

# Technical Data

<b>Product:</b>	Casted Stainless Steel Exhaust Connector		
<b>ALöTech Part:</b>	KAA001-0001A		
<b>For Vehicles (all years):</b>	Honda CN250 Helix / Spazio / Fusion, Piaggio Hexagon 250GT		
<b>Replaces original part #</b>	18301-KS4-000 (only in combination with KAA001-0003A)		
<b>Material:</b>	Stainless Steel AISI 316 / WNr. 1.4401		
<b>Weight:</b>	about 248 g		
<b>Compatible Gaskets:</b>	to cylinder head	Honda Part:	18291-KS4-690
	to muffler	ALöTech Part:	KAA001-0003A

## Features

The ALöTech exhaust connector for the motorcycles listed above is a long lasting, high quality alternative for the original Honda part # 18301-KS4-000.

Goal of the development of all our products is to offer replacement parts which not only are cheaper to buy than the original parts, but also of better quality. This exhaust connector was completely developed in Germany anew, over-engineered in most features, to be able to perform at least as well as the original, but with fewer of its weaknesses.

This is why we chose stainless steel 316 for the part. It offers great corrosion resistance and is quite strong, but still not too rigid as to prematurely crack under strong vibrations. We chose to cast the part to avoid structural weaknesses and to be able to offer a smooth exhaust channel — which also can be polished or even expanded for tuning. Actually, the whole part can be polished to a mirror finish, to further improve on its rust resistant qualities – and of course, because it looks awesome.

The freest possible flow of exhaust gases was the most important goal while developing this part. Casting the part allowed for a cost-effective way of respecting the original Honda design, which has an inner diameter of 26 mm. Most if not all non-OEM parts use standard piping with an inner diameter of 25 mm, which effectively throttles the engine under full load.

Further, we strengthened the connection to the muffler. Originally, Honda used quite thin material for this part, only 1,25 mm. We increased the wall thickness to 2,2 mm, to guarantee many years of trouble free service.

For this reason we also needed to develop new gaskets, since the original ones are too narrow for the new outer diameter, which is 30,6 mm instead of 28,5 mm. This new gaskets are made of pure, soft graphite. One is included with every connector, replacements are available under ALöTech part # KAA001-0003A.

Please note: There is enough material on this part to reduce the wall thickness to the original diameter, if you really want to use only original gaskets. This would void the warranty and is not encouraged by ALöTech.

As of January 2020, an alternative, heavy duty gasket is being developed. This one is made out of copper and should be seen as a long lasting replacement. Once development is complete, it will be made available under ALöTech part # KAA001-0010A

## Installation Remarks

We recommend the use of an original Honda sealing ring (Part # 18291-KS4-690) between the collector and the cylinder head. Honda prepared a special sealing profile on their collectors, which we took over, slightly improved. This shape creates a groove on the original sealing ring, improving sealing. This profile is not available on other non-OEM parts, which often causes prematurely exhaust leakage.

It is of the highest importance, specially while replacing an old, rusty collector, that you remove all debris and dirt from the collector bay on the cylinder head port that surrounds the exhaust channel. Otherwise the part will not have enough room to dilate under heat and might cause the softer aluminium alloy head to break under the pressure.

Please be sure that the bay has been completely cleared to at least a diameter of 38,8 mm. The original sealing rings have an outer diameter of 39 mm. If they fit and sit flat on the bottom of the collector bay, then it has been successfully prepared for our stainless steel part.

Try to ensure that the part is placed in the middle of said bay and has some expansion room on all directions. You can use solder tin wire on 4 different places around the collector during installation to ensure this. Remove the tin wire after installation.

Tighten the new collector to the same specification as the original one (7-11 Nm = 0,7 - 1,1 kg-m = 5-8 ft-lb). We recommend to first hand-tighten the nuts, mounting the muffler, and then running the engine until warm. Turn then the engine off and tighten the nuts to specification. This will reduce load on the head and studs while under heavy thermal loads, and is specially for tuners of relevance.

The theoretical maximal expansion of the collector's outer diameter @ 700 °C is 0,44506 mm.

Please note that stainless steel changes colour when it reaches high temperatures, changing from silver to gold, violet and then blue. This is particularly so on an exhaust manifold. This change is completely normal and not detrimental to the performance or longevity of the part.

The included special gasket KAA001-0003A is mounted following the repair manual instructions: first on the muffler, then it gets mated to the (pre)installed collector. Please beware that the special gasket is significantly thinner than the original one and thus also more prone to breaking. This is only the case during installation and should be at least as long lasting once in place and tighten down.

This is why we recommend using an expanding tool on the muffler if the gasket doesn't fit all the way into its seat without resistance. Using pliers or other improvised tools for this often doesn't work as expected. If the muffler is too deformed at the mounting point, tightening the muffler with the clamp might lead to cutting wounds into the gasket. If these go all the way through, a proper seal might not be possible and the gasket might need to be replaced.

Our gaskets are often not perfectly round. This impairs in no way their function. Only real nicks or cuts that go all the way through could be an issue. Even so, careful installation of somewhat damaged gaskets is often successful. In particular is an even tightening of the clamp an ideal way of ensuring a perfect seal. We recommend rounding the muffler gasket bay before starting with the installation. You might use a 34 mm tube or an expanding tool and the clamp for this.

### Quality Control

Serial number	inside diameter muffler side		outside diameter cylinder head side
	Min	Max	Max