

MUNICIPAL MACHINES CATALOGUE

MACHINES FOR SUMMER ROAD AND GREEN AREAS MAINTENANCE
WINTER ROAD MAINTENANCE MACHINERY





MACHINES FOR SUMMER ROAD AND GREEN AREAS MAINTENANCE

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AGATA sweepers are designed for cleaning hard-paved surfaces. They enable removal and collection of dirt or (without waste collection tank and with angled brush) only sweeping to the right or left side.

The sweepers can be optionally equipped with sprinkler system (reduced emission of powder and dust) and with a side disk brush (for sweeping along kerbs) They are used by road maintenance services for cleaning of the roadbed prior to application of asphalt layer on renovated road sections. They can be also used by municipal services, as well as in agriculture, forestry and water management establishments for cleaning roads and other paved surfaces. In winter, the sweeper can be used for snow clearing. Thanks to an adjustable drawbar the sweeper is designed for hitching to the tractor's category II or III front or rear three-point linkage. The machine consists of a frame to which a hydraulically driven roller brush is attached and a waste collection tank that is suspended on the frame by means of extension arms. The waste tank is emptied by tipping it over by means of a hydraulic cylinder.

Optional equipment:

- sprinkler system with 200 l water tank
- side brush
- front supporting wheel (to be installed on the front of the carrying vehicle)
- lighting
- slow-moving vehicle triangle bracket
- forklift, backhoe loader mountings (according to customer's demand)
- reinforced support wheel



AGATA ZM-1400 SWEEPER

Possibility of hitching the sweeper on backhoe loaders and other carrying vehicles (according to customer's demand)



AGATA ZM-2000 SWEEPER

AGATA ZM-1250 SWEEPER

The working width of only 1,25 m (smallest of the offered range) is a big advantage of this machine. This design allows for easy manoeuvring in narrow spaces, pathways and cramped alleys. Thanks to its construction ZM-1250 may be mounted on many carrier vehicles and is a product demanded by maintenance companies.



Brush and collection container.

Support wheels

Sprinkler system reduces dust and particulate emissions.

SWEEPERS "AGATA"	ZM-1250	ZM-1400	ZM-1600	ZM-2000	
Efficiency	7500	8300	9500	11875	[m ² /h]
Weight	195	245	249	320	[kg]
Waste tank capacity	155	175	200	250	[dm ³]
Working width	1250/1650*	1400/1800*	1600/2000*	2000/2400*	[mm]
Working speed	6	6	6	6	[kph]
Recommended brush speed	100	100	100	100	[rpm]
Maximum brush speed	130	130	130	130	[rpm]
Length (rear-hitched version)	1750	1750	1750	1750	[mm]
Length (front-hitched version)	1700	1700	1700	1820	[mm]
Width	1560	1710	1910	2330	[mm]
Height	820	820	820	820	[mm]
Mounting method on tractor	3pt hitch cat. I or II narrow	3pt hitch cat. I or II narrow	3pt hitch cat. I or II narrow	3pt hitch cat. II or III	
Power supply	12	12	12	12	[V]
Hydraulic supply	16-20	16-20	16 - 20	16 - 20	[MPa]

*working with side brush

Other mountings on demand

SWEeper
ZM-2300M

Pronar ZM-2300M sweeper is designed to clean city streets. Tiltable bottom of the waste tank allows a smooth passage over bumps and speed humps. The jack-screw stepless height adjustment mechanism allows for regulation of the sweeping roller which maximizes the lifespan of the bristles and maximizes the effects. Additional side disc brushes (left & right) allows sweeping curbs in any direction. The brush speed may be adjusted independently depending on the working conditions.

Turning actuator allows sweeping to the left or right (work with raised or without tank).



Sprinkler system reduces dust emission.



The tank is emptied by hydraulic cylinder with lock (for work with a raised container).



Suspended on a floating arm side disc brushes (600 mm diameter each) increase the working width of the machine and remove debris from hard to reach places.



Supporting wheels provide stabilization of the machine during operation.



Tank with tiltable bottom allows for easy passage through e.g. speed bumps.



Universal mounting frame allows aggregation with a wide range of carriers - from tractors up to forklifts (pictured three-point linkage).



The roller brush consists of rings (numerous variants hardness).



Indicators of position and height allow you to set the machine in the optimum working position.



The jack-screw mechanism makes it easy to lower the brush as it wears-out.



Brush motor built inside the shaft - reduced sweeper width.

SWEeper

ZM-2300M

Efficiency	14000	[m ² /h]
Weight (no side brush, with tank)	930	[kg]
Waste tank capacity	470	[dm ³]
Working width	2300	[mm]
Working speed	6	[kph]
Recommended brush speed	150	[rpm]
Maximum brush speed	195	[rpm]
Length	2260	[mm]
Width	2525	[mm]
Height	1200	[mm]
Mounting method on tractor	3pt. hitch cat. II	
Power supply	12	[V]
Hydraulic supply	16	[MPa]

Pronar ZMC 2.0 trailed vacuum sweeper is adapted for work with tractors with at least 60 HP. It has been designed to perfectly clean roads, large warehouse surfaces, and areas paved with asphalt, concrete or cobblestones.

The sweeping unit consists of 2 hydraulic rotary disc brushes that sweep the debris into the machine's interior, where a vacuum suction system moves it to a 2.1 m³ container at the rear of the sweeper. The sprinkler system, consisting of a pump, water tank, and spraying nozzles, effectively prevents formation of dust during operation. Machine control is fully automated. An electrical control panel can be used to adjust all sweeper functions, including unloading of the machine. A hydraulically articulated drawbar enables precise following of the curb contour.



Special brush for removing plants from carriageway edges.



Sweeper control panel.



Hydraulically articulated drawbar.



Additional (optional) equipment:

- side attachment for collecting leaves
- additional water tank (200 l)
- chute
- pneumatic single-conduit brake system
- hydraulic brake system

TRAILED SWEEPER

ZMC2.0

Efficiency	13800	[m ² /h]
Weight	2300	[kg]
Waste tank capacity	2,1	[m ³]
Working width regulation	2000 - 2300	[mm]
Working speed	6	[kph]
Supplying of hydraulics, sprinkler and fan	mechanical from PTO	
Water tank capacity	240 + 200*	[dm ³]
Hydraulic feed for drawbar turning	16	[MPa]
Dumping height	1660	[mm]
Width/length/height	2175/3510/2230	[mm]
Height with a raised tank	3770	[mm]
Tractor power demand	61 (45)	[HP (kW)]
Recommended PTO speed	1000	[rpm]
Permissible load on coupling (not less than)	650	[kg]
Transport speed max.	25	[kph]

*additional water tank

Hydraulic hopper dumping system.



Adjustable side brush.



Spraying nozzles in front of rotary disc brushes



ZMC 2.0 sweeper attached to Pronar 5135 tractor.



Pronar ZMC 3.0 sweeper with mechanical debris transport system.

Two rotary disc brushes clean the surface, a roller brush sweeps the debris onto a scraper conveyor belt, which conveys it to the waste container. The sweeper is great at cleaning roads, city streets, large squares, warehouse facilities, as well as car parkings and pedestrian areas. It performs ideally in road cleaning after the winter. The operator can hydraulically dump the load without any need to leave the tractor cabin by using the steering panel. The machine is also equipped with a sprinkler system, and water tank that can hold up to 1150 litres of water.

Optional equipment:

- vibrator system for easy emptying of the waste container
- work lighting of the brush operating area
- warning lighting with mandatory sign (C9 or C10) mounted on rear
- license plate bracket with lighting
- left brush hydraulic tilting
- additional warning light
- reflective outline width markers
- wheel chock set
- galvanised frame
- single-conduit pneumatic brake system
- hydraulic brake system
- upper transportation hitch drawbar
- supplying by PTO shaft



Scraper conveyor transporting waste to the hopper.



Control panel in the operator's cabin.



Hydraulic adjustment of rotary disc brush position.



Hydraulic hopper dumping system.



Additional side brush control module



Hydraulic brush for gutter cleaning



Drawbar for upper transport hitch

Multiplier powered by tractor PTO

1150 litre water tank and roller brush.

Hydraulic drawbar articulation

Tilting service hatch.



TRAILED SWEEPER

ZMC3.0

Efficiency	54000	[m ² /h]
Weight	3150	[kg]
Waste tank capacity	3	[m ³]
Working width regulation	2400 – 2700	[mm]
Working speed	1 – 20	[kph]
Sprinkler system power supply	electric	
Water tank capacity	1150	[dm ³]
Hydraulic feed for drawbar turning	16	[MPa]
Dumping height	2200	[mm]
Width/length/height	2060/4730/2480	[mm]
Height with a raised tank	4420	[mm]
Permissible load on coupling (not less than)	1700	[kg]
PTO Power demand	101 (75)	[HP (kW)]
PTO recommended speed	400	[rpm]
Max. transport speed	40	[kph]

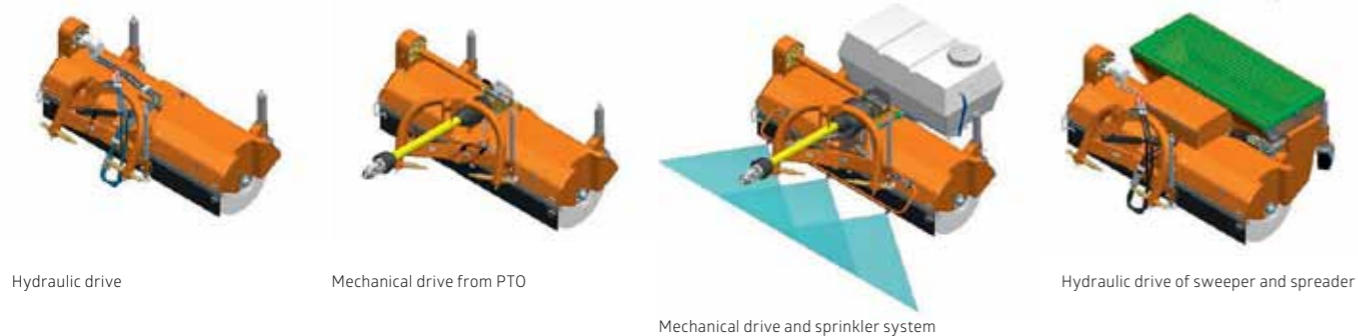
SWEeper
ZM-P16



ZM-P sweeper represents an innovative solution developed by Pronar. The standard sweeper may be fitted with one of available drives - PTO or hydraulic. ZM-P sweeper is destined for hitching to tractor's rear three-point linkage, and optionally, the hydraulic version can be mounted on the front of a tractor. The ZM-P16 model may be equipped with a sand spreader and a special „comb” brush. This combination is perfectly suited for minimising the effects of winter in cities – snow is removed from the pavement, and the sand spreader minimises the risk of pedestrians slipping on the cleaned surface.

ZM-P16 SWEEPER

with mechanical PTO drive and optional sand spreader.



Hydraulic drive Mechanical drive from PTO Mechanical drive and sprinkler system Hydraulic drive of sweeper and spreader



PTO drive Special brush for sweeping-out snow.

Equipment for ZM-P series sweepers:

- front or rear hitch mount versions
- waste or snow brush
- spray unit (for waste brush version only)
- turning angle $\pm 30^\circ$ (beam with holes or hydraulics)
- control panel (brush on/off, and/or sand spreader on/off with dial spreading rate adjustment)
- self-aligning wheels

PRONAR SWEEPER	ZM-P16	
Working width (straight setting)	1600	[mm]
Working width (30° angle)	1440	[mm]
PTO speed	540	[rpm]
Mounting	3pt hitch cat. I or II	
Brush supply	mechanical by PTO or hydraulic	
Brush speed	150 – 350	[rpm]
Working speed	<10	[kph]

TRUCK SWEEPER
ZM-S25



Thanks to its large working width, the PRONAR ZM-S25 sweeper significantly increases the functionality of a truck, particularly in the case of vehicles involved in road construction.

Thanks to the implementation of a polypropylene or polypropylene and steel wire roller brush, the machine is perfectly suited for cleaning sand, snow, soil, or remnants after road milling from pavements. It is driven by hydraulic motors, and a hydraulic cylinder has been implemented for raising and lowering, which ensures failure-free machine operation. Working angle adjustment also improves the sweeper's functionality, and in the standard version, adjustment takes place mechanically by means of a blockade that makes it possible to set the machine at the following angles: 0°, 15° and 30°. Optionally, the working angle can be set within the range from 0° to 30° using a hydraulic cylinder, which improves the comfort and precision of work. Leading of the brush over the surface is adjusted using support wheels, improving brush life. Thanks to mounting on a type A or type B DIN 76060 mounting plate, the machine is capable of cooperating with most trucks.



PRONAR SWEEPER	ZM-S25	
Working width (straight setting)	2500	[mm]
Working width (30° angle)	2155	[mm]
Height max.	1240	[mm]
Brush diameter	650	[mm]
Weight	420	[kg]
Supply	hydraulic	
Required oil pressure	16	[MPa]
Required oil flow	40	[l/min]
Controls	control panel (24V or 12V)	
Adjustment of turning angle	manual or hydraulic	

REAR-FRONT FLAIL MOWERS BK110M / 140M / 160M / 180M / 200M / 250M

Pronar BK-series mulchers (rear-front flail mowers) fit perfectly with green areas, orchards and agriculture area maintenance tasks

High quality and great durability of these machines are ensured by use of wear-resistant materials in the production process.

The features of modernised flail mowers BK M - series:

- Possibility of aggregation on both rear and front for tractor enable the user to create efficient mowing sets (together e.g. with hydraulic arms of WWT-series)
- A big range of mowing widths
- Reinforced flail shaft for heavy duty tasks
- Solid mounting of belt pulleys - for long and trouble free operations
- Wide range of flail knives and hammers



Flail shaft with flail hammers.

Intersecting gear and belt drive - overload protection of the mower



Regulation of mower position (parameter A - see table)

PRONAR	BK110M	BK140M	BK160M	BK180M	BK200M	BK250M	
Length in transport position	1140	1140	1420	1420	1420	1420	[mm]
Width in transport position	1370	1590	1810	2070	2280	2720	[mm]
Height in transport position	920	920	1020	1020	1020	1020	[mm]
Cutting width	1100	1400	1600	1800	2000	2500	[mm]
Horizontal shift of the mower (parameter A)	440	440	785	785	785	785	[mm]
Weight	360	400	540	570	610	675	[kg]
Minimal power demand	25 (18)	30 (22)	40 (29)	50 (37)	70 (51)	90 (66)	KM (kW)
PTO speed (std/optional)	1000/540	1000/540	1000/540	1000	1000	1000	[rpm]
Mounting on front 3pt hitch	cat. I	cat. I	cat. II	cat. II	cat. II	cat. II	
Mounting on front 3pt hitch	cat. I i II	cat. I i II	cat. II i III	cat. II i III	cat. II i III	cat. II i III	
Flail shaft diameter	ø 133	ø 133	ø 152	ø 152	ø 160	ø 160	[mm]
Tracing shaft diameter	ø 133	ø 133	ø 152	ø 152	ø 160	ø 160	[mm]
Flail shaft rotation speed	2550	2550	2450	2450	2420	2420	[rpm]
Number of flail blades	10	12	14	16	18	22	[pcs]

Flails and knives available - see page 18

CROSS TRAVERSE FLAIL MOWERS BKD160P / BKD180P / BKD200P

BKD-series cross traverse flail mowers allow cutting on both sides of tractor. Two-sided frame and transmission gives possibility for mounting both on front and rear tractor 3pt. hitch without mower disassembly. Cross movement provided by tractor hydraulics.

BKD mowers features:

- mounting on front or rear of tractor
- reinforced flail shaft
- solid mounting of belt pulleys - for long and
- trouble-free operations
- intersecting angle gear with directional clutch



Intersecting gear and belt drive - overload protection of the mower

CROSS TRAVERSE FLAIL MOWER **BKD200P**

LINEAR SIDE SHIFT MULCHERS

	BKD160P	BKD180P	BKD200P	
Side traverse				
Length in transport position	440	440	440	[mm]
Width in transport position	1140	1140	1140	[mm]
Height in transport position	1870	2090	2310	[mm]
Cutting width	1025	1025	1025	[mm]
Horizontal shift of the mower (parameter A)	1600	1800	2000	[mm]
Weight	635	690	730	[kg]
Minimal power demand	40 (29)	50 (37)	70 (51)	KM (kW)
PTO speed std/optional	1000	1000	1000	[rpm]
Mounting on front 3pt hitch	cat. I i II	cat. I i II	cat. I i II	
Flail shaft diameter	159	159	159	[mm]
Tracing shaft diameter	159	159	159	[mm]
Flail shaft rotation speed	2500	2500	2500	[rpm]
Number of flail blades	14	16	18	[pcs]

Flails and knives available - see page 18



BBK120M / BBK140M / BBK160M / 180M / 200M

Similarly to rear-front flail-mowers (BK series), the BBK series rear-side flail-mowers, are designed for maintaining urban greenery infrastructure, in orchards as well as on forested grounds.

They are suspended on a pantograph, which enables effective mowing of roadside ditches and use on uneven terrain. A large horizontal hydraulic traverse enables mowing with the entire working width of the mower beyond the tractor's outline. A replaceable jacket inside the mower, made of abrasion-resistant steel, protects the machine's housing against damage.

BBK200M FLAIL MOWER



Mechanical protection prevents damage when hit an obstacle

Adjusting the angle of slides makes it easier to overcome obstacles

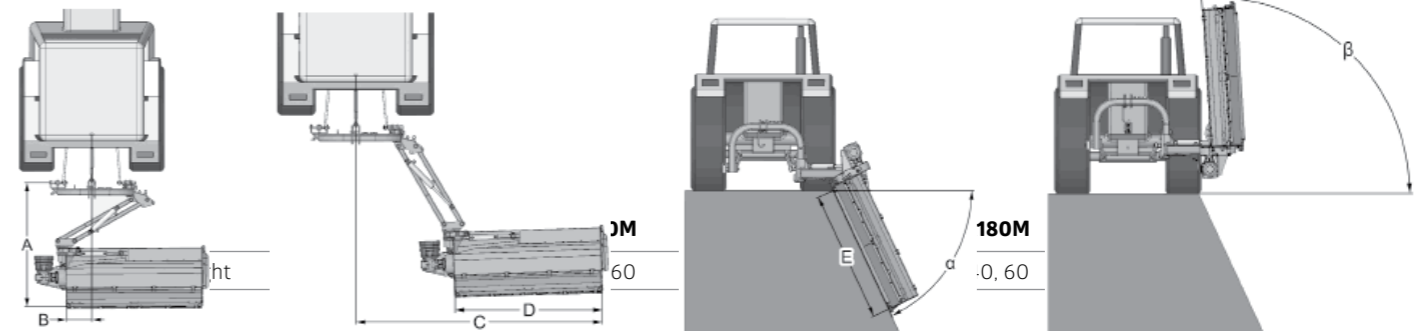
Tracking shaft regulates cutting height



Mower works on right side of the tractor, vertical rest position

PRONAR	BBK120M	BBK140M	BBK160M	BBK180M	BBK200M	
Length in transport position	1900	1900	1900	1900	1900	[mm]
Width in transport position	1770	1770	1660	1660	1660	[mm]
Height in transport position	1750	1950	2160	2380	2600	[mm]
Cutting width	1200	1400	1600	1800	2000	[mm]
Horizontal shift of the mower (hydraulic shift)	1820	1820	1820	1820	1820	[mm]
Weight	635	670	755	820	870	[kg]
Minimum power demand	30 (22)	30 (22)	50 (37)	60 (44)	70 (51)	[HP (kW)]
Max. PTO speed	540	540	540	540	540	[rpm]
Mounting on tractor	TUZ kat. II i III	TUZ kat. II i III	3pt hitch cat. II i III	3pt hitch cat. II i III	3pt hitch cat. II i III	
Flail shaft diameter	ø133	ø133	ø160	ø160	ø160	[mm]
Tracing shaft diameter	ø133	ø133	ø160	ø160	ø160	[mm]
Flail shaft rotation speed	2500	2500	2450	2450	2450	[rpm]
Number of flail blades	10	12	14	16	18	[pcs]
Mower working range						
A	1890	1890	1890	1890	1890	[mm]
B	390	390	390	390	390	[mm]
C	2620	2830	3040	3260	3480	[mm]
D	1210	1410	1620	1840	2060	[mm]
E	1200	1400	1610	1830	2050	[mm]
Working angle - downwards α	65	65	65	65	65	[°]
Working angle - upwards β	94	94	94	94	94	[°]

Flails and knives available - see page 18



Regulation of mower position (parameter A - see table)

Pronar offers a wide variety of flail knives and hammer for all models of mulchers and mowing heads. This allows to choose a knife type adapted to the needs and may increase work effectiveness and efficiency.

Type	Model	Approx. weight	Name	Max. diameter of cut material (mm)	Application	Fits
A		0,4	Flail hammer (light)	40	grass, stalks, stems, thin bushes, thin branches, stubble, crop residues	GK100L, 120L, 140L
B		0,7	Flail hammer	60	grass, stalks, stems, thin bushes, thin branches, stubble, crop residues	GK110, GK140, BK, BKD and BBK series
C		1,5	Flail hammer (heavy)	100	grass, stalks, stems, thin bushes, thin branches, stubble, crop residues	GK110, GK140, BK, BKD and BBK series
D		0,2	Y knife (light)	30	grass, stalks, stems, thin shrubs	GK80L
E		0,4	Y knife	30	grass, stalks, stems, thin shrubs	GK100L, 120L, 140L
F		1	Y-knife (heavy)	60	grass, stalks, stems, bushes, branches	GK110, GK140, BK, BKD and BBK series
G		0,4	YI knife (light)	30	grass, stalks, stems, thin shrubs	GK80L
H		0,5	YI knife	40	grass, stalks, stems, thin shrubs, branches	GK100L, 120L, 140L
I		1,4	YI knife (heavy)	60	grass, stalks, stems, thin shrubs, branches	GK110, GK140, BK, BKD and BBK series
J		1,6	YY knife (heavy)	60	grass, stalks, stems, thin bushes, thin branches, stubble, crop residues	GK110, GK140, BK, BKD and BBK series
K		1,2	TI knife	60	grass, stalks, stems, thin bushes, thin branches, stubble, crop residues	GK110, GK140, BK, BKD and BBK series
L		1,5	M knife	60	grass, stalks, stems, thin bushes, thin branches, stubble, crop residues	GK110, GK140, BK, BKD and BBK series
M		0,1	Mallet	20	grass, stalks, stems, bushes, branches	GK80L, GK100L, 120L, 140L
N		0,1	Twist knife	20	grass, stalks, stems, thin shrubs	GK80L, GK100L, 120L, 140L
O		0,2	Curved mallet	20	grass, stalks, stems, thin shrubs	GK100L, 120L, 140L

Pronar offers rear - and front - mounted hydraulic multifunctional arms for different vehicles. These heads increase the functionality of carriers through the use of different types of operating heads for different operations.

Model	GK80L	GK100L	GK120L	GK140L	GK110	GK140	GP200	GT150	GN200	GF100S	GO800	GM500
WWT420	S	S	S	S	X	X	0	S	X	0	0	0
WWT480	S	S	S	S	X	X	0	S	X	0	0	0
WWT600	0	0	0	0	S	S	S	X	S	S	S	S
WWT600P	0	0	0	0	S	X	S	X	S	S	S	S
WWT700T	0	0	0	0	S	X	S	X	S	S	S	S
WWT800T	0	0	0	0	S	X	S	X	S	S	S	S
WWP500	X	X	0	0	S	S	S	0	0	S	S	S
WWP500U	X	X	0	0	S	S	S	0	0	S	S	S
WWP500UH	X	X	0	0	S	S	S	0	0	S	S	S
WWP600	X	X	0	0	S	S	S	0	0	S	S	S

S - standard; X - not available; 0 - optional (available after changing connector type)



MOWING HEADS **GK80L / 100L / 120L / 140L / 110 / 140**

Cutting heads for WWP600 / WWP500 / WWP500U / WWP500UH multifunction arms are used for mowing grass, cutting bushes and shredding of cut tree branches.

Design of multifunction arm enables operation in hard to reach areas such as roadside ditches behind protective barriers, slopes, drainage ditches, roadsides. The cutting head leaves the cutting area with evenly ground material, which also forms a fertilising layer.



GK110

GK140

GK80L

MOWING HEAD	GK80L	GK100L	GK120L	GK140L	GK110	GK140	
Working width	800	1000	1200	1400	1100	1400	[mm]
Working shaft diameter	76	76	89	89	133	133	[mm]
Copying shaft diameter	89	89	101,6	101,6	133	133	[mm]
Hydraulic engine power	38 (28)	38 (28)	38 (28)	38 (28)	48 (35)	48 (35)	[HP (kW)]
Connector size	60x60	60x60	60x60	60x60	80x80	80x80	[mm]
Weight	115	155	185	240	290	318	[kg]
Number of knives	22	24	26	30	10	12	[pcs]
Oil flow	80	80	80	80	90	90	[l/min]
Oil pressure	21	21	21	21	25	25	[MPa]

Flails and knives available - see page 18



TRIMMING HEADS **GT150 / GN200 / GP200**

Pronar set of trimming heads has been designed to meet the tasks of green-area and orchard maintenance. Three types of tools available allow you to choose a head adequate to the task. We recommend the aggregation with multifunctional arms mounted on tractors with creeper systems.

TRIMMER	GT150
Working width	1500 [mm]
No. of cutting knives	20 [pcs.]
Max. cutting diameter	20 [mm]
Min oil working pressure	12 [MPa]
Min. oil flow	50 [l/min]
Weight	50 [kg]
Connector	140x140 plate [mm]

Branch trimmer **PRONAR GT150**

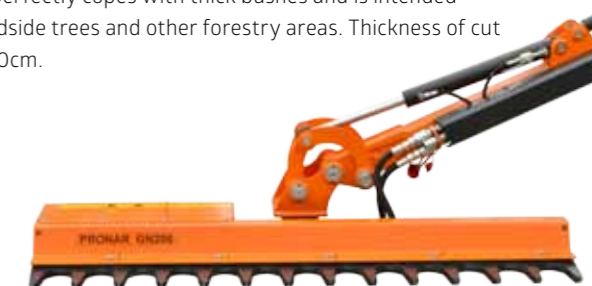
Light and precise head designed for trimming of thin branches during maintenance of i.e. hedges. Light weight allows for work with small tractors. The thickness of the cut branches - max 2 cm.



SCISSOR HEAD	GN200
Working width	2000 [mm]
No. of cutting knives	14 [pcs.]
Max. cutting diameter	100 [mm]
Min oil working pressure	12 [MPa]
Min. oil flow	80 [l/min]
Weight	250 [kg]
Connector	140x140 plate [mm]

Scissor head **PRONAR GN200**

The scissor head perfectly copes with thick bushes and is intended for pruning of roadside trees and other forestry areas. Thickness of cut branches - up to 10cm.



HEDGE CUTTER	GP200
Working width	2000 [mm]
Number of cutting discs	4 [pcs.]
Disc diameter	600 [mm]
Min oil working pressure	22 [MPa]
Min. oil flow	60 [l/min]
Weight	232 [kg]
Connector	80x80 beam [mm]

PRONAR **GP200** branch cutting saw

The GP200 is the perfect for cutting branches of roadside trees, line regulation of hedges and vineyards. The mechanism does not require gear lubrication allows you to work in harsh conditions.





GO800 ditch desludging head allows restoration of trench patency by removing sludge, mud and snatching of bushes.

PRONAR **GO 800** ditch digger

DITCH DIGGER	GO800	
Working disc diameter	800	[mm]
Min oil working pressure	22	[MPa]
Min. oil flow	90	[l/min]
Hydraulic motor power	48 (35)	[HP(kW)]
Weight	220	[kg]
Adjustable discharge direction	+	
Require carrier with creeper system		



GM 500 sign washer designed to clean signs leading pillars and protective barriers. Together with PRONAR R1000 tank, they make a perfect sign cleaning set.

Pronar GM500 washing head PRONAR **GM 500**

CLEANING HEAD	GM500	
Brush diameter	400	[mm]
Brush length	500	[mm]
Nom. oil working pressure	10	[MPa]
Min. oil flow	80	[l/min]
Water pump efficiency	80	[l/min]
Easy disassembly of protective frame for the purpose of washing road signs		



Pronar R1000 water tank can be used to store clean water for supplying municipal devices (e.g. sign washing head), as an additional tank for machines with a sprinkler system (e.g. sweepers) or as a tank for watering plants in urban areas. Can be equipped with rear road lights and water pump with hoses.



WATER TANK	R 1000	
Tank capacity	1000	[dm ³]
Water container	„MAUZER” type on independent pallet with frame	
Mounting on tractor	3pt hitch cat. II	
Width/height/length	1200/1270/1350	[mm]
Water pump efficiency	10	[l/min]
Pump power supply	12V from 7-pole electrical socket	
Interior diameter of water pump conduit	12	[mm]
Pump conduit coupling type	Rectus, series 26. DIN 7.2 mm	
Weight dry	120	[kg]



Pronar multifunctional arms, thanks to the wide range of operating heads, are a universal tool for companies involved in municipal services and road maintenance. The construction of our arms and a wide range of appliances available allow you to perform operations in hard to reach places such as roadside areas, behind protective barriers, on slopes, in drainage ditches.

MULTIFUNCTION ARM **WWP500**
MOWING HEAD **GK140**



MULTIFUNCTION ARM **WWP500U**
MOWING HEAD **GK110**



MULTIFUNCTION ARM **WWT480**
TRIMMER **GT150**



MULTIFUNCTION ARM **WWT420**
MOWING HEAD **GK80L**



MULTIFUNCTION ARM **WWT700T**
SCISSOR HEAD **GN200**



MULTIFUNCTION ARM **WWT600**
MOWING HEAD **GK140**





PRONAR WWP500 / WWP600 universal multifunction arms are designed for operation with tractors equipped with a front PTO and front 3pt linkage.

Thanks to the possibility of installing several types of working heads, they are universal tool carriers at municipal companies, enterprises providing public services and maintaining roads and roadside areas. The arm design and its outreach range of 6 m or 7 m allow cutting in hard to reach areas such as roadside ditches behind protective barriers, slopes, drainage ditches, etc. Multifunction arm is controlled from the cab using the joystick. They can operate both on the right side and after the manual rearrangement on the left side of the tractor. The boom can be moved hydraulically along the rail to the left or right. Self-aligning heads mounted on a floating arm enable perfect ground surface tracking.

Standard equipment:

drive from front tractor PTO

- joystick control
- hydraulic horizontal movement
- parking rack
- mounting plate installed in the place of the arms of the front three-point linkage,
- appropriately to the tractor model and front three-point linkage size

Optional equipment:

- rear ballast
- axle lock (appropriately to the given tractor model)

WWP600 boom with GK mowing head



WWP600 with G0800 ditch digger. Long reach fits perfectly for desludging.



WWP600 multifunction arm – hydraulic movement of working arm over guide rail.



WWP600 multifunction arm with GP200 saw for branch cutting.



MULTIFUNCTION ARM	WWP500	WWP600	
Working range of multi-functional arm with GK110	5,55	6,75	[m]
Mounting on tractor	by replacing the front three point linkage arms	by replacing the front three point linkage arms	
Working head supply	hydraulic	hydraulic	
Connector size	80x80	80x80	[mm]
Hydraulic pump power	51 (37,5)	53 (39)	[HP (kW)]
Nominal oil flow rate (pump delivery)	90	90	[l/min]
Nominal oil pressure	24	24	[MPa]
Oil tank capacity	75	75	[l]
Controls	electric	electric	
Set weight (with cutting head)	890	980	[kg]
Transport width	2400	2700	[mm]
Min. tractor weight	4000	4500	[kg]
Min. tractor power	75 (55)	80 (59)	[HP (kW)]
PTO speed	1000	1000	[rpm]

Available working heads – see page 18

Universal multifunction arm
PRONAR WWP500/WWP600
 designed for operation
 with working heads.



PRONAR WWT420/480 rear universal multifunction arms are an alternative to the front-mounted WWP series. They are designed for operation with tractors equipped with rear PTO and three-point linkage.

Thanks to compatibility with several types of working heads, they are universal tool carriers. The reach of the arm enables access to difficult areas, e.g. behind barriers.

In combination with the BK series mower the operator gets an excellent unit for mowing grasslands along roads. The multifunction arm is controlled from the operator's cabin using pull rods. The working arm can operate on the right side of the tractor.

MULTIFUNCTION ARM	WWT420	WWT480	
Horizontal range (measured to centre of connection)	3,2	3,8	[m]
Horizontal range (measured with GK100L head)	4,2	4,8	[m]
Working head supply	hydraulic - own	hydraulic - own	
Connector size	60x60	60x60	[mm]
Nominal oil pressure	21,5	21,5	[MPa]
Max. power of hydraulic system	44 (32)	44 (32)	[HP (kW)]
Oil tank capacity	130	130	[l]
Head rotation angle	205	205	[°]
Transport length	0,8	0,8	[m]
Transport width	1,46	1,65	[m]
Transport height	1,73	1,96	[m]
Steering type	Mechanical - pulling rods	Mechanical - pulling rods	
Arm protection	mechanical protector	mechanical protector	
Weight	620	645	[kg]
Lighting bar	standard	standard	
Oil radiator	optional	optional	
Mounting on rear 3pt hitch	cat. I or II	cat. I or II	
Rear PTO	type 1	type 1	
PTO speed	540	540	[rpm]
Min. tractor weight	2000	2100	[kg]

Available working heads - see page 18



MULTIFUNCTION ARM
WWT480 with GK80L head

WWT-series multifunction arms are compatible with most tractors used for municipal tasks.



WWT600 and WWT700 complement Pronar offer for long reach multifunctional arms mounted on rear three-point linkage.

Thanks to a wide variety of working heads they are perfect for roadside and slope maintenance.

Feature

- Long arm reach allows work in hard to reach areas
- Mounting on rear 3pt hitch is gentle for tractor axis
- Wide variety of working heads increase range of tractor usage
- Standard oil cooler prevents oil overheating and provides uninterrupted work
- Wear-resistant steel used in production process for high durability
- Hydraulic accumulators protection system

MULTIFUNCTION ARM	WWT600	WWT600P	WWT700T	WWT800T	
Connector size	80x80	80x80	80x80	80x80	[mm]
Horizontal range (measured to centre of connection)	5,17	5,25	6,27	7	[m]
Horizontal range (measured with GK110 head)	6,12	6,13	7,16	8,1	[m]
Working head supply	Own hydraulic system	Own hydraulic system	Own hydraulic system	Own hydraulic system	
Nominal oil pressure	21,5	21,5	21,5	21,5	[MPa]
Max. power of hydraulic system	41 (30)	41 (30)	41 (30)	33/6,5	[HP (kW)]
Nominal Oil flow	80	80	80	80	[l/min]
Oil tank capacity	180	180	180	240	[l]
Head rotation angle	205	205	205	205	[°]
Transport length	0,91	2,45	1,35	1,14	[m]
Transport width	1,63	1,63	1,63	2,08	[m]
Transport height	3,56	3,46	3,58	3,59	[m]
Steering type	Mechanical - pulling rods Mechanical	Mechanical - pulling rods	Mechanical - pulling rods	Mechanical - pulling rods	
Arm protection	hydraulic protector	hydraulic protector	hydraulic protector	hydraulic protector	
Weight	970	1050	1120	1200	[kg]
Lighting bar	Standard	Standard	Standard	optional	
Oil radiator	Standard	Standard	Standard	optional	
Mounting on rear 3pt hitch	cat. II	cat. II	cat. II	cat. II or III	
Rear PTO	type 1	type 1	type 1	type 1	
PTO speed	540	540	540	540	[rpm]
Min. tractor weight	4500	5000	5500	6000	[kg]

Available working heads - see page 18

MULTIFUNCTION ARM
WWT600 with GK140



WWT600 - arms for working with heavy heads for most difficult conditions

MULTIFUNCTION ARM
WWT600 with GN200



WWT600P - parallel system for head angle keep when adjusting arm

MULTIFUNCTION ARM
WWT600 with GP200



WWT700T, WWT800T - Long arm reach is provided thanks to hydraulic telescopic sliding

The PRONAR WWP500U and WWP500UH multifunction arms are designed for operation with MB Unimog carrying vehicles or other similar vehicles with similar specification. The power arm is mounted on a mounting plate compliant with the DIN standard at the front of the vehicle.

Arms are controlled from the operator's cabin by joystick and can be used with a wide range of heads manufactured by Pronar. The multifunction arm can be operated on the right side or, after the manual reconfiguration, on the left side of the carrying vehicle.

The multifunction arm and hydraulically.

Working head can be supplied from arms own hydraulic powered by PTO (UH version) or directly from carrier hydraulics (U - version)

Standard equipment:

- hydraulic drive (from carrier) or PTO 1000 rpm
- joystick control
- horizontal hydraulic traverse
- mounting on type A or B DIN 76060 mounting plate
- parking rack

Optional equipment:

- axle lock (appropriately to the given Unimog model)
- rear ballast
- type A or B mounting plate (faceplate) installed on the front of the vehicle



WWP500U multifunction arm with GK10 mowing head on Unimog U500

Mowing of a hard-to-reach roadside using a WWP500U multifunction arm and GK 110 head.

Mowing of a hard-to-reach roadside using a WWP500U multifunction arm and GK 110 head.



MULTIFUNCTION ARM	WWP500U	WWP500UH	
Transport width	2400	2,4	[mm]
Transport height	2020	2	[mm]
Connection size	80x80	80x80	[mm]
Horizontal range (measured to centre of connection)	4750	4,75	[mm]
Horizontal range (measured with GK110 head)	5500	5,5	[mm]
Vertical range	5250	5,25	[mm]
Vertical range (measured with GK110 head)	6100	6,1	[mm]
Turning angle (may be used on left or right side)	180	180	[°]
Angle range	0 - 180	0 - 180	[°]
Weight	750	680 / 1080	[kg]
Control own - Joystick mounted in tractors cabin	electric, 12 or 24	24	[V]
Demanded hydraulic parameters for working heads:			
Arm movement operations - hydraulic single circuit designed for continuous operation:			
- Min. oil flow	20		[l/min]
- Min. oil pressure	20		[MPa]
- Two hydraulic connectors: supply and return	from carrier		
Working tools drive - hydraulics designed for continuous operation:			
- Min. oil flow	90		[l/min]
- Nom. oil pressure	25		[MPa]
- Three hydraulic connectors: supply and return, leakage draining	from carrier		
Information of carriers PTO and head supplying			
PTO direction	left		
PTO speed	1000		[rpm]
Nom. oil flow	90		[l/min]
Nom. Pressure	21,5		[MPa]

Available working heads - see page ##

ROAD GRADER
RD- Z24



The road grader is a machine for grading and repairing gravel roads as well as for other preparatory work in the vicinity of traffic routes and public areas.

The materials used in the manufacturing process guarantee high strength and durability. Thanks to 5 hydraulic cylinders, the machine can be optimally adapted to different tasks – mouldboard can be adjusted in 3 planes. It can be used to repair gravel and forest roads, to create land for construction of new traffic routes, and to prepare grounds for investment. Thanks to the implementation of a system of hydraulic cylinders, it is ideally suited for grading soil.

Optional equipment:

- rippers
- hydraulic control of support wheels



ROAD GRADER **RD-Z24**



PRONAR	RD-Z24	
Working width - straight	2400	[mm]
- at max. turn angle	2078	
Max. frame turn angle	30	[±°]
Vertical blade rotation angle	30	[±°]
Horizontal blade turning angle	45	[±°]
Weight	930	[kg]
Mounting on tractor	3pt hitch cat. II	
Power demand	100-180 (74-132)	[HP (kW)]
Working speed max.	10	[kph]

HYDRAULIC POWER UNITS
ZHZ 100



Efficient, universal, and quick to install. Pronar ZHZ 100/140 hydraulic pumps are machines mounted on the rear three-point linkage of a tractor. They are perfectly suited for supplying hydraulically powered machines such as front-mounted multifunction arms or hydraulic machines that need strong hydraulic feed e.g OW2.4 snowblowers.

PRONAR	ZHZ100	
Nominal pump output	100	[dm³/min]
Nom. Pressure	16	[MPa]
PTO speed	1000	[rpm]
Oil tank capacity	120	[l]
Weight dry	170	[kg]
Mounting on tractor	3pt hitch cat. II	



HYDRAULIC POWER FEEDER
ZHD 170



ZHD 170 combustion hydraulic feeder from PRONAR is designed to supply power to hydraulic machinery and accessories in the field, without access to electricity sources. Power unit consists of two main subassemblies: hydraulic system and combustion engine system.



The unit may be attached to 3pt linkage or work as a stationary device.

PRONAR	ZHD 170	
Maximum pump efficiency at rated engine speed	170	[dm³/min]
Operating pressure (no efficiency limit)	21.5	[MPa]
Maximum pressure (with limited efficiency)	30	[MPa]
Number of selective control valve sections / number of hydraulic sockets	1/2 - standard, 2/4 - optional	
Electronic efficiency controller	continuous, independent for every section	
Engine producer	MMZ	
Number of cylinders/displacement	4/4750	[pcs/cm³]
Nominal power	105 (77)	[HP (kW)]
Nominal rotational speed	1500	[rpm]
Maximum torque	490	[NM]
Voltage	24	[V]
Unit fuel consumption	210	[g/kWh]
Tare weight (with full fuel tank and oil tank)	1350	[kg]
Fuel tank capacity	175	[dm³]
Oil tank capacity	145	[dm³]

The unit may be mounted on a category II 3-point linkage system or it may operate as a stationary machine





Pronar KP-7 and KP-10 containers, in open and closed versions, are designed for the collection and disposal of municipal waste. They are perfectly suited for residential estates and public facilities.

The containers are compatible with vehicles equipped with a hook lift allowing automatic loading and unloading, which is also convenient thanks to rollers located at the rear of the container. Openings and flaps in closed containers are designed to prevent ingress of rain water and its accumulation inside the container.

Standard:

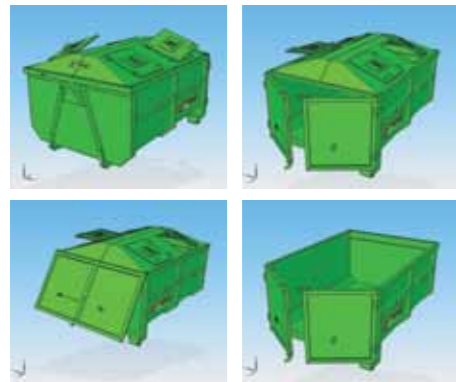
- painting with chemohardening, two-component paints
- lacquer coat finish on interior and exterior
- drawbar couplings for gantry trucks

Options:

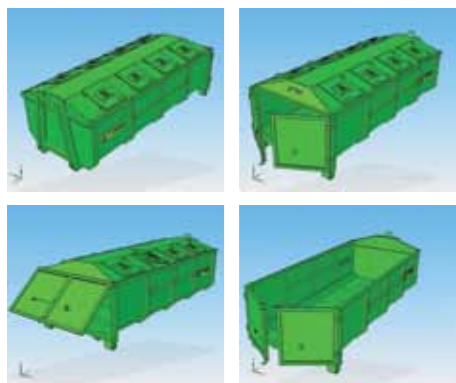
- drawbar couplings for gantry trucks
- double rear doors central locked



PRONAR **KP-7** container



PRONAR **KP-10** container



Properties:

- made with modern rotomoulding technology
- smooth surface for easy cleaning
- extremely resistant to high and low temperature
- very strong and rigid construction
- resistant to chemicals
- UV stabilised colour fastness
- recyclable
- product compliant with standard EN-840

CONTAINER	HOUSEHOLD 240L	
Interior dimensions:		
Length	730	[mm]
Width	580	[mm]
Height	1080	[mm]
Capacity	240	[l]

PRONAR **240L HOUSEHOLD CONTAINER**



CONTAINER	KP-7	KP-10	
Interior dimensions			
Length	3500	4500	[mm]
Width	1800	1800	[mm]
Height	1100	1000	[mm]
Hook height	1200	1450	[mm]
Materials used			
Floor sheet	3	3	[mm]
Side sheet	2	2	[mm]
Cover sheet	2	2	[mm]
Flap sheet	2	2	[mm]



WINTER ROAD MAINTENANCE MACHINERY

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SNOW PLOUGH
PU-1400



Features and standard equipment:

- two extreme working positions
- rubber or metal blade
- clearance lights

Additional options:

- slides
- can be mounted on various types of carrying vehicles such as: loaders, front loaders, carrying vehicles equipped with an A-frame, agricultural tractors

SNOW PLOUGH	PU-1400	
Working width		[mm]
- straight	1400	
- at max. turn angle	1260	
Max. frame turn angle	25	[±°]
Working height	600	[mm]
Weight	175	[kg]
Power demand	up to 30 (22)	[HP (kW)]
Working speed max.	10	[kph]

SNOW PLOUGH
PU-2200E



Features and standard equipment:

- two extreme working positions
- rubber or metal blade
- clearance lights
- mechanical turning
- without linkage system

Additional options:

- slides
- can be mounted on various types of carrying vehicles without the need to use a front three-point linkage
- hydraulic steering system
- support wheels
- lifting actuator



SNOW PLOUGH	PU-2200E	
Working width		[mm]
- straight	2190	
- at max. turn angle	1930	
Max. frame turn angle	28	[±°]
Working height	835	[mm]
Weight	360	[kg]
Power demand	up to 60 (44)	[HP (kW)]
Working speed max.	10	[kph]

SNOW PLOUGHS
PU-2600 / 3300



Features and standard equipment:

- rubber or metal blade
- anti-collision protection: mouldboard deflection to the front (independently ½ + ½) if an obstacle is run into
- transverse ground tracking linkage
- slides made of wear-resistant steel

Additional options:

- adjustable support wheels
- fenders protecting against curbs
- flanges increasing working width (standard in PU-3300)
- tarpaulin anti-dust screen
- overload protection
- can be mounted on various types of carrying vehicles such as: trucks and multi-functional vehicles, backhoe loaders, loaders, front loaders
- long screens

SNOW PLOUGH	PU-2600	PU-3300	
Working width			[mm]
- straight	2600	3300	
- at max. turn angle	2300	2900	
Max. frame turn angle	30	30	[±°]
Working height	1040	1040	[mm]
Weight	660	680	[kg]
Power demand	80-150 (59-110)	80-150 (59-110)	[HP (kW)]
Working speed max.	10	10	[kph]

Segmented mouldboard with spring safeguard.



Slides made of abrasion-resistant steel. Rubber blade



SNOW PLOUGHS
PUV-1400 / 1600



Features and standard equipment:

- four extreme working positions
- rubber or metal blade
- tiltable cutting edge
- clearance lights

Additional options:

- slides
- adjustable support wheels
- hydraulic shock absorption
- can be mounted on various types of carrying vehicles such as: loaders, front loaders, carrying vehicles equipped with an A-frame, agricultural tractors
- ground tracking linkage system

SNOW PLOUGH	PUV-1400	PUV-1600	
Working width - straight	1400	1600	[mm]
- at max. turn angle	1300	1493	
Max. frame turn angle	30	30	[±°]
Working height	860	675	[mm]
Weight	200	155	[kg]
Power demand	up to 30 (22)	up to 30 (22)	[HP (kW)]
Working speed max.	10	10	[kph]



SNOW PLOUGHS
KACPER PU-1700 / 2100



Features and standard equipment:

- four extreme working positions
- rubber or metal blade
- tiltable cutting edge
- clearance lights

Additional options:

- slides
- adjustable support wheels
- hydraulic shock absorption
- can be mounted on various types of carrying vehicles such as: trucks and multi-functional vehicles, backhoe loaders, loaders, front loaders
- ground tracking linkage system



SNOW PLOUGH	Kacper PU-1700	Kacper PU-2100	
Working width - straight	2080	2380	[mm]
- at max. turn angle	1870	2100	
Max. frame turn angle	30	30	[±°]
Working height	900	900	[mm]
Weight	280	300	[kg]
Power demand	25-55 (15-40)	25-55 (15-40)	[HP (kW)]
Working speed max.	10	10	[kph]

SNOW PLOUGHS
PUV-2600 / 2800 / 3000 / 3300



Features and standard equipment:

- 4 extreme working positions
- cutting edge with shock absorption
- HARDOX metal blade
- ground tracking linkage system
- skids made of abrasion-resistant steel
- clearance lights

Additional options:

- support wheels with stepless adjustment
- hydraulic shock absorption
- mounting on any carrying vehicle, according to the customer's order
- rubber blades



SNOW PLOUGH	PUV-2600	PUV-2800	PUV-3000	PUV-3300	
Working width - straight	2600	2800	3000	3300	[mm]
- at max. turn angle	2320	2490	2660	2930	
Max. frame turn angle	27	27	27	27	[°]
Working height	835	835	935	935	[mm]
Weight	600	650	800	850	[kg]
Power demand	80-150 (59-110)	80-150 (59-110)	100-200 (74-147)	100-200 (74-147)	[HP (kW)]
Working speed max.	10	10	10	10	[kph]

Rubber blades



Hydraulic shock absorption



Rubber collecting strips.



SNOW PLOUGHS
PUV-2600M / 2800M / 3000M / 3300M / 4000HD



Features and standard equipment:

- 4 extreme working positions
- cutting edge with shock absorption
- HARDOX metal blade
- ground tracking linkage system
- skids made of abrasion-resistant steel
- clearance lights

Additional options:

- support wheels with stepless adjustment
- hydraulic shock absorption
- mounting on any carrying vehicle, according to the customer's order
- rubber blades straight
- hardox or perfored blades straight or 30°



PRONAR PUV4000HD snow plough



SNOW PLOUGH	PUV-2600M	PUV-2800M	PUV-3000M	PUV-3300M	PUV-4000HD	
Working width - straight	2630	2830	3010	3305	4000	[mm]
- at max. turn angle	2210	2370	2520	2710	3280	
Max. frame turn angle	33	33	33	35	35	[°]
Working height	855	865	880	1015	1206	[mm]
Weight	680	700	730	860	1270	[kg]
Power demand	80-150 (59-110)	80-150 (59-110)	80-150 (59-110)	100-200 (74-147)	120-250 (88-110)	[KM (kW)]
Working speed max.	10	10	10	10	10	[km/h]

Clearance lights.



Blade safeguard springs



Spring safeguard (extendable blades)





Features and standard equipment:

- 2 extreme working positions
- rubber or metal blade
- capability of operating on front or rear three-point linkage of tractor
- capability of grading unpaved roads

PRONAR PU-T20 **UNIVERSAL SCRAPER BLADE**

UNIVERSAL SCRAPER – BLADE	PU-T20	
Working width		[mm]
- straight	2000	
- at max. turn angle	1530	
Max. frame turn angle	40	[°]
Working blade height	654	[mm]
Weight	400	[kg]
Power demand	max. 150 (110)	[HP (kW)]
Working speed max.	10	[kph]



SCRAPER **PRONAR PUU-3700**

Features and standard equipment:

- adjustment of working width by setting angle of two side mouldboards and the central mouldboard
- rubber blades
- electro-hydraulic control

Additional options:

- support wheels
- perforated mouldboard extensions for silage
- top extensions for snow
- adjustment of transverse plough position by means of hydraulic cylinders within the range of $\pm 12^\circ$
- clearance lights
- anti-dust screen for snow
- metal blades

SCRAPER	PUU-3700	
Working width		[mm]
- straight	3690	
- at max. turn angle	2140	
Max. frame turn angle	30	[°]
Turning angle of side wing to the front/back	+90°/-60°	[°]
Working blade height	975	[mm]
Weight	1275	[kg]
Power demand	up to 300 (221)	[HP (kW)]
Working speed max.	20	[kph]
Requirements concerning carrying vehicle hydraulics	2	[pcs]





Features and standard equipment:

- canvas cover
- control panel for setting spreading parameters as a standard equipment of sand spreader
- stainless steel spreading system

Additional options:

- mixer
- vibrator



Control panel.



SELF-LOADING SPREADER

HZS10

Carrying capacity	1700	[kg]
Tank capacity	1	[m³]
Spreading width	adjustable 2 - 6	[m]
Power supply	Hydraulic	
Nom. tractor hydraulic output	40	[l/min]
Spreading speed	5 - 40	[kph]
Mounting (optional)	3pt hitch cat. II	
Demanded 3pt hitch capacity	2500	
Weight	555	[kg]

Additional mixer facilitates aggregate breaking



Stainless steel spreading disc.



Sieve and mixer



Pronar HZW self-loading spreaders are equipped with roller dispensing system with a constant spreading width. They are suitable for spreading aggregate on sidewalks and parking lots, because they are safe to use and do not shoot stones. The suspension allows the machines to be mounted on Euro frames (frontloaders), and after the use of an adapter - on tractor 3pt linkage.

Canvas cover with frame protects the material from snow and rain.



Backlight set lets you move around public roads.



The possibility of aggregation on Euro frontloader system or tractor 3pt hitch (adapter).



Aperture adjustment to set the spreading dosage.

Working roller with slats dispense the material on the road.



Mixer for easy material slip onto the roller.



Safety grill for homogeneous spreading material.



SELF-LOADING SPREADER

HZW150

HZW200

Carrying capacity	1300	1600	[kg]
Tank capacity	0,8	1	[m³]
Spreading width	1,5	2	[m]
Power supply	PTO or hydraulic	PTO or hydraulic	
Nom. tractor hydraulic output	30	30	[l/min]
PTO nom. Speed	540	540	[rpm]
Spreading speed	5 - 40	5 - 40	[km/h]
Mounting (optional)	Euro (3 pt. hitch)	Euro (3 pt. hitch)	
Required 3pt capacity	2000	3000	[kg]
Weight	425	500	[kg]

Stała szerokość sypania



SAND SPREADERS
PS-250 / 250M



Features and standard equipment:

- defrosting material container cover
- hydraulic drive
- mixer
- stainless steel spreading disk
- manual chute adjusting

Additional options:

- PTO drive
- PTO shaft
- pins for full 3pt cat. II -1
- hydraulic chute adjusting
- hydraulic chute shut-off

SAND SPREADER	PS-250	PS-250M	
Load capacity	300	600	[kg]
Tank capacity	250	500	[l]
Power demand	15 (11)	15 (11)	[HP (kW)]
Spreading width	adjustable 1 – 6	adjustable 1 – 6	[m]
Mounting on tractor	3pt hitch cat. I or II narrow	3pt hitch cat. I or II narrow	

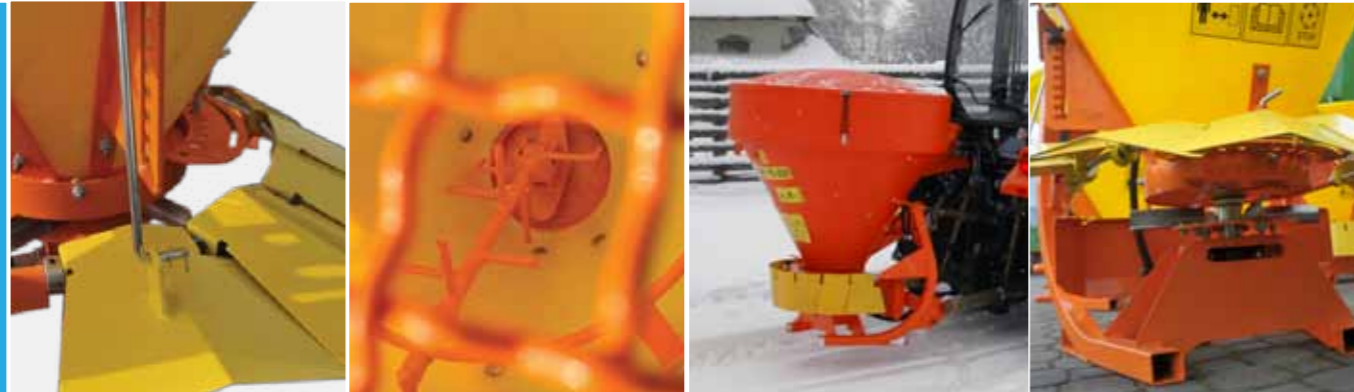
Optional hydraulic chute shutting

Adjustment of spreading width.

Sieve and mixer in funnel.

Sand container can be 250 or 500 litres of capacity

Stainless steel spreading disc.



TRAILED SAND SPREADERS
T130 / T131 / T132



Features and standard equipment:

- canvas cover protecting cargo
- two stainless steel spreading units
- conveyor belt
- hydraulic drive
- charging sieve as a standard equipment

Features and optional equipment:

- spare wheel
- side service platform (in T131 and T132 sand spreaders)

TRAILED SAND SPREADER	T130	T131	T132	
Carrying capacity	2500	3800	5500	[t]
Loadbox capacity	2	3	4	[m ³]
Spreading width	1800 – 2800	1800 – 2800	1800 – 2800	[mm]
Minimum tractor power demand	48 (35)	60 (44)	70 (51)	[HP (kW)]
Minimum hydraulic system output	32	32	32	[l/min]

Adjustable spreading width.

2 stainless steel spreader units.

Side service platform (T131 & T132).





Pronar KCT07 spreader is a solution for low-power tractors. It allows work with the simplest tractors without hydraulic system. The spreader is towable, so that it does not overload the compact carriers. Its size allows you to work on the sidewalks.



TRAILED SAND SPREADER

KCT07

Load capacity	1100	[kg]
Tank capacity	0,7	[m³]
Spreading width	1,5 - 4	[m]
Min. power requirement	20 (14,7)	[KM (kW)]
Max. working speed	15	[km/h]
Recommended PTO speed (mechanical version)	300	[rpm]
Max. hydraulic pressure (hydraulic version)	20	[MPa]
Nominal hydraulic pressure (hydraulic version)	5	[MPa]
Nominal oil flow (hydraulic version)	16-50	[l/min]
Weight	345	[kg]

The spreader's wheel drives the conveyor belt while riding. The given spreading amount will be the same, regardless of the moving speed. The spreader is not working while stationary.



MAY be aggregated to 1.5-tonne tractors.



Covers for setting spreading width and limit scattering.



PTO drive for tractors without hydraulic system.



Features and standard equipment:

- blade and slides made of „Hardox” abrasion-resistant steel
- hydraulically rotated discharge chute
- mechanical drive powered by front PTO
- mounted on three-point linkage

Features and optional equipment:

- mounting system on rear three-point linkage and on construction machinery
- hydraulic drive for OW 2.1 and OW 2.4
- high-discharge chute

SNOW BLOWERS

OW 1.5 OW 2.1 OW 2.4

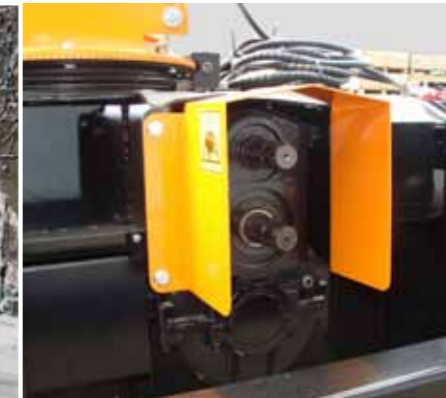
Weight	320	600 (737)	740 (830)	[kg]
Working width	1500	2100	2330	[mm]
Working height	580	780	780	[mm]
Number of augers	1	1	2	
Required tractor PTO speed (left or right)	540 or 1000	540 or 1000	540 or 1000	[rpm]
Discharge distance	5 - 20	5 - 30	5 - 30	[m]
PTO power demand	25-60 (18-44)	50-95 (37-70)	70-150 (51-110)	[HP (kW)]
Working pressure*	-	25	25	[MPa]
Demanded oil output*	-	100 - 140	135 - 195	[l/min]

for blower with hydraulic supply*

High-discharge chute.



Transmission with two PTO outputs (540/1000 rpm).



Hydraulic discharge chute rotation and adjustment of throwing distance.





OFW 2.6 is designed for the toughest winter jobs. The heavy duty construction allows for crushing snow and ice and throwing the material away from the de-snowed paths and roads. Aggregation for carriers with a communal plate DIN or tractor three-point linkage gives wide possibilities of application, not only in municipal companies. Use of high quality materials ensures long-term operations.

Rotary chute made of wear-resistant steel allows for change of dispersing material.

- possibility of adjusting working degree
- skids, plowshares, auger and dispensing chute made of Hardox
- working height of 1,2 m
- Discharge distance up to 30m
- PTO drive (1000rpm) left or right
- 3-pt hitch cat. II or III (tractor) or DIN type A (truck) mountings available
- auger and rotor overload protection



Skids or supporting wheels



Rotor made of wear-resistant steel.

Steel blades for breaking away snow from the ground. Working width 2,6m.

SNOW-CUTTER-BLOWER

OFW2.6

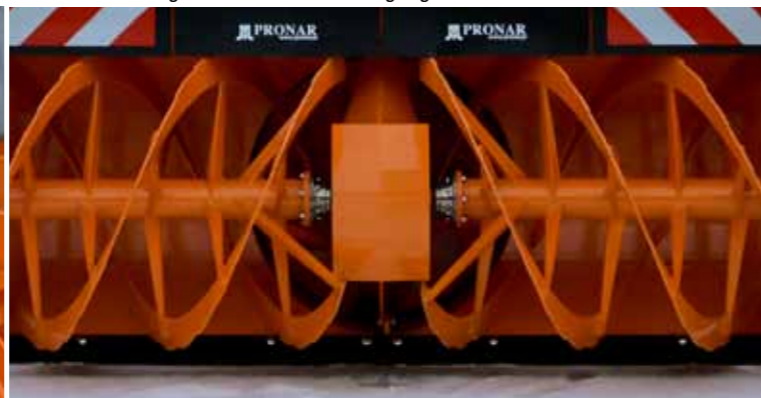
Weight	1700	[kg]
Clearing width	2600	[mm]
Working height	1240	[mm]
Required tractor PTO speed (left or right)	1000	[rpm]
PTO power demand	140 (103)	[HP (kW)]
Discharge distance	5 - 30	[m]
Auger diameter	950	[mm]
Rotor diameter	900	[mm]

Angle gearbox with overload protection



Rubber covers protect against dusting.

Snail-cutter for cutting frozen snow and ice. Working height of 1.2m.



TRUCK SNOW PLOUGH
PU-S25H, PU-S32H, PU-S35H

Features and standard equipment:

- plastic mouldboard
- electro-hydraulic control with "floating" position,
- available power supply 12V and 24V
- road lighting and clearance lighting as a standard equipment
- fenders protecting against curbs included
- own hydraulic system
- press-down function

Additional options:

- mounting on carrying vehicles other than trucks
- blades shock absorption
- steel blades
- support wheels
- flags
- press-down function
- two actuators

TRUCK SNOW PLOUGHS

	PU-S25H	PU-S32H	PU-S35H	
Working width with bumper				[mm]
- straight	2690	3370	3634	
- at max. turn angle	2550	3175	3415	
Max. frame turn angle	30	30	30	[±°]
Working height	930	1070	1070	[mm]
Electric supply	12 or 24	12 or 24	12 or 24	[V]
Carrier payload (vehicle truck)	6	8	8	[t]
Weight	335 - 380	600 - 650	650 - 710	[kg]
Mounting on DIN plate std 76060	type B	type A	type A	





Features and standard equipment:

- electrohydraulic control with "floating" position,
- available power supply: 12V and 24V
- road lights and clearance lights
- fenders protecting against curbs
- own hydraulic system
- press-down function
- easy mouldboard change

Additional options:

- mounting on carrying vehicles other than trucks
- blades shock absorption
- steel blades
- support wheels
- flags
- two actuators



Mouldboard made of plastic with memory shape. Rotomoulding technology used in production process makes it very strong.

TRUCK SNOW PLOUGH
PU-S25HL

TRUCK SNOW PLOUGHS	PU-S25HL	PU-S27HL	PU-S30HL	PU-S34HL	
Working width with bumper - straight	2690	2945	3235	3630	[mm]
- at max. turn angle	2350	2570	2825	3160	
Max. frame turn angle	30	30	30	30	[°]
Working height	930	1060	1060	1060	[mm]
Electric supply	12 or 24	12 or 24	12 or 24	12 or 24	[V]
Carrier payload (vehicle truck)	6	8	8	8	[t]
Weight	450	530	550	590	[kg]
Mounting on DIN plate std 76060	type A or B	type A or B	type A or B	type A or B	



TRUCK SNOW PLOUGH
PUT-S58



Features and standard equipment:

- working width adjustment
- KÜPER metal-ceramic-rubber cutting edge
- clearance lights
- power supply from three or four pairs of quick couplers

Additional options:

- KÜPER slides
- adjustable support wheels
- own hydraulic system

TELESCOPIC TRUCK SNOW PLOUGH

PUT-S58

Working width (folded/unfolded?) - straight	3900 / 5855	[mm]
- at max. turn angle	3455 / 5150	
Max. mouldboard turn angle	30	[°]
Working height	1090	[mm]
Electric supply	24	[V]
Carrier payload (vehicle truck)	8	[t]
Weight	1760	[kg]
Mounting on DIN plate std 76060	type A	

Optional regulated support wheel.



Position marking lights.



Mounting - DIN type A municipal plate.



TILTABLE SNOW PLOW
PUL-S45



Special truck-mounted plow with a side wing. The 0.75 m wide wing may be hidden in the outline of the plow reducing its width and facilitating passage. Complementary with PUB-S33 plow.



Side wing



TILTABLE SNOW PLOW	PUL-S45	
Working width with max. turn	3930	[mm]
Max. turning angle	30	[°]
Max. working speed	60	[km/h]
Max. working height	1090	[mm]
Weight	1280	[kg]
Mounting on municipal plate:	DIN A, B, Setra	

SIDE TRUCK SNOW PLOW
PUB-S33



SIDE TRUCK SNOW PLOW **PUB-S33**

Special plow mounted on a plate connection between the axles of the vehicle. Increases the width of the vehicle by about 2,3 m. It may be complied by PUL-S45 snowplow. Suspension allows terrain - copying by +/- 5°.



Features:

- rubber or Kuper plowshares
- own hydraulic system or powered from carrier
- ± 5° terrain adjustment
- clearance lights
- parking trolley

SIDE SNOW PLOW	PUB-S33	
Working width	2340	[mm]
Max. blade turn angle	0 - 45	[°]
Working speed max.	60	[kph]
Working height	1400	[mm]
Weight	850	[kg]
Mounting on dedicated linkage		

SEGMENTED SNOW PLOUGH
PUS-S27 / S32 / S34 / S36 / S40



Features and standard equipment:

- rubber blades (rigid suspension)
- wheels
- parking supports (on four castor wheels)
- power supply from 2 pairs of quick coupler on the carrying vehicle (1 pair on carrying vehicle with floating position);
- In-cabin control panel;
- electrical power supply from battery
- linkage: DIN A; DIN B, SETRA
- clearance lights
- side fenders
- 2 mouldboard turning actuators
- 1 mouldboard raising actuator
- 1 pressing spring per segment

Additional options:

- hydraulic power supply - power-pack with floating and pressing functions; control panel in cabin;
- 24 V electrical power supply from battery
- power supply from 1 pair of quick couplers on carrying vehicle; control panel in cabin
- electrical power supply from battery
- dust screen
- perforated steel blades (rigid)
- KÜPER blades (mounting with shock absorption)
- KÜPER skids
- road lights
- warning signs + flags
- 2 pressing springs per segment

SEGMENTED SNOW PLOUGH	PUS-S27	PUS-S32	PUS-S34	PUS-S36	PUS-S40	
Working width						[mm]
- straight	2700	3200	3420	3600	4020	
- at max. turn angle	2350	2790	2960	3135	3490	
Max. mouldboard turn angle	30	30	30	30	30	[±°]
Working weight	1040	1040	1040	1040	1040	[mm]
Electric supply	24	24	24	24	24	[V]
Weight	930	1030	1050	1100	1200	[kg]
Working speed max.	60	60	60	60	60	[kph]
Linkage	type A, type B, Setra	type A, type B, Setra	type A, type B, Setra	type A, type B, Setra	type A, type B, Setra	





Features and standard equipment:

- conveyor belt and spreading disk powered by electric motors
- canvas cover
- the spreader's standard equipment consists of control panel for setting parameters
- stainless steel spreading disk
- beacon light
- load box sieve
- parking supports

Additional options

- cargo supports
- power supply 24V
- semi-frame for hook loader (special order)

This machine is designed for cooperation with shipping vehicles and trucks with a carrying capacity of at least 2.8 tons.

TRUCK SAND SPREADER	EPT15	EPT21	
Weight	340	385	[kg]
Spreader capacity	1,5	2,1	[m ³]
Electric supplying	12 or 24	24	[V]
Spreading width	adjustable 2 – 4	adjustable 2 – 4	[m]
Aggregate spreading intensity	adjustable 50 – 150	adjustable 50 – 150	[g/m ²]
Working speed max.	40	40	[kph]

Stainless steel spreading disk.



Tilttable spreader unit.



Capability of aggregation with a hook loader.



Features and standard equipment:

- spreader's drive powered by truck's hydraulics
- control of spreading parameters by Bosch Rexrot-electrohydraulic package
- spreading intensity independent of speed
- tarpaulin cover protecting cargo
- spreading sensor
- brine system

Additional options:

- adjustable supports for loading and unloading of the machine from the vehicle
- automatic regulation of parameters depending on weather
- data kit for downloading distance, time and spreading/brining parameters; software, wiring and CAN-USB module

TRUCK SAND SPREADERS	HPT25	
Brine tank capacity	900	[l]
Spreader capacity	2,5	[m ³]
Salt spreading intensity	adjustable 5 – 40	[g/m ²]
Aggregate spreading intensity	adjustable 50 – 200	[g/m ²]
Working speed	10 – 70	[kph]

Adjustable spreader unit height.



Easy-to-use control panel



HPT25 sand spreader.





TRUCK SAND SPREADERS
PT 40 SERIES

Brine tank.



Bosch-Rexroth control panel



Adjustable spreader unit height.



TRUCK SAND SPREADERS
PT 70 SERIES

Features and standard equipment:

- spreader driven by:
 - » independent combustion engine - SPT40, SPT70
 - » trailed axle - KPT40
 - » truck hydraulics - HPT40, HPT70
- adjustable capacity of de-icing material tank within the range of 4.5–6 m³ (PT40 series)
- three capacities of loadbox: 7, 8 or 9m³ (for PT70)
- control of spreading parameters by Bosch Rexroth electro-hydraulic package
- spreading intensity independent of speed
- canvas cover protecting cargo
- spreading sensor optical or touch
- brine system
- RORO system for PT70

Additional options:

- adjustable supports for loading and unloading of the machine from the vehicle (PT40)
- automatic regulation of parameters depending on weather
- data kit for downloading distance, time and spreading/brining parameters; software, wiring and CAN-USB module
- stainless or galvanized frame and/or loadbox



RORO (Roll-on / Roll-off) system for easier loading of PT70 spreader on the carrier bed



Combustion engine with 1000 ccm capacity and 16.2kW power

TRUCK SAND SPREADER	KPT40 / HPT40 / SPT40	HPT70 / SPT70	
Brine tank capacity	1800	2700	[l]
Spreader capacity	adjustable from 4,5 to 6	7, 8 or 9	[m ³]
Salt spreading intensity	adjustable 5 – 40	adjustable 5 – 40	[g/m ²]
Aggregate spreading intensity	adjustable 50 – 200	adjustable 50 – 200	[g/m ²]
Working speed	10 – 70	10 – 70	[kph]

Hydraulic supply couplers HPT40.



Extensions increasing the size of the charging hopper.



PT series vehicle-mounted sand spreader with axle drawn by carrying vehicle.





MPB 14.44



MPB 20.55



MPB 18.47



MRW 2.85



MOBILE TROMMEL SCREENS



MPB 20.72



ZHZ-100

ZHZ-100



ZMC 2.0

ZMC 3.0



RD-Z24



AGATA ZM-2000



AGATA ZM-1400



KO PRONAR



KP-7



KO01



KO04



T-285 / KO04



T-285/1



T-286



T-185



WWP-600 / GO800



WWP-500U



WWP-480



PUV-3300



PUV-2800M



PUV-2600M



PU-S25H



BK-180



BK-160



BK-140



BK-110



PUV-3000



PUV-2800M



PU-25HL



WWT-420



BK-250



BBK-180



PU-T20



PU-1400



PUV-1400



PUV-1600



PUV-3300M



PUU-3700



PU-4000M



PU-2600



PU-2600



KACPER PU-2100



KACPER PU-1700



PU-2200E



PUS-540



MUNICIPAL MACHINES



HPT-25



BBK-200



PU-S32H



PU-S35H



EPT-15



HPT-40



KPT-40



SPT40



OW1.5



OW2.1 M



OW2.4



PUT-S58



ZM-S25



PS-250



PS-250M



ZH5-10



T-131



T-132



ZM-S25



Narew production facility nr 1



Narew production facility nr 2



Narew production facility nr 3



Narewka



Strabla



Siemiatycze



Hajnówka



All details and technical information stated in this catalogue refer to different standard and additional equipment. Due to the continuous process of product improvement, these data may change. We reserve the right to make changes without prior notice. The information contained in this publication does not constitute an offer.



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Technology for nature