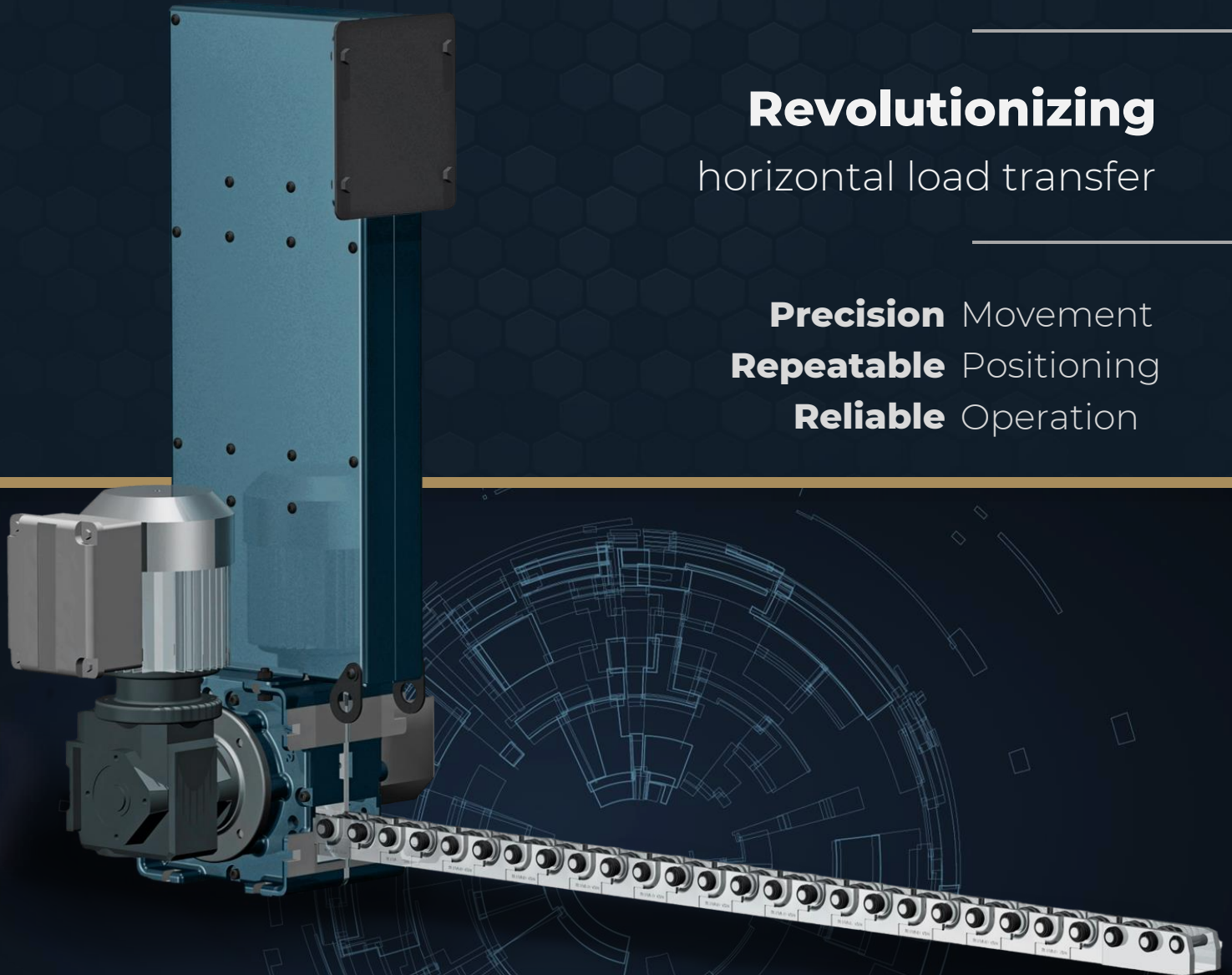


ROLLBEAM

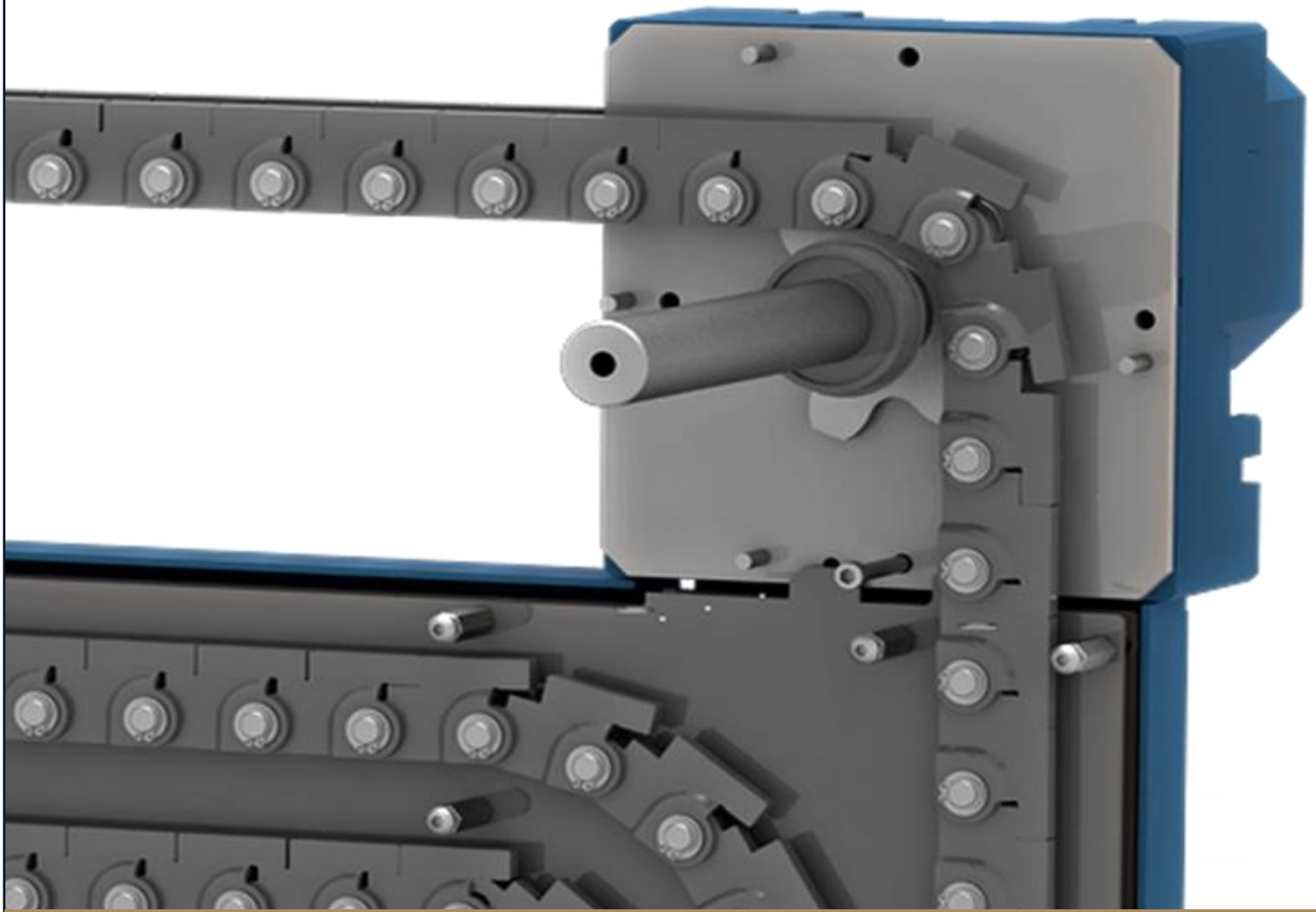
2024 EDITION

Revolutionizing
horizontal load transfer

Precision Movement
Repeatable Positioning
Reliable Operation



SERAPID



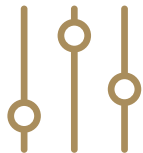
SERAPID

LEVERAGING EXCELLENCE



COMPACT

Small Footprint &
Telescopic Action



PRECISE

Accurate & Repeatable
Positioning



ROBUST

High Reliability &
Low Maintenance



GREEN

High Energy Efficiency

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OVERVIEW

ROLLBEAM BASICS

RIGID CHAIN TECHNOLOGY

ROLLBEAM PERFORMANCE

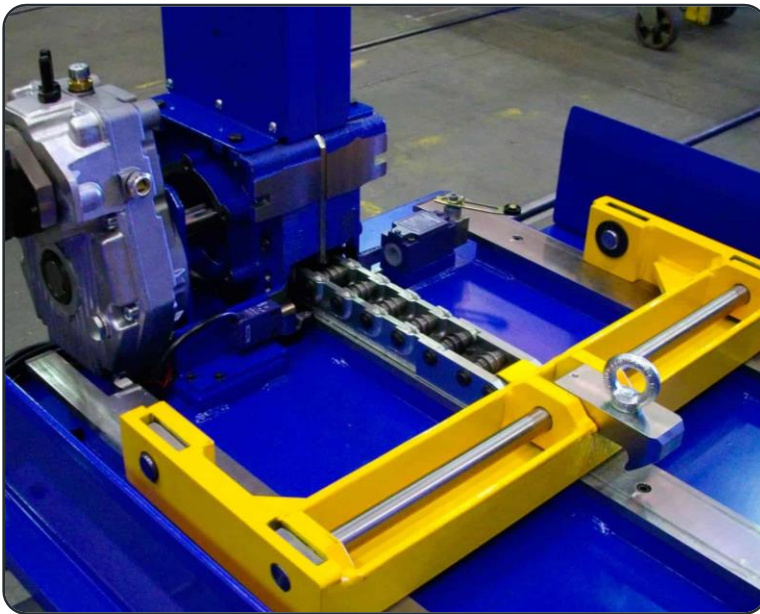
APPLICATION SCENARIOS

OPERATIONAL DATA

SAMPLE DRAWINGS

ROLLBEAM BASICS

Experience unmatched reliability, accurate positioning, and virtually unlimited horizontal stroke with SERAPID's ROLLBEAM product line.



The RollBeam operates entirely through mechanical means, boasting high reliability and a long lifespan with low maintenance requirements. Along with an impressive energy efficiency of 80-90%, this makes it a sustainable investment both ecologically and economically.

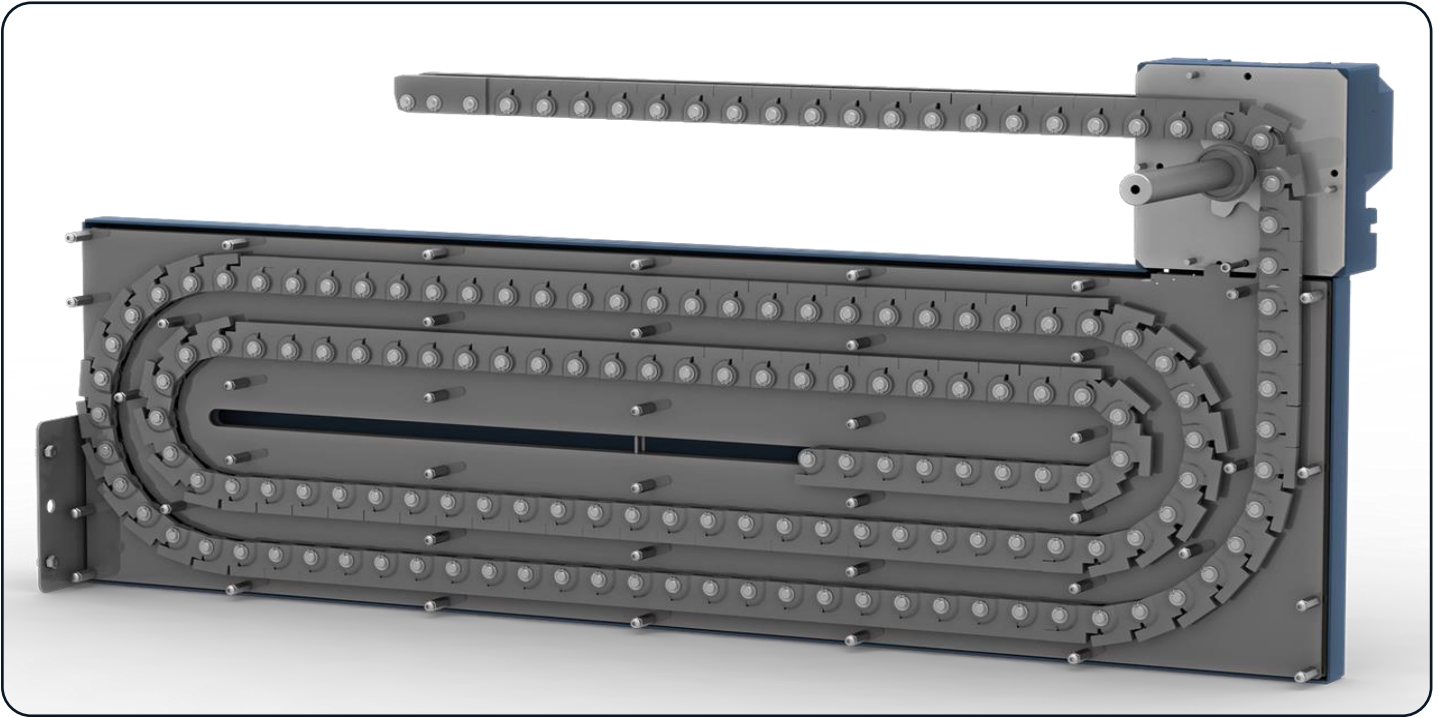
The standard RollBeam models cater to applications up to 50 tons with virtually unlimited stroke capabilities. Multiple units can be seamlessly integrated for higher load capacities to optimize system layout.

A wide array of options ensures operation suitable for harsh environments or under rigorous, high-cycle conditions.



- ✓ **Reliable Electro-mechanical power.**
- ✓ **No hydraulic fluid necessary.**
- ✓ **Repeatable accurate positioning.**
- ✓ **High performance at any stroke.**
- ✓ **Multiple mounting options.**

RIGID CHAIN TECHNOLOGY



Elevate your engineering capabilities with the versatility of **SERAPID's proprietary technology.**

Rigid Chain Technology, as implemented in SERAPID's RollBeam product line, is composed of interlocking links that move forward under thrust and load, and function much like a solid bar. Each link within the chain is meticulously designed and engineered for optimal performance.

The chain smoothly and seamlessly extends, creating a completely rigid bar for both pushing and pulling. When retracted, the chain is stored in a compact magazine, away from the transfer path. The RollBeam takes advantage of this telescopic action, allowing for a versatile and powerful system with a compact size.

SERAPID's rigid chain actuators offer a robust and reliable push/pull system and positioning mechanism, capable of withstanding significant loads while maintaining exceptional stability and accuracy.

Rigid Chain Technology empowers engineers with a versatile solution that excels in a wide range of applications, offering unparalleled strength, precision, and durability.

Our engineering department designs and modifies our products, integrating them into bespoke systems, to meet your technical project requirements.

ROLLBEAM PERFORMANCE



Features and Benefits of the SERAPID RollBeam

- ▶ Telescopic actuator with multiple versatile magazine configurations
- ▶ Complete withdrawal from transfer path permitting cross-movements & clear work area
- ▶ Entirely electro-mechanical operation, without the use of hydraulic fluid
- ▶ Compact design facilitates easy installation in confined conditions and pre-existing structures
- ▶ Sturdy construction for reliable performance in harsh industrial conditions
- ▶ Standard speed up to 300 mm/s, higher speeds on demand – up to 1m/s
- ▶ Repeatable, programmable positioning with millimeter range accuracy
- ▶ Proven in a wide range of applications
- ▶ Low maintenance & long service life
- ▶ Cost-effective /high energy efficiency (>80%)
- ▶ Application-specific designs, system engineering, and complete solutions for linear motion



APPLICATION **EXAMPLES**

VERSATILITY OF USES

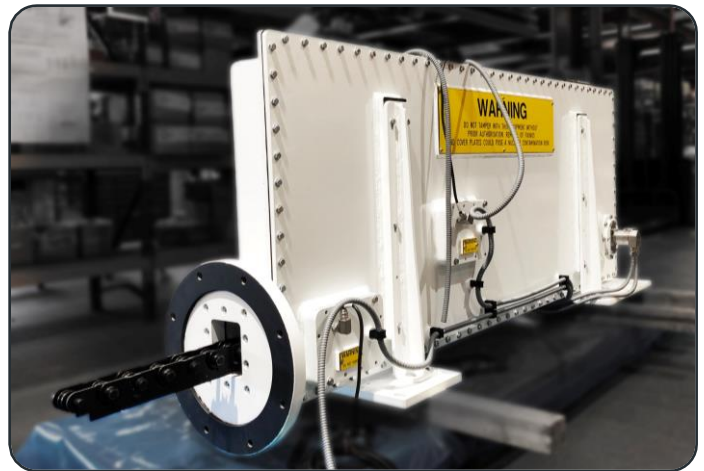
QUICK DIE CHANGE

PUSH / PULL SYSTEM

GPO DIE CART

VERSATILITY OF USES

From metal stamping to nuclear handling, the RollBeam is the choice for horizontal movement.



The RollBeam has a wide scope of uses in various industries. Notable applications include nuclear energy, automotive manufacturing and metal stamping industries. The possibilities are endless!

PROVEN APPLICATIONS:

- ▶ Transfer of radioactive fuels and materials
- ▶ Truck loading for high temperature furnaces
- ▶ Horizontal work platforms extensions
- ▶ Vehicle assembly lines
- ▶ Palletizing gas cylinders in filling benches
- ▶ Loading of deep storage nuclear waste
- ▶ Metal stamping operations
- ▶ Pipe Deburring and Cleaning
- ▶ Truck tank inspection
- ▶ Heavy handling in manufacturing
- ▶ Tool and Die positioning & exchange



QUICK DIE CHANGE



SERAPID
QDX

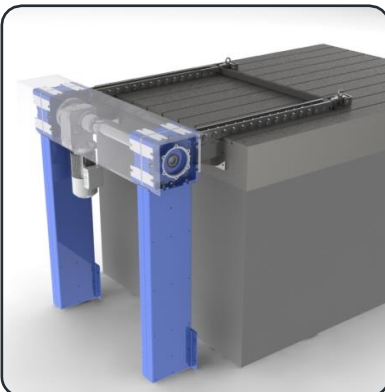
SERAPID QDX is a specialized brand offering Quick Die Exchange products. For more info visit www.serapid.com

TOOL & DIE EXCHANGE:

Rigid Chain Technology has been implemented into several products specifically made for moving tools and dies in the press environment. The RollBeam Actuator, Push/Pull System,, and GPO Tool and Die Truck provide the highest level of power, efficiency and accuracy in metalforming operations. The versatility of the RollBeam allows for mounting on a variety of tables or vehicles in the press environment.

Die change safety & efficiency are critical factors for profitable operations. Each die change means exposure to downtime, possible operator injury, or damage to equipment. SERAPID QDX reduces and eliminates these exposures with purposefully designed equipment for these production environments.

PUSH/PULL SYSTEM



SERAPID PPS: PUSH / PULL SYSTEM

SERAPID's signature Push/Pull System consists of two synchronized RollBeam units, which vary in size and can provide thrust approaching 36,000 pounds. The innovative design allows for maximum efficiency in stamping operations and stores the retracted chain out of the transfer path.

► HIGH RELIABILITY

The PPS can withstand heavy loads and frequent use with little to no maintenance. In a typical pressroom environment, a rigid chain system will maintain itself.

► FAST AND EFFICIENT MOVEMENT

The SERAPID push-pull system is capable of moving loads quickly and efficiently, which is crucial when time is of the essence. Repeatable positioning offers 1mm of accuracy.

► CUSTOMIZABLE

The SERAPID PPS is highly customizable, and configurations can be tailored to specific applications and requirements.

“GPO” DIE CART



SERAPID “GPO” DIE CART TRUCK

The GPO is a specialized vehicle designed to transport heavy loads or, more specifically, tools and dies, in industrial settings. The term “GPO” comes from a French acronym that translates to Tool Carrier & Stacker.

SERAPID die carts and trucks feature a dual RollBeam Push/Pull System mounted on the vehicle itself, which can then be conveniently driven wherever necessary. Our die carts can handle anywhere from 1 to 60 tons,



SPECIFICATIONS & BENEFITS:

- ✓ **Standard sizes = 1, 5, 10, 15 tons**
- ✓ **Maximum capacity = 60 tons**
- ✓ **Operated by driver or remote control**
- ✓ **High performance at any stroke.**
- ✓ **Single or double stacked loading options**



OPERATIONAL **DATA**

COMPONENTS

MOUNTING OPTIONS

CHAIN & LOAD GUIDES OPTIONS

STROKE CAPACITIES

LOAD & FORCE CAPACITIES

COMPONENTS

SERAPID ROLLBEAM SYSTEM



Over Hook / C-Hook

Hook can be customized to grab the load.



CAM Switch / Encoder

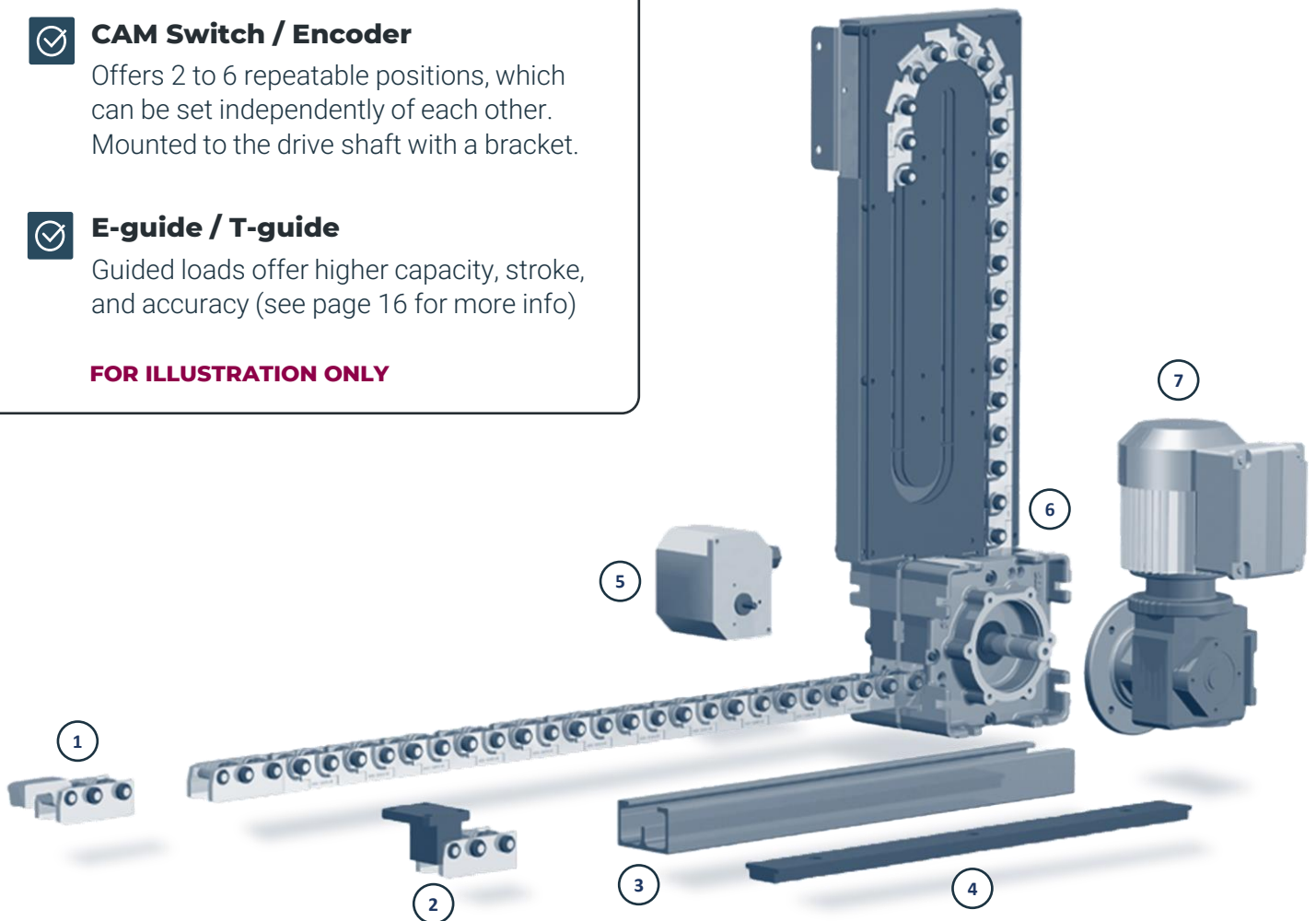
Offers 2 to 6 repeatable positions, which can be set independently of each other. Mounted to the drive shaft with a bracket.



E-guide / T-guide

Guided loads offer higher capacity, stroke, and accuracy (see page 16 for more info)

FOR ILLUSTRATION ONLY



- | | | | |
|-------------------------|-----------------|-------------------------|------------|
| 1. Over hook | 2. C-hook | 3. E-guide | 4. T-guide |
| 5. CAM switch / encoder | 6. Shaft output | 7. Gear motor / reducer | |

MOUNTING OPTIONS

HORIZONTALLY MOUNTED MAGAZINE

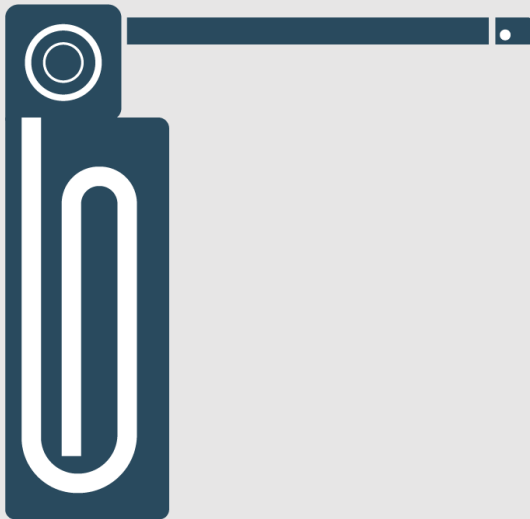


CHAIN ABOVE LOAD PATH
MAGAZINE BELOW LOAD PATH

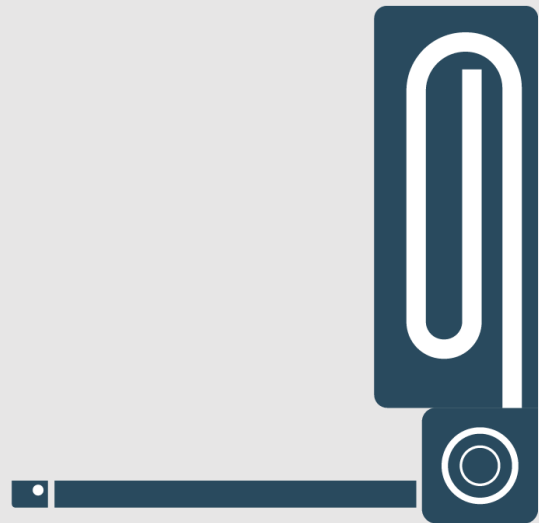


CHAIN BELOW LOAD PATH
MAGAZINE ABOVE LOAD PATH

VERTICALLY MOUNTED MAGAZINE

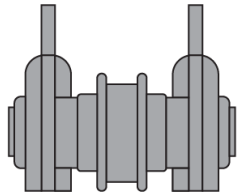


CHAIN ABOVE LOAD PATH
MAGAZINE BELOW LOAD PATH

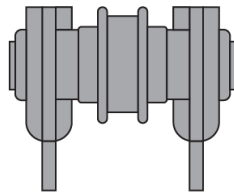


CHAIN BELOW LOAD PATH
MAGAZINE ABOVE LOAD PATH

CHAIN & LOAD GUIDES OPTIONS



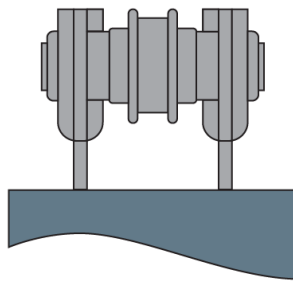
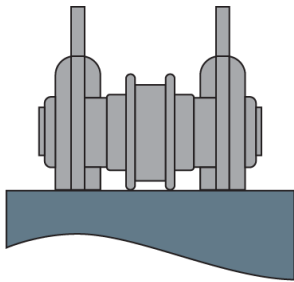
SHOULDERS UP



SHOULDERS DOWN

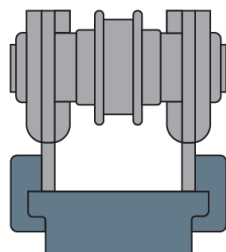
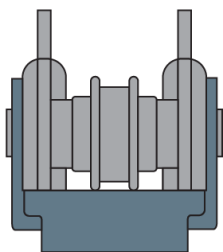
CHAIN ORIENTATION

The terms “shoulders up” and “shoulders down” refer to the orientation of the chain, which depends on various factors and the application in use.



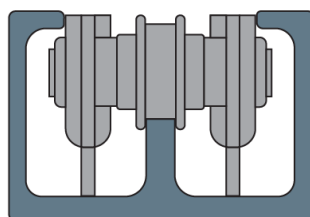
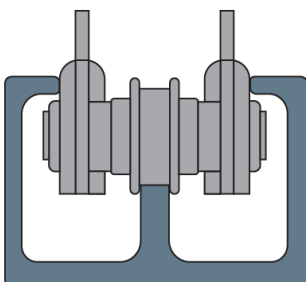
SUPPORTED CHAIN

The chain is supported by a table or surface, often with roller bars or balls to assist with ease of movement. There are limitations to stroke distance without using chain guides.



T-GUIDE – GUIDED CHAIN

T-guides are used to guide the chain and allow unlimited stroke. They have a smaller profile and lower maximum thrust power than E-guides.



E-GUIDE – GUIDED CHAIN

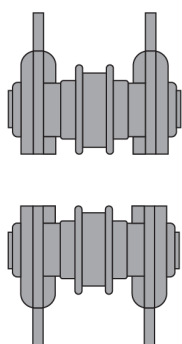
E-guides are used to guide the chain and allow unlimited stroke. E-guides allow for the highest maximum thrust power available of 160kN.

STROKE CAPACITIES



GUIDED CHAIN: E-GUIDES or T-GUIDES

When using guided chains, there is **unlimited** stroke distance.



NON-GUIDED CHAIN – SUPPORTED OR UNSUPPORTED

In configurations **without** chain guides, the chain may be operated either self-supported (no support at all) or with a supported chain and no guides.

The table below specifies the maximum stroke for each RollBeam type with chains operating either shoulders up or shoulders down and no guides.

MAXIMUM STROKE DISTANCE (IN METERS):

MODEL	Self-Supported	Supported: shoulders down	Supported: shoulders up
RB S40	1	3	3
RB S60	2	5	3
RB D60	2	5	3
RB J60	2	5	3
RB S90	3	5	4
RB D90	3	5	4
RB J90	3	5	4

LOAD & FORCE CAPACITIES



MAXIMUM LOAD CAPACITY

SERAPID systems can move up to **60 tons** or more, depending on the configuration, number of chains, motor & stroke distance. The highest force available will come from a system using multiple synchronized RollBeam Units, with E-Guides and J90 chain.

Higher force/load systems can be custom engineered for any application.



NON-GUIDED CHAIN CONFIGURATIONS

In configurations **without** chain guides, the maximum force depends on the stroke distance, chain size, and whether the chain is configured shoulders up or shoulders down. .

The table below specifies the maximum force for each RollBeam type with chains operating either shoulders up or shoulders down and no guides.

MAXIMUM FORCE PER CHAIN (IN KILONEWTONS):

MODEL	With Guides	w/o Guides shoulders down	w/o Guides shoulders up
RB 40	7.5	5	25
RB S60	25	7.5	12.5
RB D60	37	22.5	20
RB J60	50	30	25
RB S90	80	45	45
RB D90	130	62.5	62.5
RB J90	160	80	87.5



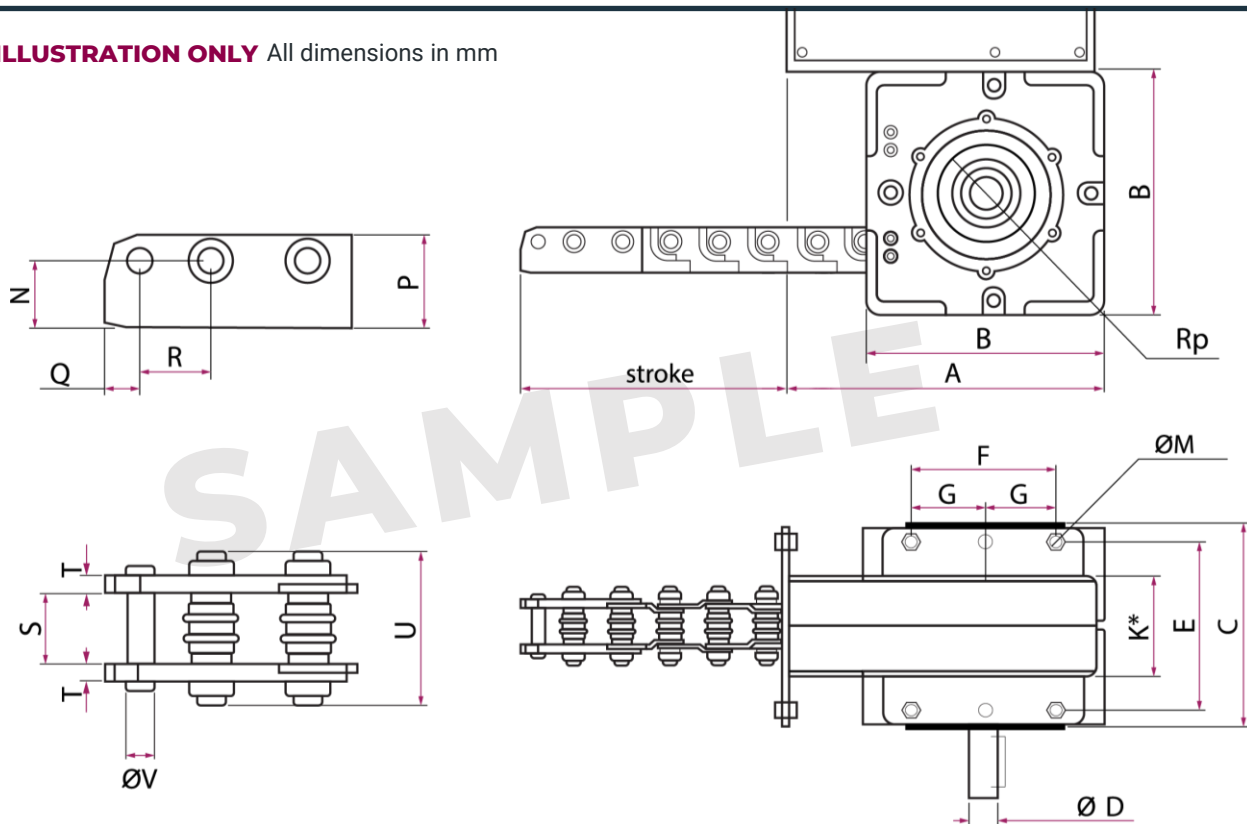
DIMENSIONS

CHAIN & HOUSING DIMENSIONS

MAGAZINE DIMENSIONS

DIMENSIONS

FOR ILLUSTRATION ONLY All dimensions in mm



Model	Rp	A	B	C	D	E	F	G	M	N	P	Q	R	S**	T**	U max	V
RB 40	40	230	202	168	25	140	120	---	10	27.5	38.5	14.5	29.5	29.4	7	63.4	10
RB S60/PS	60	330	272	200	45	170	140	---	14	31/39	49/57	22	43	40	9.2	82	15
RB D60	60	330	272	244.5	60	214.5	140	---	14	31	49	22	43	2*35	9.2	126.4	15
RB J60	60	330	272	258.5	60	228.5	140	---	14	31	49	22	43	2*39.6	9.2	142	15
RB S90	90	475	400	268	70	300	300	150	17	52	80	34	66	60	15.5	146.5	25
RB D90	90	475	400	356	100	388	300	150	17	52	80	34	66	2*62.3	15.5	234	25
RB J90	90	475	400	375	100	407	300	150	17	52	80	34	66	2*60	15.5	252.8	25
SPECIFIC	ON REQUEST																

DIMENSIONS

Standard magazine applies to RB S40, S60, D60, and J60, up to 5m stroke.
For all other RollBeam units, magazines are custom sized to measurements.



STANDARD MAGAZINES FOR RB S40

	2 tracks		3 tracks		5 tracks		2 / 3 / 5 tracks
stroke	H	J	H	J	H	J	K
500	400	190	-	-	-	-	85
1000	650	190	-	-	-	-	85
1500	900	190	-	-	-	-	85
2000	1150	190	800	260	535	400	85
3000	-	-	1135	260	735	400	85
4000	-	-	1470	260	935	400	85
5000	-	-	1800	260	1135	400	85

All dimensions in mm

STANDARD MAGAZINES FOR RB S60, D60 & J60

	2 tracks		3 tracks		5 tracks		2/3/5 tracks		
stroke	H	J	H	J	H	J	K S60	K D60	K J60
1000	690	265	-	-	-	-	110	145	160
2000	1190	265	840	360	-	-	110	145	160
3000	1690	265	1175	360	840	555	110	145	160
4000	2190	265	1505	360	1040	555	110	145	160
5000	2690	265	1840	360	2205	555	110	145	160

All dimensions in mm



CONTACT US

SERAPID USA Inc.

34100 Mound Road
Sterling Heights, MI
48310

+1 (586)274-0774
info-us@serapid.com

SERAPID Germany GmbH

Willhelm-Frank-Strasse 30
D-97980
Bad Mergenheim

+49(0)7931 96 47-0
info-de@serapid.com

SERAPID France

4 Rue des frères Robbe
ZA Eurochannel
F-76370 Martin-Eglise

+33(0)2 32 06 35 60
info-fr@serapid.com

SERAPID UK Ltd.

Elm Farm Park, Great Green
Thurston Bury St. Edwards
IP31 3SH

+44 (0)1359 233335
info-uk@serapid.com

SERAPID ASIA

51 Goldhill Plaza, #21-02
Singapore
308900

+49 (0)7931 96 47-0
info-sg@serapid.com