

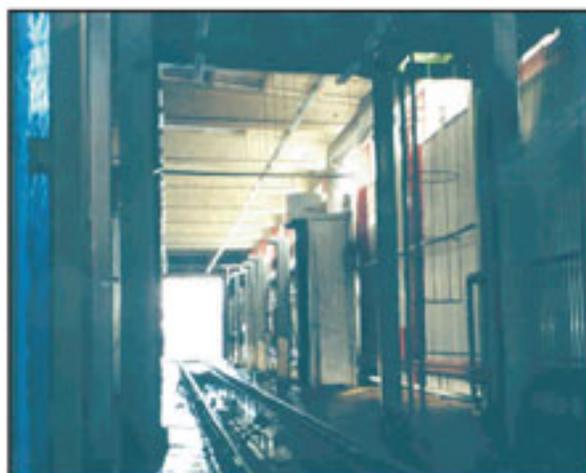
# Heavy Duty Wash Systems from Tammermatic



**Rollover Machines for  
Mixed Fleets**



**Drive-thru Machines for  
Standard Fleets**



**Drive-thru Equipment for Railway Rolling Stock**

## **RAINBOW & XJ-SERIES**



**HEAVY DUTY VEHICLE WASH SYSTEMS**



# RAINBOW

## Worldwide Known and Recognized Fleet Washers

Tammermatic is well known pioneer in vehicle wash system development and manufacturer of reliable and well performing fleet and car washers.

Tammermatic has manufactured thousands of Rainbow fleet washers during last decades. The deliveries have taken place to every continent. The operators include post offices, transit and cargo companies, car and truck manufacturers, dairies, depots of military bases, food and beverage distributors and several other enterprises.

The key factors in the success story of the Rainbow have been - and still are - high quality cleaning result and compatibility with vehicles with different shapes and sizes.

During passage of the years, the long service life, low operating costs and reliability have contributed to highly regarded status of the Rainbow.

The present Rainbow models combine tested and proven constructions with new advanced wash methods.

## CLASSIC

### Cleans from Vans to Double Deck Buses and Tractor Trailers



Rainbow Classic is suitable for cleaning vans, coaches, buses, box-vans and tractor trailers. For heavily soiled vehicles, a chemical prewash and HP equipment are available as option.

#### Highlights and Features

- Hotdip galvanised steel frame with integral splash shields
- Large / small vehicle selection
- Queue wash for small vehicles
- Chemical prewash and HP wash options
- Two- and three brush washes and drive-thru wash with side brushes
- Bypass program for horizontally protruding obstacles ("back-off" system)
- Override programs for long side view mirrors, wind-reflectors and vertical exhaust pipes etc.
- Programs for overriding artic gaps\*) and related cables and hoses.
- Intensified rear wash feature ("back-on" system)

\*) a gap between a cabin and a trailer and/or a gap between two trailers.

# NOVA

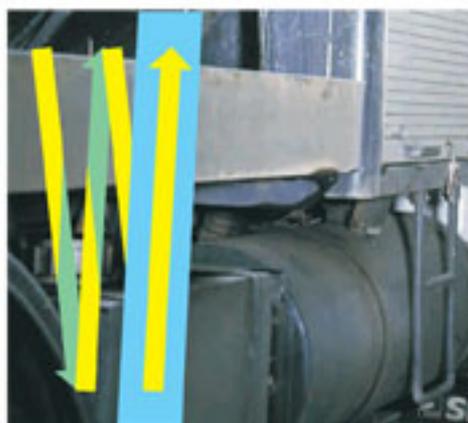
## New Cleaning Power for Fleets with Standard and Irregular Contours

The Rainbow Nova is a new member of the Rainbow Family introducing the latest advanced program features, a prewash chemical system, a searching oscillating high-pressure jet cleaning

system and top and side brush assemblies. All these features together make the Nova ideal for vehicles with various sizes and hard-to-brush contours.



# Solid Stream High Pressure Jets



The outstanding performance of the high-pressure cleaning cycle of the Nova is result of oscillating far-reaching solid stream nozzles with a double coverage sweeping technique.

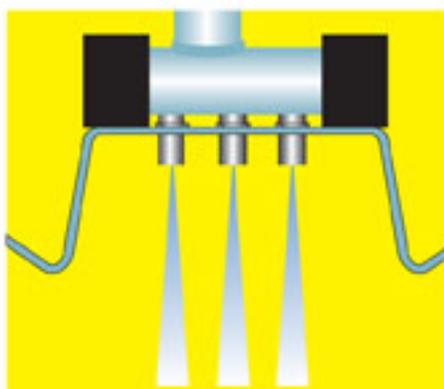
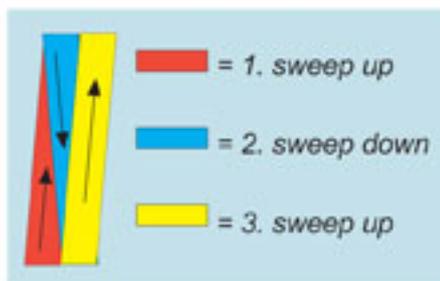
The high-pressure water jets overlap each other whereby every square centimetre is cleaned at least twice.

The high-pressure water jets clean the sides from sills and wheels to the roof as well as the front and back.

In front and the rear the jets are pivoted from vehicle corners to centre line. At the side of the vehicle the jets are simultaneously pivoted and oscillated to provide maximum coverage.

The high-pressure as well as the prewash arches are divided vertically into two sections (upper and lower) to serve cleaning of large and small vehicles.

Both high-pressure sections are fed with separate high-pressure stations.



## Variety of Applications



The Nova is very effective in variety of applications. It is ideal for fleets consisting of vans, buses, coaches, box vans, tractor trailers, HAV's and container carriers.

Use of the Nova is a cost effective solution also for hard-to-brush vehicles like waste disposal and earth removal trucks, concrete carriers, tankers and fire-engines.

Large number of reduced man-hours per vehicle as well as shorter depot-visits makes the Nova a very cost-effective investment.

# Versatile Programs for Various Fleets



**Selectable wash program elements:** large/small vehicle selection (HP & brush cycle), prewash & high-pressure applications, brush contact limiter feature, override programs for side mirrors and vertical protrusions (wind reflectors, exhaust pipes etc.), three-/two-brush wash and two-brush drive-thru wash.



The Nova features same programs as the Classic machine plus prewash and high-pressure cycles. The programs are configured to suit needs of a fleet in question.

For most vehicles, cleaned at regular basis a basic brush wash is sufficient method.

Buses and box-vans with decorative paintings / advertisements at sides require a gentler combination wash method.

The dirt is first loosened by the prewash agent after which, it is removed from the vehicle finish

with high-pressure water jets. At the same time, sand and other coarse particles are removed, which would otherwise present the risk of scratching during the brush stage of the wash.

A proper program for vehicles with irregular shapes and protruding obstacles is a high-pressure application with preceding chemical prewash.

If the vehicle contour(s) allow, a separate or simultaneous side and/or top brush action can be combined to the high-pressure wash.



## Chassis Washers for Dead-weight Removal

Both Classic and Nova models can be equipped with a chassis washer (CW-200), which is to be installed to the entrance end of the washbay. The cleaning cycle is executed when a vehicle moves over the spray-head while entering into the washbay.

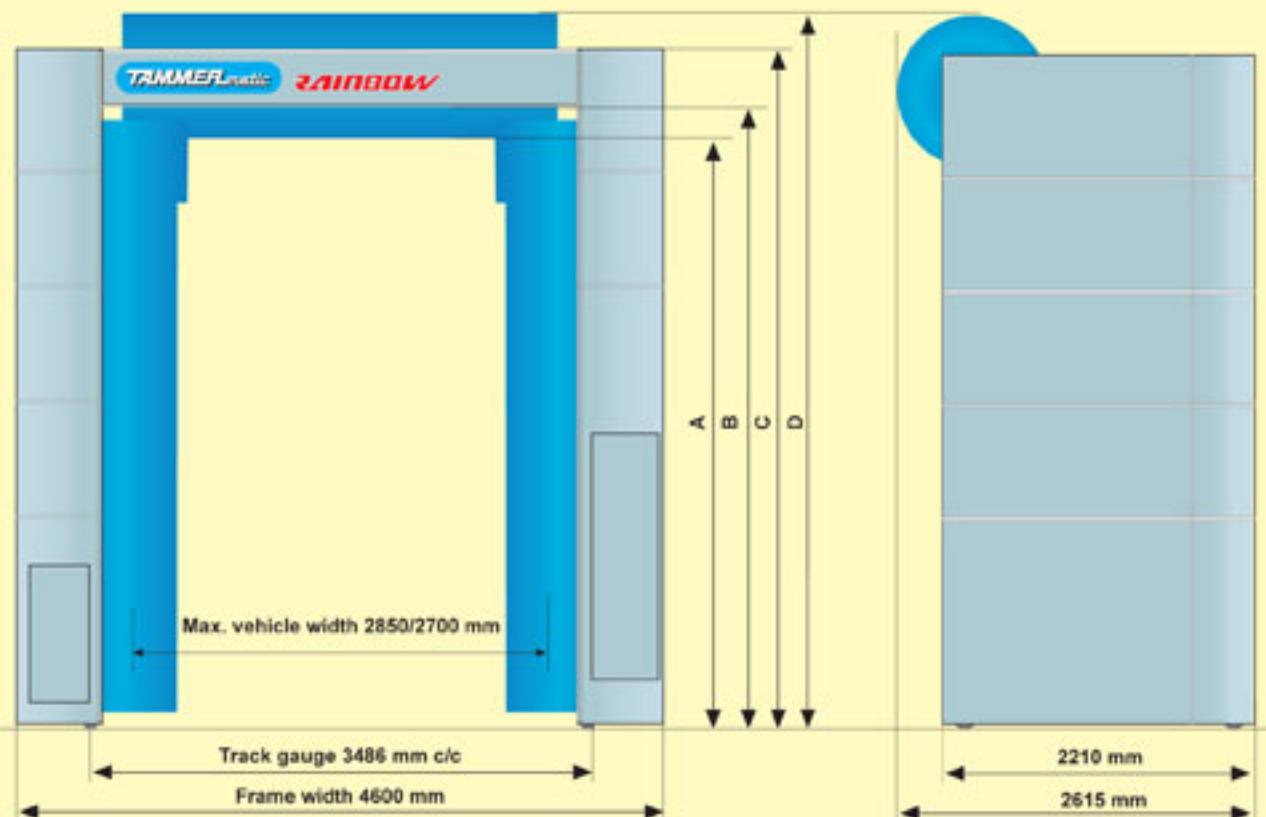
A chassis washer used in conjunction with the Classic model is fed with a separate multistage centrifugal pump (30 kW, 360 l/min, 30 bar).

In connection of the Nova model no additional pump is needed. The spray-head is connected to HP pumps of the gantry (2 x 18.5 kW, 2 x 125 l/min, 75 bar) via stainless steel solenoid valves.

The spray-head comprises two oscillating inner spray banks and two oscillating or fixed outer spray banks.



When washing smaller vehicles (e.g. passenger cars and vans), the pump of the outer sprays can be turned off due to the adequate coverage of the oscillating inner sprays.

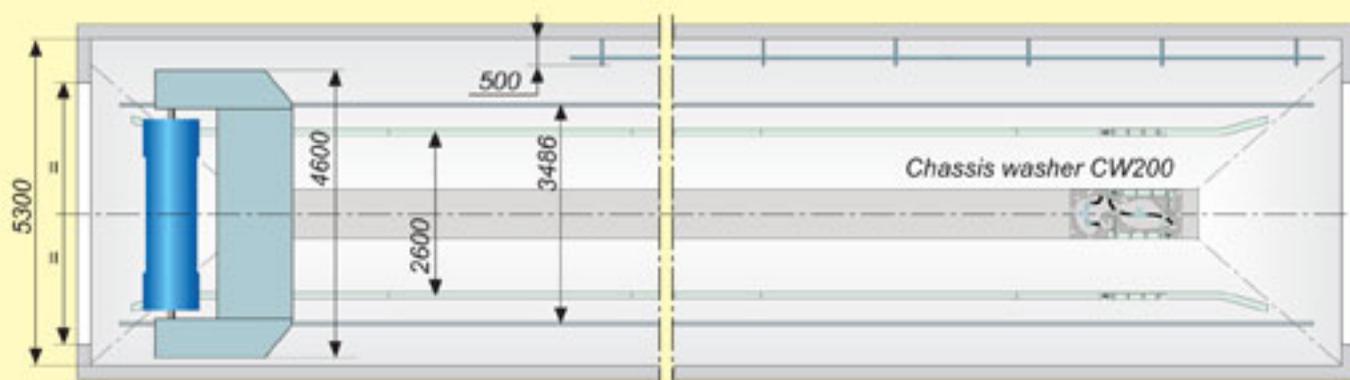


## CLASSIC

A = Wash height / mm	3400	3700	4000	4300	4600	4900	Min. washbay length: vehicle + 5000 mm (safety distance 500 excluded). Min. washbay width 5300 mm.
B = Drive-thru height / mm	3600	3900	4200	4500	4800	5100	
C = Frame height / mm	4130	4430	4730	5030	5330	5630	Water supply: NS25, 3.5 bar 80 l/min, 380 l/vehicle (length 12 m) Compressed air supply: NS10, 6-8 bar, 12 l/ vehicle (length 12 m)
D = Total height / mm	4390	4690	4990	5290	5590	5890	
Washbay min. height / mm	4490	4790	5090	5390	5690	5990	
Power supply: 3NPE 50 Hz, 400 V, Rated power 6 kW, Back-up fuses: 3 x 16 A, 0,52 kWh/vehicle (length 12 m)							

## NOVA

A = Wash height / mm	4000	4300	Power supply 3NPE 50 Hz, 400 V, Rated power: 43 kW, Back-up fuses: 3 x 80 A, 2 kWh / 12 meters long vehicle
B = Drive-thru height / mm	4200	4500	
C = Frame height / mm	4730	5030	Water supply - gantry; NS25, 3.5 bar 80 l/min Water supply - HP station; NS35, min. 200 l/min Water consumption / vehicle (length 12 m) 715 l Compressed air supply: NS10, 6-8 bar, 0,045 m <sup>3</sup> / 12 meters long vehicle
D = Total height / mm	4990	5290	
Washbay min. height / mm	5090	5390	
Min. washbay length: vehicle + 6000 mm (safety distance 500 excluded). Min. washbay width 5300 mm.			



# XJ-SERIES

## Drive-thru Brush Machines

### XJ-404 for buses, coaches and box-vans

- \* Wash heights: 3200, 3500, 3800, 4100 and 4400 mm.
- \* Maximum vehicle width: 2700 mm.
- \* Machine frame heights: 3700, 4000, 4300, 4600 and 4900 mm.
- \* Min. washbay height: Machine height + 150 mm.
- \* Min. washbay width: 5100 mm.
- \* Min. washbay length: 12 200 mm (or 9600 mm, if the start-up photocell and traffic lights are placed outside of the entrance door).
- \* Capacity: 48 vehicles/h (vehicle length 12 m, drive-thru speed 12 m/min).
- \* Power supply 3NPE 50 Hz 400 V, rated power 6,5 kW, back-up fuses 3 x 20 A.
- \* Water supply: NS40, 4-6 bar, ~ 120 l/min.
- \* Compressed air supply: NS8, 6-8 bar, 0,017 Nm<sup>3</sup>/min.



### XJ-405 for buses and coaches

XJ-405 is version of XJ-404 machine equipped with a top brush.

- \* Wash height: 4400 mm, machine frame height: 4900 mm, maximum height of the machine: 5855 mm.
- \* Maximum vehicle width: 2700 mm.
- \* Min. washbay height: Machine height + 50 mm.
- \* Min. washbay width: 5100 mm.
- \* Min. washbay length: 15 150 mm (or 14 900 mm, if the start-up photocell and traffic lights are placed outside of the entrance door)..
- \* Capacity: 20 vehicle/h (vehicle length 12 m, drive-thru speed 6 m/min).
- \* Power supply: 3NPE 50 Hz 400 V, rated power: 7,5 kW, back-up fuses 3 x 35 A.
- \* Water supply: NS40, 4 bar, ~ 120 l/min.
- \* Compressed air supply: NS8, 10 bar, 0,017 Nm<sup>3</sup>/min.



### XJ-404 TR for trolley buses

XJ-404 TR is version of XJ-404 machine for trolley buses. For dimensions and supplies see data of the XJ-404 machine.

### XJ-204 WB4 for street-cars and light trains

Maximum wash height and width 3300 / 2500 mm.  
Power supply: 3NPE 50 Hz 400 V.  
Rated power 11 kW, back-up fuses 3 x 25 A.  
Water supply: NS 25, 4 bar, ~ 120 l/min.  
Compressed air supply: NS 8, 10 bar, 0,017 Nm<sup>3</sup>/min.

# XJ1000 -Series for Long-distance Trains

XJ1000 is modular wash system for trains. It comprises snow removal, pre-cooling, pre-wash and rinse arches as well as brush, dryer, motor control and central lubrication units. Water reclaim units are also available for XJ1000 -series.

The frames of the modules are of steel structures, which are primed and coated with epoxy paint.

Pipework for water and cleaning chemicals as well as multilayer filters are of stainless steel (AISI 316). The chemical and mixing containers are of non-corrosive plastic material.

Drive-thru speed of the train: 1,5-2,5 km/h or 25-41 m/min.



Typical supply demands:  
Voltage 3NPE, 50 Hz, 400 V,  
Rated power 129 kW, back-up fuses 250 A,

Water; DN 65, ~ 500 l/min, 3-5 bar  
Compressed air; DN 15, ~ 200 l/min, 6-10 bar,  
Peak water flow to oil-separator 3,3 l/s.

Tammermatic is an entrepreneur run company with worldwide know-how and experience. The company has been developing, marketing and producing vehicle wash machines close to 40 years. The product range includes vehicle wash systems for cars, vans, buses, trucks, coaches, streetcars, HAV's, tankers and railway rolling stock.

Tammermatic has delivered vehicle wash systems to seventy countries and has presence in every continent. Challenges from worldwide installations combined with experience from harsh and unique washing conditions of Nordic countries have been major factors in development of our present state-of-the-art product range.



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