NS Series 3900 and 6300 for TS Classic

MANUAL

Contents

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Background

NS series 3901-32 and 6301-22

Immediately after the merger of the HIJSM and SS, the Dutch State Railways (NS) had already started with the electrification of the Dutch rail network, but its completion was not expected until the distant future and was primarily focused at passenger services. Freight services would not be part of this for a long time, because the Dutch industry was not yet able to supply suitable electric locomotives in those years. Against this background, the need arose at the end of the 1920s to expand the rolling stock with a successor to the Series 3700 and the tender versions derived from them. The NS 3901 -3922 series comprised the last express train locomotives designed by the Dutch Railways and were similar to their direct predecessors in a number of respects. But with a larger and more efficient boiler, these locomotives with the same axle arrangement and the same number of cylinders were able to pull the increasingly heavy passenger and freight trains at the time. The first units were delivered by Henschel & Sohn in Kassel as early as 1929. The series would eventually comprise 32 units.

With the same boiler and cylinder dimensions, a design for the tender version of the 3900s, the 6301-22 series, was developed simultaneously. In contrast to the tender locomotives derived from the 3700 (the 6000 and 6100 series), four driving axles with smaller wheel diameters were now chosen, because the new series was mainly intended for freight services and in particular for coal transport from the Limburg mining region.

Technical Data

NS 3900

Wheel arrangement:	4-6-0
Max. speed:	110 km/h
L.o.a.:	20,41 m
Wheel base:	14,52 m
Driver diameter:	1850 mm
Max. steam pressure:	14 kg/cm2
Water/coal capacity:	28 m3 / 6 tons
Total mass w/ tender:	147 tons

NS 6300

Wheel arrangement:	4-8-4
Max. speed:	90 km/h
L.o.a.:	17,38 m
Wheel base:	14,05 m
Driver diameter:	1550 mm
Max. steam pressure:	14 kg/cm2
Water/coal capacity:	14 m3 / 4,5 tons
Mass:	127 tons

Version 1.0

Installation

The *NS 3900 and 6300* by Wilbur Graphics has been made available as .zip-file and contains apart from the `Readme_EN.txt` the following items:

- Folder `Manuals\Wilbur Graphics` with Dutch, German and English manuals:

`WG_NS_3900_6300_Handbuch_V1_0.pdf`
`WG_NS_3900_6300_Manual_V1_0.pdf`
`WG_NS_3900_6300_Handleiding_V1_0.pdf`

- installer program `WG_NS_39_6300_V10_build_20250501.exe`

After launching the installer, you will be prompted to

• Language selection for the installer (Dutch/English/French/German)
• Accepting the License Terms (EULA)

See the release notes.txt for the latest changes and improvements.

Other tips
- The .zip file must be fully unpacked before you can begin the installation.
- If the installation software cannot find the RailWorks folder on your system, the reference to this folder in the Windows registry may no longer be valid. This situation occurs if you have moved the Steam environment to another computer or disk drive. You may solve this by repeating the installation of Steam.

TS Object Browser Index

Editor name	Folder	Object name
WG NS 3902 tp2	Rollmat_NS	NS_3900\Engine\WG_NS_3902.xml
WG NS 3902 tp2 tender	Rollmat_NS	NS_3900\Tender\WG_NS_3902T4.xml
WG NS 3916 tp3	Rollmat_NS	NS_3900\Engine\WG_NS_3916.xml
WG NS 3916 tp3 tender	Rollmat_NS	NS_3900\Tender\WG_NS_3916T4.xml
WG NS 3921 tp3	Rollmat_NS	NS_3900\Engine\WG_NS_3921.xml
WG NS 3921 tp3 tender	Rollmat_NS	NS_3900\Tender\WG_NS_3921T4.xml
WG NS 3922 tp3	Rollmat_NS	NS_3900\Engine\WG_NS_3922.xml
WG NS 3922 tp3 tender	Rollmat_NS	NS_3900\Tender\WG_NS_3922T4.xml
WG NS 6311 tp3	Rollmat_NS	NS_6300\Engine\WG_NS_6311.xml
WG NS 6314 tp3	Rollmat_NS	NS_6300\Tender\WG_NS_6314.xml
WG NS 6317 tp3	Rollmat_NS	NS_6300\Engine\WG_NS_6317.xml
WG NS 6322 tp3	Rollmat_NS	NS_6300\Tender\WG_NS_6322.xml
WG CIWL Orient F 1287 oxog	Rollmat_NS	CIWL_orex\WG_CIWL_F_1287_orex_oxog.xml
WG CIWL Orient PS 4035 ogog	Rollmat_NS	CIWL_orex\WG_CIWL_PS_4035_orex_ogog.xml
WG CIWL Orient VL 3496 ogog	Rollmat_NS	CIWL_orex\WG_CIWL_VL_3496_orex_ogog.xml
WG CIWL Orient WR 4008 ogog	Rollmat_NS	CIWL_orex\WG_CIWL_WR_4008_orex_ogog.xml
WG NS tp3 GTUW 64153	Rollmat_NS	NS_GTUW\WG_NS_GTUW_64153.xml
WG NS tp3 GTUW 65248	Rollmat_NS	NS_GTUW\WG_NS_GTUW_65248.xml
WG NS tp3 GTMK 59228	Rollmat_NS	NS_GTMK\WG_NS_GTMK_59228.xml
WG NS tp3 GTMK 59241	Rollmat_NS	NS_GTMK\WG_NS_GTMK_59421.xml
WG NS 30M3 LbEb Esso	Rollmat_NS	NS_30m3_Ketelwagens\WG_NS_tp3_30M3_Kwgn_EssoNL.xml
WG NS Frico Oppeln Tp3	Rollmat_NS	NS_Frico_Oppeln\WG_NS_Frico_Oppeln_tp3.xml
WG NS B 6404	Rollmat_NS	NS_C_6400\WG_NS_C_6404.xml
WG NS B 6417	Rollmat_NS	NS_C_6400\WG_NS_C_6417.xml
WG NS B 6447	Rollmat_NS	NS_C_6400\WG_NS_C_6447.xml
WG NS B 6478	Rollmat_NS	NS_C_6400\WG_NS_C_6478.xml
WG NS tp2 Dg2425	Rollmat_NS	NS_Dg\NS_tp2_Dg2425.xml
WG NS tp3 S-HTS tubes/buizen	Rollmat_NS	NS_S-HTS\WG_NS_SSlmas53_tp3_buizen.xml
WG NS tp3 ZZw 51 NAM	Rollmat_NS	NS_ZZw51\WG_NS_NAM_ZZw_51_tp3.xml
WG NS AB 7216	Rollend mat	NS_AB_7201\WG_NS_AB_7201.xml
WG NS B 7284 bl	Rollend mat	NS_AB_7201\WG_NS_B_7184.xml
WG NS AB 7521	Rollend mat	NS_AB_7521\WG_NS_AB_7521.xml
WG NS D 7521 skvb	Rollend mat	NS_D_7521\WG_NS_D_7521_skvb.xml
WG NS D 7521 oxox	Rollend mat	NS_D_7521\WG_NS_D_7521_oxox.xml
WG NS D 6061	Rollend mat	NS_D6000\WG_NS_D6061\WG_NS_D6061.xml
WG NS D 6066	Rollend mat	NS_D6000\WG_NS_D6061\WG_NS_D6066.xml
WG_NS_C_bak_6921	Rollend mat	NS_AB_6100\WG_NS_AB6116\WG_NS_C6921.xml
WG_NS_AB_6100_bak_6116	Rollend mat	NS_AB_6100\WG_NS_AB6116\WG_NS_AB6116.xml
WG DB Ep3 30m3 LbEb BP	Rollmat_de	DB_30m3_Kesselwagen\WG_DB_tp3_30M3_Kwgn_BP.xml
WG DB Ep3 30m3 LbEb Shell	Rollmat_de	DB_30m3_Kesselwagen\WG_DB_tp3_30M3_Kwgn_Shell.xml
WG DB Ep3 R20 Stuttgart NKF	Rollmat_de	DB_R_20_Stuttgart\WG_DB_tp3_R_20_NKF.xml
WG DB Ep3 R20 Stuttgart	Rollmat_de	DB_R_20_Stuttgart\WG_DB_tp3_R_20.xml
WG DB Ep3 Glmmhs57	Rollmat_de	DB_Glmmhs57\WG_DB_Glmmhs_57_tp3.xml
WG DB Ep3 Gmmhs30 Oppeln	Rollmat_de	DB_Ghs30_Oppeln\WG_DB_Gmmhs30_Oppeln_tp3.xml
WG DB Ep3 Gms30 Oppeln (Brh.)	Rollmat_de	DB_Ghs30_Oppeln\WG_DB_Gms30_Oppeln_tp3.xml

WG DB Ep3 Tkos30 Oppeln	Rollmat_de	DB_Ghs30_Oppeln\WG_DB_Tkos30_Oppeln_tp3.xml
WG DB Ep3 Ommr32 801024	Rollmat_de	DB_Ommr\WG_DB_Ommr32_801024.xml
WG DB Ep3 Ommr33 812307	Rollmat_de	DB_Ommr\WG_DB_Ommr33_812307.xml
WG DB Ep3 Ommr33 814013	Rollmat_de	DB_Ommr\WG_DB_Ommr33_814013.xml
WG DB Ep3 Omm55	Rollmat_de	DB_Omm55\WG_DB_Omm55.xml
WG DB E28 AB4u ogog	Rollmat_de	DB_E28\WG_DB_E28_AB4ü28_ogog.xml
WG DB E28 B4u ogog	Rollmat_de	DB_E28\WG_DB_E28_B4ü30_ogog.xml
WG DB E28 PwPost4u oxog	Rollmat_de	DB_E28\WG_DB_E28_PwPost4ü_oxog.xml
WG DB E28 WL4u ogog	Rollmat_de	DB_E28\WG_DB_E28_WL4ü_Mitropa_ogog.xml
WG DB E28 WR4u ogog	Rollmat_de	DB_E28\WG_DB_E28_WR4ü_Mitropa_ogog.xml
WG DB E38 AB4u-38 11626 ugug…	Rollmat_de	DB_ABC4ü38_39\WG_DB_AB4u_38_11626_ugug.xml…
WG DB E38 B4u-38 11680 ugug…	Rollmat_de	DB_ABC4ü38_39\WG_DB_B4u_38_11680_ugug.xml…
WG DB E38 BC4u-39 215501 ugug…	Rollmat_de	DB_ABC4ü38_39\WG_DB_BC4u_39_215501_ugug.xml…
WG DB E38 Pw4u-37 105654 uxug…	Rollmat_de	DB_ABC4ü38_39\WG_DB_Pw4u_37_105654_uxug.xml

An explanation of the abbreviations ugug, oxog etc. can be found later in this manual under 'Diafragm Animations'.

Pw 4ü – 37

AB 4ü – 38

Preload Consists

Consist	Display name
WG NS 3902	Losse loc
WG NS 3916	losse loc
WG NS 3921	losse loc
WG NS 3922	losse loc
WG NS 3902	met/with Etoile du Nord
WG NS 3916	met sneltrein/with express passenger
WG NS 3921	Int. D-trein /Int. Express Service
WG NS 3922	met stoptrein/with passenger local
WG NS 3922	D164 Loreley Express
WG NS 6311	Losse loc
WG NS 6314	losse loc
WG NS 6317	losse loc
WG NS 6322	losse loc
WG NS 6311	met NAM ketelwagens
WG NS 6314	m/w 2-ass/axle Gmix
WG NS 6317	m/w NS DB coal
WG NS 6322	m/w NS S-HTS Pijpen/Tubes
DTG DB V200 Red	m/w DB Rheingold Express (DTG ELAP-Addon required)

To ensure that the rolling stock supplied by this release can also be used in your own scenarios, the subfolders of Wilbur Graphics (Rollend mat, Rollmat_NS and Rollmat_de, resp.) must always be linked to the route in scenarios if this is not built by Wilbur Graphics.
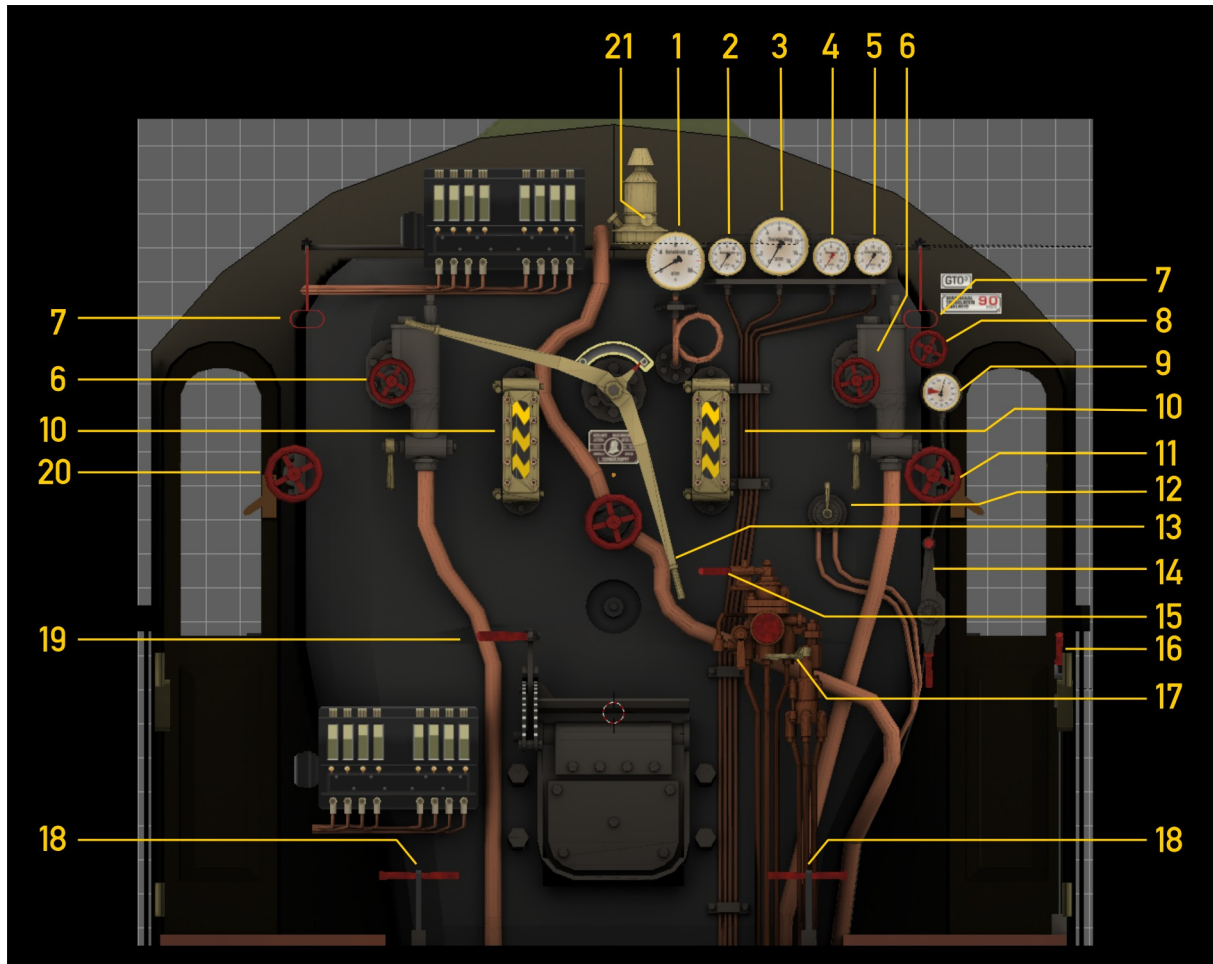
Operation

Cab Layout

The cabs of the 3900 and 6300 are identical. The locomotives will be put into operation by switching the compressor on (handwheel 11 or CTRL + 0, resp).

1	Manometer boiler pressure		12	Sander	X
2	Brake cylinder pressure		13	Regulator	A / D
3	Brake pipe pressure		14	Reverser	W S
4	Main reservoir pressure		15	Train brake lever	; / '
5	Steam chest pressure		16	Cylinder cocks on/off	C
6	Injectors		17	Engine brake lever	[/]
7	Whistle	SPATIE	18	Dampers on/off	M
	Whistle (short)	N	19	Firebox door	
8	Bell (6300 only)	B	20	Blower	
9	Speedometer		21	Oil lamp (cab lighting)	CTRL + F11
10	Water level glasses			Front/rear lights	H / SHIFT +H
11	Compressor on/off	CTRL + 0		Shunting lights	CTRL + F9

The cab layout in this TrainSimulator version follows the TS Classic standard for steam locomotives (expert mode) and therefore deviates from reality on parts (no Hasler self-registering speedometer, for example). The operation of front and rear signals is TS-compliant. The 2100s had no electrical installation and the signal lighting consisted of kerosene lamps. These can be 'switched' on and off in the familiar way with the H-button. Shunting signals are operated with the hotkey CTRL+F9 and are automatically extinguished when train signals are switched on. When shunting, a white lamp is also shown on the tender. For driving in darkness, a kersosine lamp can be lit to read the meters (CTRL+F11).

Scenario settings

In TS Classic, coal and water supplies carried by the tender are also part of the simulation. Players can set coal and water launch values using the TS Scenario Editor, as will be explained now. After tender and locomotive have been placed on the track in the usual way, you must select the tender with a double left mouse click. Then a settings window appears at the top right corner:

Diafragm animation

When building consists with the included coaches in the Scenario Editor (SE) or the QuickDrive menu (QD), it is important to combine the right variants. The animation type is indicated by the letter combinations `sk`, `vb`, `ug` and `ux`, where:

`og` or `vb` = working animation (indicated by green arrow in SE)
`ox` or `sk` = dummy animation (indicated by a red arrow in SE)

Working and dummy animations look the same in the uncoupled state. However, the difference becomes visible when a carriages are coupled with their *ug* sides and the animation kicks in. Dummy diafragms come in handy when a carriage is placed behind an engine, or as a slip coach. However, coupling is always accomplished.

Carriages without suffixes are always equipped with working diafragms (`ogog` or `vbvb`).
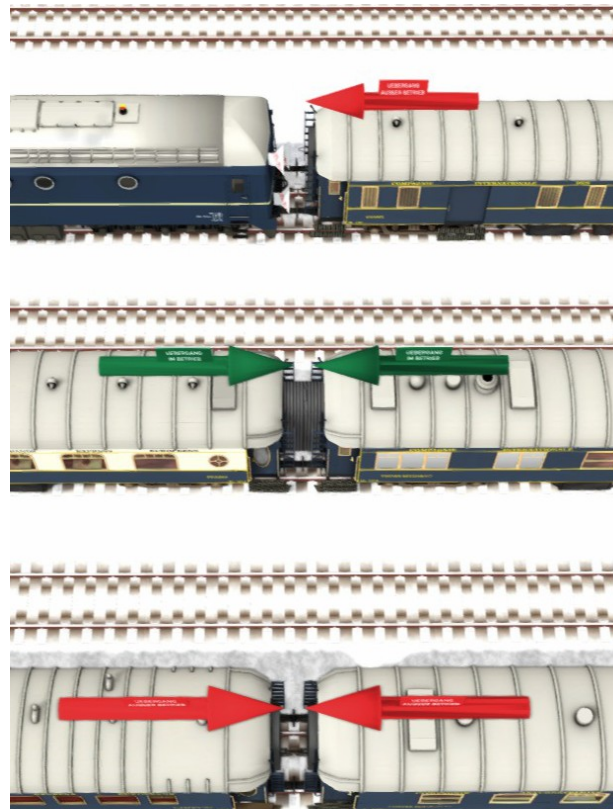
Colophon/Credits

Development and Production:
© Wilbur Graphics, Henk van Willigenburg (www.wilburgraphics.com)

Tips and advice:
ChrisTrains.com
Ton van Schaik
Reinhart190953

Testing:
Reinhart190953, Ton van Schaik

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