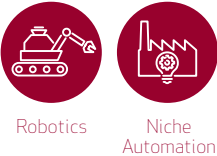


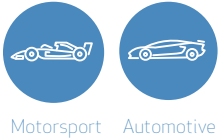
QUADRUPED ROBOT TAKES BIG STRIDES TOWARDS SAVING LIVES

When Researchers at the Istituto Italiano Di Technologia (IIT) wanted to bring to life their HyQ “Hydraulically actuated Quadruped”, to assist humans in their response to emergencies such as search and rescue operations in dangerous places, they approached Moog for a solution.

MARKET



OTHER APPLICATIONS



CAPABILITY



THE CHALLENGE

To provide the IIT with a sub miniature and extremely high response hydraulic solution to control the leg motion of the HyQ which would have to react rapidly when the legs hit the ground, enabling precise reactive control of the rigidity/ elastically of the limbs, absorbing the shock of impact, and preventing stress and damage to the centre body.

THE SOLUTION

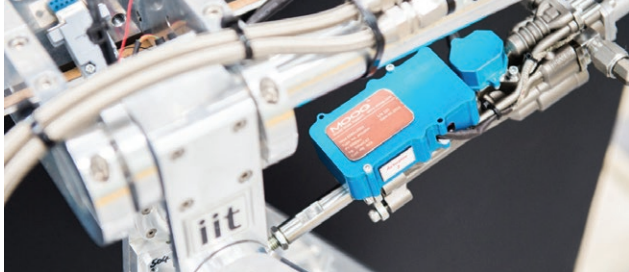
The concept of “actively compliant” legs was made possible by the extremely high response of the Moog E024-LA miniature hydraulic servo valve integrated with a Moog servo actuator and additive manufactured manifold to control leg motion.



THE RESULT

A migration of F1 micro hydraulics technology to human emergencies providing:

- Precise reactive control of the rigidity/elasticity of the limbs of the quadruped.
- Shock absorption of impact and prevention of stress and damage to the central body.
- A robust, reliable, ultra-compact light-weight hydraulic solution capable of precise control in milliseconds.
- One of the few robots capable of doing the “flying trot” where all four legs leave the ground simultaneously.



COMPLEX SIMULATION

Contact us today to find out more about **Moog precision motion control** on **01684 858000**