

भारतसरकार (GOVERNMENT OF INDIA)
रेलमंत्रालय (MINISTRY OF RAILWAYS)
रेलवेबोर्ड (RAILWAY BOARD)

No. 2025/efile/1/weighbridge (3492051)

New Delhi, dt.15.09.2025

General Manager
SWR, SCR, WCR

Sub: Pilot – Conduct of Trials of Portable Weighing System
Ref: Railway Board's letter of even number dt.21.03.2025

Please find attached herewith RDSO's letter No.MW/CS/PEWB dated 20.08.2025. RDSO after examining different types of weighment systems, which are portable/easy to install and capable of wheel-wise weighment to detect overloading & uneven loading, has submitted the functional specification of weighing system.

It has been decided to conduct field trials of this New Version in SWR, SCR, WCR. This system is capable of weighment - wheel wise & total and can be installed quickly at any location. This will help in detecting overloading/uneven loading or uneven unloading. Correction at the terminal itself will ensure safety.

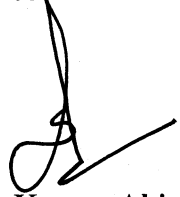
Zonal Railways are advised to adhere to following broader guidelines while undertaking procurement, installation and monitoring of the said equipment -

- Nominated Zonal Railways will install New Weighing System at least two Goods Sheds within their jurisdiction.
- Since this weighbridge does not require straight track of 100 meters on either side, it can be fitted close to the loading point. Select goods sheds, from Group-I, where open wagon are being handled.
- Performance of the installed weighing system should be monitored for minimum period of three months.
- Zonal Railways shall prepare a Trial Report incorporating the feedback from concerned stake holders viz. IR, freight customer(s) and OEM covering functioning of system, reliability, accuracy, ease of operation etc. The report should be forwarded to RDSO with copy endorsed to Traffic Commercial Directorate of Railway Board.
- Zonal Railway can sanction this work as per above referred Railway Board's letter under PH-16 and execute on open tender basis.

It is further clarified that since the new equipment is under trial for establishing the performance parameters *vis a vis* consistency, accuracy etc., the weighment data generated during trial period will not be used as a reference or basis for taking any commercial/safety related decision making/documentation.

This issued with the approval of the Competent Authority.

D.A. as above


(Surendra Kumar Ahirwar)
Exec. Dir., Traffic Commercial (Rates)
Railway Board

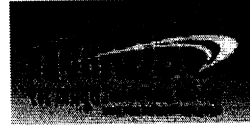
Copy for information and necessary action:
Exec Dir/(Std./Wagon), RDSO

File No.RDSO-MW0CS(WB)/4/2024-O/o PED/SW/RDSO



भारत सरकार - रेल मंत्रालय
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Government of India - Ministry of
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Organisation Lucknow - 226011
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No.MW/CS/PEWB

Dated: 20-08-2025

EDME/Modernization
Railway Board, New Delhi

Sub: Provision of Wheel-wise load measurement system.

Ref: (i) M(O&BD), Railway Board Inspection note No.2024/MOBD/HM/TP/13 dated 04.06.2025.

(ii) Points noted during discussion of M(O&BD), Railway Board with DG, RDSO on 06.08.2025.

- Vide letter under reference (i) above, Railway Board has advised RDSO to examine the provision of static load sensors for full rake in the siding to measure the load in every wagon during loading and to advise installation at few places for trial. It was further emphasized during the meeting at ref.(ii) above.
- EIMWB system as per latest RDSO specification No. WD-29-MISC-19 (Rev.1) issued in Oct. 2021 is capable of wheel wise load detection along with weighment of full rake. For deployment of this feature and sharing reports with Zonal Railways, all EIMWB manufacturers have already been directed vide this office letters of even no. dated 25.06.2025, 30.06.2025 & 21.07.2025. Further, OEMs have also been asked to submit requirement for converting EIMWBs installed prior to specification issued in Oct. 2021. Make-wise requirement shall be finalized and issued to Zonal Railways on priority.
- Though, EIMWBs are capable of wheel-wise load detection however, they require certain conditions w.r.t. straight track, concrete slab, instrumented rail etc. thus not suitable for requirement specified by M(O&BD), Railway Board at all loading siding. Further, installation of EIMWB at working siding requires substantial traffic block for installation and commissioning.
- Keeping above discussion in view, RDSO has approached few OEMs and has examined different type of systems which are portable/easy to install and capable of wheel-wise load measurement.
- Accordingly, following three firms have submitted their techno-commercial offers (copy enclosed) for portable weighing system. The technical features, capabilities, limitations, approx. price details etc. are summarized as under:

SN	Technical feature	M/s POWERVE, Berlin	M/s Trackblaze, Australia	M/s RAILMET, Chennai India
1.	Model	POW2X - 2 Wheelset Kits (each measures, simultaneously, the vertical forces of both wheels of a wheelset)	MTW Single Axle Static & Dynamic Wireless (S2).	Portable Dynamic Asymmetric Wagon Wheel Load Measuring System (ALMS)
2.	Wheel wise load measurement	Yes	Yes	Yes
3.	Weighment Speed	In static condition, wheel placed on load cell at a very slow speed (advised at 0.5 Km/h)	0 to 5kmph	0 to 10kmph
4.	Accuracy	Not specified.	The accuracy of the four axle system is $\pm 0.5\%$ in static mode. The accuracy of the single axle system is $\pm 3\%$ under ideal conditions.	$\pm 1\%$
5.	Weighment direction	One direction	Bi-directional	Bi-directional

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6.	Weighment data	Saved on cloud server	Controller and wireless on tablet	Controller and wireless on tablet
7.	Installation requirements for one wheel set system	The system is portable however requires precise placement of each wheel set on rail mounted wedge equipped with load cells.	System can be installed at any location between the two rails and no modification in existing track structure is required.	System can be installed at any location and no modification in existing track structure is required.
8.	Installation time	30 to 45 minutes	30 to 45 minutes	30 to 45 minutes
9.	Price for single axle	€ 46,000.00 i.e. ₹46,92,000.00 approx. excluding taxes	₹ 40,67,613.00 including GST	₹ 24,85,000.00 without GST (With 18%GST Rs.29,32,300.00)
10.	Payment T&C	100% one time	100% payment against proforma invoice	80% Advance & balance 20 % against receipt of material at site
11.	Warranty		12 months after dispatch of goods	12 months from the date of invoice against manufacturing defects
12.	Photo			
13.	Suitability for proposed use	This system is being used for balancing of vehicles at design/maintenance stage and not suitable for intended use in loading sidings.	Suitable.	Suitable.

6. Offer received from all three firms is attached herewith for ready reference please.
7. Besides above, similar systems may be available with other OEMs also, therefore a functional requirement of "Wheel-wise load measurement system" for PoC purpose has been prepared and attached as **Annexure-I** which may also be followed for supply & installation of this system.
8. Keeping above in view, following recommendations are made for consideration and approval of Railway Board:
- 8.1. Railway Board may direct few sidings to install above system or similar system following functional requirement given at **Annexure-I**.
 - 8.2. Installation and commissioning of the system should be jointly witness by siding owner (railway/private), OEM, Zonal Railway & RDSO to assess ease of installation & commissioning, time required in installation etc.
 - 8.3. Performance of installed system should be monitored for minimum three months, feedback from all stake holders i.e. siding owner, Zonal Railway, OEM should be taken w.r.t functioning of system, reliability, accuracy, ease of operation etc.
 - 8.4. Based on above exercise a final functional requirement specification shall be framed by RDSO and sent to Railway Board for further proliferation etc.

DA: As above.

(Arvind Kumar)
Digitally Signed by Arvind Kumar
For Executive Director/Std./Wagon

Copy to:

1. EDME/Frt./RB - For kind information please.
2. ED/Traffic (Rate)/RB - For kind information & necessary action please.

Date: 20-08-2025 17:05:55

Reason: Approved

File No.RDSO-MW0CS(WB)/4/2024-O/o PED/SW/RDSO

Annexure-I

Functional requirement of Wheel-wise load measurement system for PoC

1. Objective: Loading within permissible carrying capacity of wagon and evenly loaded across the wagon are essential for safe train operation. Wagons detected with overload are adjusted to bring the consignment load within carrying capacity of wagon leading to detention of rake and requires additional resources for unloading etc. Similarly, unevenly loaded wagon are potential safety hazard in train operation especially during negotiations of curves, point & crossing etc. One of the most accurate methods of detecting this uneven loading in wagons is wheel by wheel load measurement on left & right side of the vehicle.

Existing EIMWB system installed over railway network following latest RDSO specification No. WD-29-MISC-19 (Rev.1) issued in Oct. 2021 is capable of wheel wise load detection along with weighment of full rake. Though, EIMWBs are capable of wheel-wise load detection however, they require certain conditions w.r.t. straight track, concrete slab, instrumented rail etc. thus not suitable for all loading sidings etc. Further, installation of EIMWB at working siding requires substantial traffic block for installation and commissioning.

Keeping above discussion in view, following functional requirement has been prepared for "Wheel-wise load measurement system" for installation in loading sidings for PoC purpose.

2. Functional Requirements of the system:

- 2.1. The system shall provide the balancing detail of left/right wheel, axle to axle, Bogie to Bogie. System shall be capable of measuring load difference in longitudinal as well as transverse direction.
- 2.2. The system should also provide the weight of each wheel, axle, bogie, wagon and rake.
- 2.3. The system should be easy to install without any major disruption of traffic. It should not require placement of concrete slab, cutting of rails etc. Change of PSC sleepers is permitted; however, requirement should be bare essential to avoid any disruption to traffic. Portable/movable/mobile device is preferable which can be installed at a desired location without any major modification at site.
- 2.4. The system should be able to work in existing conditions prevailing in loading sidings over railway network. Performance should not be adversely affected due to prevailing environmental condition, dust, muck etc.
- 2.5. The system should be robust enough to stay installed full time on the track even when the wagons are not weighed or moved. Also, the necessary provision should be made to reduce the system's wear and tear while installed but not in use.
- 2.6. The accuracy of installed system shall be specified by the supplier in their offer.
- 2.7. Warranty of installed system should be minimum two years. The supplier must ensure minimum availability of 90% for the installed system throughout the warranty period. Items which are not covered under scope of warranty shall be categorically specified. Supplier shall also furnish terms & conditions for AMC/breakdown attention post warranty period.
- 2.8. The supplier should provide robust and secure carrying cases for all the system components for easy movement in the field and convenient storage.
- 2.9. The system should be suitable for different types of rails, i.e., UIC 52 and UIC 60 etc. in use over IR network.
- 2.10. The system should be factory pre-calibrated without the requirement of test weights or calibrated wagons at the site.
- 2.11. The supplier should provide the calibration jig/system for periodic calibration of the system in-house. The calibration bench or test jig should also be able to test or simulate the conditions under which the system is actually used, which simulates the in-track conditions.

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- 2.12. The system should weigh the wagons in static and dynamic modes as per the user's requirement. Minimum and maximum speed for which system is capable shall be specified by the supplier.
- 2.13. There should not requirement of any major wiring on the track/wayside. Only power supply within the range of 200 m of location where system is to be installed, shall be provided by the purchaser.
- 2.14. Wireless connectivity between the remote controller/PC/tablet/laptop etc. and the parts of the system installed on the track/rail shall be preferred. In case, wiring is essential it should be bare essential and plug & play type.
- 2.15. The system should be able to measure the weight and balancing of the four-axle rail vehicle irrespective of the type of the vehicle/wagon and varying axle distances.
- 2.16. The four-axle system should be upgradable to a six or eight-axle weighing system by adding the hardware for the additional axles only and reusing the existing hardware of the four-axle system.
- 2.17. The user's interface of the software should be the same for all types of axle configurations and irrespective of the type of rail vehicle.
- 2.18. The system should be easily configurable for changes in the orientation of the wagon/train and direction while weighing without resetting the system.
- 2.19. The system should identify the wheels and axles by assigning the incremental numbers in the forward or reverse direction, always in the direction of the wagon/train movement.
- 2.20. The system should provide the print slip for the measurement immediately after the weighing, without transferring the results into another system.
- 2.21. Integration of system with AI based camera is desirable, capable of reading wagon nos. and assigning the same in the report generated from the system.
- 2.22. The system should have adequate battery backup (minimum 6 hrs.) for working in the field without a power supply.

3. Eligibility Condition:

- 3.1. The supplier/tenderer shall either be OEM or authorized agent of OEM specifically for supply, installation & commissioning of this system in India.
- 3.2. The supplier/tenderer must have successfully supplied & commissioned at least one such system for railway application in India or internationally. Requisite documentary evidence from customer must be submitted with the offer.

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Speed matters

RAIL/FY25-26/4001
13/08/2025

**PROPOSAL FOR PORTABLE DYNAMIC ASYMMETRIC WAGON WHEEL
LOAD MEASURING SYSTEM (ALMS)**

Prepared For

The Executive Director -Wagon
RDSO Ministry of Railway Govt of India
Manak Nagar,Lucknow – 226011

Prepared by

R.GOMATHI

GENERAL MANAGER

Mobile: 8939821722

RAILMET TECHNOLOGIES (P) LTD

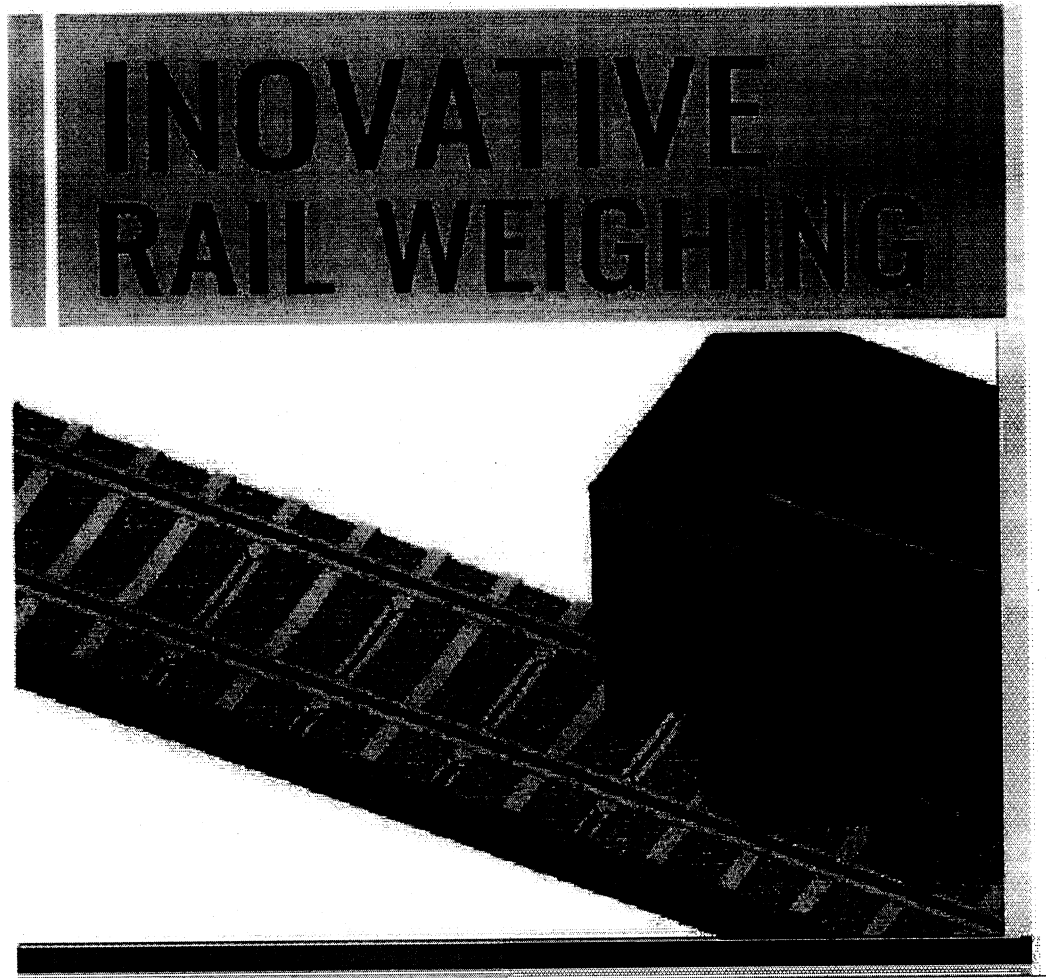
NO.1/295, SOMANGALAM ROAD,CHENNAI -602109

railmet2021@gmail.com

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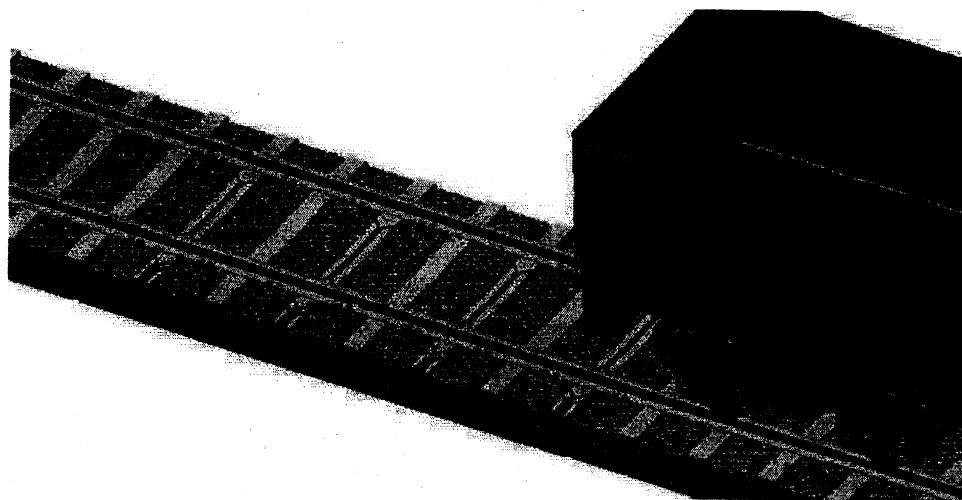
About ALMS Dynamic Portable Rail Wheel Weighing System.

_ALMS is an Innovation Dynamic Portable Wheel Weighing System to weight wagon and engine wheel weight . The system consisting of filed equipment with each pair having two wheel weigher . The ALMS can configured as single wheel weigher or bogie or whole wagon/engine wheel weighing system

The Wagon or engine Each Axle can be weighed individual and display the total weight of the metro car and individual weight of the Axle will be displayed in the Indicator and analyzed different parameter as per your specification (different between the axle weight, etc)

The System is Fourth Generation design having wire and wireless connectivity for the sensor to handle held equipment namely Android tablet PC . The tablet designed to accept 6 pair of _ALMS wheel weigher and can be connected Via intelligent Junction box if it is wired and complete wireless option is available .

ALMS LAYOUT :



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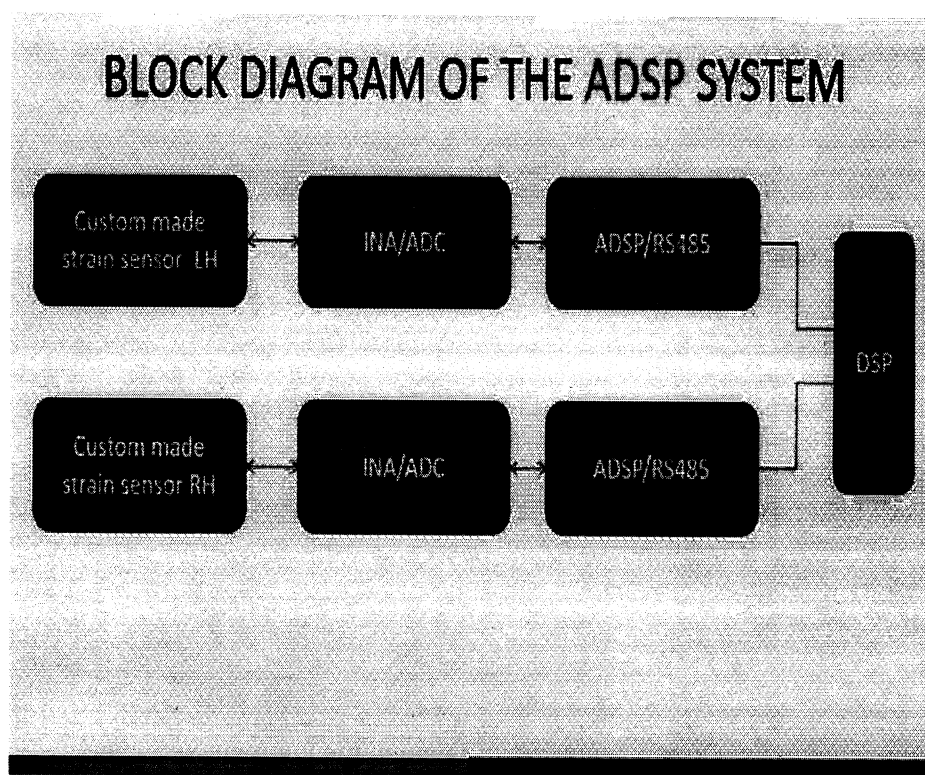
General Information		
(a)	Type	Pitless Portable Rail Dynamic Weigh Bridge
(b)	Wheel Weighing Capacity	40 ton
(c)	DISPLAY	Wheel / Axle Load /Asymmetric Load
(d)	Ambient Temperature	50 Deg Celsius
(e)	Humidity	95 %
Specification of the Weigh Bridge		
(a)	Type of Weigh Bridge	Rail Axle weigher
(b)	Weighing Capacity	Wheel 40 and wagon 150 ton
(c)	Load cell	Strain gauge
(d)	Type of Weighing	Individual axle based
(e)	Weighing	Dynamic
(f)	Direction of Weighment	Bi Direction
(g)	Type of Wagon	Any type
(h)	No of Axles	4 or 2
(i)	wheel Load	40 ton T (Maximum)
(j)	Calibration	Automatic
(l)	Increment	Selectable 5/10/ 20 /50 /100 Kg
(m)	Accuracy	+/- 1 % FSR
(n)	Power Supply	230 V, + /- 10 %, single phase 50 Hz

File No.RDSO-MW0CS(WB)/4/2024-O/o PED/SW/RDSO

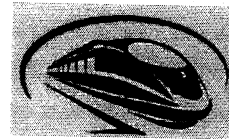


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ALMS SYSTEM BLOCK DIAGRAM



File No.RDSO-MW0CS(WB)/4/2024-O/o PED/SW/RDSO

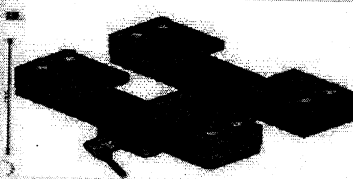


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Sensor and Sensor Mounting :

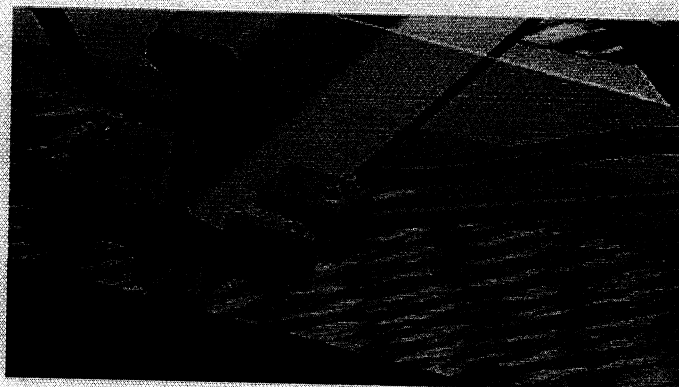
II

SENSOR FIXTURE

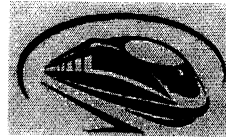


II

HOW TO FIX THE SENSOR



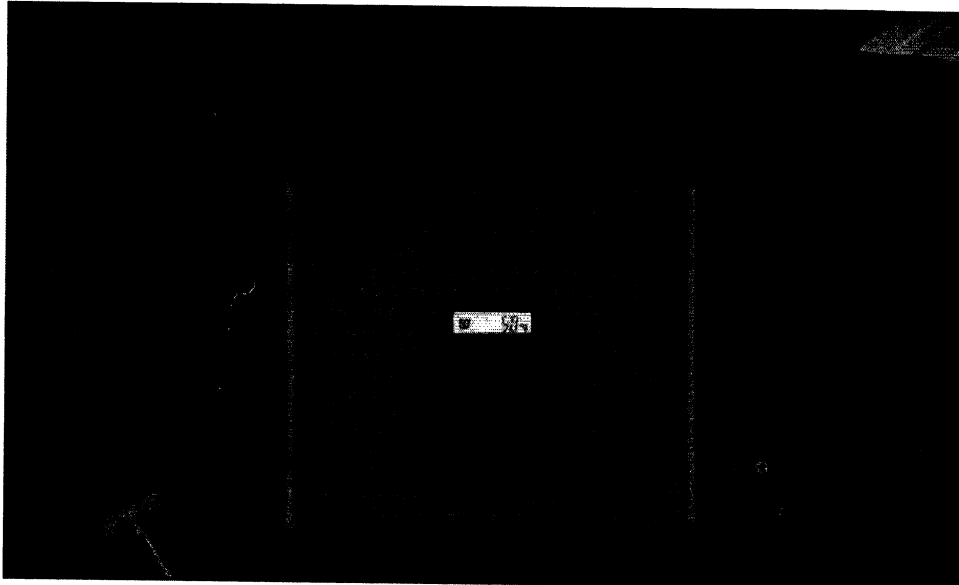
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Digitizer & Junction Box:

Each Weigh Bridge will have independent Digitizers for processing the signal generated by the strain gauges and that by track switch logic. The Digitizer will be housed in a sheet metal fabricated panel suitably reinforced. The panel will be of floor mounting type and will be of dust and vermin proof and will conform to IP: 55 protection class .A block diagram of the processor is enclosed.



The Digitizer will have microcontroller-based circuitry with solid state integrated circuits to effect fast and reliable operation. The Digitizer is constructed to the highest international standards, embodies the latest techniques and utilizes the best components to ensure the highest possible reliability and integrity, even when used in harsh industrial environment. . The system can operate over a wide temperature range without affecting the accuracy and reliability the multiprocessor technology of the system allows independent processing of weight, rack logic and communication ensuring

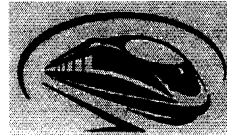
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fast and accurate weighment. The system automatically monitor movement of wagon to initiate weigh cycle. Wagon movement on the Weigh Bridge is identified Power Supply to the Digitizer will be 230V, (+) / (-) 10 %, 50 Hz, Single phase AC. A Voltage stabilizer / Line Conditioner will also be provided. The other features, facilities are detailed below.

- Modular construction
- Analog digital converter with filter
- RFI /EMI signal protection to provide a high level of signal integrity even in harsh Industrial environment.
- Automatic zero maintenance.
- Diagnostic facility
- Auto calibration
- Built in surge arrester for protection electronic circuits.
- 25 mm digital display and real time clock to display date and time or no display in case wireless RS 232 interfaces
- Option for operation of Weighing System with the help of Digitizer without the help of PC or Tablet PC
- Pass Word Protection
- Auto / manual mode of operation of the system.
- All the control logic in the system will be achieved through semi conductor devices and will be free of relay logic

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Special Features :

- Dynamic Portable wheel weighing system
- Easy to install without cutting rail .
- Plug and Play technology.
- Can measure wheel weigh with asymmetric load on LH & RH wheel or Bogie
- Dual supply Battery / 230V AC supply
- Increase the measuring speed up to 10kmph
- improved accuracy even at higher speed up
- Modular in design .
- Cloud based software
- Modular add on software like remote calibration and health monitoring facility .
- Enhanced wagon capacity of 150 ton or more .
- Easy to install (Plug and Play Technology)
- Un cut rail to avoid derailment and accident
- Install any where and any time
- Quick to deploy and remove for make shift arrangement

File No.RDSO-MW0CS(WB)/4/2024-O/o PED/SW/RDSO



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Specification :

- Axle load $10 \div 400$ kN ($\sim 1 \div 40$ t)
- Weighing accuracy (on wagon basis) $\pm 1\%$ W&M Certified product .
- Speed measurement accuracy 1%
- Electric supply 230 (190-250) V; 50/75 Hz or Battery powered
- Electric power consumption max. 150 VA (during measurement)
- Operational temperature range $-25^{\circ}\text{C} \dots +60^{\circ}\text{C}$
- Module environmental protection IP67
- Minimal lifetime 10 years
- MTBF 10.000 hrs.
- Wheelbase 700 mm min.
- Wheel diameter 350 – 1250 mm
- Rail type (UIC) 48, 49, 54, 60
- Railroad sleeper distance 580-650 mm
- Internal accumulator capacity 12Ah
- Operating time in case of power failure 20 min

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SCOPE OF SUPPLY FOR PORTABLE DYNAMIC AXLE WEIGHING SYSTEM:

SR.NO	DESCRIPTION	QUANTITY
1	ALMS DYNAMIC Rail Axle Weigh Weighing System	1 No
2	Digitizer -PORTABLE	1 No
3	Junction Box	1 No
4	All required cables and conduits will be supplied.	1 SETS
5	Wheel Weighing Working Software and tablet	1 No
6	Installation, Commissioning of the weigh bridge	1 No

PRICE FOR PORTABLE DYNAMIC AXLE WEIGHING SYSTEM

SUPPLY OF ITEMS				
ITEMS	PRODUCT DETAILS	QTY	UNIT PRICE- INR	TOTAL PRICE- INR
01	ALMS Portable Dynamic Rail Wheel Weighing System consisting of 2 Wheel in Axle Configuration. Shall able to display LH and RH Wheel Weight along with Axle weight.	1 Sets	21,85,000.00	21,85,000.00
02	ALMS Tab Master Software with Tablet and Android PC	1 No	3,00,000.00	3,00,000.00
	TOTAL		24,85,000.00	24,85,000.00

RUPEES : TWENTY FOUR LAKH EIGHTY FIVE THOUSAND ONLY

File No.RDSO-MW0CS(WB)/4/2024-O/o PED/SW/RDSO


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TERMS AND CONDITION:

GST	18 % Extra HSN Code: 84239020
Price	EX –Works, Chennai
Transportation	Customer Scope.
Packing and forwarding	Inclusive
Transit Insurance	Customer Scope.
Delivery	8 Weeks
Warranty	12 months from the date of invoice against manufacturing defects
Terms Of Payment	80% Advance & balance 20 % against receipt of material at site
Validity of the offer	60 days from the date of this quotation.
Installation	<ul style="list-style-type: none"> • We will supervise the installation of System at your site and hand over the same in good working condition. • You will have to provide us with unskilled labor, welder if required. • Civil Work if required will be customer scope, however we will submit the civil drawing. • Test weight for calibration at the time of Installation will be customer scope. • Boarding & lodging for in Installation Engineer will be customer scope. • Gate pass & internal transportation will be customer scope.

Thanking you and always assuring you of our best services, we remain.

FOR RAILMET TECHNOLOGIES PVT LTD**AUTHORIZED SIGNATORY**

File No.RDSO-MW0CS(WB)/4/2024-O/o PED/SW/RDSO



weighbridge rdso <weighbridge.general.rdso@gmail.com>

Fwd: POWERVE technical meeting

arvind kumar <arvindirsme10@gmail.com>

To: rituraj.rdso09@gmail.com, pv6575@gmail.com, weighbridge rdso <weighbridge.general.rdso@gmail.com> Tue, Aug 12, 2025 at 3:11 PM

pl make compile position to RB as advised by ED sir

----- Forwarded message -----

From: **Sajeev PM** <sajeev6550@gmail.com>

Date: Tue, Aug 12, 2025 at 1:30 PM

Subject: Fwd: POWERVE technical meeting

To: arvind kumar <arvindirsme10@gmail.com>

Dear sir,

Please find trailing mail for your reference.

Regards,
Sajeev

----- Forwarded message -----

From: **Kami Alavi** <kamran.alavi@outlook.de>

Date: Mon, 11 Aug 2025 at 11:15 AM

Subject: AW: POWERVE technical meeting

To: rituraj Kumar <rituraj.rdso09@gmail.com>, arvindirsm10@gmail.com <arvindirsme10@gmail.com>

Cc: francesco mannara <francescomannara@gmail.com>, sajeev6550@gmail.com <sajeev6550@gmail.com>

Dear Mr. Kumar, dear Mr. Arvin,

I would like to thank you for the constructive meeting last week and your valuable interest in IVMtech solution "POWERVE", a cutting-edge hand-portable weighing solution for precise and efficient wheelset force measurement. We hope, we could clarify your open points accurately.

Please find attached the technical description and specifications of the POWERVE system. To ensure you receive a configuration that perfectly matches your operational needs and delivers maximum value.

We offer the following commercial configurations:

- **POW2X** – 2 Wheelset Kits (each measures, simultaneously, the vertical forces of both wheels of a wheelset) + 1 Control System
- **POW3X** – 3 Wheelset Kits + 1 Control System
- **POW4X** – 4 Wheelset Kits + 1 Control System
- **POW6X** – 6 Wheelset Kits + 1 Control System

To support your decision-making, I would be happy to provide:

- An indicative price per Wheelset Kit

File No.RDSO-MW0CS(WB)/4/2024-O/o PED/SW/RDSO

- An example fixed offer for the POW2X configuration

Sl. No.	Description	Qty	Unit Price	Total Price
10	POWERVE Wheelset Kit (WK, each unit allows to measure the 2 wheels of a wheelset) – Includes calibration of the load cells as per ISO 376 – in compliance with ISO 17025 calibration process.	2,0	22.000,00	44.000,00
20	POWERVE Control System (CS) – Includes Smart Cloud platform to manage and analyze the measurements.	1,0	2.000,00	2.000,00

Total Net Price	€ 46.000,00
VAT	€ 0,00
Total Price	€ 46.000,00

NOTE: Additional Wheelset Kits (WK) can be purchased to extend at anytime the system configuration to POW3X-POW4X and POW6X.

Moreover, the following optional items can be offered:

Sl. No.	Description	Qty	Unit Price	Total Price
30	SAT with technical training on-site. The fee includes 1 engineer on-site for 1-2 days.	1,0	3.000,00	3.000,00
40	Shipment at customer address, including insurance	1,0	800,00	800,00

If you have any questions or would like clarification on any point, please feel free to reach out to me directly.

We look forward to receiving your preferred configuration and would be glad to prepare a binding offer for you promptly.

Warm regards,
Kamran Alavi

Von: Kami Alavi

Gesendet: Montag, 4. August 2025 09:33

File No.RDSO-MW0CS(WB)/4/2024-O/o PED/SW/RDSO

An: arvindirsm10@gmail.com <arvindirsme10@gmail.com>; sajeev6550@gmail.com <sajeev6550@gmail.com>

Cc: francesco mannara <francescomannara@gmail.com>; rituraj Kumar <rituraj.rdso09@gmail.com>

Betreff: POWERVE technical meeting

Zeit: Dienstag, 5. August 2025 08:00-08:30.

Ort:

Dear all,

Please find below the link to our upcoming technical meeting regarding the POWERVE System and its potential applications for Indian Railways.

To ensure better preparation and a more productive discussion, feel free to share your insights or points in advance.

Thank you in advance.

POWERVE Technical Meeting

Dienstag, 5. August · 8:00 bis 9:00AM

Zeitzone: Europe/Berlin

Google Meet-Teilnahmeinformationen

Link für Videoanruf: <https://meet.google.com/boj-pvfq-ami>

File No.RDSO-MW0CS(WB)/4/2024-O/o PED/SW/RDSO

KLOVERTEL 
Takes You Forward**KLOVER TEL PRIVATE LIMITED**A-41, Mohan Cooperative Industrial Estate
New Delhi 110044 India
GSTIN 07AABCC9560B1ZW**Quote**

Quote# KTPL/25-26/015

To
Shri Ajit Kumar Singh
Executive Director/Wagon
Research, Designs and Standards Organisation (RDSO),
Manak Nagar,
Lucknow-226011
India
GSTIN 09AAAGM0289C1ZHQuote Date : 13/08/2025
Expiry Date : 12/10/2025
Reference# : Meeting dt. 12/08/2025
Sales person : Kalpesh Kansagara
Division : KTPL – Railways

Subject: Budgetary Quote for Mobile Train Weighing and Balancing System

OPTION 1:

#	Item & Description	MOQ	Unit Rate	Amount
1	MTW Four Axle Static Wireless (S8W) Including the one-time demonstration of installation and training at the site	1.00	97,68,619.00	97,68,619.00
Sub Total				97,68,619.00
IGST18 (18%)				17,58,352.00
Total				₹1,15,26,971.00

OPTION 2:

#	Item & Description	MOQ	Unit Rate	Amount
1	MTW Single Axle Static & Dynamic Wireless (S2) Including the one-time demonstration of installation and training at the site	1.00	34,47,130.00	34,47,130.00

Klover Tel Private Limited
A - 41 Mohan Cooperative Estate
New Delhi - 110044, India
Email: info@klovertel.comGST No: 07AABCC9560B1ZW
CIN: U64202DL2002PTC117268
Web: www.klovertel.com
Tel: +91-11-411611248

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Sub Total	34,47,130.00
IGST18 (18%)	6,20,483.00
Total	₹40,67,613.00

Special Remark: The offered product cannot be used for commercial weighing or billing. It is for the captive, quality and safety usage only.

Note:

- Due to the unique design of the MTW, adjustments can be made for each load cell's height. This allows the user to level the MTW systems against each other to provide a level weighing area. Especially useful in areas where the track is not calibrated to a level.
(this is available to level lines up to approximately 10mm out of tolerance – dependent on track wear and type)
- A minimum of 27.6 inches - 700mm of clear space (down to the foot of the rail) between sleepers is required to fit the MTW. There are exceptions to this rule & once rail size is known, we can advise.
- The offered system is designed for the mobile application, i.e. the system should be installed when the weighing of the wagon is planned, and it should be de-installed after the weighing is completed. It is not recommended to keep the system permanently installed at the site if there is a movement of rail vehicles over the system.
- The accuracy of the four axle system is $\pm 0.5\%$ in static mode.
The accuracy of the single axle system is $\pm 3\%$ under ideal conditions.
- The single axle system can be upgraded to a four axle system in the future by adding the additional load cells and frames for three more axles, without changing the controller hardware.

Terms & Conditions

Delivery: - FOR RDSO, Lucknow

Payment: - 100% payment against Proforma Invoice or 100% payable against an irrevocable and confirmed letter of credit, to be opened in favour of Klovertel Pvt Ltd at the time of ordering and to be confirmed by a nationalised Indian bank. The L/C shall be negotiable against submission of the shipping bills and dispatch documents. All charges in connection with the opening, confirmation and negotiation of the letter of credit shall be borne by the buyer.

Delivery Time: - 16 weeks after the receipt of Purchase Order and approval of technical documents.

Warranty: - The warranty period is 12 months after dispatch of the goods.

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File No.RDSO-MW0CS(WB)/4/2024-O/o PED/SW/RDSO

KLOVERTEL 
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- Neither party shall be liable for any failure or delay in the performance of its obligations under this agreement if such failure or delay is caused by events beyond the reasonable control of the affected party, including but not limited to natural disasters, pandemics, acts of war, terrorism, civil unrest, government actions, or any other event deemed force majeure. If the event persists for more than 60 days, either party may terminate the agreement without any penalty.

2. Geopolitical and War Clause

- In the event of war, civil war, armed conflict, or similar disruptions impacting the execution of the contract, including trade embargoes, political sanctions, or cross-border restrictions, the obligations of both parties shall be temporarily suspended. If such circumstances continue for more than 90 days, either party reserves the right to terminate the contract without liability.

3. Payment Terms and Delays

- Payments shall be made as per the agreed schedule. Any delay in payment beyond 30 days from the due date will attract an interest of 1.5% per month. In case of non-payment beyond 60 days, the supplier reserves the right to suspend deliveries or terminate the contract.

4. Warranty and Liability

- The warranty covers manufacturing defects and faulty workmanship for a period of 12 months from the date of dispatch. The supplier's liability under warranty is limited to repair or replacement of defective parts. The supplier shall not be liable for indirect, incidental, special, or consequential damages, including loss of revenue, profit, or business opportunities.

5. Confidentiality

- Both parties agree to treat all information exchanged during the execution of this contract as confidential and shall not disclose it to third parties without prior written consent.

6. Intellectual Property Rights

- All intellectual property developed during the project shall remain the property of the supplier unless otherwise agreed in writing.

7. Dispute Resolution

- In case of any dispute arising out of this contract, the parties agree to first attempt mediation. If unresolved, disputes shall be referred to arbitration under the Indian Arbitration and Conciliation Act, 1996.

8. Termination Clause

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- Either party may terminate the agreement with 30 days' written notice if the other party fails to fulfill its contractual obligations and does not remedy the breach within the notice period.

9. Limitation of Liability

- The liability of the supplier, whether in contract, tort, or otherwise, arising out of or in connection with the performance of the contract, shall not exceed the total value of the contract. The supplier shall not be liable for indirect, incidental, special, or consequential damages, including loss of revenue, profit, or business opportunities.

10. Governing Law and Jurisdiction

- This contract shall be governed by and construed in accordance with the laws of the Republic of India. Any disputes arising out of or in connection with this contract shall be subject to the exclusive jurisdiction of the courts of New Delhi, India.

We hope that our offer is in line with your requirements and would be pleased to receive your firm order at the earliest.

Should you need any further information please feel free to contact us.

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