

UNTHA

shredding technology

The reliable brand!



QR CLASS

1-shaft shredder for
shredding of recyclable materials

QR800 | QR1000 | QR1200 | QR1400 | QR1700 | QR2100



TROUBLE-FREE SHREDDING OF RECYCLABLE MATERIALS

The QR class is a new generation of extremely reliable and versatile high-performance single-shaft shredders. These products are all about the trouble-free shredding of recyclable materials. With the QR class, operators can be sure of avoiding unscheduled downtime as these machines do what they were built for - the reliable shredding of material.

The QR class was developed and realised over a two-year period, in cooperation with users from industry and commerce. This cooperation has resulted in a new series of single-shaft shredders that leave nothing to be desired. In addition to the robust, universal cutting unit, indestructible body and reliable, completely maintenance-free pusher technology, the technical highlights of this product also include a resilient drive system that comes with a safety coupling. In contrast to standard units, the QR class does not require a shaft stub, as the gears are integrated in the rotor. This results in a significant reduction of repair efforts. Yet another outstanding technological feature is the multi-functional flap that allows quick and easy access to the cutting chamber for the efficient emptying of the hopper and removal of foreign objects.

Furthermore, the pusher may be cleaned in an ergonomic and safe position. The simple operation is based on a high-resolution touch-screen display, intelligent pusher controls, long maintenance intervals and the quick and safe access to all machine components. All these factors combined make operation and maintenance of these units as easy as never before!

AREAS OF APPLICATION

The QR class is particularly recommended for the processing of all kinds of plastics, independent of shape, state or properties of the material, ranging from foils, lumps, profiles, fibres, ribbons, hollow parts, post-consumer and production waste to composite materials, files and data, paper and cardboard, waste wood and pallets, etc.



YOUR BENEFITS:

- Outstanding reliability
- Maximum availability
- High performance
- Exceptional versatility
- Easy maintenance
- Premium granulate

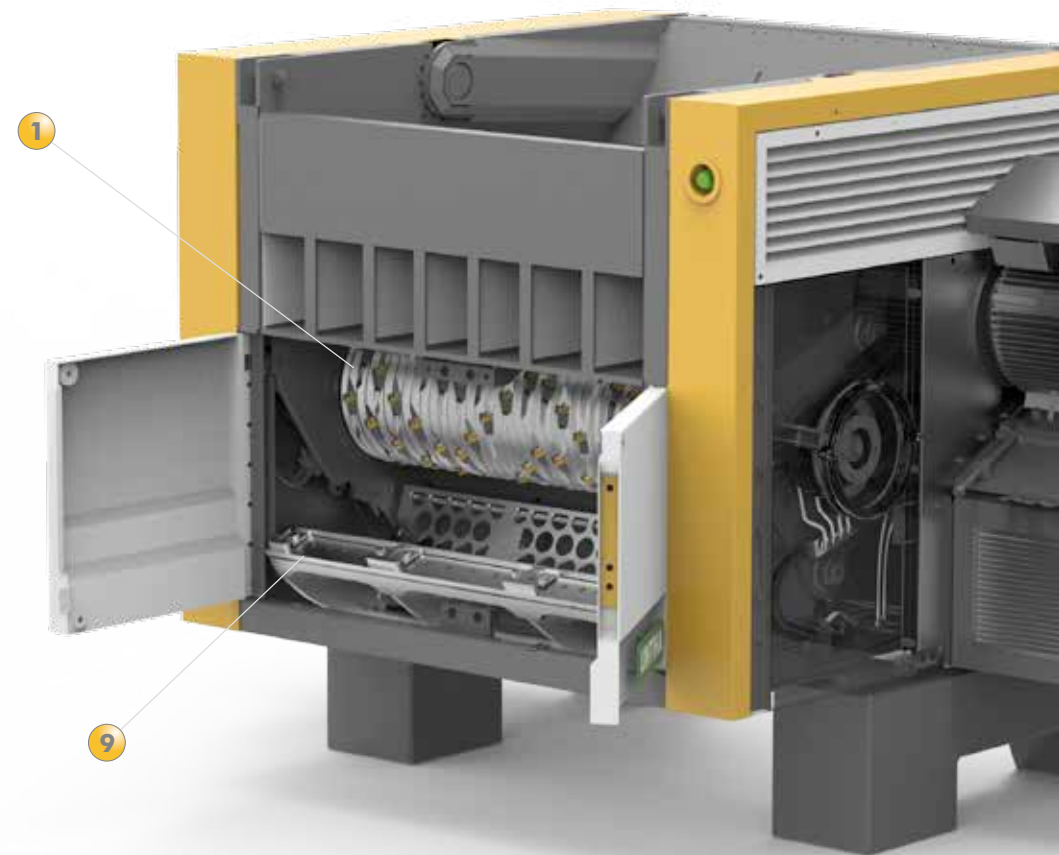
QUALITY FEATURES

EFFECTIVE CUTTING SYSTEM

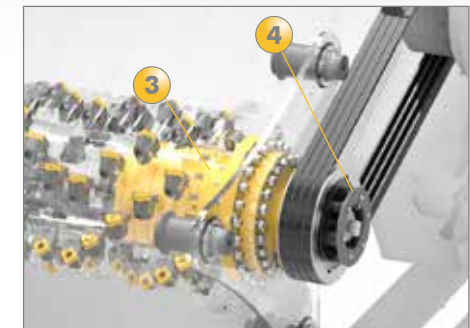
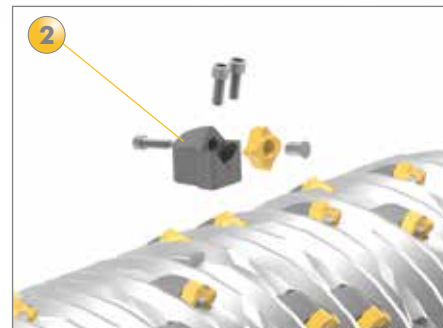
- **Universal rotor:** Ensures the reliable processing of highly different materials.
- **Large rotor diameter ① :** Facilitates material feed-in, increases throughput rates and reduces heating of the rotor.
- **Screwed-in cutter holders ② :** In case of damage, blade holders may be replaced easily and quickly.
- **Clamped indexable cutters:** Facilitate the easy and quick exchange of indexable cutters and reduce the risk of breakage.
- **Main cutting bar may be reversed up to 4 times, secondary cutting bar up to 2 times:** Significantly reduces wear costs.
- **Indexable cutters may be reversed up to 4 times:** Further contributes towards the reduction of wear costs.
- **Adjustable main and secondary cutting bar:** For an optimised, flexible cutting gap.
- **Variable blade geometries:** For optimised cutting properties and premium output material.

FAIL-SAFE POWER TRAIN

- **Integrated planetary gear ③ :** No shaft stub required, resulting in a significant reduction of repair efforts.
- **Reliable safety coupling ④ :** Protects the cutting system and the power train.
- **Exposed drive motor:** Ensures optimal heat conduction, easy cleaning and the ergonomic tensioning of the belts.
- **Robust belt drive:** Enables speed adjustment and protects all drive components.
- **High-strength fan belt:** Reduces the risk of premature wear and unscheduled downtimes.
- **Broad range of drive outputs:** Facilitates optimised machine configuration.



Symbolic image QR1700: The individual machine types may vary in terms of design and finish.





MAINTENANCE-FREE PUSHER SYSTEM

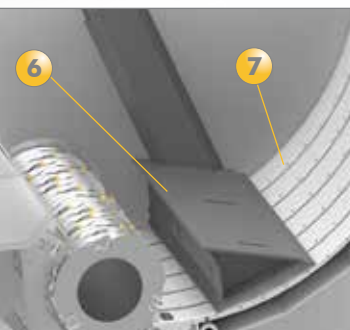
- **Hermetic, internal pusher system ⑥** : Allows for a larger filling volume and prevents material leakage.
- **Maintenance-free pusher construction**: Requires no maintenance whatsoever.
- **Profiled pusher floor ⑦** : Prevents the pusher getting jammed and facilitates the processing of thin-walled materials.
- **Concave pusher plate**: Ensures that 100 % of the material is processed.
- **Efficient pusher kinematics**: For high-performance material processing.
- **Fail-safe hydraulics ⑧** : Prevent unscheduled downtimes.

FLEXIBLE PERFORATED SCREEN UNIT

- **Convenient screen pan system**: Easy and quick to replace (ergonomically). In case of damage, only the affected segment needs to be replaced.
- **Exchangeable screen pans**: Increased machine uptime due to two-way exchangeable screen troughs.
- **Hydraulically lowerable screen corpus ⑨** : For the ergonomic and time-efficient cleaning/ replacement of the perforated screen.
- **Defined interface**: Facilitates the integration of discharge systems.
- **Spacious compartment**: Protects rotor bearing from dirt and prevents material leakage.

ROBUST MACHINE BODY

- **Indestructible machine body**: All occurring forces are absorbed effortlessly. UNTHA Long Life Design.
- **Compact construction**: Facilitates space-saving set-up and smooth integration in the overall plant.
- **Low filling level**: Ensures maximum flexibility when it comes to loading.
- **Large filling volume**: Increases process safety and reduces the risk of bridge formations.
- **Functional design**: Increases efficiency during maintenance and operation.



EXCEPTIONALLY USER- AND MAINTENANCE-FRIENDLY

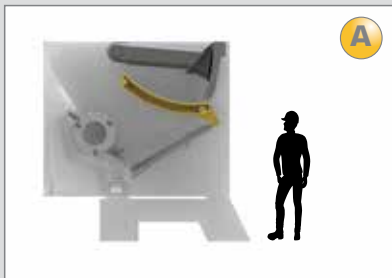
- **Premium Siemens control system**: Offers a high level of reliability. Facilitates integration in superordinate control systems.
- **User-friendly 7" touch display**: Easy to operate; visualises the individual operating status.
- **Intelligent pusher control system**: Ensures optimised machine performance.
- **Integrated operating element for the multi-functional flap and the screen corpus**: Provides a good view of the hazard area and facilitates operation.
- **Highly maintenance-friendly**: Long maintenance intervals; all components may be accessed quickly, safely and ergonomically.
- **Service window**: For direct, speedy access to the safety coupling.
- **Hydraulic multi-functional flap**: Ensures easy, fast access to the cutting chamber during cleaning and maintenance activities. Facilitates the efficient emptying of the hopper, the straightforward removal of foreign objects and the cleaning of the pusher in an ergonomic, safe position.

HYDRAULIC MULTI-FUNCTIONAL FLAP

The innovative service and maintenance flap is hydraulically operated and offers easy, quick access to the cutting unit.

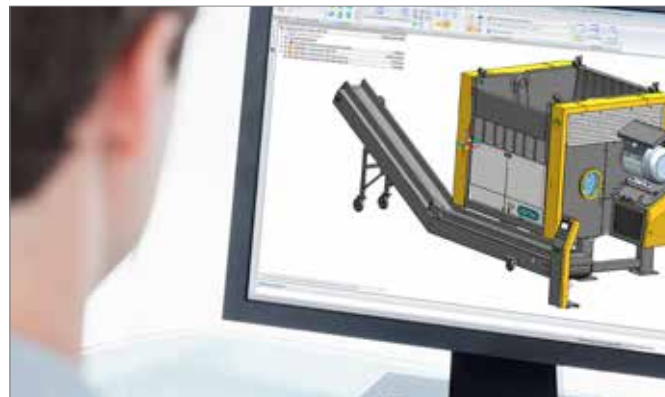
A This makes the indexable cutters and cutting bars easy to replace, the removal of foreign objects and the process of adjusting the cutting gap particularly efficient and straightforward.

B In addition, the multi-functional flap facilitates the efficient emptying of the hopper and the cleaning of the pusher in an ergonomic, safe position.



YOUR CUSTOMISED MACHINE: EXTRAS

- **UNTHA Lifetime Support:** Guarantees maximum availability throughout the lifetime of the machine.
- **User-friendly 7" touch display:** Easy to operate; visualises the individual operating status.
- **Frequency converter:** Ensures optimised machine performance and short current peaks during start-up and reversing.
- **Operating status display:** For the speedy, visual display of the machine operating status.
- **Flexible controller upgrades:** Facilitates customer-specific control system adaptations and upgrades.
- **Special attachment hoppers:** For optimal adjustment to the input material and feeding method.
- **Special perforated screens:** For the straightforward processing of specific materials.
- **Rotor wear protection (hard surfacing):** Significantly increases rotor availability with abrasive materials.
- **Special rotors (smooth, profiled):** Ensure the efficient shredding of specific materials.
- **Rotor cooler:** Ensures the reliable shredding of materials with a particularly low melting point.
- **Individual pusher plates:** For the efficient, complete shredding of specific materials.
- **Remote maintenance:** For speedy fault diagnosis and trouble-shooting as well as machine optimisation.
- **UNTHA Carefree Packages (gold, silver, bronze):** Ensure that machines are technically sound and ready for use at all times.
- **Individual packaging / transport protection:** Special packaging for optimum protection of the unit during transport.



HOLISTIC SOLUTIONS

With more than 40 years' expertise in shredding technology, we are in a position to implement even the most unusual customer requests. From system solutions all the way to turnkey, small-scale plants – UNTHA engineers will always come up with the solution that is right for you, offering project planning, execution and all-round service from a single source!

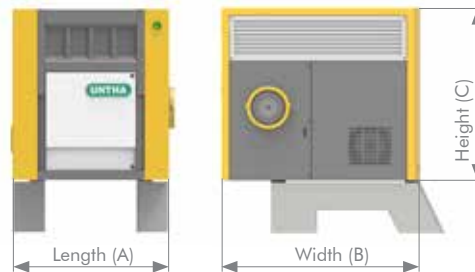
QR CLASS

1-shaft shredding system

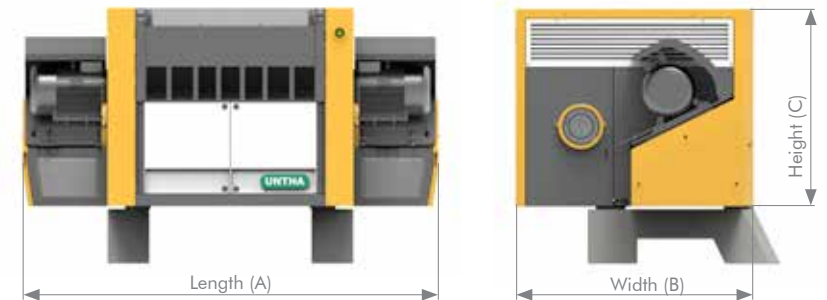
TECHNICAL DATA		QR800	QR1000	QR1200	QR1400	QR1700	QR2100
Drive power	kW	22/30	22/30/37/45	37/45/55	45/55	55/75/90/110*/150*	90/110*/150*/180*
Rotor length	mm	800	1000	1200	1400	1700	2100
Ø Rotor	mm	450	450	450	450	560	560
Rotor speed	rpm	Standard = 97 (optional 80 - 120)					
Fill opening	mm	800 x 1300	1000 x 1800	1200 x 1800	1400 x 1800	1700 x 2100	2100 x 2100
Hydraulic power	kW	2.2	2.2	2.2	2.2	4	4
Ø Screen	mm	10 - 100	10 - 100	10 - 100	10 - 100	10 - 100	10 - 100
Size cutters	mm	34	34	34	34	40 (optional 60)	40 (optional 60)
Weight**	kg	3800	4600	5100	5600	12000	13000

DIMENSIONS	A	B	C
QR800	1580	1745	1680
QR1000	1790	2150	1890
QR1200	2010	2150	1890
QR1400	2190	2150	1890
QR1700	3340	2410	2030
QR1700 (drive on both sides)	4200	2410	2030
QR2100	3770	2410	2030
QR2100 (drive on both sides)	4620	2410	2030

QR800 - QR1400



QR1700 - QR2100



Dimensions in mm.
 *) Two-sided drive
 **) With the lowest drive power



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