

Johnson Electric Group Overview



... innovating motion ...

Motion Technologies

- ▶ DC & AC motors
- ▶ Piezo motors and stages
- ▶ Brushless motor technology
- ▶ HVDC motor technology
- ▶ Blowers & Fans
- ▶ Pumps
- ▶ Gears
- ▶ Magnets
- ▶ Switches
- ▶ Solenoids
- ▶ Precision components
- ▶ Motion subsystem engineering
- ▶ Simulation and testing



Product Brands

Motion Solutions

**JOHNSON
MEDTECH**
medical devices

saia-burgess
automotive actuators

GATE
engine cooling

Motors

**JOHNSON
MOTOR**
micromotors

saia
stepper motors

**V 唯易
MOTOR**
standard motors

NANOMOTION
piezo motors

Switches

saia
microswitches

burgess
*industrial
microswitches*

BAR
*push button
switches*

th contact
panel switches

Solenoids

LEDEX
DC solenoids

DORMEYER
AC solenoids

Circuits

PARLEX
flexible printed circuits & flat flexible cables

Global Engineering Centers

- ▶ **China**
- ▶ **Germany**
- ▶ **Hong Kong**
- ▶ **Italy**
- ▶ **Israel**
- ▶ **Japan**
- ▶ **Switzerland**
- ▶ **UK**
- ▶ **USA**



Company Organization



Automotive Products Group (APG)



... innovating motion ...

Automotive Applications

Power Train Cooling



Cooling Fan Module



Electronic Speed Control



Circulation Pump

Lighting



Adaptive Front-lighting



Headlamp Adjuster

Steering



Steering Wheel Lock

Washer / Wipers



Headlamp Washer



Washer Pump



Windscreen Wiper

Braking



Electric Parking Brake



Anti-lock Braking System

HVAC



HVAC Blower



Climate Control



Climate Control Actuator

Mirrors



Mirror Actuator



Mirror Adjuster



Power Folder

Window Lift & Sunroof



Window Lift



Sunroof Control

Door Lock



Central Door Lock



Child Lock

Power Closure Systems



Door Close Assist



Latching / Cinching



Switch



Power Lift Gate

Suspension



Suspension Leveling

Seating



Headrest Adjuster



Seat Adjuster

Transmission



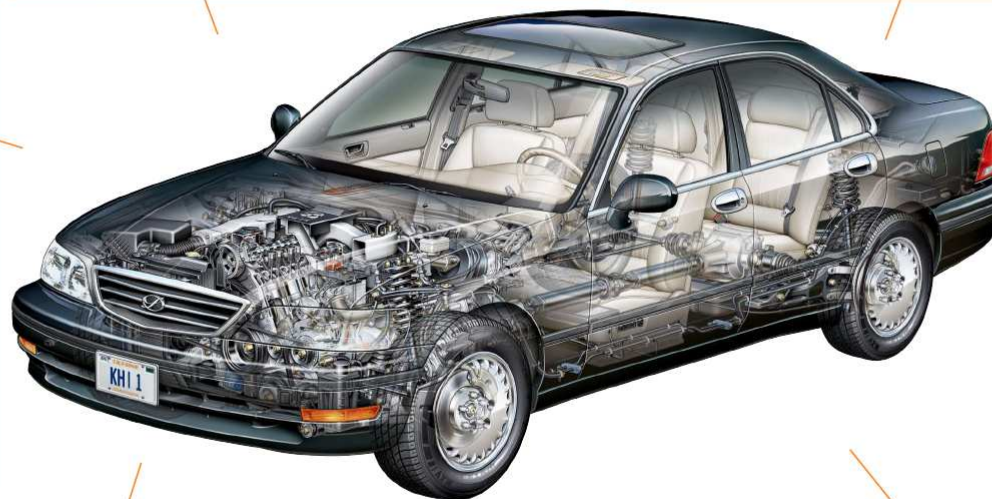
Automatic Manual Transmission



Dual Clutch Transmission



Lumbar Support



Engine Management



Electronic Throttle Control



Exhaust Gas Recirculation



Air Pump



Fuel Pump

Automotive key Customers



Industry Products Group (IPG)



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Industrial Automation



Industries Served

- Automotive
- Building Automation and Security
- Business Machines
- Defense
- Food and Beverage
- Home Entertainment and Gaming
- Home Technologies
- HVAC
- **Industrial Equipment**
 - Heavy Equipment
 - Lift Trucks
 - Material Handling
 - Postal Equipment
 - Valves
 - Semiconductor Automation
 - Inventory Control
 - Instrumentation and Testing
- Lawn and Garden
- Medical Devices
- Personal Care
- Power Equipment
- Power Tools
- Camera and Optical

Industrial Equipment

Home > Industries Served > **Industrial Equipment**

RESOURCES FOR
ENGINEERS



SOLUTION CONSULTANT
(PRODUCT SEARCH)



Heavy Equipment



Lift Trucks



Material Handling



Postal Equipment



Valves



**Semiconductor
Automation**

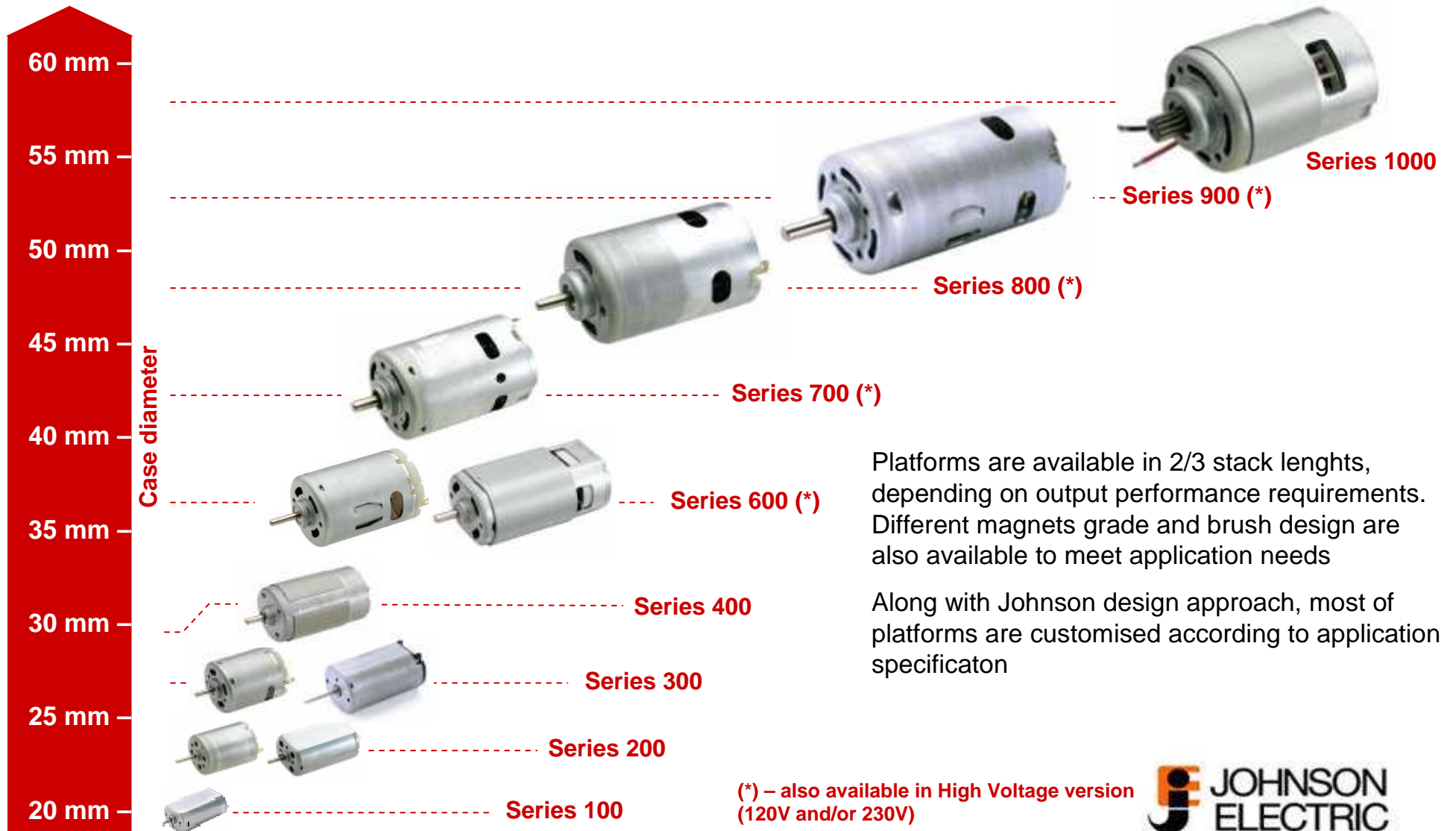


Inventory Control

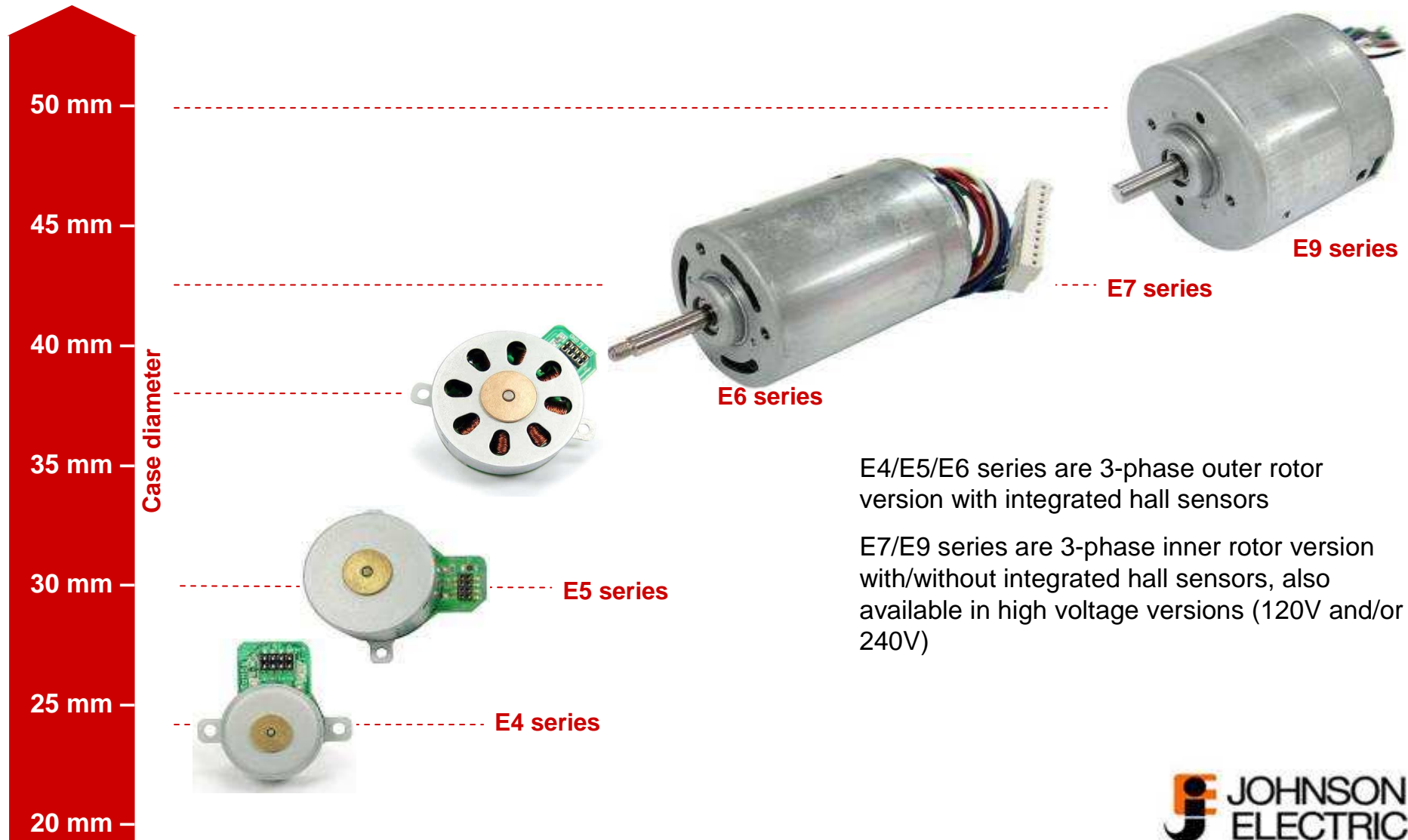


**Instrumentation
and Testing**

PMDC motors – Brushed version



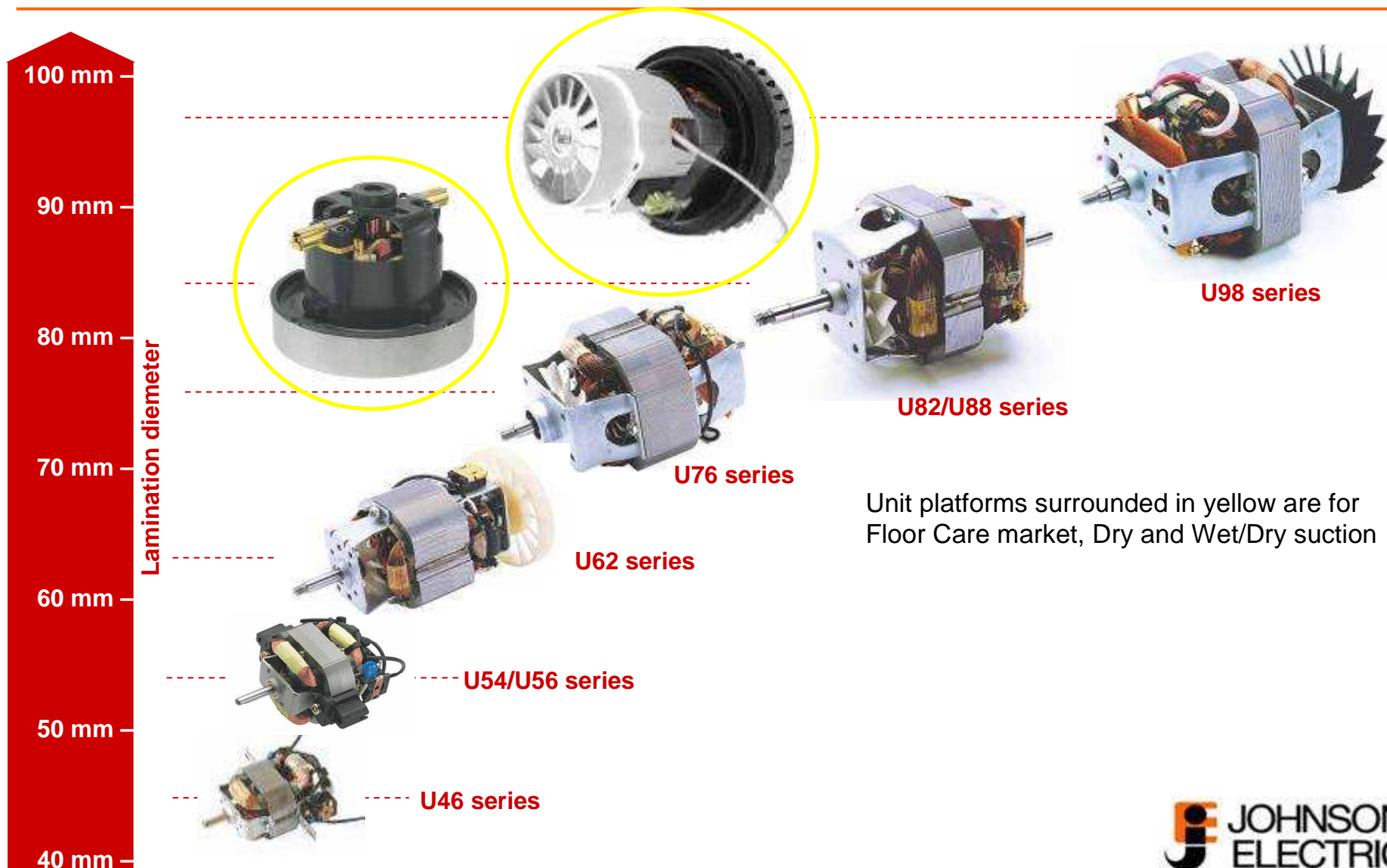
PM motors – Brushless version



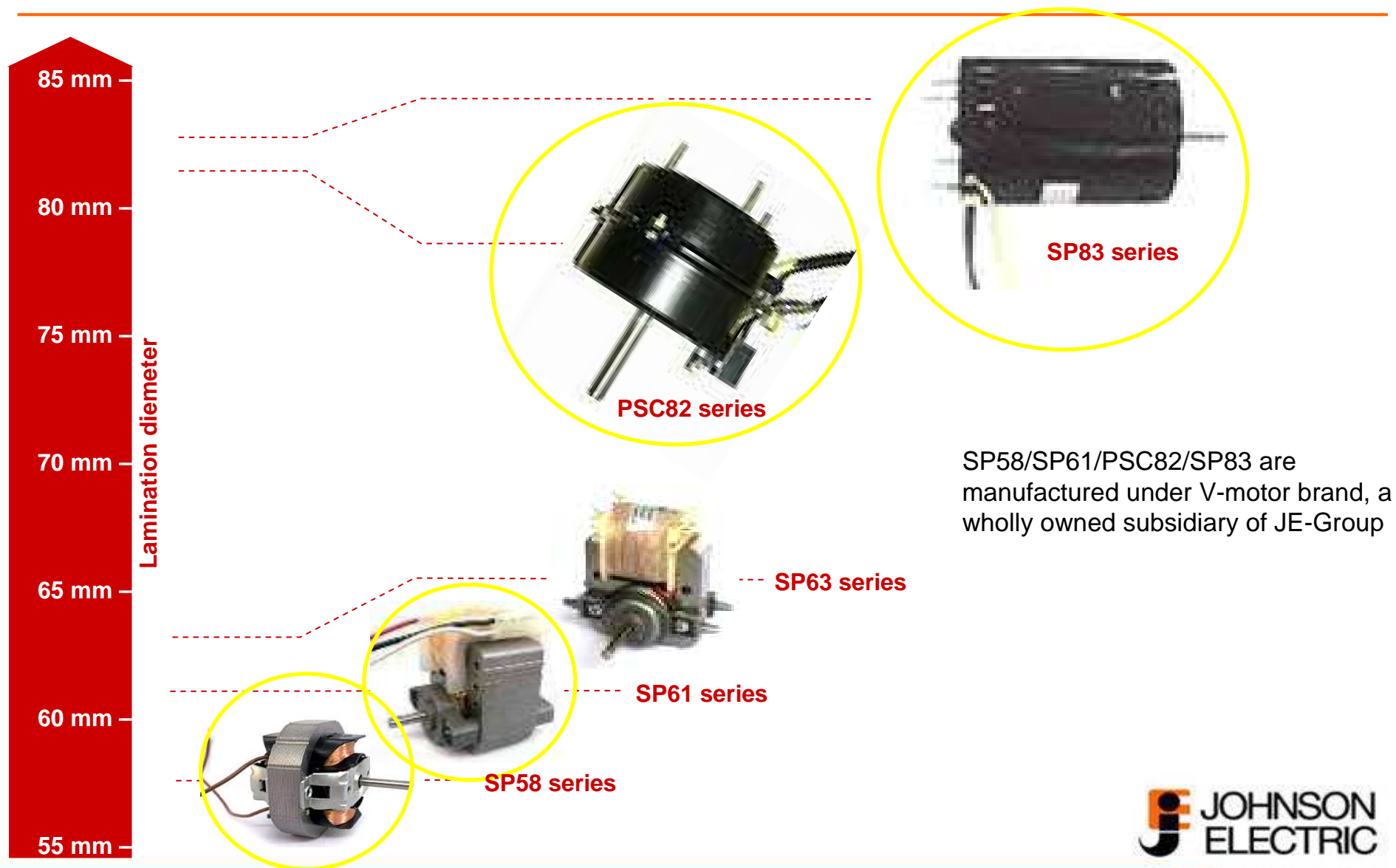
E4/E5/E6 series are 3-phase outer rotor version with integrated hall sensors

E7/E9 series are 3-phase inner rotor version with/without integrated hall sensors, also available in high voltage versions (120V and/or 240V)

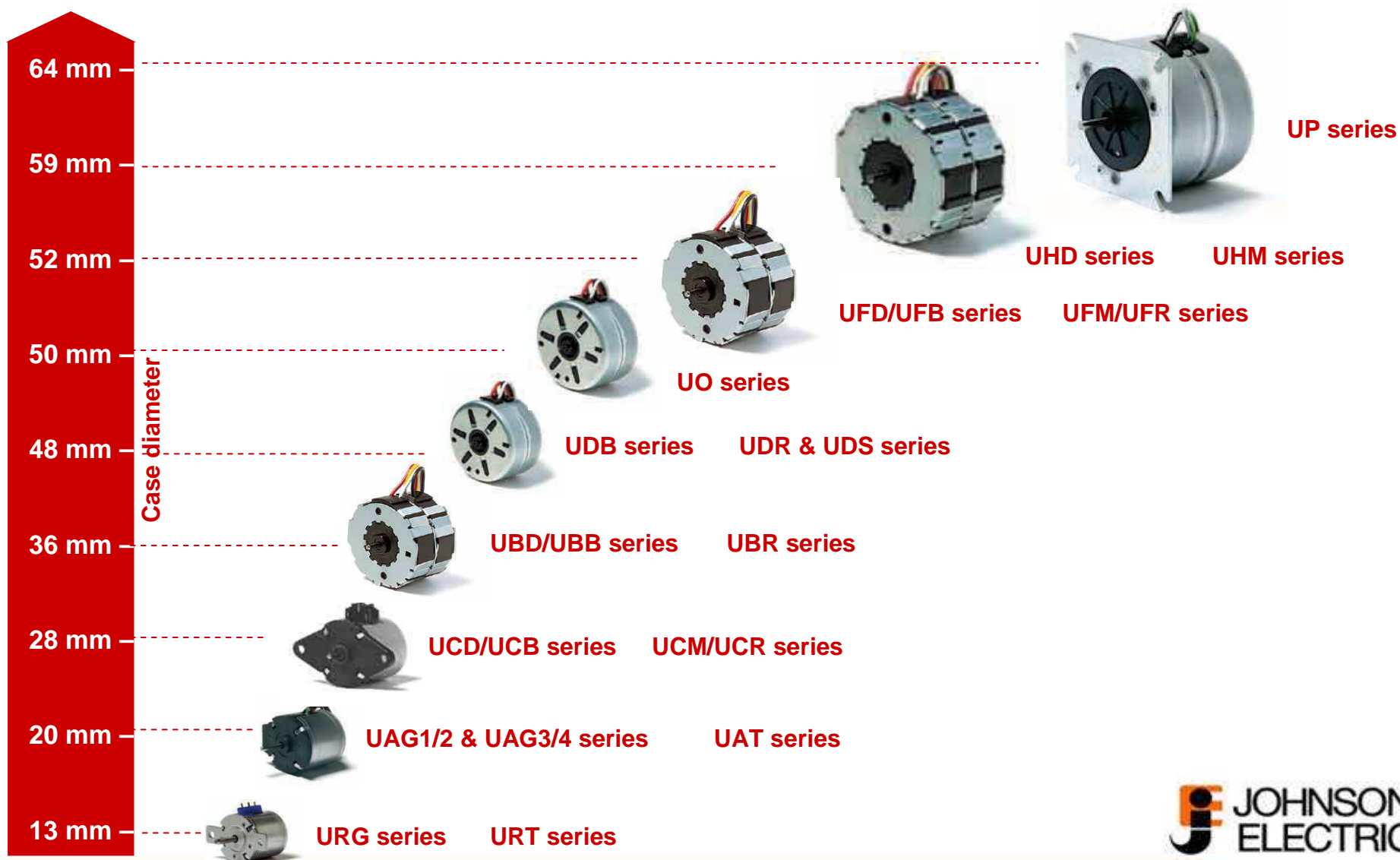
UNIVERSAL motors



INDUCTION motors



STEPPER & ROTATIONAL Motors



LINEAR Actuator



Travel 10 - 95 mm



Travel 13 - 150 mm



Travel 15 mm

SYNCHRONOUS

STEPPER

ULE series

UCC series

UCL series

UA series

UAL series

SOLENOIDS

LEDEX **DORMEYER**

ROTARY



Ultimag



BTA



3 Ball Race Rotary

LINEAR



Low Profile



Soft Shift



Tubular



Box & C Frame

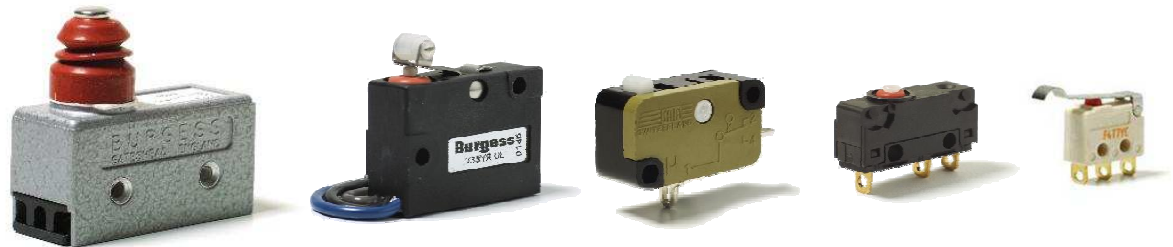


Laminated

SWITCHES



Micro Switches (MS):



Manual Switches (MOS):

Push Button, Rocker, Rotary, Tippmatic



Panel Mounted Switches (PMS):

Key lock, Piezo, Push Button, Emergency



9. Human Interface

Switches

- ▶ Intelligent
 - Integrated Electronics
 - CPU interface
- ▶ Sensory
 - Haptics
 - Sound
- ▶ Color
 - Surface
 - Light
- ▶ Design
 - Human factors
 - Application specific



Control Panels

- ▶ Light Touch ®
 - Low force
 - Polycarbonate graphics
- ▶ Capacitive
 - Versatile panel material
 - Design / shape
- ▶ Light Guide
 - Ultra thin (<1mm)
 - Design / shape / uniform illumination
- ▶ Inductive
 - Constant touch sensitive
 - Versatile panel material

Manufacturing & Engineering



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Manufacturing Focus

- ▶ “Johnson City” main site
 - Production Capacity is 3 million motors/day
 - High volume switch production
- ▶ Vertical Integration
 - In-house components
 - In-house equipment
- ▶ Lean Manufacturing Concepts
 - 3P
 - Cellular manufacturing
 - Flexible, low-cost assembly
 - JEPS
- ▶ Customer Supply Chain Integration
 - Local Final Assembly
 - Local Replenishment
 - JIT, Kanban



Thank You

For more details visit also

<http://www.johnsonelectric.com/>



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