ENGLISH
SIDSA
Experience SID Quality

1. SMP (Shredding-Mixing-Pumping) plant in Japan
2. Pre-shredder for RDF in Austria
3. Shredder in Waste To Energy (WTE) station in Switzerland
4. Tire shredder in France
5. Hazardous waste shredder in Great Britain
6. Fine shredder for RDF in Africa

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History of SID Shredding and Pumping Installations

SID (Société Industrielle de la Doux) is a company who designs, manufactures and erects a wide range of machinery and installations for waste treatment and process technologies.

SID is today the leading company for the planning and construction of complete shredding installations.

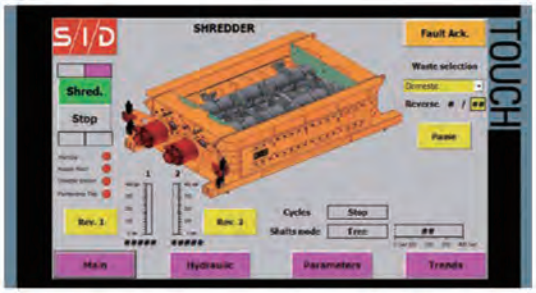
SID customized solutions are used in many industries, such as: incinerator plants, cement industry, refineries, heat and power stations, recycling plants etc.

1972	SID starts building rotary shredders
1982	SID becomes an independent company
1988	The first machine with automatic ejection of unshreddables is built
1994	SID Deutschland GmbH is founded in Germany
1996	The world's biggest shredding installation is put into Operation in Stuttgart
1998	First SMP is put into operation in Germany
2003	SolidPumps company is integrated into SID group
2005	SID installs the first SMP in China
2006	SID Machinery (Beijing) Co., Ltd. is founded in China
2009	SID launches 4-shaft shredders
2011	New mobile platforms are developed
2013	SIDSA Environmental Pvt. Ltd is founded in India
2014	New high capacity fine shredders are put into operation
2016	SID installs the first hazardous waste SMP in China
2018	Manufacturing buildings are tripled on SID Machinery (Beijing) Co., Ltd.

Shredding and Pumping Installations

Mechanical engineering
The competent engineers of SID are using the latest technology for analysis, construction and design of mechanical components and installations.

Hydraulics
Hydraulic engineers of SID are developing standardized or customized hydraulic systems.



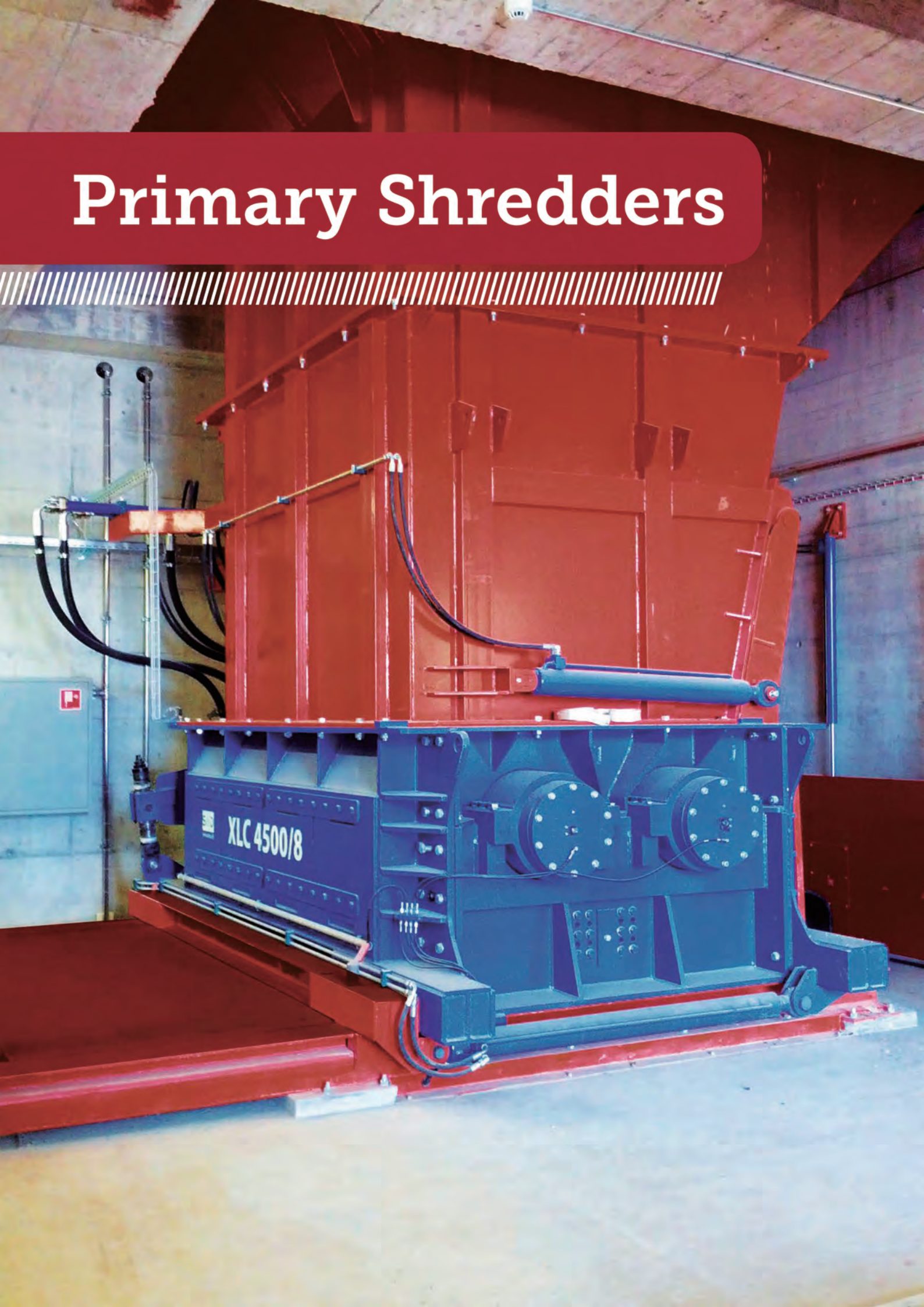
Electrical and programming engineering
SID installations can be fully automated. SID engineers are able to program all major PLCs, to integrate the installation in your DCS, and to use the latest electric drive technologies.

Manufacturing
All key components are produced and mounted in SID workshops.

Mounting and put-into-operation
A team of mechanical, electrical and hydraulic engineers guarantees a competent follow-up of your projects on site.

After-sales services
Our after-sales services department is available 24/7. Our very large stock of spare parts and our close cooperation with worldwide active suppliers and local partners guarantee a high availability for our installations.

Primary Shredders



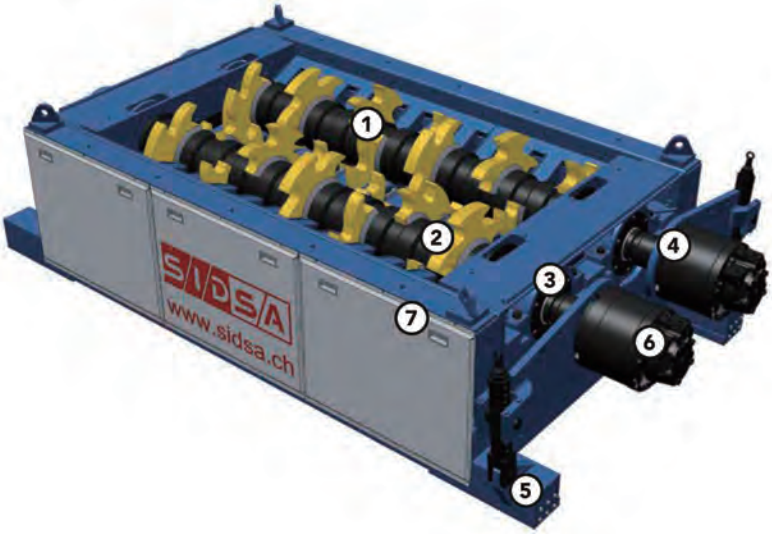
Primary Shredders Series:
XLC 3000 XLC 3000 MR
XLC 4500 XLC 4500 MR
XLC 7300

Our XLC primary shredders are widely known as the sturdiest and the most reliable machines in the market. They guarantee high throughput and very good productivity with low maintenance and operational costs.

Our primary shredders are suitable for a wide variety of products such as: industrial, bulky, municipal and hazardous waste.

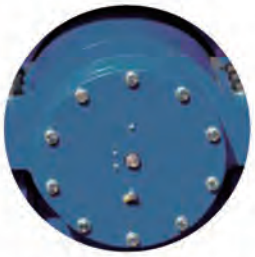
- **+ Very powerful installations up to 630 kW**
- **+ Throughput up to 240 t/h**
- **+ Door for automatic ejection of unshreddable products**
- **+ Waste can be shredded in each sense of rotation**
- **+ Wear parts are easily and independently exchangeable**
- **+ All worn parts are completely reweldable**
- **+ Process of waste reduction is completely automated using hydraulic adjustment systems and modern customized IT programs**
- **+ Mobile version is available**

XLC 4500 under the Magnifying Glass



1.
Highly resistant hooks
High resistance to wear, multiple times reweldable, optimized shredding geometry

2.
Patented combs
Central and side combs are easily exchangeable and adjustable for adopted granulometry



3.
Housing in two parts
Easy and quick exchange of the whole shafts possible by simple unscrewing of the superior element of the housing

4.
Patented sealing for bearings
Quadruple sealing preventing leakages, even for liquids

5.
Shock absorbers
Efficient protection of the hydraulic system against over-loads

6.
Drive
Especially designed hydraulic or electric drive for optimal torque and performance, runs perfectly in extreme conditions

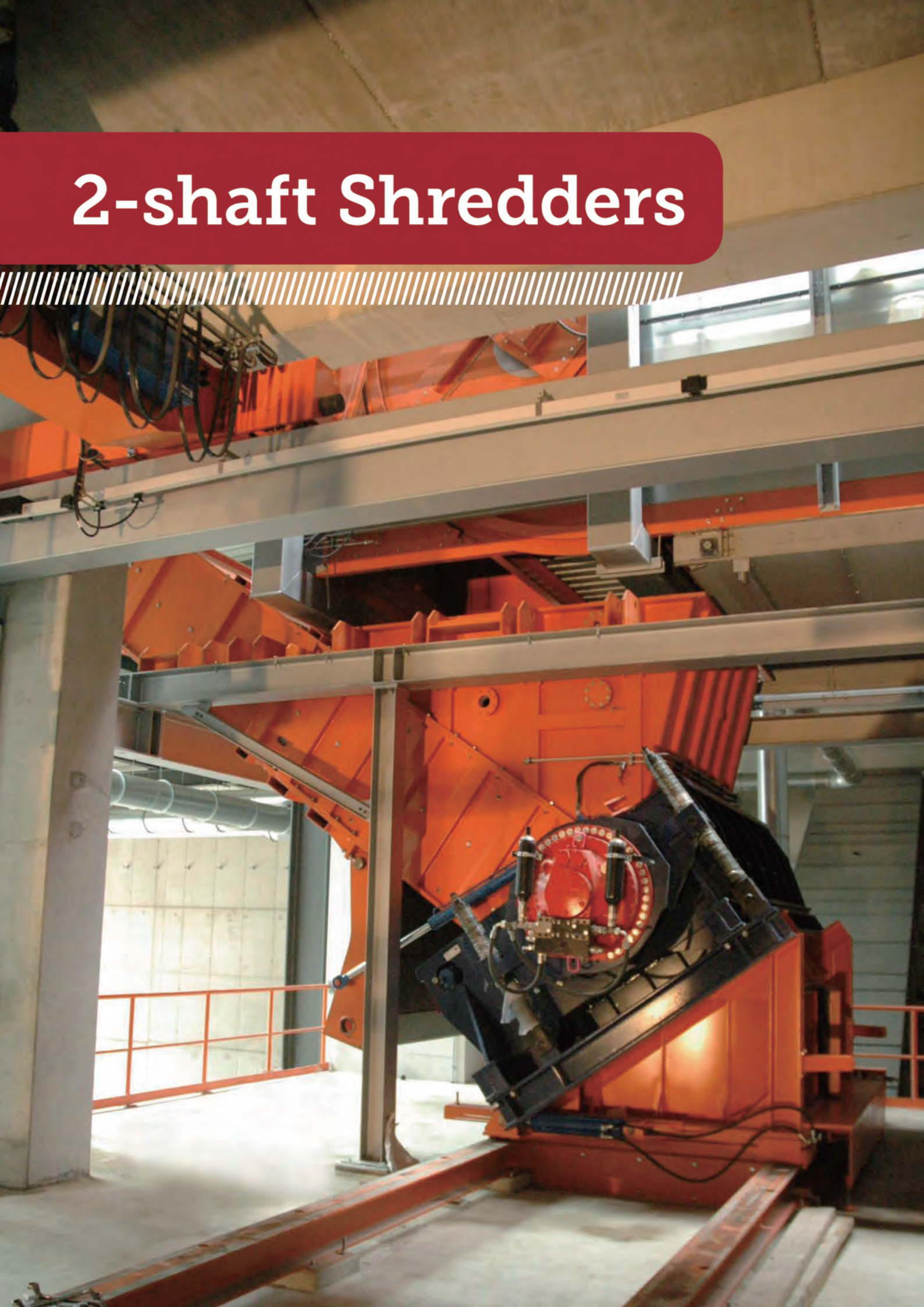
7.
Ejection door
Hydraulically driven door for automatic ejection of unshreddable products

Application in many Industries:

+ **Incinerators**
+ **Cement plants**
+ **Sorting and recycling plants**
+ **Refuse derived fuel (RDF) installations**
+ **MSW (Municipal Solid Waste) treatment installations**
+ **Hazardous waste treatment installations**

Technical data	XLC 3000 MR	XLC 3000	XLC 4500 MR	XLC 4500	XLC 7300
Dimensions L x W x H (m x m x m)	3.3 x 1.4 x 1.5	3.3 x 2.1 x 0.9	4.4 x 2.2 x 1.7	4.8 x 2.5 x 1.2	4.6 x 3.3. x 1.7
Cutting chamber (m x m)	1.8 x 1.0	1.8 x 1.6	2.6 x 1.7	2.6 x 1.8	2.7 x 2.7
Weight (t)	9	10	13	21	38
Installed power (kW)	90 – 160	160 – 250	110 – 200	200 – 500	315 – 630
Bulky waste (up to t/h)	15	30	20	60	120
Domestic waste and MSW (up to t/h)	40	60	50	150	240
Wood and easily breakable products (up to t/h)	15	25	20	60	120

2-shaft Shredders



2-shaft Shredders Series:

S 100 **S 350**
S 200 **S 400**
S 300 **S 500**

Very powerful, 2-shaft Shredders show one of the highest shredding throughputs and the lowest energy consumptions. This design makes operational and maintenance costs very attractive.

These reliable and long lifetime machines are suitable for a wide range of applications, including: MSW, bulky, industrial, hazardous, medical, food and electronic waste or tires.

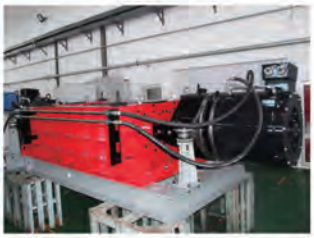
+ **Design customized to requested granulometry**
+ **Specially designed cutters for optimal shredding**
+ **Hydraulic door for the automatic ejection of unshreddable parts**
+ **Quick exchange of all wear and spare parts**
+ **Quadruple sealing preventing leakages, even for liquids**
+ **Mobile version is available**

Our customized 2-shaft shredders exist with following options:

Inclined form
e.g. for chemical waste

Ram feeder
For pushing the product onto the cutting tools

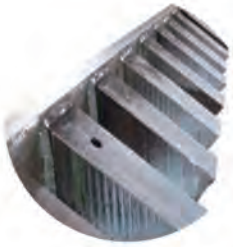
Ejection door
For easy removal of unshreddable parts



High torque electric drive
Which guarantees high efficiency

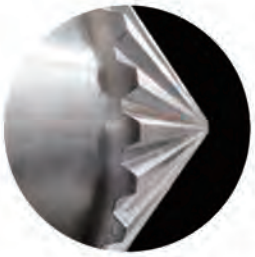
S 350 under the Magnifying Glass

1.
CrNiMo cutter rings
Entirely machined, multiple heat treated



2.
Combs
Easily exchangeable combs

3.
Housing in two Parts
Easy and quick exchange of the whole shafts possible by simple unscrewing of the superior element of the housing



4.
Ribbed shafts
The metal filled shafts have special ribbing design which provides optimal torque transmission

5.
Shock absorbers
Efficient protection of the hydraulic drive system against overloads

6.
Drive
Especially designed hydraulic or electric drive for optimal torque and performance, runs perfectly in extreme conditions

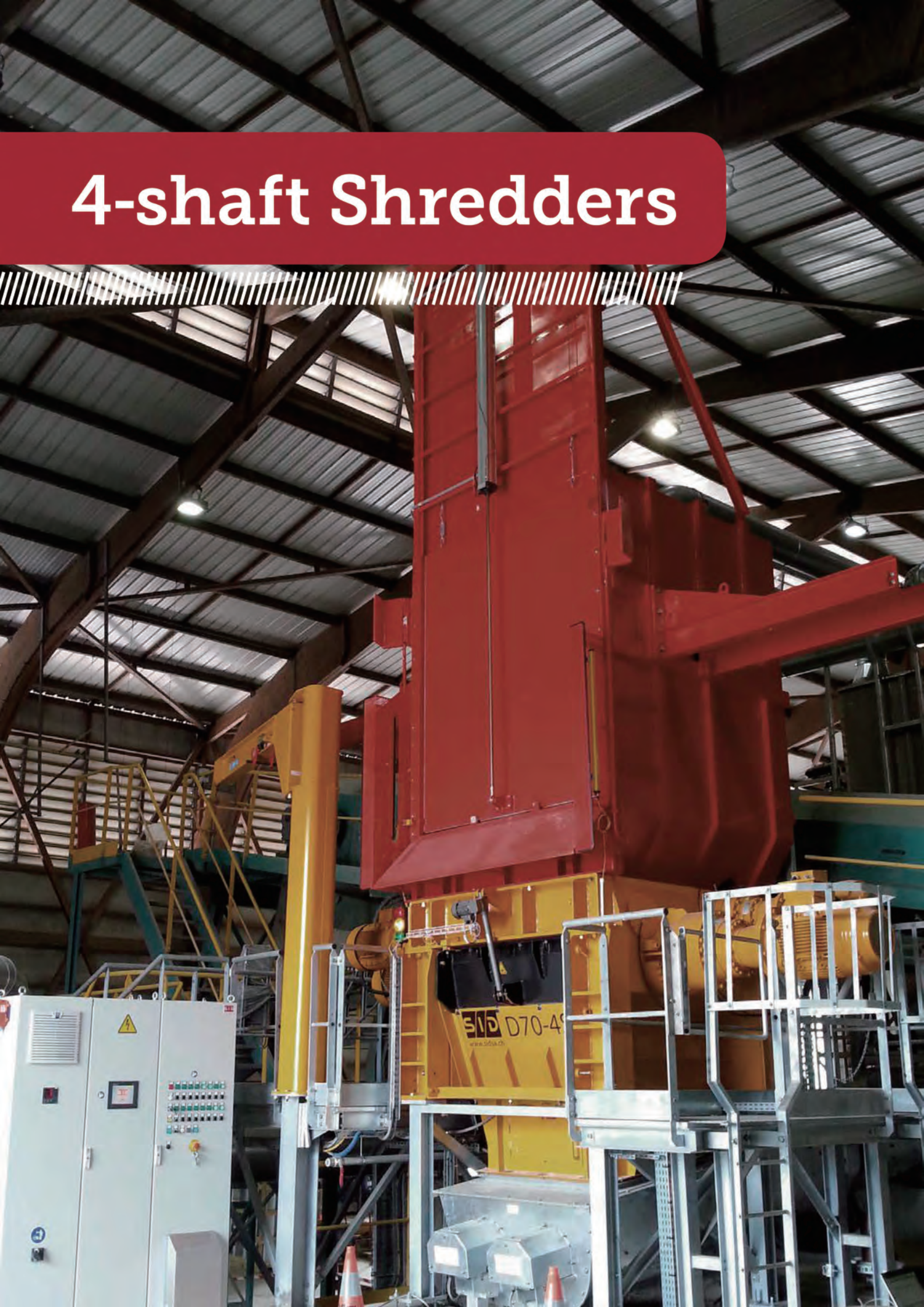
7.
Patented sealing for bearings
Quadruple sealing preventing leakages, even for liquids

Application in many Industries:

+ **Shredding-mixing-pumping (SMP) installations**
+ **Refuse derived fuel (RDF) installations**
+ **Tire shredding installations**
+ **Cement plants**
+ **Waste incinerators**
+ **Chemical industry**
+ **Bioenergy plants**

Technical data	S 100	S 200	S 300	S 350	S 400	S 500
Dimensions L x W x H (m x m x m)	2.7 x 1.1 x 0.5	3.5 x 1.8 x 0.5	4.0 x 1.8 x 1.1	4.5 x 1.8 x 1.1	5.2 x 2.2 x 1.1	5.9 x 2.6 x 1.7
Cutting chamber (m x m)	1.0 x 0.65	1.26 x 0.85	1.62 x 1.1	2.0 x 1.1	2.5 x 1.5	2.7 x 1.55
Weight (t)	3	7	10	14	25	35
Installed power (kW)	18.5 – 55	37 – 200	90 – 400	110 – 400	250 – 630	264 – 630
Cuttering ring width (mm)	20 – 50	30 – 120	62 – 170	62 – 170	75 – 110	75 – 110
Bulky waste (up to t/h)	–	–	20	20	40	60
Industrial, special and hazardous waste (up to t/h)	4	8	25	30	50	80
Domestic waste (up to t/h)	8	16	40	50	80	120
Wood (up to t/h)	–	5	20	25	50	70
Car tyres (up to pcs/h)	500	1000	2000	2500	4000	5000
Lorry tyres (up to pcs/h)	–	40	300	360	500	600
16 kg drums (up to pcs/h)	200	300	400	400	800	1000
20 kg drums (up to pcs/h)	30	60	400	400	800	1000

4-shaft Shredders



4-shaft Shredders Series:
S 200 4S
S 300 4S
S 350 4S

4-shaft Shredders are one of SID's key technological innovations for fine shredding. With the LAS system and shaft's mutual position they are suitable for shredding a wide range of products, for example tires, industrial, mixed and hazardous waste. Often, they are used in RDF installations.

+ **Lowering and Sliding (LAS) system for easy and quick screen replacement**
+ **Regular output size of products after screen**
+ **Multiple drive system for optimal power transmission**
+ **4 shafts and 4 drives ensure high flexibility**

Technical data	S 200 4S	S 300 4S	S 350 4S
Dimensions L x W x H (m x m x m)	4.2 x 2.0 x 1.4	4.4 x 2.2 x 1.7	4.4 x 2.2 x 1.7
Cutting chamber (m x m)	1.3 x 1.3	1.8 x 1.6	2.0 x 1.8
Weight (t)	12	18	22
Installed power (kW)	90 – 200	180 – 500	180 – 500
Capacity (up to t/h)	10	30	30
Output size (mm)	30 – 100	30 – 100	30 – 100

Fine Shredders

Fine Shredders Series:
XLF 4500 M
XLF 4500

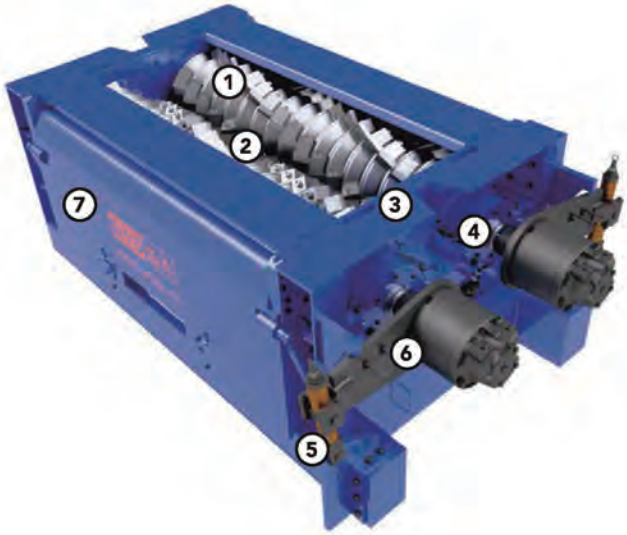
Our fine shredders consist of one or two shafts each driven by a slow-speed high torque motor.

The different powers are developed by two hydraulic power packs. Each hydraulic unit drives one shaft.

Electric high torque drives are also available.

- **+ Sturdy alloy steel rotor**
- **+ Quick replacement of knives**
- **+ Hydraulic access door**
- **+ Load start-up**
- **+ Automatic reverse overload**
- **+ Hydraulic or electric drive**

XLF 4500 under the Magnifying Glass



1.
Highly resistant knives
Turnable and quickly exchangeable

2.
Central combs
Adjustable in height. Can be retracted and slid

3.
Housing in two parts
Easy and quick exchange of the whole shafts possible by simple unscrewing of the superior element of the housing

4.
Patented sealing for bearing
Quadriple sealing preventing leakages, even for liquids

5.
Shock absorber
Efficient protection of the hydraulic system against overloads

6.
Hydraulic drive
Especially designed hydraulic drive for optimal torque and performance, runs perfectly in extreme conditions

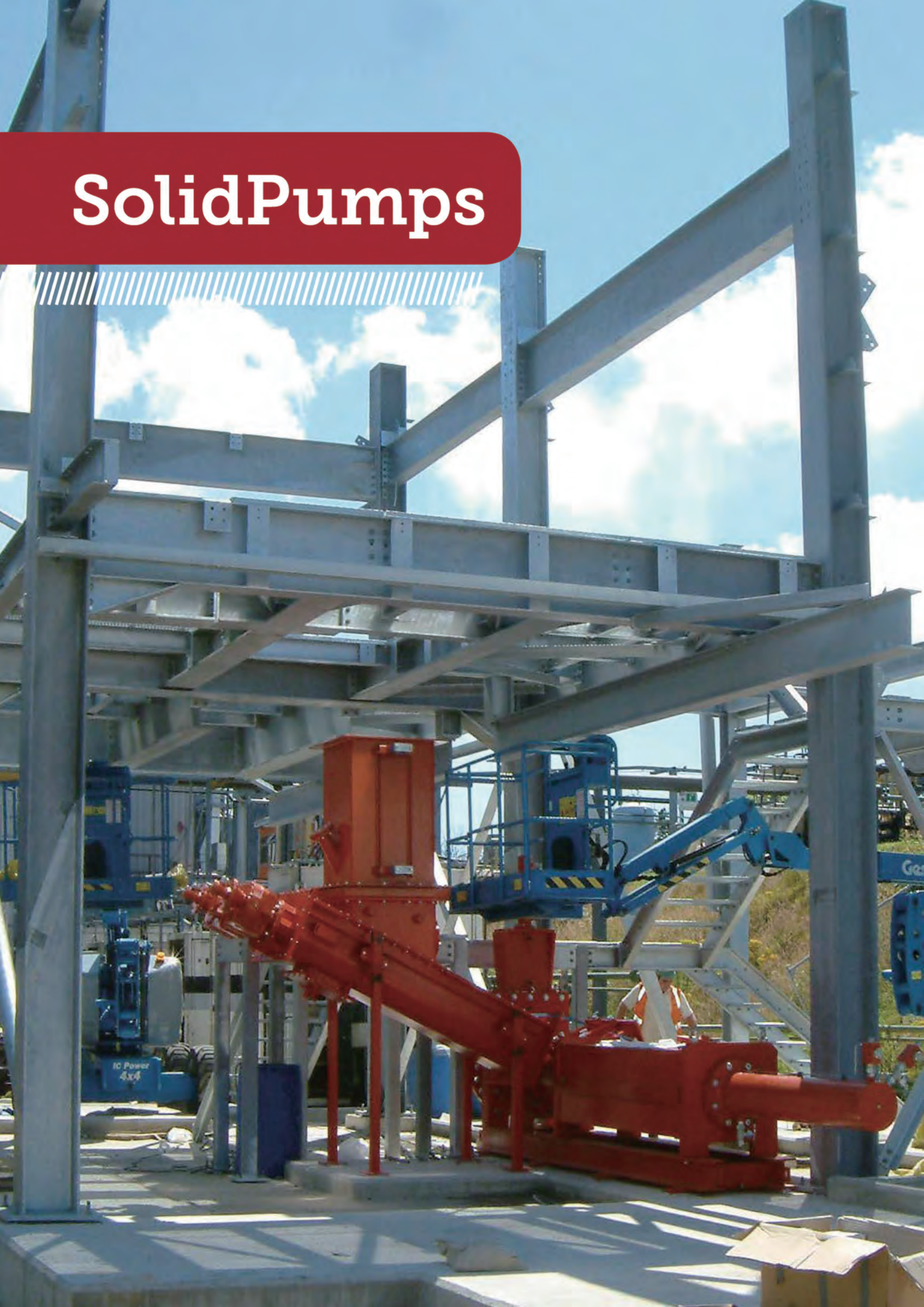
7.
Ejection door
Hydraulically driven door for automatic ejection of unshreddable products

Application in many Industries:

+ **Cement plants**
+ **Sorting and recycling facilities**
+ **Refuse derived fuel (RDF) installations**
+ **Household waste treatment facilities**

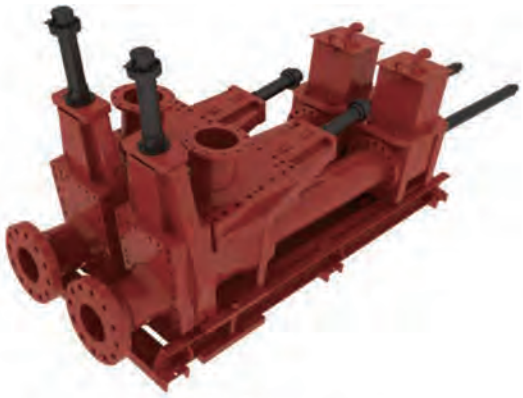
Technical data	XLF 4500 M	XLF 4500
Dimensions L x W x H (m x m x m)	4.5 x 1.9 x 2.0	4.5 x 2.6 x 2.0
Weight (t)	20	28
Installed power (kW)	90 – 320	200 – 630
Capacity (t/h)	3 – 15	5 – 30
Granulometry (mm)	30 – 100	30 – 100

SolidPumps



Single Piston Pump (SPP)
For extreme applications and foreign bodies and highly viscous liquids

Single Tubular Piston Pump (STPP)
For pumping pasty material



Double Tubular Piston Pump (DTPP)
For continuous pumping

SolidPumps Series:
SPP
STPP
DTPP

SID SolidPumps is a specialist for piston pumps suitable for the most demanding industrial applications. An undeniable know-how and more than 30 years of experience enable SID SolidPumps to provide services corresponding to highest technological standards.

SolidPumps offers turnkey solutions from the design to after sales services.

+ **Cutting ring and piston head.** Sturdy as made from high alloyed steel, easily disassembled, optimized shape for exceptional cutting power, hence long pieces can be cut and pumped.

+ **Hydraulic cylinder.** Mechanically separated from the piston pump – avoiding oil contamination and reducing maintenance.

+ **Pumps pressure.** Adaptable to customer's request, pumping pressure enables to pump long distances.

+ **Continuous measuring and regulation.** Increasing operational flexibility, allowing excellent Integration into an overall system.

+ **High sealing system.** Pumping part completely separated avoiding the back-flow. Highly abrasion resistant wear parts.

+ **Adjustable opening of Single Piston Pumps.** Inlet opening rotatable by 180°, allowing forwarding material to be filled directly into the pumping zone. Top or side feeding possible, with reduced risk of clogging and higher loading capacity.

Application in many Industries:

- + **Feeding system for cement kilns**
- + **Preparation units for industrial and hazardous waste**
- + **Transport of bituminous products, mining sludge, coke, etc.**
- + **Power and energy plants**
- + **Wastewater treatment plants**
- + **Chemical industry**
- + **Heavy industry**
- + **Industrial slaughterhouses**
- + **Food industry**
- + **Biomass and fermentation plants**

Technical data	SPP 15	SPP 25	SPP 35	CUSTOM BUILT	STPP 15	STPP 25	STPP 35	CUSTOM BUILT
Throughput (up to m^3/h)	4	8	15	150	12	50	100	1000
Pressure (up to bar)	160	100	100	160	160	160	160	500
Diameter (mm)	150	250	350	max. 1000	150	250	350	max. 1000
Stroke of the piston (mm)	625	1150	1420	max. 6000	1000 – 2000	1000 – 2000	1500 – 3000	max. 6000

Technical data	DTPP 15	DTPP 25	DTPP 35	CUSTOM BUILT
Throughput (up to m^3/h)	25	100	200	2000
Pressure (up to bar)	160	160	160	500
Diameter (mm)	150	250	350	max. 1000
Stroke of the piston (mm)	1000 – 2000	1000 – 2000	1500 – 3000	max. 6000

Produced or Integrated by SID

Bunker gates

Mixers

Steel structures/ Platforms

Lifts

Hoppers

Conveyors

Interlocking chambers

Metal separators

Pushers

SID in close cooperation with the most trustworthy suppliers all over the world, will provide you with the best quality products and services.

We will advise and accompany you on each step of conception and planning process of your installation which we will build according to your needs.

Control systems

Shredding-Mixing-Pumping Installations (SMP)

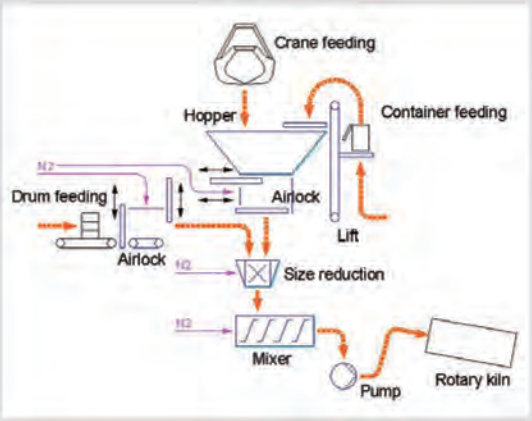
1st step: shredder
Depending on the clients needs we design and build the most suitable shredder

2nd step: mixer
After shredding waste is mixed to a homogeneous product

3rd step: pump
Mixed product is pumped by the specially designed SID pump to the final use

Interlocking chamber
This device allows to seal the treatment process, especially relevant for hazardous waste

Blanketing system
Allows operation with reduced explosible atmosphere



Process diagram

SID is specialized in the field of design, development and construction of turnkey SMP installations for hazardous waste.

SID is the market leader in constructions of kiln feeding systems for hazardous waste and for substitute fuels in the cement industry.

The plants are designed depending on the types of applied waste in consideration of the highest safety standards and equipped with interlocking chambers and oxygen control systems in the hazardous waste area.

The SMP technology represents a highly attractive investment for the hazardous waste area as well as for the cement industry.

The SMP system is designed for an optimized technical and commercial service:

Hazardous waste is given into the system and treated accordingly. The final, homogenised product can be used as substitute fuel (= reduction of primary fuel costs) e.g. in the cement industry.

The following noticeable advantages depending on the sector:

+ Reduction of primary energy costs by utilisation of alternative fuels. ①
+ Increased safety at work due to automated operation. The SMP can be operated by a single person. ①②
+ Higher throughout (up to 20%). ②
+ Higher lifetime of the key components (e.g. +20% for the cladding). ②
+ Reduction of additives in flue gas treatment system. ②
+ Increase of installation availability due to reduced kiln maintenance operations. ②

① Cement industry
② Hazardous waste incineration

Control of atmosphere
Integrated into the overall SMP automation

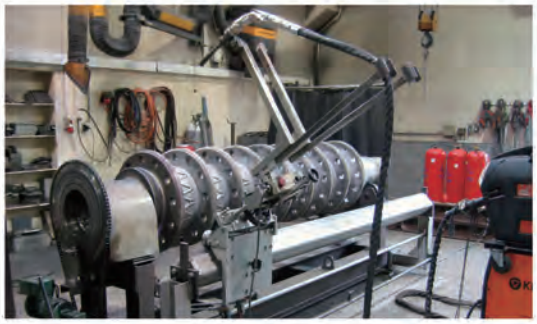
Customer Service

SID after-sales department is available 24/7. You can always rely on our services.

Thanks to our experience and well developed know-how, we can guarantee the longest possible lifetime and the lowest operational costs.

The high quality of the after-sale services is one of our key commitments.

Spare Parts
Our large stock of spare parts, wear parts and consumables, a solid network between our companies in Switzerland, Germany and China, as well as close cooperation with the leading worldwide suppliers and local partners guarantees highest availability for your installation.



On site and at SID center services centers
We offer all necessary services on site and in our workshops with our mechanical, hydraulic and electric experts, such as:

- hard welding/hard facing
- preventive maintenance
- advice and consulting
- machine refurbishments
- reparations
- components exchange
- software updates

Contract
We provide 3 types of after sales contracts:
- order on demand
- framework contract
- preventive maintenance contract

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