

ENGLISH // EDITION 3

# **DRIVE TECHNOLOGY**

PIVOTING · LIFTING · MOVING · TELESCOPING · ROTATING





# **RUD Conveyor & Drive technology** High performance for all environments

Irrespective of whether one is interested in horizontal, curved or vertical drive concepts - RUD conveyor and drive systems provide a variety of system solutions with round steel chains for various applications in bucket elevators, power generation, onshore and offshore, underground mining and in the industrial and hoist chain sectors.



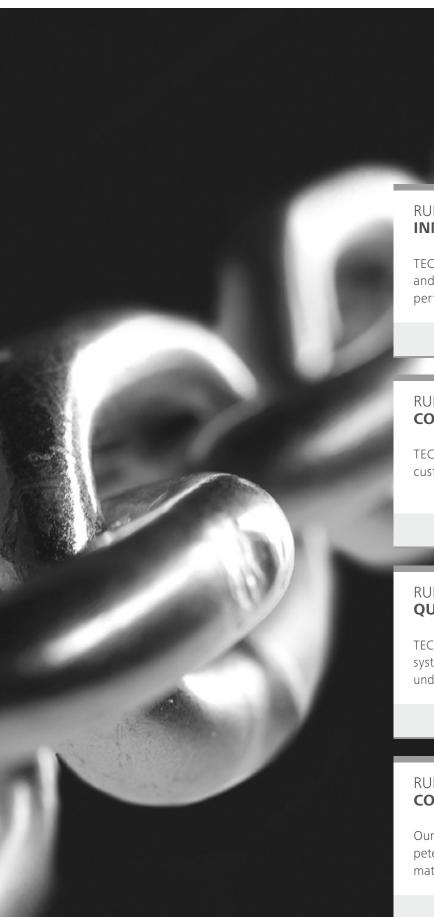












# RUD MEANS INNOVATION

TECDOS offers drive innovations for industrial, harbour and offshore applications. Always searching for perfection.

**Examples of applications p. 8** 

# RUD PROVIDES COMPLETE SOLUTIONS

TECDOS offers intelligent modules and complete systems customised to your specific application.

Systems p. 18

# RUD GUARANTEED **QUALITY**

TECDOS components and modules succeed where other systems fail. A malfunction-free operation is also possible under harsh weather conditions.

Product overview p. 20

# RUD PROMISES COMPETENT CONSULTING

Our sales and marketing team comprises worldwide, competent contact partners who can advise you with technical matters and are always willing to face up to new challenges.

Service p. 38

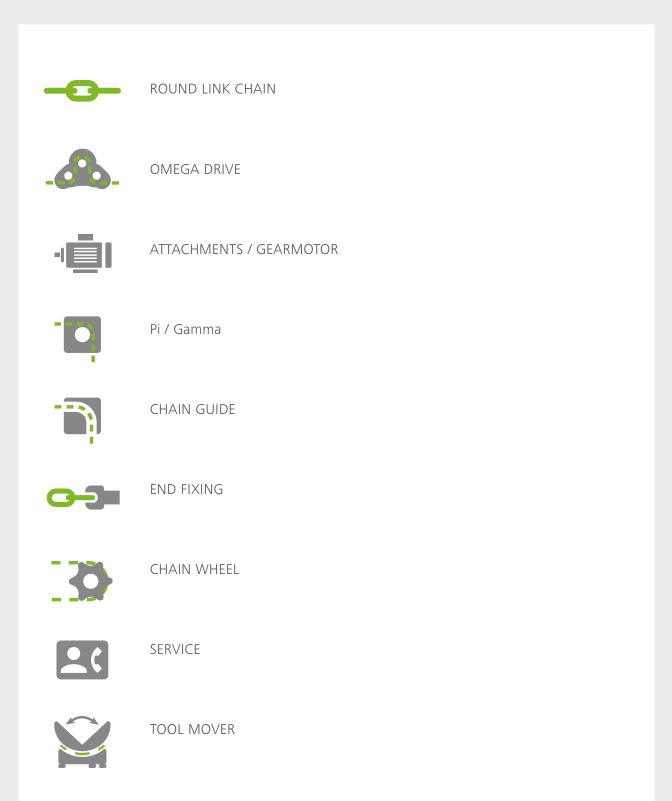








# **Symbol Legend**





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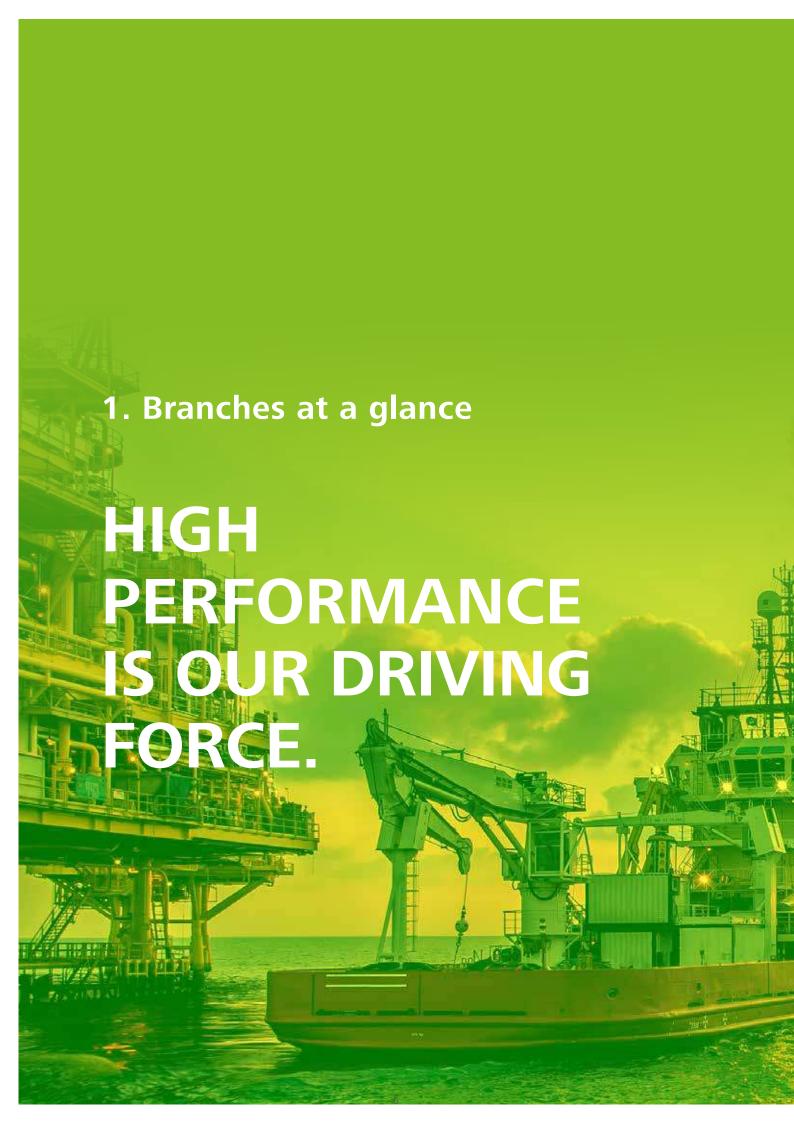


traceparts

Discover now RUD TECDOS chains drivers and components on traceparts. RUD product download simplifies design! Product Content Everywhere Click here or search www.traceparts.com/en for TECDOS.











# PIVOTING LIFTING MOVING TELESCOPING ROTATING

Whatever direction you want to move something in, the combination of TECDOS components provides suitable solutions for the most diverse fields of industry.

# 1. TECDOS® Branches at a glance

1.1 Maritime & Offshore







# 1.2 Machine Engineering & Plant Engineering













# MOVE ADJUST DRIVE

Innovative and high-performance drive systems for linear and rotating movements.

#### 2. TECDOS® drive solutions

#### 2.1 Lifting





#### Sectional door drive units Moving doors with weights of several tonnes

Doors which weigh several tons e.g. in hangars or industrial halls must be reliably opened and closed, so neither people may be injured nor objects may be damaged. A combination of diverse technical drive components provides a trouble-free application.

#### **RUD Solution**

- TECDOS premium chain strands for lifting and lowering
- RUD lifting means and aids as linkage for counterweights
- TECDOS chain wheels: weather resistant, corrosion resistant and robust
- End user can combine roller chain with round link chain





# **Gangway**Robust, variable and compact

Gangways and ship access systems must be adjustable in longitudinal and transverse directions as well as for the height for different models and sizes of vessels so that safe access for passengers and crew is ensured.

- TECDOS medium chain
- Pi-drive
- End fixina
- Lift limiter





# Wagon unloading equipment Rapid and safe material unloading

A shunting transshipment port for bulk goods requires a facility with which railway wagons could be unloaded rapidly and safely. Loads of up to 100 tons could not should be lifted and tipped in this case.

#### **RUD** Solution

- TECDOS medium chain
- Pocketwheels





# Lifting equipment for final vehicle assembly

Variable height for ergonomic working

Vehicles attached to load frames must be traversed variably in height to enable ergonomic working during final assembly. The load frames must not hereby swing in the horizontal axis and only limited installation space is available for the drive unit.

- TECDOS premium chain, tensioned all round as crisscross
- 4-fold pocketwheel-drive shaft
- pocketwheel deflection wheels
- Chain guide
- End fixing

## 2. TECDOS® drive solutions

#### 2.2 Telescoping





# **Ship Loader** Flexible ship loading

Mobile ship loaders with mobile booms are utilised for loading of bulk goods on cargo ships. This equipment enable the cargo to be evenly distributed in the freight hold.

#### **RUD Solution**

- TECDOS premium chain
- Pocketwheel in OMEGA arrangement
- Chain guide
- End fixing

#### 2.3 Process





# Rail Wagon Unloading System Handle heavy object safely

The availability of the railway wagon unloading system should be increased.

- TECDOS premium chain
- Pocketwheel in OMEGA arrangement
- End fixing







#### **Spud Pole Skidding**

Anchoring and positioning system for dredgers

Dredgers must be positioned safely and moved forward step by step in order to expand and dredge canals.

The 9 m long travel route is therefore executed at a speed of 5m/minute. The tensile forces on the chains normally amount to 90kN although they can increase up to 130kN.

#### **RUD Solution**

- TECDOS premium chain
- End fixing
- TECDOS OMEGA Drive





#### Skidding

Reliable solution for moving loads from one point to another

For bulk material handling on a dredger, a robust and easy-to-install solution was sought, which is particularly restistant to sand or gravel blocking.

- OMEGA drive concept
- TECDOS premium chain
- End fixing

### 2. TECDOS® drive solutions

#### 2.3 Process





#### **Spooling**

Equipment for cable winches and double drum winches

For a hydraulically driven double drum anchor towing winch with a cable pull of 500 tons, a winding device was needed.

#### **RUD Solution**

- TECDOS medium chain
- End fixing for round link chain
- Double strand pocketwheel

2.4 Rotating





#### **Blade Turning Device**

Transporting bulky, sensitive rotor blades

Assembling and erecting turbines requires handling equipment with which the long rotor blades [up to 80 Mtrs] can be secured, aligned horizontally and rotated around the longitudinal axis.

- TECDOS medium chain
- Pocketwheels







# Rotating & Turning Equipment Rotating rotor blades

Rotor blades for wind turbines are laminated in half-shells during manufacturing. To ensure that the multiple layers of glass-fibre or carbon-fibre-reinforced plastic can be inserted with millimetre precision and without wrinkles, the half-shells must be rotated around the longitudinal axis during moulding.

#### **RUD Solution**

- TECDOS premium chain
- Pocketwheel in OMEGA arrangement
- End fixing





# TOOL MOOVER Handling Handle heavy tools safely

"Turning heavy tools safely" - the RUD TOOL MOVER was specially developed for the safe turning of heavy-duty tools and heavy-duty workpieces in your manufacture facility.

#### **RUD Solution**

- TECDOS premium chain
- TECDOS end fixing
- TECDOS Omega Drive
- Compatible accessories optional

# Configure your TOOL MOVER quickly and easily!

More information:

www.rud.com/en/products/conveyor-drive-systems/







# HANDY RISKFREE FLEXIBLE

Our systems and components guarantee sustainable solutions, even under difficult conditions. TECDOS systems are user friendly and can be combined flexibly.

# 3. TECDOS® Systems

#### 3.1 Product overview | individual components

For the construction of a complete TECDOS drive solution, based on the TECDOS high performance round link chain, we can provide the most diverse components and systems for every requirement. All TECDOS round steel chains are stamped and this ensures traceable evidence to the melt over standard 3.1 certificates.

#### **TECDOS®** Individual componets









Discover now **RUD TECDOS chains drivers and components** Click here or search www.traceparts.com/en for TECDOS.















ROUND LINK CHAIN

CHAIN GUIDE

END FIXING

CHAIN WHEEL

OMEGA DRIVE

GEARMOTOR

ATTACHEMENTS / Pi/GAMMA DRIVE



#### **GAMMA** drive

Complete systems incl. pocketwheel for a chain redirection of 90°.



#### PI-drive

Complete systems incl. spocket wheel for a chain redirection from 90° to 180°.



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#### **OMEGA DRIVE**

Drive solution with SEW electric motor. Adapter flange, TECDOS high performance chain and OMEGA DRIVE



→ p. 24



#### **Attachements & Motors**

Drive unit / motor and shaft



Mounting rail and adapter flange



Complete systems are available with motors from leading manufacturers.

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#### **TECDOS complete system | TOOL MOVER**

For the safe handling and rotation of heavy and precision injection moulding tools and other objects.



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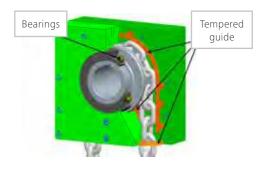
# 3. TECDOS® systems

#### 3.2 PI / GAMMA drive | Pocket wheel blocks

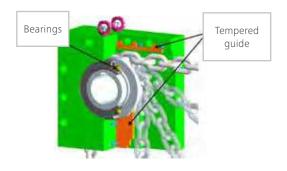


PI pocketwheel blocks enable vertical and horizontal drive with 180° chain wrapping, while the GAMMA pocketwheel block is utilised for drives with 90° redirection.

#### PI wrap angle 180°



#### GAMMA wrap angle 90°



#### Attachements PI / GAMMA:

Along with TECDOS end fixings, many attachment solutions are available from the VIP lifting means\* program.



\*The VIP standard bolt must be replaced by a TECDOS special bolt when combining TEDCOS chains.

#### PI-/GAMMA drive principle

Versatile module for drive and idler application. Integrated roller bearings. Drive shaft free of additional forces. No shaft required when used as idler module. Integrated chain guide and stripper.

#### Advantages:

- Versatile application possibilities as drive unit module & redirection module
- Integratted bearing
- Chain guide and stripper integrated
- Drive shaft without any additional forces
- Shaft not required when utilising redirection module



#### **TIP**

We can also provide special paintwork according to maritime specifications on request.



#### Multiple chain strand systems PI / Gamma

Modular design for highest-possible flexibility when selecting electrical, hydraulic or pneumatic motors.



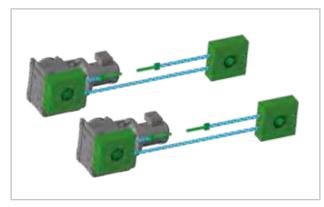
#### System applications for TECDOS PI/GAMMA:



#### Vertical PI drive

Vertical PI drive unit as double arrangement with two parallel operating drive units.

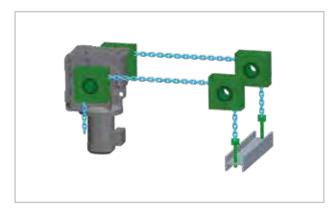
Also possible in 2, 3 and 4 fold arrangements with drive units depending on the application.



#### Horizontal PI drive

Horizontal drive unit as double arrangement with two parallel operating PI drive units.

Also possible in 3 and 4 fold arrangements with drive units depending on the application.



#### Double strand with GAMMA drive

Vertical GAMMA drive unit as double arrangement with one drive units.

Also possible in 3 and 4 fold arrangements with drive units depending on the application.

**TECDOS ADVANTAGE:** 

**ALL FROM ONE MANUFACTURE** 

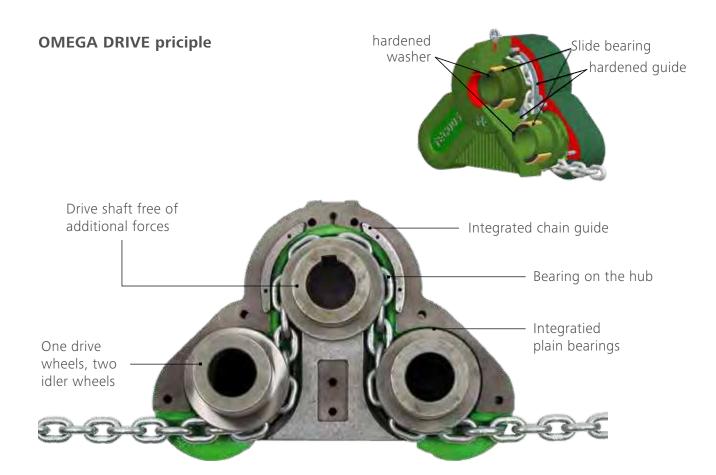
# 3. TECDOS® Systems

#### 3.3 OMEGA DRIVE | Innovative drive system



OMEGA DRIVE is the ideal drive solution for linear or rotating movements. In order to process a running crane trolley on a carrier, ship cranes on a rail or for skid application. The OMEGA DRIVE is superior to comparable rack and pinion and sprocket wheel solutions.

In comparison it is less sensitive to dirt, sand, ice, etc., is easier to mount and tolerates deviations of alignment. The modular concept allows the drive through electric, hydraulic or pneumatic motors, at order point electric motor can be supplied.



#### OMEGA DRIVE complete system

OMEGA DRIVE offers quiet and reliable performance long after that of a rack and pinion drive.

OMEGA DRIVE is resistant to ice, dirt, rain and aggressive environments. This drive concept has proven itself in many applications worldwide.

#### **OMEGA DRIVE applications**

RUD OMEGA DRIVE is the solution: for moving ship cranes, tracking solar panels to the sun, or simply traversing a machine.

Supplementary parts for flangemounting of motors available on request.



## 3. TECDOS® Systems

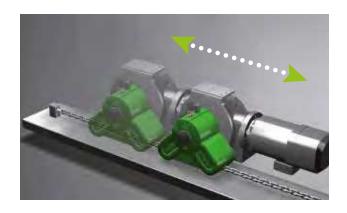
#### Complete system | Versatile drive systems for linear and curved motion



1. Linear travel, fixed drive and moving chain / equipment



2. Moving drive and fixed chain / equipment



3. Fixed drive and rotating chain / equipment



4. Fixed chain, drive / equipment moving along curved path



#### Your perfect companion for various systems:

- Moving harbour and ship cranes
- · Aligning and adjusting ship loading and unloading
- Opening and closing sliding doors in the holds
- Rotating and lifting platforms
- Propulsion for ferries on rivers and lakes
- · Moving wagons for unloading
- Extending telescopic booms for ship loaders and cranes
- Moving sea posts (spud pole)
- Traversing Skiddinig Systems

### **OMEGA DRIVE**

Approval by major maritime classification societies possible

#### Spezifikationen:

- Operating force 6 260 kN
- Mobile or fixed drive
- OMEGA DRIVE Weight 20 - 2.163 kg
- Chain speed 1 6 m/minute with full load, up to 12 m/minute with part load

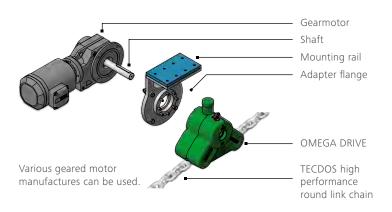


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#### 3.4 OMEGA DRIVE modolar system | for maximum flexibility in the choice of an electric, hydraulic or pneumatic motor

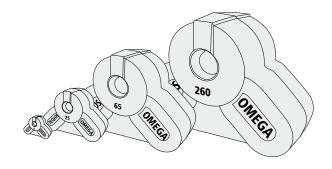




#### OMEGA DRIVE is available in 7 various operational forces:

#### Product advantages:

- · less sensitive to dirt, sand, ice
- easy to mount
- tolerates alignment and measurement deviations, such as temperature elongation
- does not generate reaction forces
- can be used in all directions
- weather and corrosion resistant





OMEGA DRIVE Hotline: +49 (0) 7361 504-1457

More information:

www.youtube.com/user/RUDKetten







## 3. TECDOS® Systems

#### 3.5 TOOL MOVER handle heavy objects safely and easily





**Problems with conventional rotating and turning equipment:** Huge operator risk, Potential damage to costly tools and damage to hoist brakes and ropes.

#### RUD Solution: TOOL MOVER turned heavy, sensitive tools & machine components.

The TOOL MOVER can be used anywhere in the plant, since it is not anchored to the floor and is very compact\*\*. The TOOL MOVER can moved with a hoist (lifting points) or lift truck (fork insertion points). Since the TOOL MOVER table has a very low supporting surface, the open tool can be cleaned while on the table itself. The TOOL MOVER is equipped with PU\* plates to protect the tool. The TOOL MOVER can handle tools and objects weighing up to 64 tons. A siren to indicate that the table is operating is standard equipment.

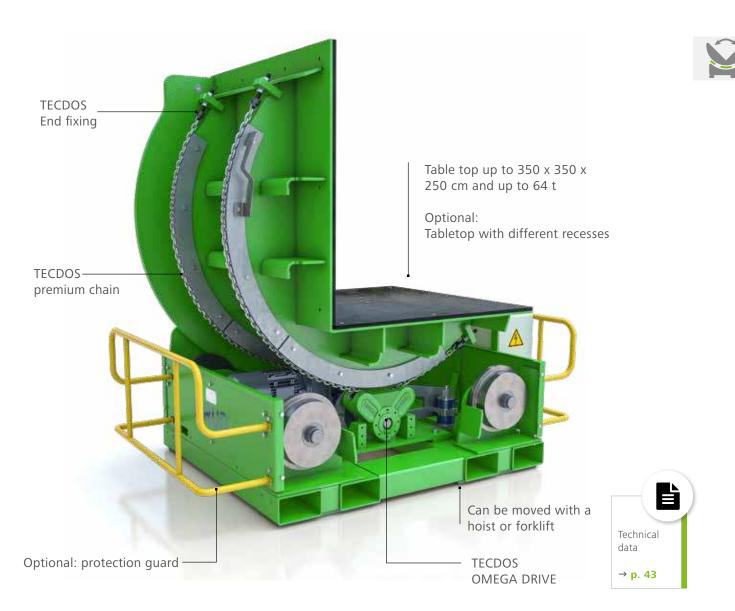
\*only THS 10 \*\*no standard

"The highest priority in the purchase of RUD TOOL MOVERS was the safety of our employees. Furthermore, damage to the items to be turned is effectively excluded. In addition, we save considerable working hours. With the TOOL MOVER, only one employee turns the tool in half the time, which often took two or three men when turning the crane. In addition, the hall floors and lifting gear are protected."





#### TOOL MOVER with optional attachements and safety equipment (no standard):



#### **Detailed information:**

We would be pleased to provide you with the separate TOOL MOVER brochure.



#### **Contact**

**TOOL MOVER Hotline:** +49 (0) 7361 504-1442

#### **More Information:**

www.youtube.com/user/RUD-Ketten



#### Configure your TOOL MOVER quickly and easily!

More information:

www.rud.com/en/products/conveyor-drive-systems













# ROBUST DURABLE SAFE

For all TECDOS drive solutions always the optimum chain selection for pivoting, lifting, handling, telescoping and rotating.

# 4. TECDOS® Spare parts & components

#### 4.1 TECDOS® Round link chain | Material and application benefits



The core component of each TECDOS system application is a highly wear-resistant RUD round link chain for maximum service life – even with wear-resistant media. Extremely dynamic strength therefore ensures maximum operational safety.

#### TECDOS is always the best solution:

- when high forces have to be transmitted within limited space
- · when three-dimensional mobility is required
- · under severe environmental conditions
- when exposed to weather
- in offshore, underwater and harbour applications
- when the means of traction has to have optimized storage capacity

**TIP** 

Lubrication enables you to achieve up to 10-15 fold service life.





• when frequent use is required

• when infrequent use is required

### Corrosion protection for TECDOS high performance chain

Surface	Short description of surface coating	New condition	After 100 hours salt-spray test
Electrolytic galvanised	electrolytic metal	(600)	
*topcoat silver	deposition (6-10 μm)		
			Technical data
			→ p. 40



## Designed for all enviroments

## High robustness



3D-mobilty



**Deflection radius** 



Storage



Maintenance



Simply end fixing



Reliable with low actuation



Reliable with more frequent actuation



## 4. TECDOS® Spare parts & components

#### 4.2 TECDOS® pocket wheels



Case hardened TECDOS pocket wheels are optimally designed to work with TECDOS chain and guarantee long life and silent running.

#### Features:

- All TECDOS chain wheels are made of low-alloy steel, completely machined and surface-hardened
- 2. Chain wheels available for loads from 6 kN up to 260 kN
- 3. Geometry of the pockets is perfectly coordinated to the TECDDOS round steel chain
- 4. The bore and hub designs can be designed as customer-specific requirements (toothing possible with specification from DIN standard)
- 5. Rust resistant and acid resistant drive and redirection wheels available on request



TECDOS® chain wheels for drive units and redirection can be manufactured for single and multiple chain strand configurations. Available on request for all chain sizes from TEC 6 to TEC 260 for loads from 6 up to 260 kN.



**TIP** 

All TECDOS components can be delivered as rust resistant and acid resistant.



#### 4.3 TECDOS® Chain guide

Chain guides are used under severe environmental conditions, when one chain strand is not loaded, when the chain is prone to jumping off the sprocket wheel, to ensure smooth running of the chain over the sprocket wheel.



#### Differences of the two executions:

- Machined chain guide heat treated for optimal wear resistance
- Chain guide laser cut, without heat treatment
- radially divided for simplified assembly

The selection of the chain guide depends on the application and the operation environment.

Please contact your RUD specialist for further information.



# 

#### **TECDOS®** Application

- 1. Pi pocket wheel block
- 2. PowerPoint fixing point
- 3. Chain guide redirection unguided
- 4. Round link chain medium/premium
- 5. End fixing



5

# 4. TECDOS® Spare parts & components

#### 4.4 RUD lift limiter



The lift limiter prevents the chain from "passing through" i.e. it serves as a travel route limiter on the unloaded sides of the chain.

#### Features:

- Limits the lift of a TECDOS drive system and
- Prevents the chain from being pulled through by the PI/ GAMMA or chain guides units



4.5 RUD chain connector



TECDOS chains and connectors form a reliable system. Both components perfectly fit in combination with the OMEGA DRIVE or chain wheels.

#### Features:

- Connects the chain to an endless chain loop
- Attention: Operating forces are limited to maximum power of the chain connector



## 4.6 TECDOS® End fixing



Axial adjustable end fixing for linking the chain and load-supporting structures

#### Features:

TECDOS End fixing:

- Transfers 100 % of the TECDOS chain operating forces
- axially adjustable



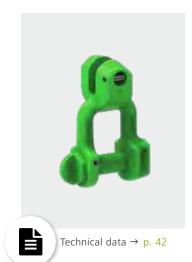


### 4.7 RUD foolproof high dynamic shackle

High tensile version with an integrated safety thread in the shackle bracket.

### Features:

- Smooth bolt support in the shackle on both sides. The bolt is turnable
- No bending strength in the thread (only a securing function)
- Optimal adaptation max. mouth width with the smallest shackle bolt
- Owing to the turned clevis connection, it is extensively resistant to bending
- Long term securing by driving in the pre-assembled tensioning sleeve
- Special thread, thus distinctive in comparison to other shackle bolts
- Pre-assembled connecting bolt and tensioning sleeve



### 4.8 RUD PowerPoint fixing point

RUD fixing points are easy to rotate and always the right connection

### Features:

- Rotating 360°, pivoting 230°
- Universal, unmistakable VIP connection for chain, hook and eye
- Double ball bearing for turning/rotating operations





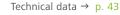
### 4.9 RUD Cobra fork head hook

The Cobra hook with a ring connection and of course all the advantages of a RUD - clevis hook.

### Features:

- Very robust design without a protruding hook tip
- The forged safety latch engages in the tip of the hook and is thus protected against lateral bending
- With a triple coiled corrosion protected double leg spring
- Thickened tip of the hook to prevent misuse
- Wear marks on both sides
- Gauge marks for measuring the width of the hook opening







5. Information & Services

SO EVERYTHING MOVES, WHICH HELPS YOU TO MOVE FORWARD.





# COMPETENT RELIABLE REACHABLE

Our expert knowledge enables us to reliably support you during and after the optimisation of your processes. In order to fulfil this demand, we can provide you with extensive offers and services.

### 5. TECDOS® Information

### 5.1 Technical charts



### TECDOS® round link chain

### Medium

quenched and tempered chain HV approx. 360



### Premium

case hardened chain HV 580 – 600



### Sizes

round link chain is available in 7 sizes



Chain	Working load [kN]	Weight approx. [kg/m]	Breaking force [kN]	Medium (part no.)	Premium (part no.)
TEC 6	6	0,59	34,0	7905137	7905146
TEC 12	12²	1,13	65,1	7905102	7905113
TEC 25	25 <sup>2</sup>	2,24	126,0	7905093	7905068
TEC 43	43²	3,80	212,3	7905057	7905040
TEC 65	65²	5,70	322,0	7904959	7905020
TEC 140 <sup>1</sup>	140²	12,30	694,0	7904948	7905015³
TEC 260 <sup>1</sup>	260²	22,6	1315,0	7904947	-

<sup>&</sup>lt;sup>1</sup> topcoat silver <sup>2</sup> When using with TECDOS chain connectors the operational force of the chain has to be adapted according to the specification of the connectors. <sup>3</sup> max. 44 m length per strand

Product information  $\rightarrow$  p. 32



### TECDOS® chain wheels

chain size	No. of po- ckets*	Pitch circle diameter ø (mm)	Hub length B [mm]	Bore ø D [mm]	Outer ø F [mm]	No. of Keyways DIN 6885 P9 [mm]	Weight [kg]	Part no.	
TEC 6	6	58,4	45	30 H7	63,5	1	0.5	7905327	
TEC 12	6	82,3	70	40 H7	89,5	1	1.5	7905328	ľ
TEC 25	6	108,0	100	50 H7	118,0	1	3.8	7905329	
TEC 43	6	139,2	120	70 H7	152,0	1	7.1	7905330	
TEC 65	6	174,5	150	90 H7	190,5	1	13.0	7905331	*
TEC 140	6	256,2	200	130 H7	279,5	2**	42.6	7905332	*
TEC 260	6	347,8	250	180 H7	379,5	2**	101.0	7905333	

\*) Standard 6 pockets other sizes on request \*\*) Keyways at 120° offset

Product information  $\rightarrow$  p. 34



### TECDOS® chain guide

Milled chain guide, radially divided

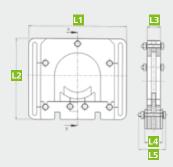
Chain	Pockets	Weight [kg]	L1	L2	L3	L4	Part no.
TEC 6	6	1.6	114	118	25	37	7906322
TEC 12	6	4.2	145	161	35	50	7906186
TEC 25	6	9.6	190	209	50	60	7902719
TEC 43	6	18.3	239	263	65	80	7902294
TEC 65	6	31.7	284	322	80	100	7902289
TEC 140	6	97.0	404	463	118	142	7902320
TEC 260	6	206.6	525	621	193	150	7902038



Product information  $\rightarrow$  p. 35

Laser cut chain guide, radially divided

Chain	Pockets	Weight [kg]	L1	L2	L3	L4	L5	Part no.
TEC 6	6	2.1	164	120	22	30,4	44	8504484
TEC 12	6	3.5	195	162	24	32,4	49	8504465
TEC 25	6	8.3	248	210	36	46,	65,3	8503920
TEC 43	6	-	-	-	-	-	-	on request
TEC 65	6	_	-	_	_	_	_	on request



Product information  $\rightarrow$  p. 35

### **RUD** lift limiter

Chain	Weight [kg]	Part no.
TEC 6	0.14	7906314
TEC 12	0.5	7907126
TEC 25	0.4	7906460
TEC 43	1.7	7906401
TEC 65	4.0	7906315
TEC 140	8.0	7906313
TEC 260	-	on request



Product information  $\rightarrow$  p. 36



Discover now **RUD TECDOS chains drivers and components** on traceparts. RUD product-download simplifies design!

<u>Click here</u> or search <u>www.traceparts.com/en</u> for **TECDOS**.

### 5. TECDOS® Information

### 5.1 Technical charts

### **3-3**-

### **RUD** chain connector

Part no.	Chain size	Working load [kN]	Load cycles to failure	Max. allowed chain speed	Weight [kg]	Surface
7908978	TEC 12	9	20.000	8 m/min	0.035	painted
7908986	TEC 25	18	20.000	8 m/min	0.095	painted
7908995	TEC 43	30	20.000	8 m/min	0.2	painted
7908990	TEC 65	45	20.000	8 m/min	0.38	painted
7906522	TEC140	100	20.000	8 m/min	1.15	painted
7907432	TEC260	200	20.000	4 m/min	2.6	painted

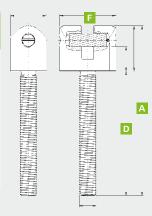


Product information  $\rightarrow$  p. 36



### TECDOS® end fixing

Designation	Chain	Working load [kN]	A [mm]	D [mm]	F [mm]	Weight [kg]	Part no.
HEBG-M12	TEC6	6	103,0	79,0	32,0	0.145	7996526
HEBG-M16	TEC12	12	139,0	107,0	42,0	0.4	7993561
HEBG-M24	TEC25	25	198,0	155,0	56,0	1.0	7997341
HEBG-M30	TEC43	43	249,0	195,0	70,0	2.0	7997329
HEBG-M36	TEC65	65	303,0	237,0	82,0	3.4	7997326
HEBG-M42	TEC140	140	388,0	293,0	116,0	7.6	7997385
HEBG-M48	TEC260	260	482,0	353,0	160,0	16.5	7997420



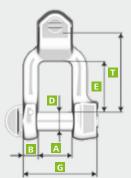
Product information  $\rightarrow$  p. 36

### RUD foolproof high dynamic shackle

Attention, this component has been modified for TECDOS applications.

Standard components from the RUD VIP Family are not suitable for TECDOS drive chains.

Designation	Chain	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	G [mm]	H [mm]	T [mm]	Weight [kg/Stk.]	Part no.
Shackles - VV-GSCH 6	TEC 6	17	8	22	10	21	40	28	36	0.13	7909779
Shackles - VV-GSCH 8	TEC 12	21	10	26	12	32	48	39	48	0.27	7909780
Shackles - VV-GSCH 10	TEC 25	27	13	34	16	35	62	44	60	0.6	7909781
Shackles - VV-GSCH 13	TEC 43	33	17	42	20	41	81	59	78	1.3	7909782
Shackles - VV-GSCH 16	TEC 65	38	21	49	24	49	95	69	96	2.25	7909783
Shackles - VV-GSCH 22	TEC 140	53	30	76	36	72	130	95	132	6.43	7909784





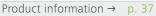
Product information  $\rightarrow$  p. 37

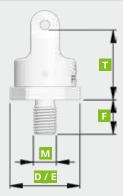


### **RUD PowerPoint fixing point**

Attention, this component has been modified for TECDOS applications. Standard components from the RUD VIP Family are not suitable for TECDOS drive chains.

Designation	Chain	D [mm] corner dimension	E [mm] wrench width	F [mm]	M [mm]	Md [mm]	T [mm]	Weight [kg/Stk.]	Part no.
PP-VIP M16	TEC 6	46	41	25	16	17.5	50	0.42	7909768
PP-VIP M20	TEC 12	61	55	30	20	22	61	0.94	7909769
PP-VIP M24	TEC 25	78	70	36	24	26	77	1.82	7909770
PP-VIP M30	TEC 43	95	85	45	30	33	93	3.47	7909771
PP-VIP M36	TEC 65	100	90	54	36	39	102	4.69	7909772





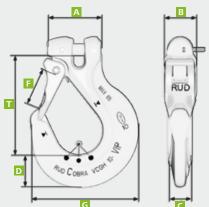
### **RUD** Cobra fork head hook

Attention, this component has been modified for TECDOS applications.

Standard components from the RUD VIP Family are not suitable for TECDOS drive chains.

Designation	Chain	A [mm]	B [mm]	C [mm]	D [mm]	F [mm]	F <sub>max</sub> [mm]	G [mm]	T [mm]	Weight [kg/Stk.]	Part no.
Hook VCGH 10	TEC 6	38	22	16	20	25	45	72	76	0.4	7909773
Hook VCGH 13	TEC 12	50	28	20	28	30	52	95	97	0.8	7909774
Hook VCGH 16	TEC 25	60	36	26	36	35	65	118	108	1.5	7909775
Hook VCGH 20	TEC 43	76	46	30	37	40	73	135	126	2.8	7909776
Hook VCGH 22	TEC 65	83	56	36	49	48	87	161	152	4.7	7909777
Hook VCGH 28	TEC 140	117	78	50	74	63	114	223	198	11.9	7909778







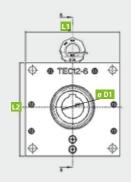
### TECDOS® PI

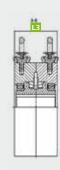
KFGA-L 180° without flange mounting

chain	No. of Pockets	Pitch circle diameter [mm]	L1 [mm]	L2 [mm]	L3 [mm]	ø D1 [mm]	Weight [kg]	Part no.
TEC 6	6	58,4	132	134	53	30	6.3	7907923
TEC 12	6	82,3	170	168	76	40	14.5	7908019
TEC 25	6	108,0	218	212	106	50	32.0	7908033
TEC 43	6	139,2	268	265	126	70	58.0	7908056
TEC 65	6	174,5	314	325	156	90	99.0	7907782
TEC 140	6	256,2	426	463	210	130	251.0	7907498
TEC 260	6	347,8	550	620	252	180	521.0	7909792

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TECDOS PI-/Gamma drives can be manufactured appropriate to all chain sizes. Other sizes on request.





### KFGA-LFL 180° with flange mounting

vhain	No. of Pockets	Pitch circle diameter [mm]	L1 [mm]	L2 [mm]	L3 [mm]	ø D1 [mm]	ø D2 [mm]	Weight [kg]	Part no.
TEC6	6	58,4	170	170	57	30	110,5	11.5	7905451
TEC12	6	82,3	260	260	80	40	180,5	37.3	7905430
TEC25	6	108,0	310	310	110,5	50	230,5	74.6	7905520
TEC43	6	139,2	360	360	131,5	70	250,5	111.0	7905745
TEC65	6	174,5	460	460	161,5	90	350,5	224.0	7906750
TEC140	6	256,2	426	463	216	130	340	254.0	7909147
TEC260	6	347,8	550	620	258	180	400	530.0	7908714

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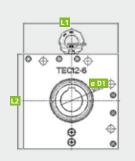
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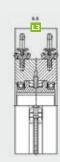
### TECDOS® GAMMA

KFGA-L 90 - 180° without flange mounting

Chain	No. of Pockets	Pitch circle diameter [mm]	L1 [mm]	L2 [mm]	L3 [mm]	ø D1 [mm]	Weight [kg]	Part no.
TEC6	6	58,4	161	161	53	30	8.8	7908072
TEC12	6	82,3	173	173	76	40	16.0	7908087
TEC25	6	108,0	223	223	106	50	33.0	7908096
TEC43	6	139,2	281	281	126	70	60.0	7908108
TEC65	6	174,5	341	341	156	90	105.0	7908113
TEC140	6	256,2	482	482	210	130	277.0	7907769
TEC260	6	347,8	-	-	-	-	_	-

Product information  $\rightarrow$  p. 22

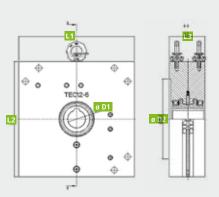




### KFGA-LFL 90 - 180° with flange mounting

Chain	No. of Pockets	Pitch circle diameter [mm]	L1 [mm]	L2 [mm]	L3 [mm]	ø D1 [mm]	ø D2 [mm]	Weight [kg]	Part no.
TEC6	6	58,4	170	170	57	30	110,5	11.0	7908786
TEC12	6	82,3	260	260	80	40	180,5	38.0	7908457
TEC25	6	108,0	310	310	110,5	50	230,5	70.0	7908459
TEC43	6	139,2	360	360	131,5	70	250,5	102.0	7909612
TEC65	6	174,5	460	460	161,5	90	350,5	217.0	7908681
TEC140	6	256,2	-	-	-	-	-	-	-

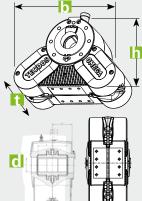
Product information  $\rightarrow$  p. 22





### **OMEGA DRIVE**

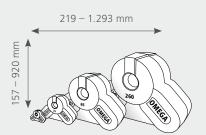




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### Modular system

Designation	Working load [kN]	Speed [m/min]	Gearmotor z.B.: SEW	Adapter flange	Shaft	Mounting Rail
	6	6	KHF 47 DRN80M4		Х	X
OMEGA 6		8 10 12	KHF 47 DRN90L4	Χ		
		6	KHF 67 DRN90L4		X	×
OMEGA 12	12	8 10	KHF 67 DRN100M4	Х		
		12	KHF 67 DRN100LC4			
		6	KHF 87 DRN100LC4		Χ	X
OMEGA 25	25	8 10	KHF 87 DRN132S4	Χ		
		12	KHF 87 DRN132M4			
OMEGA 43	43	6 8	KHF 97 DRN132M4			X
OIVIEGA 43	43	10	KHF 97 DRN132MC4	X	Χ	^
		12	KHF 97 DRN160S4			
		2	KHF 107 R77DRN100M4		X	X
	65	4	KHF 107 R77DRN132M4			
OMEGA 65		6	KHF 107 DRN132MC4	X		
		8	KHF 107 DRN160M4			
		10	KHF 107 DRN160MC4			
	140	2	PHF002 KF77 DRN132M4	X	X	×
004564440		4	PHF002 KF77 DRN160MC4			
OMEGA 140		6 8	PHF002 KF87 DRN180M4 PHF002 KF87 DRN180LC4			
		10	X4KH150/HU/F			
	260	10	PHF032 KF97 DRN132M4	X	Х	X
		2	PHF032 KF97 DRN160M4			
OMEGA 260		3	PHF032 KF97 DRN180M4			
		4	PHF032 KF97 DRN180L4			



OMEGA DRIVES is available in 7 operational forces.

### **TECDOS TOOL MOVER**

Тур		Table surface [cm]	Maximum load capacity	Own weight approx [kg]	
	L	Н	В		
THS 10	100	100	100	10.000	1.550
THS 16	160	160	160	16.000	4.400
THS 20	160	160	160	20.000	4.450
THS 25	250	250	250	25.000	11.350
THS 32	250	250	250	32.000	11.400
THS 64	350	350	250	64.000	22.000

Product information  $\rightarrow$  p. 28

### **RUD-Service**

**\_**()

TECDOS high perfomance chains are extremely robust and require very little maintenance due to their simple construction. The following points are our support for a improved operating safety:



### Measure, document, maintain

- Consultation and recommendation for spare parts
- Maintenance
- Replacement of competitors products with RUD products
- On-site consultation
- Measuring and testing
- On-site installation
- Fault elimination
- Inspection
- Retrofitting



### Calculation, Construction & Consultation

- Product development and further development
- Dimensioning of the best components for your individual requirement
- Technical consultation, if needed on-site
- Synchronisation of all components to your individual requirements
- On request provision of CAD files
- Problem solving in case of difficult cases of operation



Discover now **RUD TECDOS chains drivers and components** on traceparts. RUD product-download simplifies design! **Click here** or search **www.traceparts.com/de** for **TECDOS**.



### **Technical questionnaire**Drive Systems

Please copy and fax or send to:

**CONTACT DATA** 

Remarks:

Drive system:

Current situation:

Desired situations:

tecdos@rud.com (Fax +49 7361 504-1523)

### 

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www.rud-tecdos.com

Firm:*			Responsible:*				
Street:*			E-Mail:				
ZIP / City:*			Tel.:				
Date:			Preferred delivery date:	* Pflichtfelder			
PROJECT							
Task:	☐ lifting	pulling	other:				
			Please also send a separate	e sheet for sketches			
Maximum tensile strength on	the chain [kN]:	weight [kg]:	Friction factor [μ]:				
Roller friction 0 wheel / materi	al parameter		Sliding friction: Friction factor*				
Max. speedup [m/s²] /max. dei	tension [m/s²]:						
Speed[m/min] from:		to:					
Cycle operation??	<b>□</b> yes	☐ no	cycles per:				
Duty and passive state per cyc	le::						
Total operating time daily [h]:			annually [h]:				
Lenght of traverse path [mm]:							
Number of load chain strands:							
☐ New project	☐ Conversion Retrofit (s	pecify housing dimension	ns)				
Drive pocket wheel - pitch circ	le diameter [mm]:						
Drive pocket wheel - pitch circ	le diameter [mm]:						
Chain used before conversion, type and dimensions, max breaking load, operating time and reason for the break down:							
Environmental influences:	☐ corrosive	■ abrasively	☐ temperature	□ others			
Drive relocation/ -mark preferr	ed (refer to e.g. catalogue	p. 43)					

Performance:

■ Pneumatic motor

■ Hydraulic motor

Туре:

☐ Electric motor

Protection cover IP:

☐ Gearmotor

☐ Direct drive

Rotational speede:



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### Conveying and driving



Whether you're looking for a complete bucket elevator, chain conveyor or chain drive, our wide experience in bulk goods handling, including cement, fertiliser, aggregates among many others, makes RUD the one-stop shop for your application.



For power generation with coal and biomass, as well in the recycling sector, RUD is a leading technology supplier for components and complete solutions based on round link chains and the FORKY product line. Whether for material feeding, ash removal or cleaning scrapers, RUD CRATOS has the solution you're looking for.



RUD components are the first choice worldwide for leading hoisting equipment manufacturers. We also offer a wide range of round link chains for industrial applications of all kinds.



RUD Powerblock and Dominator shackles set the benchmark world-wide and their unbeatable reliability makes them number one choice for high performance mining operations.



The RUD TECDOS Team develops and fabricates drive solutions for turning, lifting, moving, telescoping and skidding goods. Along with our component program, TECDOS OMEGA and Pi/GAMMA drives are now available as complete solutions.