 PP0908	1.000 1.000 4.000	n/a

# High Performance

Subaru / Nissan / Mitsubishi

Piston			Pins		Circlips		Rings	
Part No.	Description	Diameter (mm)	Part No.	Diameter (mm)	Part No.	Diameter (mm)	Width (mm)	Engine Pack No.
PA2667	Subaru WRX STI EJ25 (2.5L) 8.2:1 compression ratio	99.500	PA2074	22.998	PP5433	23.000	1.180 1.180 1.960	PR7865
PA2667+025	Subaru WRX STI EJ25 (2.5L) 8.2:1 compression ratio	99.750	PA2074	22.998	PP5433	23.000	1.180 1.180 1.960	PR7866
PA2667+050	Subaru WRX STI EJ25 (2.5L) 8.2:1 compression ratio	100.000	PA2074	22.998	PP5433	23.000	1.180 1.180 1.960	PR7867
PA2690	Subaru WRX EJ20 (2.0L) 8:1 compression ratio	92.000	PA2074	22.998	PP5433	23.000	1.480 1.480 3.000	PR7320
PA2690+050	Subaru WRX EJ20 (2.0L) 8:1 compression ratio	92.500	PA2074	22.998	PP5433	23.000	1.480 1.480 3.000	PR7321
PA2687	Nissan VQ35 (3.5L) Low CR 8.8:1 compression ratio Turbo application	95.500	PA1251	21.998	PP2371	22.000	1.180 1.180 2.500	PR7323
PA2687+050	Nissan VQ35 (3.5L) Low CR 8.8:1 compression ratio Turbo application	96.000	PA1251	21.998	PP2371	22.000	1.180 1.180 2.500	PR7325
PA2688	Nissan VQ35 (3.5L) High CR 10.3:1 compression ratio Normally aspirated or supercharged	95.500	PA1251	21.998	PP2371	22.000	1.180 1.180 2.500	PR7323
PA2688+50	Nissan VQ35 (3.5L) High CR 10.3:1 compression ratio Normally aspirated or supercharged	96.000	PA1251	21.998	PP2371	22.000	1.180 1.180 2.500	PR7325
PA2689	Mitsubishi Evo 4G63 (2.0L) 8.8:1 compression ratio	85.000	PA1846	21.998	PP2371	22.000	1.180 1.180 2.000	PR7317
PA2689+100	Mitsubishi Evo 4G63 (2.0L) 8.8:1 compression ratio	86.000	PA1846	21.998	PP2371	22.000	1.180 1.180 2.000	PR7319
PA2701+100	Mitsubishi Evo 4G63 (2.2L) 8.8:1 compression ratio For use with 94mm crank	86.000	PA1846	21.998	PP2371	22.000	1.180 1.180 2.000	PR7319



## custom pistons

Cosworth produce pistons for a diverse range of engines and applications and are always keen to discuss your requirements for limited production runs. Our Sales and Design teams are ready to solve your high performance piston problems.

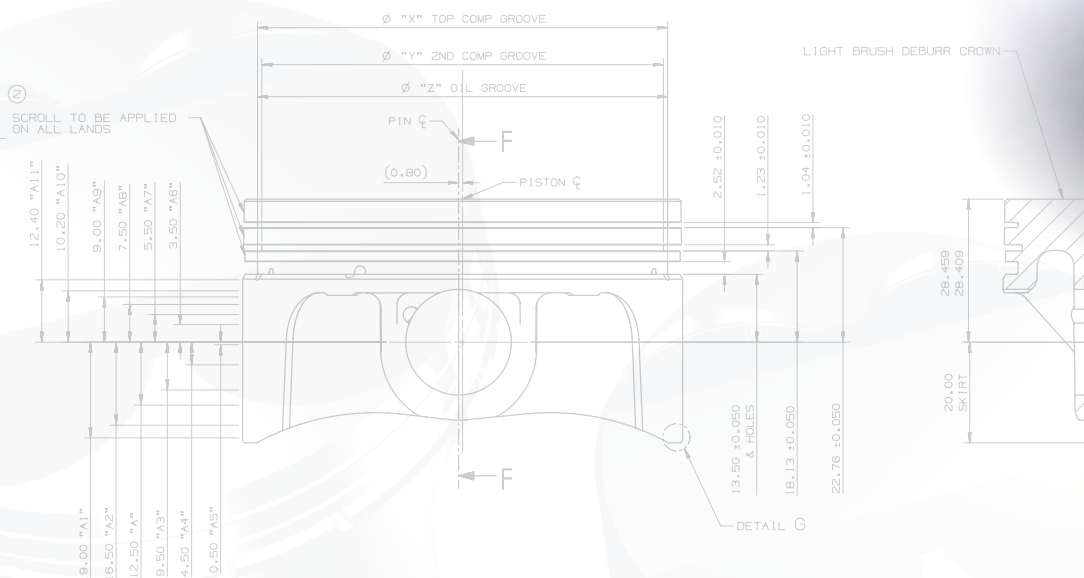
- Subaru
- Honda
- Mitsubishi
- Mazda
- Nissan
- Porsche
- Kawasaki
- Suzuki
- Ducati
- Ford
- Aston Martin
- and many others

In addition to piston design and manufacture, we can offer design analysis, simulation and test services at any level up to full international motorsports standard.

We welcome enquiries for any of your performance pistons requirements. Please call or email us today.

UK Sales: +44 (0)1604 598664  
Email: [clsales@cosworth.com](mailto:clsales@cosworth.com)

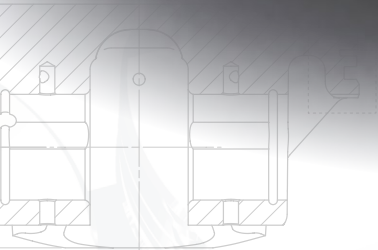
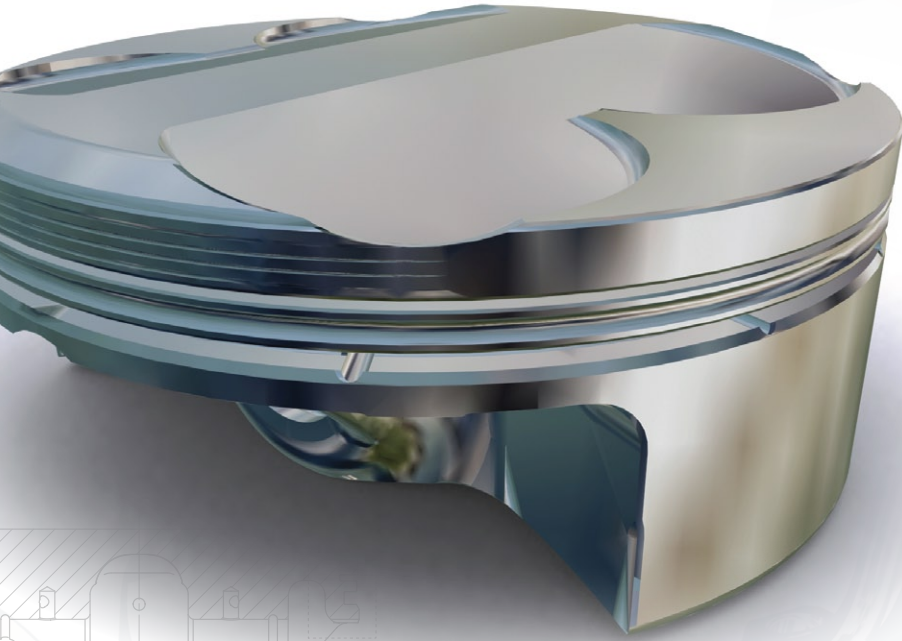
US Sales: +1 310 534 1390 ext.324  
Email: [sales@cosworth.com](mailto:sales@cosworth.com)



**F1 standard high quality piston forgings, combined with design optimisation for your particular application, ensure you get the best.**

# COSWORTH

- *Road*
- *Race*
- *Rally*
- *Boat*
- *Bike*
- *Aerosport*
- *Historic*



SECTION F-F  
THROUGH PIN C/L



w w w . c o s w o r t h . c o m

**UK Head Office**

Cosworth Ltd  
The Octagon  
St James Mill Road  
Northampton  
NN5 5RA  
United Kingdom

Tel: +44 (0)1604 598300  
Fax: +44 (0)1604 598301  
Email: [clsales@cosworth.com](mailto:clsales@cosworth.com)

**US Office**

Cosworth LLC  
3031 Fujita Street  
Torrance  
CA 90505  
USA

Tel: +1 310 534 1390  
Fax: +1 310 534 2631  
Email: [sales@cosworth.com](mailto:sales@cosworth.com)