

A photograph of four men standing in a factory setting. Three of the men are wearing blue Schunk work jackets, while the man in the center is wearing a light blue button-down shirt. They are all smiling and holding various industrial tools. The man on the far left holds a large metal vise. The man in the center holds a circular metal component with multiple holes. The man on the far right holds a small metal tool. The background shows a factory floor with various equipment and structures.

Co-act EGL-C | News HMI 2019

Benedikt Janßen | Product manager | March 2019

Superior Clamping and Gripping



Collaborating long-stroke gripper

Co-act EGL-C



**Electric 2-finger parallel gripper
certified for collaborative operation.**

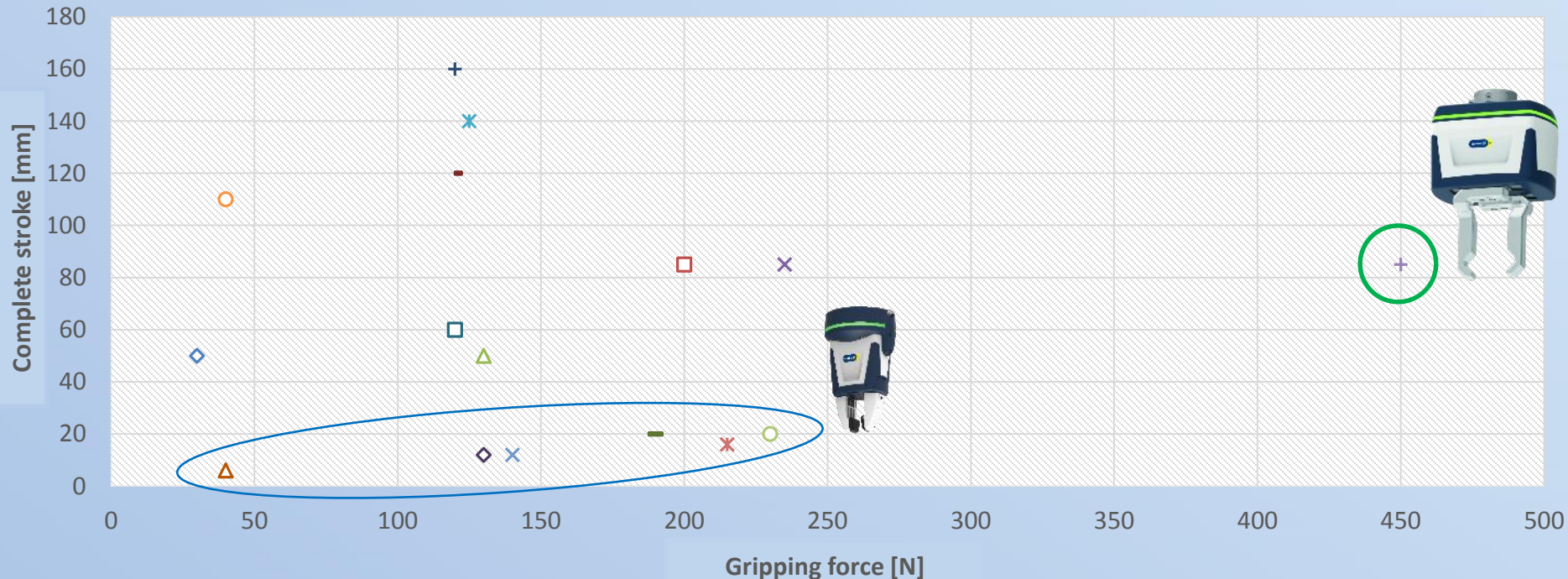
**The world's first certified industrial
long-stroke gripper for collaborative
operation.**

**Secure gripping in HRC-applications
with up to 450 N of gripping force.**

**Communication via ethernet-based
bus systems and with 24V power
supply.**

Co-act portfolio

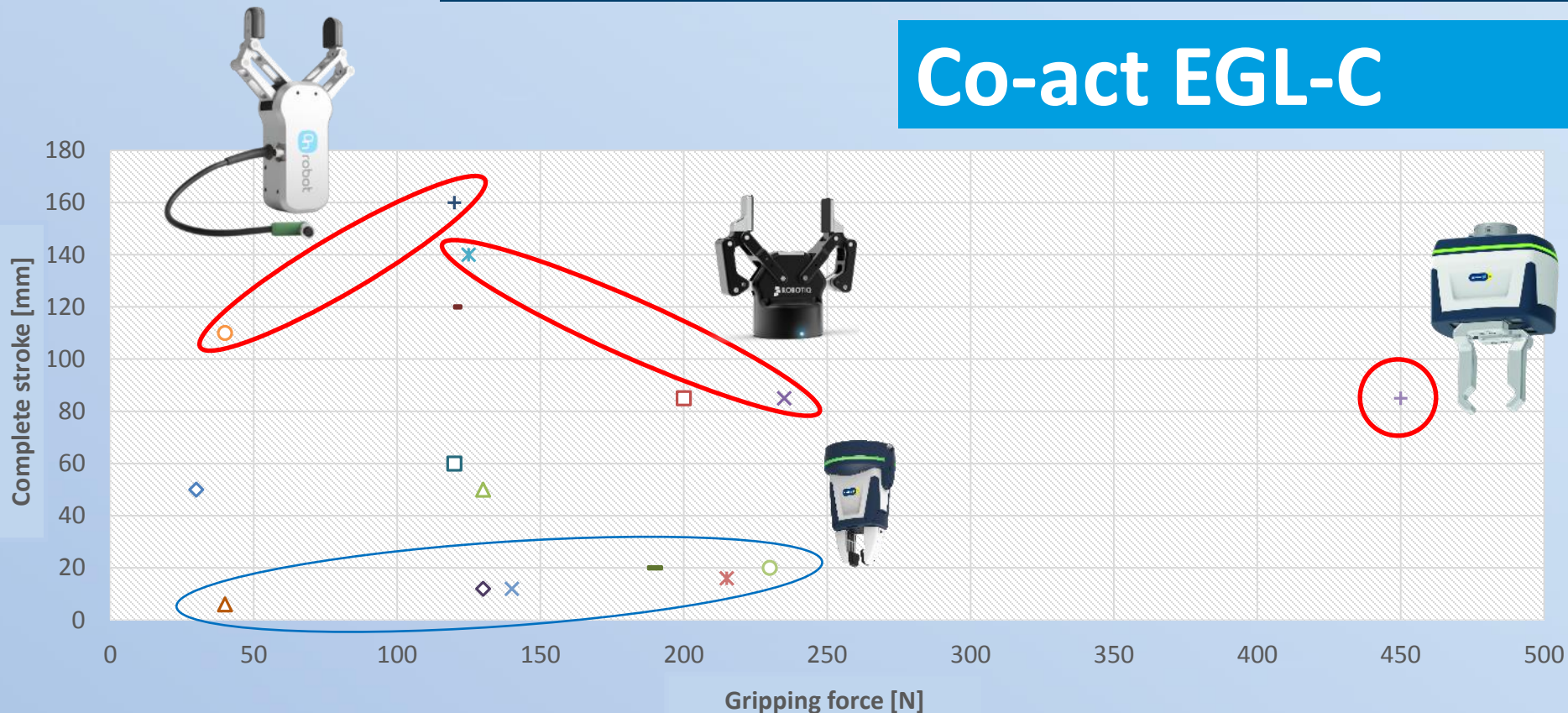
Co-act EGL-C



- ◆ Weiss CRG 30-50
- Weiss CRG 200-85
- △ Robotiq Hand-E
- × Robotiq 2F-85
- ✕ Robotiq 2F-140
- OnRobot RG2
- + OnRobot RG6
- Zimmer HRC-01
- Zimmer HRC-03
- ◇ Zimmer HRC-04
- ▣ Dahl DAG-M
- △ Co-act EGP-C 25
- × Co-act EGP-C 40
- ✕ Co-act EGP-C 50
- Co-act EGP-C 64
- + Co-act EGL-C 90

Co-act portfolio vs. competitor

Co-act EGL-C



- ◆ Weiss CRG 30-50
- Weiss CRG 200-85
- △ Robotiq Hand-E
- × Robotiq 2F-85
- × Robotiq 2F-140
- OnRobot RG2
- + OnRobot RG6
- Zimmer HRC-01
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- Co-act EGP-C 64
- + Co-act EGL-C 90

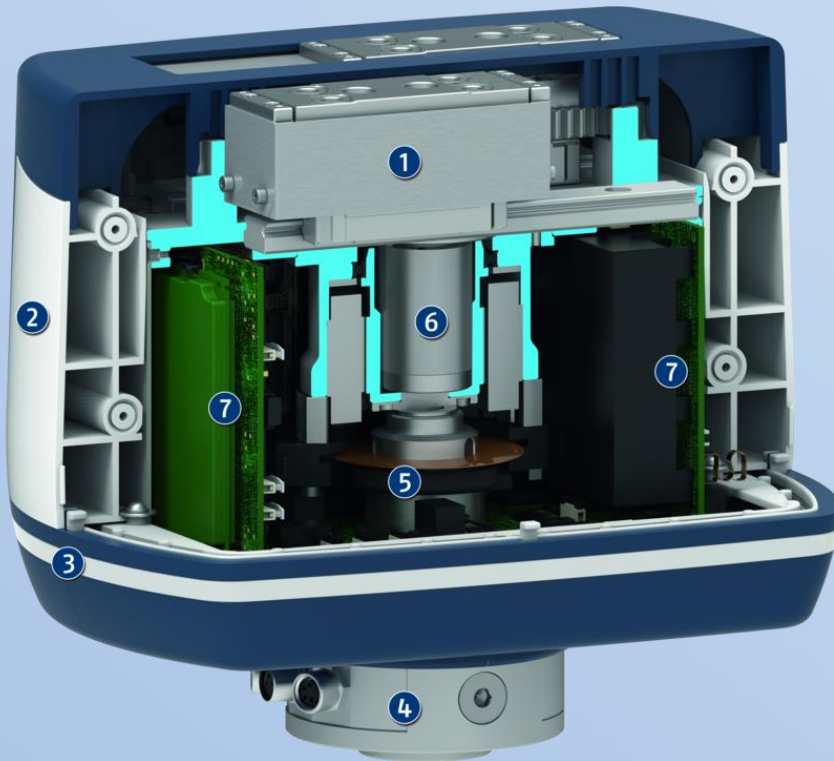
Principle of function

Co-act EGL-C

Functional description

The servomotor drives the base jaws with a gear mechanism and a rack-and-pinion-principle. The stroke is sensed by a doubled encoder system at the end of the servomotor. A force measurement is integrated in each base jaw. The electronic for power and logic is completely integrated in the gripper.

- ① Force-measuring jaws
- ② Collision protection
- ③ LED strip light
- ④ Flange
- ⑤ Stroke measuring system
- ⑥ Drive with gear
- ⑦ Electronics



I can grip safe!

Co-act EGL-C

Gripping force of 450N is over the limits of ISO/TS 15066

- Risk minimizing measures necessary
- Co-act EGL-C is equipped with safety function „Safe gripping“

Safe gripping - Combination of several safety functions

- Safe limited speed
 - Safe limited force / Safe limited motor torque
 - Safe force monitoring
 - Safe temperature monitoring
 - Safe brake control
- Redundant sensors and electronics necessary!

Functional safe - Certification under preparation!

EXKURS - Biomechanical limits

Co-act EGL-C

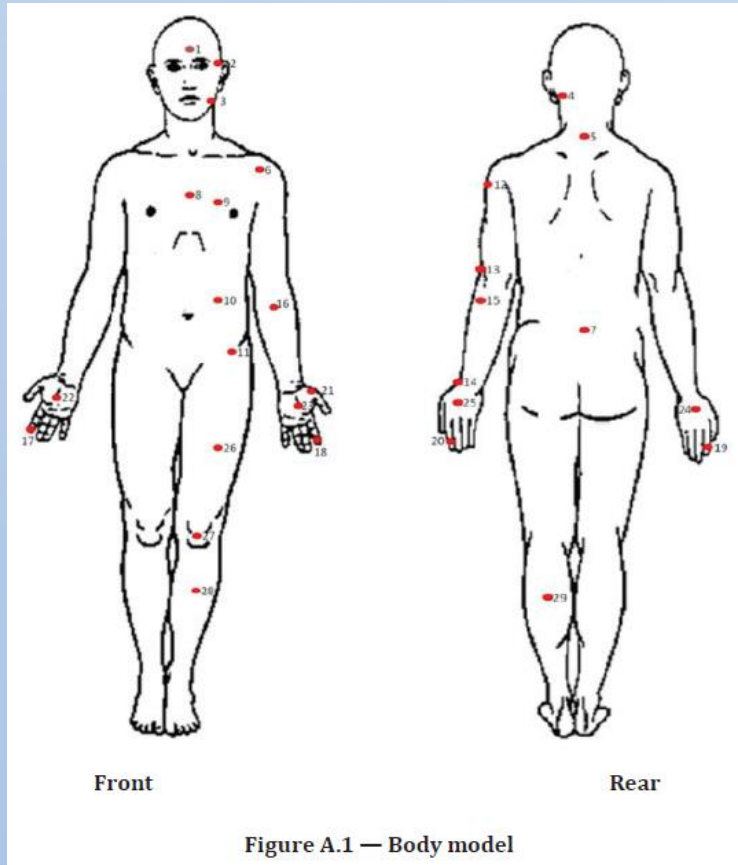


Table A.2 (continued)

Body region	Specific body area		Quasi-static contact		Transient contact	
			Maximum permissible pressure ^a p_s N/cm ²	Maximum permissible force ^b N	Maximum permissible pressure multiplier ^c P_T	Maximum permissible force multiplier ^c F_T
Hands and fingers	17	Forefinger pad D	300	140	2	2
	18	Forefinger pad ND	270		2	
	19	Forefinger end joint D	280		2	
	20	Forefinger end joint ND	220		2	
	21	Thenar eminence	200		2	
	22	Palm D	260		2	
	23	Palm ND	260		2	
	24	Back of the hand D	200		2	
	25	Back of the hand ND	190		2	
Thighs and knees	26	Thigh muscle	250	220	2	2
	27	Kneecap	220		2	
Lower legs	28	Middle of shin	220	130	2	2
	29	Calf muscle	210		2	

Source: ISO/TS 15066:2016(E)

EXKURS - Gripping force and HRC

Co-act EGL-C

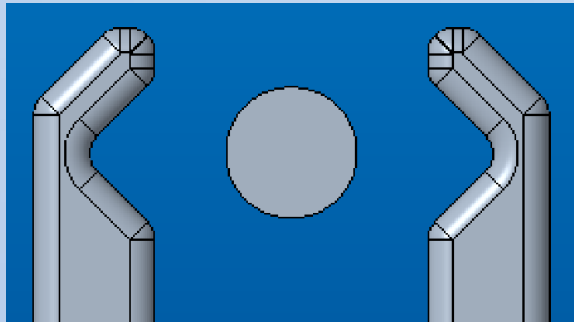
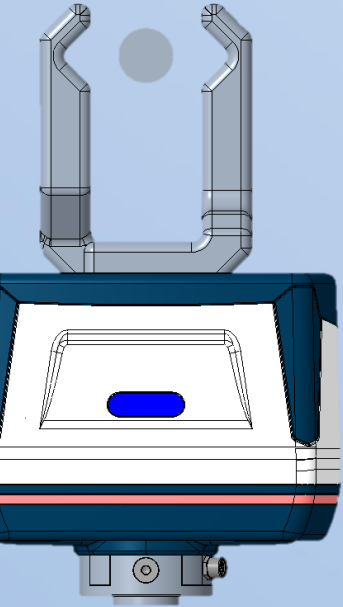


The "gripping force" specification in the catalog refers to the arithmetic sum of the forces acting on each jaw individually at distance P (see illustration). For evaluation of the biomechanical limit values in accordance with ISO/TS 15066, only the gripping force acting on each gripper jaw must be used. Furthermore, the information in the operating manual is referred to.

- ① Co-act EGL-C gripper
- ② Gripper jaws (customized)
- ③ Gripping force applied to each gripper jaw
- ④ Workpiece

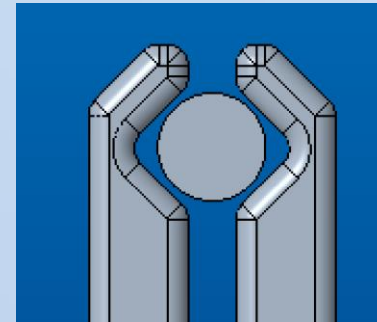
I can grip safe!

Co-act EGL-C



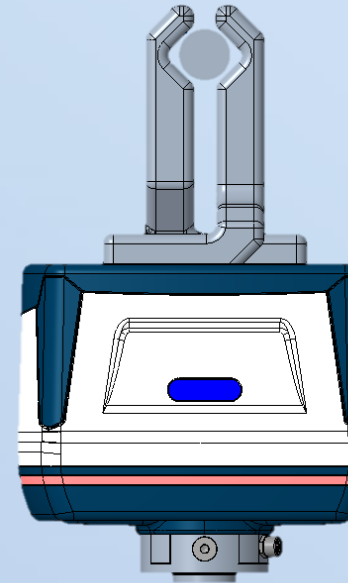
- Distance between workpiece and fingers bigger than 4 mm
- Gripping force under 140N

Gripping force safely reduced!



- Distance between workpiece and fingers smaller than 4 mm
- Gripping force higher 140N

Gripping force not reduced!



YouTube - #HMI2019

Co-act EGL-C



YouTube - Next Robotics - Hannover Messe 2019 Weltneuheit! Flexibler Cobot-Greifer von Schunk

Advantages – Your benefits

Co-act EGL-C

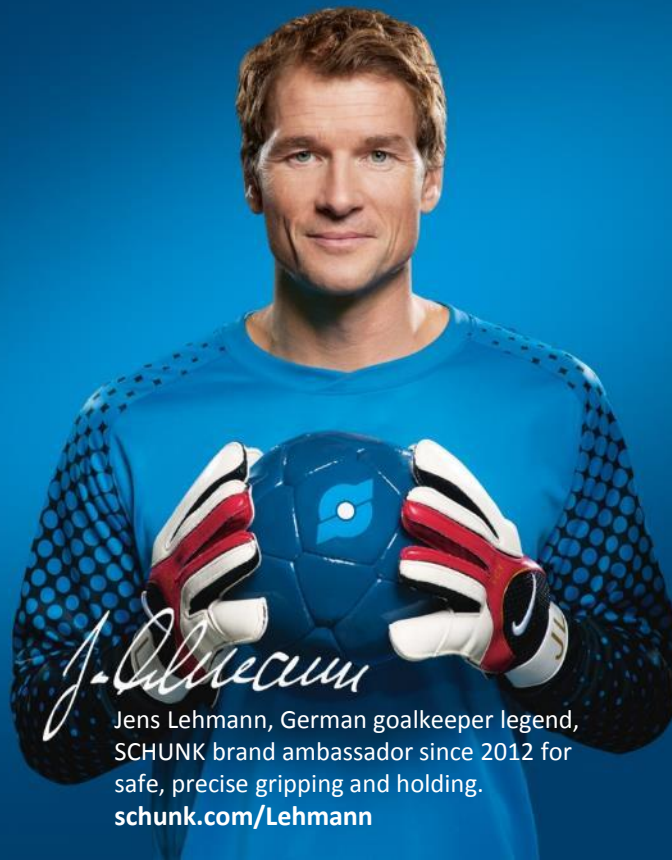
- **Certified gripping unit** saves effort for safety assessment of the application
- **Safe gripping for workpiece weights of up to 2.25 kg** guaranteed by integrated force and distance measurement
- **Pre-assembled gripping unit with robot interface** for a easy and fast integration
- **Integrated status display** to the visibility of the application state at the operator's eye level
- **Actuation via various bus systems** for easy commissioning and rapid integration into existing systems

Price 5.000€ - 5.500€
Available Q4/2019

Our advantages compared to our competitors!

- Gripper will be certified- We face the challenge!
- Gripping force of max. 450N- We can handle heavy things!
- Gripping force maintenance up to 450N - We grip safe in every situation!
- Integration of three bus systems- We are more communicative!

Superior Clamping and Gripping



Jens Lehmann, German goalkeeper legend,
SCHUNK brand ambassador since 2012 for
safe, precise gripping and holding.
schunk.com/Lehmann