

# *Indanum 4*

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A project that mentions how motorcycle manufacturers combined different components to build interesting motorcycles.

How did it all start?

This story is largely about my father (Marián Danišek senior) and his thoughts on renovating old motorcycles. He has 50 years of experience with renovations of a large number of motorcycles, various types of veterans, from simple two-stroke to demanding 4-stroke brands and he got to the stage where he starts looking for new and more challenging projects.

The decision was made to build own motorcycle with the appearance as of 1930's.

A lesson from history.

Combinations of components from different manufacturers for the creation of the new motorcycle have been used since the beginning of the production of single-track vehicles. In this early period, this was mainly due to the fact, that the production of complicated and expensive power units - initially engines and later also gearboxes. Later, however, it was an attempt to use interesting and successful technical solutions for the emergence of specific and unusual machines, such as:

### **VINDIAN = Vincent + Indian**

The Indian management's effort was to compete with its biggest competitor, Harley Davidson, and to launch a strong twin-cylinder with OHV distribution in the late 1940s. Since the actual development of such an aggregate would be time and money consuming, Indian chose to use the most modern and very powerful two-cylinder fork with OHV distribution from Vincent HRD. Several prototypes were built with the working name Vindian (Vincent + Indian), but unfortunately there was no serial production. This fact makes many fans of Indian motorcycles very sad, because in addition to the possibility of having a classic machine with a modern engine, this interconnection of the structure could have saved the Indian company from bankruptcy.



Triton = Triumph + Norton

The name Triton was created by combining two words Triumph and Norton. Triton is also a mythological figure - Greek god, a messenger of the sea. Motorcycles were built only as order and you could mostly see single-seater machines. There wasn't very large selection of motorcycles in 1960's as today, so if you want to have an exclusive machine with the best components, you had to have it built yourself. At that time in the England, there was no better and more reliable engine than the one built by Bonneville Triumph. The parallel twin-cylinder had a displacement of 649,311 cc and its maximum output of 46 hp (34 kW) started at 6500 rpm. At the same time, if you need a top frame, then your choice was Featherbed from Norton, which was specially developed for racing motorcycles which participate at the famous Tourist Trophy on the Isle of Man. Norton also had its engines developed specifically for racing machines, but their reliability was not great. Triton They used gearboxes from Triumph. We will certainly not be far from the truth when we declare that Triton was an extraordinary machine in England at that time, which influenced many "coffee" loafers.

Triton had his unique charm and now he wants to bring back the Dutch Icon Motorcycle with his a reborn model, which, like the original, will be hand-built exactly according to the customer's requirements. Each machine will be unique and exceptional.





Norvin = North + Vincent

Vincent engines were mounted on other frames. The most common was Norvin, who used the Norton Featherbed frame. Other names were used, including Vincent-Norton, Vinton, and Vin-Nor. While mostly single-use versions, a timely production attempt was announced by Staffordshire engineer Tom Somerton in late 1959, with planned low-volume engines starting in 1960. It is not known how many have been completed.



Tribsa = Triumph + BSA

Tribsa or Tri-B.S.A. a custom-made coffee racer or off-road motorcycle of the 60's and 70's. Its name was a merger of Triumph and BSA. The purpose was to combine the best elements of each brand and provide an excellent motorcycle. Tribsa used a two-cylinder Triumph engine, installed in the frame of a BSA motorcycle. Although both the BSA A65 and Triumph 650 cc engines were twin valves with valve timing (OHV), only the Triumph had two camshafts, making it easier to tune for higher performance. BSA frame was a duplex cradle design that was considered stiffer and stronger than Triumph's only downtube.

The factory planned for the ISDT a series of nine TriBSAs using 348 cc, 490 cc and 504 cc Triumph twin-cylinder engines in a frame using geometry from BSA Victor, Victor front fork and wheel along with rear Triumph QD wheel in the Triumph swingarm. Gold Star light alloy fuel tank, steel oil tank, with three ignition coils, one as a spare. The 490 cm3 prototype was completed and tested in Wales. The remaining production the batch used other planned engine sizes.

The Tribsa was experimentally built in Meriden by Triumph in 1973 using excess BSA A65 frames. This led to the "factory Tribse", which was to use BSA A65 frames with a 650 cm3 TR6 engine. Not many of these hybrids was produced and factory records are uncertain.





Other brands:

- Noriel = Norton + Ariel
- Norley - Norton + Harley Davidson



Noriel = Norton + Ariel



Norley - Norton + Harley Davidson

I could go into more detail about each brand, but to sum it up, in some cases it was directly a factory modification and other times it was a modification at the sellers or individual modifiers. In any case, these brands have become more valued than serial ones machines, thanks to the best components that have been used and can be seen in many museums today.

#### Story behind the INDANIM 4 project

The history of the VINDIAN motorcycle, the special custom construction of the INDIAN Scout 750 OHV road version, the experience from the renovation and use of the NIMBUS 750 OHC motorcycle have convinced us that combining the INDAN design and the complete NIMBUS power unit will create a comfortable and reliable INDANIM 4 motorcycle.





**NIMBUS 1940 750 CC 4 Cyl OHV**



**INDIAN Scout 750 OHV**



INDANIM 4 was created by combining motorcycles and a designer name:

- INDIAN + NIMBUS + DANÍŠEK (designer) + 4
- IN - Indian
- DA - Daníšek: name of the designer
- NIM - Nimbus
- 4 - In-line four-cylinder

The construction of the INDANIM 4 motorcycle took about a year (07.2018-07.2019). I was already very active in this project and I made sure that we followed the direction as much as possible and not deviate from what the motorcycle should look like. I went very deep because I had a very clear idea. The design of the motorcycle must be reminiscent of the 30s and in appearance INDIAN 4 motorcycle. No chromium was used, only nickel, which corresponded to the 1930s.

A set of Nimbus motorcycles was purchased, from which the following were used: engine, gearbox and gimbals. Construction of its own frame and fork began.





It was time to make the tank and fenders, which were matched to the chassis.



The engine and transmission have been disassembled and repaired.





We re-evaluated some of the realized ideas during the construction, such as the original exhaust from Nimbus. The foot shift has been redesigned to be manual so that the overall look of the motorcycle looks sleek and factory-like.



We kept the historic look and ergonomics of the handlebars.

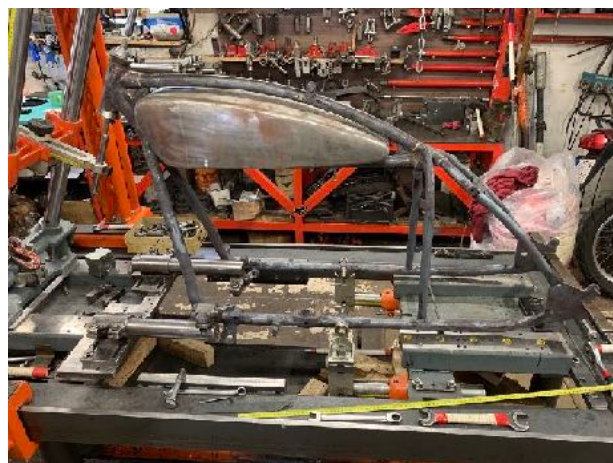


The foot gear has been supplemented with manual gearshift, which allows you to shift by hand and foot.

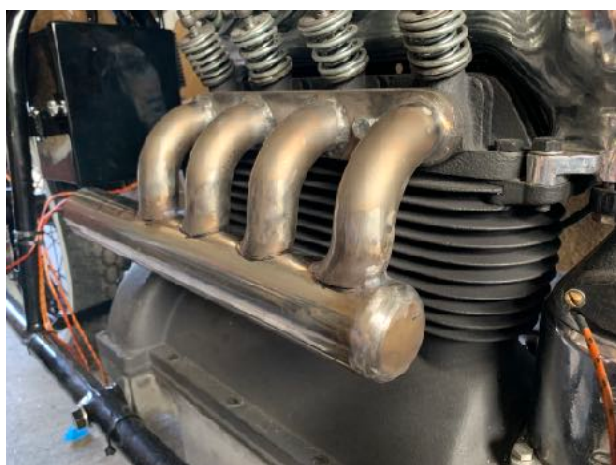




After completing the frame and fork and their annealing, it was necessary to align them on the appropriate stool. The frame was further checked on a 3D measuring device.



The exhaust pipe was made of stainless steel and polished.





In order for the final look to be perfect, it was necessary to choose a beautiful color combination, tires with white sides and design a logo for the tank and bags. The logo was sprayed on the tank using an airbrush and the logo on the bag was cast and polished with a color combination. Everything was painted, assembled and the testing period began.



The motorcycle is designed for taller people. We drove 30km on the INDANIM 4 motorcycle for the first time and INDANIM 4 didn't even hesitate. The preparation was so precise that the motorcycle worked flawlessly from day one. I must say that this is very comfortable driving that does not tire even on long journeys. No recesses in the legs, buttocks, or hands. Reaching the speed of 100km/hour is no problem. It has a wonderful sound.

We drove approximately 1500 km on the INDANIM 4 motorcycle in 2019 and over 1000 km in 2020, and the season is not over yet. Now I can say that this is a very successful and reliable project. We also attended several veteran meetings and we have got positive reactions and praise. Many people have mistaken this motorcycle for the INDIAN 4 motorcycle. I can say that out of 100 people, 99 claimed that it was an INDIAN 4.

## Technical specification

### Engine

- Type: Air-cooled in-line four-cylinder, one cam distribution OHC
- Capacity : 746cc
- Drilling / stroke: 60 mm/66 mm
- Compression ratio : 5.4:1
- Fuel system: One carburetor – Barrel

### Transmission

- Cardan drive
- Dry coupling, single plate
- 3 - speed gearbox

### Parameters

- Speed Travel speed: 90km/hour - Maximum: 120 km/hour (short term)
- Power 22 hp at 4500 rpm

### Dimensions

- Length 2400 mm
- Width 1000 mm
- Height 1120 mm
- Wheelbase: 1435 mm
- Weight 200 kg
- Fuel tank 17.5 liters

At the end of this article I would like to thank Vladimír Souček, ARIEL club Slovakia-Karol Burger and Jozef Vladovič, who helped us in the implementation of the INDANIM 4 project.















