

AS-Motor Flail Mowers

Product Presentation – AS 701 SM / AS 901 SM



HOCHGRAS PERFORMANCE

AS 701 / 901 SM – table of contents



Tip: You can navigate in the document via mouse-over click – click page number and click www.as-motor.de to return to the table of contents.

AS 701 / 901 SM device concept Main features and main arguments p. 4 Model overview p. 5 Vehicle structure p. 6 Application areas / target groups p. 7 **AS 701 / 901 SM engine** p. 9 Overview Engine technology p. 10 Air filter / engine oil p. 12 Fuel tank p. 14 AS 701 / 901 SM - drive p. 17 Overview Rear axle and drive frame p. 18 Transmission and shifting p. 19 Single-wheel steering and brake clutch p. 19

AS 701 / 901 SM mower deck Overview p. 21 p. 22 Blade system / grass placement Suspension / height adjustment p. 23 Engagement mechanism / safety p. 24 AS 701 / 901 SM operating elements Overview p. 26 Overview of operating elements p. 27 Steering bar adjustment p. 28 Transport eyes and transport position p. 29 AS 701 / 901 SM Accessories / technical data Accessories p. 31 Technical data p. 33



Main features and main arguments

Model overview / vehicle structure

Application areas / target groups



HOCHGRAS PERFORMANCE

Main features and main arguments 1/1





Model overview 1/1



 AS 701 SM with mechanical 5-speed manual transmission, steering brake clutch, automatic parking brake and flail shaft with Y- flail. Ideal for professional use for extensive maintenance of unknown areas or slopes with growth heights of up to 120 cm and bushes

 AS 901 SM with mechanical 5-speed manual transmission, steering brake clutch, automatic steering brake and flail shaft with Y- flail. Ideal for professional use for extensive maintenance of unknown areas or steep slopes with growth heights of up to 150 cm and bushes

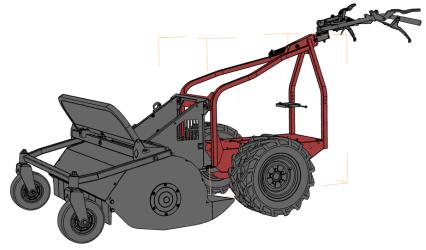


Vehicle structure 1/1

- Perimeter square tubular steel frame as support frame and protection for engine and transmission
- Adapted material thickness for high stability and concurrent low device weight
- Height-adjustable, laterally adjustable, folding handlebar
- Cross-country mobility through perfect vehicle geometry, weight distribution and ground clearance
- Ideal balance between traction drive and mower deck pressure
- Stability and torsional rigidity with concurrent protection of the device against branches
- Square tube for high stability and concurrent low device weight
- Optimally adjustable for maximum operating convenience and reduced transport dimensions
- Optimised weight distribution and high ground clearance enable use on extreme slopes







Application areas 1/1



AS PRODUCTS FLAIL MOWERS	Maximum work rate in m²/hour (V _{Max} x cutting width)	Maximum undergrowth height in cm
AS 701 SM	2.500	100
AS 901 SM	3.600	130

AS PRODUCTS	Gradient suitability Level > rising > very steep	Professional use	Mowing deck	Drive
FLAIL MOWERS				
AS 701 SM			Mulching with flail	Rear wheel drive 5-gear
AS 901 SM			Mulching with flail	Rear wheel drive 5-gear





Overview

Engine technology, air filter / engine oil

Fuel tank



HOCHGRAS PERFORMANCE

Overview 1/1



- AS 701 SM: Briggs & Stratton 4-stroke 1-cylinder Series 3
 Intek, with 344 ccm displacement and 13 hp (9.7 kW)
 maximum power at 3,600 rpm.
- AS 901 SM: Briggs & Stratton 4-stroke 2-cylinder Vanguard V-Twin 480 ccm displacement and 16 hp (11.9 kW) maximum power at 3,600 rpm.
- Oil and fuel pump, oil pressure switch
- High-capacity tank (5-litre) and easy maintenance access
- ✓ Strong engine suitable for working on slopes with abundant power for mowing and for use on rugged terrain
- Toolless accessibility for daily maintenance tasks
- ✓ Large fuel reserve for long work deployments
- Intake grille reduces contamination of the air filter for long service life







Engine technology (AS 701) 1/2



- AS 701 SM: Briggs & Stratton 4-stroke 1-cylinder Series 3
 Intek and 13 hp (9.7 kW) maximum power at 3,600 rpm.
- Pressure lubrication with oil filter
- Grey cast iron cylinder sleeve for long service life and minimal oil consumption and OHV (OverHead Valve) technology
- Magnetron ® electronic ignition system
- AVS ® Anti-Vibration System patented linear compensation system
- Controlled feed of clean oil to the bearing surfaces in the crankcase for a long service life
- ✓ OHV optimised performance, long engine service life and low fuel consumption
- Magnetron ® ensures easy start and it is maintenance-free
- Less vibration thanks to AVS®







Engine technology (AS 901) 2/2



- AS 901 SM: Briggs & Stratton 4-stroke 2-cylinder Vanguard V-Twin and 16 hp (11.9 kW) maximum power at 3,600 rpm.
- Pressure lubrication similar to a vehicle engine for continuous delivery of oil under pressure to engine components in the crankcase for maximum lubrication
- Grey cast iron cylinder sleeve for long service life and minimal oil consumption and OHV (OverHead Valve) technology
- Magnetron ® electronic ignition system
- Quiet operating experience through V-Twin technology with low oil consumption and suitability for working on slopes
- High torque for maximum performance
- ✓ OHV optimised performance, long engine service life and low fuel consumption
- Magnetron ® electronic ignition system ensures easy start and it is maintenance-free







Air filter / engine oil (AS 701) 1/2



- Paper air filter cartridge with easy accessibility for cleaning and replacement
- Optimised air circulation through top intake and additional grille in the engine cover
- Factory-standard SAE 30 for low consumption (normal summer operation) or optional synthetic engine oil (5W30) for maximum performance also under 5° C
- Air filter offers ideal protection against contaminated air in the engine for consistent high-performance
- Long maintenance intervals and optimal accessibility for standard maintenance tasks
- Optimal air circulation and easy separation of suctioned-in leaves and grass
- Different oils for different requirements







Air filter / engine oil (AS 901) 2/2



- Two-stage filter system with automotive design air filter with washable foam pre-filter and paper air filter cartridge as main filter
- Forged crankshaft and cast iron cam shaft
- Optimised air circulation through top intake and additional grille in the engine cover
- Factory-standard SAE 30 for low consumption (normal summer operation) or optional synthetic engine oil (5W30) for maximum performance also under 5° C
- Improved protection against contaminated air in the engine (dual element) for consistent high-performance
- Long maintenance intervals and optimal accessibility for standard maintenance tasks
- Optimal air circulation and easy separation of suctioned-in leaves and grass
- ✓ Different oils for different requirements







Fuel tank 1/1



- 5-litre tank capacity (normal petrol)
- Optimised shape and withdrawal at the lowest point of the tank with reserve function
- Positioning of the tank in the rear for ideal weight distribution
- Clear separation of tank and engine
- 7.6 litre tank volume (only AS 901 USA version)

- Large tank volume for long deployments
- Special shape and reserve function for complete use of the fuel and for high operational safety
- Optimal weight distribution through tank position for ideal handling on demanding terrain
- ✓ Thanks to the clear separation from the engine there is no heat load of the tank / fuel









Overview

Transmission and shifting

Single-wheel steering and brake clutch

Drive frame and guide wheels

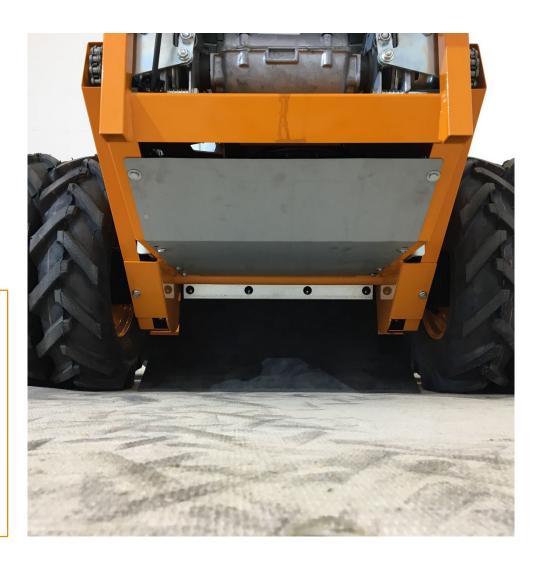


HOCHGRAS PERFORMANCE

Overview 1/1



- Robust rear axle with manual shift transmission, limited slip differential and AS tyres (field studs)
- Twin tyres and optional steel wheels for use in rough terrain
- Robust design manual shift transmission from the ride-on mower area with 5 forward gears and reverse gear
- Each rear wheel with steering and brake clutch for easy control of the direction of travel secure hold on the slope
- Robust design and high torque through mechanical drive for use in harsh conditions
- Straight-ahead course on the slope via limited-slip differential and optimal control when turning, thanks to single-wheel steering and brake clutch
- Lightweight transmission design compared to hydrostatic solutions
- Optional low-pressure tyres available for AS 701



Rear axle 1/1



- Robust rear axle with manual shift transmission and high ground clearance
- Tyre variants: AS (Acker Stollen, English field studs)
 4.80/4.00-8 (single-tyres = AS 701, twin tyres = AS 901 with bolted wheel connection
- Wheels within the mowing width and optional use of steel wheels (701 additionally, and 901 by changing to twin tyres)
- Robust design and high torque through mechanical drive for use in harsh conditions
- Agricultural tread tyres for optimal lateral guidance when mowing transverse to the slope
- Optional steel wheels for maximum traction on slopes and rough terrain
- ✓ Standing grass is not run over at the next run







Transmission and shifting 1/1



- Robust design manual shift transmission from the ride-on mower area with 5 forward gears and reverse gear
- Speeds: Forward: 1.1 / 1.5 / 2.4 / 3.0 / 3.6 km/h (701), 1.2 / 1.6 / 2.6 / 3.2 / 4.0 km/h (901) reverse: 1.7 km/h (701), 1.8 km/h (901)
- Low weight compared to hydrostatic drives with low operating forces
- Direct transmission of force via space-saving chain drive
- Lightweight transmission design compared to hydrostatic solutions
- Problem-free continuous use, thanks to robust design
- ✓ Individually adjustable speed for different terrain and plant growth
- ✓ High torque for maximum traction







Single-wheel steering and brake clutch 1/1



- The steering and brake clutch enables disengaging and braking of the individual wheels
- Press the right steering brake lever for right curve, and press the left steering brake lever for left curve
- If both levers are pressed the device comes to a standstill, even with activated traction drive
- Straight-ahead course on the slope via limited-slip differential and optimal control when turning
- Each rear wheel with steering and brake clutch for easy control of the direction of travel secure hold on the slope
- Extremely low expenditure of operating force to control the device
- Optimal suitability for working on slopes thanks to limitedslip differential and
- Device remains at a stop on the slope even without engine and with gear engaged, and nevertheless it can be moved









Overview

Blade system / grass placement

Suspension / height adjustment

Engagement mechanism / safety



HOCHGRAS PERFORMANCE

Overview 1/1



- 70 cm (AS 701) or 90 cm (AS 901) with Y-flails that can be used on both sides and large dimensioned flail shaft
- Pendulum-bearing supported flail mower deck with stable drive frame – large, wide guide rollers
- Central height adjustment in 6 levels
- Blade clutch lever with safety button
- Stone impact guard on the drive frame and rock impact protective flaps on the mower deck opening
- Extremely clean mulching result and placement of cuttings over the entire working width
- ✓ High work rate and high growth heights
- Floating mower deck via guide rollers for easy working and manoeuvring
- High safety for operator and environment on areas close to traffic

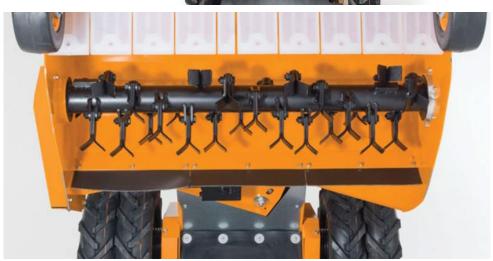


Blade system / grass placement 1/1



- AS 701 with 70 cm cutting width 20 Y-flails, can be used on both sides, 3 mm thick
- AS 901 with 90 cm cutting width 26 Y-flails, can be used on both sides, 3 mm thick
- Large-dimensioned balanced flail shaft
- Double-wall mower deck and narrow flail shaft drive via lateral V-belt
- Uniform mulch placement over the entire working width
- Cuttings are chopped to fine mulch through diagonal blades of the Y-flails
- ✓ High work rates up to 3600 m²/h and high growth to 150 cm are possible
- Minimal vibration due to quiet operation of the flail shaft
- Lightweight design with high stability
- ✓ Long service life, long maintenance intervals





Suspension / height adjustment 1/1



- Pendulum bearing supported mower deck for uneven terrain
- Stable drive frame as collision guard and with large and wide free-running pivot wheels as guide rollers
- Additional skids that protect the turf when driving over edges and hilltops
- Easy-movement central height adjustment in 6 levels via one lever
- Pendulum bearing support for ideal adaptation to the terrain
- Floating mower deck via guide rollers for easy working and manoeuvring
- ✓ Mower deck can give way upward e.g. when driving over hilltops and on uneven terrain – the blade does not touch the ground – no damage
- Easy mower deck lift-out through special kinematics







Engagement mechanism / safety 1/1

MOTOR

- Engagement via blade clutch lever with additional lock button, when releasing the lever, the blade shaft comes to a standstill within 7 seconds and the parking brake is engaged.
- Stone impact guard on the drive frame of stable perforated sheet to protect the operator and protective flaps of the mower deck opening
- Device does not move faster downhill and brakes automatically when releasing the operating elements on the steering bar
- Double protection when activating the blade shaft
- Ideal operator protection against foreign objects that are whirled up without restricting the view
- Reduced stone impact through flail blades and additional stone impact protection flaps
- High safety on slopes thanks to automatic parking brake and constant downhill speed









Overview

Overview of operating elements

Steering bar adjustment

Transport position and securing element



HOCHGRAS PERFORMANCE

Overview 1/2



- Optimal adjustment of the steering bar position lateral adjustment and height adjustment
- Logical and ergonomic arrangement of all operating elements
- Minimal operating forces to control the device through the single-wheel steering and brake clutch
- Minimal operating forces for height adjustment thanks to special kinematics
- High-level safety and driver protection through ergonomic arrangement of the operating elements
- ✓ Easy and logical operation of all operating elements
- Mowing on steep slopes and rough terrain with major expenditure of force.



Overview of operating elements 2/2



- Steering bar lateral adjustment
- Operating hour meter
- Shift lever gear change
- Steering brake lever (single-wheel steering brake clutch)
- Blade clutch lever

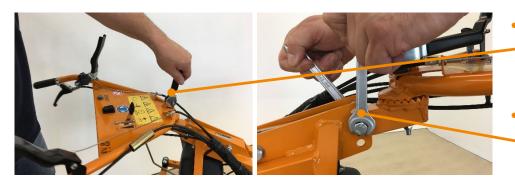


- Cutting height adjustment element
- Steering bar height adjustment
- Gas lever
- Engine stop switch
- Traction drive lever and parking brake

Steering bar adjustment 1/1

MOTOR

- Lateral adjustment of the steering bar for working on obstructions and convenient use on the slope
- Height adjustment for ergonomic adaptation to the body height of the operator





- Lateral adjustment of the steering bar
- Height adjustment of the steering bar in 3 levels

Transport eyes and transport position 1/1



- Stable eyes for lashing straps enable easy securing for transport
- Folded in steering bar for compact dimensions







Eye for lashing straps on the device frame in the rear

Eye for lashing straps on the drive frame of the mower deck

Device with folded in steering bar



AS 701 / 901 SM Accessories / technical data

Accessories

Technical data



HOCHGRAS PERFORMANCE

AS 701 / 901 SM – accessories

Overview 1/2



- AS-Motor offers a variety of accessories for the AS 701 SM and 901 SM fail mowers
- For the most part, the accessories from AS-Motor are developed and built directly in the plant
- For example steel hand guard, twin tyres, steel wheels with wheel hub and much more

- Individual adaptation and extension of the machine to meet the respective requirements
- ✓ 100% custom-tailored for the devices from AS-Motor
- Fast retrofitting without complications









AS 701 / 901 SM – accessories

Overview 2/2



Accessories	AS 701 SM	AS 901 SM
Twin wheels	X	Series
Low pressure tyres	X	
Operating hour meter	X	X
Steel hand guard set	X	X
Inclinometer	X	X
Steel wheels with hub	X	X
Grip heating	X	
Liquide tyre Sealant "Plattfuss-Stop"	X	Х
Tubeless wheel	Х	X

AS 701 / 901 SM - technical data

Engine / drive / dimensions 1/2



Model	AS 701 SM	AS 901 SM	
Engine			
Engine, design	1-cyl. 4-stroke	2-cyl. 4-stroke	
Manufacturer	Briggs & Stratton	Briggs & Stratton	
Туре	Series 3 Intek	Vanguard V-Twin	
Displacement in cm ³	344	480	
Rated power (kW / hp)	7.6 / 10.3	10.7 / 14.5	
Max. power (kW / hp)	9.7 / 13	11.9 / 16	
Engine speed rated capacity in rpm	3300	3500	
Starting device	Rope start	Rope start	
Drive			
Traction drive, type	Rear-wheel + diff	Rear-wheel + diff	

AS 701 SM	AS 901 SM
5-speed / 1R	5-speed / 1R
1.1 / 1.5 / 2.4 / 3.0 / 3.6	1.2 / 1.6 / 2.6 / 3.2 / 4.0
1.7	1.8
Y-blade (20 pcs)	Y-blade (26 pcs)
70	90
10 - 100	10 - 100
6	6
120	150
196	215
	5-speed / 1R 1.1 / 1.5 / 2.4 / 3.0 / 3.6 1.7 Y-blade (20 pcs) 70 10 - 100 6 120

AS 701 / 901 SM – technical data

Dimensions / fill quantities / noise / vibration 1/2



Model	AS 701 SM	AS 901 SM
Operating dimensions L/W/H in cm	220/84/105	220/104/105
Fill quantities		
Fuel tank in (litres / type)	5	5
Engine oil	1,2 SAE 30 or	1,4 SAE 30 or
(litres / type)	5W-40	5W-40
Angular gear unit	0.25 hypoid SAE	0.25 hypoid SAE
(litres / type)	90-API-GL5	90-API-GL5
Noise level		
Measured sound power level LwA (dB in accordance with DIN EN 12733)	102	100

Model	AS 701 SM	AS 901 SM
Sound power level at the operating station LpA (dB in accordance with DIN EN 12733)	91	87
Measurement uncertainty k (dB (A))	2.5	2.5
Vibration emission		
values		
Hand-arm vibration in m/s ²	2.4	2.5
Measurement uncertainty U in m/s²	1.5	1.5
Housing	Steel	Steel



AS-Motor Flail Mowers

Thank you for your attention!



HOCHGRAS PERFORMANCE