



EBARA



TH Mining
DEWATERING PUMPS

EBARA offers specially designed pumps for the transportation of contaminated water with low levels of suspended solids.

MINING

Aiming to meet the needs of the mining industry, EBARA offers the market centrifugal water pumps, dewatering pumps, process pumps, and customized solutions with high performance and reliability, reducing operating costs and downtime, resulting in increased plant efficiency.

Mining is one of the sectors that demands high reliability and durability of equipment. In the case of transporting water with solids, component wear can cause unexpected failures, halting the entire production process, resulting in excessive costs.

The TH Mining line combines all the benefits required in the mineral processing stages, such as durability, advanced hydraulics, mechanical strength, robustness, and minimal maintenance, operating with high efficiency in the most severe applications.

EBARA has specialists dedicated to the mining sector, developing high-tech, innovative, customized, and integrated solutions that cover everything from product development, application methodology, spare parts, services, and testing.

With service centers located at strategic points nationwide, EBARA offers support to its customers, including monitoring of commissioning, startup of the operating system, control, maintenance, specific training, and customized technical assistance services.



EBARA FLOATING PUMP WITH TH MINING PUMP

Water is essential for mining processes, just as efficient technology is necessary to manage these valuable resources. In addition to the supply, recovery, and treatment of process water, water drainage and dewatering in mining are demanding tasks.

In open-pit mines, if the water level of the water table, or from rain, is not removed in a timely manner, the mine will be flooded. In this scenario, efficient water drainage systems are essential for the operation and maintenance of a mine.

Both process water and water transported during drainage or dewatering may contain abrasive and corrosive components. Equipment designed for these applications must therefore be robust and reliable. If your application is dealing with water containing suspended solids, it is essential to use the correct pumps and water systems for the specific requirements. To ensure safe and efficient operation in the mining industry, robust, reliable, and durable equipment is required.



DESCRIPTION

EBARA has developed a specific line called TH Mining, targeted at the mining market for dewatering transportation. They have differentiated hydraulic-mechanical characteristics for application in water intake from dams, dewatering of open-pit and underground mines, and mineral transportation and processing. They also require minimal maintenance, which significantly reduces unwanted pump downtime and consequently offers greater operational availability of the plant.

TH Mining pumps, as well as the entire EBARA product portfolio, allow handling moderate flow demands without any loss of performance. They provide efficient pumping and minimize interventions, especially when compared to other pumps in the same applications.

In mining, the term dewatering, or even "contaminated water," refers to water with a slight presence of suspended solids, although the percentage of solids is generally low enough to indicate an application for a slurry pump.

Water pumps are designed to move water from one location to another, while dewatering pumps are designed to remove water from an area where it is not wanted, such as mines, construction sites, or flooded areas.

TH Mining pumps are available with electric or combustion drive and can be installed on a metal skid, trailer, float, or floating platform, promoting ease and flexibility in movement to any necessary location. By using TH Mining pumps, it is possible to take advantage of the interchangeability of components, minimizing the volume of spare parts.

Well-sized systems help increase longevity and efficiency, optimizing the relationship between performance and cost.

EQUIPMENT CHARACTERISTICS

- Single-stage, radial centrifugal pumps.
- Horizontal foot-mounted construction.
- Horizontal suction flange.
- Vertical discharge flange in the upper position.
- Aligned flange centers.
- Construction according to DIN 24256 / ISO 2858 or EN733 standards.
- Meets the specifications of mineral customers with various combinations of construction materials.
- Modular and interchangeable.
- Back pull-out design, allowing for maintenance, disassembly, and inspection without removing the suction and discharge piping.
- Bearings designed for high loads, grease lubrication, eliminating the need to add or change lubricating oil.
- Special bearing seal to prevent contamination by the pumped product or external wash water.
- Wear rings on the rotor for clearance and vibration control.
- Ample internal space in the seal chamber, facilitating access to the sealing components.
- Packing seal with a lantern ring for distribution of external water. Optional single mechanical seal or double cartridge seal.
- Special epoxy paint standard, meeting the demands of mining applications.
- Maximum flow rate: 1,000 m³/h standard and up to 1,500 m³/h upon request.
- Maximum pressure: 16 bar standard, optional up to 24 bar in special construction material.
- Maximum operating temperature of 120°C.
- Keyed rotor and fixed with a nut at the end of the shaft.

The TH Mining design features proven technology for water transport, dewatering, drainage, and mineral processing.

APPLICATIONS

The TH Mining pump is extensively used throughout mining and other heavy industries, with its primary applications in:

- Tailings dam dewatering.
- Open pit mine dewatering.
- Underground mine dewatering.
- Dam water intake.
- Sedimentation basins.
- Groundwater lowering.
- Sand and gravel plants.
- Industrial plants.
- Municipal applications.
- Power plants.
- Among other applications.



UNISELF EBARA WITH TH MINING PUMP



EBARA FLOATING PLATFORM WITH TH MINING PUMP

EBARA FLOATING PLATFORM EQUIPMENT SPECIFICATIONS

- **Float:** Carbon steel construction, with full perimeter guardrail, meeting NR12 standards.
- **Pump:** TH Mining series.
- **Priming:** Automatic and immediate, without the use of a foot valve, vacuum pump, or suction tank.
- **Assembly:** Innovative design and customized inclination to ensure continuous operation, with individual or multiple pump configurations.
- **Maintenance:** Availability of manual or electric hoist, on board.
- **Movement:** Allows for displacement using a mobile crane, manual or electric winch, or support boat.
- **Painting:** Special epoxy coating suitable for marine use.

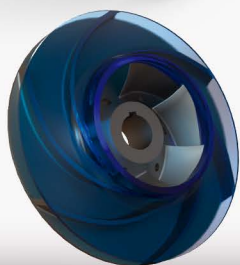
UNISELF EBARA EQUIPMENT SPECIFICATIONS

- **Drive:** Internal combustion engine, CO2 emissions in accordance with current regulations. Electric motor optional.
- **Pump:** TH Mining series.
- **Priming:** Automatic system through tank and vacuum priming.
- **Control:** Integrated control panel and overall control system. With automatic shutdown protection. Remote control and telemetry Options.
- **Structure:** Construction in reinforced carbon steel.
- **Assemblies:** On a metal skid, on a trailer or floating platform.



CASING

Nodular cast iron GGG50 casing, with optional other steel alloys, and optional internal lining with special resin. The current hydraulic design, with a volute coordinate profile that reduces flow dispersion, contributes to increased efficiency and service life, resulting in reduced wear points on the surface and longer intervals between replacements or repairs. Larger sizes with double volute to balance recirculation and radial thrust effects. Compatible with ANSI and DIN flange standards.



IMPELLER

Closed impeller, suction side made of a special chromium-based alloy (hard metal) to ensure greater wear resistance when exposed to suspended solids. The updated design developed using computational fluid dynamics (CFD) simulation, results in higher efficiency, lower energy consumption, and features balance holes to reduce axial thrust.



SHAFT

Shaft designed and sized for high loads, resulting in lower deflections, allowing for higher critical speeds and low vibration levels. Standard construction material is 4140 alloy steel, with options for other metal alloys.



SEAL CHAMBER

The ample internal space of the seal chamber facilitates access to sealing components, ensuring greater ease and safety during pump installation and maintenance. Standard sealing by packing, equipped with a lantern ring for external water supply. Optional mechanical seal, single or double, cartridge type. When required, supplied with flushing piping.



SHAFT SLEEVE

Made of special carbon steel and/or hardened to ensure greater resistance, especially when exposed to suspended solids. Optional in other construction materials, upon request.

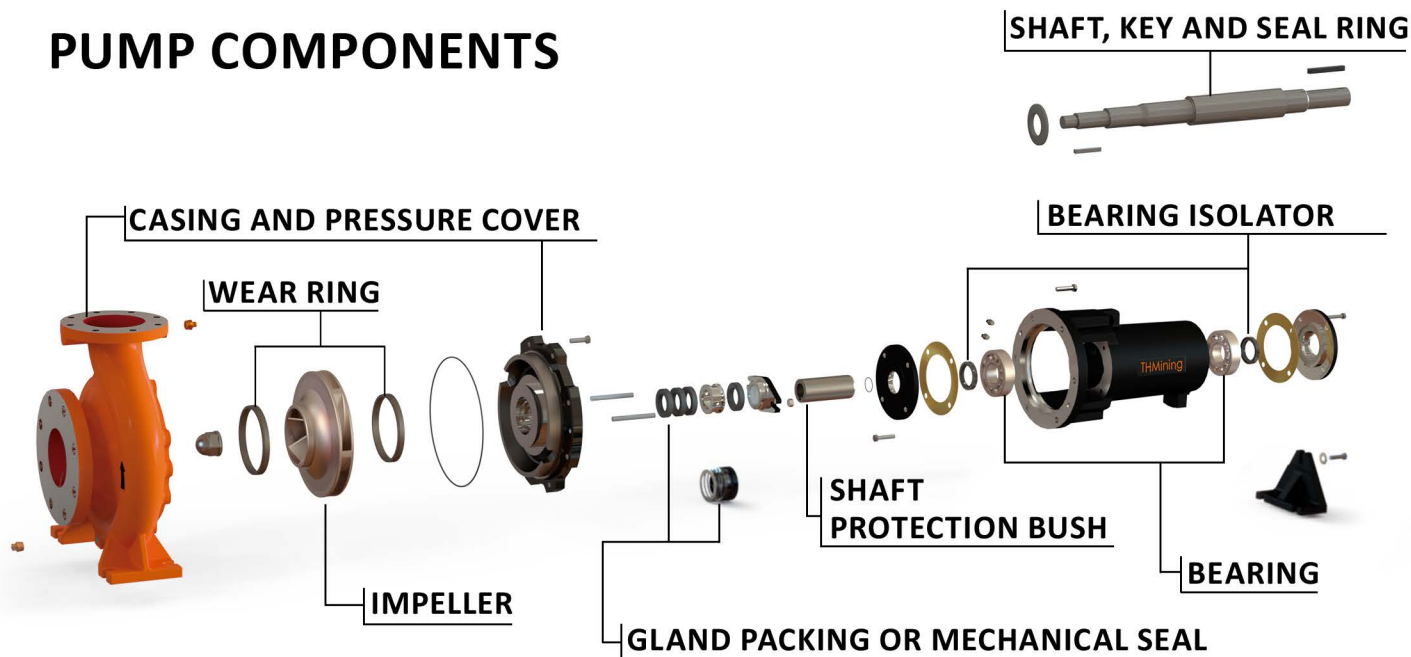


BEARING

With bearings designed for high loads, equipped with a special sealing system that prevents contamination by the pumped product or external wash water. Grease-lubricated roller bearings result in reduced operating temperature, improved efficiency, and longer lubrication intervals. In addition to preventing accidents, it eliminates the need to add or change lubricating oil. The bearing housing has a robust and reinforced structure.

The TH Mining pump line combines modern engineering, materials technologies, a supplier network, and EBARA's manufacturing capabilities to deliver integrated solutions for customized water intake and dewatering systems.

PUMP COMPONENTS



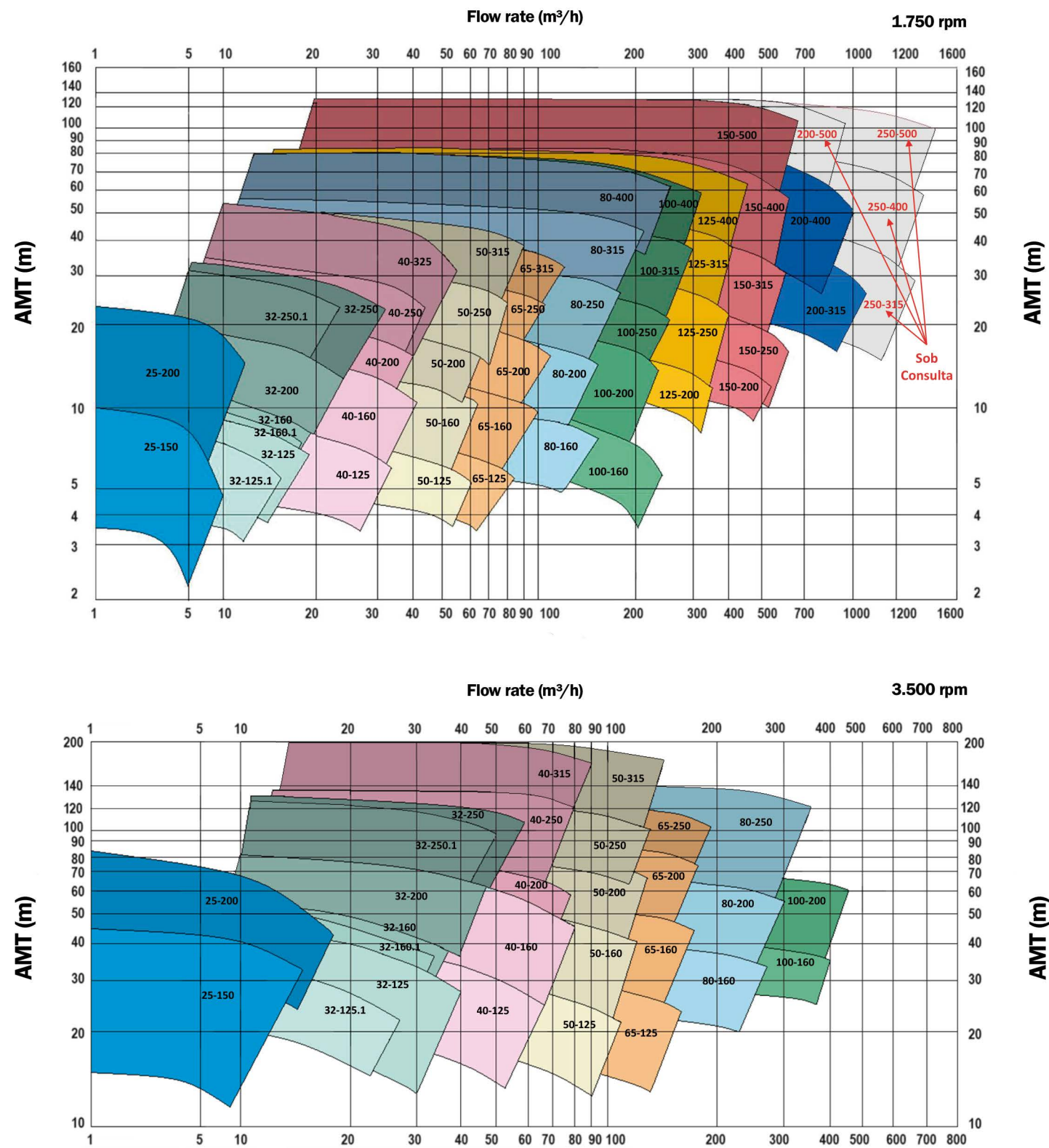
LIST OF PUMP COMPONENTS

- | | | |
|--|---|--|
| <ul style="list-style-type: none">▪ Shaft▪ Transmission key▪ impeller key▪ Shaft seal ring▪ Cover bolt▪ Support cover▪ Gland cover gasket▪ Bearing seal▪ Bearing▪ Bracket▪ Support bracket | <ul style="list-style-type: none">▪ Plain washer▪ Bracket bolt▪ Sealing plug▪ Bushing O-ring▪ Shaft protection bushing▪ Gland follower bolt▪ Gland follower▪ GGland packing or mechanical seal▪ Lock ring▪ Gland stud▪ Pressure cover | <ul style="list-style-type: none">▪ Casing O-ring▪ Impeller▪ Shaft nut▪ Casing▪ Casing plug▪ Impeller wear ring▪ EBARA identification plate▪ Optional resin coating on casing▪ Optional resin coating on pressure cover▪ Optional customer identification plate |
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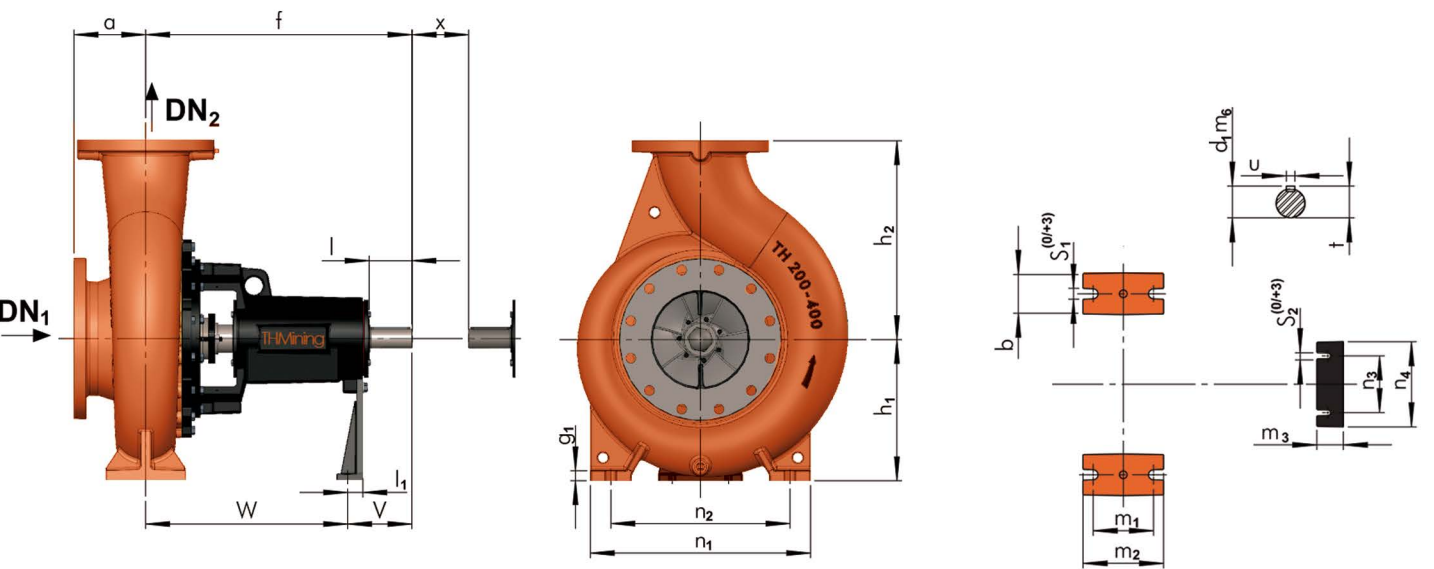
Optional Casing: The TH Mining line offers a special protection against impacts and mineral buildup on the equipment, preventing damage or overheating caused by inadequate ventilation.

PERFORMANCE CHART

Quick selection guide



DIMENSIONAL DATA TABLE



MODEL	Pump Dimension				Pump base information																Shaft end						Weight (kg)
	DN ₁	DN ₂	a	f	h ₁	h ₂	b	g ₁	g ₂	l ₁	m ₁	m ₂	m ₃	n ₁	n ₂	n ₃	n ₄	S ₁	S ₂	V	W	d ₁ m ₆	l	t	u	x	
25-150	32	25	73	397	112	160	50	15	6,35	41,35	100	70	66,35	190	140	110	152,4	14	14	100	297	24	50	26,9	8	100	33
25-200	40	25	90	385	160	175	50	15	6,35	41,35	100	70	66,35	240	190	110	152,4	14	14	100	285	24	50	26,9	8	100	41
32-125.1	50	32	80	385	112	140	50	15	6,35	41,35	100	70	66,35	190	140	110	152,4	14	14	100	285	24	50	26,9	8	100	33
32-125	50	32	80	385	112	140	50	15	6,35	41,35	100	70	66,35	190	140	110	152,4	14	14	100	285	24	50	26,9	8	100	35
32-160.1	50	32	80	385	132	160	50	15	6,35	41,35	100	70	66,35	240	190	110	152,4	14	14	100	285	24	50	26,9	8	100	35
32-160	50	32	80	385	132	160	50	15	6,35	41,35	100	70	66,35	240	190	110	152,4	14	14	100	285	24	50	26,9	8	100	36
32-200	50	32	80	385	160	180	50	15	6,35	41,35	100	70	66,35	240	190	110	152,4	14	14	100	285	24	50	26,9	8	100	43
32-250.1	50	32	100	500	180	225	65	18	9,52	39,52	125	95	64,52	320	250	110	152,4	14	14	130	370	32	80	35,3	10	100	68
32-250	50	32	100	500	180	225	65	18	9,52	39,52	125	95	64,52	320	250	110	152,4	14	14	130	370	32	80	35,3	10	100	69
40-125	65	40	80	385	112	140	50	15	6,35	41,35	100	70	66,35	210	160	110	152,4	14	14	100	285	24	50	2,9	8	100	39
40-160	65	40	80	385	132	160	50	15	6,35	41,35	100	70	66,35	240	190	110	152,4	14	14	100	285	24	50	2,9	8	100	43
40-200	65	40	100	385	160	180	50	15	6,35	41,35	100	70	66,35	265	212	110	152,4	14	14	100	285	24	50	2,9	8	100	50
40-250	65	40	100	500	180	225	65	18	9,52	39,52	125	95	64,52	320	250	110	152,4	14	14	130	370	32	80	35,3	10	100	75
40-315	65	40	125	500	200	250	65	18	9,52	39,52	125	95	64,52	345	280	110	152,4	14	14	130	370	32	80	35,3	10	100	74
50-125	80	50	100	385	132	160	50	15	6,35	41,35	100	70	66,35	240	190	110	152,4	14	14	100	285	24	50	26,9	8	100	40
50-160	80	50	100	385	160	180	50	15	6,35	41,35	100	70	66,35	265	212	110	152,4	14	14	100	285	24	50	26,9	8	100	44
50-200	80	50	100	385	160	200	50	15	6,35	41,35	100	70	66,35	265	212	110	152,4	14	14	100	285	24	50	26,9	8	100	47
50-250	80	50	125	500	180	225	65	18	9,52	39,52	125	95	64,52	320	250	110	152,4	14	14	130	370	32	80	35,3	10	100	74
50-315	80	50	125	500	225	280	65	18	9,52	39,52	125	95	64,52	345	280	110	152,4	14	14	130	370	32	80	35,3	10	100	109
65-125	100	65	100	385	160	180	65	18	6,35	41,35	125	95	66,35	280	212	110	152,4	14	14	100	285	24	50	26,9	8	100	50
65-160	100	65	100	500	160	200	65	18	9,52	39,52	125	95	64,52	280	212	110	152,4	14	14	130	370	32	80	35,3	10	100	70
65-200	100	65	100	500	180	225	65	18	9,52	39,52	125	95	64,52	320	250	110	152,4	14	14	130	370	32	80	35,3	10	100	62
65-250	100	65	125	500	200	250	80	19	9,52	39,52	160	120	64,52	360	280	110	152,4	18	14	130	370	32	80	35,3	10	100	90
65-315	100	65	125	530	225	280	80	19	9,52	36,52	160	120	61,52	400	315	110	152,4	18	14	160	370	42	110	45,1	12	140	125
80-160	125	80	125	500	180	225	65	18	9,52	39,52	125	95	64,52	320	250	110	152,4	14	14	130	370	32	80	35,3	10	100	90
80-200	125	80	125	500	180	250	65	18	9,52	39,52	125	95	64,52	345	280	110	152,4	14	14	130	370	32	80	35,3	10	140	90
80-250	125	80	125	500	225	280	80	19	9,52	39,52	160	120	64,52	400	315	110	152,4	18	14	130	370	32	80	35,3	10	140	105
80-315	125	80	125	530	250	315	80	19	9,52	36,52	160	120	61,52	400	315	110	152,4	18	14	160	370	42	110	45,1	12	140	133
80-400	125	80	125	530	280	355	80	20	9,52	36,52	160	120	61,52	435	355	110	152,4	18	14	160	370	42	110	45,1	12	140	161
100-160	125	100	125	500	200	280	80	19	9,52	39,52	160	120	64,52	360	280	110	152,4	18	14	130	370	32	80	35,3	10	140	105
100-200	125	100	125	500	200	280	80	18	9,52	39,52	160	120	64,52	360	280	110	152,4	18	14	130	370	32	80	35,3	10	140	110
100-250	125	100	140	530	225	280	80	20	9,52	36,52	160	120	61,52	400	315	110	152,4	18	14	160	370	42	110	45,1	12	140	133
100-315	125	100	140	530	250	315	80	18	9,52	36,52	160	120	61,52	400	315	110	152,4	18	14	160	370	42	110	45,1	12	140	142
100-400	125	100	140	530	280	355	100	20	9,52	36,52	200	150	61,52	500	400	110	152,4	22	14	160	370	42	110	45,1	12	140	179
125-200	150	125	140	530	250	315	80	20	9,52	36,52	160	120	61,52	400	315	110	152,4	18	14	160	370	42	110	45,1	12	140	136
125-250	150	125	140	530	250	355	80	18	9,52	36,52	160	120	61,52	400	315	110	152,4	18	14	160	370	42	110	45,1	12	140	157
125-315	150	125	140	530	280	355	100	20	9,52	36,52	200	150	61,52	500	400	110	152,4	22	14	160	370	42	110	45,1	12	140	155
125-400	150	125	140	530	315	400	100	20	9,52	36,52	200	150	61,52	500	400	110	152,4	22	14	160	370	42	110	45,1	12	140	195
150-200	200	150	160	530	280	400	100	20	9,52	36,52	200	150	61,52	550	450	110	152,4	22	14	160	370	42	110	45,1	12	180	183
150-250	200	150	160	530	280	375	100	20	9,52	36,52	200	150	61,52	500	400	110	152,4	22	14	160	370	42	110	45,1	12	180	194
150-315	200	150	160	670	315	400	100	20	15	38	200	150	65	550	450	140	210,0	22	20	170	500	48	110	52,5	14	180	248
150-400	200	150	160	670	315	450	100	20	15	38	200	150	65	550	450	140	210,0	22	20	170	500	48	110	52,5	14	180	280
150-500	200	150	180	670	375	500	100	28	15	38	200	150	65	550	450	140	210,0	25	14	170	500	48	110	52,5	14	180	340
200-315	250	200	200	670	355	450	100	22	15	38	200	150	65	550	450	140	210,0	25	14	170	500	48	100	52,5	14	180	285
200-400	250	200	180	670	355	500	100	22	15	38	200	150	65	550	450	140	210,0	25	14	170	500	48	100	52,5	14	180	320
200-500	250	200																									
250-315	300	250																									
250-400	300	250																									
250-500	300	250																									

For dimensional information, consult the factory.

Access our social media!



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