

Bielsko-Biała, 03.11.2023

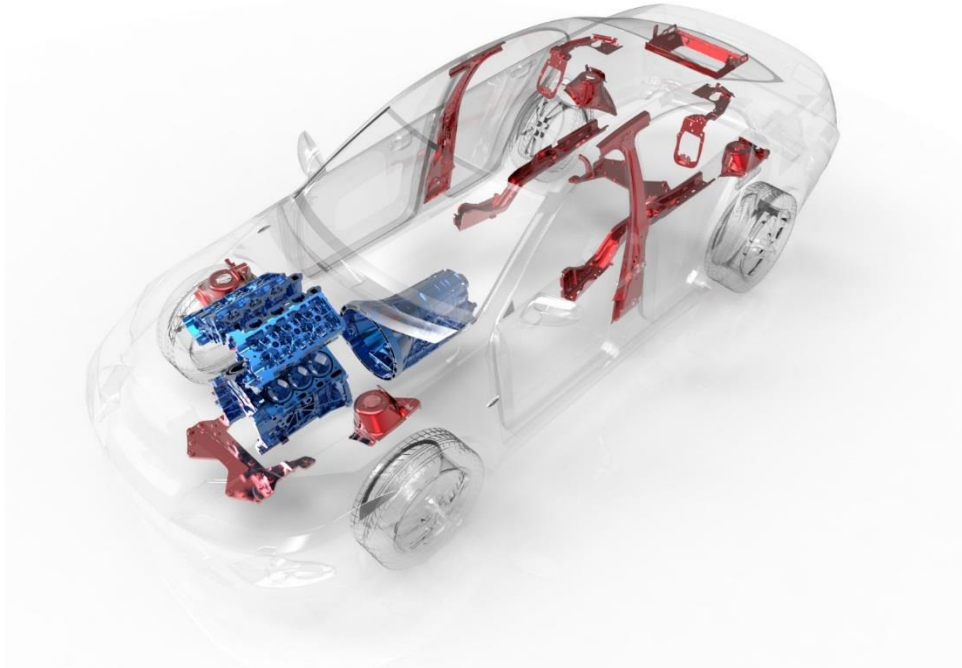
REQUEST FOR QUOTATION

Nemak POLAND sp. z o. o. Bielsko-Biała, in connection with the submission of the application for funds from the National Recovery Fund (NRF) within the competition A 2.1.1. *Investments supporting robotization and digitization in enterprises*, invites to submit an offer for:

Industrial washer code CPV: 42995000-7

Performance Specification

MO-2023-009 v1.1 EN



The equipment described here in below is procured for:

NEMAK POLAND
43-300, Bielsko-Biała
ul. Komorowicka 53
Poland

"Notes"

In this Technical Specification, the plant is named "NEMAK SITE".

BMW/Daimler Washing Machine

Information category: Confidentiality – Public Information

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1. History

Table 1: History of the Performance Specification BU NEMAK EUROPE versions

Document index:	Date	Person responsible	Note / Revisions
1	25.02.2020	Zauner Sascha	Date of completion

Table 2: History of the Performance Specification Project related

Document index:	Date	Person responsible	Note / Revisions
1	24.05.2023	Marcin Orlinski	

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2. General information

Beside the Technical Specification of BU NEMAK EUROPE and the additional requirements from NEMAK SITE this Performance Specification shall form the **basis for quotations submitted for procurement of appliances, machines, production lines, tools and services** supplied and provided to NEMAK SITE.

When a purchase order is issued this Performance Specification form a legally binding integral part of the contract.

All and any non-conformity with this Performance Specification shall require prior written approval of NEMAK SITE and/or BU NEMAK EUROPE. Verbal agreement shall be considered **not binding**.

All and any change to this Performance Specification may only be made by project manager of NEMAK SITE. Transmission or reproduction, in part or in full, shall require express written approval of project manager of NEMAK SITE.

Compliance with the minutes, the Performance Specification, the Technical Specification and the resources rulebook of NEMAK SITE and/or BU NEMAK EUROPE, and the generally accepted technical rules and standards as well as the state of the art is essential. The entire scope of work shall conform to the laws, ordinances and standards (EN, DIN, ISO) applicable **at the site of use (NEMAK SITE)**, compliance with the rules and regulations of the trade and professional associations (e.g. VDE / VDI) is essential.

The following shall prevail and be applicable in the event of inconsistency, in the order given:

Table 3: Order of validity

1.	Capex protocol
2.	Requirement and Performance & Technical Specifications and the current resources rule book of the BU NEMAK EUROPE and NEMAK SITE
3.	Supplier's offer
4.	National laws, ordinances and regulations applicable at the site of installation or use
5.	Standards (EN, DIN, ISO)
6.	Rules and regulations of the trade and professional associations (e.g. VDE/VDI)
7.	Generally accepted technical rules and standards as well as state of the art

In case of violation of contractual and legal provisions, we reserve the right to take all and any legal action. The soonest delivery date practical shall be indicated in the offer. Designs differing from those specified in this Performance Specification may only be submitted as separate quotations.

Additions are only accepted if they are approved in writing by the Project Manager of NEMAK SITE or asked for in writing by Procurement of NEMAK SITE. Deadlines for submission of offers must be met. NEMAK SITE reserve the right to disregard offers submitted late.

Access to the full content of the request for quotation, including details of the requirements, may take place after the bidder signs the Confidentiality Agreement. Attachment No. 5 - Confidentiality Agreement.

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2.1 Conditions of participation in the proceedings

Only supplier with experience in manufacturing of washing machines which quarantine cleanliness requirements as specified in this RFQ are admitted to attend this quotation process

The rules of participation in the procedure are included in the document: **CC_CAP-23-0xx - BMW_DAIMLER - Industrial washer**

2.2 Material provisions of the contract and conditions for changing material provisions of the contract

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The provisions of the contract are specified in the document: **Attachment No. 4 - Contract Template**

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2.3 Conditions for possible withdrawal from the RfQ process

Nemak Poland sp. z o. o. may withdraw from concluding the contract if:

- there has been a significant change in circumstances which means that the performance of the contract is no longer in the company's interest, and it could not have been predicted in advance.
- public funds which Nemak Poland sp. z o.o. intended to finance all or part of the contract were not awarded.

Bidders are not entitled to any claims due to the Purchaser's withdrawal from concluding the contract. It is not possible for the bidder to withdraw from concluding the contract.

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2.4 Criteria for evaluating offers:

The offer with the highest number of points (TOTAL) will be selected according to the following rules:

Evaluation criteri*	Supplier 1			Supplier 2			Supplier 3		
	weight 1-5	assesement 0-4	points	weight	assesement	points	weight	assesement	points
Final price	5		0			0			0
Maintenance cost	1		0			0			0
Energy efficiency of the system	5		0			0			0
Proposed Solution Robustness	4		0			0			0
Flexibility of the system	3		0			0			0
Layout matching	4		0			0			0
Technical evaluation	5		0			0			0
Delivery terms (incoterms)	2		0			0			0
Delivery time	2		0			0			0
Payment terms	2		0			0			0
Expirirnce in similar projects	5		0			0			0
Financial stability	3		0			0			0
			TOTAL : 0			0			0

The selected offer (name and address of the selected contractor, net price) will be published on the website <https://www.nemak.com/suppliers/?sc=0#suppliersWelcome>

The selection of the offer will be documented in a report (available at the request of the bidder), with the exception of some offers constituting a business secret.

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2.5 Information about point weights assigned to individual assessment criteria

Evaluation criteria (element/no.of points):

		Waga
Final price	4 - lowest price	5
	3 - second lowest price	
	2 - third lowest price	
Maintenance cost	4 - Lowest estimated cost	1
	3 - Second-lowest estimated cost	
	2 - Third-lowest estimated cost	
	0 - Estimated costs unacceptable	
Energy efficiency of the system	4 - Lowest energy consumption costs among technical solutions	5
	3 - Second-lowest energy consumption costs	
	2 - Third-lowest energy consumption costs	
	0 - Unacceptable energy consumption costs	
Proposed Solution Robustness	4 - Highest-rated solution reliability	4
	3 - Second-highest-rated solution reliability	
	2 - Third-highest-rated solution reliability	
	0 - Unacceptable solution reliability	
Flexibility of the system	4 - Highest-rated solution universality	3
	3 - Second-highest-rated solution universality	
	2 - Third-highest-rated solution universality	
	0 - Unacceptable solution universality	
Layout matching	4 - Device perfectly meets installation requirements	4
	3 - Device meets requirements with minor deviations	
	2 - Device meets requirements with major deviations	
	0 - Device does not meet requirements	
Technical evaluation	4 - the highest no. of point from TE	5
	3 - second highest no. of point from TE	
	2 - third highest no. of point from TE	
	0 - offer not technically not accepted	
Delivery terms (incoterms)	4 - DDP	2
	1 - EXW	
Delivery time	4 - delivery time xx weeks earlier than indicated in RfQ	2
	3 - delivery time acc. to required in RfQ	
	1 - acceptable delivert delay (Nemak acceptance required)	
	0 - not acceptable delivery delay	
Payment terms	4 - more than 60 days	3
	3 - 60 days	
	2 - 30 days	
	1 - płatności ratowe	
Expirinice in similar projects	4- washing machine of components with similar size and more strict cleanliness requirement	5
	3 - washing machine of components with similar size and cleanliness requirement as stated in this RfQ	
	1 - washing machine of smaller components and cleanliness requirement as stated in this RfQ	
	0 - no expirience in cleaning components acc. to cleanliness requirements stated in this RfQ	
Financial stability	4-	2
	3 -	
	2 -	
	1 -	

* if any of evaluation criteria is 0 offer can't be considered

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2.6 Description of the method of awarding points for meeting a given offer evaluation criterion

Number of points = weight x evaluation

Weight – defined individually for each investment

Evaluation – according to table "Principles of evaluation of offers"

TOTAL = *sum of all evaluation criteria*

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3. Project Organization

3.1 Contact for Project Coordination

Marcin Orliński

Automation Leader

Poland | Nematik Europe

+48334847104 +48604121557

marcin.orlinski@nemak.com

Department	Contact Person	Extension
Project Manager	Przemysław Borowski	
Purchasing	Iwona Darlak	
Plant Engineering	Marcin Orliński	
Electrical Engineering		
Software Engineering		
Maintenance		
Production area		
Quality		
HSE		
Energy		
Environmental		

3.2 Project Timing

Milestone	Date	Calendar week
Due date for offer:	04.12.2023	CW 49/2023
Delivery date:	25.11.2024	CW 48/2024
SOP:	7.02.2025	CW 6/2025
System handover: (Contract completion date)	7.03.2025	CW10/2025

Relevant Milestones for the contractor must be specified in the offer (e.g. nomination, technical & commercial agreement, supply of sample parts, Acceptance for delivery, ...)

The Contractor and Nematik need to develop a detailed time chart and define the fastest way to assure these date. The timing can be adjusted and postponed by the project manager of NEMAK SITE. In case of a postponement the project manager of NEMAK SITE will inform the contractor immediately.

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3.3 Delivery condition

Incoterms 2020 DDP delivered at place, NEMAK SITE

3.4 Site conditions

	Yes	No	
Site of the works			Nemak Bielsko-Biala
Building			
Setting-up location			Poland
Max. height / width of access: (Rolling shutter gate)			4m high 3,5m wide
Max. Floor load			5000 kg/m ²
Shop crane available		X	Not available
Elevator available		X	
Floor opening available		X	
Connection to low-voltage distribution board	X		400V, 50Hz, Characteristic – three phases + neutral + PE
Connection to water and sewage system		X	Max. working pressure 3 bar
Connection to compressed air supply	X		Working pressure min: 5,5Bar max 6,0Bar
Connection to centralized hydraulic system		X	
Ambient operating conditions	X		Elevated humidity up to approx.50-80%
		X	Chlorine atmosphere
		X	Dusts
		X	Chips
		X	Emulsions
	X		Noise
	X		Temperatures from 20°C to approx. 35°C
		X	Handling of molten metal
		X	Fire hazard
		X	Explosion hazard
		X	Greater-than-normal vibrations
		X	X-Rays, other radiations
		X	Radiation-sensitive facilities
		(further ambient conditions)	
		(further ambient conditions)	
Special ambient conditions (⇒ Resources rule book)			Prior to submission of an offer, it shall be agreed with the Project Manager of NEMAK SITE if the "Special ambient conditions" (refer to Resources rule book) exist.

The contractor must submit a completed connection specification including main data for media connections!

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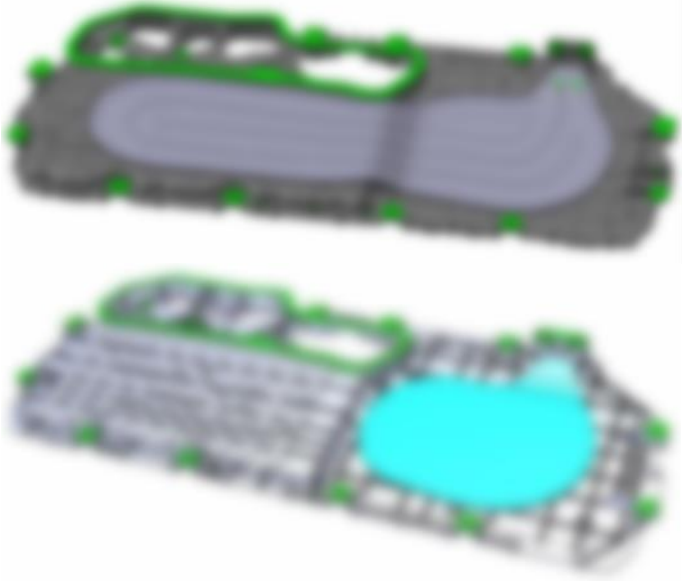
4 Scope of Work

4.1 Operating time

The offered equipment must be design for following operating time:

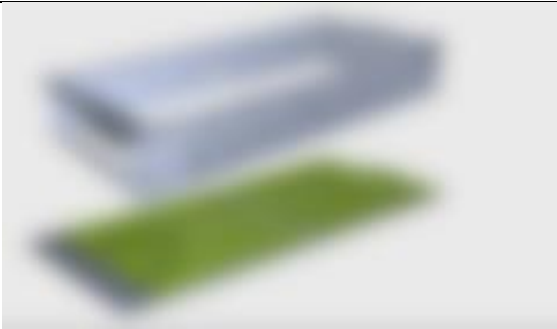
- 3 shifts per day
- 17 shifts per week
- 48 weeks per year


4.2 Description of the part(s)

BMW Penthouse	
Casting technology:	HPDC
Alloy:	
Part condition:	Part after pre-CNC machining
Part dimensions (LxWxH):	1153 mm x 409 mm x 82 mm
Part weight [kg]:	11 kg
Part Temperature [°C]:	ambient
Tolerances:	
Accuracy:	
Residual dirt:	yes
Special characteristics:	no
Basic:	
Entry:	

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Daimler 1	
Casting technology:	HPDC
Alloy:	
Part condition:	Part after final CNC
Part dimensions (LxWxH):	620 mm x 1272 mm x 189 mm
Part weight [kg]:	20 kg
Part Temperature [°C]:	ambient
Tolerances:	
Accuracy:	
Residual dirt:	yes
Special characteristics:	no
	

Daimler 2	
Casting technology:	HPDC
Alloy:	
Part condition:	Part after final CNC
Part dimensions (LxWxH):	621 mm x 728 mm x 189 mm
Part weight [kg]:	20 kg
Part Temperature [°C]:	ambient
Tolerances:	
Accuracy:	
Residual dirt:	yes
Special characteristics:	no
	

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4.3 Volumes/cycle time

Required cycle time 80s (every 80s, 3 Penthouse parts must come out/ or 2 Daimler parts)

4.4 Description of the task

The task is design and build washing machine dedicated to BMW Penthouse cooling plate project and Daimler Truck project. Washer needs to be designed as one, long device, where input will be on one side and output will be on the other side of the washer (tunnel washer). Parts must be loaded on the universal baskets/frames. Loading and unloading must be prepared for both manual and automatic loading/unloading.

4.5 Planned process flow (check washer preliminary layout)

- **Part loading (by the robot or by the operator)**
- **Pre-washing**
- **Dripping**
- **Direct washing 1**
- **Direct washing 2**
- **Cooling area washing (BMW part has additional circuit which is called “cooling area” and it must be washed/dried separately)**
- **Dripping**
- **Drying area 1**
- **Drying area 2**
- **Drying area 3 + Vacuum for cooling area**
- **Blowing (ambient air)**
- **Unloading**

4.6 Performance

Performance data	
Operating mode:	Manual / automatic
Lot size:	3 pieces on one pallet/fixture
Required cycle time:	80s per fixture
Required availability:	95 %
Required Scrap rate:	n.a.
Required OEE:	n.a.
Required output good parts:	n.a.

Machinery and equipment must be designed for a minimum term of 10 years, provided that contractually not otherwise agreed.

4.7 Layout / Space requirements

Check preliminary layout

4.8 Additional requirements / comments

- Supplier is responsible for final washer layout, attached layout is only preliminary concept of device
- Quality requirements – check attachments
- Ensure cleanliness requirements on the surface of parts
- Washer needs to be built and commission on the supplier side (to check machine functionality during pre-acceptance test)

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- Washer needs to be prepared for manual loading/unloading (safety need to be respected) as well as robot loading/unloading
- Parts must be positioned on the washer pallet/basket
- Each fixture needs to have space for 3 parts (Penthouse) or 2 parts (Daimler)
- Fixtures must be positioned to achieve repeatability of the part position (for automatic loading)
- Fixtures must be stable (they cannot swing)
- Fixtures must be universal for all kind of parts in mix
- Washer needs to recognize what kind of part was loaded on the fixture
- Parts should be fixed in vertical position
- Parts need to be placed on some sockets/hooks to avoid any mechanical clamping
- Part position must be repeatable (for robot loading/unloading and for dedicated washing)
- Pallets cannot damage/bend the parts
- Pallets need to be open from the bottom to avoid water contamination inside
- The washer needs to be sealed. All sealings need to be permanent (like welding). Silicone/glues are not allowed
- Washer chambers must be easily accessible (after opening some service doors)
- Service doors for chamber must be equipped with window (to see what kind of part is on the fixture and to check, if washing process is ongoing)
- Washing chambers need to be separated from each other (to avoid detergent transmission between chambers)
- Washer sections proposition:
 - Loading area
 - Pre-Washing (tank 1)
 - Dedicated washing 1 (tank 2)
 - Dedicated washing 2 (tank 2)
 - Cooling area washing (tank 3)
 - Dipping/blowing area
 - Rinsing (tank 4)
 - Dipping/blowing area
 - Heating 1
 - Heating 2
 - Vacuum for cooling area
 - Blowing with filtrated ambient temperature air
 - Unloading area
- Washer needs to be equipped with platform for manual working (at input and output)
- Platform must be equipped with ergonomic stairs and rails
- Part after washing need to be dry (especially inside cooling area)
- Washer needs to be equipped with necessary platforms/ladders for maintenance
- Each motor/sensor/pneumatic cylinder need to be accessible
- Both, washer and filtration unit need to be placed on the dipping pan
- Tact time of the washer (default 80s) must be regulated from OP (from 70s to 100s)
- Water temperatures must be regulated from the OP
- Operation Panel need to have one window, where all “automatic cycle start condition” signals will be visible
- All digital signals must be shown on the OP
- Washer needs to be equipped with automatic detergent refilling, separate for prewashing/washing/cooling area washing tanks
- The washer needs to be equipped with 2 operations panels. One at input, one at output
- Filtration unit must be equipped with one spare filtration circuit (one for each tank) to “bridge” circuit during filter change
- Dedicated washing section, need to be equipped with moving nozzles directed to casting cooling area
- The heating section must be well isolated. Temperature of the covers cannot be higher than ambient +10
- All pipes with hot water (outside of the washer) must be isolated
- Heat pump must be used to reduce energy consumption
- Supplier responsible for machine, process and chosen cleaning chemicals
- Station for monitoring cleanliness parameters of bath (automatic or semi-automatic or manual) to ensure proper quality of parts surface

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- Describe what parameters of bath must be monitored
- Describe how often should be change bath, scope (process of change bath must be done simple, ergonomic, energy efficient)
- Filters must ensure cleanliness of bath
- Must be choose proper oil skimmer
- Machine must be aligned with VDA 19
- Main supply scope:
 - Turnkey installation: delivery, unloading, internal transport, positioning, anchoring, commissioning, production support, trainings
 - Gates, fences
 - Electric cabinet, Operation Panel
 - CE certificate
 - Risk analysis (need to be provided to Nemak)
 - Noris connection
 - Teleassistance connection
 - PLC, OP, Robot programs (after SOP, supplier need to provide complete, editable backusp of the software)
 - Complete documentation (check specific requirements in the Technical Standards)
 - 3D models of the fixtures (all elements which have contact with the part)

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5 Content offer

The offer must include following items (for additional options the pro rate of mechanical, electrical, assembly and commissioning costs must be taken into account in the respective position):

- Project management
- Media consumption (Energy, Air, Water, etc. more information in EUR-AME-XA-0001 document)
- Pre-acceptance at contractor side
- Freight & Transport
- Installation at NEMAK SITE
- Training at NEMAK SITE (Operator + Maintenance)
- CE-Certification
- Documentation in local language NEMAK SITE
- Warranty 24 months
- AS OPTION: Tele-assistance – remote machine diagnostics
- AS OPTION: Maintenance contract for 24 months
- AS OPTION: Spare part package

Following points must be submitted with the offer:

- Detailed price schedule according NEMAK price breakdown template
- Detailed Total cost of ownership (TCO) breakdown according NEMAK price breakdown template
- Price split between part related equipment (fixtures, clamping units, grippers, ...) and non-part related equipment
- Detailed time schedule
- Description process flow
- Time study
- Layout proposal
- On-site requirements and operators

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6 Appendices to the Request for Quotation – will be shared ones NDA signed

Depending on the scope of work under the purchase order, there are further terms of reference of NEMAK SITE which apply. Unless such documents are enclosed with the Performance Specification; they can be obtained from the project manager of NEMAK SITE on request.

These include:

- Technical Specification BU NEMAL EUROPE (EUR-AME-XA-0001)
- Technical Standards of Nemak Poland rev 9.4
- Cleanness requirements
- Preliminary washer layout
- 3D models (at the request of the bidder)
- Attachment No. 4 - Contract template
- CC_CAP-23-0xx - BMW_DAIMLER - Industrial washer
- Attachment No. 3 Industrial washer_BMW_DAIMLER_rev.00

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7 Commercial condition

Acc. to : CC_CAP-23-0xx - BMW_DAIMLER - Washing machine