



Hand in hand for tomorrow

Manual Tool Change System CMS

Product Information
Comparison CMS and SHS

06-2024



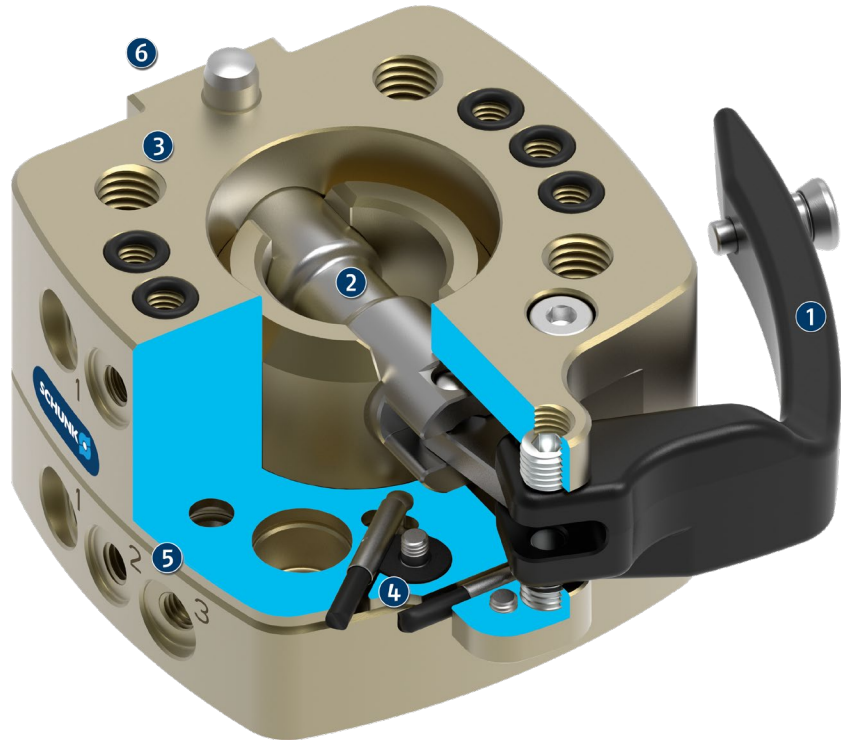
- 1. Product overview**
- 2. Selling prices**
- 3. Replacement HWS & SHS**
- 4. Competition**
- 5. Sales support measures
& Marketing push**

Product overview CMS

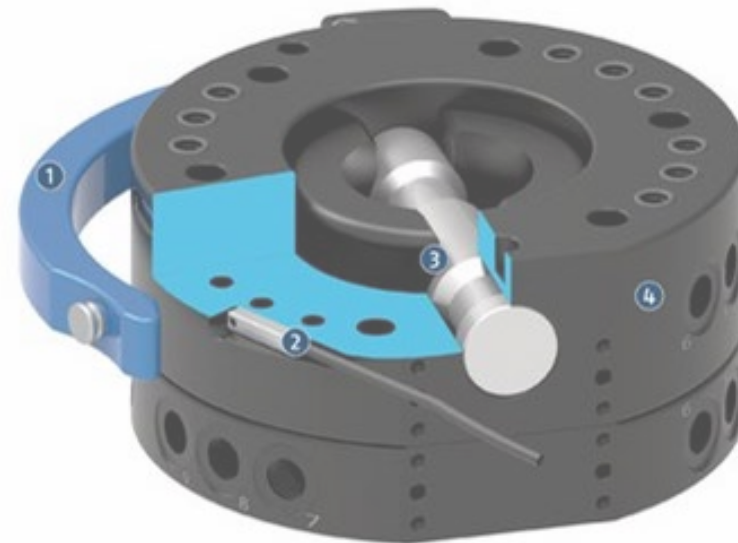
- Introduction of a **completely new product family**
- Consisting of **6 sizes** (040, 050, 063, 080, 100 and 125) analog to the SHS series, plus "not-ISO" and "Basis" version



CMS vs. SHS: Similarities



- ISO flange on the robot side
- Proven locking mechanism via locking bolt and lever
- With H1 grease as standard
- Query sensors



CMS vs. SHS: Replaceability

- Identical installation height
- Identical screw-on patterns (head and adapter side)

1:1 replaceable, but not 1:1 compatible

-> Complete system replaceable, but master + adapter not compatible



Identification code CMS

CMS 040 – K – B – A15

Series
Changer Manual SCHUNK

Size
(according ISO-Flange)

Side
K = robot side
A = adapter side

Version
B = Basic (without air feed-throughs)
N = Non-ISO -> 1:1 SHA (only tool side, not at -B)

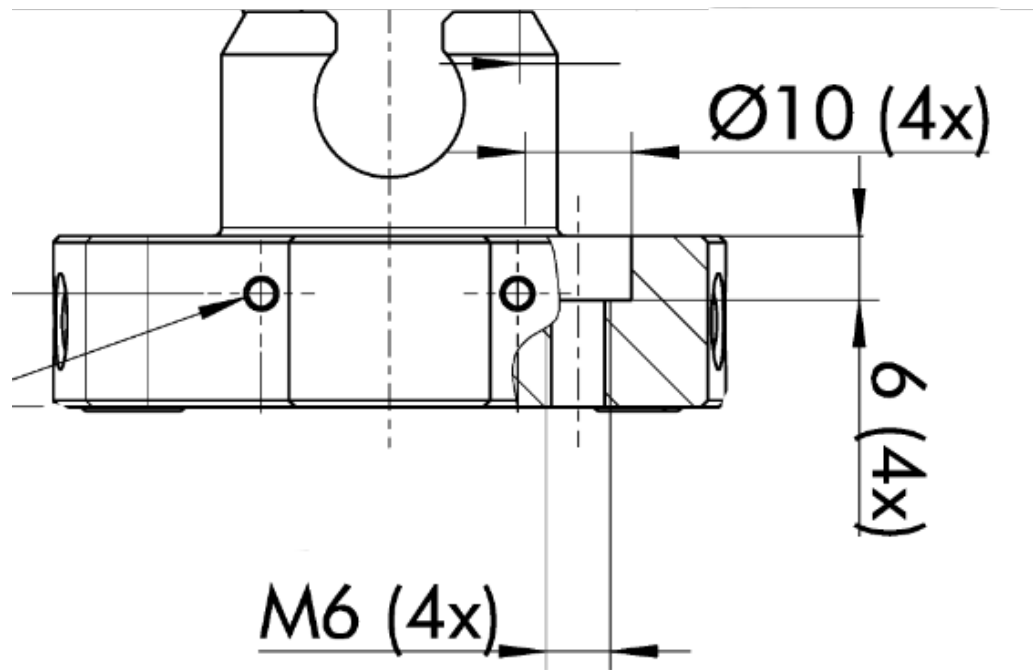
Optional modules



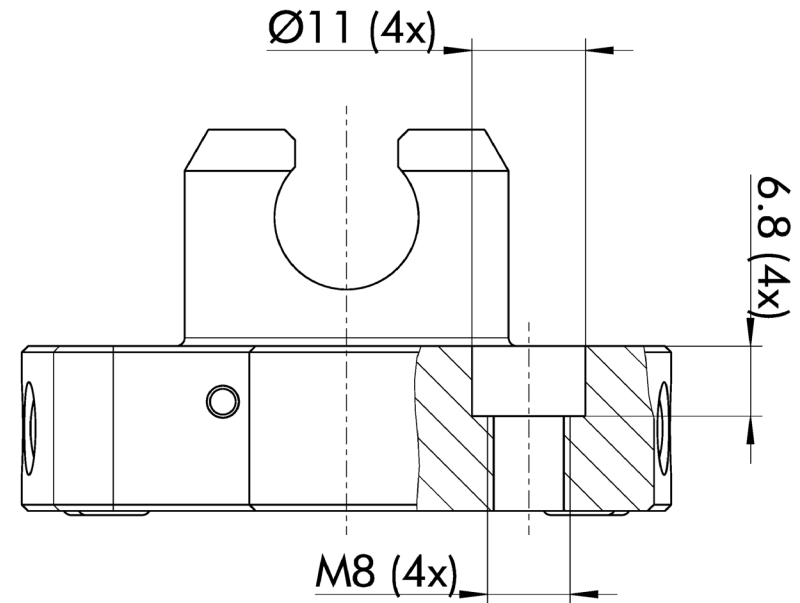
No placeholders for non-existent version / modules
-> Example: CMS 040-K
Comparison: SHK-040-000-000

Variants

- CMS-A vs. CMS-A-N
- Same pitch circle, different thread size
- Example: CMS 050



CMS-A: ISO flange below

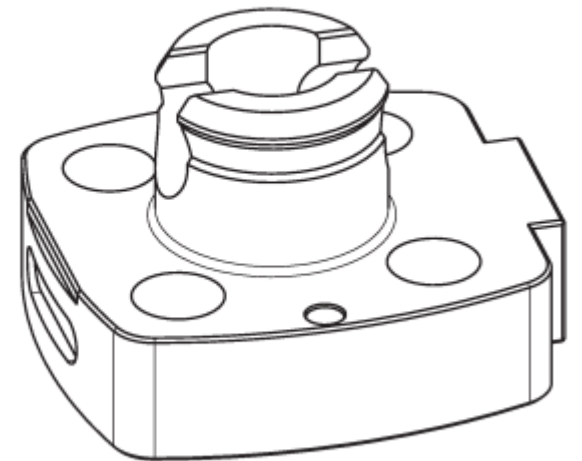
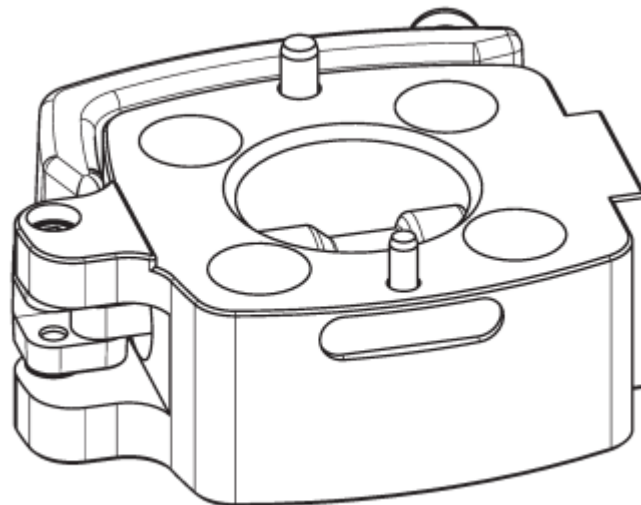


CMS-A-N: SHA mounting pattern

NEW: Basic-Version

Differences to standard version

- No integrated air feed-throughs
- No possibility for sensor query
- Optional modules possible
- significantly lower priced



Overview of variants

CMS 040-K

- Suitable for ISO flange
- Bolt-on surface SWO
- Air feed-through
- Sensors optional

CMS 040-K-B

- Suitable for ISO flange
- Bolt-on surface SWO
- No air feed-through
- No sensors

CMS 040-A

- ISO flange downwards
- Screw-on surface SWO
- Air feed-through

CMS 040-A-N

- SHA mounting pattern (non-ISO)
- Mounting surface SWO
- Air feed-through

CMS 040-A-B

- ISO flange downwards
- Mounting surface SWO
- No air feed-through

➔ Prio variant for new applications

➔ 1:1 SHS Replacement
For competition with GRIP SHW-P

➔ For competition with GRIP SHW



Special solutions and modifications based on the CMS are now also possible again!
(provided the general conditions are met)

ID-Overview

Old product		1:1 replacement		ISO screw connection (tool side)		Basic version	
ID SHS	Description SHS	ID CMS	Description CMS	ID CMS	Description CMS	ID CMS	Description CMS
310400	SHK-040-000-000	1545243	CMS 040-K	1545243	CMS 040-K	1545285	CMS 040-K-B
310401	SHA-040-000-000	1545281	CMS 040-A-N	1545265	CMS 040-A	1545287	CMS 040-A-B
310410	SHK-050-000-000	1545289	CMS 050-K	1545289	CMS 050-K	1545314	CMS 050-K-B
310411	SHA-050-000-000	1545313	CMS 050-A-N	1545310	CMS 050-A	1545315	CMS 050-A-B
310420	SHK-063-000-000	1545316	CMS 063-K	1545316	CMS 063-K	1545321	CMS 063-K-B
310421	SHA-063-000-000	1545319	CMS 063-A-N	1545318	CMS 063-A	1545322	CMS 063-A-B
310430	SHK-080-000-000	1545324	CMS 080-K	1545324	CMS 080-K	1545360	CMS 080-K-B
310431	SHA-080-000-000	1545327	CMS 080-A-N	1545325	CMS 080-A	1545362	CMS 080-A-B
310440	SHK-100-000-000	1545364	CMS 100-K	1545364	CMS 100-K	1545370	CMS 100-K-B
310441	SHA-100-000-000	1545368	CMS 100-A-N	1545366	CMS 100-A	1545387	CMS 100-A-B
310450	SHK-125-000-000	1545393	CMS 125-K	1545393	CMS 125-K	1545403	CMS 125-K-B
310451	SHA-125-000-000	1545401	CMS 125-A-N	1545397	CMS 125-A	1545404	CMS 125-A-B

CMS vs. SHS: Overview advantages



- + New lever shape**
-> all air connections can be used radially
- + Sensor query** (lock-unlocking and tool presence) integrated in all sizes
- + Direct mounting of feed-through modules**
(S7 on 040/050, K on 063/080, J on 100/125)
- + New air feed-throughs**
-> less force required for locking
-> Suitable for positive and negative pressure (vacuum)

New lever shape

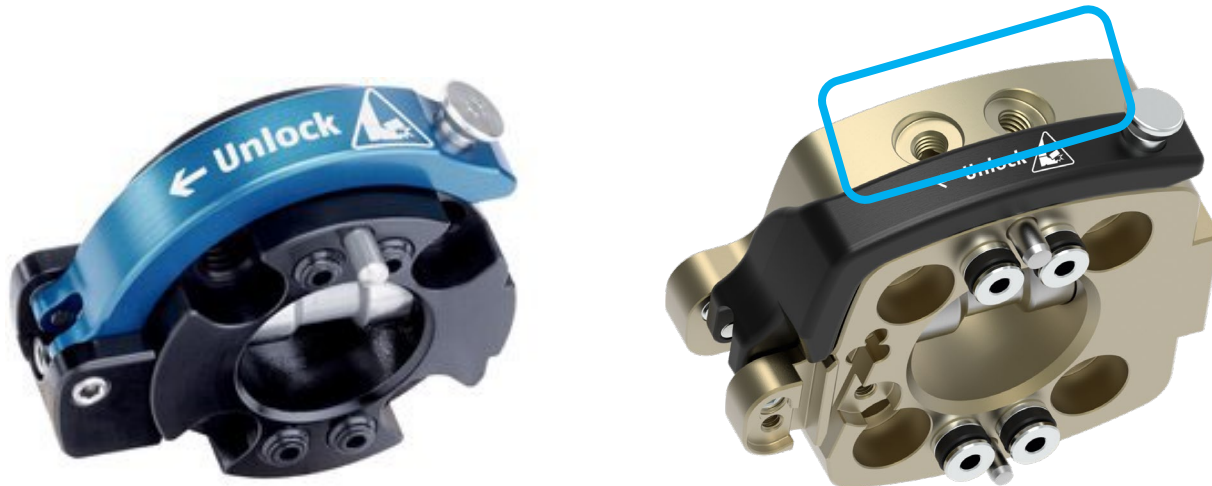
Until now:

Simple and convenient tool-free changing process

NEW:

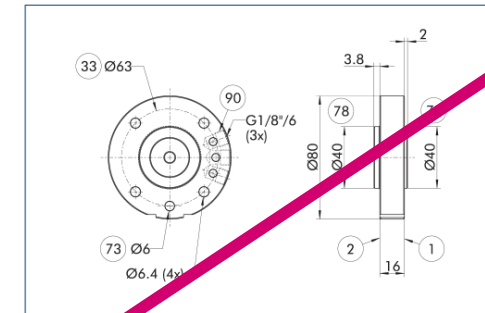
Offset lever enables to use all radial air connections!

- Previously: Lever covers 50% of the radial connections on the master side



-> interface plate not required!

Adapterplatte ISO-A063-P-Radial



- ① Anschluss roboterseitig
- ② Anschluss werkzeugseitig
- ③ Lochkreis DIN ISO-9409
- 73 Passung für Zentrierstift
- 78 Passung für Zentrierung
- 90 Anschlüsse für radiale Luftdurchführung

Roboterseitige Adapterplatte

Bezeichnung	Ident.-Nr.
Roboterseitig	
A-SHK-063-P-RADIAL	1391562

① Adapterplatte mit radialen Luftanschlüssen zur Nutzung der integrierten axialen Luftanschlüsse des SHK.

Sensors

Locking & tool presence monitoring

Monitoring of locking and unlocking

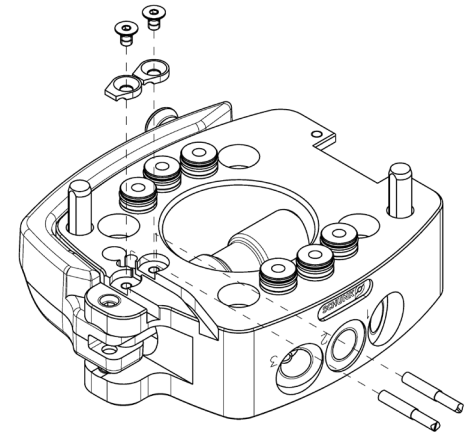
- Inductive sensing of the lever position (closed)

Monitoring tool presence

- Inductive sensing of the pin in CMS-A

Same mounting kit for both queries in all sizes:

- 1548743 – AS-CMS-K-IN30K
- Mounting kit contains sensor, clamp bracket and screw
- Always optional



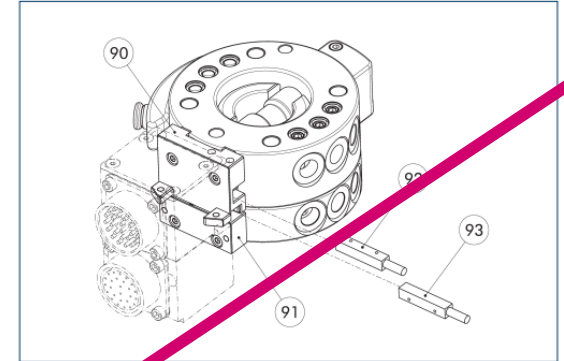
Option modules (SWO-E and SWO-F)

SCHUNK standard mounting patterns for electrical, pneumatic and fluid modules

- **Until now:** interface plate required
- **NEW:**
- S7 for CMS 040 and 050
- K for CMS 063 and 080
- J for CMS 100 and 125
- Picture shows CMS 050 with SWO-ME10 option module

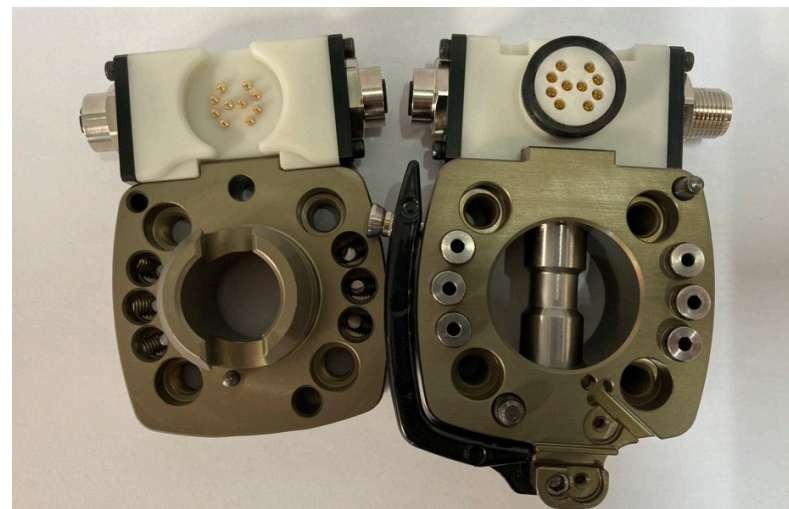
-> Adapter plate not required!

Anbaubehör



- 90 Roboterseitige Adapterplatte
- 91 Werkzeugseitige Adapterplatte
- 92 Verriegelungssensor
- 93 Werkzeuganwesenheitssensor

Bezeichnung	Ident.-Nr.	Beschreibung
Roboterseitig		
SHK-063-AKO-K	1304742	Adapterplatte
Werkzeugseitig		
SHA-063-AKO-K	1304745	Adapterplatte



Integrated fluid feed-throughs



- Previously used form sealings require very high compression forces
- New approach: sealing pins with lip seals
-> **CMS is easier to lock!**

Feeding-through vacuum:

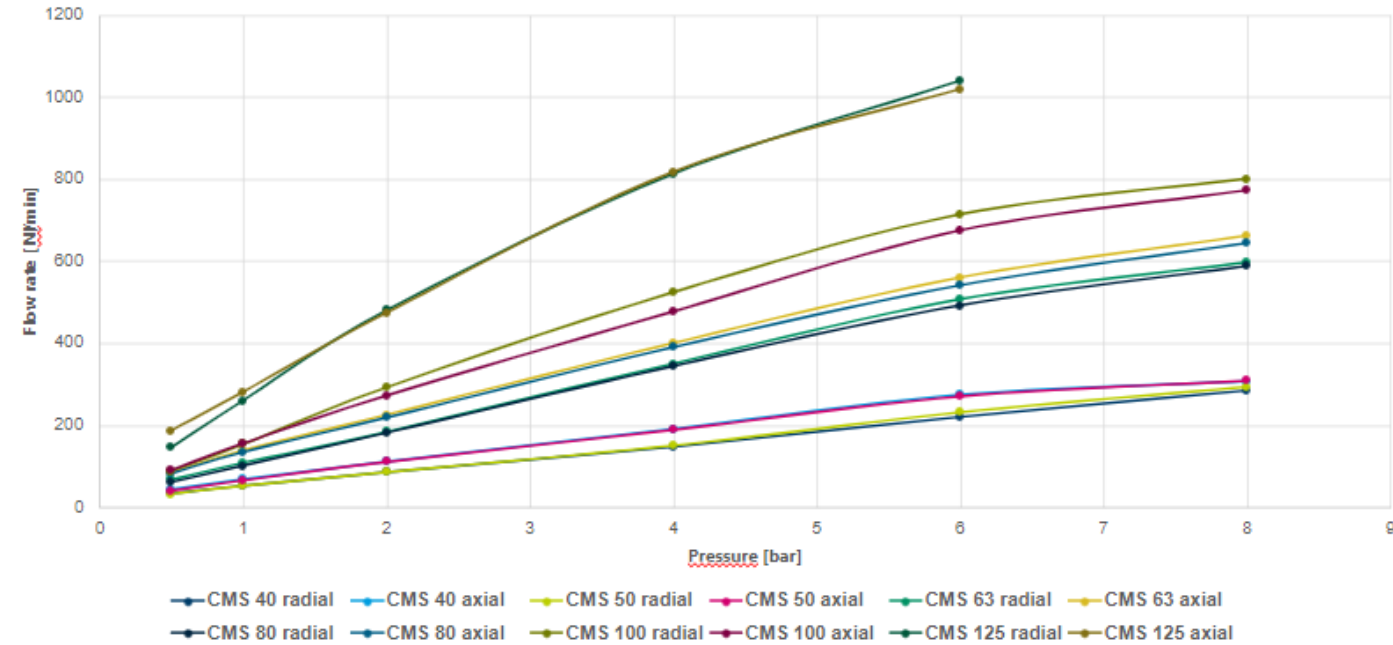
- ✓ system is suitable for **pneumatic and vacuum applications**
- ✓ Successful validation in the technical laboratory at SCHUNK
- ✓ Customer does not have to turn or replace seals, 1:1 use as with SHS

Measurements in technical lab

Test setup



Flow rate - diagram



Flow test – compressed air

CMS 40 to CMS 63

	CMS 40 radial	CMS 40 axial	CMS 50 radial	CMS 50 axial	CMS 63 radial	CMS 63 axial
[bar]	[Nl/min]	[Nl/min]	[Nl/min]	[Nl/min]	[Nl/min]	[Nl/min]
0,5	30	40	30	40	65	85
1	50	65	50	65	105	135
2	85	110	85	110	180	225
4	145	190	150	185	350	400
6	220	270	230	270	505	560
8	280	305	290	305	595	660
Air connection thread on CMS valve and adaptor	M5	M5	M5	M5	G1/8"	G1/8"
Tube diameter [mm]	6	6	6	6	8	8

Measurement results available on request
Technical product sales

SCHUNK CMS vs. SCHUNK SHS

1:1 interchangeable, but not 1:1 compatible

	CMS	SHS
Air feedthroughs	All radially usable	Without adapter plate, only 50% radially useable
Sensors	Integrated in all sizes	100 and 120 direct, smaller sizes with adapter plates
Mounting optional modules	Direct	100 and 120 direct, smaller sizes with adapter plates
Force needed for locking	Less, because of lip sealings	More, because of rubber bushings



Moment rating

- In general: CMS is as good as or better than the SHS in terms of moment capacity
- Payload and static moments are identical
- Dynamic moments: Focus in tests and simulations was on getting higher Mx/y value, Mz reduced for this purpose

size	payload		Dynamic moment rating				static moment rating			
	SHS	CMS	SHS	CMS	SHS	CMS	SHS	CMS	SHS	CMS
			Mx/y		Mz		Mx/y		Mz	
040	9	9	15	22,5	25	15	45	45	75	75
050	11	11	25	35	45	27	75	75	135	135
063	18	18	50	75	80	48	150	150	240	240
080	36	36	100	115	155	75	300	300	465	465
100	43	43	150	230	395	230	500	500	1185	1185
125	58	58	320	478	775	465	960	960	2325	2325

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List sales prices as of 07-2024

- Launch June 2023: CMS adopts SHS prices, SHS increased by +5%
- Push 2024: SHS is increased by +20% from 01.07. (Phasing out and discontinuation)

CMS / CMS -A-N		CMS-B		SHS		HWS	
CMS 040-K	639 €	CMS 040-K-B	447 €	SHK-040	805€	HWK-040	990 €
CMS 040-A CMS 040-A-N	371 €	CMS 040-A-B	260 €	SHA-040	468 €	HWA-040	583 €
CMS 050-K	671 €	CMS 050-K-B	470 €	SHK-050	846€	HWK-050	1.030 €
CMS 050-A CMS 050-A-N	387 €	CMS 050-A-B	271 €	SHA-050	488€	HWA-050	598 €
CMS 063-K	699 €	CMS 063-K-B	489 €	SHK-063	881 €	HWK-063	1.070 €
CMS 063-A CMS 063-A-N	404 €	CMS 063-A-B	283 €	SHA-063	510€	HWA-063	630 €
CMS 080-K	793 €	CMS 080-K-B	555 €	SHK-080	999 €	HWK-080	1.220 €
CMS 080-A CMS 080-A-N	437 €	CMS 080-A-B	306 €	SHA-080	551 €	HWA-080	660 €
CMS 100-K	1.070 €	CMS 100-K-B	749 €	SHK-100	1.350 €	HWK-100	1.700 €
CMS 100-A CMS 100-A-N	671 €	CMS 100-A-B	470 €	SHA-100	846 €	HWA-100	1.040 €
CMS 125-K	1.360 €	CMS 125-K-B	952 €	SHK-125	1.710 €	HWK-125	2.120 €
CMS 125-A CMS 125-A-N	921 €	CMS 125-A-B	645 €	SHA-125	1.170 €	HWA-125	1.430 €

Price comparison CMS vs. SHS

Prices as of 01.07.2024

Configuration with A15 module and adapter plate for use of all radial air feed-throughs

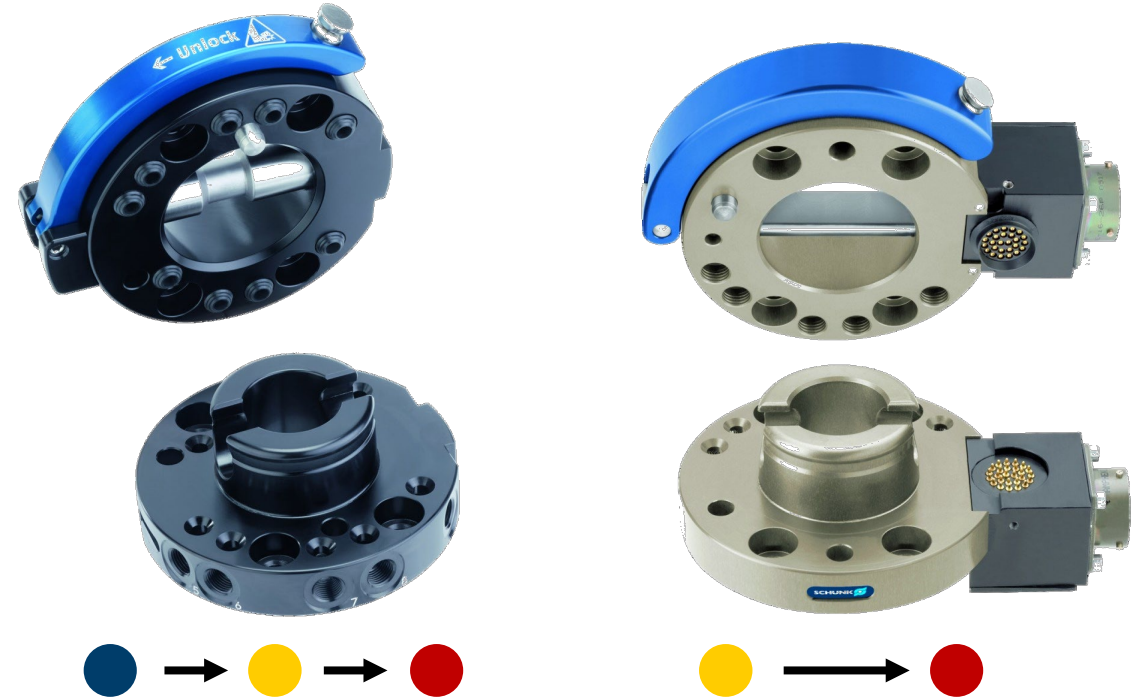
SHS			CMS		
1391557	A-SHK-050-P-RADIAL	324 €	-	-	-
310410	SHK-050-000-000	846 €	1545289	CMS 050-K	671 €
1304734	SHK-050-AK0-S7	126 €	-	-	-
9936357	SW0-A15-K	270 €	9936357	SW0-A15-K	270 €
Subtotal master		1566€	Subtotal master		941€
310411	SHA-050-000-000	488 €	1545313	CMS 050-A-N	387 €
1304738	SHA-050-AK0-S7	119 €	-	-	-
9936356	SW0-A15-A	199 €	9936356	SW0-A15-A	199 €
Subtotal tool		806€	Subtotal tool		586€
TOTAL		2372€	TOTAL		1527 €



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Replacement HWS & SHS

- HWS and SHS will be discontinued in the official product discontinuation process in 2024 (from on 01.07.2024)
- HWS available until **30.12.2024** (end of sales)
- SHS available until **30.06.2025** (end of sales) + price adjustment +20% from 01.07.2024
- **Targets:**
 - Full focus on new product CMS
 - Sales campaign CMS national Start from **02.04.**, valid until the end of Q3 2024
 - Exception: SHS and HWS only in existing applications sold



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GRIP

- GRIP with new variant on the market: SHW-P (since Q3 2023)
(GRIP version SHS with pneumatical feed-throughs, O-rings)
- Not interchangeable with the SCHUNK SHS version,
 - neither head nor adapter

Arguments for SCHUNK:

- ⊕ technical advantages CMS vs. SHS
- ⊕ Variety & quality of option modules
- ⊕ SCHUNK complementary portfolio
(end-of-arm components) -> everything from a single sourced
- ⊕ SHW-P not 1:1 identical (height), adapter plate may be necessary



Other competitors

No major competitor apart from GRIP and ZIMMER, some cobot and niche products



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Presentation on homepage

- Clearer presentation of CMS on our homepage: Customers understand better which part of the quick change system is currently displayed or which half (head or adapter) is ordered

SCHUNK Hand in hand for tomorrow

Germany Janina Zuber Warenkorb

Nach Marke, Modell, Identnummer, Seriennummer...

Produkte Applikationen Services Aktuelles Unternehmen Karriere

Startseite > Automatisierungstechnik > Wechselsysteme > CMS > CMS 040-K

CMS 040-K
Manuelles Wechselsystem
Ident.-Nr. 1545243

639,00 € pro Stück
Versandfertig ab 11 Arbeitstagen

– 1 + [In den Warenkorb](#)

Manuelles Wechselsystem CMS, Baugröße: 040, Handwechsellkopf, manuell

- Kolbenhubabfrage: optional
- Anzahl Fluiddurchführungen: 4
- Kraft F_z max.: 700 N
- Max. Gesamtzuladung: 9 kg

[Sie haben eine Frage?](#)
[CAD-Datei herunterladen](#)

[Technische Details](#) [Zeichnungen](#) [Downloads](#) [Zubehör](#)

Technische Details

Manual change head **Dimensionen und max. Belastungen**

Large exhibition pedestal

Goal: Provide overall view of series and complementary portfolio. **Hands-on is encouraged!**

Left side:

- Customers can change tools (EGK – PGL+P) on the "robot" themselves
- Sensors for locking and tool presence monitoring with status display

Right side:

- Display of all sizes + selection of option modules (signal ML8, communication KE7, pneumatics P48)
- All masters removable – adapters are fixed



Small exhibition pedestal

Goal: compact version of the large CMS exhibition platform (half pallet width). Ideally suited for smaller trade fairs, in-house exhibitions, etc.

Touching is welcome!

- Trade fair visitors can carry out tool changes (EGK – PGL+P) themselves
- Robot statically mounted, CMS size 050 and optional modules
- Sensors for locking and tool presence monitoring with jam display
- All adapters removable – heads are fixed



Marketing Push Flyer



Target of the flyer:

- Inform new customers
- Help convince existing customers to switch from SHS to CMS

Updated version with new renderings available digitally

SCHUNK

Manual Change System CMS

Flexible. Compact. Intuitive.

Hand in hand for tomorrow

Manual changing. Done. With SCHUNK.

The manual change system CMS impresses with its user-friendliness, diversity of modules, and extensive range of accessories. It can be used on robots as well as in stationary applications, wherever tool changes are important.

Your added value:

- **ISO flange pattern** for simple assembly on most types of robots without additional adapter plates
- **Locking and tool presence monitoring prepared by default** for process-reliable monitoring, optionally with sensors
- **Integrated air feed-throughs** allow compressed air and vacuum to be fed through
- **Locking lever** Proven (push level) technology for manual actuation without additional tools
- **High module diversity** for diverse media transmission options
- **Available as basic variant** without integrated air feed-throughs for easy applications

Now even better

All air feed-throughs can be applied radially
Previously: master side only 50% applicable radially

Locking and tool presence monitoring is integrated in all sizes
Previously: only integrated from size 100 upwards

Direct screw mounting of electrical, pneumatic and fluid modules
Previously: adapter plate required

Accurately interchangeable
SCHUNK offers the CMS manual change system for existing customers as a T1 replacement for the predecessor model. Since it has the same overall height as well as identical screw connection diagrams on the robot and tool side, easy and quick retrofitting of existing systems is possible.

It pays off to switch

The new CMS manual change system complements proven attributes of the predecessor model with new functions. In addition to the T1 replacement, the system is also available with an ISO screw connection diagram on the tool side and can thus be mounted on a wide variety of end-of-arm components without requiring adapter plates. In the basic version, the CMS change system is available without integrated air feed-throughs.

Old product	T1 replacement	ISO screw connection (tool side)	Basic version
ID SH	Description SHS	ID CMS	Description CMS
310400	SHK-040-000-000	1545243	OMS-040-E
310401	SHK-040-000-000	1545281	OMS-040-A-B
310410	SHK-050-000-000	1545289	OMS-050-E
310411	SHK-050-000-000	1545312	OMS-050-A-B
310420	SHK-063-000-000	1545316	OMS-063-E
310421	SHK-063-000-000	1545318	OMS-063-A-B
310430	SHK-080-000-000	1545324	OMS-080-E
310431	SHK-080-000-000	1545322	OMS-080-A-B
310440	SHK-100-000-000	1545364	OMS-100-E
310441	SHK-100-000-000	1545366	OMS-100-A-B
310450	SHK-125-000-000	1545393	OMS-125-E
310451	SHK-125-000-000	1545400	OMS-125-A-B

Interested?
SCHUNK offers a comprehensive complementary portfolio in addition to the user-friendly CMS manual change system. Please feel free to contact us for details.
Tel.: +49-7333-103-2990
automationsolution@de.schunk.com

SCHUNK
SCHUNK SE & Co. KG
Spaßtechnik
Greiftechnik
Automatisierungstechnik

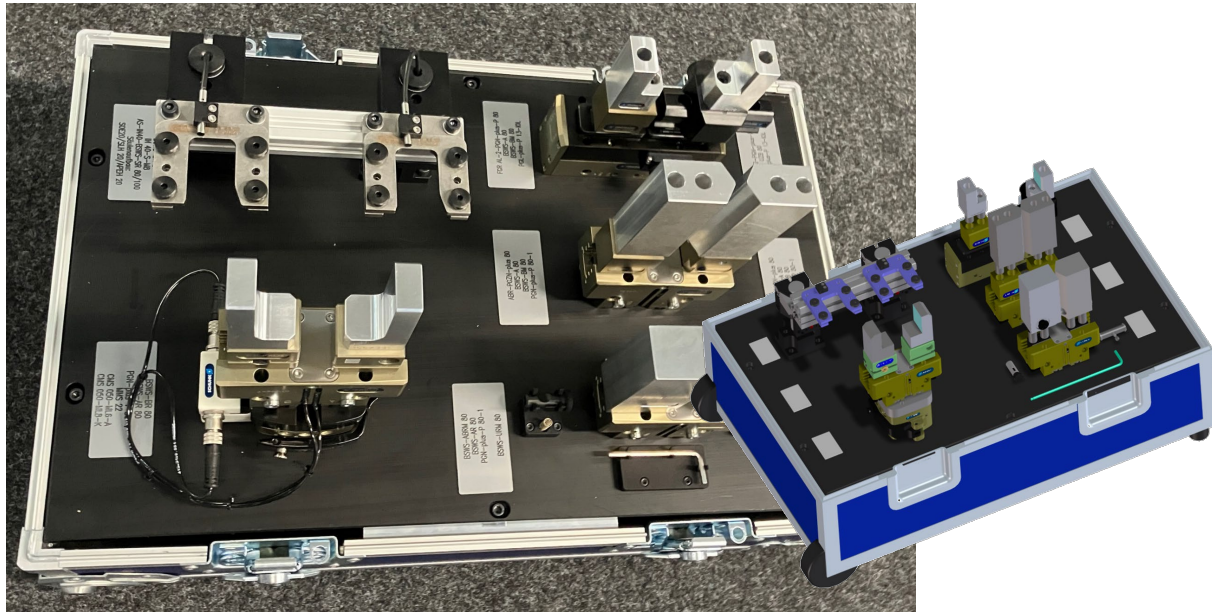
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Application images & video

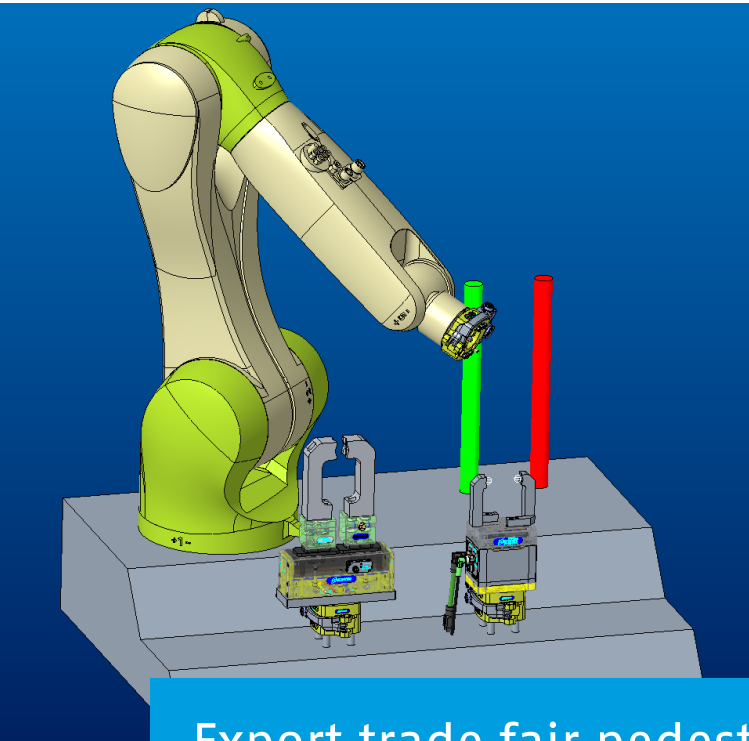


Manual tool change with SCHUNK CMS
Link: https://youtu.be/4RfA_IbzkXM?si

Further measures



CMS included in the roadshow case for BSWS



Export trade fair pedestal (Available since 06-2024)

Further measures

SCHUNK - Hand in hand for tomorrow
48,690 followers
21. Mar 2024

Ever thought about a quick and simple tool change in seconds? Then read on 📖

With our manual change system the #CMS, performing manual changes on the robot or in fixtures has never been easier or more precise.

Whether it's swapping tools or adjusting fixtures, you can count on the CMS for fast and highly repeatable changes.

What's more?
The CMS is now available for robots with an ISO interface, covering a range from ISO 40 to ISO 125, ensuring compatibility for a wide variety of applications. 🤖

Curious to learn more?
For all the details on this innovative product visit 📄 schunk.com/cms 📄

#handinhandfortomorrow #manualchangesystem #toolchange

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(21.03.2024)



Moving ads

Google Ads Campaign in Germany (Performance Max)

verschiedenen Varianten
Manuelles Wechselsystem CMS von SCHUNK entdecken!

Hohe Modulvielfalt
CMS überzeugt durch seine Benutzerfreundlichkeit, Modulvielfalt & umfangreiches Zubehör.
SCHUNK SE & Co. KG

Mit verbesserten Funktionen
Für die Nutzung an Robotern und in stationären Anwendungen geeignet. Jetzt anfragen!



Hand in hand for tomorrow