



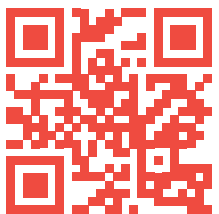
CATALOGUE 2021

SPECIAL RACING PRODUCTS

Motocross | Roadrace | Karting



VHM 2021 CATALOGUE



 www.vhm.nl

 info@vhm.nl

 DE VLONDER 208
5427 DH BOEKEL
THE NETHERLANDS

 +31(0) 492 32 4595

  VHM racing products

 VHM special racing products

 www.vhm.nl

PREFACE

INTRODUCTION

We proudly introduce our 2021 catalogue with VHM Special Racing Products. For more than 25 years, we have been developing, testing and offering Special Racing Products for motocross, roadrace and karting.

- ✔ Gold anodized cylinder heads with exchangeable combustion chamber inserts
- ✔ Crankshafts with improved inertia and better balance percentage
- ✔ Pistons for high performance and longevity
 - ✔ Modifications and crankshaft rebuilds
 - ✔ and many other Special Racing Products

DISTRIBUTOR

In addition to offering VHM Special Racing Products, we are authorized distributor of aftermarket products which are specially selected, with brands such as:

- Afam chains and sprockets
- Athena gaskets and seals
- HGS 2- and 4 stroke exhaust systems
- Hinson clutch components
- Hotrods connecting rods
- JE-Pistons 4-stroke pistons
- NGK sparkplugs
- Prox replacement parts
- Suterclutch slipperclutches
- Twin Air powerflow kits and air filters
- Vertex 2- and 4-stroke pistons
- V-Force reedvalves

VHM IS YOUR #1 SUPPLIER OF HIGH QUALITY PRODUCTS, PROVIDING TECHNICAL SERVICE AND FAST DELIVERY







PRODUCT AVAILABILITY

We have a large stock in our warehouse to make fast delivery possible. If you need products that we don't have in our product list, don't hesitate to contact us for a request. Our products are available through VHM dealers worldwide. Find more information on www.vhm.nl/dealerlocator



VHM Manual piston height measurement

<ol style="list-style-type: none"> 1. Setup the dial indicator before each measurement. 2. Put the top part of the tool on the flat bottom tool. Fit the dial indicator on the top part and adjust the zero level to 5.00 mm, by moving the dial indicator up or downwards. Then fix the dial indicator to the top part with the screw. 3. Check if the big pointer is pointing to 0, if not, turn the outer ring of the dial indicator to 0. 4. Make sure that the piston is at Top Dead Center (TDC) 5. Piston height = distance between cylinder deck and top of the piston, when the piston is at Top Dead Center (TDC) 		
<ol style="list-style-type: none"> 6. Positive piston height: <i>Top of the piston is above the cylinder deck</i> 7. The little pointer has turned to 6.00 mm 8. The big pointer turns counter clockwise and stops at 0.75mm. 9. The piston has travelled 6.00 + 0,75 = 6,75 mm 10. Because we have adjust the zero level to 5 mm, the piston height is 6,75 – 5,00 = + 1.75 mm 		
<ol style="list-style-type: none"> 11. Negative piston height: <i>Top of the piston is below the cylinder deck</i> 12. The little pointer has turned to 3.00 mm 13. The big pointer turns clockwise and stops at 0.25 mm 14. The piston has travelled 3.00 + 0,25 = 3,25 mm 15. Because we have adjust the zero level to 5.00 mm, the piston height is 3,25 – 5.00 = - 1,75 mm 		

Now that we have measured the piston height, we can install the VHM cylinder head and insert. Adjust your measured piston height with the piston height shown on the insert box to get the correct volume and squish. The piston height can be adjusted using thicker or thinner cylinder base gaskets. The specifications of each insert is shown on the top of the insert box.

Piston height	Distance between top of the piston and cylinder deck when the piston is at Top Dead Center. (Also called; deck height) [mm]
Volume	Volume of the combustion chamber including volume spark plug hole, when the piston is at Top Dead Center. [cc]
Squish	Distance between the piston and combustion chamber in the squish band area, when the piston is at Top Dead Center. [mm]

Every VHM insert has a unique part number.

1. Part numbers ending with a letter, for example AE32087-H, are standard inserts. The piston height is measured on a standard engine.
2. Part numbers ending with numbers, for example AE32087-006, are special inserts. These inserts are special made and may have another piston height, volume, squish or shape of the combustion chamber.

A great advantage of our system is that the squish and volume is always known, whether by increasing or decreasing the piston height. For example insert AE32087-H for the KTM 85cc engine has a piston height +2.20mm, squish 0.80mm and volume 8.00 cc. If we use a 0.20 mm thicker cylinder base gasket the piston height will be +2.20 - 0.20 mm = +2.00 mm. The squish will be 0.80 + 0.20 = 1.00 mm. When we change the piston height with this insert, the volume will also change. Using a thicker cylinder base gasket will increase the volume. The new volume can be calculated as following:

$$\text{Volume difference} = \frac{\pi}{4} \times D^2 \times h$$

D = Bore cylinder = 47 mm h = difference piston height

$$\text{Volume difference} = \frac{\pi}{4} \times 47^2 \times (2.20 - 2.00) = 346,989 \text{ mm}^3 = 0,346 \text{ cm}^3 = 0,346 \text{ cc} \approx 0,37 \text{ cc}$$

New volume with piston height +2.00 = 8.00 + 0,37 = 8,37 cc

With the same calculation, the volume can also be calculated with a thinner cylinder base gasket, which means a higher piston height.

	Piston height	Volume	Squish
Thicker cylinder base gasket	↓	↑	↑
Thinner cylinder base gasket	↑	↓	↓

Instagram



VHM racingproducts

YouTube



VHM special racingproducts

Facebook

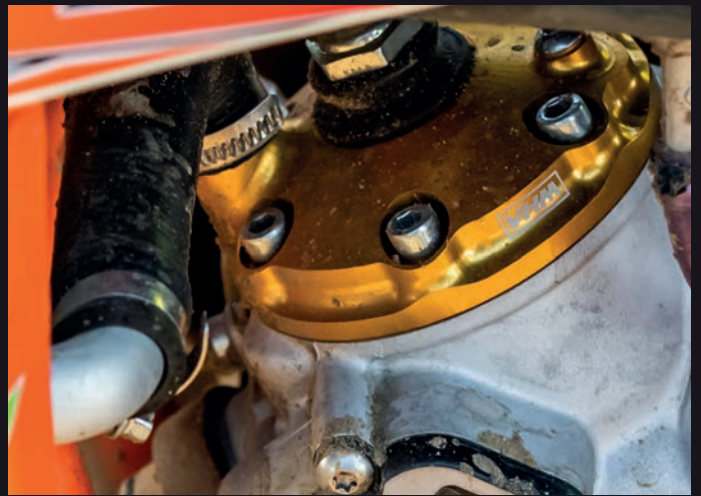
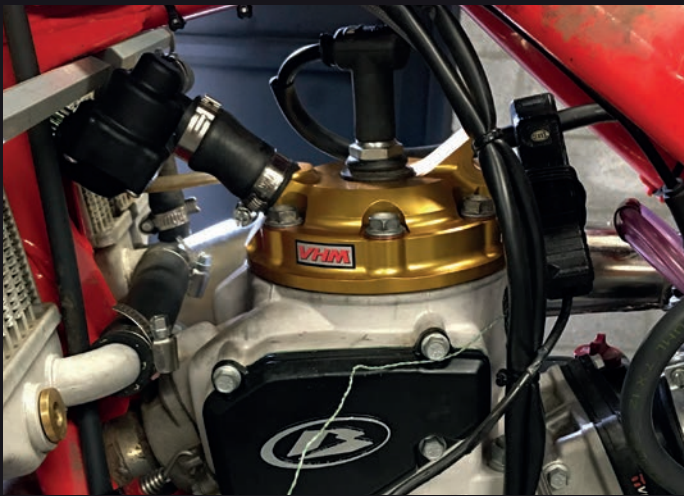
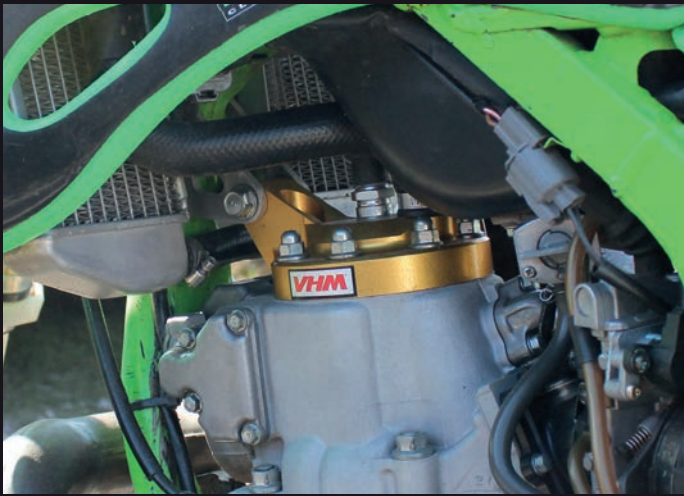
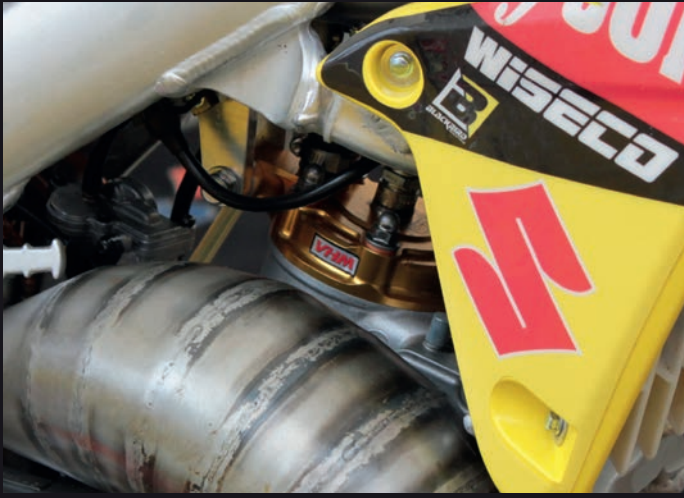


VHM racingproducts

Newsletter email



www.vhm.nl/newsletter



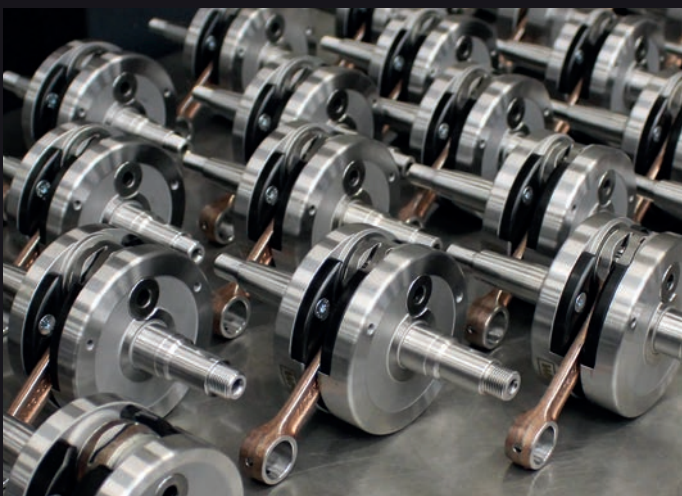
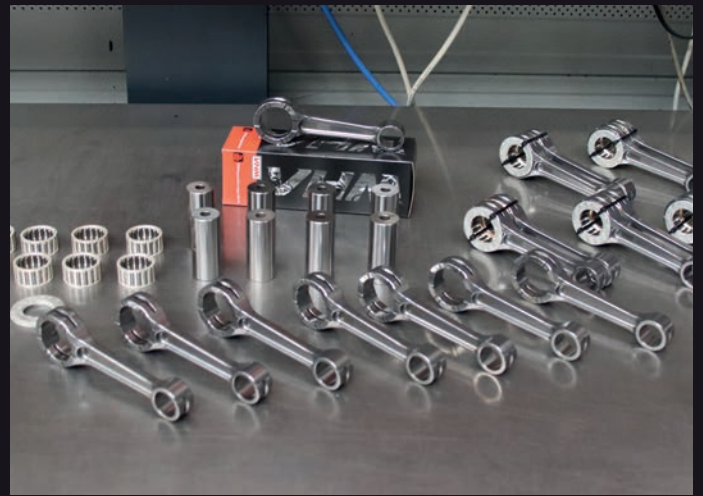


TABLE OF CONTENTS

New parts	5
25 years stories	7
Website	8
Upgrade kits	9
KTM 65SX, 85SX, 125SX, Husqvarna TC65, TC85, TC125	9
KTM 250SX, Husqvarna TC250, Kawasaki KX85, TM MX85	10
Yamaha YZ85, YZ125, Beta RR125 2T, RR250 2T	11
Vintage roadrace	12
Cylinder heads	13
Aprilia, Beta	14
GasGas	15
Honda	16
Husaberg, Husqvarna	22
Kawasaki	24
KTM	27
Suzuki	34
TM	36
Yamaha	38
OEM head inserts	42
2Fast4Race, Aprilia, Derbi	43
GasGas, lame, Kreidler, Malossi	44
Modena, Pavesi, Polini	45
TM	46
Custom inserts	47
Crankshafts and conrods	48
Aprilia, Honda	49
Husqvarna, KTM	50
Yamaha	51
Crankshaft modifications	52
Piston kits	54
For motocross	55
For roadrace	56
For moped	58
For karting	59
CDI units	60
Beta, Husqvarna, KTM	61
Yamaha	62
Air intakes	63
Kawasaki, Husqvarna, KTM	64
Yamaha	66
Various parts and measuring tools	67
Power valve base & adjuster, exhaust flange, power valve + axle, bush kickstarter gear	68
Ignition cover, handlebar stabilizers, clutch axles, powertubes, power valve cover	69
Reedvalve spacers, intake and reedvalve insert, excenters, oil air-vent plugs	70
Measuring tools and spare parts	71
Merchandise	72
Beanie, bottle opener, caps, shirts	73
Website tips & tricks	74
Technical support	75
Projects	76
Notes	77

We continuously develop new parts for better performance and faster lap times. During 2020, we've added many new parts like cylinder heads, air intakes and CDI's. See here all that's new in a glance!

CYLINDER HEAD AA33046
KTM 200SX / 200EXC 2003 - 2016

Various inserts AE32063-



p. 32

CYLINDER HEAD AA33182

BETA RR300 2T 2013 - 2021

Various inserts AE32295-



p. 15

CYLINDER HEAD AA33183

BETA RR250 2T 2018 - 2021

Various inserts AE32296-



p. 15

CYLINDER HEAD AA33184

BETA RR125 2T 2018 - 2021

Various inserts AE32297-



p. 14

CYLINDER HEAD AA33185
KTM 150EXC TPI 2020 - 2021

Various inserts AE32298-



p. 31

CYLINDER HEAD AA33186

TM EN300FI 2020

Various inserts AE32299-



p. 63

CYLINDER HEAD AA33189
KAWASAKI KX125 1998 - 2002

Various inserts AE32306-



p. 25

CYLINDER HEAD AA33190

APRILIA RS125 1995 - 2010

Various inserts AE32008-



p. 14

CYLINDER HEAD AA33193

KAWASAKI KX500 1989 - 2004

Various inserts AE32310-



p. 26

CRANKSHAFT AK20252

KTM 125SX 2016 - 2021 & HUSQVARNA TC125 '16 - '21

Middle inertia



p. 50

OEM HEAD INSERT AE32231

2FAST4RACE

Blind and custom possibilities



p. 34

OEM HEAD INSERT AE32303

MALOSSI MINARELLI AM6 70CC

Blind and custom possibilities



p. 44



AIR INTAKE AI020619

YAMAHA YZ250F 2019 - 2020

Use with powerflow kit 152222C



p. 66

AIR INTAKE AI020919

YAMAHA YZ450F 2019 - 2021

Use with powerflow kit 152222C



p. 66

AIR INTAKE AI040620

KAWASAKI KX250 2020



p. 64

AIR INTAKE AI040621

KAWASAKI KX250 2021



p. 64

AIR INTAKE AI060619 2T

KTM 250SX 2019 - 2021 &
HUSQVARNA TC250 '19 - '21

Use with powerflow kit 154223C



p. 65

AIR INTAKE AI060818E

KTM 350EXC-F '17 - '21 &
HUSQVARNA FE350 '17 - '21

Use with powerflow kit 154222C



p. 65

AIRBOX COVER AB020918

YAMAHA YZ250F 2019 - 2021
& YZ450F 2018 - 2021



p. 66

MOUNTING PLATE DA31237

KTM 85SX, 125SX, 250SX &
HUSQ TC85, TC125, TC250

For CDI units



p. 62

CDI CD060221

KTM 65SX 2021

Map 1 VHM, Map 2 standard GET



p. 61

CDI CD060617

KTM 250SX 2017 - 2021 &
HUSQVARNA TC250 '17 - '21

Map 1 VHM, Map 2 standard GET



p. 62

CDI CD070420

BETA RR125 2T 2020 - 2021

Map 1 VHM, Map 2 standard GET



p. 61

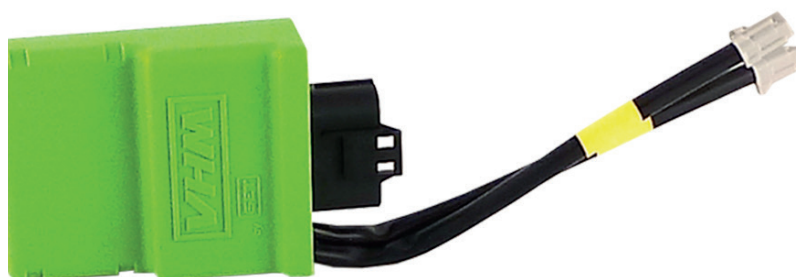
CDI CD070620

BETA RR250 2T 2020 - 2021

Map 1 VHM, Map 2 standard GET



p. 61





1 BLUE VHM CARBURETTOR PART ONE



2 BLUE VHM CARBURETTOR PART TWO



3 VHM COMBUSTION CHAMBER



4 VHM CYLINDER HEAD PART ONE



5 VHM CYLINDER HEAD PART TWO



6 VHM CRANKSHAFT PART ONE



7 VHM CRANKSHAFT PART TWO



8 VHM REED VALVES



9 VHM CARBURETTORS CRF250R, RM85, KF3 AND KF2



10 VHM PISTONS



11 VHM EK1

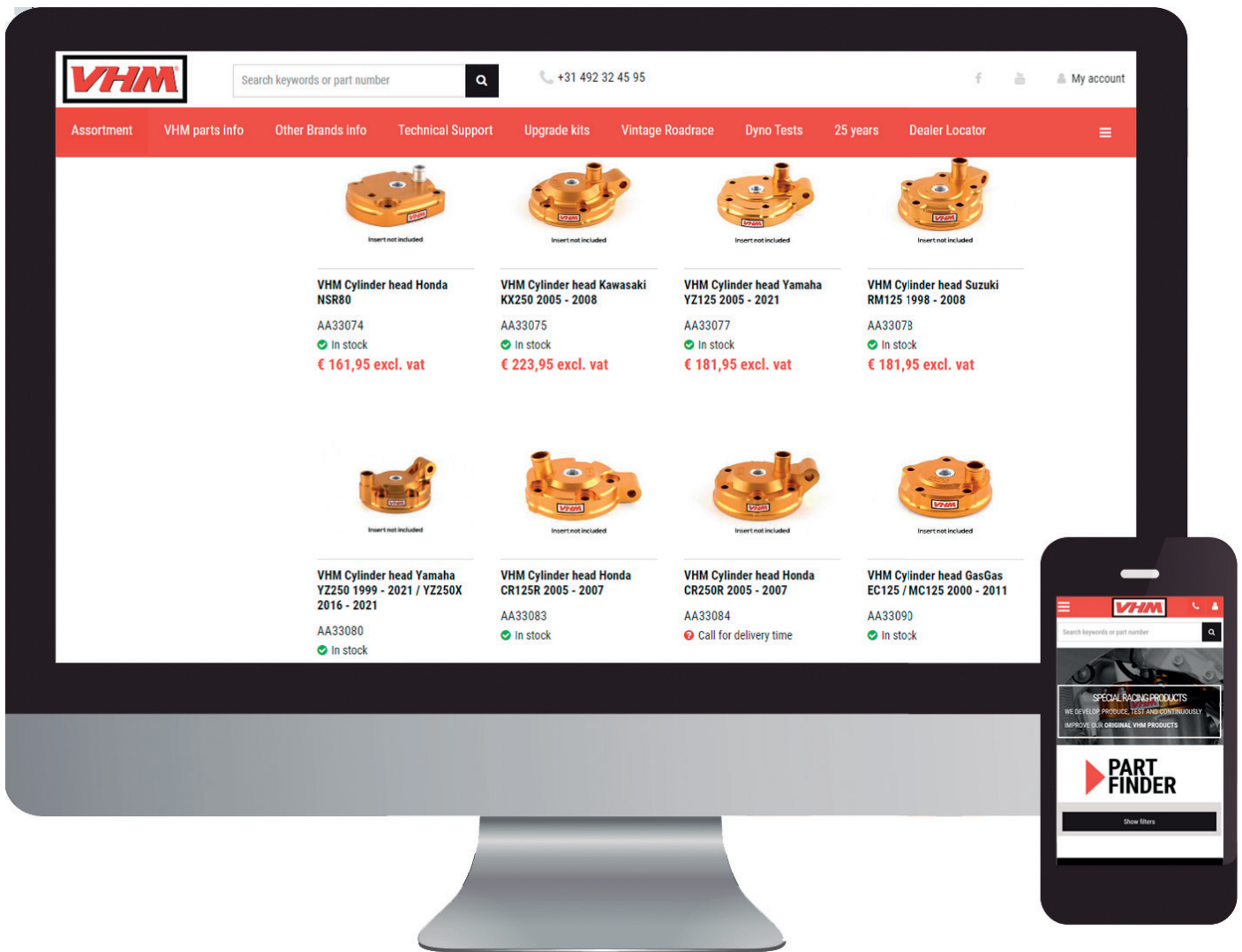


12 DYNO TESTBENCHES



Read all 12 old VHM stories at:

www.vhm.nl/25years



VHM WEBSITE

- ✔ Easy access to information concerning ALL parts like price, applications and specifications
- ✔ Quickly find parts for your bike with the Part finder
- ✔ Find your nearest VHM dealer with the Dealer Locator

DEALER LOCATOR

Our new website contains a Dealer Locator, which enables you to search for your nearest VHM dealer. Just fill in your zip code, country or city and the locator will show you the nearest dealer.

B2B WEBSHOP

Our website also contains a B2B webshop for our business customers.

EASILY FIND PARTS FOR YOUR BIKE

To make it easy for you to find parts for your bike / engine, we've added a Part Finder. Just fill in the application, make, model and year and the website will show you all parts we have in our assortment for it.

www.vhm.nl



Brand

- Afam (1142)
- Athena (160)
-

Part finder

4.038 results

KTM 65SX '09 - '21 HUSQVARNA TC65 '17 - '21

VHM UPGRADE PARTS

Cylinder head	AA33112
Insert	AE32167-059
12° Piston kit (Ø44.96)	APKT06521722B
Crankshaft (middle inertia)	AK20097-1
CDI unit (map 1 = VHM) 2018 - 2020	CD060218
CDI unit (map 1 = VHM) 2021	CD060221
Powervalue adjuster	DA31153
Powervalue base	DA31181
Exhaust flange	DA31194



KTM 85SX '13 - '17 HUSQVARNA TC85 '14 - '17

VHM UPGRADE PARTS

Cylinder head	AA33145
Insert	AE32226-056
12° Piston kit (Ø46.95)	APKT08521707A
Crankshaft modification (high inertia)	AK20161-002



KTM 85SX '18 - '21 Husqvarna TC85 '18 - '21

VHM UPGRADE PARTS

Cylinder head	AA33171
Insert	AE32281-013
12° Piston kit (Ø46.95)	APKT08521707A
Crankshaft (middle inertia)	AK20225
CDI unit (map 1 = VHM)	CD060318
Air intake	AI060318



KTM 125SX '16 - '21 Husqvarna TC125 '16 - '21

VHM UPGRADE PARTS

Cylinder head	AA33156
Insert	AE32257-026
12° Piston kit (Ø53.95)	APKT12511673A
Crankshaft (middle inertia)	AK20252
CDI unit (map 1 = VHM)	CD060416
Air intake	AI060416



KTM 250SX '17 - '21 Husqvarna TC250 '17 - '21

VHM UPGRADE PARTS

Cylinder head	AA33166
Insert	AE32272-024
12° Piston kit (Ø66.33)	APKT25021754A1
Air intake	AI060619 2T
CDI unit (map 1 = VHM)	CD060617



KAWASAKI KX85 '00 - '21

VHM UPGRADE PARTS

Cylinder head	AA33151
Insert	AE32240-E
Crankshaft modification (middle inertia)	AK20178-002

TM MX85 '13 - '20

VHM UPGRADE PARTS

Cylinder head	AA33070
Insert	AE32089-H
Piston kit (Ø47.89)	APTM08521702E



www.vhm.nl/upgradekits



YAMAHA YZ85 '19 - '21

VHM UPGRADE PARTS

Cylinder head	AA33176
Insert	AE32286-029
12° Piston kit (Ø47.45)	APYZ08521757A
Crankshaft (high inertia)	AK20235B
CDI unit (map 1 = VHM)	CD020319



YAMAHA YZ125 '05 - '21

VHM UPGRADE PARTS

Cylinder head	AA33077
Insert	AE32100-E
12° Piston kit (Ø53.95) use s/e bearing 20mm width	APYZ12521714A
Crankshaft (high inertia, +3mm conrod)	AK20192-1



BETA RR125 2T '18 - '21

VHM UPGRADE PARTS

Cylinder head	AA33184
Insert	AE32297-E
CDI unit (map 1 = VHM)	CD070420



BETA RR250 2T '18 - '21

VHM UPGRADE PARTS

Cylinder head	AA33183
Insert	AE32296-E
CDI unit (map 1 = VHM)	CD070620



VINTAGE 2-STROKE ROADRACE

We loved the 2-stroke era of roadrace and still develop and produce parts for various vintage racebikes.

Piston kits | cylinder heads | inserts | crankshaft and connecting rods

See at a glance what we have for various vintage roadrace bikes! We've designed a roadrace parts brochure that includes all VHM parts for roadrace. It can be downloaded at our website: www.vhm.nl/vintageroadracebrochure

For more information:

www.vhm.nl/vintageroadrace

We have special racing products available for the following models:

APRILIA

- ✔ RSW125
- ✔ RS125 1995 - 2010
- ✔ RSW250
- ✔ RS250 1995 - 2002

HONDA

- ✔ RS125 ND4 1984 - 1986
- ✔ RS125 NF4 1987 - 1994
- ✔ RS125 NX4 1995 - 2010
- ✔ RS250 ND5 1985 - 1986
- ✔ RS250 NF5 1987 - 1992
- ✔ RS250 NX5 1993 - 2000
- ✔ RS250 NXA 2001 - 2010
- ✔ NSR50
- ✔ NSR80
- ✔ NSR125
- ✔ NSR150
- ✔ NSR250 MC16 1986 - 1987
- ✔ NSR250 MC18 1988 - 1989
- ✔ NSR250 MC21 / MC28 1990 - 1999
- ✔ NSR300

KAWASAKI

- ✔ KR150

SUZUKI

- ✔ RGV250 VJ21 1988 - 1991
- ✔ RGV250 VJ22 1991 - 1996
- ✔ RGV250 VJ23 1997 - 1998

YAMAHA

- ✔ TZ125 1995 - 1999
- ✔ TZ125 2000 - 2010
- ✔ TZ250 1988 - 1990
- ✔ TZ250 1995 - 1999
- ✔ TZ250 2000 - 2010



VHM CYLINDER HEADS

World famous VHM cylinder heads with exchangeable combustion chambers. Specially developed for optimal power output during the whole race. The head features special designed water duct for optimal water flow.

- ✔ More engine power
- ✔ Better heat transference
- ✔ Exchangeable combustion chambers

AVAILABLE FOR

The VHM cylinder headsets are available for the most common MX 2-stroke engines from 50cc - 500cc for Beta, GasGas, Honda, Husaberg, Husqvarna, Kawasaki, KTM, Suzuki, TM and Yamaha. The VHM cylinder heads are also available for 2 stroke roadrace engines: Aprilia, Honda, Kawasaki, Suzuki and Yamaha.

www.vhm.nl/cylinderheads

VHM HEAD INSERTS

The combustion chamber can be quickly adjusted, depending on the track and weather conditions. There are various types of inserts available for each cylinder head; VHM standard, optional, blind and custom inserts. The inserts are sold separately! These inserts do not fit the standard (OEM / stock) heads, only our VHM heads.

- ✔ Quick to adjust
- ✔ Many choices VHM standard, optional and blind
- ✔ Custom specifications possible

www.vhm.nl/inserts



VHM Cylinder head

AA33190 **Aprilia RS125** **1995 - 2010** *****NEW product*****
Rotax 122 / 123



Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32008-A	1995 - 2010	Blind	Machine yourself			
AE32008-B	1995 - 2010	VHM standard		11.50	+2.00	1.40
AE32008-xxx	1995 - 2010	Custom	Special insert according to your specification			

Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various
SK33190	•	•	•	

AA33102 **Aprilia RS250 Streetbike** **1995 - 2002**
Suzuki RGV250 VJ21 **1988 - 1991**
Suzuki RGV250 VJ22 **1991 - 1996**



Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32149-A	1995 - 2002	Blind	Machine yourself			
AE32149-B	1995 - 2002	Optional		11.80	-0.35	0.90
AE32149-C	1995 - 2002	VHM standard		12.00	-0.35	0.90
AE32149-D	1995 - 2002	Optional		12.20	-0.35	0.90
AE32149-E	1995 - 2002	Optional		12.40	-0.35	0.90
AE32149-F	1995 - 2002	Optional		12.60	-0.35	0.90
AE32149-xxx	1995 - 2002	Custom	Special insert according to your specification			

Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various
SK33102	•	•	•	

AA33184 **Beta RR125 2T** **2018 - 2021** *****NEW product*****
Beta RR125 2T Racing **2018 - 2021**



Part number insert	Year	Insert Type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32297-A	2018 - 2021	Blind	Machine yourself			
AE32297-C	2018 - 2021	Optional		10.80	-0.10	1.10
AE32297-E	2018 - 2021	Standard		11.00	-0.10	1.10
AE32297-F	2018 - 2021	Optional		11.20	-0.10	1.10
AE32297-xxx		Custom	Special insert according to your specification			

Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various
SK33184	•	•	•	

VHM Cylinder head

AA33183 **Beta RR250 2T** **2018 - 2021**
Beta RR250 2T Racing **2019 - 2021** *****NEW product*****



Part number insert	Year	Insert Type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32296-A	2018 - 2021	Blind	Machine yourself			
AE32296-C	2018 - 2021	Optional			+3.70	
AE32296-E	2018 - 2021	Standard			+3.70	
AE32296-F	2018 - 2021	Optional			+3.70	
AE32296-xxx		Custom	Special insert according to your specification			

Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various
SK33000	•			

AA33182 **Beta RR300 2T** **2013 - 2021** *****NEW product*****



Part number insert	Year	Insert Type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32305-A	2013 - 2017	Blind	Machine yourself			
AE32305-C	2013 - 2017	Optional		27.50	0.00	1.80
AE32305-E	2013 - 2017	Standard		28.50	0.00	1.80
AE32305-F	2013 - 2017	Optional		29.50	0.00	1.80
AE32305-xxx		Custom	Special insert according to your specification			
AE32295-A	2018 - 2021	Blind	Machine yourself			
AE32295-C	2018 - 2021	Optional		27.50	+3.50	1.80
AE32295-E	2018 - 2021	Standard		28.50	+3.50	1.80
AE32295-F	2018 - 2021	Optional		29.50	+3.50	1.80
AE32295-xxx		Custom	Special insert according to your specification			

Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various
SK33182	•	•	•	

AA33090 **GasGas EC125/MC125** **2000 - 2011**



Part number insert	Year	Insert Type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32117-A	2000 - 2011	Blind	Machine yourself			
AE32117-C	2000 - 2011	Optional		11.40	-3.55	1.00
AE32117-E	2000 - 2011	VHM standard		11.60	-3.55	1.00
AE32117-F	2000 - 2011	Optional		11.80	-3.55	1.00
AE32117-xxx	2000 - 2011	Custom	Special insert according to your specification			

Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various
SK33000	•			

VHM Cylinder head
AA33057
Honda CR85R
2003 - 2007


Part number insert	Year	Insert Types	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32071-A	2003 - 2007	Blind	Machine yourself			
AE32071-C	2003	Optional		7.80	+2.40	1.00
AE32071-E	2003	VHM standard		8.00	+2.40	1.00
AE32071-F	2003	Optional		8.20	+2.40	1.00
AE32071-K	2004	Optional		7.80	+2.40	1.20
AE32071-L	2004	VHM standard		8.00	+2.40	1.20
AE32071-M	2004	Optional		8.20	+2.40	1.20
AE32071-N	2005 - 2007	Optional		7.80	+2.20	0.80
AE32071-O	2005 - 2007	VHM standard		8.00	+2.20	0.80
AE32071-P	2005 - 2007	Optional		8.20	+2.20	0.80
AE32071-xxx	2003 - 2007	Custom	Special insert according to your specification			
Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various		
SK33057	•	•	•			

AA33155
Honda CR125R
1987 - 1999


Part number insert	Year	Insert Type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32256-A	1987 - 1999	Blind	Machine yourself			
AE32256-K	1990 - 1991	Optional	Dome piston	10.60	+1.90	1.00
AE32256-L	1990 - 1991	VHM standard	Dome piston	10.80	+1.90	1.00
AE32256-M	1990 - 1991	Optional	Dome piston	11.00	+1.90	1.00
AE32256-C	1992 - 1999	Optional	Flat top piston	10.60	-0.70	1.00
AE32256-E	1992 - 1999	VHM standard	Flat top piston	10.80	-0.70	1.00
AE32256-F	1992 - 1999	Optional	Flat top piston	11.00	-0.70	1.00
AE32256-xxx	1987 - 1999	Custom	Special insert according to your specification			
Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various		
SK33025	•	•	•			

AA33055
Honda CR125R
2000 - 2004


Part number insert	Year	Insert Type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32058-A	2000 - 2002	Blind	Machine yourself			
AE32058-C	2000 - 2002	Optional	Flat top piston	10.60	-0.55	1.00
AE32058-E	2000 - 2002	VHM standard	Flat top piston	10.80	-0.55	1.00
AE32058-F	2000 - 2002	Optional	Flat top piston	11.00	-0.55	1.00
AE32058-xxx	2000 - 2002	Custom	Special insert according to your specification			
AE32070-A	2003 - 2004	Blind	Machine yourself			
AE32070-C	2003	Optional	Flat top piston	11.20	-0.45	1.00
AE32070-D	2003	Optional	Flat top piston	11.40	-0.45	1.00
AE32070-E	2003	Optional	Flat top piston	11.60	-0.45	1.00
AE32070-F	2003	VHM standard	Flat top piston	11.80	-0.45	1.00
AE32070-H	2004	Optional	Dome piston	10.40	+2.10	1.00
AE32070-K	2004	VHM standard	Dome piston	10.60	+2.10	1.00
AE32070-L	2004	Optional	Dome piston	10.80	+2.10	1.00
AE32070-xxx	2003-2004	Custom	Special insert according to your specification			
Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various		
SK33024	•	•	•			

VHM Cylinder head
AA33083 Honda CR125R 2005 - 2007


Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32104-A	2005 - 2007	Blind	Machine yourself			
AE32104-B	2005 - 2007	Optional		11.00	+2.25	1.00
AE32104-C	2005 - 2007	VHM standard		11.20	+2.25	1.00
AE32104-E	2005 - 2007	Optional		11.40	+2.25	1.00
AE32104-F	2005 - 2007	Optional		11.60	+2.25	1.00
AE32104-xxx	2005 - 2007	Custom	Special insert according to your specification			

Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various
SK33024	•	•	•	

AA33003 Honda CR250R 1992 - 2001


Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32020-A	1992-2001	Blind	Machine yourself			
AE32020-E	1992-1996	Optional	Dome piston	19.80	+3.00	1.60
AE32020-F	1992-1996	Optional	Dome piston	20.20	+3.00	1.60
AE32020-G	1992-1996	VHM standard	Dome piston	20.60	+3.00	1.60
AE32020-D	1997-2001	Optional	Flat top piston	19.80	-0.40	1.60
AE32020-C	1997-2001	Optional	Flat top piston	20.20	-0.40	1.60
AE32020-B	1997-2001	VHM standard	Flat top piston	20.60	-0.40	1.60
AE32020-xxx	1992-2001	Custom	Special insert according to your specification			

Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various
SK33003	•	•	•	

AA33042 Honda CR250R 2002 - 2004


Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32060-A	2002-2004	Blind	Machine yourself			
AE32060-L	2002-2004	Optional		19.80	-0.30	1.30
AE32060-H	2002-2004	Optional		20.20	-0.30	1.30
AE32060-K	2002-2004	VHM standard		20.60	-0.30	1.30
AE32060-F	2002-2004	Optional		21.00	-0.30	1.30
AE32060-xxx	2002-2004	Custom	Special insert according to your specification			

Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various
SK33042	•	•	•	

VHM Cylinder head
AA33084
Honda CR250R
2005 - 2007


Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32106-A	2005 -2007	Blind	Machine yourself			
AE32106-B	2005 -2007	Optional		19.80	+3.25	1.50
AE32106-C	2005 -2007	VHM standard		20.20	+3.25	1.50
AE32106-E	2005 -2007	Optional		20.60	+3.25	1.50
AE32106-xxx	2005 -2007	Custom	Special insert according to your specification			

Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various
SK33084	•	•	•	

AA33121
Honda CR500R
1989 - 2001


Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32181-A		Blind	Machine yourself			
AE32181-E		VHM standard		51.00	+6.20	2.50
AE32181-xxx		Custom	Special insert according to your specification			

Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various
SK33121	•	•	•	

AA33168
Honda NSR50


Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32276-A		Blind	Machine yourself			
AE32276-E		VHM standard				
AE32096-xxx		Custom	Special insert according to your specification			

Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various
SK33031	•	•	•	

VHM Cylinder head
AA33074 Honda NSR80


Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32096-A		Blind	Machine yourself			
AE32096-E		VHM standard				
AE32096-xxx		Custom	Special insert according to your specification			

Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various
SK33074	•	•	•	

AA33173 Honda NSR125


Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32284-A		Blind	Machine yourself			
AE32284-E		VHM standard		12.00	+1.37	0.90
AE32284-xxx		Custom	Special insert according to your specification			

Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various
SK33173	•	•	•	•

AA33063 Honda NSR150


Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32078-A		Blind	Machine yourself			
AE32078-E		VHM standard		14.20	+2.88	0.65
AE32078-xxx		Custom	Special insert according to your specification			

Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various
SK33063	•	•	•	

AA33192 Honda NSR250 MC16 1986 - 1987
*****NEW product*****


Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32308-A		Blind	Machine yourself			
AE32308-xxx		Custom	Special insert according to your specification			

Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various
SK33191	•	•	•	

VHM Cylinder head
AA33191 Honda NSR250 MC18 1988 - 1989
*****NEW product*****


Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32308-A		Blind	Machine yourself			
AE32308-xxx		Custom	Special insert according to your specification			
Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various		
SK33191	•	•	•			

AA33054 Honda NSR250 MC21/MC28 1990 - 1999


Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32069-A		Blind	Machine yourself			
AE32069-E		VHM standard		12.60	+1.37	1.07
AE32069-xxx		Custom	Special insert according to your specification			
Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various		
SK33054	•	•	•			

AA33169 Honda NSR300


Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32078-A		Blind	Machine yourself			
AE32078-E		VHM standard		14.20	+2.88	0.65
AE32078-xxx		Custom	Special insert according to your specification			
Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various		
SK33169	•	•	•			

VHM Cylinder head
AA33035 Honda RS125 NX4 2000 - 2010


Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32050-A	2000 - 2010	Blind	Machine yourself			
AE32050-D	2000 - 2010	Optional	Dome piston	11.20	+2.00	0.65
AE32050-E	2000 - 2010	VHM standard	Dome piston	11.40	+2.00	0.65
AE32050-F	2000 - 2010	Optional	Dome piston	11.60	+2.00	0.65
AE32052-G	2000 - 2010	Optional	Flat top piston	11.20	-0.45	0.65
AE32052-H	2000 - 2010	VHM standard	Flat top piston	11.40	-0.45	0.65
AE32052-K	2000 - 2010	Optional	Flat top piston	11.60	-0.45	0.65
AE32050-xxx	2000 - 2010	Custom	Special insert according to your specification			

Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various
SK33035	•	•	•	

AA33056 Honda RS125 A-kit 2001 - 2003


Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32050-A	2001 - 2003	Blind	Machine yourself			
AE32050-D	2001 - 2003	Optional	Dome piston R150	11.20	+2.00	0.65
AE32050-E	2001 - 2003	VHM standard	Dome piston R150	11.40	+2.00	0.65
AE32050-F	2001 - 2003	Optional	Dome piston R150	11.60	+2.00	0.65
AE32050-xxx	2001 - 2003	Custom	Special insert according to your specification			
AE32052-D	2001	Optional	A-kit 2001 R300	11.20	+0.80	0.65
AE32052-E	2001	VHM standard	A-kit 2001 R300	11.40	+0.80	0.65
AE32052-F	2001	Optional	A-kit 2001 R300	11.60	+0.80	0.65
AE32052-G	2001 - 2003	Optional	Flat top piston	11.20	-0.45	0.65
AE32052-H	2001 - 2003	VHM standard	Flat top piston	11.40	-0.45	0.65
AE32052-K	2001 - 2003	Optional	Flat top piston	11.60	-0.45	0.65
AE32052-xxx	2001 - 2003	Custom	Special insert according to your specification			

Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various
SK33000	•			

AA33067 Honda RS125 JHA A-kit RS-V 2004 - 2010


Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32067-A	2004 - 2010	Blind	Machine yourself			
AE32067-H	2004 - 2010	Optional	Flat top piston	11.80	-0.48	0.75
AE32067-K	2004 - 2010	VHM standard	Flat top piston	12.00	-0.48	0.75
AE32067-L	2004 - 2010	Optional	Flat top piston	12.20	-0.48	0.75
AE32067-xxx	2004 - 2010	Custom	Special insert according to your specification			

Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various
SK33000	•			

VHM Cylinder head
AA33036
Honda RS250 NX5
Honda RS250 NXA
1993 - 2000
2001 - 2010


Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32051-A	1993 - 2010	Blind	Blind insert			
AE32051-023	1993 - 2000	Optional	Dome piston	10.20	+2.00	0.65
AE32051-021	1993 - 2000	Optional	Dome piston	10.40	+2.00	0.65
AE32051-022	1993 - 2000	Optional	Dome piston	10.60	+2.00	0.65
AE32051-118	1993 - 2000	Optional	Dome piston	10.80	+2.00	0.65
AE32051-016	1993 - 2000	Optional	Dome piston	11.40	+2.00	0.65
AE32051-017	1993 - 2000	Optional	Dome piston	11.60	+2.00	0.65
AE32051-018	1993 - 2000	VHM standard	Dome piston	11.80	+2.00	0.65
AE32051-019	1993 - 2000	Optional	Dome piston	12.00	+2.00	0.65
AE32051-068	1993 - 2000	Optional	Dome piston	12.20	+2.00	0.65
AE32051-D	2001 - 2010	Optional	Dome piston	11.80	+2.10	0.65
AE32051-E	2001 - 2010	Optional	Dome piston	12.00	+2.10	0.65
AE32051-F	2001 - 2010	VHM standard	Dome piston	12.20	+2.10	0.65
AE32051-G	2001 - 2010	Optional	Dome piston	12.40	+2.10	0.65
AE32051-H	2001 - 2010	Optional	Dome piston	12.60	+2.10	0.65
AE32051-J	2001 - 2010	Optional	Dome piston	12.80	+2.10	0.65
AE32051-101	2001 - 2010	Optional	Flat top piston: APHO12521750	10.60	-0.30	0.65
AE32051-073	2001 - 2010	Optional	Flat top piston: APHO12521750	11.20	-0.30	0.65
AE32051-072	2001 - 2010	Optional	Flat top piston: APHO12521750	11.40	-0.30	0.65
AE32051-071	2001 - 2010	Optional	Flat top piston: APHO12521750	11.60	-0.30	0.65
AE32051-070	2001 - 2010	Optional	Flat top piston: APHO12521750	11.80	-0.30	0.65
AE32051-069	2001 - 2010	Optional	Flat top piston: APHO12521750	12.00	-0.30	0.65
AE32051-061	2001 - 2010	VHM standard	Flat top piston: APHO12521750	12.20	-0.30	0.65
AE32051-xxx	2001 - 2010	Custom	Special insert according to your specification			

Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various
SK33036	•	•	•	

AA33052
Honda RS250 A-kit
2001 - 2005


Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32067-A	2001 - 2005	Blind	Machine yourself			
AE32067-C	2001 - 2005	Optional	Flat top piston	11.80	-0.30	0.65
AE32067-E	2001 - 2005	VHM standard	Flat top piston	12.00	-0.30	0.65
AE32067-F	2001 - 2005	Optional	Flat top piston	12.20	-0.30	0.65
AE32067-xxx	2001 - 2005	Custom	Special insert according to your specification			

Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various
SK33000	•			

AA33097
Husaberg TE 125
2012 - 2014

See KTM 125SX / EXC 2007 - 2015

AA33098
Husaberg TE 250
2011 - 2014

See KTM 250SX / EXC 2007 - 2016

AA33109
Husaberg TE 300
2011 - 2014

See KTM 300SX / EXC 2008 - 2016

AA33114
Husqvarna TC50
2017 - 2021

See KTM 50SX 2017 - 2021

AA33017
Husqvarna CR65
2012 - 2015

See KTM 65SX 2000 - 2008

VHM Cylinder head

AA33112	Husqvarna TC65	2017 - 2021	See KTM 65SX 2009 - 2021
AA33145	Husqvarna TC85	2014 - 2017	See KTM 85SX 2013 - 2017
AA33171	Husqvarna TC85	2018 - 2021	See KTM 85SX 2018 - 2021
AA33149	Husqvarna TC105	2014 - 2017	See KTM 105SX 2013 - 2017
AA33177	Husqvarna TC105	2018 - 2021	See KTM 105SX 2018 - 2021
AA33039	Husqvarna CR125 Husqvarna WR125	2001 - 2013 2001 - 2013	



Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32054-A	2001 - 2013	Blind	Machine yourself			
AE32054-C	2001 - 2013	Optional		10.80	-0.50	1.00
AE32054-E	2001 - 2013	Optional		11.00	-0.50	1.00
AE32054-F	2001 - 2013	VHM standard		11.20	-0.50	1.00
AE32054-H	2001 - 2013	Optional		11.40	-0.50	1.00
AE32054-xxx	2001 - 2013	Custom	Special insert according to your specification			

Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various
SK33000	•			

AA33097	Husqvarna TC125 Husqvarna TE125	2014 - 2015 2015 - 2016	See KTM 125SX / EXC 2007 - 2015
AA33156	Husqvarna TC125	2016 - 2021	See KTM 125SX 2016 - 2021
AA33098	Husqvarna TC/TE 250	2014 - 2016	See KTM 250SX/EXC 2007 - 2016
AA33166	Husqvarna TC250 Husqvarna TE250	2017 - 2021 2017	See KTM 250SX 2017 - 2021
AA33175	Husqvarna TE250i	2018 - 2021	See KTM 250EXC TPI 2018 - 2021
AA33109	Husqvarna TE/TC 300	2014 - 2016	See KTM 300SX/EXC 2008 - 2016
AA33167	Husqvarna TE300 Husqvarna TC300 Husqvarna TX300	2017 2017 - 2021 2017 - 2018	See KTM 300SX 2017 - 2021
AA33172	Husqvarna TE300i	2018 - 2021	See KTM 300EXC TPI 2018 - 2021

VHM Cylinder head
AA33026
**Kawasaki KX65
Suzuki RM65**
**2000 - 2021
2000 - 2005**


Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32032-A	2000 - 2021	Blind	Machine yourself			
AE32032-M	2000 - 2021	Optional		6.90	+1.75	0.70
AE32032-N	2000 - 2021	VHM standard		7.20	+1.75	0.70
AE32032-xxx	2000 - 2021	Custom	Special insert according to your specification			

Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various
SK33026	•	•	•	

AA33151
Kawasaki KX85
2000 - 2021


Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32240-A	2000 - 2021	Blind	Machine yourself			
AE32240-B	2000 - 2021	Optional		7.60	+1.70	0.90
AE32240-C	2000 - 2021	Optional		7.80	+1.70	0.90
AE32240-E	2000 - 2021	VHM standard		8.00	+1.70	0.90
AE32240-F	2000 - 2021	Optional		8.20	+1.70	0.90
AE32240-xxx	2000 - 2021	Custom	Special insert according to your specification			

Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various
SK33151	•	•	•	

AA33151-1
Kawasaki KX100
2000 - 2021


Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32240B-A	2000 - 2021	Blind	Machine yourself			
AE32240B-001	2000 - 2021	Optional		9.00	+1.17	1.00
AE32240B-002	2000 - 2021	VHM standard		9.30	+1.17	1.00
AE32240B-xxx	2000 - 2021	Custom	Special insert according to your specification			

Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various
SK33151-1	•	•	•	

VHM Cylinder head
AA33189
Kawasaki KX125
1998 - 2002
*****NEW product*****


Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32306-A	1998 - 2002	Blind	Machine yourself			
AE32306-B	1998 - 2000	Optional		10.80	+0.32	1.00
AE32306-C	1998 - 2000	VHM standard '98-00		11.00	+0.32	1.00
AE32306-E	1998 - 2000	Optional		11.20	+0.32	1.00
AE32306-K	2003 - 2008	Optional		10.80	+1.80	1.00
AE32306-L	2003 - 2008	Optional		11.00	+1.80	1.00
AE32306-M	2003 - 2008	VHM standard '01-02		11.20	+1.80	1.00
AE32306-N	2003 - 2008	Optional		11.40	+1.80	1.00
AE32306-xxx	2003 - 2008	Custom	Special insert according to your specification			

Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various
SK33000	•			

AA33043
Kawasaki KX125
2003 - 2008


Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32061-A	2003 - 2008	Blind	Machine yourself			
AE32061-C	2003 - 2008	Optional		11.20	+1.80	1.00
AE32061-E	2003 - 2008	Optional		11.40	+1.80	1.00
AE32061-F	2003 - 2008	VHM standard '04-08		11.60	+1.80	1.00
AE32061-G	2003 - 2008	VHM standard '03		11.80	+1.80	1.00
AE32061-xxx	2003 - 2008	Custom	Special insert according to your specification			

Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various
SK33043	•	•	•	

AA33075
Kawasaki KX250
2005 - 2008


Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32098-A	2005 - 2008	Blind	Machine yourself			
AE32098-C	2005 - 2008	Optional		20.20	+3.00	1.50
AE32098-E	2005 - 2008	VHM standard		20.60	+3.00	1.50
AE32098-F	2005 - 2008	Optional		21.00	+3.00	1.50
AE32098-xxx	2005 - 2008	Custom	Special insert according to your specification			

Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various
SK33075	•	•	•	

VHM Cylinder head
AA33193
Kawasaki KX500
1998 - 2004
*****NEW product*****


Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32310-A	1998 - 2004	Blind	Machine yourself			
AE32310-B	1998 - 2004	Optional		41.00	+0.75	2.00
AE32310-C	1998 - 2004	Optional		43.00	+0.75	2.00
AE32310-E	1998 - 2004	Optional		45.00	+0.75	2.00
AE32310-F	1998 - 2004	Optional		47.00	+0.75	2.00
AE32310-G	1998 - 2004	Optional		49.00	+0.75	2.00
AE32310-xxx	1998 - 2004	Custom	Special insert according to your specification			

OEM cylinder head specifications	Cylinder head gasket [mm]	Volume [cc]
This chart shows the volume of the OEM cylinder head depending on the thickness of the cylinder head gasket.	0.20	43.50
	0.40	44.70
	1.00	48.20

Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various
SK33193	•	•	•	•

AA33062
Kawasaki KR150 / KRR150 / ZX-150RR


Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32077-A		Blind	Machine yourself			
AE32077-E		VHM standard		14.20	+2.93	0.70
AE32077-xxx		Custom	Special insert according to your specification			

Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various
SK33062	•	•	•	•

AA33062
Kawasaki KR150 / KRR150 / ZX-150RR
O-RING


Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32077-A		Blind	Machine yourself			
AE32077-E O-RING		VHM standard		14.20	+2.93	0.70
AE32077-xxx		Custom	Special insert according to your specification			

Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various
SK33062	•	•	•	•

VHM Cylinder head
AA33017 KTM 50SX 2000 - 2008


Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32027-A	2000 - 2008	Blind	Machine yourself			
AE32027-K	2000 - 2008	Optional	VHM (trumpet) shape	5.70	+2.50	0.60
AE32027-L	2000 - 2008	VHM standard	VHM (trumpet) shape	5.90	+2.50	0.60
AE32027-xxx	2000 - 2008	Custom	Special insert according to your specification			

Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various
SK33000	•			

AA33114 KTM 50SX 2009 - 2021
KTM 50SXS 2011 - 2016
Husqvarna TC50 2017 - 2021


Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32170-A	2009 - 2021	Blind	Machine yourself			
AE32170-C	2009 - 2021	Optional		4.00	+2.45	0.60
AE32170-E	2009 - 2021	VHM standard		4.20	+2.45	0.60
AE32170-xxx	2009 - 2021	Custom	Special insert according to your specification			

Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various
SK33114	•	•	•	

AA33112 KTM 65SX 2009 - 2021
KTM 65SXS 2012 - 2015
KTM 65XC 2009
Husqvarna TC65 2017 - 2021


Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32167-A	2009 - 2021	Blind	Machine yourself			
AE32167-B	2009 - 2012	Optional		5.00	+2.25	0.80
AE32167-C	2009 - 2012	VHM standard		5.20	+2.25	0.80
AE32167-E	2009 - 2012	Optional		5.40	+2.25	0.80
AE32167-G	2013 - 2021	Optional		5.00	+2.45	0.80
AE32167-H	2013 - 2021	VHM standard		5.20	+2.45	0.80
AE32167-K	2013 - 2021	Optional		5.40	+2.45	0.80
AE32167-101	2009 - 2021	Optional	12° piston: APKT06521722 Raise cylinder 0.10mm	5.00	+0.40	0.80
AE32167-059	2009 - 2021	VHM standard	12° piston: APKT06521722 Raise cylinder 0.10mm	5.20	+0.40	0.80
AE32167-xxx	2009 - 2021	Custom	Special insert according to your specification			

Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various
SK33112	•			•

VHM Cylinder head

AA33068 **KTM 85SX** **2004 - 2012**
KTM 85SXS **2012**
KTM 85XC **2009**



Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32087-A	2004 - 2012	Blind	Machine yourself			
AE32087-G	2004 - 2012	Optional		7.80	+2.20	0.80
AE32087-H	2004 - 2012	VHM standard		8.00	+2.20	0.80
AE32087-K	2004 - 2012	Optional		8.20	+2.20	0.80
AE32087-112	2004 - 2012	VHM standard	For 12° piston: APKT08521707	8.00	+0.60	0.80
AE32087-xxx	2004 - 2012	Custom	Special insert according to your specification			

Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various
SK33068	•	•	•	

AA33145 **KTM 85SX** **2013 - 2017**
KTM 85SXS **2013 - 2015**
Husqvarna TC85 **2014 - 2017**



Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32226-A	2013 - 2017	Blind	Machine yourself			
AE32226-C	2013 - 2017	Optional		7.80	+2.20	0.80
AE32226-E	2013 - 2017	VHM standard		8.00	+2.20	0.80
AE32226-F	2013 - 2017	Optional		8.20	+2.20	0.80
AE32226-079	2013 - 2017	Optional	For 12° piston: APKT08521707	7.80	+0.60	0.80
AE32226-056	2013 - 2017	VHM standard	For 12° piston: APKT08521707	8.00	+0.60	0.80
AE32226-100	2013 - 2017	Optional	For 12° piston: APKT08521707	8.20	+0.60	0.80
AE32226-xxx	2013 - 2017	Custom	Special insert according to your specification			

Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various
SK33145	•	•	•	

AA33171 **KTM 85SX** **2018 - 2021**
Husqvarna TC85 **2018 - 2021**



Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32281-A	2018 - 2021	Blind	Blind insert			
AE32281-C	2018 - 2021	Optional		7.80	+2.15	0.80
AE32281-E	2018 - 2021	VHM standard		8.00	+2.15	0.80
AE32281-F	2018 - 2021	Optional		8.20	+2.15	0.80
AE32281-012	2018 - 2021	Optional	For 12° piston: APKT08521707	7.80	+0.55	0.80
AE32281-013	2018 - 2021	VHM standard	For 12° piston: APKT08521707	8.00	+0.55	0.80
AE32281-014	2018 - 2021	Optional	For 12° piston: APKT08521707	8.20	+0.55	0.80
AE32281-xxx	2018 - 2021	Custom	Special insert according to your specification			

Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various
SK33145	•	•	•	

VHM Cylinder head
AA33110 **KTM 105SX** **2003 - 2012**
KTM 105XC **2008 - 2009**


Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32161-A	2003 - 2012	Blind	Machine yourself			
AE32161-C	2003 - 2012	Optional		9.20	+2.20	0.90
AE32161-E	2003 - 2012	VHM standard		9.40	+2.20	0.90
AE32161-F	2003 - 2012	Optional		9.60	+2.20	0.90
AE32161-xxx	2003 - 2012	Custom	Special insert according to your specification			

Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various
SK33000	•			

AA33149 **KTM 105SX** **2013 - 2017**
Husqvarna TC105 **2014 - 2017**


Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32161-A	2013 - 2017	Blind	Machine yourself			
AE32161-C	2013 - 2017	Optional		9.20	+2.20	0.90
AE32161-E	2013 - 2017	VHM standard		9.40	+2.20	0.90
AE32161-F	2013 - 2017	Optional		9.60	+2.20	0.90
AE32161-xxx	2013 - 2017	Custom	Special insert according to your specification			

Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various
SK33000	•			

AA33177 **KTM 105SX** **2018 - 2021**
Husqvarna TC105 **2018 - 2021**


Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32288-A	2018 - 2021	Blind	Machine yourself			
AE32288-B	2018 - 2021	Optional		9.20	+2.20	0.90
AE32288-C	2018 - 2021	VHM standard		9.40	+2.20	0.90
AE32288-E	2018 - 2021	Optional		9.60	+2.20	0.90
AE32288-F	2018 - 2021	Optional		9.80	+2.20	0.90
AE32288-xxx	2018 - 2021	Custom	Special insert according to your specification			

Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various
SK33177	•	•	•	

VHM Cylinder head
AA33097

KTM 125SX **2007 - 2015**
KTM 125SXS **2007 - 2008**
KTM 125EXC **2007 - 2016**
Husqvarna TC125 **2014 - 2015**
Husqvarna TE125 **2015 - 2016**
Husaberg TE125 **2012 - 2014**



Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32128-A	2007 - 2012	Blind	Machine yourself			
AE32128-B	2007 - 2012	Optional		11.20	0.00	0.90
AE32128-C	2007 - 2012	Optional		11.40	0.00	0.90
AE32128-E	2007 - 2012	VHM standard	for 125SX	11.60	0.00	0.90
AE32128-F	2007 - 2012	VHM standard	for 125EXC / TE125	11.80	0.00	0.90
AE32128-H	2007 - 2012	Optional		12.00	0.00	0.90
AE32128-I	2013 - 2015	Optional		11.20	0.00	1.00
AE32128-J	2013 - 2015	Optional		11.40	0.00	1.00
AE32128-K	2013 - 2015	VHM standard	for 125SX / TC125	11.60	0.00	1.00
AE32128-L	2013 - 2015	VHM standard	for 125EXC / TE125	11.80	0.00	1.00
AE32128-M	2013 - 2015	Optional		12.00	0.00	1.00
AE32128-089	2007 - 2015	Optional	For 12° piston: APKT12511673	11.60	+ 0.40	0.90
AE32128-048	2007 - 2015	VHM standard	For 12° piston: APKT12511673	11.80	+ 0.40	0.90
AE32128-xxx	2007 - 2015	Custom	Special insert according to your specification			

Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various
SK33097	●	●	●	●

AA33156

KTM 125SX **2016 - 2021**
KTM 125 XC-W **2017 - 2019**
Husqvarna TC125 **2016 - 2021**
Husqvarna TX125 **2017 - 2019**



Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32257-A	2016 - 2021	Blind	Machine yourself			
AE32257-B	2016 - 2021	Optional		11.20	0.00	0.90
AE32257-C	2016 - 2021	Optional		11.40	0.00	0.90
AE32257-E	2016 - 2021	VHM standard		11.60	0.00	0.90
AE32257-F	2016 - 2021	Optional		11.80	0.00	0.90
AE32257-040	2016 - 2021	Optional	For 12° piston: APKT12511673	11.20	0.00	0.90
AE32257-029	2016 - 2021	Optional	For 12° piston: APKT12511673	11.40	0.00	0.90
AE32257-026	2016 - 2021	VHM standard	For 12° piston: APKT12511673	11.60	0.00	0.90
AE32257-031	2016 - 2021	Optional	For 12° piston: APKT12511673	11.80	0.00	0.90
AE32257-xxx	2016 - 2021	Custom	Special insert according to your specification			

Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various
SK33156	●	●	●	●

VHM Cylinder head

AA33103 **KTM 144SX** **2007 - 2008**
KTM 150SX **2009 - 2015**
KTM 150XC **2009 - 2015**



Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32150-A	2008 - 2015	Blind	Machine yourself			
AE32150-B	2008 - 2015	Optional		13.20	0.00	1.10
AE32150-C	2008 - 2015	Optional		13.40	0.00	1.10
AE32150-E	2008 - 2015	VHM standard		13.60	0.00	1.10
AE32150-F	2008 - 2015	Optional		13.80	0.00	1.10
AE32150-xxx	2008 - 2015	Custom	Special insert according to your specification			

Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various
SK33097	•	•	•	•

AA33157 **KTM 150SX** **2016 - 2021**
KTM 150XC-W **2017 - 2019**
Husqvarna TE150 **2017 - 2019**



Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32260-A	2016 - 2021	Blind	Machine yourself			
AE32260-B	2016 - 2021	Optional		13.20	0.00	1.10
AE32260-C	2016 - 2021	Optional		13.40	0.00	1.10
AE32260-E	2016 - 2021	VHM standard		13.60	0.00	1.10
AE32260-F	2016 - 2021	Optional		13.80	0.00	1.10
AE32260-G	2016 - 2021	Optional		14.00	0.00	1.10
AE32260-xxx	2016 - 2021	Custom	Special insert according to your specification			

Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various
SK33157	•	•	•	•

AA33185 **KTM 150EXC TPI** **2020 - 2021**
Husqvarna TE150i **2020 - 2021**

*****NEW product*****



Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32298-A	2020 - 2021	Blind	Machine yourself			
AE32298-B	2020 - 2021	Optional		13.60	0.00	1.10
AE32298-C	2020 - 2021	Optional		13.80	0.00	1.10
AE32298-E	2020 - 2021	VHM standard		14.00	0.00	1.10
AE32298-F	2020 - 2021	Optional		14.20	0.00	1.10
AE32298-G	2020 - 2021	Optional		14.40	0.00	1.10
AE32298-xxx	2020 - 2021	Custom	Special insert according to your specification			

Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various
SK33157	•	•	•	•

VHM Cylinder head

AA33046	KTM 200SX	2003 - 2016
	KTM 200EXC	2003 - 2016
	KTM 200MXC	2003
	KTM 200XC	2006 - 2009
	KTM 200XC-W	2006 - 2016



Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32063-A	2003 - 2016	Blind	Machine yourself			
AE32063-C	2003 - 2016	Optional		16.30	0.00	1.20
AE32063-E	2003 - 2016	VHM standard for 200SX		16.60	0.00	1.20
AE32063-F	2003 - 2016	VHM standard for 200EXC		16.90	0.00	1.20
AE32063-xxx	2003 - 2016	Custom	Special insert according to your specification			

Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various
SK33000	•			

AA33098	KTM 250SX/EXC/XC-W	2007 - 2016
	KTM 250XC	2007 - 2013
	KTM 250SXS	2007
	Husqvarna TC/TE250	2014 - 2016
	Husaberg TE250	2011 - 2014



Part number insert	Year	Insert types	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32129-A	2007 - 2016	Blind	Machine yourself			
AE32129-C	2007 - 2016	Optional		20.60	+3.70	1.40
AE32129-E	2007 - 2016	Optional		21.00	+3.70	1.40
AE32129-F	2007 - 2016	Optional		21.45	+3.70	1.60
AE32129-H	2007 - 2016	VHM standard for 250SX / TC250		21.80	+3.70	1.60
AE32129-K	2007 - 2016	VHM standard for 250EXC / TE250		22.20	+3.70	1.60
AE32129-068	2007 - 2016	VHM standard	For 12° piston: APKT25021754	22.20	+0.50	1.60
AE32129-xxx	2007 - 2016	Custom	Special insert according to your specification			

Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various
SK33098	•	•	•	

VHM Cylinder head

AA33166 **KTM 250SX** **2017 - 2021**
KTM 250EXC **2017**
Husqvarna TC250 **2017 - 2021**
Husqvarna TE250 **2017**



Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32272-A	2017 - 2021	Blind	Machine yourself			
AE32272-C	2017 - 2021	Optional		21.80	+3.70	1.60
AE32272-E	2017 - 2021	VHM standard	for 250SX / TC250	22.20	+3.70	1.60
AE32272-F	2017 - 2021	Optional		22.60	+3.70	1.60
AE32272-S	2017 - 2021	Optional		23.00	+3.70	1.60
AE32272-T	2017	VHM standard	for 250EXC / TE250	24.00	+3.70	1.70
AE32272-024	2017 - 2021	VHM standard	For 12° piston: APKT25021754	22.20	+0.50	1.60
AE32272-037	2017 - 2021	Optional	For 12° piston: APKT25021754	22.60	+0.50	1.60
AE32272-xxx	2017 - 2021	Custom	Special insert according to your specification			
Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various		
SK33098	•	•	•			

AA33175 **KTM 250EXC TPI** **2018 - 2021**
KTM 250XC-W TPI **2019 - 2021**
KTM 250XC TPI **2020 - 2021**
Husqvarna TE250i **2018 - 2021**



Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32272-A	2018 - 2021	Blind	Machine yourself			
AE32272-S	2018 - 2021	Optional		23.00	+3.70	1.60
AE32272-T	2018 - 2021	VHM standard		24.00	+3.70	1.70
AE32272-xxx	2018 - 2021	Custom	Special insert according to your specification			
Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various		
SK33098	•	•	•			

AA33109 **KTM 300SX/EXC** **2008 - 2016**
KTM 300XC **2014 - 2016**
KTM 300XC-W **2014 - 2016**
Husqvarna TE/TC300 **2014 - 2016**
Husaberg TE300 **2011 - 2014**



Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32160-A	2008 - 2016	Blind	Machine yourself			
AE32160-H	2008 - 2016	VHM standard	for 300SX / TC300	26.25	0.00	1.90
AE32160-E	2008 - 2016	VHM standard	for 300EXC / TE300	28.50	0.00	1.70
AE32160-xxx	2008 - 2016	Custom	Special insert according to your specification			
Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various		
SK33109	•	•	•			

VHM Cylinder head

AA33167 **KTM 300EXC/XC/XC-W** **2017 - 2018**
KTM 300SX **2017 - 2021**
Husqvarna TE300 **2017 - 2018**
Husqvarna TC300 **2017 - 2021**
Husqvarna TX300 **2017 - 2018**



Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32274-A	2017 - 2021	Blind	Machine yourself			
AE32274-B	2017 - 2021	VHM standard for 300SX / TC300		26.25	0.00	1.90
AE32274-E	2017 - 2018	VHM standard for 300EXC / 300XC / 300XC-W / TE300 / TX300		27.50	0.00	1.90
AE32274-xxx	2017 - 2021	Custom	Special insert according to your specification			

Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various
SK33167	•	•	•	

AA33172 **KTM 300EXC TPI** **2018 - 2021**
KTM 300XC-W TPI **2019 - 2021**
Husqvarna TE300i **2018 - 2021**
Husqvarna TX300i **2020 - 2021**



Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32274-A	2018 - 2021	Blind	Machine yourself			
AE32274-C	2018 - 2021	Optional		26.50	0.00	1.90
AE32274-E	2018 - 2021	Optional		27.50	0.00	1.90
AE32274-F	2018 - 2021	VHM standard		28.50	0.00	1.90
AE32274-xxx	2018 - 2021	Custom	Special insert according to your specification			

Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various
SK33167	•	•	•	

AA33026 **Suzuki RM65** **2000 - 2005** See Kawasaki KX65 2000 - 2021

AA33009 **Suzuki RM85** **1998 - 2017**



Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32014-A	1998 - 2017	Blind	Machine yourself			
AE32014-E	1998	Optional	RM79	7.20	+1.65	1.00
AE32014-D	1998	Optional	RM79	7.40	+1.65	1.00
AE32014-C	1998	VHM standard	RM79	7.60	+1.65	1.00
AE32014-M	1999	Optional	RM82	7.40	+1.65	1.00
AE32014-L	1999	Optional	RM82	7.60	+1.65	1.00
AE32014-K	1999	VHM standard	RM82	7.80	+1.65	1.00
AE32014-N	2000 - 2017	Optional	RM85	8.00	+1.40	1.00
AE32014-O	2000 - 2017	VHM standard	RM85	8.20	+1.40	1.00
AE32014-xxx	1998 - 2017	Custom	Special insert according to your specification			

Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various
SK33009	•	•	•	

VHM Cylinder head
AA33126 Suzuki RM112 Supermini 2000 - 2012


Part number insert	Year	Standard	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32195-A	2000 - 2012	Blind	Machine yourself			
AE32195-xxx	2000 - 2012	Custom	Special insert according to your specification			
Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various		
SK33009	•	•	•			

AA33078 Suzuki RM125 1998 - 2008
**New model, old model inserts: AE32005-F '98, AE32005-M '01-'02, AE32005-R '03*


Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32088-016	1998-2000, 2003	Optional	Dome piston	11.00	+1.90	1.00
AE32088-003	1998-2000, 2003	VHM standard	Dome piston	11.20	+1.90	1.00
AE32088-015	1998-2000, 2003	Optional	Dome piston	11.40	+1.90	1.00
AE32088-019	2001 - 2002	VHM standard	Dome piston	11.20	+2.10	1.00
AE32088-A	2004	Blind	Blind insert			
AE32088-C	2004	Optional		10.80	-0.50	1.00
AE32088-E	2004	Optional		11.00	-0.50	1.00
AE32088-F	2004	VHM standard		11.20	-0.50	1.00
AE32088-H	2004	Optional		11.40	-0.50	1.00
AE32088-xxx	2004	Custom	Special insert according to your specification			
AE32101-A	2005 - 2008	Blind	Blind insert			
AE32101-B	2005 - 2008	Optional		10.80	-0.50	0.90
AE32101-C	2005 - 2008	Optional		11.00	-0.50	0.90
AE32101-E	2005 - 2008	VHM standard		11.20	-0.50	0.90
AE32101-F	2005 - 2008	Optional		11.40	-0.50	0.90
AE32101-xxx	2005 - 2008	Custom	Special insert according to your specification			
Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various		
SK33078	•	•	•			

AA33038 Suzuki RM250 2001 - 2008


Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32053-A	2001 - 2008	Blind	Machine yourself			
AE32053-C	2001 - 2002	Optional		20.20	-0.50	1.30
AE32053-E	2001 - 2002	VHM standard		20.60	-0.50	1.30
AE32053-F	2003 - 2008	Optional		20.20	+3.00	1.50
AE32053-H	2003 - 2008	VHM standard		20.60	+3.00	1.50
AE32053-xxx	2001 - 2008	Custom	Special insert according to your specification			
Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various		
SK33038	•	•	•			

AA33102 Suzuki RGV 250 VJ21 1988 - 1991
Suzuki RGV 250 VJ22 1991 - 1996

See Aprilia RS250 Streetbike 1995 - 2002

VHM Cylinder head
AA33188
Suzuki RGV 250 VJ23
1997 - 1998
*****NEW product*****


insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32302-A	1997 - 1998	Blind	Machine yourself			
AE32302-xxx	1997 - 1998	Custom	Special insert according to your specification			
Part number sealkit SK33000	O-ring small	O-ring middle	O-ring big	O-ring various		

AA33070
TM MX85
1999 - 2020


Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32089-A	1999 - 2020	Blind	Machine yourself			
AE32089-C	1999 - 2012	Optional		7.40	-0.60	1.00
AE32089-E	1999 - 2012	Optional		7.60	-0.60	1.00
AE32089-F	1999 - 2012	VHM standard		7.80	-0.60	1.00
AE32089-G	2013 - 2020	Optional		7.80	-0.80	0.90
AE32089-H	2013 - 2020	VHM standard		8.00	-0.80	0.90
AE32089-K	2013 - 2020	Optional		8.20	-0.80	0.90
AE32089-xxx	1999 - 2020	Custom	Special insert according to your specification			
Part number sealkit SK33000	O-ring small	O-ring middle	O-ring big	O-ring various		

AA33005
TM MX125
TM EN125
TM MX144
1998 - 2011
1998 - 2011
2007 - 2011


Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32017-A	1998 - 2011	Blind	Machine yourself			
AE32017-O	1998 - 2011	Optional	MX125 / EN125	10.80	-1.60	0.90
AE32017-N	1998 - 2011	Optional	MX125 / EN125	11.00	-1.60	0.90
AE32017-M	1998 - 2011	VHM standard	MX125 / EN125	11.20	-1.60	0.90
AE32017-L	1998 - 2011	Optional	MX125 / EN125	11.40	-1.60	0.90
AE32017-xxx	1998 - 2011	Custom	Special insert according to your specification			
Part number sealkit SK33000	O-ring small	O-ring middle	O-ring big	O-ring various		

VHM Cylinder head
AA33142 **TM MX125** **2012 - 2019**
TM EN125 **2012 - 2019**


Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32223-A	2012 - 2019	Blind	Machine yourself			
AE32223-B	2012 - 2015	Optional		10.80	-1.70	1.00
AE32223-C	2012 - 2015	Optional		11.00	-1.70	1.00
AE32223-E	2012 - 2015	VHM standard		11.20	-1.70	1.00
AE32223-F	2012 - 2015	Optional		11.40	-1.70	1.00
AE32223-G	2012 - 2015	Optional		11.60	-1.70	1.00
AE32223-K	2016 - 2019	Optional		11.00	-1.70	1.20
AE32223-L	2016 - 2019	Optional		11.20	-1.70	1.20
AE32223-M	2016 - 2019	Optional		11.40	-1.70	1.20
AE32223-N	2016 - 2019	VHM standard		11.60	-1.70	1.20
AE32223-O	2016 - 2019	Optional		11.80	-1.70	1.20
AE32223-P	2016 - 2019	Optional		12.00	-1.70	1.20
AE32223-xxx	2012 - 2019	Custom	Special insert according to your specification			

Part number sealkit O-ring small O-ring middle O-ring big O-ring various
 SK33000 ● ● ● ●

AA33105 **TM MX250 / MX300** **1999 - 2014**


Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32152-A	1999 - 2014	Blind	Machine yourself for 250cc			
AE32152-C	1999 - 2014	Optional	250cc	20.20	-0.40	1.30
AE32152-E	1999 - 2014	VHM standard MX250	250cc	20.60	-0.40	1.30
AE32152-F	1999 - 2014	Optional	250cc	21.00	-0.40	1.30
AE32152-xxx	1999 - 2014	Custom	Special insert according to your specification			
AE32153-A	1999 - 2014	Blind	Machine yourself for 300cc			
AE32153-C	1999 - 2014	Optional	300cc	27.00	-0.50	1.80
AE32153-E	1999 - 2014	VHM standard MX300	300cc	28.00	-0.50	1.80
AE32153-F	1999 - 2014	Optional	300cc	29.00	-0.50	1.80
AE32153-xxx	1999 - 2014	Custom	Special insert according to your specification			

Part number sealkit O-ring small O-ring middle O-ring big O-ring various
 SK33000 ● ● ● ●

AA33154 **TM MX250 / MX300** **2015 - 2020**


Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32255-A	2015 - 2020	Blind	Machine yourself 250cc			
AE32255-C	2015 - 2020	Optional	Ø66.40 - 250cc	20.20	-0.40	1.30
AE32255-E	2015 - 2020	VHM standard MX250	Ø66.40 - 250cc	20.60	-0.40	1.30
AE32255-F	2015 - 2020	Optional	Ø66.40 - 250cc	21.00	-0.40	1.30
AE32255-xxx	2015 - 2020	Custom	Special insert according to your specification			
AE32250-A	2015 - 2020	Blind	Machine yourself for 300cc			
AE32250-C	2015 - 2020	Optional	Ø72 - 300cc	27.00	-0.60	1.60
AE32250-E	2015 - 2020	VHM standard MX300	Ø72 - 300cc	28.00	-0.60	1.60
AE32250-F	2015 - 2020	Optional	Ø72 - 300cc	29.00	-0.60	1.60
AE32250-xxx	2015 - 2020	Custom	Special insert according to your specification			

Part number sealkit O-ring small O-ring middle O-ring big O-ring various Remark
 SK33154 ● ● ● ● Only for MX300

VHM Cylinder head
AA33186
TM EN300FI
2020
*****NEW product*****


Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32299-A	2020 -	Blind	Machine yourself			
AE32299-C	2020 -	Optional		27.00	-0.80	1.30
AE32299-E	2020 -	VHM standard		28.00	-0.80	1.30
AE32299-F	2020 -	Optional		29.00	-0.80	1.30
AE32299-xxx	2020 -	Custom	Special insert according to your specification			

Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various	Remark
SK33000	•				

AA33174
Yamaha YZ65
2018 - 2021


Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32285-A	2018 - 2021	Blind	Machine yourself			
AE32285-C	2018 - 2021	Optional		6.80	+1.25	0.80
AE32285-E	2018 - 2021	VHM standard		7.00	+1.25	0.80
AE3285-F	2018 - 2021	Optional		7.20	+1.25	0.80
AE32285-xxx	2018 - 2021	Custom	Special insert according to your specification			

Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various
SK33174	•	•	•	

AA33041
Yamaha YZ85
2002 - 2018


Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32059-A	2002 - 2018	Blind	Machine yourself			
AE32059-H	2002 - 2018	Optional		8.20	+1.60	1.00
AE32059-K	2002 - 2018	VHM standard		8.40	+1.60	1.00
AE32059-L	2002 - 2018	Optional		8.60	+1.60	1.00
AE32059-196	2002 - 2018	VHM standard	For 12° piston: APYA08521757	8.40	+0.00	1.30
AE32059-197	2002 - 2018	Optional	For 12° piston: APYA08521757	8.60	+0.00	1.30
AE32059-xxx	2002 - 2018	Custom	Special insert according to your specification			

Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various
SK33041	•	•	•	

VHM Cylinder head
AA33176 Yamaha YZ85 2019 - 2021


Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32286-A	2019 - 2021	Blind	Machine yourself			
AE32286-C	2019 - 2021	Optional		8.20	+1.60	1.30
AE32286-E	2019 - 2021	VHM standard		8.40	+1.60	1.30
AE32286-F	2019 - 2021	Optional		8.60	+1.60	1.30
AE32286-032	2019 - 2021	Optional	For 12° piston: APYZ08521757	8.20	+0.00	1.30
AE32286-029	2019 - 2021	VHM standard	For 12° piston: APYZ08521757	8.40	+0.00	1.30
AE32286-xxx	2019 - 2021	Custom	Special insert according to your specification			

Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various
SK33041	•	•	•	

AA33032 Yamaha YZ125 2001 - 2004


Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32046-A	2001 - 2004	Blind	Machine yourself			
AE32046-H	2001 - 2004	Optional		10.80	+1.85	1.00
AE32046-K	2001 - 2004	Optional		11.00	+1.85	1.00
AE32046-L	2001 - 2004	VHM standard		11.20	+1.85	1.00
AE32046-M	2001 - 2004	Optional		11.40	+1.85	1.00
AE32046-xxx	2001 - 2004	Custom	Special insert according to your specification			

Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various
SK33077	•	•	•	

AA33077 Yamaha YZ125 2005 - 2021


Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32100-A	2005 - 2021	Blind	Machine yourself			
AE32100-B	2005 - 2021	Optional		10.80	0.00	0.90
AE32100-C	2005 - 2021	Optional		11.00	0.00	0.90
AE32100-E	2005 - 2021	VHM standard		11.20	0.00	0.90
AE32100-F	2005 - 2021	Optional		11.40	0.00	0.90
AE32100-xxx	2005 - 2021	Custom	Special insert according to your specification			

Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various
SK33077	•	•	•	

VHM Cylinder head
AA33104 Yamaha YZ144 2005 - 2021


Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32151-A	2005 - 2021	Blind	Machine yourself			
AE32151-xxx	2005 - 2021	Custom	Special insert according to your specification			
Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various		
SK33104	•	•	•			

AA33187 Yamaha YZ250 1988 - 1998 *NEW product*****


Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32300-A	1988 - 1998	Blind	Machine yourself			
AE32300-xxx	1988 - 1998	Custom	Special insert according to your specification			
Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various		
SK33000	•					

**AA33080 Yamaha YZ250 1999 - 2021
Yamaha YZ250X 2016 - 2021**


Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32021-A	1999 - 2021	Blind	Machine yourself			
AE32021-D	1999 - 2021	Optional		19.80	+2.80	1.50
AE32021-C	1999 - 2021	Optional		20.20	+2.80	1.50
AE32021-B	1999 - 2021	VHM standard for YZ250		20.60	+2.80	1.50
AE32021-009	1999 - 2021	Optional		21.00	+2.80	1.50
AE32021-092	2016 - 2021	VHM standard for YZ250X		21.80	+2.80	1.60
AE32021-xxx	1999 - 2021	Custom	Special insert according to your specification			
Part number sealkit	O-ring small	O-ring middle	O-ring big	O-ring various		
SK33080	•	•	•			

VHM Cylinder head
AA33028-1 Yamaha TZ125 1995 - 2010


Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32036-A	1995 - 2010	Blind	Machine yourself			
AE32036-122	1995 - 1999	VHM standard	Ø 56 mm piston	11.80	0.00	0.80
AE32036-134	1995 - 1999	Optional	Ø 56 mm piston	12.00	0.00	0.80
AE32036-C	2000 - 2010	Optional	Ø 54 mm piston	11.40	0.00	0.80
AE32036-E	2000 - 2010	VHM standard	Ø 54 mm piston	11.60	0.00	0.80
AE32036-F	2000 - 2010	Optional	Ø 54 mm piston	11.80	0.00	0.80
AE32036-G	2000 - 2010	Optional	Ø 54 mm piston	12.00	0.00	0.80
AE32036-xxx	1995 - 2010	Custom	Special insert according to your specification			

Part number sealkit SK33000

O-ring small O-ring middle O-ring big O-ring various

AA33028 Yamaha TZ250 1995 - 2002


Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32036-A	1995 - 2002	Blind	Machine yourself			
AE32036-122	1995 - 1999	VHM standard	Ø 56 mm piston	11.80	0.00	0.80
AE32036-134	1995 - 1999	Optional	Ø 56 mm piston	12.00	0.00	0.80
AE32036-C	2000 - 2002	Optional	Ø 54 mm piston	11.40	0.00	0.80
AE32036-E	2000 - 2002	VHM standard	Ø 54 mm piston	11.60	0.00	0.80
AE32036-F	2000 - 2002	Optional	Ø 54 mm piston	11.80	0.00	0.80
AE32036-G	2000 - 2002	Optional	Ø 54 mm piston	12.00	0.00	0.80
AE32036-xxx	1995 - 2002	Custom	Special insert according to your specification			

Part number sealkit SK33000

O-ring small O-ring middle O-ring big O-ring various

AA33065 Yamaha TZ250 2003 - 2010


Part number insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32080-A	2003 - 2010	Blind	Machine yourself			
AE32080-C	2003 - 2010	Optional		11.80	0.00	0.80
AE32080-E	2003 - 2010	VHM standard		12.00	0.00	0.80
AE32080-F	2003 - 2010	Optional		12.20	0.00	0.80
AE32080-xxx	2003 - 2010	Custom	Special insert according to your specification			

Part number sealkit SK33000

O-ring small O-ring middle O-ring big O-ring various

▲ OEM HEAD INSERTS

FOR STANDARD CYLINDER HEAD COVER

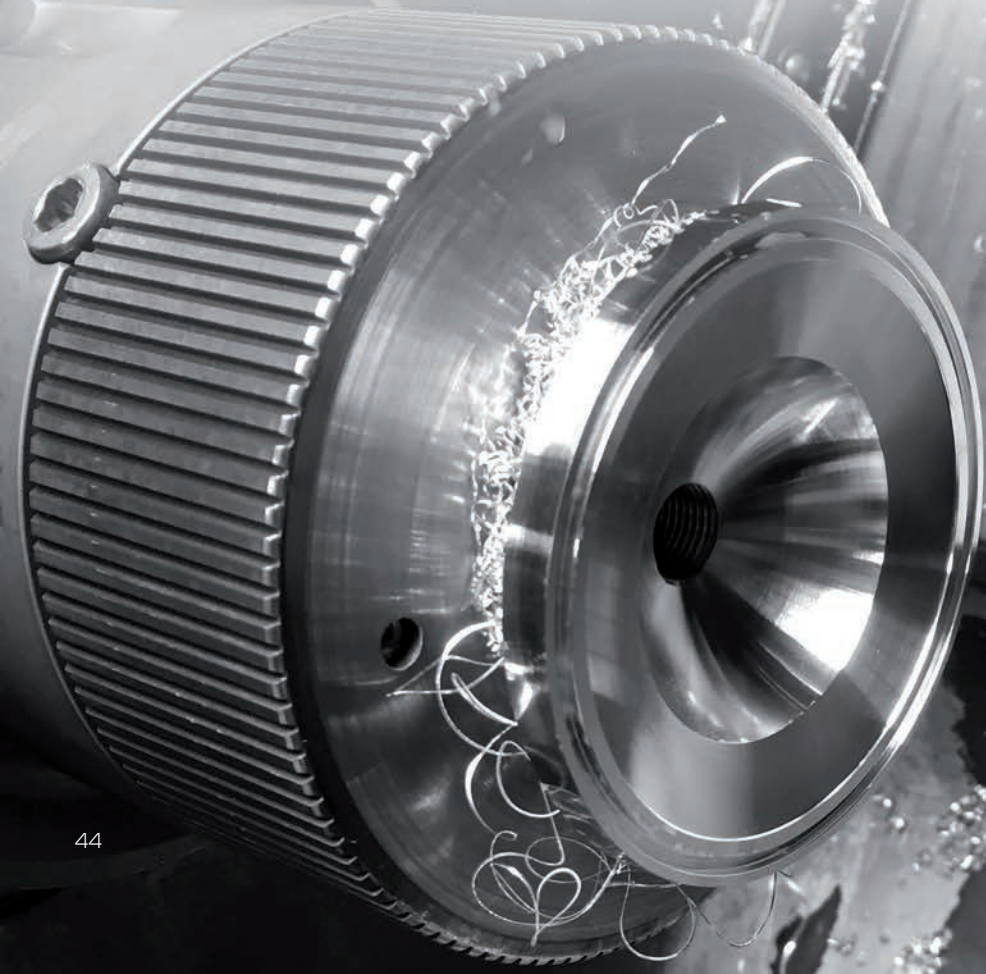
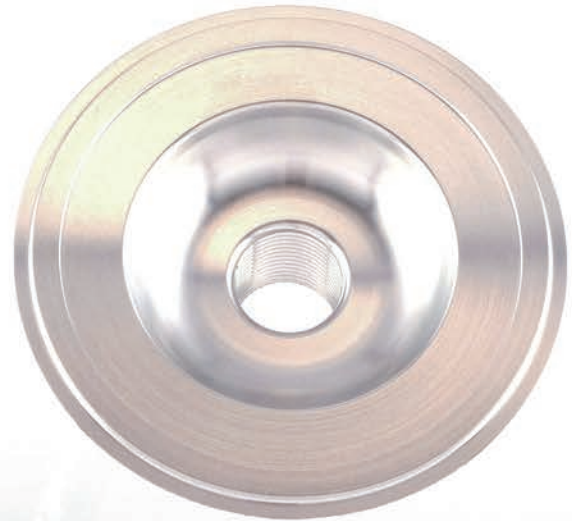
Besides the VHM cylinder headsets we also offer special inserts for certain standard (OEM) cylinder headcovers. See the following pages for which engines we have these inserts available.

- ✔ Quick to adjust
- ✔ Fit standard cylinder head in some cases head mod needed
- ✔ Custom specifications possible

MACHINE YOURSELF

All inserts are available with a machined combustion chamber or not machined 'blind insert'. With the 'blind' insert, you are able to machine the combustion chamber by yourself.

www.vhm.nl/inserts



VHM OEM head inserts
2Fast4Race

Partnumber insert	Year	Insert type	Description
AE32231-A		Blind	
AE32231-xxx		Custom	Special insert according to your specification


Aprilia RSW125 / RSW250 racebike Type APC

Partnumber insert	Year	Insert Type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32076-A		Blind				
AE32076-AC39		Optional		11.37	+1.50	0.75
AE32076-AC32		Optional		11.22	+1.50	0.75
AE32076-AC37		Optional		11.10	+1.50	0.75
AE32076-AC38		Optional		10.90	+1.50	0.75
AE32076-AC56		Optional		10.77	+1.50	0.75
AE32076-AC68		Optional		10.64	+1.50	0.75
AE32076-AC69		Optional		10.50	+1.50	0.75
AE32076-xxxx		Custom	Special insert according to your specification			


Aprilia RSW125 / RSW250 racebike Type APE

Partnumber insert	Year	Insert Type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32085-A		Blind insert				
AE32085-004		Optional	For RSW125 APE	10.20	+1.50	0.75
AE32085-005		Optional	For RSW125 APE	10.40	+1.50	0.75
AE32085-AC69		Optional	For RSW125 APE	10.50	+1.50	0.75
AE32085-AC56		Optional	For RSW125 APE	10.77	+1.50	0.75
AE32085-AC38		Optional	For RSW125 APE	10.90	+1.50	0.75
AE32085-006		Optional	For RSW125 APE	10.60	+1.50	0.75
AE32085-AC39		Optional	For RSW125 APE	11.37	+1.50	0.75
AE32085-xxxx		Custom	Special insert according to your specification			


Derbi 50cc / 70cc

Partnumber insert	Year	Insert Type	Description
AE32135-A		Blind	50cc
AE32135-xxx		Custom	50cc, Special insert according to your specification
AE32144-A		Blind	70cc
AE32144-xxx		Custom	70cc, Special insert according to your specification



VHM OEM head inserts

GasGas 65cc

Partnumber insert	Year	Insert type	Description
AE32118-A		Blind	
AE32118-xxx		Custom	Special insert according to your specification



Iame 125 Screamer

Partnumber insert	Year	Insert type	Description
AE32246-A		Blind	
AE32246-xxx		Custom	Special insert according to your specification



Kreidler 50/60cc Air Cooled

Partnumber insert	Year	Insert type	Description
AE32185-A		Blind	
AE32185-xxx		Custom	Special insert according to your specification

Note: does not fit the standard cylinder headcover, VHM modification on the headcover needed: **MODCYLKOP-001**



Malossi Minarelli AM6, scooter 7T

Partnumber insert	Year	Insert Type	Description
AE32173-A		Blind	Minarelli AM6, scooter 7T, pitch 50x50 and 52x52
AE32173-xxx		Custom	Minarelli AM6, scooter 7T, pitch 50x50 and 52x52 Special insert according to your specification
AE32173B-A		Blind	Minarelli AM6, scooter 7T, pitch 54x54 and 56x56 (Derbi) Special insert according to your specification
AE32173B-xxx		Custom	Minarelli AM6, scooter 7T, pitch 54x54 and 56x56 (Derbi) Special insert according to your specification
AE32303-A		Blind	Minarelli AM6, 70cc, 2020 Special insert according to your specification
AE32303-xxx		Custom	Minarelli AM6, 70cc, 2020 Special insert according to your specification



Malossi Piaggio

Partnumber insert	Year	Insert Type	Description
AE32172-A		Blind	
AE32172-xxx		Custom	Special insert according to your specification



VHM OEM head inserts
Modena 125

Partnumber insert	Year	Insert Type	Description
AE32234-A		Blind	
AE32234-xxx		Custom	Special insert according to your specification


Pavesi 125

Partnumber insert	Year	Insert Type	Description
AE32055-A		Blind	
AE32055-xxx		Custom	Special insert according to your specification

Note: does not fit the standard cylinder headcover, VHM modification on the headcover needed.


Polini Minarelli

Partnumber insert	Year	Insert Type	Description
AE32091-A		Blind	
AE32091-xxx		Custom	Special insert according to your specification



VHM OEM head inserts
TM K9B, K9C, KZ10, KZ10B

Partnumber insert	Year	Insert type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32203-A	2008 - 2015	Blind	K9B, K9C, KZ10, KZ10B			
AE32203-xxx	2008 - 2015	Custom	K9B, K9C, KZ10, KZ10B, Special insert according to your specification			
AE32203-277	2010 - 2011	Optional	KZ10 4° piston, APTM12521729	13.80 (13.20 CIK)	-2.20	1.05 mm 5.5°
AE32203-278	2012	Optional	KZ10 4° piston, APTM12521729	13.80 (13.20 CIK)	-2.30	1.05 mm 5.5°
AE32203-279	2013 - 2015	Optional	KZ10 4° piston, APTM12521729	13.80 (13.20 CIK)	-2.40	1.05 mm 5.5°

Note: VHM inserts does not fit the standard cylinder headcover (CYLTMKZ10), VHM modification on the headcover needed: **MODCYLKOP-001**


TM K9B, K9C, KZ10, KZ10B

Partnumber	Year	Partnumber	Modification cylinder head cover for using VHM inserts AE32203-xxx
OEM Cylinder head CYLTMKZ10	2008 - 2015	MODCYLKOP-001	


TM KZ10C

Partnumber insert	Year	Insert Type	Description	Volume [cc]	Piston height [mm]	Squish [mm]
AE32270-A	2016 - 2018	Blind				
AE32270-026	2016 - 2018	Optional		13.80 (13.10 CIK)	-2.20	0.90 mm
AE32270-027	2016 - 2018	Optional		13.80 (13.10 CIK)	-2.30	0.90 mm
AE32270-028	2016 - 2018	VHM standard		13.80 (13.10 CIK)	-2.40	0.90 mm
AE32270-029	2016 - 2018	Optional		13.80 (13.10 CIK)	-2.50	0.90 mm
AE32270-030	2016 - 2018	Optional		13.80 (13.10 CIK)	-2.60	0.90 mm
AE32270-xxx	2016 - 2018	Custom	Special insert according to your specification			

Note: VHM inserts fit the standard cylinder headcover CYLTMKZ10C without any modifications.


TM KZ10C

Partnumber	Year
OEM Cylinder head CYLTMKZ10C	2016 - 2018



CUSTOM INSERTS

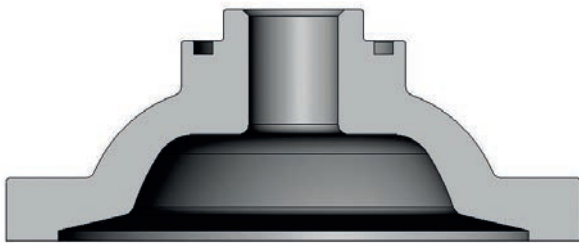
Besides our standard, optional and blind inserts, we also offer the possibility to produce a custom insert. Thereby we machine the insert according to your requested specifications.

- ✔ Your specifications
- ✔ VHM high quality
- ✔ Already possible from 1 piece

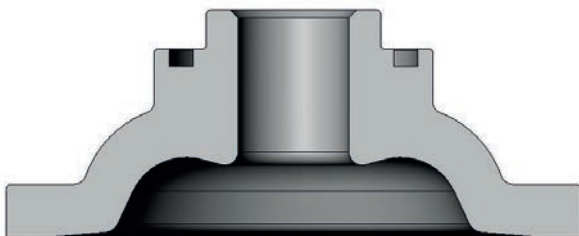
TO YOUR SPECIFICATIONS

When ordering a custom insert, we need to know the following desired values from you:

- Volume [cc]; total volume combustion chamber including spark plug hole measured on the engine
- Squish [mm]; minimum space / distance between piston and insert
- Piston height [mm]; Difference between top of cylinder and top of piston when piston at top dead center
- Piston crown radius or height [mm]; The radius on top of the piston (flat piston R=0mm)
- Amount [pieces]; Possible from 1 piece
- Shape; Shape A or B



Insert shape A



Insert shape B

COMPRESSION RATIO

The compression ratio can be adjusted, by increasing or decreasing the volume of the combustion chamber. What compression you need, depends on the track and weather conditions.

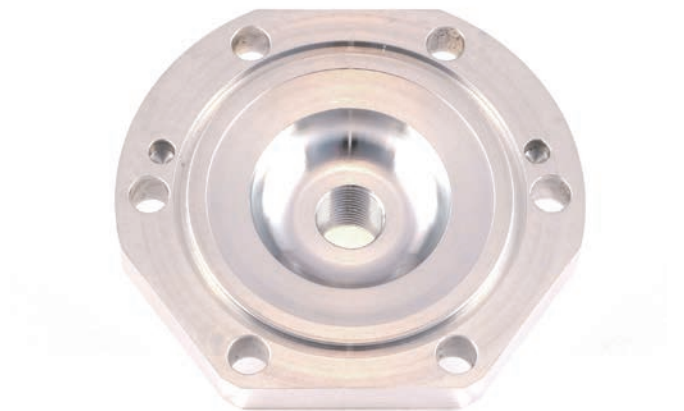
A higher compression ratio, which means less volume, will give the engine more low and middle range torque. This will improve the acceleration and increases torque feeling when accelerating out of the corner. However, this compromises top speed and the insert is more sensitive to detonation.

Lowering the compression ratio, which means more volume, will result in better overrevolution characteristics. We advise MX drivers to use inserts with a bigger volume on fast tracks to improve topspeed. However, this can compromise it's bottom power.

ORDER FORM CUSTOMIZED INSERT

You can find an order form for customized inserts on our website.

www.vhm.nl/projects



▲ CRANKSHAFTS AND CONRODS

VHM CRANKSHAFTS

VHM crankshafts are designed with a different inertia and balance for a better handling and performance. These crankshafts' high performances are the result of engineering, design and many years of close collaboration with the most professional race teams. All VHM crankshafts can be overhauled many times due to the crankwebs that have been heat treated.

✔ Faster lap times

better mid and top over revolutions due to increased inertia

✔ Longevity

can be rebuild many times without losing the strength and stiffness

✔ Accuracy

runout within 0.01mm

✔ Less vibration

due to better balance factor

LINE-UP

The line-up for the VHM crankshafts for MX: KTM 65SX, 85SX, 125SX, Husqvarna TC65, TC85, TC125, Yamaha YZ85 and YZ125. For roadrace: Honda RS125.

REBUILDING

We also rebuild crankshafts. They will be disassembled and the connecting rod, big end pin, needle bearing and side washers will be replaced. Contact us for more information at info@vhm.nl.

PROJECT CRANKSHAFTS

We can also produce special crankshaft batches. From design, calculations, crank web production to assembly of the complete crankshafts. Contact us for more information at info@vhm.nl.

CONNECTING RODS

Besides our VHM crankshafts, we also have VHM connecting rod kits for Aprilia RSW125 / RSW250, Honda RS125 '00-'10 and RS250 '93-'10.

www.vhm.nl/crankshafts



VHM Crankshafts & connecting rods

CRK07 **Honda RS125 NX4** **1995-2010**



Description	Content
VHM RS125 A-kit connecting rod kit Note: fits OEM crankshaft 13300-NX4-711	1x connecting rod, 1x big end pin, 1x bearing, 2x washer

CRK04 **Honda RS250 NX5, NXA** **1993-2010**



Description	Content
VHM RS250 A-kit connecting rod kit Note: fits OEM crankshaft 13000-NX5-790 and 13000-NXA-610	2x connecting rod, 2x bearing, 4x washer

CRK100 **Aprilia RSW125 / RSW250/LE**



Description	Content
VHM connecting rod kit	1x connecting rod, 1x big end pin, 1x bearing, 2x washer

AK20107A **Honda RS125 NX4** **1995 - 2010** **Middle inertia**



Spare parts	Description	Content
CRK07	VHM RS125 A-kit connecting rod kit	1x connecting rod, 1x big end pin, 1x bearing, 2x washer

AK20107B **Honda RS125 NX4** **1995 - 2010** **High inertia**



Spare parts	Description	Content
CRK07	VHM RS125 A-kit connecting rod kit	1x connecting rod, 1x big end pin, 1x bearing, 2x washer

VHM Crankshafts & connecting rods

AK20097-1	KTM 65SX	2009 - 2021	Middle inertia
	KTM 65XC	2009	
	KTM 65SXS	2012 - 2015	
	Husqvarna TC65	2017 - 2021	



Spare parts	Description	Content
03.6029 DA28062-1	ProX connecting rod kit Synthetic plates	1x connecting rod, 1x big end pin, 1x bearing, 2x washer 2x black synthetic plates (middle inertia)

AK20225	KTM 85SX	2018 - 2021	Middle inertia
	Husqvarna TC85	2018 - 2021	



Spare parts	Description	Content
03.6113 DA28127	ProX connecting rod kit Synthetic plates	1x connecting rod, 1x big end pin, 1x bearing, 2x washer 2x

AK20252	KTM 125SX	2016 - 2021	Middle inertia	***NEW***
	KTM 125XC	2021		
	KTM 125XC-W	2016 - 2019		
	Husqvarna TC125	2016 - 2021		
	Husqvarna TX125	2017 - 2019		



Spare parts	Description	Content
03.6226	ProX connecting rod kit	1x connecting rod, 1x big end pin, 1x bearing, 2x washer

VHM Crankshafts & connecting rods
AK20235B
Yamaha YZ85 2019 - 2021
High inertia

Spare parts

 B4B-11650-00
03.2119

Description

 OEM connecting rod kit
ProX connecting rod kit

Content

 1x connecting rod, 1x big end pin, 1x bearing, 2x washer
1x connecting rod, 1x big end pin, 1x bearing, 2x washer

AK20192
Yamaha YZ125 2005 - 2021
High inertia

Spare parts

03.2225

Description

ProX connecting rod kit, 102 mm

Content

1x connecting rod, 1x big end pin, 1x bearing, 2x washer

AK20192-1
Yamaha YZ125 2005 - 2021
High inertia, +3 mm conrod

Spare parts

03.2221

Description

ProX connecting rod kit, 105 mm

Content

1x connecting rod, 1x big end pin, 1x bearing, 2x washer

MODIFICATIONS

We can perform modifications on certain OEM crankshafts for better performance. We then change the balance percentage and inertia of the crankshaft, using tungsten and / or aluminium material. This results in a better feeling and handling of the bike and leads to reduced vibrations.

- ✔ Better feeling and handling
- ✔ Reduced vibrations
- ✔ Better performance

Why modify the OEM crankshaft? Most of the tuned engines use an OEM crankshaft, which is not optimal balanced for a tuned engine. When a lighter or heavier piston and connecting rod are used, the balance is not correct anymore, which results in more vibrations.

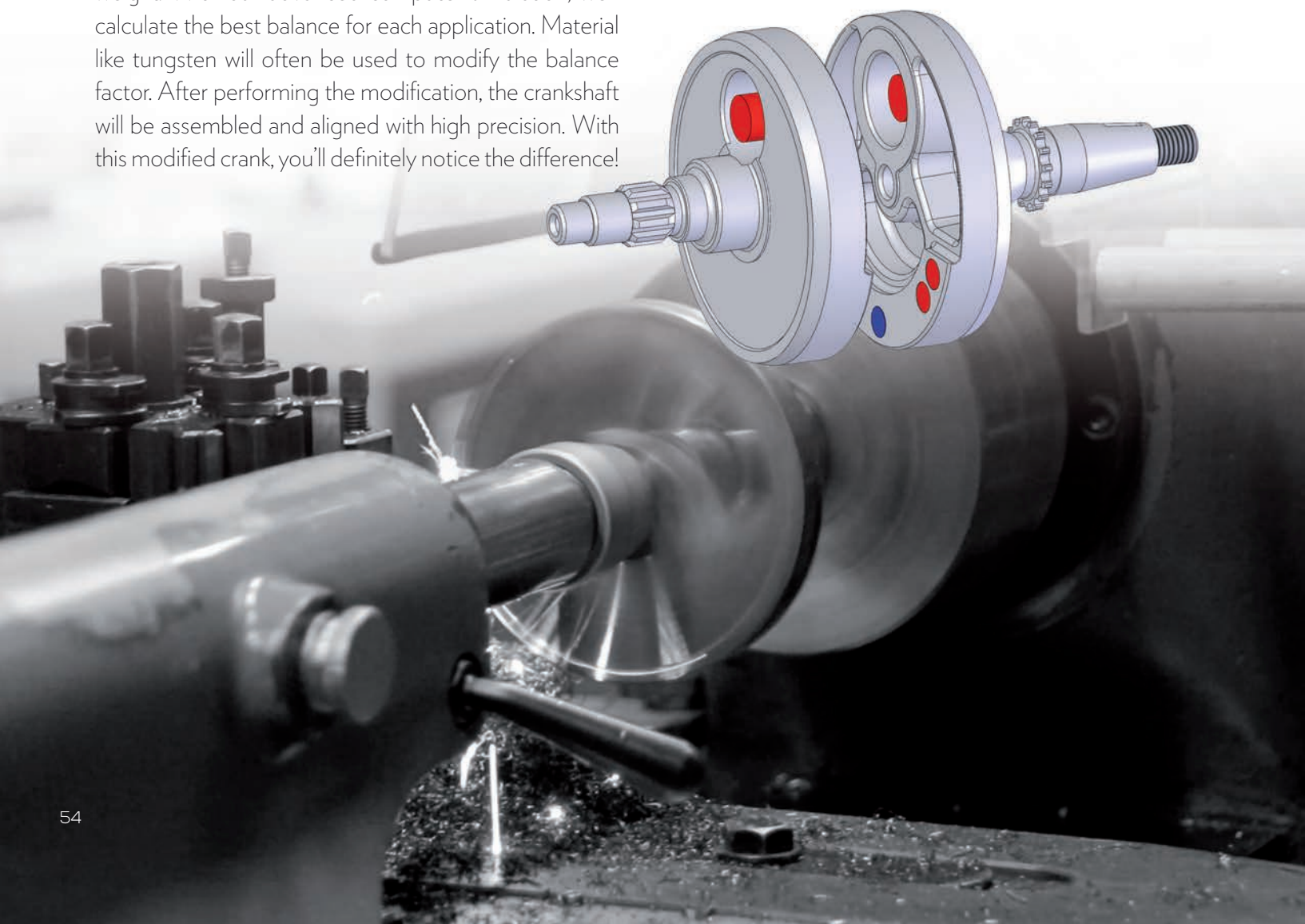
How does it work? When we receive your OEM crankshaft, we'll first determine the total reciprocating weight. With our advanced computer simulation, we'll calculate the best balance for each application. Material like tungsten will often be used to modify the balance factor. After performing the modification, the crankshaft will be assembled and aligned with high precision. With this modified crank, you'll definitely notice the difference!

CUSTOMIZED MODIFICATIONS

We can also perform customized crankshaft modifications on your OEM crankshaft. If you have a specific idea or an OEM crankshaft which is not mentioned in this catalogue, you can always ask us for a customized modification.

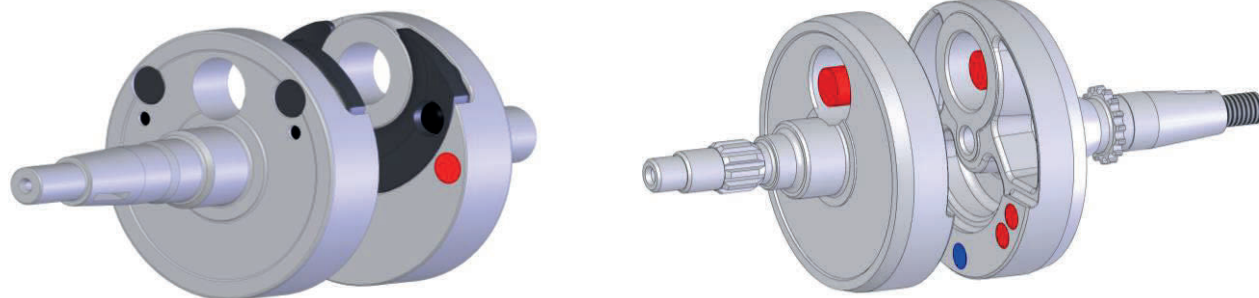
In the past we've already made customized modifications on crankshafts for several engines like Honda CR125R, lame 60cc Waterswift, Kawasaki KX250F, KTM 350SX-F, Maxter MXO 125, Suzuki RM125, RM-Z250, TM MX250, MX300, OK125 S-Junior, 60cc mini, KZ10C, Vortex DDJ 125, DDS 125, Yamaha YZ250 and Yamaha YZ450F.

www.vhm.nl/crankmods



VHM Crankshaft modification

Brand & type	Year	Part number	Description
Honda			
CR250R	2005 - 2007	AK20038-001	Middle inertia, modified balance
CRF450R	2017 - 2021	AK20221-001	High inertia, modified balance
Husqvarna			
TC50	2017 - 2021	AK20123-002	High inertia
TC65	2017 - 2021	AK20136-002	Middle inertia, modified balance
TC85	2014 - 2017	AK20161-002	High inertia, modified balance
	2018 - 2021	AK20224-001	Middle inertia
TC125	2014 - 2015	AK20137-001	High inertia, modified balance
	2016 - 2021	AK20202-001	High inertia
	2016 - 2021	AK20202-002	Middle inertia
TC250	2014 - 2016	AK20133-005	High inertia, std conrod and piston
TC250 Big bore	2008 - 2016	AK20133-004	Using Husqvarna 300 piston, high inertia, modified balance
FC250	2014 - 2015	AK20169-001	Low inertia
FC250	2016 - 2021	AK20203-002	High inertia, modified balance
	2016 - 2021	AK20203-006	Low inertia, modified balance
TE300	2014 - 2016	AK20143-002	Hotrods crankshaft with silver conrod, using OEM 300 piston, high inertia, modified balance
	2014 - 2016	AK20143-003	Hotrods crankshaft with brown conrod (stronger), using OEM 300 piston, high inertia, modified balance
Kawasaki			
KX65	2000 - 2021	AK2066-004	Middle inertia and modified balance
KX85	2006 - 2013	AK20041-007	High inertia, modified balance
	2014 - 2021	AK20178-001	High inertia, modified balance
	2014 - 2021	AK20178-002	Middle inertia, modified balance
KX125	2003 - 2010	AK20033-001	High inertia, modified balance
KTM			
50SX	2009 - 2021	AK20123-002	High inertia
65SX	2009 - 2021	AK20136-002	Middle inertia, modified balance
85SX	2009 - 2012	AK20086-002	High inertia, modified balance
	2013 - 2017	AK20161-002	High inertia, modified balance
	2018 - 2021	AK20224-001	Middle inertia
125SX	2007 - 2015	AK20137-001	High inertia, modified balance
	2016 - 2021	AK20202-001	High inertia
	2016 - 2021	AK20202-002	Middle inertia
150SX	2016 - 2021	AK20210-001	High inertia, modified balance
150SX	2016 - 2021	AK20210-002	Middle inertia, modified balance
250SX	2008 - 2016	AK20133-005	High inertia, std conrod and piston
250SX Big bore	2008 - 2016	AK20133-004	Using KTM 300 piston, high inertia, modified balance
250SX-F	2013 - 2015	AK20169-001	Low inertia
250SX-F	2016 - 2021	AK20203-002	High inertia, modified balance
	2016 - 2021	AK20203-006	Low inertia, modified balance
	2016 - 2021	AK20203-006	Low inertia, modified balance
300EXC	2008 - 2016	AK20143-002	Hotrods crankshaft with silver conrod, using KTM 300 piston, high inertia, modified balance
300EXC	2008 - 2016	AK20143-003	Hotrods crankshaft with brown conrod (stronger), using KTM 300 piston, high inertia, modified balance
450SX-F	2016 - 2021	AK20211-001	Modified balance
Suzuki			
RM85	2003 - 2012	AK20039-001	High inertia, modified balance
Yamaha			
YZ85	2002 - 2018	AK20071-001	High inertia, modified balance
	2019 - 2021	AK20232-001	Middle inertia
YZ125	2005 - 2021	AK20063-002	High inertia, modified balance
YZ125	2005 - 2021	AK20063-006	High inertia, modified balance, using 3 mm longer conrod
YZ144	2005 - 2021	AK20063-001	High inertia, modified balance
YZ250F	2016 - 2018	AK20206-001	High inertia
	2019 - 2021	AK20233-001	Low inertia
	2019 - 2021	AK20233-002	Middle inertia



VHM BILLET PISTONS

VHM pistons are 100% CNC machined from high quality solid billet material. With our Takisawa piston lathe we are able to turn elliptical shaped pistons with very high precisions. This mitigates engine lockups. Another feature of most of our pistons is a inside coating, which reduces micro welding, lowers the friction on the pin, prevents piston bore galling and provides a very good thermal conduction.

- ✔ High performance
- ✔ Longevity and keeps performance during lifetime
- ✔ Non-circular piston profile (and inside coating)
- ✔ Resistance to detonation

DIRECT REPLACEMENT / SPECIAL MODELS

We produce two piston models. One is a standard, direct replacement model, which can be placed into your engine with no other adjustments needed. The other is a special model for maximum performance gain, which can only be used in combination with a special VHM insert or longer conrod.

AVAILABLE FOR

VHM pistons are available for MX: KTM 65SX, 85SX, 125SX, 250SX, Husqvarna TC65, TC85, TC125, TC250, TM MX85, Yamaha YZ85 and YZ125. For roadrace: Aprilia RSW125, RSW250, Honda RS125, RS250 and Yamaha TZ125, TZ250. For karting: TM KZ10/B/C and KZ-R1. For moped: Kreidler 50cc Air Cooled, 60cc Air Cooled, Malossi 50cc, 50cc Derbi and Minareli AM6 50cc.

www.vhm.nl/pistons



VHM Piston kits
MOTOCROSS
KTM 65SX
Husqvarna TC65
2009 - 2021
2017 - 2021

Special - 12° top

Part number	Piston diameter
APKT06521722A	Ø44.95
APKT06521722B	Ø44.96
APKT06521722C	Ø44.97
APKT06521722D	Ø44.98
APKT06521722E	Ø44.99

Piston-cylinder clearance [mm]	Piston ring end gap [mm]	Piston ring	Piston pin	Piston clip
Minimum 0.04	0.25+0.10	APR451.0	APP1238	APC121.0
Maximum 0.05				

Must use special 12° insert!

Year	5.00cc	5.20cc
09-'21	AE32167-101	AE32167-059

KTM 85SX
Husqvarna TC85
2003 - 2021
2014 - 2021

Special - 12° top

Part number	Piston diameter
APKT08521707A1	Ø46.94
APKT08521707A	Ø46.95
APKT08521707B	Ø46.96
APKT08521707C	Ø46.97
APKT08521707D	Ø46.98

Piston-cylinder clearance [mm]	Piston ring end gap [mm]	Piston ring	Piston pin	Piston clip
0.05	0.30+0.10	APR471.0	APP1440	APC141.1SP

Must use special 12° insert!

Year	7.80cc	8.00cc	8.20cc
04-'12	AE32087-112		
13-'17	AE32226-056	AE32226-079	AE32226-100
18-'21	AE32281-012	AE32281-013	AE32281-014

KTM 125SX
Husqvarna TC125
2001 - 2021
2014 - 2021

Direct replacement - Flat top

Part number	Piston diameter
APKT12511691A1	Ø53.94
APKT12511691A	Ø53.95
APKT12511691B	Ø53.96
APKT12511691C	Ø53.97
APKT12511691D	Ø53.98

Piston-cylinder clearance [mm]	Piston ring end gap [mm]	Piston ring	Piston pin	Piston clip
0.05	0.35+0.10	APR541.0KEY	APP1545	APC151.1


Special - 12° top

Part number	Piston diameter
APKT12511673A1	Ø53.94
APKT12511673A	Ø53.95
APKT12511673B	Ø53.96
APKT12511673C	Ø53.97
APKT12511673D	Ø53.98

Piston-cylinder clearance [mm]	Piston ring end gap [mm]	Piston ring	Piston pin	Piston clip
0.05	0.35+0.10	APR541.0KEY	APP1545	APC151.1

Must use special 12° insert!

Year	11.20	11.40	11.60	11.80
07-'15	AE32128-048			
16-'21	AE32257-040	AE32257-029	AE32257-026	AE32257-031

KTM 250SX
Husqvarna TC250
2006 - 2021
2014 - 2021

Special - 12° top

Part number	Piston diameter
APKT25021754A2	Ø66.32
APKT25021754A1	Ø66.33
APKT25021754A	Ø66.34
APKT25021754B	Ø66.35
APKT25021754C	Ø66.36

Piston-cylinder clearance [mm]	Piston ring end gap [mm]	Piston ring	Piston pin	Piston clip
0.07	0.40+0.10	APR6641.0	APP1856	APC181.4SP

The pistons has a black coloured coating on the piston skirt to reduce friction and wear.

Must use special 12° insert!

Year	22.20cc	22.60cc
06-'16	AE32129-068	
17-'21	AE32272-024	AE32272-037

VHM Piston kits
TM MX85
2013 - 2020

Direct replacement - Bore Ø47.95

Part number	Piston diameter	Piston-cylinder clearance [mm]	Piston ring end gap [mm]	Piston ring	Piston pin	Piston clip
APTM08521702E	Ø47.89	0.06	0.30+0.10	APR481.0	APP1338.5	APC131.1SP
APTM08521702F	Ø47.90					

Yamaha YZ85
2019 - 2021

Special - 12° top

Part number	Piston diameter	Piston-cylinder clearance [mm]	Piston ring end gap [mm]	Piston ring	Piston pin	Piston clip
APYZ08521757A	Ø47.45	0.05	0.30+0.10	APR4751.0	APP1440	APC141.1SP
APYZ08521757B	Ø47.46					
APYZ08521757C	Ø47.47					

Must use special 12° insert!

Year	8.20cc	8.40cc
19-20	AE32286-032	AE32286-029

Yamaha YZ125
2005 - 2021

Direct replacement

Part number	Piston diameter	Piston-cylinder clearance [mm]	Piston ring end gap [mm]	Piston ring	Piston pin	Piston clip
APYZ12521705A1	Ø53.94	0.05	0.30+0.10	APR541.0	APP1545	APC151.1SP
APYZ12521705A	Ø53.95					
APYZ12521705B	Ø53.96					
APYZ12521705C	Ø53.97					

Use s/e bearing 20mm width, ProX 21.3206 or Vertex WB111


Special + 3mm longer conrod

Part number	Piston diameter	Piston-cylinder clearance [mm]	Piston ring end gap [mm]	Piston ring	Piston pin	Piston clip
APYZ12521714A1	Ø53.94	0.05	0.30+0.10	APR541.0	APP1545	APC151.1SP
APYZ12521714A	Ø53.95					
APYZ12521714B	Ø53.96					
APYZ12521714C	Ø53.97					
APYZ12521714D	Ø53.98					

 Use +3mm longer conrod (105mm) ProX 03.2221 / VHM crankshaft AK20192-1
 Use s/e bearing 20mm width, ProX 21.3206 or Vertex WB111

ROADRACE
Aprilia RSW125
Aprilia RSW250

Direct replacement

Part number	Piston diameter	Piston-cylinder clearance [mm]	Piston ring end gap [mm]	Piston ring	Piston pin	Piston clip
APAP12521745A1	Ø53.92	0.07	0.30+0.10	APR541.0	APP1545	APC151.1SP
APAP12521745A	Ø53.93					
APAP12521745B	Ø53.94					

Honda RS125 ND4
1984 - 1986
Honda RS250 ND5
1985 - 1986

Direct replacement - Ø14 piston pin

Part number	Piston diameter	Piston-cylinder clearance [mm]	Piston ring end gap [mm]	Piston ring	Piston pin	Piston clip
APHO12521743A	Ø55.93	0.07	0.35+0.10	APR561.0	APP1445	APC141.1SP
APHO12521743B	Ø55.94					

VHM Piston kits

Honda RS125 NF4 1987 - 1994
Honda RS250 NF5 1987 - 1992


Direct replacement - Ø14 piston pin

Part number	Piston diameter	Piston-cylinder clearance [mm]	Piston ring end gap [mm]	Piston ring	Piston pin	Piston clip
APHO12521717A	Ø53.93	0.07	0.30+0.10	APR540.8	APP1445	APC141.1SP
APHO12521717B	Ø53.94					
APHO12521717C	Ø53.95					

Honda RS125 NX4 1995 - 2010
Honda RS250 NX5 1993 - 2000
Honda RS250 NXA 2001 - 2010


Direct replacement - Dome - Ø15 piston pin

Part number	Piston diameter	Piston-cylinder clearance [mm]	Piston ring end gap [mm]	Piston ring	Piston pin	Piston clip
APHO12521708A1	Ø53.92	0.07	0.30+0.10	APR540.8	APP1545	APC151.1SP
APHO12521708A	Ø53.93					
APHO12521708B	Ø53.94					
APHO12521708C	Ø53.95					


Special - Flat top - Ø15 piston pin

Part number	Piston diameter	Piston-cylinder clearance [mm]	Piston ring end gap [mm]	Piston ring	Piston pin	Piston clip
APHO12521750A	Ø53.93	0.07	0.30+0.10	APR540.8	APP1545	APC151.1SP
APHO12521750B	Ø53.94					

Must be used in combination with a VHM flat top insert and head when not driving with an A-kit. It can be used as direct replacement for an A-kit.

Yamaha TZ250 1988 - 1990


Direct replacement - Bore Ø56

Part number	Piston diameter	Piston-cylinder clearance [mm]	Piston ring end gap [mm]	Piston ring	Piston pin	Piston clip
APYA12521747A	Ø55.93	0.07	0.35+0.10	APR561.0	APP1647	APC161.1SP
APYA12521747B	Ø55.94					

Yamaha TZ125 1995 - 1999
Yamaha TZ250 1995 - 1999


Direct replacement - Bore Ø56

Part number	Piston diameter	Piston-cylinder clearance [mm]	Piston ring end gap [mm]	Piston ring	Piston pin	Piston clip
APYA12521724A1	Ø55.92	0.07	0.35+0.10	APR561.0	APP1647	APC161.1SP
APYA12521724A	Ø55.93					
APYA12521724B	Ø55.94					
APYA12521724C	Ø55.95					

Yamaha TZ125 2000 - 2010
Yamaha TZ250 2000 - 2010


Direct replacement - Bore Ø54

Part number	Piston diameter	Piston-cylinder clearance [mm]	Piston ring end gap [mm]	Piston ring	Piston pin	Piston clip
APYA12521716A	Ø53.93	0.07	0.30+0.10	APR540.8	APP1545DLC	APC151.1SP
APYA12521716B	Ø53.94					
APYA12521716C	Ø53.95					
APYA12521716D	Ø53.96					

VHM Piston kits
MOPED
Kreidler 50cc Air Cooled

Ø14 piston pin

Part number	Piston diameter
APKR05011715A	Ø39.95
APKR05011715B	Ø39.96
APKR05011715C	Ø39.97
APKR05011715D	Ø39.98

Piston-cylinder clearance [mm]	Piston ring end gap [mm]	Piston ring	Piston pin	Piston clip
0.04	0.20+0.10	APR401.0	APP1433	APC141.1

Note: For use in air cooled engine only!


Ø12 piston pin

Part number	Piston diameter
APKR05011676A1	Ø39.94
APKR05011676A	Ø39.95
APKR05011676B	Ø39.96
APKR05011676C	Ø39.97
APKR05011676D	Ø39.98
APKR05011676E	Ø39.99
APKR05011676F	Ø40.00

Piston-cylinder clearance [mm]	Piston ring end gap [mm]	Piston ring	Piston pin	Piston clip
0.04	0.20+0.10	APR401.0	APP1233	APC121.0

Note: For use in air cooled engine only!

Kreidler 60cc Air Cooled

Ø14 piston pin

Part number	Piston diameter
APKR06011705A	Ø43.95
APKR06011705B	Ø43.96
APKR06011705C	Ø43.97
APKR06011705D	Ø43.98

Piston-cylinder clearance [mm]	Piston ring end gap [mm]	Piston ring	Piston pin	Piston clip
0.04	0.20+0.10	APR441.0	APP1437	APC141.1

Cylinder modification and adjusted insert needed!
Note: For use in air cooled engine only!


Ø12 piston pin

Part number	Piston diameter
APKR06011683A1	Ø43.94
APKR06011683A	Ø43.95
APKR06011683B	Ø43.96
APKR06011683C	Ø43.97
APKR06011683D	Ø43.98

Piston-cylinder clearance [mm]	Piston ring end gap [mm]	Piston ring	Piston pin	Piston clip
0.04	0.20+0.10	APR441.0	APP1237	APC121.0

Cylinder modification and adjusted insert needed!
Note: For use in air cooled engine only!

Malossi 50cc

20mm compression height, for aluminium cylinder

Part number	Piston diameter
APMA05011689A1	Ø39.94
APMA05011689A	Ø39.95
APMA05011689B	Ø39.96
APMA05011689C	Ø39.97
APMA05011689D	Ø39.98
APMA05011689E	Ø39.99

Piston-cylinder clearance [mm]	Piston ring end gap [mm]	Piston ring	Piston pin	Piston clip
0.05	0.20+0.10	APR401.0	APP1233	APC121.0

Note: For use in water cooled engine only!


25mm compression height, for aluminium cylinder

Part number	Piston diameter
APMA05011712A	Ø39.95
APMA05011712B	Ø39.96

Piston-cylinder clearance [mm]	Piston ring end gap [mm]	Piston ring	Piston pin	Piston clip
0.05	0.20+0.10	APR401.0	APP1233	APC121.0

Note: For use in water cooled engine only!

VHM Piston kits
Malossi 50cc Derbi
2015 - 2019

20mm compression height, for aluminium cylinder

Part number	Piston diameter	Piston-cylinder clearance [mm]	Piston ring end gap [mm]	Piston ring	Piston pin	Piston clip
APMA05011710A	Ø39.83	0.05	0.20+0.10	APR3991.0	APP1233	APC121.0
APMA05011710B	Ø39.84					
APMA05011710C	Ø39.85					

Note: For use in water cooled engine only!


25mm compression height, for aluminium cylinder

Part number	Piston diameter	Piston-cylinder clearance [mm]	Piston ring end gap [mm]	Piston ring	Piston pin	Piston clip
APMA05011709B	Ø39.84	0.05	0.20+0.10	APR3991.0	APP1233	APC121.0
APMA05011709C	Ø39.85					

Note: For use in water cooled engine only!

Minarelli AM6 50cc

For aluminium cylinder

Part number	Piston diameter	Piston-cylinder clearance [mm]	Piston ring end gap [mm]	Piston ring	Piston pin	Piston clip
APMI05011694A	Ø40.25	0.04	0.20+0.10	APR4031.0	APP1233	APC121.0
APMI05011694B	Ø40.26					

Note: For use in water cooled engine only!

Sachs 50cc

For nikasil cylinder

Part number	Piston diameter	Piston-cylinder clearance [mm]	Piston ring end gap [mm]	Piston ring	Piston pin	Piston clip
APSA05011701A	Ø39.96	0.04	0.20+0.10	APR401.0 ¹	APP1433	APC141.0
APSA05011703A	Ø40.56					

¹Piston ring APR401.0 for Ø39.96, APR4061.0 for Ø40.56

KARTING
TM KZ10
2010 - 2012
TM KZ10B
2013 - 2015
TM KZ10C
2016 - 2018
TM KZ-R1
2019 - 2021

4° top

Part number	Piston diameter	Piston-cylinder clearance [mm]	Piston ring end gap [mm]	Piston ring	Piston pin	Piston clip
APTM12521729A1	Ø53.92	0.07	0.35+0.10	APR540.8 x2	APP1545	APC151.1SP
APTM12521729A	Ø53.93					
APTM12521729B	Ø53.94					

VHM CDI UNITS

VHM CDI units for 2 stroke race engines. Map by VHM, units are made by GET. Specially developed to get the maximum performance in combination with our VHM upgrade kit parts. We've developed and improved the ignition curve.

- ✔ VHM map pre-installed
- ✔ High power output
- ✔ Plug & play
- ✔ Including map switch
- ✔ High quality by GET
- ✔ For 85SX / 125SX / 250SX Including aluminium plate

PRE-INSTALLED MAPS

VHM CDI's are plug and play and have 2 maps pre-installed. Map 1 is with a VHM ignition curve, which is developed, tested and programmed by VHM in combination with our VHM upgrade kit parts for optimal performance. Map 2 is a standard ignition curve by GET. You can switch between maps with the included switch for on the steering bar.

AVAILABLE FOR

The VHM CDI units are available for Beta RR125 2T, RR250 2T, Husqvarna TC65, TC85, TC125, TC250, KTM 65SX, 85SX, 125SX, 250SX and Yamaha YZ85.

www.vhm.nl/cdi



VHM CDI units

CD070420 **Beta RR125 2T** **2020 - 2021**
 Beta RR125 2T Racing **2020 - 2021**



Description	Content
VHM CDI unit	1x CDI unit, 1x switch
Note: Map 1: VHM, Map 2: standard GET	

CD070620 **Beta RR250 2T** **2020 - 2021**
 Beta RR250 2T Racing **2020 - 2021**



Description	Content
VHM CDI unit	1x CDI unit, 1x switch
Note: Map 1: VHM, Map 2: standard GET	

CD060218 **KTM 65SX** **2018 - 2020**
 Husqvarna TC65 **2018 - 2020**



Description	Content
VHM CDI unit	1x CDI unit, 1x switch
Note: Map 1: VHM, Map 2: standard GET	

CD060221 **KTM 65SX** **2021**
 Husqvarna TC65 **2021**



Description	Content
VHM CDI unit	1x CDI unit, 1x switch
Note: Map 1: VHM, Map 2: standard GET	

CD060318 **KTM 85SX** **2018 - 2021**
 Husqvarna TC85 **2018 - 2021**



Description	Content
VHM CDI unit	1x CDI unit, 1x switch, 1x aluminium plate (DA31237)
Note: Map 1: VHM, Map 2: standard GET	

VHM CDI units

CD060416 **KTM 125SX** **2016 - 2021**
Husqvarna TC125 **2016 - 2021**



Description	Content
VHM CDI unit	1x CDI unit, 1x switch, 1x aluminium plate (DA31237)
Note: Map 1: VHM, Map 2: standard GET	

CD060617 **KTM 250SX** **2017 - 2021**
Husqvarna TC125 **2017 - 2021**



Description	Content
VHM CDI unit	1x CDI unit, 1x switch, 1x aluminium plate (DA31237)
Note: Map 1: VHM, Map 2: standard GET	

CD020319 **Yamaha YZ85** **2019 - 2021**



Description	Content
VHM CDI unit	1x CDI unit, 1x switch
Note: Map 1: VHM, Map 2: standard GET	

▲ AIR INTAKES AND AIRBOX COVER

VHM AIR INTAKES

VHM air intakes for 2 and 4 stroke dirtbike engines. Developed for an optimum air flow and made of real carbon. When the engine is running and temperatures rise, the airbox rubber usually deforms. This is due to the high temperatures as it gets more soft, which leads to an even less optimal air flow. Our carbon intake prevents the airbox rubber from deforming and ensures an optimal airflow. There's a massive bottom power improvement for the 4-stroke models. The 2-stroke models improve the top-end.

- ✔ Made of real Carbon
- ✔ Optimum air flow
- ✔ Easy to mount
- ✔ Prevent the airbox rubber from deforming at running temperatures
- ✔ Including hole for temperature sensor for the 4-stroke models
- ✔ Ensures that mud is evenly spread over the whole airbox no worries about mud piling up during a long race

AVAILABLE FOR

The VHM air intakes are available for many 2- and 4-stroke Husqvarna, KTM, Kawasaki and Yamaha models.

www.vhm.nl/airintakes

MOUNTING

Many of the air intake models must be used in combination with a powerflow kit from Twin Air. Furthermore, the AI060416 for KTM 125SX and AI020919 for Yamaha YZ450F need to be glued with Innotec adheseal, which is included in the box. We've created mounting video's for almost all air intake models, which you can easily watch through the url below.

www.vhm.nl/mountingairintake

VHM AIRBOX COVERS

New in our assortment: VHM carbon airbox covers for Yamaha YZ250F and YZ450F. The airbox cover does not only look terribly good on your bike, it also greatly improves over the whole power curve, from bottom to top power!

- ✔ More power from bottom to top
- ✔ Made of real carbon
- ✔ Optimum air flow
- ✔ Awesome look
- ✔ Very easy to mount



VHM Air Intakes & cover

AI040620 **Kawasaki KX250** **2020**



Description	Content
VHM Air Intake	1x carbon air intake
Note: Including hole for temperature sensor	

AI040621 **Kawasaki KX250** **2021**



Description	Content
VHM Air Intake	1x carbon air intake
Note: Including hole for temperature sensor	

AI040919 **Kawasaki KX450** **2018 - 2020**



Description	Content
VHM Air Intake	1x carbon air intake

Must be used in combination with Twin Air powerflow kit 151125C.

AI060318 **KTM 85SX** **2018 - 2021**
Husqvarna TC85 **2018 - 2021**



Description	Content
VHM Air Intake	1x carbon air intake

Can be used in combination with the standard filter carrier or with a Twin Air powerflow kit 154221C.

AI060416 **KTM 125SX** **2016 - 2021**
KTM 150SX **2016 - 2021**
Husqvarna TC125 **2016 - 2021**



Description	Content
VHM Air Intake	1x carbon air intake, 1x innotec adhesion seal

Note: Use innotec adhesion seal for mounting

Must be used in combination with Twin Air powerflow kit 154223C (for 2019 - 2021) or 154219C (for 2016 - 2018).

VHM Air Intakes & cover

AI060619 2T	KTM 250SX	2019 - 2021
	KTM 250XC / 300XC	2019
	Husqvarna TC250	2019 - 2021
	Husqvarna TX300	2019



Description	Content
VHM Air Intake	1x carbon air intake

Must be used in combination with Twin Air powerflow kit 154223C.

AI060818E	KTM 250EXC-F	2017 - 2021
	KTM 350EXC-F	2017 - 2021
	Husqvarna FE250	2017 - 2021
	Husqvarna FE350	2017 - 2021



Description	Content
VHM Air Intake	1x carbon air intake

Note: Including hole for temperature sensor

Must be used in combination with Twin Air powerflow kit 154222C.

AI060619	KTM 250SX-F / 250XC-F	2019 - 2021
	KTM 350SX-F / 350XC-F	2019 - 2021
	Husqvarna FC250	2019 - 2021
	Husqvarna FC350	2019 - 2021



Description	Content
VHM Air Intake	1x carbon air intake

Note: Including hole for temperature sensor

Must be used in combination with Twin Air powerflow kit 154222C.

AI060919	KTM 450SX-F / 450XC-F	2019 - 2021
	Husqvarna FC450 / FX450	2019 - 2021



Description	Content
VHM Air Intake	1x carbon air intake

Note: Including hole for temperature sensor

Must be used in combination with Twin Air powerflow kit 154222C.

AI060919E	KTM 450EXC-F	2019 - 2021
	Husqvarna FE450	2019 - 2021
	Husqvarna FE501	2020 - 2021



Description	Content
VHM Air Intake	1x carbon air intake

Note: Including hole for temperature sensor

Must be used in combination with Twin Air powerflow kit 154222C.

VHM Air Intakes & cover

AI020619 **Yamaha YZ250F** **2019 - 2020**



Description

VHM Air Intake

Content

1x carbon air intake

Note: Including hole for temperature sensor

Must be used in combination with Twin Air powerflow kit 152222C.

AI020919 **Yamaha YZ450F** **2019 - 2021**



Description

VHM Air Intake

Content

1x carbon air intake

Note: Including hole for temperature sensor. Use innotec adheseal for mounting.

Must be used in combination with Twin Air powerflow kit 152222C.

AB020918 **Yamaha YZ250F** **2019 - 2021**
 Yamaha YZ450F **2018 - 2021**



Description

VHM "high volume" carbon air box cover

Content

1x carbon cover

Note: Yamaha washer (5TJ-21757-00) is included in the box, as the one on your bike might need to be replaced when mounting the carbon airbox cover.

VHM VARIOUS PARTS

Besides our well-known cylinder heads, crankshafts and pistons, we also produce many other parts for your engine, such as power valve adjusters, clutch covers, handlebar stabilizers and exhaust flanges. See an overview of all our various products on the next pages.

www.vhm.nl/variousparts

MEASURING TOOLS

Furthermore we have some measuring tools available to measure the piston height and volume of the combustion chamber. See our manual and video of piston height measurement at www.vhm.nl/pistonheight.

www.vhm.nl/tools



VHM Various parts
Powervalue base

Partnumber	Brand	Type	Year from	Year till
DA31181	KTM	65SX	2009	2021
		65XC	2009	
		65SXS	2012	2015
	Husqvarna	TC65	2017	2021



The VHM power valve base is made from high quality aluminum machined from solid. The power valve base is designed with a stronger center base which provides a better support and guidance of the power valve. The power valve will always function during all circumstances.

The VHM power valve base fits the VHM cylinder head (part number AA33112) as well as the OEM cylinder head.

Powervalue adjuster with 2 stage spring

Partnumber	Brand	Type	Year from	Year till
DA31153	KTM	65SX	2009	2021
		65XC	2009	
		65SXS	2012	2015
	Husqvarna	TC65	2017	2021



Spare parts	Description	Content
31155KIT001	Progressive spring + holder	1x progressive spring, 1x holder

When using another exhaust pipe, it will influence the opening of the power valve. With the VHM power valve adjuster with 2 stage spring, you are able to adjust the opening timing of the power valve easily with the screw. The first stage of the spring allows the power valve to open very easily for a better and direct response. The second part of the spring keeps the power valve fully open for a maximum exhaust flow. The VHM power valve adjuster is made from high quality aluminum machined from solid.

The VHM power valve adjuster fits the VHM cylinder head (part number AA33112), VHM power valve base (part number DA31181) as well as the OEM cylinder head and power valve base.

Exhaust flange

Partnumber	Brand	Type	Year from	Year till
DA31194	KTM	65SX	2009	2021
		65XC	2009	
		65SXS	2012	2015
	Husqvarna	TC65	2017	2021



Use the VHM exhaust flange and exhaust leaking is history. The exhaust pipe with O-ring seals fits perfectly on the VHM exhaust flange.

The VHM exhaust flange is made of high grade aluminum and has a another design with springholder. The original bracket for the spring is not necessary.

Powervalue + axle

Partnumber	Brand	Type	Year from	Year till
DA31028	KTM	65SX	2009	2021
		65XC	2009	
		65SXS	2012	2015
	Husqvarna	TC65	2017	2021


Bush kickstarter gear

Partnumber	Description	Brand	Type	Year from	Year till
DA31235		KTM	85SX	2018	
		Husqvarna	TC85	2018	



The original bush of the kickstarter gear turned out to be some little trouble-maker, with the stock washer being weak and thin. As no one is waiting for a DNF, we've produced these superior bushes for the kickstarter gear. So it prevents engine failures and is a stronger lock washer for the starter intermediate gear.

VHM Various parts
Ignition covers

Partnumber	Description	Brand	Type	Year from	Year till
DA31196		KTM	85SX	2013	2017
		Husqvarna	TC85	2014	2017



VHM ignition cover made from one piece billet material, stronger than the stock ignition cover. The cover is precision machined, hard anodized for a high wear resisting surface.

Handlebar stabilizers

Partnumber	Description	Brand	Type	Year from	Year till
DA31079	Ø28	Honda	CR125R, CR250R, CRF250R, CRF450R		
DA31086	Ø28	KTM	125SX, 150SX, 250SX/EXC/SX-F, 300SX/EXC, 350SX-F/EXC-F, 450SX-F/EXC-F		



The VHM handlebar stabilizer provides more stability and assures the handlebar is always fixed on the clamp.

Clutch axles

Partnumber	Description	Brand	Type	Year from	Year till
DA31171	aluminum/steel	Honda	CRF250R	2010	2013
DA31205	aluminum/steel	Honda	CRF250R	2014	2015
DA31160	aluminum/steel	Honda	CRF450R	2009	2012
DA31197	aluminum/steel	Honda	CRF450R	2013	2016
DA31229	aluminum/steel	Honda	CRF450R	2017	2020
DA31166	aluminum/steel	Suzuki	RM-Z450	2008	2018



The standard clutch axle is made from one piece of steel. With an engine running at higher operating temperatures, the standard clutch axle expands less than the rest of the engine, which gives more play on the clutch lever. This will result in a bad performing clutch. The VHM clutch axle is made from hard anodized steel and the middle of the axle is made from aluminum. The VHM clutch axle will expand and shrink exactly the same as the rest of the engine. Whether the engine is hot or cold, the clutch lever will always work perfectly.

Powertubes

Partnumber	Description	Brand	Type	Year from	Year till
DA31173		KTM	250SX-F, 350SX-F	2011	2012
			250EXC-F, 350EXC-F	2012	
DA31168		Suzuki	RM-Z250	2010	2014
DA31172		Yamaha	YZ450F	2010	2013



After installing the power tube on the throttle body, it improves bottom power at part throttle openings, a better and smooth throttle response without re-mapping the ECU.

The power tube is manufactured from solid aluminum, it's lightweight with a high quality finish.

VHM Various parts
Reedvalve spacers

Partnumber	Description	Brand	Type	Year from	Year till	
S37002	4mm	KTM	50SX	2009	2021	
			50SXS	2011	2016	
			65SX	2009	2021	
			65SXS	2012	2015	
			65XC	2009		
			Husqvarna	TC50	2017	2021
S37004	4mm	KTM	85SX	2004	2021	
			85SXS	2012	2015	
			85XC	2009		
			Husqvarna	TC85	2014	2021
S37007	4mm	KTM	125SX	2016	2021	
			125XC-W	2017	2019	
			Husqvarna	TC125	2016	2021
				TX125	2017	2019



This 4mm thick reedvalve spacer can be used to enlarge the crankcase volume.

Intakes

Partnumber	Description	Brand	Type	Year from	Year till
DA31195	Short intake (L19) + plastic reed valve insert	TM	K9B/C - KZ10	2007	2012



Using the short intake plate and reed valve insert will improve the engine response. The intake plate is made of high grade aluminum and includes an O-ring seal. No liquid gaskets and cleaning is necessary. The plate is extra strong due to the reinforcement ribs. The reed valve insert has a better shape and another volume for better engine performance. The OEM rubber intake fits perfectly on the aluminum plate (rubber intake not included).

Excenters

Partnumber	Description	Brand	Year from	Year till
CRG001	16 position caster camber pills 2.25 mm Stainless Steel	CRG / Zanardi / Maddox / Maranello		
CRG002	16 position caster camber pills offset 2.25 mm aluminium	CRG / Zanardi / Maddox / Maranello		
CRG003	16 position caster camber pills offset 1.125 mm aluminium	CRG / Zanardi / Maddox / Maranello		



With the VHM excenters the adjustment of the camber and caster is increased by the 16 hole. On the excenter a trust edge has been introduced so that the camber and caster can be adjusted very easy by hand without any special tool.

The VHM excenters are made of aluminum or stainless steel and are suitable for the CRG, Zanardi, Maddox and Maranello karts.

Oil air-vent plugs

Partnumber	Description	Brand	Type	Year from	Year till
DA31204		TM	K9B/C - KZ10 - KZ10B - KZ10C	2007	2018



The OEM oil plug needs a hose for air breathing, but oil can flood out of the engine through the hose of the plug. With the VHM oil air-vent plug, no oil can flood out of the plug. The plug has separate chambers were air can extract, but oil remains in the engine.

VHM Measuring tools & spare parts
Piston height measuring tools

Partnumber	Description	Content
AM34012	Measuring tool 85 cc (also compatible for many 65 cc engines)	1x Measuring tool 85 cc, dial indicator not included
AM34012B	Measuring tool 105cc	1x Measuring tool 105 cc, dial indicator not included
AM34013	Measuring tool 125 cc - 150 cc	1x Measuring tool 125 - 150 cc, dial indicator not included
AM34014	Measuring tool 250 cc	1x Measuring tool 250 cc, dial indicator not included
AM34016	Measuring tool 300 cc	1x Measuring tool 300 cc, dial indicator not included



To use the VHM cylinder head correctly, the piston height is a very important value to set up. The piston height measuring tool is a very clever tool to measure the piston height. There are 5 types available depending on the capacity of the engine. The tool comes complete with the upper and lower part of the tool. The dial indicator is separate available.

Partnumber	Description	Content
AM36007	Dial indicator Holes	1x Dial indicator


Volume measuring parts

Partnumber	Description	Content
AM36018	Pipet 20 ml	1x pipet 20 ml
AM36019	Pipet 25 ml	1x pipet 25 ml



With the pipet you are able to easily measure the volume of each combustion chamber. The graduation of the pipet is very accurate with 0.10 ml.

Partnumber	Description	Content
AM36020	Tap for pipette	1x tap



The tap for the pipette is very easy to use when measuring the combustion chamber volume.

Nutcaps, rings, screws and washers

Partnumber	Description	Content
BD35030	Copper Washer 8 x 18 x 2	1x copper washer
BD35032	Copper Washer 6.5 x 14 x 1.5	1x copper washer
BD36006	Copper Washer 6 x 10 x 1	1x copper washer
BD36009	Nutcap 8 mm	1x Nutcap
BD36021	Nutcap 6 mm	1x Nutcap
DA31109 1MM	Spark plug ring 1 mm stainless steel	1x ring
DA31109 2MM	Spark plug ring 1 mm stainless steel	1x ring
DA31109 3MM	Spark plug ring 1 mm stainless steel	1x ring
DA31109 4MM	Spark plug ring 1 mm steel	1x ring
M6X6 INBUS	Galvanized low screw	1x screw
M6X8 INBUS	Galvanized low screw	1x screw
M6X10 INBUS	Galvanized low screw	1x screw



Washer



Nutcap



Spark plug ring



Galvanized low screw

VHMMERCHANDISE

CASUAL CLOTHING

Perfect for working in your garage, when walking through the paddock or standing on the podium! We have beanies, caps and shirts available.



ACCESSORIES

We've designed an awesome little piston with conrod, which can be used as a bottle opener and as a keychain!

www.vhm.nl/merchandise



VHM Merchandise
Beanie (knit hat)

Partnumber	Description	Size
MCEB01Z	VHM beanie (knit hat) black	One size fits all



Nice fitting and warm black-colored knitted hat with subtle VHM embroidery on the front. One size fits all! Perfect for the cold winter days during the pre-season training and early races.

Bottle opener / keychain

Partnumber	Description
MVB01G	Keychain ring included



Awesome little piston with conrod, which can be used as a bottle opener and as a keychain! A keychain ring is included, so you can easily attach it to your key(s). It's gold anodized with the VHM logo lasered on each side of the conrod. A real eyecatcher for everyone crazy about engines!

Caps

Partnumber	Description	Size
MCC02Z-58	VHM cap	58



Nice looking cap to wear at the track, in your workshop or whenever you feel like it. The cap is designed with flat embroidery of our logo on the front, as well as VHM letters flat embroidery on the front/brim and left panel. In addition, there's an engraved back metal buckle with our logo, which ensures an adjustable closure. The cap's model is 'baseball', with curved brim.

Partnumber	Description	Size
MCC01Z-58	VHM snapback cap	58



Nice looking cap to wear at the track, in your workshop or whenever you feel like it. The cap is designed with a 3D embroidery and digital background printing on the front. There's also a woven VHM label next to the plastic adjustable back strap. In addition, we've designed a sticker which is attached on top of the red brim. It demonstrates our in total 11 World championships and 9 European championship titles until 2017. One size fits most!

Shirts

Partnumber	Description	Size
MCSM01Z-S	VHM shirt black	S
MCSM01W-S	VHM shirt white	S
MCSM01W-M	VHM shirt white	M
MCSM01W-L	VHM shirt white	L



This shirt is designed with a nice front embroidery, containing our slogan 'Special Racing Products' and many other quotes like 'Born to race' and 'In it to win it'. There's also a small stitched label at the front bottom of the shirt, showing our logo and a laurel wreath surrounding it. The shirt has a nice long fit and is made of high quality cotton.

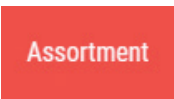
WEBSITE TIPS & TRICKS

#1 PRICELISTS

Did you know that we (still) have an Excel file of our price list available on our website? You can find it at www.vhm.nl/downloads

#2 ASSORTMENT

How to find ALL parts on our website? Click on the menu button [Assortment] and go from there. We've categorized our parts into 4 main groups; Chassis parts, Engine parts, Merchandise & Tools.



#3 TABLE OR TILE VIEW

Scroll through our assortment with a table or tile view! The table view is a compact view and only shows the necessities. The tile view is an extended view and also shows the properties of parts. Quite handy when searching for inserts!



#4 QUICK LINKS

Want to look at an overview of our cylinder heads, inserts, pistons or crankshafts? Use the quick links on our homepage! In just one click you'll get the overview you'd like to see by clicking on the parts picture.



#5 OTHER MENU

Want to see and read more about us? Check out the 'other menu' on our homepage. It contains pages like news, VHM champions, downloads, FAQ and about us.



#6 TRANSLATION OPTION

Difficult reading English? We've built in a google translate option, so you can select your own language. You can find the button at the top right of our website. Please note that the translations might not be perfect.



#7 PARTS PER PAGE

Like to scroll through our complete assortment? You can select how many results you'd like to see at once. You can choose from 12, 24, 48 and 96 parts per page!



#8 PART FINDER SKIP FIELDS

Used our partfinder yet? Did you know you could skip fields? You do not necessarily have to start with filling the 'select application' field. You can also immediately start your search with 'select make' or even 'select model' to speed up your search.



#9 EASILY CHECK YOUR VHM INSERT SPECS

Quickly check / find your VHM insert specifications on our website: just type in the number of the insert in our search bar and click on the insert you want to know the specifications from.

#10 PARTS NOT ON OUR WEBSITE

Can't find the part you were looking for from the other brands we sell? Don't hesitate to contact us about it. We've added many parts on our website, but not all there is. Send an e-mail to info@vhm.nl and we'll do our best to help you with the parts you need.

#11 VHM CRANK MODIFICATION LIST

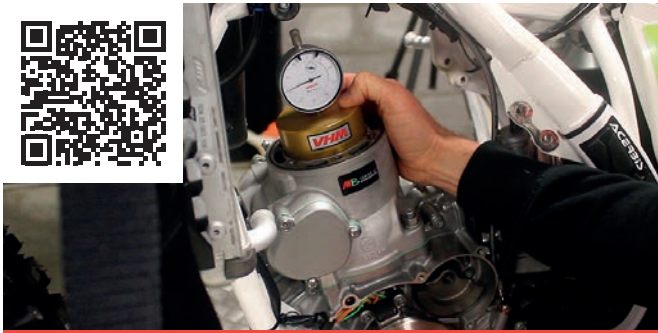
You can also check the complete VHM crankshaft modifications list on our website. The crankshaft modifications can't be found in our regular website assortment, thus can only be requested by email.

www.vhm.nl/crankmods

#12 NAVIGATION PATH

When clicking through our assortment, a navigation path under the menu bar will be shown. When you'd like to go back or see the complete category again, just click on it in the path. For example, when viewing our cylinder head AA33177, you will see the navigation path Engine parts > cylinder parts > cylinder heads > AA33177.

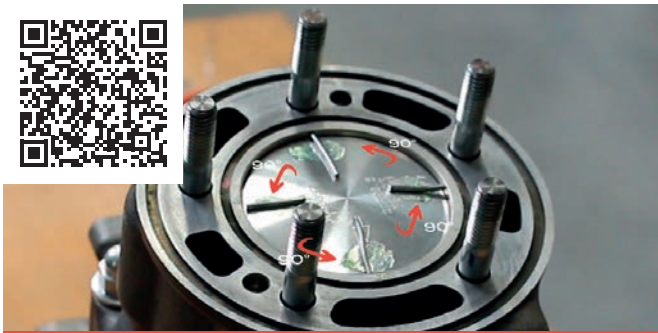
Engine parts > Cylinder parts > Cylinder heads > AA33177



www.vhm.nl/pistonheight



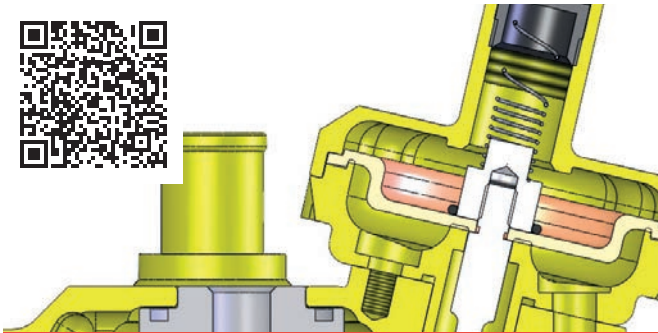
www.vhm.nl/volumemmeasurement



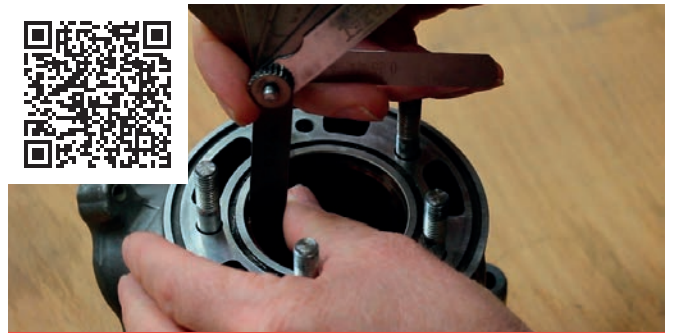
www.vhm.nl/squishmeasurement



www.vhm.nl/insertcalculator



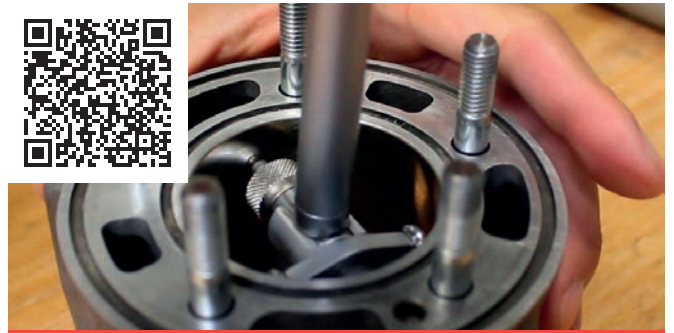
www.vhm.nl/powervalveassembly



www.vhm.nl/pistonringendgap



www.vhm.nl/mountingairintake



www.vhm.nl/pistoncylinderclearance

PROJECTS

We have 4 special project categories. Note that we always need to review project requests and are not always able to produce.

PROJECT CRANKSHAFTS

Need a crankshaft for a big bore cylinder? Or need a crankshaft for a rare engine? In the past, we've already produced many project crankshafts. Ask us for the possibilities! Minimum quantity for us to start a project batch is 10 pieces.

PROJECT CONNECTING RODS

Need a special connecting rod? For example a longer rod, or a conrod for a rare engine? Contact us for the possibilities. Minimum order quantity for us to start a project conrod is 10 pieces.

CUSTOMIZED INSERTS

See page 49 for more information on our customized inserts.

OTHER PROJECTS

Looking for another part for your engines? Get in touch and ask for the possibilities! In the past we've produced, among others, a clutch basket, special customer-oriented measure tool and triple clamp.

www.vhm.nl/projects

