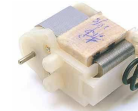


Johnson motors overview

- ❑ Synchronous motors
- ❑ Stepper motors
- ❑ Torque limited synchronous motors
- ❑ Permanent magnets motors
 - ❑ Brushed PMDC
 - ❑ Brushless motors (AC/DC with driver)
 - ❑ 2-poles synchronous AC motors
- ❑ Universal motors (AC/DC)
- ❑ Induction motors (AC)



innovating motion

rotational synchronous motors saia

**JOHNSON
MOTOR**

- ▶ simple AC power supply
- ▶ combination with gearboxes
- ▶ speed depends on frequency of AC supply and gear ratio
- ▶ Available sizes:
 ∅ 13 - 64mm



13mm
(URT)



20mm
(UAT)



36mm
(UBR)

28mm
(UCM)



64mm
(UPU)



48mm
(UDR)

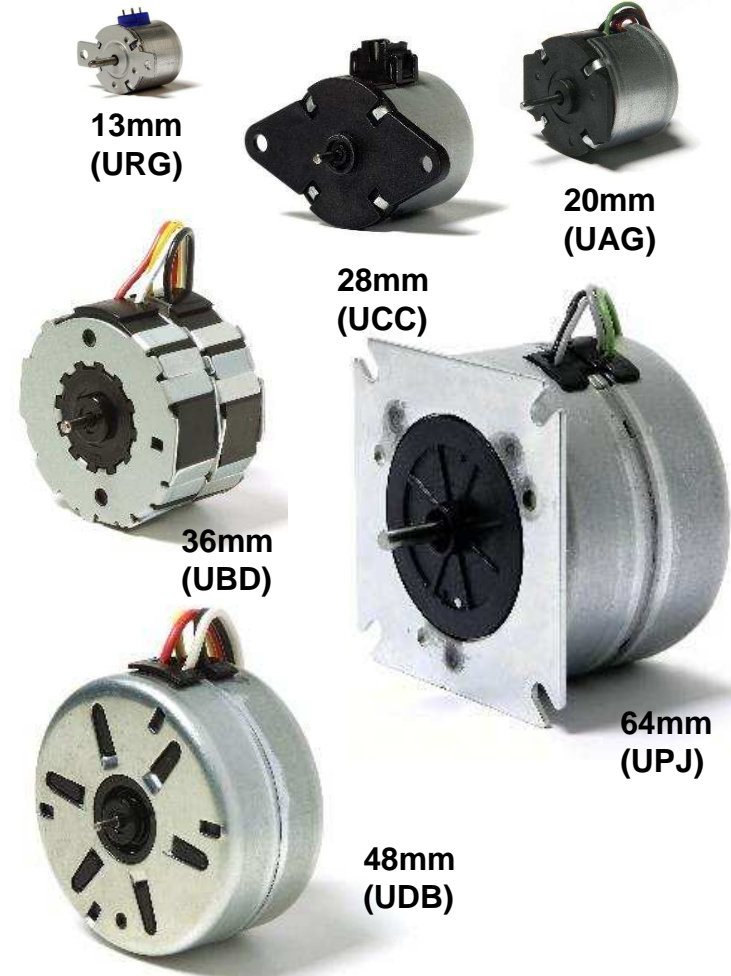
**JOHNSON
ELECTRIC**

innovating motion

rotational stepper motors **saia**

**JOHNSON
MOTOR**

- ▶ Defined step angle
- ▶ Positioning operation by executing a number of steps
- ▶ Speed control by modifying steps per second (=step frequency)
- ▶ combination with gearboxes
- ▶ Available sizes:
 ∅ 13 - 64mm



**JOHNSON
ELECTRIC**
... innovating motion ...

Gearboxes **saia**

**JOHNSON
MOTOR**

- ▶ Very large range of different sizes and ratios
- ▶ Large choice for motor-gearbox combinations
- ▶ Some version available with clutch
- ▶ Loadability : 30 ...2500 cNm



VK2



UGA/UGD



UGM



UGB/UGF



UGV



UGO/UGP
(STG60/STG61)



UGJ



UGR
(STG200)



UGS
(V250)

**JOHNSON
ELECTRIC**
... innovating motion ...

torque limited synch. motors saia

JOHNSON
MOTOR

- ▶ Integrated hysteresis clutch limits the torque
- ▶ low noise at end stop
- ▶ mechanical protection at end stop
- ▶ acceleration of high external inertia (high mass)
- ▶ diameter range: 35 - 64mm



35 mm
(UN)



50mm
(UO)



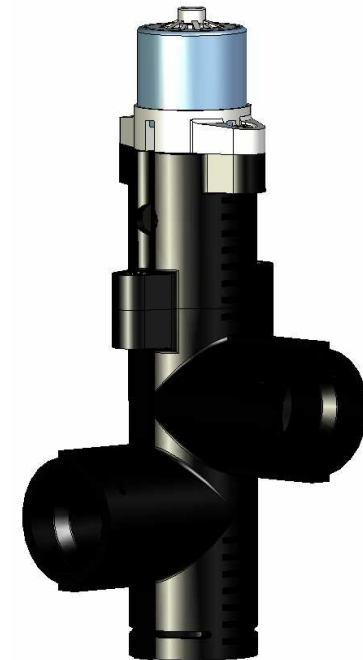
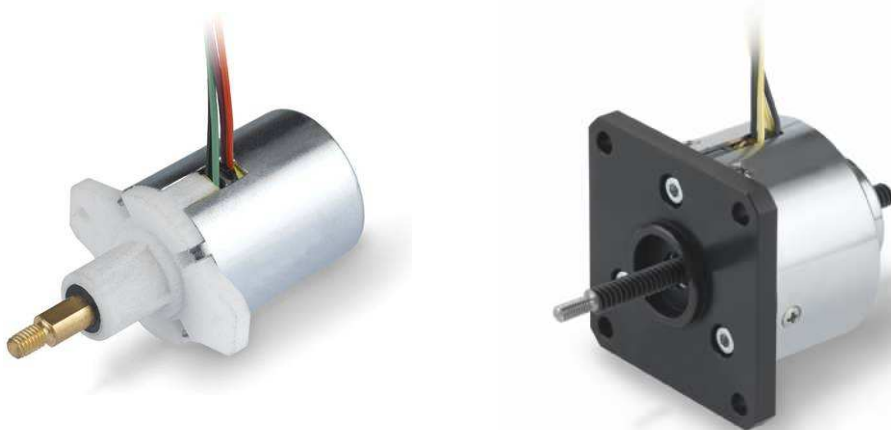
64mm
(UP)

 JOHNSON
ELECTRIC
... innovating motion ...

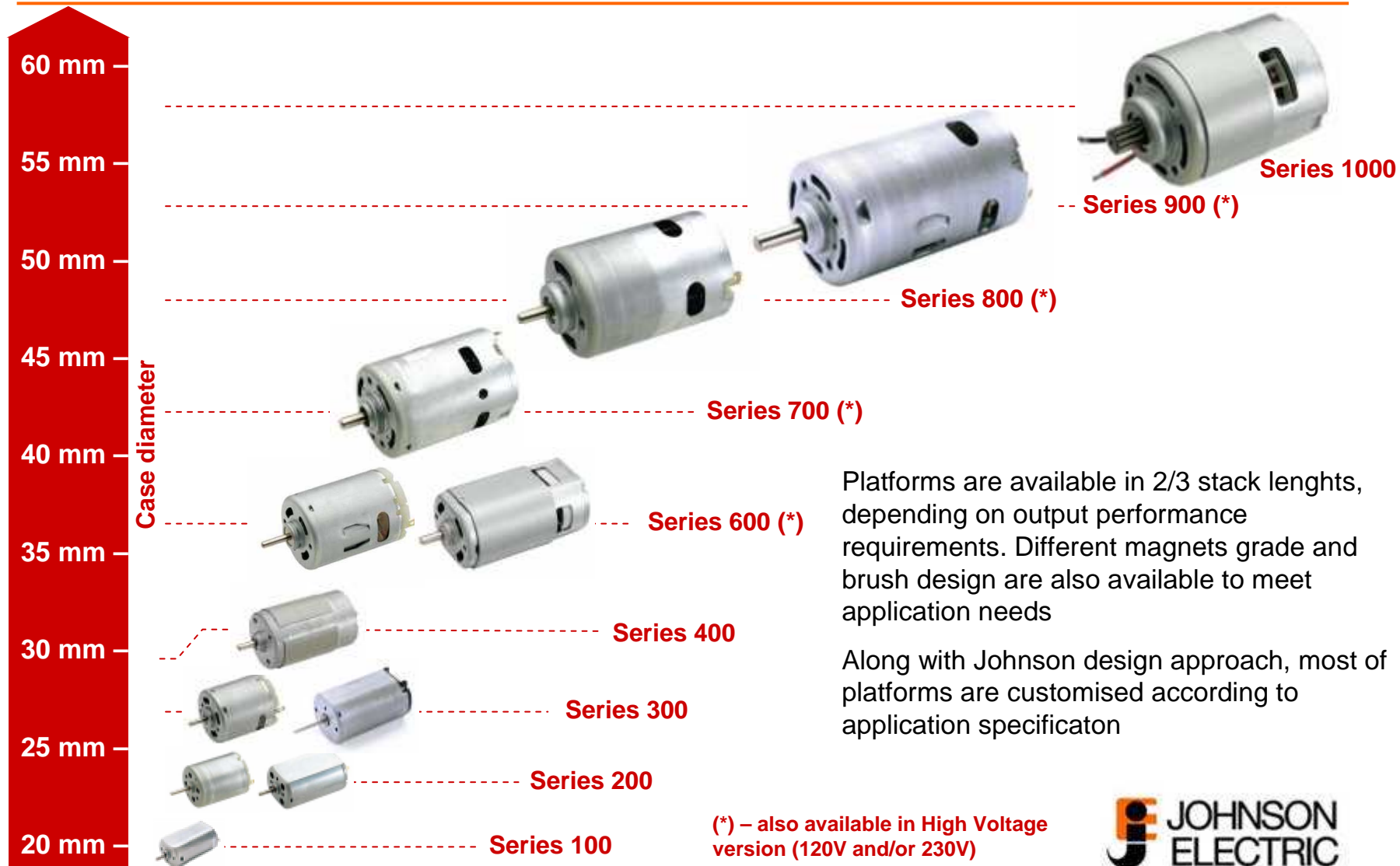
Linear motor saia

JOHNSON
MOTOR

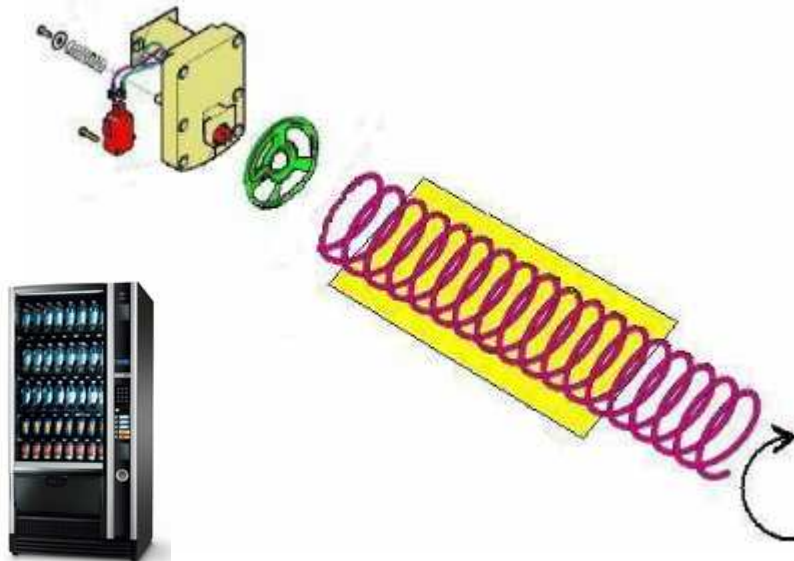
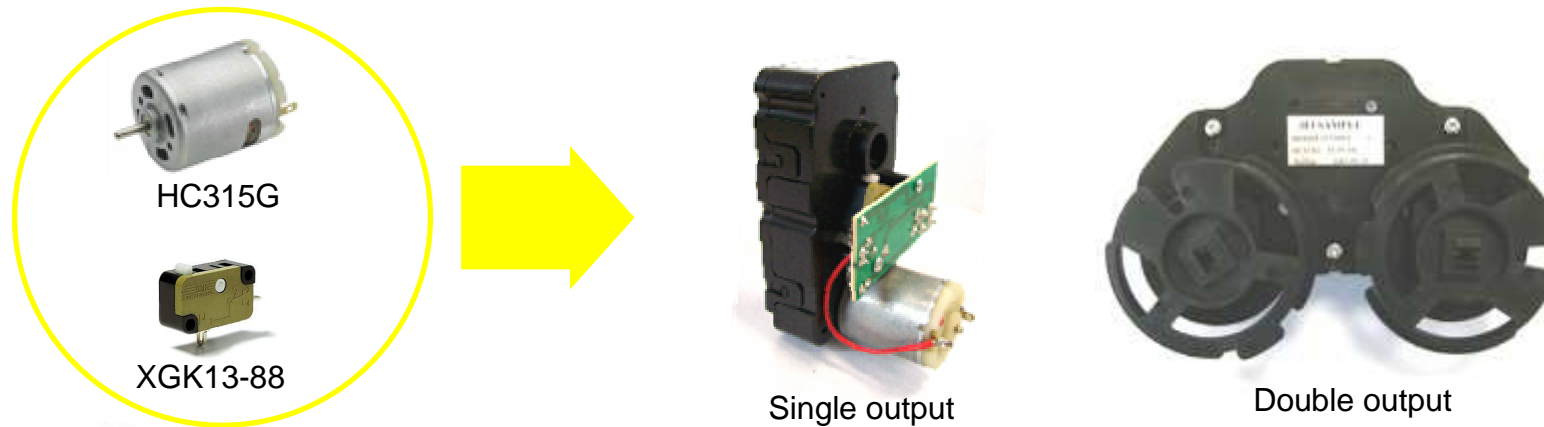
- ▶ Derived from rotary motor – direct linear movement
- ▶ Stepper and synchronous version available
- ▶ Internal spindle-nut system moves a threaded shaft
- ▶ Resolution down to 0,021mm full step
- ▶ Forces up to 50N for $\varnothing 28$ (70N for short life time <50k cycles), 300N version $\varnothing 55$ under dev.
- ▶ Life time depends on application and required force, 500k cycles ON-OFF possible
- ▶ Stroke typ. 13mm, up to 150mm possible with external guidance
- ▶ Constant force over full stroke



PMDC motors – Brushed version



PMDC motors – application example



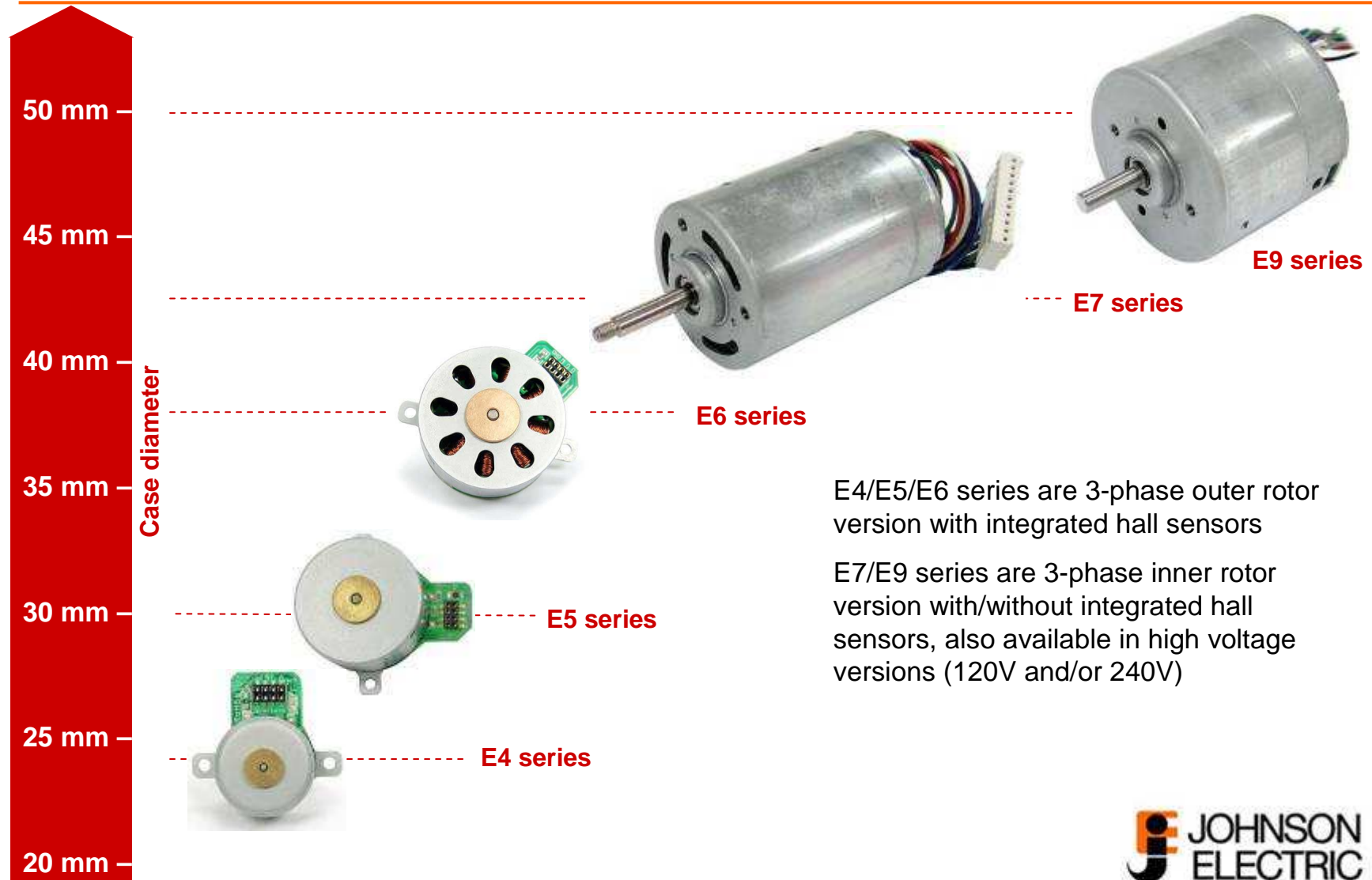
The subsystem is used into cold dispenser vending machines, driving a spiral worm containing in each coil bottles, snacks, etc

Mechanical performances are very important for very heavy products delivery as microswitches commutation, very critical in providing phasing pulse by 2-wire connection to electronic board for position sensing



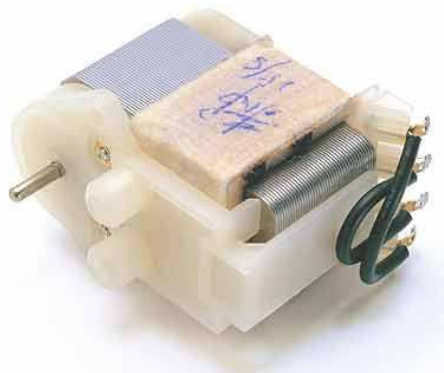
PM motors – Brushless version

**JOHNSON
MOTOR**



**JOHNSON
ELECTRIC**
... innovating motion ...

PM motors – Synchronous version



SN20 series

SN20 series is used in small kitchen appliances, i.e. microwave oven or juicer

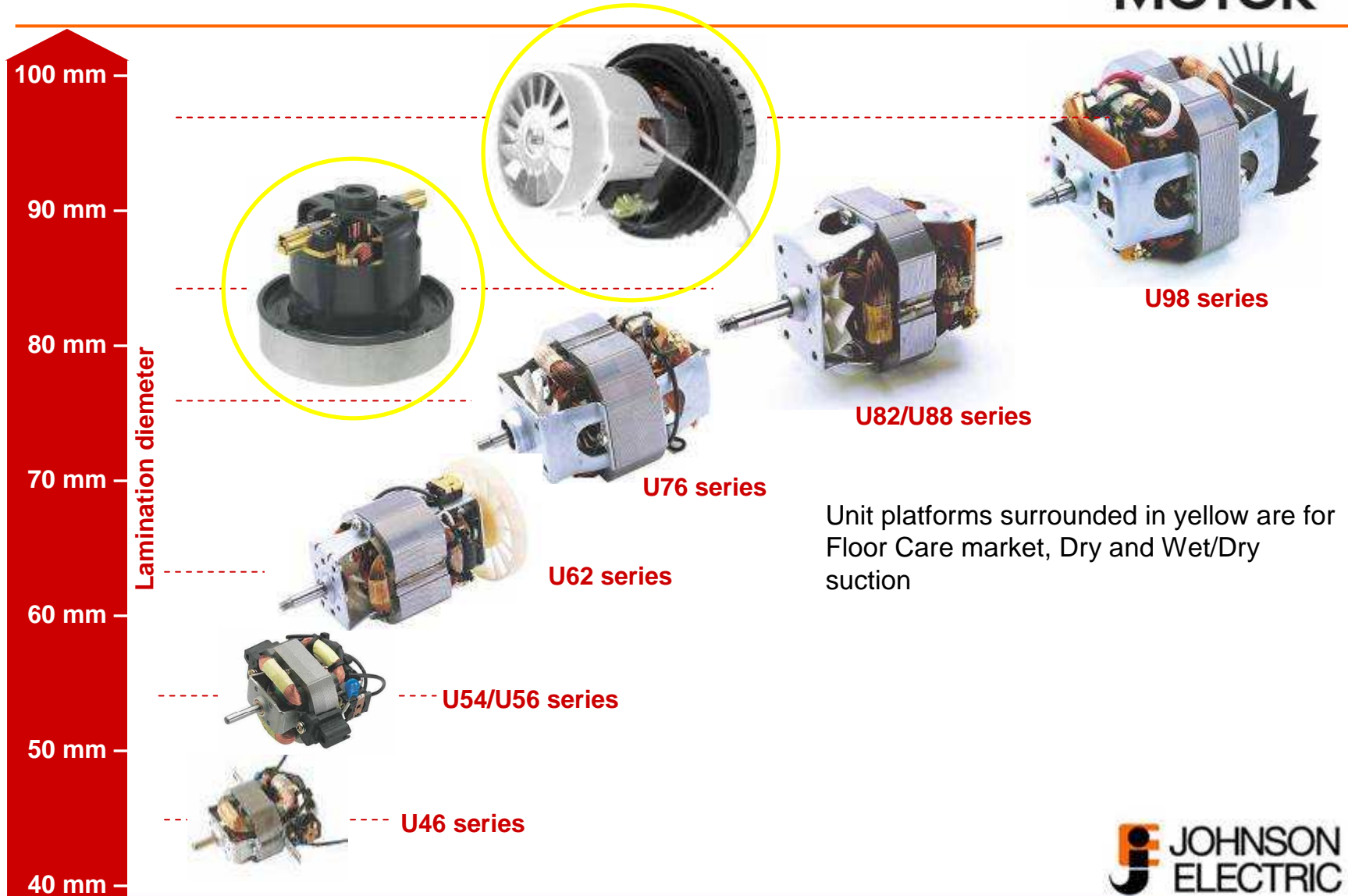


SN31 series

SN31 series is widely used into White Goods market, for water draining pump; different stack lengths can be selected to meet the output performance

UNIVERSAL motors

**JOHNSON
MOTOR**



**JOHNSON
ELECTRIC**
... innovating motion ...

INDUCTION motors

**JOHNSON
MOTOR**

