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## **FUTTEC EXPANDS AND ADDS INDEPENDENT MICROWAVE FURNACES TO THE UNIQUE FT3 3RD GENERATION "MICROWAVE PATCHERS" FOR YEAR-ROUND POT REPAIRS ON ROADS OF II. AND III. CLASS**

The Czech company FUTTEC, which developed a patented microwave system for the year-round, non-invasive and durable repair of potholes on asphalt surfaces, has strengthened its position on the domestic market over the past year. It also achieved this thanks to the efforts of its development team, which is constantly working on innovations in the design of unique machines: among its hottest new products are the third, very powerful generation of the FT3 "microwave patcher" and a separate machine assembly with the FF-9 microwave furnace, which is still used as part of the FT3 device. Separate microwave furnaces, designed primarily for the needs of cities and municipalities, are used for temporary, fast, year-round and economically advantageous repair of larger potholes on roads of II. and III. classes with warm packed asphalt mixture.

However, the expansion of the fleet and types of microwave equipment is not the only success of FUTTEC over the past year. The others include, for example, obtaining a European patent from the European Patent Office with uniform effect for 17 EU countries, participation in Czech business missions abroad, expanding cooperation with Czech contractors or successfully demonstrating microwave technology on foreign roads (Austria, Germany). *"We symbolically completed our very progressive one-year journey by moving to modern offices in the Prague administrative complex The Park Chodov. At the same time, we changed our corporate identity. This is reflected, among other things, in the dynamic form of the new logo, which reflects our plans and visions for the future: these are primarily expansion into foreign markets (including expansion into the USA, which we are now finalizing) and the development of a complex ecosystem of microwave technology repairs with*



*greater use of artificial intelligence and Big Data. " comments Jiří Rušíkvas, founder and owner of [FUTTEC](#). FUTTEC very quickly turns into a modern innovative company. "Last June, we introduced the second generation of our microwave patchers. Now we are launching the third one - even faster and more powerful than the previous version. At the same time, we deepened our cooperation with TSK, ŘSD and the regional SÚS and thanks to this we significantly strengthened our team," adds Jiří Rušíkvas.*

*Machine assembly with microwave furnace FF-9 (third generation)*

**How did the idea for a separate machine assembly with a microwave furnace come about?** FUTTEC has repaired many thousands of potholes on asphalt roads of all classes. While working on the roads (connected with the testing of the original two generations of the FT3 "microwave patcher"), the company acquired a lot of knowledge and experience: it then applied this to FUTTEC

machines to adapt them even more to the needs of users and to various natural conditions. Thanks to the close cooperation of the work and development team, not only the third generation of the "microwave patcher" was created, but also the FF-9 microwave furnace. And it was the testing and use of "microwave patchers" in real conditions that showed that there is a great demand and space for a separate machine assembly with a microwave furnace - all this as a response to the needs of municipalities that have roads of the II. and the III. classes in their cadastre.

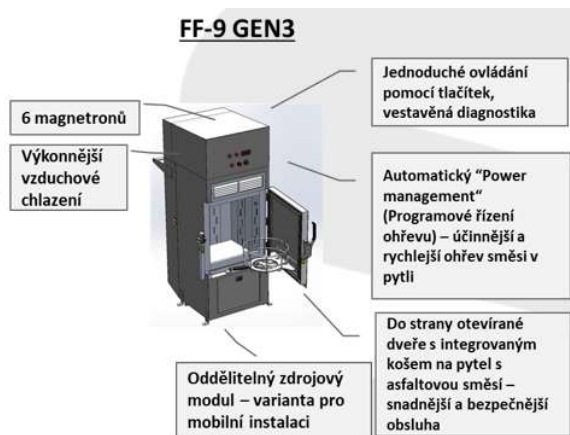
*"Initially, we used the microwave furnace to heat the packed asphalt mixture only as an integral part of the "microwave patcher". It is intended for durable, seamless repairs of potholes up to 80 x 80 cm in size - i.e. primarily for preventive maintenance of roads that are still in relatively good condition (a high-quality and carefully repaired area will regain the parameters of the original road). However, during the entire process of development, testing and field work, we realized that the time had come to start producing microwave furnaces also as a separate machine assembly. Microwave furnaces are the ideal solution for roads in worse condition, which are full of larger potholes and are often approaching the end of their service life. A separate microwave furnace gently and evenly heats the supplied asphalt mixture and thus enables a high-quality, even temporary repair of the pothole (it does not allow the entire repaired area to be heated). However, its use is more flexible, faster and more economical than with the "microwave patcher". This is especially important when we consider that the filling of large potholes often serves to extend the life of a bad road of the II. and the III. class before its total reconstruction (and durable, more economically demanding repairs as part of preventive maintenance are therefore not necessary here). We are currently negotiating with a wide network of machine rental companies in individual regions, where interested parties - mainly cities and municipalities - will be able to rent this mobile set," explains Jiří Rušíkvas.*



FUTTEC Series microwave Patcher (third Generation)

Dobroslav Rak, FUTTEC's chief designer, adds what makes the latest generation of microwave furnace different from its predecessor: *"The machine assembly of the FF-9 microwave furnace consists of a cart on which the oven is located, a vibrating compacting plate, an electric generator and a reservoir for asphalt packed mixture. Thanks to a number of innovations, the heating of 25 kg of packed asphalt mixture was accelerated by approx. 20% (i. e. from 10 to 8 minutes). However, significant modifications took place mainly in its construction solution and the working space in which the furnace is stored. This made it easier to work with a bag of asphalt mixture, handling and service."*

Microwave furnace FF-9 of the third generation:



### About FUTTEC and its patented microwave technology:

The company FUTTEC a.s. was founded in 2011 with the aim of developing a unique system for repairing potholes on roads. The technology, which is the result of many years of research and improvement, was created in cooperation with the Institute of Chemical Processes of the Academy of Sciences of the Czech Republic and VUT Brno. FUTTEC won the Visionaries 2019 award for it in the competition of the same name by the CzechInno association. In addition, it managed to obtain a subsidy of 1.8 million euros from the European Commission under the EU Horizon 2020 program for the commercialization of this innovative technology. FUTTEC is now seeking another EU grant under the EIC Accelerator program.

The patented FUTTEC® technology is intended for the permanent repair of potholes on asphalt surfaces on roads, cycle paths and other asphalt surfaces. It works on the principle of heating asphalt mixtures using microwave technology, which ensures deep heating of the repaired area without degradation of the asphalt mixture. The result is high strength and a long service life of the repaired site. Thanks to this principle, road repair can be carried out all year round, i.e. even in winter. Other advantages of FUTTEC microwave technology include speed, flexibility, efficiency and cost savings as well as human resources, environmental friendliness, health safety and transparency (a protocol is created during the repair, which is a warranty certificate for the repair).

#### **More information:**

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