



VC

VERTICAL
MILLING MACHINES

3-AXIS





TRIMILL – your partner for PORTAL MILLING MACHINES

Our main mission is to develop and manufacture portal milling machines with an excellent proportion of QUALITY – OUTPUT – RELIABILITY – PRICE. An important part of our services comprises a well-elaborated system of the warranty and after-warranty service.

A wide selection of the TRIMILL machines contains vertical and horizontal portal milling machines, which are distinguished by high rigidity and accuracy and are intended for machining of pressing tools, moulds and precise workpieces in the single-piece production.

- Machine travels from (X,Y,Z) 1.100/1.000/700 mm to 13.500/4.500/1.800 mm
- Three-, five- and multi-axis design

Partnership with our customers is based on following pillars:

- Proficiency, experience, professionalism
- Customized solutions
- Development of new solutions
- Top service and immediate availability of spare parts

Figures and facts

- 12.900 m² of the production area and more than 130 specialists in development, design, assembly and technology
- Since 2000, when our family company was established, we have been operating in the markets all over the world
- 500 portal machining centres at 200 satisfied customers in 30 countries of the world

Our customers

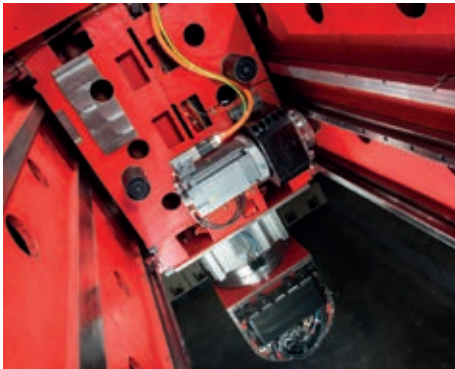
- Tool factories
- Forging shops
- Automotive industry
- Aerospace industry
- Energy industry

The most frequently machined materials on our machines

- Tool steel
- Aluminium alloys
- Cast iron
- Structural materials

■ TRIMILL PRINCIPLE: BOX-IN-BOX and UHPC

The box-in-box is a unique system of closed construction of the cross-beam and cross-slide with internally positioned and guided ram unit (axes Y and Z). UHPC is a high strength concrete with excellent properties for vibration damping and thermal stability of machines.



THE ADVANTAGES OF TRIMILL PRINCIPLE:

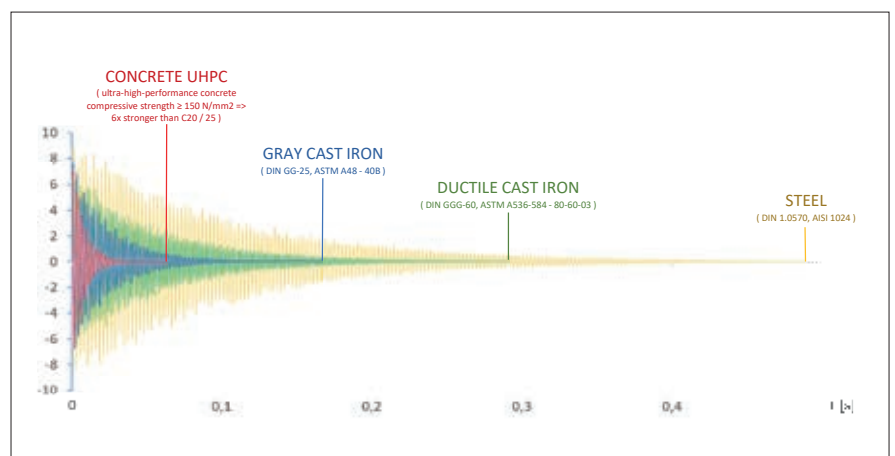
- Consistent milling results thanks to stable thermo-symmetrical arrangement on linear guideways
- Always 4 guides of the cross and vertical support for the machine, preventing the occurrence of the so-called „banana effect“ which deforms/bends the vertical support of the machine
- Increased rigidity of the machine in the X axis by +60%, in the Y axis by +30% and in the Z axis by +90%

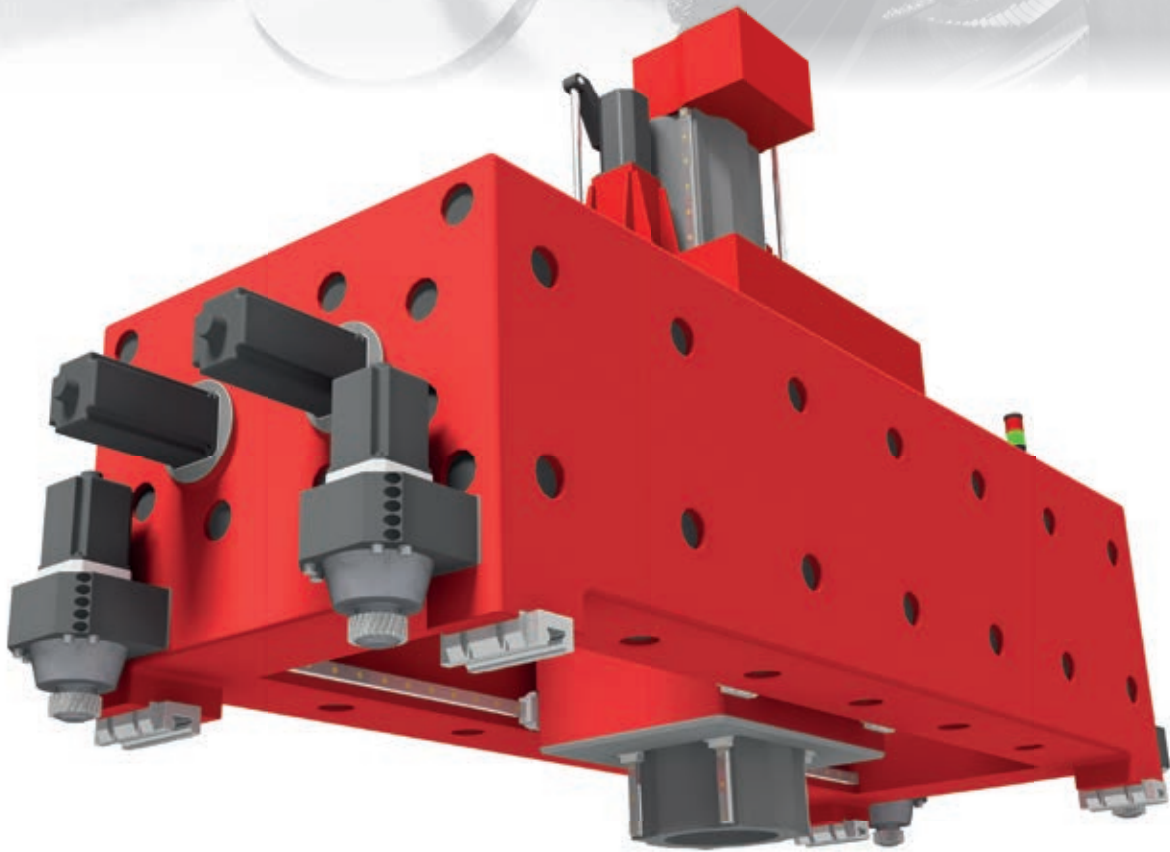


ADVANTAGES OF USING UHPC:

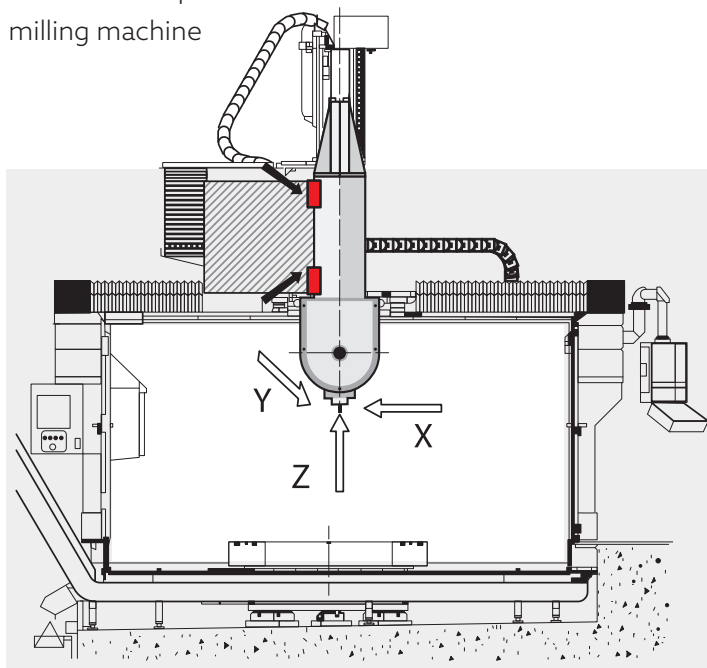
- The columns and longbeams of most TRIMILL machines are made of high-strength concrete (UHPC).
- Maximum vibration damping and extended tool life
- Low thermal conductivity and high heat capacity resulting in high thermal stability of the machines
- Compressive strength ≥ 150 Mpa \Rightarrow 6 times stronger than C20/25 concrete
- Production in our own concrete plant in TRIMILL, a.s.

TRIMILL uses UHPC with the most effective damping properties for all stationary machine components, which ultimately means better surface quality, higher precision and longer tool life.

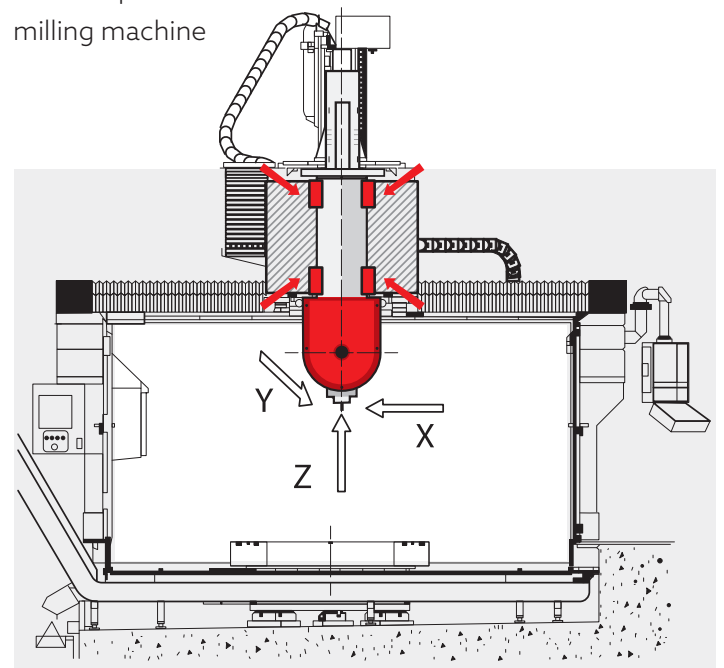




Conventional portal milling machine



TRIMILL portal milling machine





Machine travels X, Y, Z	1.800 × 1.000 × 700 mm
Optional spindle	25 kW, 200 Nm, 12.000 1/min, HSK - A100
Optional spindle	29 kW, 69 Nm, 24.000 1/min, HSK - A63
All data for spindles	S1/100%
Clamping surface	2.000 × 1.370 mm
Workpiece weight	max. 10.000 kg
Feed rate X, Y, Z	30.000 mm/min
Machine weight	18.000 kg
Machine dimensions	5.193 × 3.782 × 3.732 mm



**Possibility of continuous 5-axis machining
by means of an attachable, tilting rotary table**

Workpiece diameter max. 800 mm

Workpiece weight max. 1.000 kg

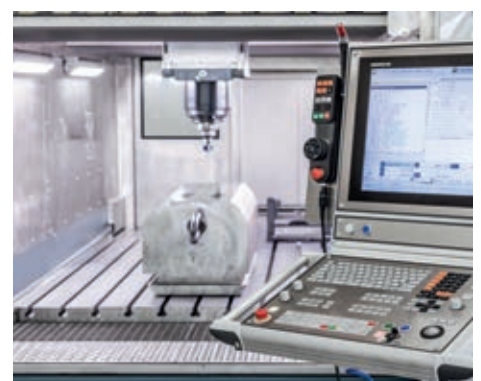
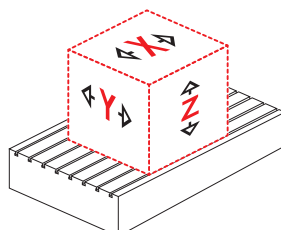
**Maximal dimensions of the workpiece
in vertical machining (mm)**

X 1.800

Y 1.000

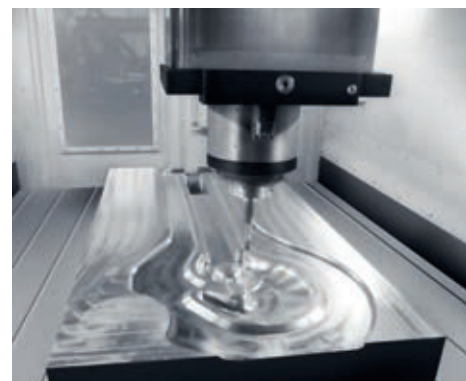
Z 800

(with the length of the tool and the holder 150 mm)





Machine travels X, Y, Z	2.300 × 1.400 × 800 mm
Optional spindle	38 kW, 302 Nm, 15.000 1/min, HSK - A100
Optional spindle	29 kW, 69 Nm, 24.000 1/min, HSK - A63
All data for spindles	S1/100%
Clamping surface	2.500 × 1.900 mm
Workpiece weight	max. 18.000 kg
Feed rate X, Y, Z	30.000 mm/min
Machine weight approx.	25.500 kg
Machine dimensions	5.100 × 4.600 × 4.050 mm



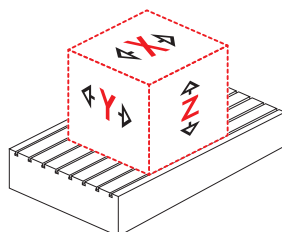
**Possibility of continuous 5-axis machining
by means of an attachable, tilting rotary table**

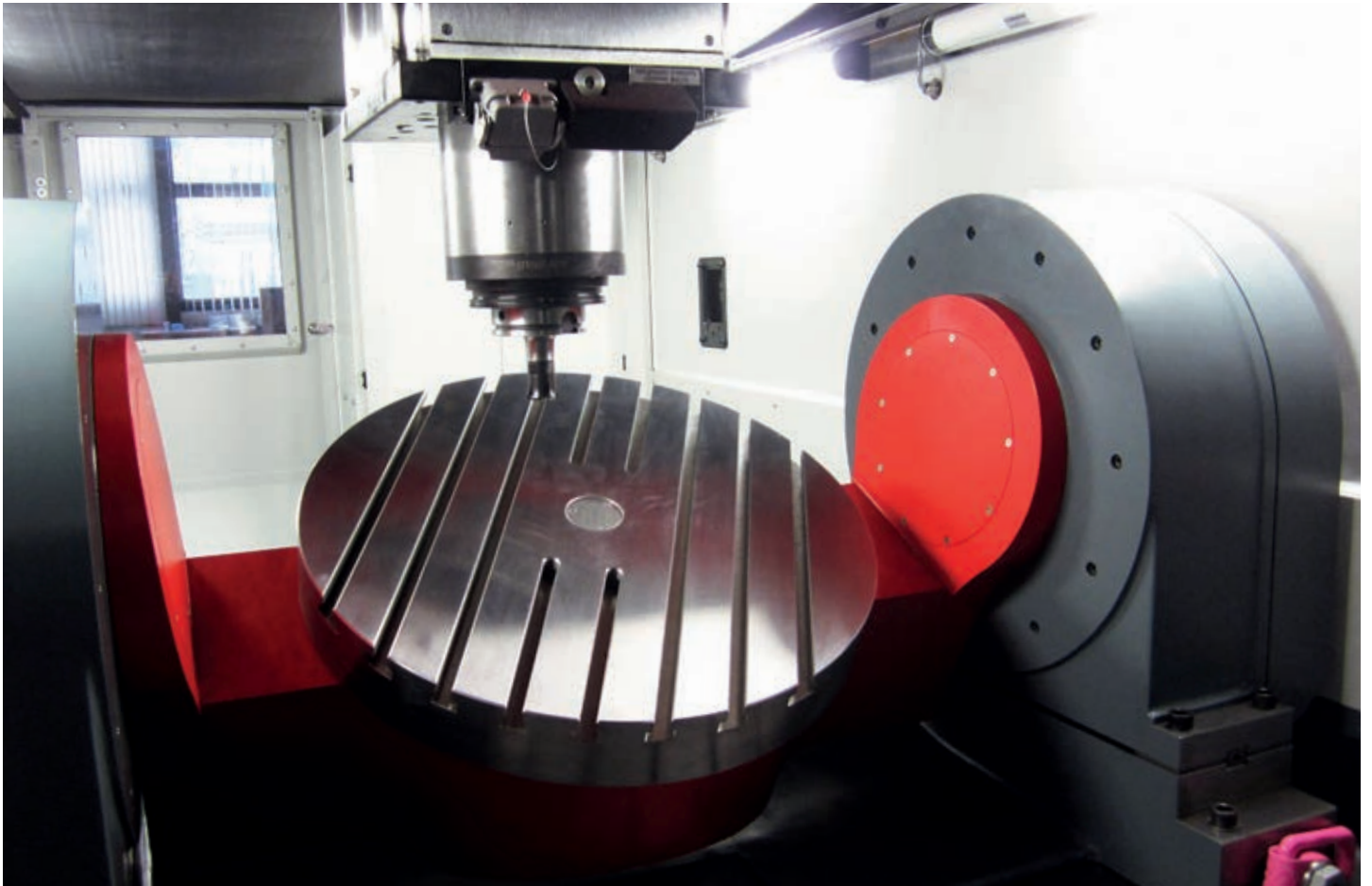
Workpiece diameter	max. 800 mm
Workpiece weight	max. 1.000 kg

**Maximal dimensions of the workpiece
in vertical machining (mm)**

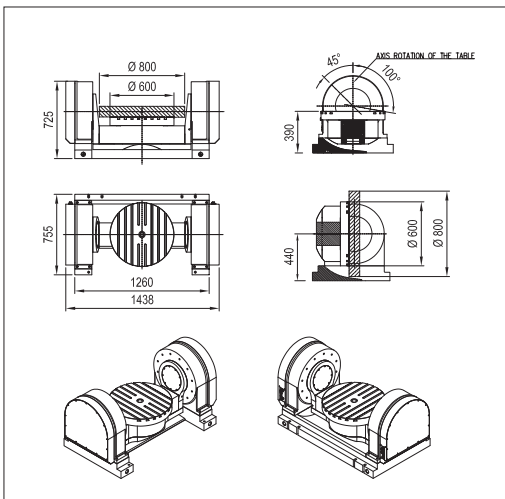
X 2.300
Y 1.400
Z 925

(with the length of the tool and the holder 150 mm)





TRIMILL TABLE 600



The 2-axis tilting rotary table developed and manufactured by us significantly increases the technological flexibility of the 3-axis CNC machining center TRIMILL. This high-precision accessory can easily be mounted on a fixed machine table with T-slots, connected to a docking station, and thus quickly transforms a 3-axis machine into a powerful 5-axis machine, enabling continuous 5-axis machining. The tilting rotary table can be easily dismantled and the machine can be returned to full capacity for 3-axis machining within a few minutes.



- table tilting and rotation (axis B and C) in continuous mode
- double-sided roller-bearings for B-axis, direct drive by 2 torque motors, no backlash
- roller-bearing for C-axis, direct drive by torque motor, no backlash
- table designed for wet operation
- plug and play installation



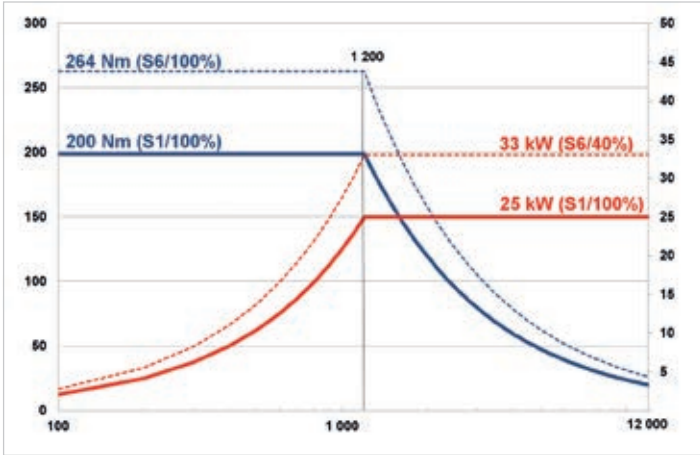
Machine travels X, Y, Z	4.500 × 4.500 × 1.500 mm
Optional spindle	38 kW, 302 Nm, 15.000 1/min, HSK - A100
Optional spindle	52 kW, 1.000 Nm, 2.500 1/min, HSK - A100
All data for spindles	S1/100%
Clamping surface	5.000 × 4.800 mm
Workpiece weight	max. 186.000 kg
Feed rate X, Y, Z	40.000 mm/min
Machine weight approx.	115.800 kg
Machine dimensions	9.415 × 9.830 × 6.208 mm

	X	×	Y	×	Z
VC 3016	3.000	×	1.600	×	1.200
VC 3021	3.000	×	2.100	×	1.200
VC 3525	3.500	×	2.500	×	1.500
VC 4525	4.500	×	2.500	×	1.500
VC xx25	xxxx	×	2.500	×	1.500
VC 4535	4.500	×	3.500	×	1.500
VC xx35	xxxx	×	3.500	×	1.500
VC 4545	4.500	×	3.500	×	1.500
VC xx45	xxxx	×	4.500	×	1.500

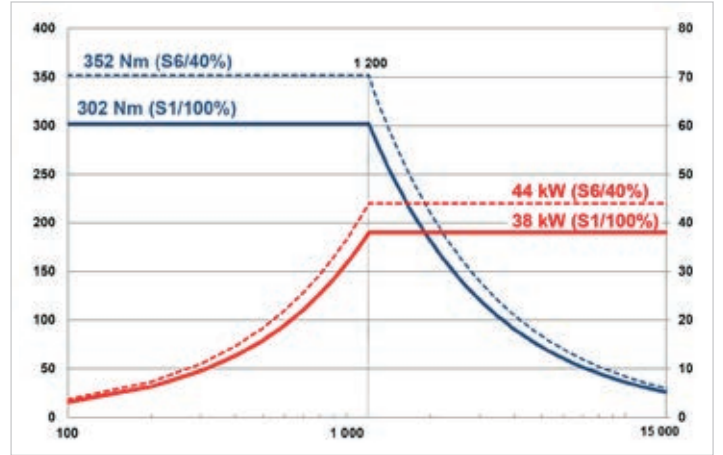


SPINDLE CHARACTERISTICS

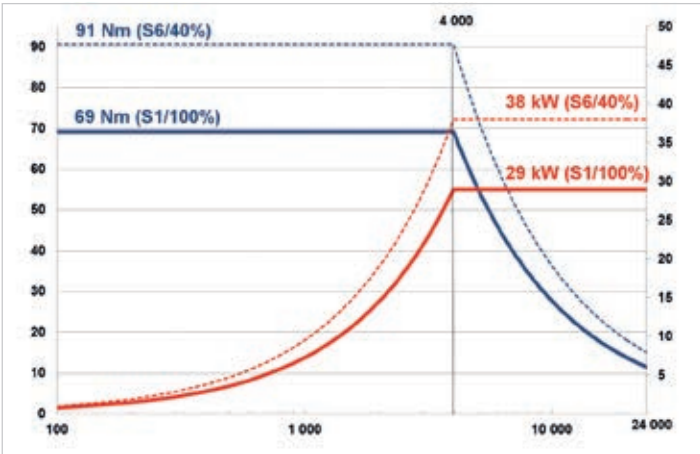
1. VC 1810



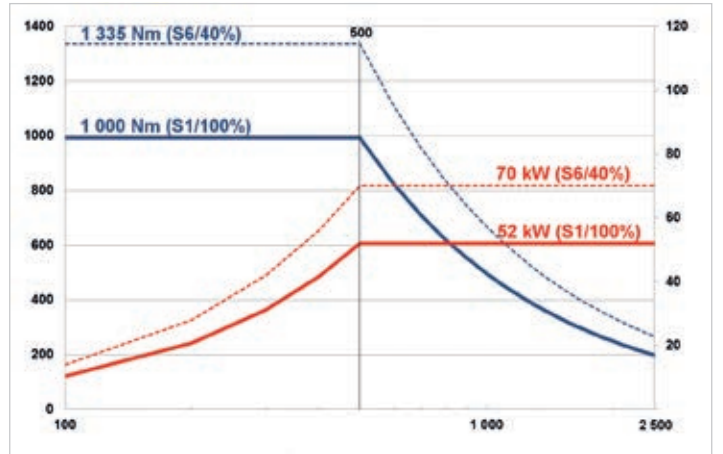
2. VC 4545/ VC 2314



3. VC 1810 / 2314



4. VC 4545



— Torque (S1/100%) — Power (S1/100%)
- - - Torque (S6/40%) - - - Power (S6/40%)

