Rørsanering



The approved and compact Bagela cable pulling winches are manufactured in the shock-resistant, recovering Terpolymer (ABS) housing on a hot-dip galvanized base frame.

The longevity of the winch aggregate in combination with this housing makes the winch a worth-stable construction machine. The plastic is solid-coloured and available in red, blue, orange and white. Of course it can be painted although. For operation the soundproofed housing remains closed, only the cover of the control panel has to be opened.

The winch is powered by a diesel engine and is equipped with a steplessly controlled hydrostatic gear. Every Bagela Pipe Renewal Winch is outfitted with automatic hold-on system. The required line pull can be pre-selected by control of the hydraulic oil pump (pressure/flow control) which keeps the winching rope in permanent tension even at varying pull resistance. This system ensures full self-control of the winch and is more effective than manual control of line speed. The line pull may be increased until the hydraulic overflow valves are activated.

The winch itself is consisting of a twin capstan drive and rope storage drum with automatic rope stacking device. A rope protecting, grooved double capstan system generates the whole pulling force.
The chassis is spring mounted and can be approved with **100 km/h** (depending on national road traffic regulations).



The winch is to be retained by two telescopic and pretensionable rear props and a deflection boom against an end trestle.

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Winch control

Serial outfit:

- Hydr. Pulling force indicator
- Gear speed shifter
- Pulling force pre-selection
- Rope speed
- Rope: In/Stop/Out
- Emergency stop
- Elapsed hour counter
- Backwards extendable and lowerable rear props
- Central loading rail on top

Optional:

- Remote Control
- Printer
- PC 310, with Touchscreen:
  - Preselected pulling force
  - Actual pulling force
  - Length (progress bar)
  - Speed
  - USB Port
    (no add. Software neccessary)



Easy maintenance: If needed the cover can be lifted totally.



Winch control with PC 310

The plastic housing is solid-coloured and available in red, blue, orange and white. It may be painted in any RAL colour if desired.

Additional outfit:
Other type of engines, chassis, paintings and more rope if needed .
Dimensions and weights may differ if extras are fitted.



Telescopic deflection boom:
All Bagela winches can be fitted out with a telescopic deflection boom. An appropriate holder at the winch assures the safe transport of the boom in which the end of the rope can remain.



Accessory capstan
For pulling in the UV radiator.

Technical Data

Type	max. pulling force kN	max. pulling speed m/min	Engine Diesel kW	Rope length m	Rope diam. mm	Length mm	Width mm	Height mm	Weight kg	Order-No.
RW 3000	30	40	16.5	300	10	3800	1650	1380	1300	**001.002.16**
RW 4000	40	35	18	300	11	4450	1650	1380	1450	**001.003.13**
RW 5000	50	30	18	300	12	4450	1650	1380	1450	**001.004.28**

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- **Lockable, sound proved ABS plastic housing**
- **Interior freely accessible by upwards tiltable side parts**
- **Higher rope output speed up to 100 m/min possible**
- **Longer rope length possible**
- **Fully tinted ABS housing in red, blue, white and orange**
- **Deflection boom optional, stored in the housing with pivot mounting**
- **Front supports countersunk in the housing**
- **Minimal noise immission, operation of the winch with closed housing, only operation panel remains open**

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Bagela RW 20
Renewal of sewer pipe



Bagela RW 40
for swage lining of
Scottish offshore pipelines



Bagela RW 100
Crossing below
the river Rhine



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Winch control with PC 310

Winch control

Serial outfit:

- Hydr. Pulling force indicator
- Gear speed shifter
- Pulling force reselection
- Rope speed
- Rope: In/Stop/Out
- Emergency stop
- Elapsed hour counter

Optional:

- Remote Control
- Printer
- PC 310, indicating:
  - Preselected pulling force
  - Actual pulling force
  - Length (progress bar)
  - Speed
  - USB-port
    (no add. software neccessary)

The winch is powered by a Diesel engine and is equipped with a steplessly controlled hydrostatic gear.
Every Bagela Pip Renewal Winch is equipped with the automatic hold-on system. The required line pull can be pre-selected by control of the hydraulic oil pump (pressure/flow control) which will keep the winching rope in permanent tension even at varying pull resistance. This system ensures full self-control of the winch and is more effective than manual control of the line speed. The line pull may be increased until the hydraulic overflow valves are activated. The winch itself is consisting of a twin capstan drive and rope storage drum with automatic rope stacking device. The whole pulling force is generated by a grooved double capstan system.

For operation the plastic or respectively the steel made and soundproofed housing remains closed, only the cover of the control panel has to be opened.

The winch is to be retained by two telescopic and pretension- able rear props and a deflection boom against an end trestle.





Additional outfit:
Other type of engines, chassis, paintings and more rope if needed.
Dimensions and weights may differ if extras are fitted.

Technical Data

Type	Max. Pulling Force kN	Max. Pulling Speed m/min	Engine Diesel kW	Rope- Length m	Rope- Diam. mm	Chassis Twin axle	Brake	Length mm	Width mm	Height mm	Weight kg	Order-No.
RW 10	100	60	18	300	16	Height adj.	overrun	5200	1850	1650	2650	**002.003.01**
RW 20	200	30	36	300	22	Height adj.	overrun	5000	2000	2000	5200	**002.301.01**
RW 40	400	25	74	1100	32	On tracks		4750	2550	2500	20000	**002.603.03**
RW 100	1000	25	140	1500	52	On tracks		6000	2730	3450	20000	**032.505.00**
	Rope storage					On tracks		4750	2700	3250	25000	**032.560.00**

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RW 100

at the reconstruction of the main water supply via pipe reducing system from a pipe diameter of 1030 mm down to 919 mm in Great Britain.
The distances between the excavating pit were extended up to 800 m. The Pulling speed was at an average of 3 m/min.

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Telescopic deflection booms for Bagela capstan winches



Telescopic deflection boom
with revolute joint

Type of winch	Max. boom length	Order-No.
RW 3000-5000	2500 mm	**004.014.01**
RW 10	5000 mm	**004.001.02**
RW 20	5000 mm	**004.034.04**

Adjustable spindles
with revolute joint

Type of winch	Max. boom length	Order-No.
RW 3000-5000	2500 mm	**004.074.00**
RW 10	5000 mm	**004.075.00**
RW 20	5000 mm	**004.065.00**



Telescopic deflection boom
with two adjustable spindles and revolute joint

Type of winch	Max. boom length	Order-No.
RW 10	5000 mm	**004.001.05**



Rope deflection roller with spindles
Adjustable from 920-1200 mm, Max. rope dia. 16 mm
Max. working load: 100 kN, Weight: 55 kg
Order No.: 004.219.00

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Manhole tensioning pulley

There is hardly ever space enough between the tube exit and the deflection pulley when cleaning appliances or cameras are pulled through. Using the Bagela tensioning pulley the whole cross section of the manhole is used. The deflection pulley is set against the manhole wall and tightened with two threaded spindles. Due to the inclined position of the spindles the pulley gets increasingly pressed against the manhole wall with rising pulling force. The groove and size of the pulley allow it to be used also for camera cable. The rope or cable is held on the pulley by means of three pins.





Max. Working load	Weight	**Order-No.**
20 kN	29.2 kg	**004.224.00**
50 kN	52 kg	**004.224.50**

Rope protection roller for pipe cleaning

During pipe cleaning, winches cannot always be placed in a straight line with the excavation, so that the rope may rub against the wall. The rope protection roller will prevent such rubbing and will ensure that the cleaning gear is pulled out unhindered.



Diameter range	Weight	**Order-No.**
100 - 350 mm	18 kg	**004.223.10**
200 - 550 mm	20 kg	**004.223.15**

Different sizes on request.

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Spongeball for final cleaning

Ball-Ø	Weight	Order-No.
40 mm	0.005 kg	**009.834.03**
60 mm	0.021 kg	**009.834.05**
70 mm	0.031 kg	**009.834.07**
80 mm	0.057 kg	**009.834.08**
110 mm	0.150 kg	**009.834.10**
120 mm	0.192 kg	**009.834.20**
135 mm	0.267 kg	**009.834.25**
150 mm	0.339 kg	**009.834.30**
160 mm	0.377 kg	**009.834.40**
170 mm	0.491 kg	**009.834.45**
190 mm	0.782 kg	**009.834.46**
210 mm	0.935 kg	**009.834.48**
270 mm	1.717 kg	**009.834.50**
325 mm	4.000 kg	**009.834.60**



Tube cleaning brush for secondary cleaning

with stable plastic bristles

DN mm	Weight	Order-No.:
80	0.4 kg	**009.850.00**
100	0.5 kg	**009.851.00**
150	1.5 kg	**009.852.00**
200	2.7 kg	**009.853.00**
250	5.0 kg	**009.854.00**
300	7.1 kg	**009.855.00**
350	9.5 kg	**009.856.00**
400	1.0 kg	**009.857.00**
450	13.0 kg	**009.858.00**
500	15.5 kg	**009.859.00**



Plunger for final cleaning

DN mm	Weight	Order-No.:
100	5 kg	**009.860.00**
125	6 kg	**009.861.00**
150	8 kg	**009.862.00**
200	12 kg	**009.863.00**
250	19 kg	**009.864.00**
300	25 kg	**009.865.00**

Other sizes upon request.

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Plunger for final cleaning
rigid version

DN (mm)	Weight	Order-No.:
100	2.5 kg	**009.870.00**
125	3.5 kg	**009.871.00**
150	4.0 kg	**009.872.00**
200	7.0 kg	**009.873.00**
250	12.0 kg	**009.874.00**
300	22.0 kg	**009.875.00**
350	25.0 kg	**009.876.00**
400	33.0 kg	**009.877.00**
500	68.0 kg	**009.878.00**
600	94.0 kg	**009.879.00**



Plunger for final cleaning
linked version

DN (mm)	Weight	Order-No.:
100	2.5 kg	**009.890.00**
125	3.5 kg	**009.891.00**
150	5.5 kg	**009.892.00**
200	6.2 kg	**009.893.00**
250	13.0 kg	**009.894.00**
300	23.5 kg	**009.895.00**
350	26.5 kg	**009.896.00**
400	35.0 kg	**009.897.00**
500	70.0 kg	**009.898.00**
600	96.5 kg	**009.899.00**



Scraper
made of spring steel for removal of hard incrustations

DN (mm)	Weight	Order-No.:
100	2.5 kg	**009.800.00**
125	4.2 kg	**009.801.00**
150	5.1 kg	**009.802.00**
200	6.5 kg	**009.803.00**
250	11.0 kg	**009.804.00**
300	16.0 kg	**009.805.00**
350	21.2 kg	**009.806.00**
400	26.0 kg	**009.807.00**
500	31.5 kg	**009.808.00**
600	54.0 kg	**009.809.00**



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Tube roller with base plate
galvanized
for welding of single lengths and inserting inliners of 300 mm diameter.
Carrying load: 300 kg, Weight: 4.0 kg
Order No.: 009.100.00



Tube roller jack
galvanized

Max. Tube-Ø	Max. Load	Weight	**Order-No.**
500 mm	500 kg	11.5 kg	**009.409.20**
750 mm	1000 kg	29 kg	**009.409.30**



Tube suspension tackle
for excavator boom, Max. tube dia. 300 mm
Gewicht / Weight: 15 kg
Order No.: 004.101.00



Tube roller device for welding
Max. tube dia. 400 mm
Weight: 9 kg
Load: 500kg
Order No.: 009.911.00

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Pulling head for PEHD-Tube
-without seal-

Tube-Ø outside	Clamping range	Order-No.
32 mm	24-28 mm	**009.563.04**
40 mm	32-36 mm	**009.563.06**
50 mm	39-47 mm	**009.563.08**
63 mm	49-60 mm	**009.563.12**
75 mm	59-70 mm	**009.563.14**
90 mm	71-85 mm	**009.563.16**
110 mm	87-103 mm	**009.563.18**
125 mm	99-116 mm	**009.563.20**
140 mm	111-130 mm	**009.563.22**
160 mm	127-148 mm	**009.563.24**
180 mm	144-166 mm	**009.563.26**
200 mm	158-184 mm	**009.563.28**
225 mm	178-206 mm	**009.563.30**
250 mm	198-230 mm	**009.563.36**



Pulling head for PEHD-Tube
-with seal-

Tube-Ø outside	Clamping range	Order-No.
32 mm	24-28 mm	**009.563.60**
40 mm	32-36 mm	**009.563.61**
50 mm	39-47 mm	**009.563.62**
63 mm	49-60 mm	**009.563.63**
75 mm	59-70 mm	**009.563.64**
90 mm	71-85 mm	**009.563.65**
110 mm	87-103 mm	**009.563.66**
125 mm	99-116 mm	**009.563.67**
140 mm	111-130 mm	**009.563.68**
160 mm	127-148 mm	**009.563.69**
180 mm	144-166 mm	**009.563.70**
200 mm	158-184 mm	**009.563.71**
225 mm	178-206 mm	**009.563.72**
250 mm	198-230 mm	**009.563.73**



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