



Compact cylinder

High force type

CQE Series +

RoHS

The same theoretical output is available even when the supply pressure to the cylinder is decreased.



MAIN FEATURES

Lower your supply pressure without compromising on cylinder output force

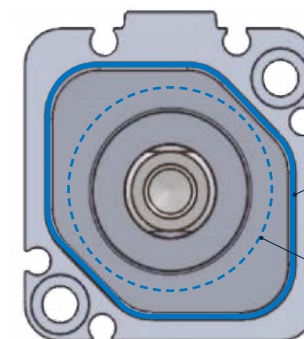
Reduce your machine's dimensions without sacrificing power

Theoretical output force equivalent to a cylinder one size bigger.

Boost power without redesigning your machine

The theoretical output of the next larger bore sized cylinder is made possible with the polygonal piston shape

ENERGY EFFICIENCY DIGITAL SHEET



CQE Series

Size 32

(Polygonal piston)

Existing CQ2

Ø 32

(Round piston)

CQE case study

An SMC CQE series piston was selected to address a customer requirement to lift a 60 kg system within a tightly constrained design space. External bearings were not feasible, and piston shafts were required to prevent rotation. Alternative bearing and non-rotating piston options were unsuitable due to size, while smaller diameters demanded higher pressure that the end user would not accept. The CQE series enabled high force at low pressure, achieving non-rotation and simplifying integration into the final design.

Key customer benefits:

- Easy integration without machine redesign
- No need for operating pressure increase.

SELECTED PART NUMBERS

Part number	Sizes [mm]	Stroke [mm]	Port size	Rod end thread
CDQEB20-□	20	5, 10, 15, 20, 25, 30, 35, 40, 45, 50	M5 x 0.8	Female thread
CDQEB20-□M				Male thread
CDQEB25-□	25			Female thread
CDQEB25-□M				Male thread
CDQEB32-□	32		Rc1/8	Female thread
CDQEB32-□M				Male thread
CDQEB40-□	40			Female thread
CDQEB40-□M				Male thread

□ Insert required stroke.

APPLICATIONS

Generally, all application such as clamping, pressing, positioning particularly where space is restricted or when supply pressure is limited.

- Holding metal parts in CNC machining fixtures
- Securing welded sheet-metal parts in automotive jigs
- Press-fitting bearings into housings
- Inserting pins, bushings, or connectors
- Pusher mechanisms in pick-and-place systems
- Indexing small trays or pallets in packaging lines
- Precise stop/locate actuators on robotic fixtures
- Replacing existing actuators during energy-saving upgrades
- Modernising worn machinery with minimal re-engineering
- Downsizing components to reduce mass
- Part diverting/lane switching arm control
- Reject pushers
- Automated machine guard open/close actuators.

