



Zagreb, 15.05.2020

Project number:	KK.01.2.1.01.0045
Purchase number:	05

## **TENDER DOCUMENTATION (TD)**

### **Contract notice for supply of electric motor and controller for driving hydraulics and related components**

No. 05 of procurement KK.01.2.1.01.0045

#### **1. INFORMATION ON THE CLIENT**

Name of the customer: DOK-ING d.o.o.  
Address: Slavonska avenija 22G, 10 000 Zagreb, Croatia  
PIN: 39982657045  
Internet address: <http://www.dok-ing.hr/>  
E-mail: [eunabava@dok-ing.hr](mailto:eunabava@dok-ing.hr)  
Telephone: +385 1 2481-300  
Fax: +385 1 2481-303

## 2. INFORMATION ON THE CONTACT PERSON FOR COMMUNICATION WITH THE SUPPLIERS

Communication and any other exchange of information between the Customer and the Bidder shall be effected exclusively via e-mail. All questions and clarification requests can be sent via e-mail to: [eunabava@dok-ing.hr](mailto:eunabava@dok-ing.hr)

The Customer shall respond to the request for additional information and clarifications only if sent by e-mail to the above address. For the purpose of equal treatment of all bidders, the response to the requests shall be sent to all bidders regardless of who sent the initial application or question.

## 3. COMMENCEMENT OF THE PUBLIC PROCUREMENT PROCEDURE

The date of commencement of the public tender procedure is the date of publication of the Contract Notice on the website [www.struktturnifondovi.hr](http://www.struktturnifondovi.hr)

## 4. TYPE OF PROCUREMENT PROCEDURE

An open public procurement procedure with a public Procurement Notice is applied.

## 5. DESCRIPTION OF PROCUREMENT SUBJECT

The Customer is procuring the electric motor and controller with power, signal cabling and electrical connectors.

The equipment offered must comply with the technical characteristics set out in Item 6.

The procurement is not divided into groups and all bidders must submit one bid for all components. Partial bids will not be accepted. The submitted bid must include all items, the total price and separate prices for each of the offered components.

### Procurement subject:

1. Electric motor with power, signal cabling and electrical connectors	
Electric motor with power, signal cabling and electrical connectors Phi-Power PH.381.4.3.1.001 Spline shaft sealed PowerLok or „Equivalent“	1 pc.
Datasheets	attach a document with the offer
Installation and/or user manual	attach a document with the offer
3D model (STEP or IGES)	attach a document with the offer
*Equivalent items must comply to the technical specifications as defined in point 6.1	

**2. Electric motor controller (inverter) with power, signal cabling and electrical connectors**

Electric motor controller (inverter) with power, signal cabling and electrical connectors Cascadia Motion PM100DZ inverter or „Equivalent“	1 pc.
Datasheets	attach a document with the offer
Installation and/or user manual	attach a document with the offer
3D model of the device	attach a document with the offer
*Equivalent items must comply to the technical specifications as defined in point 6.2	

Call for project proposals is published in Croatian and English, and in accordance with the above-mentioned, technical specifications shall be in Croatian and English for the purpose of achieving equal treatment of all potential bidders and a clear understanding of all points of the technical specifications.

**6. TECHNICAL SPECIFICATIONS****6.1 Electric motor with power, signal cabling and electrical connectors****Table 1. – Technical specification of the electric motor**

Type	Permanent magnet synchronous motor
Rotor configuration	Inrunner
Min. torque vs speed characteristics	
Current form	AC
Min. DC BUS voltage	≤ 700 V
Max. Current	≤ 600 Arms
Feedback sensor	Integrated resolver
Cooling	Glycol-water mix 50/50 ratio
Maximum dimension	max. length 115 mm (Without shaft), max. diameter 380 mm (Body max diameter excluding terminal box and coolant manifold), max. diameter 500 mm (Without connection box)

Max. weight:	38 kg (Dry complete with shaft)
Ambient temp. range	-20 to 90 °C
Operating temperature	≥ 170 °C
Mounting	Eight M10x1,5 holes on front and back of the housing
Shaft connection	Sealed shaft version, BS 3550: 1963, fillet root, side fit, pitch = 16/32, No of splines = 27, pressure angle =30°, pitch diameter = 1.6875"
IP protection	IP67

## 6.2 Electric motor controller (inverter) with power, signal cabling and electrical connectors

**Table 2. – Technical specification of the electric motor**

Minimal input supply voltage	≤ 500 V
Maximum input supply voltage	≥ 820 V
Continuous output current (RMS)	≥ 150 A
Peak maximum output current	≥ 200 A
Peak output power	≥ 100 kW
Maximum dimensions	max. length 200 mm, max. width 320 mm, max height 90 mm
Communication interface	CAN
Operating temperature range without derating	-40 – 80 °C
Weight	≤ 8 kg
Ingress protection	At least IP67
Maximum HV cable diameter	≥ 16 mm

For the subject of the procurement, for all (sub) items/descriptions/referring to the place which may be affixed to a trademark, patent, type, norm or specific origin, the Bidder may offer "equivalent" to the requested or specified and Customer will accept other equivalent quality assurance measures, but in that case the Bidder must enclose proof of equivalence (catalog, manufacturer or the like). "Equivalent" is all off offered that is not within the prescribed description but meets the minimum technical characteristics of the required (sub) items. Where applicable, the characteristics must correspond to the defined ones, with the deviation up to +/- 1%, unless the range is otherwise defined by the Customer.

## 7. EVALUATION CRITERION

The successful Bidder selection criteria shall be the most economically advantageous bid (best value for money).

**Selection criteria:**

- Failure to fulfill the technical specifications as defined in point 6.1 – 6.2 leads to direct exclusion of supplier from the tender.

Evaluation criteria of the selected bidder	Score
Price	40
Delivery period	40
Product warranty	20
Total	100

The calculation of the scores of the price is done according to the following formula:

- $X_c = (C_n / C_x) \times 40$
- $X_c$  – score number of the evaluated bid
- $C_n$  – lowest tender price
- $C_x$  – price of the evaluated bid
- 40 - maximum score number

The calculation of the scores of the delivery period is done according to the following formula:


- $X_{ri} = (R_{ln} / R_{lx}) \times 40$
- $X_{ri}$  – score number of the evaluated bid
- $R_{ln}$  – lowest tender delivery period
- $R_{lx}$  – delivery period of the evaluated bit
- 40 - maximum score number

The calculation of the scores of the product warranty is done according to the following formula:

$$X_g = (C_{gx} / C_{gn}) \times 20$$

- $X_g$  – score number of the evaluated bid
- $C_{gx}$  – product warranty of the evaluated bid
- $C_{gn}$  – longest offered product warranty
- 20 - maximum score number

For the subject of the procurement, for all (sub) items/descriptions/referring to the place which may be affixed to a trademark, patent, type, norm or specific origin, the Bidder may offer "equivalent" to the requested or specified and Customer will accept other equivalent quality assurance measures, but in that case the Bidder must enclose proof of equivalence (catalog, manufacturer or the like). "Equivalent" is all off offered that is not within the prescribed description but meets the minimum technical characteristics of the required (sub) items. Where applicable, the characteristics must correspond to the defined ones, with the deviation up to +/- 1%, unless the range is otherwise defined by the Customer.

 <b>DOK-ING</b>	<b>TENDER DOCUMENTATION (TD)</b>	<b>FRM-PCH-06</b>
		<b>Rev.01</b>
		<b>18.11.2019.</b>

## 8. PREPARATION AND SUBMISSION OF BIDS

The bid shall be submitted in Croatian or English and in Latin script. When preparing the bid, the Bidder shall adhere to requests and requirements from the subject Tender Documents. The bid must contain the following as a minimum:

1. Full name of Bidder, address and contact person
2. Unit prices quoted for each subject of procurement, according to item 5 and total price
3. Terms of payment
4. Prices are expressed without value added tax (VAT) and transport cost. The offer price is expressed in currency of Croatia, Croatian Kuna (HRK) or Euro (EUR) and is written in numbers. In the event that the bidder submits a price expressed in Euro (EUR), it will be converted into Croatian Kuna, according to the middle exchange rate of the Croatian National Bank (CNB) valid on the day of publication of the Tender Documents. The offer price is unchanged during the term of the procurement contract.
5. Product warranty for each subject of procurement are expressed in month and in whole numbers (e.g. 24, 25, 26...)
6. Technical specification of quoted items where is visible that offered procurement subjects meet technical specification requested in Item 6.

The proposal shall be submitted electronically, by e-mail to the address given in Item 1 of this call for bids.

## 9. DEADLINE FOR SUBMISSION OF BIDS

The deadline for submission of bids is 8 calendar days from the date of publication of this Notice at [www.strukturnifondovi.hr](http://www.strukturnifondovi.hr)

## 10. DELIVERY PERIOD OF THE PROCUREMENT SUBJECT

The delivery period shall commence immediately after signing the contract / Purchase Order.

## 11. MODIFICATION OR WITHDRAWAL OF SUBMITTED BIDS

The Bidder may change or withdraw their bid before the deadline for submission

If a modification or amendment to the bid is submitted, it must be submitted in the same way as the original proposal, indicating that this is a change / addendum to the proposal.

## 12. VALIDITY OF BIDS

The validity of bids must be at least 60 days after the deadline for submission.

## 13. SELECTION OF THE MOST ADVANTAGEOUS BID

The deadline for the evaluation of bids and the decision on a successful bidder is 10 working days after the deadline for submitting the proposal. The bidders shall be informed on the decision within that deadline.

**Public procurement: Ivanka Serdarušić**