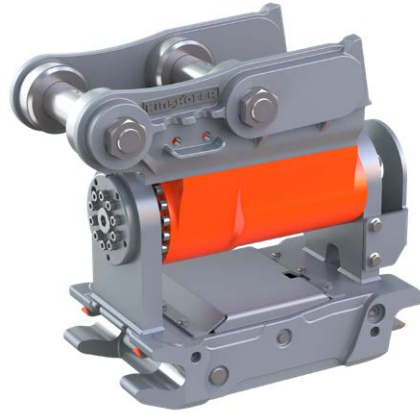


The Kinshofer TC Tilt Couplers provide a tilting angle of up to 180°, increasing the flexibility and efficiency of all attachments to a maximum. Compatible with quick coupling system S-Lock.

- ▷ Compact design, **no cylinder**.
- ▷ **More flexibility**.
- ▷ **Low height** - thus **high breakaway force**.
- ▷ **Low maintenance**.
- ▷ **Optionally available:** a double unlockable non-return valve mounted to the motor provides a safe position of the TC tilt coupler across all angles, see accessories page 9.



Mechanic Tilt Couplers TC KMS-S

Type	Rotary drive	Tilt angle	Locking	Weight (kg/lbs)	Operating weight (t/lbs)
TC02-180 KMS30S-150	RA02	2 x 90°	mechanic	49 / 107.8	1.0 - 2.0 / 2,200 - 4,400
TC02-180 KMS30S-180	RA02	2 x 90°	mechanic	49 / 107.8	1.0 - 2.0 / 2,200 - 4,400
TC03-180 KMS40S	RA03	2 x 90°	mechanic	49 / 107.8	2.0 - 2.9 / 4,400 - 6,380
TC045-180 KMS40S	RA045	2 x 90°	mechanic	72 / 158.4	2.4 - 4.5 / 5,280 - 9,900
TC07-180 KMS40S	RA07	2 x 90°	mechanic	80 / 176	4.3 - 7.0 / 9,460 - 15,400
TC07-180 KMS45S	RA07	2 x 90°	mechanic	102 / 224.4	4.3 - 7.0 / 9,460 - 15,400
TC10-180 KMS45S	RA10	2 x 90°	mechanic	130 / 286	6.0 - 10.0 / 13,200 - 22,000
TC14-140 KMS45S	RA14	2 x 70°	mechanic	195 / 429	8.6 - 14.0 / 18,920 - 30,800

Package consists of: upper bracket, rotary drive, mechanic quick coupler, socket

Hydraulic Tilt Couplers TC KHS-S

Type	Rotary drive	Tilt angle	Locking	Weight (kg/lbs)	Operating weight (t/lbs)
TC02-180 KHS30S-150	RA02	2 x 90°	hydraulic	49 / 107.8	1.0 - 2.0 / 2,200 - 4,400
TC02-180 KHS30S-180	RA02	2 x 90°	hydraulic	49 / 107.8	1.0 - 2.0 / 2,200 - 4,400
TC03-180 KHS40S	RA03	2 x 90°	hydraulic	49 / 107.8	2.0 - 2.9 / 4,400 - 6,380
TC045-180 KHS40S	RA045	2 x 90°	hydraulic	72 / 158.4	2.4 - 4.5 / 5,280 - 9,900
TC07-180 KHS40S	RA07	2 x 90°	hydraulic	80 / 176	4.3 - 7.0 / 9,460 - 15,400
TC07-180 KHS45S	RA07	2 x 90°	hydraulic	102 / 224.4	4.3 - 7.0 / 9,460 - 15,400
TC10-180 KHS45S	RA10	2 x 90°	hydraulic	130 / 286	6.0 - 10.0 / 13,200 - 22,000
TC14-140 KHS45S	RA14	2 x 70°	hydraulic	195 / 429	8.6 - 14.0 / 18,920 - 30,800

Package consists of: upper bracket, rotary drive, hydraulic quick coupler

Installation sets for hydraulic Tilt Couplers TC KHS-S

Type	Description
KHS03L HD-KHS08L installation set safety	incl. KHS Control unit
KHS03L HD-KHS08L installation set basic	incl. unlockable flip switch

Accessories

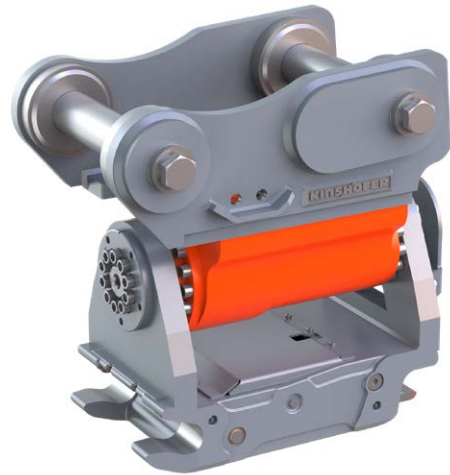
Type	Description
KM 685 06 KSW01 hook	load hook (1t / 2,200lbs load capacity) for KMS/KHS30S
KM 685 06 KSW03 hook 3t	load hook (3t / 6,600lbs load capacity) for KMS/KHS40S
KM 685 06 KSW08 hook	load hook (5t / 11,000lbs load capacity) for KMS/KHS45S and KMS/KHS50S

Requirements of carrier machine for TC KHS-S

	Quick coupler	Rotary drive
Hydraulic system:	one double acting hydraulic circuit	one double acting hydraulic circuit
Operating pressure (to be set at excavator):	210 - 300 bar / 2,610 - 3,040 psi	250 bar / 3,620 psi
Pump capacity:	5 - 10 l/min / 1.3 - 2.5 GPM	5 - 10 l/min / 1.3 - 2.5 GPM
Note:	excavator needs to be equipped with quick coupler control.	

The Kinshofer TC Tilt Couplers provide a tilting angle of up to 140°, increasing the flexibility and efficiency of all attachments to a maximum. Compatible with quick coupling system S-Lock.

- ▷ **Counter-balance valve** mounted to the motor **retains a secure position** for the tilt coupler across the angle.
- ▷ Compact design, **no cylinder**.
- ▷ **More flexibility**.
- ▷ **Low height** – thus **high breakaway force**.
- ▷ **Low maintenance**.
- ▷ **Non-return valve set** is **optionally available**.



Request? buc@kinshofer.com

Mechanic Tilt Couplers TC KMS-S

Type	Rotary drive	Tilt angle	Locking	Weight (kg/lbs)	Operating weight (t/lbs)
TC14-140 KMS60S	RA14	2 x 70°	mechanic	223 / 491	8.6 - 14.0 / 18,920 - 30,800
TC19-140 KMS60S	RA19	2 x 70°	mechanic	415 / 913	12.1 - 19.0 / 26,620 - 41,800
TC23-140 KMS70S	RA23	2 x 70°	mechanic	575 / 1,265	16.7 - 23.0 / 36,740 - 50,600

Package consists of: upper bracket, rotary drive, mechanic quick coupler, socket

Hydraulic Tilt Couplers TC KHS-S

Type	Rotary drive	Tilt angle	Locking	Weight (kg/lbs)	Operating weight (t/lbs)
TC14-140 KHS60S	RA14	2 x 70°	hydraulic	223 / 491	8.6 - 14.0 / 18,920 - 30,800
TC19-140 KHS60S	RA19	2 x 70°	hydraulic	415 / 913	12.1 - 19.0 / 26,620 - 41,800
TC23-140 KHS70S	RA23	2 x 70°	hydraulic	575 / 1,265	16.7 - 23.0 / 36,740 - 50,600

Package consists of: upper bracket, rotary drive, hydraulic quick coupler

Installation sets for hydraulic Tilt Couplers TC KHS-S

Type	Description
KHS03L HD-KHS08L installation set safety	incl. KHS Control unit
KHS03L HD-KHS08L installation set basic	incl. unlockable flip switch

Accessories

Type	Description
KM 685 06 KSW10 hook	load hook (8t/17,600lbs load capacity) for TC KMS/KHS60S
KM 685 06 KSW21 hook	load hook (10t/22,000lbs load capacity) for TC KMS/KHS70S
TC14-140 NRV	non-return valve kit for TC14-140
TC19-140 NRV	non-return valve kit for TC19-140
TC23-140 NRV	non-return valve kit for TC23-140

Requirements of carrier machine for TC KHS-S

	Quick Coupler	Rotary Drive
Hydraulic system:	one double-acting hydraulic circuit with safety switch (permanent pressure close)	one double acting hydraulic circuit
Operating pressure:	160 - 300 bar / 2,320 - 4,350 psi	210 - 310 bar / 3,040 - 4,500 psi
Pump capacity:	-	TC14: 16 - 28 l/min / 4.2 - 7.4 GPM TC23: 35 - 35 l/min / 9.3 - 9.3 GPM
Note:	excavator needs to be equipped with quick coupler control.	

Accessories for Quick Couplers, Tilt Couplers and Rotary Couplers

unlockable flip switch (hold to run)



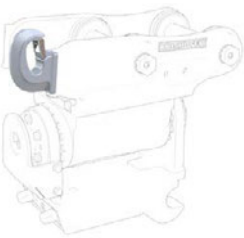
KHS Control

Installations sets for hydraulic quick couplers and tilt couplers

Type	Description
KHS01L-KHS03L installation set safety	incl. KHS Control unit
KHS01L-KHS03L installation set basic	incl. unlockable flip switch (hold to run)
KHS03L HD-KHS08L installation set safety	incl. KHS Control unit
KHS03L HD-KHS08L installation set basic	incl. unlockable flip switch (hold to run)

Non-return valve sets for hydraulic tilt couplers TC

Type	Description
TC02-TC03-180 NRV	non-return valve set for TC02 and TC03
TC045-180 NRV	non-return valve set for TC045
TC07-180 NRV	non-return valve set for TC07
TC10-180 NRV	non-return valve set for TC10
TC14-140 NRV	non-return valve set for TC14



Load hook for quick couplers and tilt couplers

Type	Description
KM 685 06 KSW01 hook	load hook for system L-Lock (1t / 2,200lbs load capacity)
KM 685 06 KSW03 hook 2t	load hook for system L-Lock (2t / 4,400lbs load capacity)
KM 685 06 KSW03 hook 3t	load hook for system L-Lock (3t / 6,600lbs load capacity)
KM 685 06 KSW08 hook	load hook for system L-Lock (5t / 11,000lbs load capacity)

KMS01L socket & KMS03L socket



KMS08L socket

Sockets for mechanic quick couplers and tilt couplers

Type	Description
KMS01L socket	socket for mechanical System L-Lock (KMS01)
KMS03L socket	socket for mechanical System L-Lock (KMS03)
KMS08L socket	socket for mechanical System L-Lock (KMS08) and S-Lock

Quick coupling adapters for System L-Lock

Type	Description
KSW01 rigid	bolt-on adapter
KSW01 cardanic	adapter for cardanic suspension incl. suspension, w/o pendulum damper
KSW03 rigid	bolt-on adapter
KSW03 cardanic	adapter for cardanic suspension incl. suspension, w/o pendulum damper
KSW08 rigid	bolt-on adapter
KSW08 cardanic	adapter for cardanic suspension incl. suspension, w/o pendulum damper



Accessories for Quick Couplers, Tilt Couplers & Rotary Couplers

unlockable flip switch (hold to run)



KHS Control

Installations sets for hydraulic quick couplers and tilt couplers

Type	Description
KHS03L HD-KHS08L installation set safety	incl. KHS Control unit
KHS03L HD-KHS08L installation set basic	incl. unlockable flip switch (hold to run)
KHS10L installation set safety	incl. KHS Control unit
KHS10L installation set basic	incl. unlockable flip switch (hold to run)
KHS21L installation set safety	incl. KHS Control unit
KHS21L installation set basic	incl. unlockable flip switch (hold to run)
KHS25L installation set safety	incl. KHS Control unit
KHS25L installation set basic	incl. unlockable flip switch (hold to run)



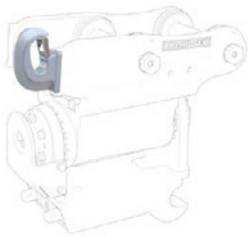
Locking sensor for hydraulic quick couplers and tilt couplers with System L-Lock

Type	Description
KHS-L-Sensor	2 sensors support the secure locking, only in combination with KHS10-25L installation set sensor
KHS10-25L installation set sensor	KHS-L installation set safety including cable loom for quick coupler sensors

Non-return valve sets for hydraulic tilt couplers TC



Type	Description
TC14-140 NRV	non-return valve set for TC14-140
TC19-140 NRV	non-return valve set for TC19-140
TC23-140 NRV	non-return valve set for TC23-140



Load hook for quick couplers and tilt couplers

Type	Description
KM 685 06 KSW10 hook	load hook (8t/17,600lbs load capacity)
KM 685 06 KSW21 hook	load hook (10t/22,000lbs load capacity)
KM 685 06 KSW25 hook	load hook (18t/39,600lbs load capacity)



Sockets for mechanic quick couplers and tilt couplers

Type	Description
KMS10L socket	socket for mechanical System L-Lock (KMS10L)
KMS21/25L socket	socket for mechanical System L-Lock (KMS21L/KMS25L)
KMS08L socket	socket for mechanical System S-Lock



Quick coupling adapters for System L-Lock

Type	Description
KSW10 rigid	bolt-on adapter
KSW10 cardanic	adapter for cardanic suspension incl. suspension, w/o pendulum damper
KSW21/25 rigid	bolt-on adapter
KSW21/25 cardanic	adapter for cardanic suspension incl. suspension, w/o pendulum damper