

Advanced Testing Systems

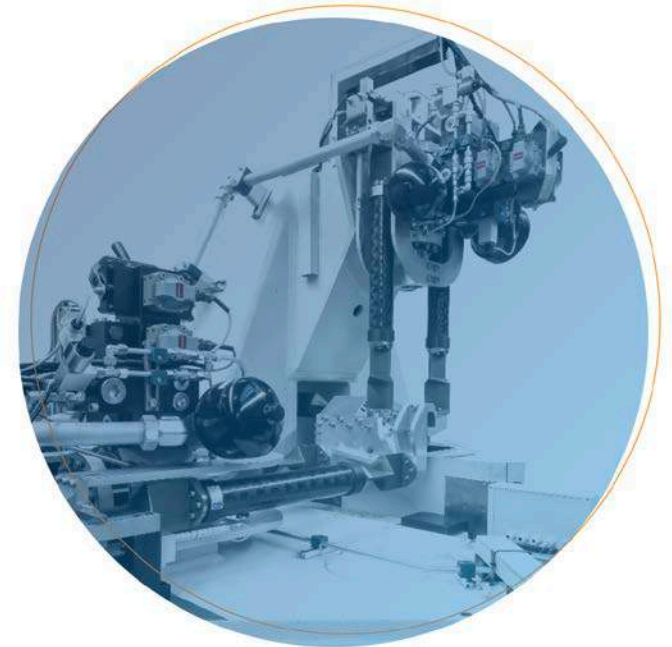
COMPANY, PRODUCTS AND APPLICATIONS

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INOVA PRAHA S.R.O.
PRAŽSKÁ 15
CZ – 102 00 PRAHA 10

Who We Are

- INOVA is your provider of **advanced systems for dynamic stress and durability testing.**
- In addition to comprehensive test systems, we develop and manufacture a **broad range of advanced system components.**
- Today, we are a European group headquartered in the Czech Republic, serving **customers from the most important global markets.**
- Subsidiary in Germany and sales offices in many other countries, including China, Korea, Russia, India, Switzerland or Turkey.



Inova Timeline

1968

INOVA s.p. established as a state-owned enterprise with the aim to develop and manufacture testing systems for Eastern Europe.

2000

INOVA GmbH established as a sales office for the German market.

2007

INOVA introduces EU3000 – a state-of-the-art test rig electronic control system.

2012

New testing hall with an antivibration base plate for dynamic tests.

2019

INOVA completes a major upgrade of its production facilities to further boost the outstanding quality and reliability of its products.

1995

The company transforms into a private business, newly called INOVA Praha s.r.o.

2002

INOVA brings out its own solution for comprehensive elastomer testing.

2011

The company unveils new advanced testing solutions, including an inhouse developed hexapod test rig.

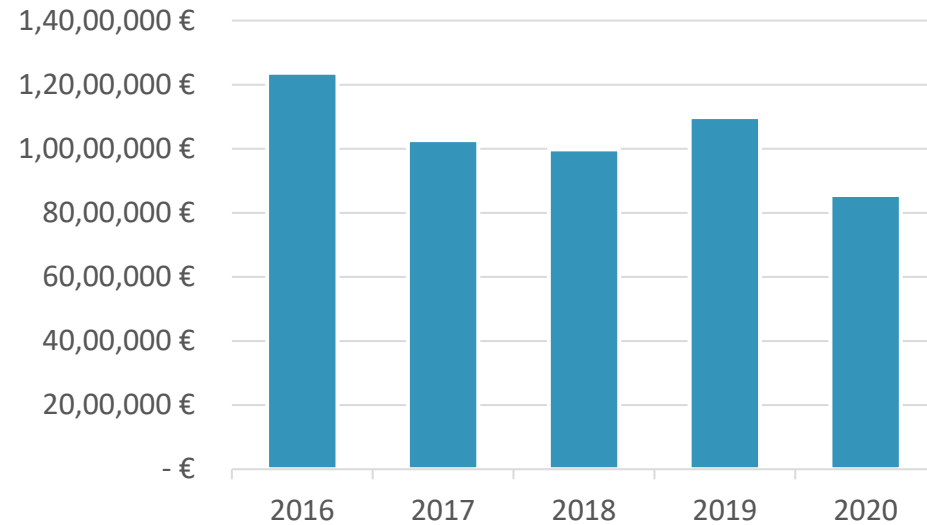
2016

Introduction of LEMs as an alternative to hydraulic actuators.

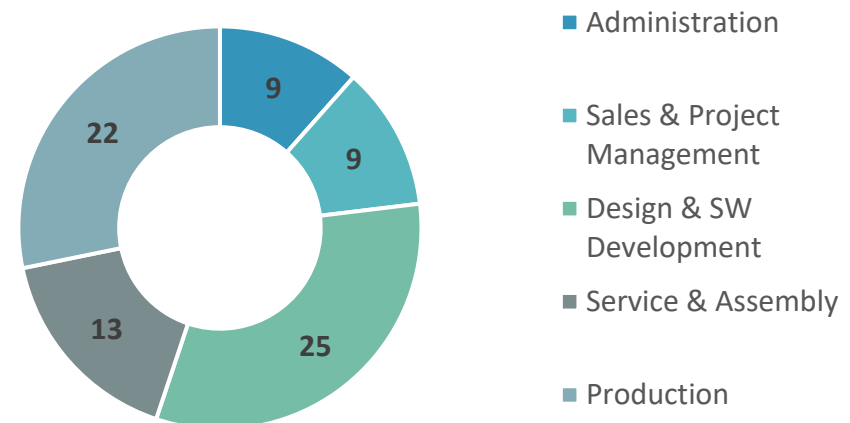
Inova in numbers

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Yearly Revenue

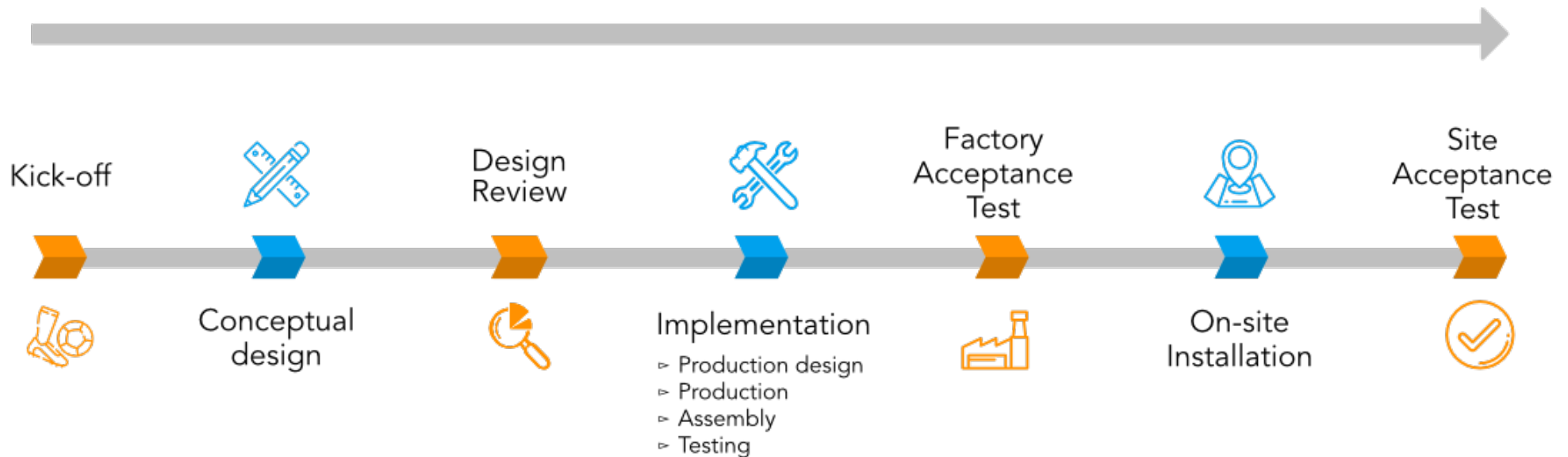


Inova Employees



How We Deliver

Internal/External Status Reporting, Open Point Management, Change Request Management



Non-disclosure agreement

With customers are signed the NDA as a part of contract or pre-design phase.

Mentioned test rig and equipment below are linked to Inova product, which were developed, design , produce by Inova Praha s.r.o.

Mentioned name of final customer belong to NDA. Open information is possible to find on Customers websites or public materials.

Inova References

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Automotive

Railway industry

Ship building

Aircraft industry

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7-poster

- Front axle 7,500 kg
 - Actuator 2x 100 kN with stronger piston rod against lateral loads
- rear axle 13,000 kg
 - Actuator 2x 160 kN with stronger piston rod against lateral loads
- Vertical dynamic $v = 0,7$ m/s, $a = 13$ g, $s = 80$ mm
- 1x longitudinal and 2x side load
- Directly coupling to wheel dummy possible.



4-poster / 2-poster

- For passenger car or motorbike
- Inside climatic chamber possible
- [Video1](#) [Video2](#) passenger car
- [Video](#) automatic manipulation



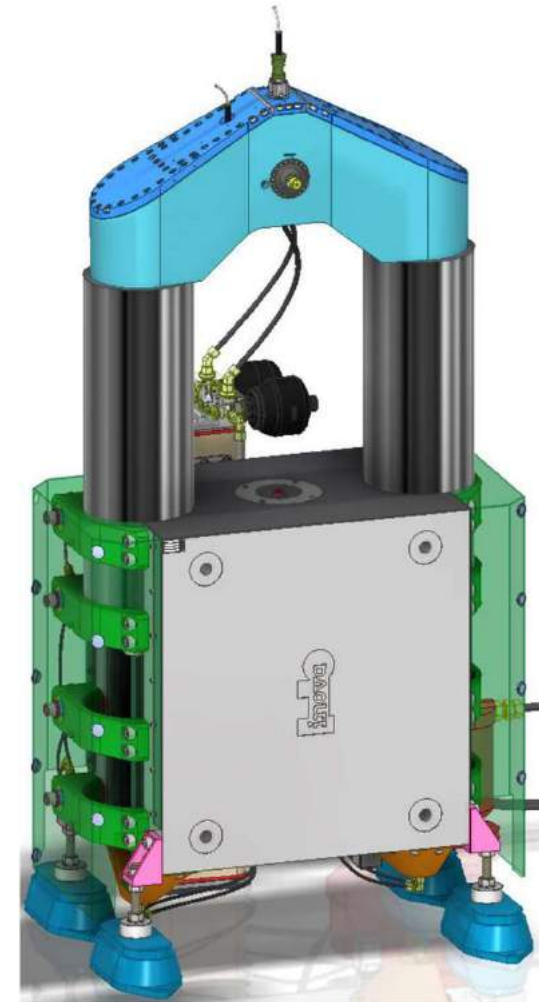
Dual corner axle test rig 2x 6DOF

- Best simulation accuracy provided by lightweight and high stiffness of mechanical structures with long service life.
- Loads for each corner:
 - X - Longitudinal load, brake load
 - Y - side load
 - Z - vertical load
 - Mx - camber
 - My - brake torque or drive torque
 - Mz - steering



1 DOF elastomer test rig 1000 Hz

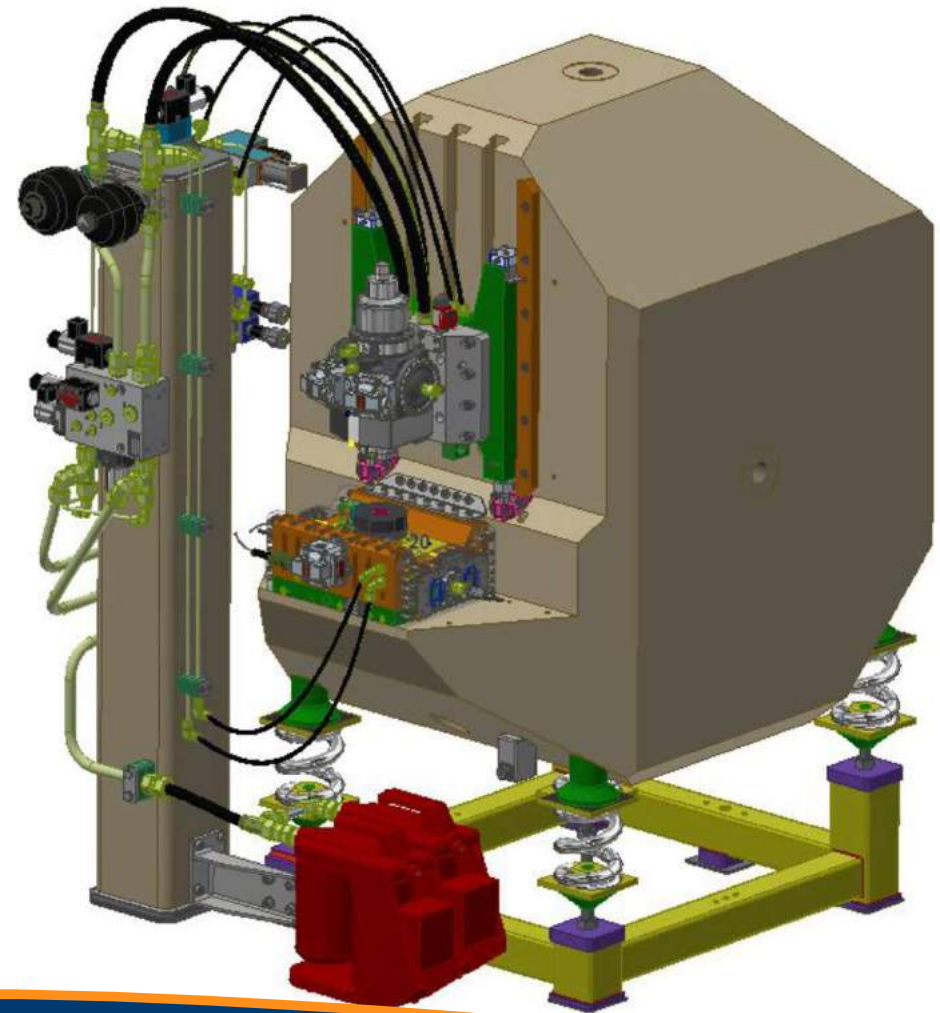
- Dynamic testing for measuring characteristic of elastomer componets
- Z direction dynamic:
 - $F = +/- 10 \text{ kN (28MPA)}$, $s = +/- 10\text{mm}$
 - 1000Hz @ 0,025mm
 - 1000 Hz by croshead space 300mm



2 DOF elastomer test rig 800 Hz

- Dynamic testing for measuring characteristic or elastomer componets
- Z direction dynamic:
 - $F = +/- 25 \text{ kN (21MPA)}$, $s = +/- 25\text{mm}$
 - $F = 800 \text{ Hz @ } s = 0,05 \text{ mm}$
- X direction dynamic –hydrostatic table
 - $+7\text{kN, } +25\text{mm}$, 50Hz

Option: Acoustic isolation cover



4 DOF elastomer test rig 80 Hz

- Dynamic testing for durability and measurign of characteristic
- X, Y and Z direction dynamic:
 - $F = +/- 25 \text{ kN}$, $s = +/- 25 \text{ mm}$
 - $F = 80 \text{ Hz}$ @ $s = 1 \text{ mm}$
- Z direction static:
 - $s = 250 \text{ mm}$
- Z direction torsion
 - $Mz = +/- 200 \text{ Nm}$, $Wz = +/- 25^\circ$, $f \leq 5 \text{ Hz}$
- Options: Kistler piezo measuring platform, Z force +/- 50kN, Temperature simulation



6 DOF Shakers

- Designed for test frequency up to 100 Hz
- Acceleration up to 20 g



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6 DOF Shaker seismic or durability

Hexapod

- Designed for test frequency >200 Hz
- Acceleration up to 20 g
- Hydrostatic ball joints



Bogie testring

- Up to 32 Cylinders.
- Power pack station 1000L/min

