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Nota di contenuto	Cover; Title Page; Copyright Page; Contents at a Glance; Table of Contents; About the Author; About the Technical Reviewer; Acknowledgments; Introduction; A Brief History of Robots; Why a LEGO Technic Book on Robots?; How This Book Is Structured; CHAPTER 1 Where to Begin with Your LEGO Technic Robot Kit; LEGO Pick a Brick; BrickLink; Web Sites for LEGO Instructions; The LEGO Official Site; Peeron; Brickfactory; A Basic Introduction to LEGO Technic Pieces; A System of Storage for LEGO Technic Parts; Technic Bricks; Beams; Levers; Axles; Technic Axles in Action; Bushes and Connector Pegs Technic Connector Pegs in Action Technic Bushes in Action; Connector Peg/Cross Axles in Action; Technic Friction Snaps in Action; Other Types of Technic Connectors in Action; Cross Blocks and Angle Elements; Technic Cross Blocks in Action; Technic Angle Elements in Action; Gears; LEGO Technic Gears in Action; Racks and Shock Absorbers; Technic Miscellaneous Pieces; Designing Digitally with LEGO Software; LEGO Digital Designer; MLCAD; LDraw; Summary; CHAPTER 2 Creating a Robot Body; The Three Laws of LEGO Technic Robotics; The First Law of Technic Robotics: Planning The Second Law of Technic Robotics: Build It Strong The Third Law of Technic Robotics: Geometry; Project 2-1: Creating a LEGO Base; Project

2-2: A Solid Framework; Project 2-3: Triangle and Trapezoids; Summary; CHAPTER 3 Bring Your LEGO Technic Robots to Life with Power Functions; LEGO Power Functions; Power; Action; Motors; Lights; Control; Direct Control; Remote Control; The IR-TX Remote; The IR Speed Remote Control; A Robot Base with Wheels; Project 3-1: Creating a Four-Wheel Drive Engine Wheel Base; Project 3-2: Creating a Four-Wheel Steering System  
Project 3-3: Securing the Robot Base to the Wheeled Base Powering the Robot Base; Summary; CHAPTER 4 Designing a Robot Arm; Project 4-1: The Hand; Project 4-2: The Wrist; Project 4-3: The Elbow; Project 4-4: The Shoulder; Project 4-5: Joining the Shoulder with the Body; Take Control with the Mega-Remote; Summary; CHAPTER 5 Creating Robots with Extensions; Project 5-1: Rack-and-Pinion Extension; Project 5-2: The Scissorlift Mechanism; Summary; CHAPTER 6 The Robot Head; Circles, Curves, and Other Round Shapes; Project 6-1: Building the Top of the Head with Eyebrows  
Project 6-2: Adding Eyes and Nose Project 6-3: Creating the Mouth; Bringing the Robot Head to Life; Summary; CHAPTER 7 Enabling a LEGO Technic Robot to Walk; Project 7-1: A Two-Legged Walker Motor; Project 7-2: The Legs of the Two-Legged Robot Walker; Creating a Walker with More Than Two Legs; Final Words About Building Robots; Summary; APPENDIX A Parts List; Index

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## Sommario/riassunto

Building robots is a snap with LEGO Technic Robotics! This book shows you how to use LEGO bricks and Power Functions components such as motors and remote controls to create all kinds of robots. Best of all, you don't have to learn any programming. You just need your imagination and the expert building principles that you'll find inside LEGO Technic Robotics. Author Mark Rollins teaches you the hows and whys of Technic project design. You're not just snapping pieces here and there; with LEGO Technic Robotics you're actively learning the fundamentals of good design so you can go on to create truly spectacular LEGO robot creations. From robots that run on wheels, walk on two or four legs, or move and function in ways that only you can dream up, this book will help you create your own robot army. Turn to LEGO Technic Robotics and build with real power! After you've mastered the techniques in this book, if you're looking to build more creations, check out Practical LEGO Technics, also written by Mark Rollins, and discover how to build vehicles that can roll, run, and more. Please note: the print version of this title is black & white; the eBook is full color. You can download the color diagrams in the book from <http://www.apress.com/9781430249801>.

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