



INVITATION TO TENDER FOR SOLE SUPPLY CONTRACT

TENDER SUMMARY AND ADDITIONAL TENDER REQUIREMENTS

The FIA's objective is to select an exclusive supplier whose task will be to ensure the production and delivery of the **Fuel Flow Meters** in the 2021, 2022 and 2023 seasons of the FIA Formula One World Championship (hereafter referred to as "the Championship").

For reasons related to the regulatory stability of the FIA Formula One World Championship, the FIA may decide, at its absolute discretion and at the latest by 31 December 2022, that the exclusive supply contract may be extended to the 2024 and/or 2025 seasons of the Championship. All bidders are invited to confirm that they would be prepared to accept such an extension if required by the FIA.

Interested parties are hereby invited to tender to become the exclusive supplier of the **Fuel Flow Meters** for the Championship.

The selected tenderer will be invited to enter into a contract with the FIA that will establish the terms of the tenderer's appointment as exclusive supplier. The exclusive supplier will supply the product directly to the teams (not to the FIA) under terms and conditions to be agreed.

Bids must be submitted to the FIA Administration by e-mail to the following address: tenderingprocedure@fia.com, in accordance with the FIA's "Invitation to Tender for sole supply contract - tendering instructions" available on the FIA's website: www.fia.com, apart from article 1.1.8 and article 3 which will not apply to the present invitation to tender.

Bids will be evaluated on the basis of the criteria and information mentioned below under "Additional Requirements".

The FIA reserves the right at any time, without giving reasons therefore and at its sole discretion, to amend, modify or terminate this invitation to tender and the timeline below (including doing a further round of bids among all or part of the tenderers) and/or to issue a new invitation to tender. Moreover, the FIA reserves the right, without giving reasons therefore and at its sole discretion, not to select any tenderer and/or not to enter into a contract with the selected tenderer.

Publication of invitation to tender:

5 February 2020

Tender submission date:

13 March 2020

Notification of decision:

Mid-April 2020

ADDITIONAL REQUIREMENTS

1. CRITERIA

Among other elements mentioned in these “Additional Requirements”, bids will be evaluated on the basis of the following criteria:

- Technical specifications (Appendix II) with a special focus on anti-aliasing feature and encryption;
- Robustness, quality and reliability of the Product;
- Special Conditions of the Draft Contract (only minor amendments to these Special Conditions can be accepted);
- Pricing of the Product;
- Any other applicable regulations, sporting equity, industry expertise, safety and cost reduction.

In addition, the FIA may consider the commitments, actions, credibility and experience from the tenderer in favour of a more sustainable motorsport and mobility.

2. TECHNICAL INFORMATION

Tenderers are invited to fill in the specifications table contained in Appendix II.

3. DUE DILIGENCE

In the context of this invitation to tender, tenderers are also invited to fill in the “Questionnaire Compliance – Due Diligence” attached in Appendix VI.

The FIA reserves the rights to carry out further due diligence, including financial due diligence, on the tenderers and their considered sub-contractors.

DRAFT CONTRACT FOR SUPPLYING FUEL FLOW METERS
IN THE 2021, 2022 AND 2023 FIA FORMULA ONE WORLD CHAMPIONSHIP

BETWEEN

THE FEDERATION INTERNATIONALE DE L'AUTOMOBILE (FIA)

8 Place de la Concorde

75008 Paris

hereinafter referred to as the "**FIA**"

ON THE ONE HAND,

AND

[•]

hereinafter referred to as the "**PROVIDER**"

ON THE OTHER HAND.

Hereinafter together referred to as the "**PARTIES**".

PART 1 - GENERAL CONDITIONS

RECITALS

- (A) The FIA's authority in relation to international motor sport has been recognised since 1904 when national automobile clubs came together to establish the FIA to provide, amongst other things, an international forum to regulate motor sport internationally.
- (B) The FIA is the sole body governing international motor sport and is recognised by its members as the sole authority having the sporting power with the right to organise international FIA championships, including the CHAMPIONSHIP.
- (C) The FIA has an absolute obligation conferred on it by its members to safeguard its authority over all safety, sporting, technical and disciplinary matters relating to the CHAMPIONSHIP, as well as traditional values.
- (D) The FIA will publish the GOVERNING RULES annually.
- (E) The FIA has determined that the interests of the CHAMPIONSHIP require that a single supplier of the PRODUCT should be appointed for a limited term.
- (F) It is intended that the FIA and the PROVIDER will enter into this CONTRACT pursuant to which the PROVIDER will be appointed as the sole supplier of the PRODUCT to the CHAMPIONSHIP for the term set out herein.

1. APPOINTMENT AND SUPPLY

- 1.1 The FIA hereby appoints the PROVIDER to be the exclusive supplier of the PRODUCT to the COMPETITORS for the CHAMPIONSHIP and the PROVIDER hereby accepts this appointment and agrees to supply the PRODUCT to the COMPETITORS for the CHAMPIONSHIP in accordance with the terms of this CONTRACT and the terms of the SUPPLY AGREEMENTS.
- 1.2 Following from its appointment, the PROVIDER shall enter into a SUPPLY AGREEMENT with each COMPETITOR setting out the terms upon which the PRODUCT shall be supplied.
- 1.3 The PRODUCT that is supplied by the PROVIDER to the COMPETITORS shall be compliant with the SPORTING REGULATIONS, the TECHNICAL REGULATIONS and the TECHNICAL SPECIFICATIONS.

2. RELATIONS BETWEEN THE PROVIDER AND THE COMPETITORS

- 2.1 The PROVIDER shall treat all COMPETITORS in accordance with the PRINCIPLES OF SPORTING EQUALITY.
- 2.2 The PROVIDER shall supply the PRODUCT to all COMPETITORS on equivalent terms. It shall enter into a standard SUPPLY AGREEMENT with each COMPETITOR.
- 2.3 All SUPPLY AGREEMENTS shall be fully compliant with the PRINCIPLES OF SPORTING EQUALITY, the CONTRACT, the SPORTING REGULATIONS, the TECHNICAL REGULATIONS and the TECHNICAL SPECIFICATIONS.

- 2.4 Each SUPPLY AGREEMENT requiring a COMPETITOR to purchase the PRODUCT for use at more than one COMPETITION shall include a clause permitting the COMPETITOR and/or PROVIDER to terminate the SUPPLY AGREEMENT without a penalty of any kind in the event of expiry or earlier termination of the CONTRACT.
- 2.5 If requested by the FIA, the PROVIDER shall supply a copy of each SUPPLY AGREEMENT in order to demonstrate that the PRINCIPLES OF SPORTING EQUALITY are maintained. With respect to the FIA, the PROVIDER hereby waives and confirms that it shall not assert or seek to rely on any confidentiality provision in any SUPPLY AGREEMENT or other agreement relevant to the supply of the PRODUCT to prevent the FIA from reviewing relevant agreements or carrying out its regulatory functions (including ensuring that the PRINCIPLES OF SPORTING EQUALITY are maintained).
- 2.6 The FIA may request amendments to a SUPPLY AGREEMENT if it considers that the SUPPLY AGREEMENT is not consistent or compatible with, or is otherwise contrary to, the PRINCIPLES OF SPORTING EQUALITY. For the avoidance of doubt, the PROVIDER's obligation to abide by the PRINCIPLES OF SPORTING EQUALITY shall not be limited or otherwise affected by the FIA's review of a SUPPLY AGREEMENT and/or a request for an amendment to be made.
- 2.7 In the event of uncertainty regarding whether any action taken or proposed to be taken by the PROVIDER may breach the PRINCIPLES OF SPORTING EQUALITY, the PROVIDER shall request guidance from the FIA, which shall make a determination in this regard. Where such a determination is made by the FIA, the PROVIDER's actions in complying with that determination shall be deemed to be in compliance with the PROVIDER's obligation in GENERAL CONDITION 2.1 to treat all COMPETITORS in accordance with the PRINCIPLES OF SPORTING EQUALITY.

3. LIABILITY

- 3.1 Without prejudice to the FIA's other rights, the PROVIDER shall indemnify and hold harmless the FIA from and against all reasonably foreseeable losses incurred by the FIA as a direct result of the PROVIDER's:
- (a) failure to supply the PRODUCT of the requisite quantity;
 - (b) failure to supply the PRODUCT of the requisite quality;
 - (c) negligence in the supply of the PRODUCT; or
 - (d) any other failure in the supply of the PRODUCT.
- 3.2 The PROVIDER represents and warrants that it is in a position to meet any liability that may arise under GENERAL CONDITION 3.1 above and hereby covenants to maintain such position for the period of time during which the PROVIDER may be liable.
- 3.3 Notwithstanding GENERAL CONDITIONS 3.1 and 3.2 above, the PROVIDER that enters into the CONTRACT will produce an attestation certifying that an insurance policy has been contracted in its name with a top-ranking international insurance company for covering its liability as PROVIDER for any and all action which might be taken to obtain compensation for prejudice caused by a manufacturing defect affecting the PRODUCT used pursuant to the CONTRACT.

4. WARRANTIES

- 4.1 The PROVIDER represents and warrants that it has full power and authority to enter into and fully perform its obligations under the CONTRACT and the provisions of the CONTRACT, when executed, will constitute valid and binding obligations on the PROVIDER in accordance with its terms. The PROVIDER also represents and warrants that it has full power and authority to enter into and fully perform its obligations under the SUPPLY AGREEMENTS when executed.
- 4.2 The FIA represents and warrants that it has full power and authority to enter into and fully perform its obligations under the CONTRACT and the provisions of the CONTRACT, when executed, will constitute valid and binding obligations on the FIA in accordance with its terms.

5. TERMINATION

- 5.1 Notwithstanding any other provision hereof, either party may terminate the CONTRACT with immediate effect by written notice to the other if any of the following events occur:
- (a) the other party has committed a material breach of the CONTRACT which is not capable of remedy or, if remediable, has not remedied it within 14 days of the non-breaching party's written notice requiring the default to be remedied (for the avoidance of doubt, a breach by the PROVIDER of any of GENERAL CONDITIONS 1.2, 1.3, 2, 3 and 4.1 and any of SPECIAL CONDITIONS is acknowledged by the parties to be a material breach);
 - (b) steps (including any steps analogous to those following) have been taken to wind up the other party or to place the other party into administration or to have a receiver appointed over any of its assets, other than as part of a scheme of solvent reconstruction or amalgamation; or
 - (c) the other party shall cease or threaten to cease carrying on business or the other party shall make any composition or arrangement with its creditors or become subject to any other insolvency process or proceeding (other than as part of a scheme of solvent reconstruction or amalgamation) or have all or any of its assets or undertakings seized by a government or governmental agency or authority (including any acts analogous to the above).

6. GOVERNING RULES

- 6.1 The GOVERNING RULES constitute the legal, administrative and technical framework of the CHAMPIONSHIP and the conditions set forth therein shall have binding force and prevail among the parties to the CONTRACT.
- 6.2 The CONTRACT shall in principle be interpreted in a manner that gives effect to the provisions of the GOVERNING RULES, the intention of the parties being to construe the provisions of the CONTRACT in the context of the more general framework of the GOVERNING RULES.
- 6.3 The PROVIDER acknowledges that the TECHNICAL SPECIFICATIONS and GOVERNING RULES are subject to amendment from time to time. The PROVIDER will be responsible (subject to an agreement between the PARTIES as to who is responsible for any

related costs) for all research and development associated with the manufacture of the PRODUCT, including the making of any changes to the PRODUCT to be supplied pursuant to the CONTRACT that may be necessitated by any amendment to the TECHNICAL SPECIFICATIONS or the GOVERNING RULES.

- 6.4 The PROVIDER acknowledges that the FIA may take decisions regarding the supply of the PRODUCT, this CONTRACT and any obligations accruing from the GOVERNING RULES through whatever structure it deems appropriate, including through its disciplinary structures. The PROVIDER shall not challenge the competence of an FIA disciplinary body acting in accordance with the GOVERNING RULES.

7. GOVERNING LAW AND LANGUAGE

- 7.1 The language that shall prevail for the interpretation of the CONTRACT shall be English and the CONTRACT and all documents connected with the CONTRACT shall be written in English. In the event of any conflict between the language of the CONTRACT and any translation thereof, the language of the CONTRACT shall prevail. In the event of any conflict between the language of any document connected with the CONTRACT and any translation thereof, the language of the document connected with the CONTRACT shall prevail.

- 7.2 The governing law of the CONTRACT shall be French law.

- 7.3 The Tribunal de Grande Instance de Paris, France, shall have sole jurisdiction to settle any dispute that may arise between the FIA and the PROVIDER in connection with the CONTRACT, subject at all times to the provisions of GENERAL CONDITION 6.4 above.

- 7.4 Without any prejudice to GENERAL CONDITION 7.3 above, the PROVIDER undertakes to strictly respect the Statutes and Code of Ethics of the FIA as well as the GOVERNING RULES. The PROVIDER hereby agrees to be subject to the internal judicial and disciplinary bodies of the FIA.

8. GENERAL

- 8.1 Nothing in the CONTRACT guarantees or shall be construed as guaranteeing the solvency of a COMPETITOR. The FIA is not responsible for ensuring that the COMPETITORS satisfy the terms of the SUPPLY AGREEMENTS and the FIA shall not be liable for a failure by any COMPETITOR to satisfy the terms of a SUPPLY AGREEMENT.

- 8.2 No delay or omission or failure to exercise any right or remedy provided herein shall be deemed to be a waiver thereof.

- 8.3 The CONTRACT shall be binding on and enure to the benefit of the parties and their respective successors and permitted assigns. The PROVIDER shall not be entitled to assign or sub-contract its rights or obligations under the CONTRACT in whole or in part without the prior written consent of the FIA. In case of sub-contracting, the PROVIDER remains fully liable for the performance of any part of this Contract and any damages caused by its sub-contractors

- 8.4 Any public communications or press releases by the PROVIDER related to the CONTRACT shall be discussed in advance and approved in writing by the FIA.
- 8.5 Any notice to be given under the CONTRACT shall be given in writing delivered to the other party by any one or more of the following methods:
- (a) personal delivery to one of its corporate officers, in which case notice shall be treated as having been given at the time of such personal delivery;
 - (b) first class registered post or courier delivery service (such as DHL or UPS) to the address mentioned above (or such other address as may be notified to the other party in writing from time to time), in which case notice shall be treated as having been given on the date of actual receipt at that address (or on the next local business day if delivered on a local non-business day or after 4.00 p.m. local time on a local business day), which shall rebuttably be presumed to be the second local business day after posting.
- 8.6 Any variations of the CONTRACT shall be ineffective unless agreed in writing and signed by the parties.
- 8.7 If any term, provision or condition of the CONTRACT is held by a court of competent jurisdiction to be invalid, void or unenforceable such invalidity, voidness or unenforceability shall not invalidate the remainder of the CONTRACT, all of which shall remain in full force and effect.
- 8.8 The CONTRACT may be executed in any number of counterparts (whether original or facsimile counterparts) and upon due execution of all such counterparts by all parties, each counterpart shall be deemed to be an original hereof.
- 8.9 GENERAL CONDITIONS 3, 4, 7 and 8 shall survive expiry or termination of the CONTRACT for any reason (but shall terminate at the time expressly provided in the relevant GENERAL CONDITION, if any).

PART 2 - SPECIAL CONDITIONS

1. SUPPLY OF THE PRODUCT

1.1 The PROVIDER shall supply such quantity of the PRODUCT as is required for each COMPETITOR at each:

- (a) COMPETITION (see **APPENDIX I**);
- (b) OFFICIAL TESTING.

1.2 The PRODUCT supplied by the PROVIDER shall be of a strictly uniform quality throughout the duration of the CHAMPIONSHIP and strictly comply with the TECHNICAL SPECIFICATIONS detailed in **APPENDIX II**.

1.3 The number of PRODUCTS that must be fitted at the same time in the car has been set to two (2) in 2020 and will likely remain a requirement in 2021. This may be reviewed by the FIA at its sole discretion.

1.4 Both sensors mentioned in SPECIAL CONDITIONS 1.3 must be of the exact same specification (see **APPENDIX II**), with the exception of the electrical connector keyway.

1.5 The FIA will limit the maximum number of PRODUCTS that each COMPETITOR may use during the COMPETITIONS of a single CHAMPIONSHIP season.

Limits have been set for the 2020 season of the CHAMPIONSHIP:

- (a) eight (8) for the first sensor;
- (b) four (4) for the second sensor.

Those limits will likely remain for the 2021 season of the CHAMPIONSHIP and may be reviewed by the FIA at its sole discretion.

No limit will be applied to the number of PRODUCTS used outside of a COMPETITION.

1.6 The FIA does not guarantee the PROVIDER a minimum quantity of the PRODUCT to be supplied.

1.7 The PROVIDER shall draw up and make available to the FIA a record of PRODUCTS supplied which may be consulted at any time by the FIA.

1.8 All PRODUCTS supplied must be suitable for use at all times during the COMPETITIONS.

1.9 The PROVIDER undertakes to report to the FIA any issues with the PRODUCT, the COMPETITOR concerned and the results of any associated investigations.

1.10 The PROVIDER shall loan and maintain free of charge seven (7) PRODUCTS to the FIA with no usage limitations and replace them within a reasonable time, as agreed with the FIA, if the FIA considers that they need to be replaced or checked. All loaned PRODUCTS in the possession of the FIA at the termination of the CONTRACT shall be returned to the PROVIDER within a reasonable time, at the expense of the FIA.

2. DELIVERY OF THE PRODUCT

- 2.1 By **1 May 2020**, COMPETITORS will be requested to communicate to the PROVIDER a list of the expected order quantities and delivery schedule for the PRODUCT for the 2021 season.
- 2.2 By **1 July 2020**, a minimum of two (2) PRODUCTS shall be supplied to each COMPETITOR (subject to order) and to the FIA. The PRODUCTS must not be supplied to anyone other than the FIA before that date.
- 2.3 By **1 September 2020**, COMPETITORS will be requested to place orders for the PRODUCT for the 2021 season.
- 2.4 By **1 October 2020**, remaining pre-ordered PRODUCTS shall be delivered to each COMPETITOR and to the FIA according to a delivery plan subject to the FIA's express prior written approval.
- 2.5 Following the completion of the initial deliveries, the PROVIDER will deliver additional ordered PRODUCTS to the COMPETITORS on request within the lead times provided in **APPENDIX II**.

3. MANUFACTURING CONDITIONS OF THE PRODUCT AND TECHNICAL CONTROL

- 3.1 The PROVIDER shall provide to the FIA a detailed technical study of the PRODUCT, for the approval of the FIA ENGINEER. In the event that an amendment is made to the TECHNICAL SPECIFICATIONS or the GOVERNING RULES that requires an amendment to the PRODUCT supplied pursuant to the CONTRACT, the PROVIDER shall provide to the FIA a detailed technical study of the amended PRODUCT to be supplied pursuant to the CONTRACT to take account of such amendment.
- 3.2 The PROVIDER shall make such modifications to the PRODUCT to be supplied pursuant to the CONTRACT as the FIA ENGINEER may require.
- 3.3 The PROVIDER shall not make any change to the PRODUCT during the CONTRACT without the FIA's express prior written agreement.
- 3.4 Technical checks may be carried out on samples taken either directly from the PROVIDER or during the COMPETITION (PRODUCT used by the COMPETITORS during the running of the COMPETITION) comparing the quality and technical compliance of the PRODUCT distributed with that of the samples taken.

4. TECHNICAL SUPPORT

- 4.1 The PROVIDER shall be present on the COMPETITIONS as requested by the FIA for any problem-solving requiring the support of the PROVIDER at the circuit.
- 4.2 The PROVIDER shall be present at OFFICIAL TESTING as requested by the FIA for the installation of the PRODUCT and any subsequent problem-solving requiring the support of the PROVIDER at the circuit.
- 4.3 The FIA shall give the PROVIDER a reasonable notice for any requirement to attend an OFFICIAL TEST or a COMPETITION.

4.4 The FIA will make arrangements for track access passes for the PROVIDER as may be necessary.

5. PRICING OF THE PRODUCT

5.1 The price of the PRODUCT supplied shall be as detailed on the PRICING FORM, which amount shall be inclusive of all taxes and charges and which amount shall not be increased for any reason except in accordance with SPECIAL CONDITION 5.4.

5.2 The price of the PRODUCT supplied shall be inclusive of any technical support required during the term of the CONTRACT, notably the technical support described in SPECIAL CONDITION 4.

5.3 VAT (value added tax) shall not be charged to those COMPETITORS that are exempt from VAT and that have supplied proof of such exemption to the PROVIDER.

5.4 The price stated in SPECIAL CONDITION 5.1 may be adjusted for the seasons 2022 and 2023 in accordance with the indexation formula provided in **APPENDIX III**.

6. INTELLECTUAL PROPERTY

6.1 The FIA remains at all times the owner of the intellectual property rights contained in the TECHNICAL SPECIFICATIONS.

6.2 The PROVIDER shall supply the FIA with the requested amount and types of devices (documentation, software, specifications, looms, licences, etc.) that the FIA will need to freely and independently programme and use the PRODUCT and conduct all checks that the FIA deems appropriate. This includes the right for the FIA to access any logging data during bench, track testing and the COMPETITIONS.

6.3 The PROVIDER agrees and acknowledges that all rights, title and interest of the data and/or results generated by the PRODUCT are owned by the FIA. The PROVIDER may only access any such data and/or results subject to the prior written consent of the FIA, for the PROVIDER's technical or contractual purposes, including but not limited to, conducting R&D ordered by the FIA, confirming and diagnosing faults, or determining whether a PRODUCT has been operated outside the TECHNICAL SPECIFICATIONS.

6.4 The FIA acknowledges that the PRODUCT as provided by the PROVIDER, including the software as well as any related documentation, information, data, methodologies, know-how and materials, is the property of the PROVIDER and that the only right which the FIA obtains to the PRODUCT is the licence granted by the PROVIDER in compliance with **APPENDIX II**.

6.5 The PROVIDER grants to the FIA and the FIA accepts, a non-exclusive, worldwide, royalty-free, fully paid-up license valid for the term of the CONTRACT (a) to use the PRODUCT, including related documentation and specification, and (b) to sublicense the use of the PRODUCT and any subsequent versions and/or modifications thereof to third parties requiring access to the PRODUCTS to assist the FIA in fulfilling its regulatory functions (the "FIA Authorised sub-licensees"), provided that such third parties are identified in advance to the PROVIDER and do not include any entity reasonably deemed by the PROVIDER and the FIA to be a present or potential

commercial competitor or customer.

- 6.6 The PROVIDER hereby undertakes to provide the licenses (as set forth under APPENDIX II) only to the FIA and the FIA Authorised sub-licensees to the express exclusion of any third party including, but not limited to, the COMPETITORS or any company or organization involved in the CHAMPIONSHIP.
- 6.7 Save for the purposes of providing the PRODUCT under this CONTRACT, the PROVIDER agrees and acknowledges that no parts of the PRODUCT and no data relating to a COMPETITION may be reproduced, stored in a retrieval system or transmitted in any form or by any means electronic, mechanical, photocopying, recording, broadcasting means or otherwise to any other party than the FIA without the FIA's express prior written approval.
- 6.8 The PROVIDER agrees to use reasonable endeavours not to do anything or permit anything to be done at any time during and/or after the term which would in any way devalue, prejudice the ownership, management and/or exploitation of the data during and/or after the term of the CONTRACT.

7. ASSOCIATION RIGHTS

The PROVIDER shall have no rights to refer to itself or authorise any third party to refer to the PROVIDER (whether in marketing/promotional materials, on websites/social media platforms or otherwise) as a supplier or service provider (or similar) to the CHAMPIONSHIP or the Formula 1™ brand (or otherwise imply the same) without first entering into a separate written agreement with the Commercial Rights Holder of the CHAMPIONSHIP for the grant of this right.

PART 3 - DEFINITIONS

The following terms shall be understood to have the following meanings for the purposes of the "CONTRACT".

- 1.1 **CHAMPIONSHIP** means the 2021, 2022 and 2023 seasons of the FIA Formula One World Championship. The FIA may decide, at its absolute discretion and at the latest by 31 December 2022, that the CONTRACT shall be extended to the 2024 and/or 2025 FIA Formula One World Championship under the exact same conditions.
- 1.2 **COMPETITION(S)** (referred to as EVENT in the FIA Formula One World Championship regulations) means any race forming part of the CHAMPIONSHIP and entered on the International Sporting Calendar of the FIA. A COMPETITION is deemed to commence at the scheduled time for scrutineering and sporting checks and includes all practice, qualifying and the race itself and ends at the expiry of the deadline for the lodging of a protest under the terms of the International Sporting Code under the terms of the International Sporting Code.
- 1.3 **COMPETITOR(S)** means the racing teams that have been accepted by the FIA to take part in the CHAMPIONSHIP.
- 1.4 **CONTRACT** means the GENERAL CONDITIONS, the SPECIAL CONDITIONS, the DEFINITIONS and the APPENDICES. In case of contradiction between the elements of the CONTRACT, the GENERAL CONDITIONS, the SPECIAL CONDITIONS and the DEFINITIONS will prevail over the APPENDICES. In case of contradiction between the various APPENDICES, their order of priority will correspond to their numbering order.
- 1.5 **DEFINITIONS** means the definitions set out in this Part 3 of the CONTRACT.
- 1.6 **FIA** means the Fédération Internationale de l'Automobile (FIA).
- 1.7 **FIA ENGINEER** means the technician appointed by the FIA to carry out all technical checks and controls and to grant the necessary approval prior to the starting up of production.
- 1.8 **GENERAL CONDITIONS** means the provisions contained in Part 1 of the CONTRACT.
- 1.9 **GOVERNING RULES** means:
 - (a) the FIA International Sporting Code and the Appendices thereto;
 - (b) the SPORTING REGULATIONS applicable to the CHAMPIONSHIP;
 - (c) the TECHNICAL REGULATIONS applicable to the CHAMPIONSHIP;
 - (d) The FIA Code of Ethics;
 - (e) The FIA Judicial and Disciplinary Rules;
 - (f) The FIA Standards of Conduct for Suppliers (APPENDIX V);
 - (g) Any other regulations applicable to the CHAMPIONSHIP.

- 1.10 **OFFICIAL TESTING** means tests as defined in and authorised in the SPORTING REGULATIONS.
- 1.11 **PRICING FORM** means the pricing form provided at **APPENDIX IV** stating the prices at which the PRODUCT will be supplied at the COMPETITIONS, the PRODUCTION SITE and the OFFICIAL TESTING to the COMPETITORS.
- 1.12 **PRINCIPLES OF SPORTING EQUALITY** means the equal treatment by the PROVIDER of all COMPETITORS with respect to:
- (a) anything which may affect the performance of the PRODUCT;
 - (b) the terms on which the PRODUCT is supplied;
 - (c) the support, access and information made available to COMPETITORS in relation to the PRODUCT; and
 - (d) any other matter which affects or may have an effect, however minor, on sporting performance.
- 1.13 **PRODUCT** means the fuel flow meter as such word is described in the TECHNICAL SPECIFICATIONS.
- 1.14 **PROVIDER** means [•].
- 1.15 **PRODUCTION SITE** means the factory that will produce the PRODUCT supplied pursuant to the CONTRACT.
- 1.16 **SPECIAL CONDITIONS** means the provisions contained in Part 2 of the CONTRACT.
- 1.17 **SPORTING REGULATIONS** means the Sporting Regulations applicable to the CHAMPIONSHIP as published and amended by the FIA from time to time. The Sporting Regulations are available on the FIA website: www.fia.com.
- 1.18 **SUPPLY AGREEMENT** means any agreement, and all amendments thereto, between the PROVIDER and a COMPETITOR pursuant to which the PROVIDER shall supply the PRODUCT to the COMPETITOR.
- 1.19 **TECHNICAL REGULATIONS** means the Technical Regulations applicable to the CHAMPIONSHIP as published and amended by the FIA from time to time. The Technical Regulations are available on the FIA website: www.fia.com.
- 1.20 **TECHNICAL SPECIFICATIONS** means the technical requirements applicable to the PRODUCT, as issued and amended by the FIA from time to time (APPENDIX II).

Signed:

On behalf of the FIA:

On behalf of the PROVIDER:

In his/her capacity as:

In his/her capacity as:

In:

In:

On:

On:

APPENDICES

I – CALENDAR

II – TECHNICAL SPECIFICATIONS

III – INDEXATION FORMULA

IV – PRICING FORM

V - FIA STANDARDS OF CONDUCT FOR SUPPLIERS

VI – QUESTIONNAIRE COMPLIANCE – DUE DILIGENCE

VII – PROVIDER’S OFFER DATED [•]

APPENDIX I

Calendar

The calendar of each season of the CHAMPIONSHIP will be available on the FIA website:
www.fia.com.

APPENDIX II

Technical Specifications

1. Introduction

The 2021 F1 Technical Regulations require in the following article the supply of a standard fuel flow meter.

5.11.3 All cars must be fitted with a single fuel flow meter, wholly within the fuel tank, which has been manufactured by the single supplier appointed by the FIA World Motor Sport Council to a specification determined by the FIA. This sensor may only be used as specified by the FIA Technical Department. Furthermore, all fuel delivered to the power unit must pass through this homologated sensor, and must all be delivered to the combustion chambers by the fuel injectors described by Article 5.11.2.

The FIA issued a Technical Directive (TD/042-19) in 2019 to improve policing regarding fuel flow measurement and has mandated a second fuel flow meter for the 2020 season. There are now two sensors fitted at the same time on the car and this will likely remain in place for 2021 and beyond, although this could be reviewed by the FIA at its sole discretion.

The object of this document is to set requirements for this fuel flow meter and to define a list of information to be provided by potential suppliers.

2. How to file technical details

The object of this document is to define the desired specifications for the complete system. Potential suppliers are expected to fill in the following tables:

- “Compliance”: Express the level of compliance of the tendered system towards each requirement → **C**: Compliant, **PC**: Partially compliant, **NC**: Non-compliant;
- “Evidence”: Provide evidence to justify the stated level of compliance;
- “Notes”: Additional information that may help to support or clarify the tender.

The FIA will evaluate offers even if not meeting all requirements. Potential suppliers are encouraged to provide any additional information regarding the product, the associated production and development processes that may assist the FIA’s evaluation of the tender.

3. Sensor Specification

SYSTEM OVERVIEW	COMPLIANCE	EVIDENCE	NOTES
MEASUREMENT DESCRIPTION			
The device to measure fluid velocity, fluid direction, temperature.			
The device to compute volumetric flow rate, cumulative mass flow and mass flow rate. Mass flow can be determined from a calculated density-temperature equation/lookup table.			
The sensor should measure the total time on power since last reconditioning.			
The sensor should measure the total time with flow since last reconditioning.			
The sensor should measure the total time since last power cycle was done.			
ENVIRONMENT DESCRIPTION			
The flow sensor to operate in the fuel line of an F1 engine, on the low pressure side (<10 barG).			
ATMOSPHERIC ENVIRONMENT			
The sensor to operate submerged in the fuel cell of a Formula 1 vehicle (2 barA maximum fuel cell pressure)			
EXTERNAL END-USER INSTRUMENTS			
The device will typically be one instrument of several on the CAN bus. The data output from the sensor will be recorded by the FIA Single ECU over the CAN bus.			

At the discretion of the FIA, the teams will also have access to CAN bus data.			
The acquisition system will be the FIA Standard ECU.			
The device shall have the ability to exchange its measurement data via CAN.			
POWER SOURCE			
System power for the device to be low voltage DC, provided typically from the data logger or power distribution module. Alternatively a laptop may be used to interrogate the sensor.			
GENERAL DESIGN REQUIREMENTS			
RELIABILITY AND SERVICE LIFE			
Operation Time: the device shall run up to 5 hours continuous without need for cleaning/power cycling.			
Lifetime between reconditioning: the device shall achieve 100 hours of running and still be within performance specification			
Lifetime: the device shall perform 400 hours of service before its end of life.			
SAFETY REQUIREMENTS			
The device shall not contaminate the fuel line with particulates.			
The device shall not contain materials that contaminate the fuel.			
PHYSICAL REQUIREMENTS			
GENERAL			
The device shall have a volume of less than or equal to 500cm ³ .			

The device shall weigh less than or equal to 400g.			
The device shall be fitted with std -6AN male fluid couplings.			
IDENTIFICATION			
The following identifications shall be visible as a minimum: <ul style="list-style-type: none"> - Sensor manufacturer Logo - Unit Serial Number - Sensor Reference - Sensor Part Number 			
TAMPER PROOFING			
The device shall be protected by anti-tamper solutions suitable for in-fuel operation. Solutions with in-data traceability are highly desirable.			
EXTERNAL ELECTRICAL CONNECTIONS			
The device shall use a fuel-proof electrical connector. Two distinct connector keyways should be made available to differentiate the sensors required by SPECIAL CONDITIONS 1.3.			
FUNCTIONAL REQUIREMENTS			
MEASUREMENT			
GENERAL PERFORMANCE			
The device shall measure between a range of +/- 0-4000ml/min.			
The repeatability from one measurement to another under steady state conditions shall be no greater than +/- 0.25% uncertainty.			

The device shall have an accuracy of no less than +/- 0.5% for post filtered instantaneous flow measurement.			
The device shall have a 2 kHz minimum actual measurement rate or higher.			
The device shall have a measurement anti-aliasing feature that will be approved by the FIA. Details of the technical solution and its validation should be provided in the offer. Only the FIA and the supplier shall be entitled and able to enable, disable and configure the anti-aliasing feature.			
The device measurement shall be repeatable from one sensor to the next to +/- 0.25% independent of sensor life.			
The device shall operate within its performance specification independent of flow direction.			
The device shall operate within its performance specification within a range of fuel pressure from -0.5barG to +10barG.			
The device shall operate within its performance specification regardless of mounting orientation.			
The device shall measure cumulative total flow to an accuracy of +/-0.5%.			
The device shall be capable of applying a 4th order low pass Butterworth with 25Hz -3 dB cut-off frequencies to instantaneous flow measurement for CAN transfer.			
The device shall be capable of making mass flow conversions based upon a temperature density equation or look up table.			
The device shall be within its performance specification when undergoing measurement of any of the fuels compliant with the F1 Technical Regulations over the specified fuel temperature range.			

The device shall be able to power up and begin full functionality regardless of start-up temperature and flow condition in under 3 seconds. This time must be consistent from sensor to sensor.			
The device shall be able to recover automatically and without action from an incorrect fluid composition (Trapped air for example).			
When unable to read flow the device must store the last correct data and count no flow until it is able to measure flow again.			
On power-up the device shall restore cumulative volume flow (stored in the device at a rate of 1Hz).			
On power-up the device shall restore cumulative mass flow (stored in the device at a rate of 1Hz).			
On power-up the device shall restore Max and Min fuel temperatures (maximums & minimums only written when exceeded and then at a max rate of 1 Hz).			
On power-up the device shall restore Max and Min PCB temperatures (maximums & minimums only written when exceeded and then at a max rate of 1 Hz).			
On power-up the device shall restore Max and Min Accelerometer XYZ axis values (maximums & minimums only written when exceeded and then at a max rate of 1 Hz).			
On power-up the device shall restore elapsed time (total time on power) in min:sec (stored in the device at a rate of 1Hz).			
On power-up the device shall restore service time (total time with flow) in min:sec (Stored in the device at a rate of 1Hz).			

TEMPERATURE MEASUREMENT			
<p>The device shall produce two fuel temperature measurements from two separately immersed temperature sensors that are accurate to within 0.15°C between 0°C and +110°C without factory calibration. The fuel information used for the density calculation shall be the average of the two measurements and it shall switch to one of the two when one is declared faulty. The device shall display the fuel temperature measurement status.</p>			
<p>The fuel temperature measurements shall have a response time of T95% of 4 seconds.</p>			
<p>The device shall produce a PCB temperature data output that is accurate to within 0.5°C between 0°C and +85°C without factory calibration.</p>			
CAN ADDRESS			
<p>The device should allow the FIA approved calibration company to adapt the CAN address. A minimum of 6 CAN addresses should be available, 6 of which can be the same as the auto loom detect CAN addresses.</p>			
CALIBRATION			
<p>The device shall be able to be calibrated on top of the factory calibration.</p>			
<p>The following maps must be programmable only via a protected RS-232, RS-485 or CAN connection:</p> <ul style="list-style-type: none"> - Information related to density calculation - Complete calibration map f(Temperature/flow) 			

CAN / DATA LOGGING

The device should communicate by CAN the channels listed in the following documents. This CAN communication must be done in accordance with the following CAN specification:

Fuel Flow Sensor CAN Interface

Bus Speed 1Mb/s
Base ID 0x190 for F1
All data big endian integers MS byte first.

Race Transmit Messaging

Base ID, 100Hz – Filtered flow values (Butterworth filter as detailed in the specifications)

bytes 0-1 signed word volume flow rate, 0.5 ml/min/bit

bytes 2-3 signed word mass flow rate, 0.5 g/min/bit

bytes 4-5 signed word integrated volume flow quantity, 10 ml/bit

bytes 6-7 signed word integrated mass flow quantity, 10 g/bit

Base ID+1, 100Hz
See below

Based ID+1 100Hz

Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7	
Speed of sound, 0.1m/s/bit	0	CAN ID select (1, 2, 3 - Unsigned)		Fuel temperature (0.01degC/bit signed)		PCB temperature (0.1degC/bit signed)		
	1	CAN control processor SW version (unsigned)		Min fuel temperature (0.01degC/bit signed)		Max fuel temperature (0.01degC/bit signed)		
	2	Measuring processor SW version (unsigned)		Min PCB temperature (0.1degC/bit signed)		Max PCB temperature (0.1degC/bit signed)		
	3	Boot SW version (unsigned)		Hardware version (unsigned)		Supply voltage (0.1V/bit unsigned)		
	4	Datalogger SW version (unsigned)		Diagnostics bitword (unsigned)		Seconds from hardware reset (s unsigned)		
	5	SW programming counter		Latched diagnostics bitword (unsigned)		Service time indicator (min unsigned)		
	6	Manufacturer calibration counter		Manufacturer status bitword (unsigned)		Elapsed time indicator (min unsigned)		
	7	Third party calibration counter		Sensor serial number (unsigned)		resistor sense input voltage (0.01V/bit unsigned)		
	8	Density calibration counter		CAN control processor software checksum (unsigned)		density calibration checksum (unsigned)		
	9			Bootloader checksum (unsigned)		density value in use (0.1kg/m3/bit, unsigned)		
	10			GILL Configuration checksum (unsigned)		Reference density at a reference temperature (0.1kg/m3/bit,		
	11			GILL calibration checksum (unsigned)		Reference temperature for density calibration (0.1degC/bit		
	12			Third party calibration checksum (unsigned)		Slope (Density vs temperature) (0.001kg/m3/degC/bit signed)		
	13			PCB serial number				
	14			Measuring processor software checksum (unsigned 32 bits)				
	15					X axis accelometer ABS integral (1g.s/bit unsigned)		
	16			Y axis accelometer ABS integral (1g.s/bit unsigned)		Z axis accelometer ABS integral (1g.s/bit unsigned)		
	17			Min X axis acceleration (0.1g/bit signed)		Max X axis acceleration (0.1g/bit signed)		
	18			Min Y axis acceleration (0.1g/bit signed)		Max Y axis acceleration (0.1g/bit signed)		
19			Min Z axis acceleration (0.1g/bit signed)		Max Z axis acceleration (0.1g/bit signed)			

Diagnostics bits

- 0 Flow measurement in error
- 1 Fuel temperature 1 in error
- 2 Fuel temperature 2 in error
- 3 PCB temperature in error
- 4 Invalid speed of sound
- 5 Invalid density
- 6 Power supply 1 in error
- 7 Power supply 2 in error
- 8 Power supply 3 in error
- 9 CAN error
- 10 PCB overtemperature
- 11 Service required
- 12
- 13
- 14 Accel limit exceeded on at least one axis
- 15 Flow measurement outside specification

+ Confidential Command (to be precisely selected by Sensor Manufacturer).			
CAN communication shall meet ISO 11898-2 (High Speed Applications) standard.			
ENCRYPTION			
The device shall not allow unauthorised access to firmware and memory locations over RS-232, RS-485 or CAN.			
The device should create and display checksums allowing to determine if the correct calibration data are programmed in the sensor.			
The device should create and display checksums allowing to determine if the correct firmware and hardware are present in the sensor.			
The device shall have the ability to encrypt all data transmitted. The encryption protocol shall be shared and approved by the FIA. Only the FIA and the supplier shall be entitled and able to enable, disable and configure the encryption feature.			
ELECTRICAL REQUIREMENTS			
POWER SUPPLY			
A Minimum Supply Voltage of 5.5VMin shall apply.			
A Maximum Supply Voltage of 22VMax shall apply.			
A Nominal Supply of 12VNom shall apply.			
An over-voltage (non-destructive) of 30VTransientClamp shall apply.			

A maximum continuous reverse supply (Non-destructive) of -30V _{RevMax} shall apply.			
The supply current shall be less than or equal to 100mA from 12-17V DC.			
The supply current shall be less than or equal to 180mA from 5.5V DC.			
The device's power supply circuitry shall be protected from reverse polarity.			
The device's power supply circuitry shall be protected from ground and battery short circuits.			
RESET			
The device should be able to receive a reset (Power Cycle) command by CAN.			
The device should be able to reset the cumulative mass and volume data from a CAN command.			
ELECTROMAGNETIC COMPATIBILITY			
The device shall meet EMC Immunity SAE J1113/2 1996 standard.			
ENVIRONMENTAL REQUIREMENTS			
FLUID COMPATIBILITY			
The sensor shall be compatible with Unleaded Formula One Fuel (as defined in the F1 FIA Technical Regulations).			
FLUID TEMPERATURE			
The device must operate with a maximum fuel temperature of 80°C.			

The device must operate with a minimum fuel temperature of 0°C.			
UNIT OPERATING TEMPERATURE			
The device must operate with a maximum PCB temperature of 85°C.			
The device must operate with a minimum PCB temperature of 0°C.			
STORAGE TEMPERATURE			
The device must not be adversely affected by a storage temperature minimum of -40°C.			
The device must not be adversely affected by a storage temperature maximum of 85°C.			
PRESSURE			
The pressure drop of the device shall be no greater than 1000 mbar @ 6000ml/min in a 3mm ² /s viscosity fluid at 40°C.			
The device must be burst-resistant to 60barA.			
The device shall operate with a liquid pressure of up to 20barA.			
VIBRATION			
Vibrations should not affect the measurement precision of the sensor.			
SEALING			
The device must be fully sealed to IP68 standard.			

4. GUI specification

The fuel flow meter manufacturer must provide the FIA with a GUI in accordance with the following specification:

GUI SPECIFICATION	COMPLIANCE	EVIDENCE	NOTES
Automatically recognise connection and disconnection of a sensor.			
Reboot a sensor.			
Read and display second calibration table + density data from sensor.			
Create a file from calibration table + density data read in sensor.			
Read and display a calibration table file from a computer.			
Import and display a calibration table file from a computer into the sensor - checking that the serial number within the calibration table file matches that of the sensor.			
Compare the calibration table + density data read from the sensor with a calibration table file read from the computer. Present both side by side and highlight the differences in sensor's data**.			
Read and display all* checksums and versions from sensor.			
Read serial number and base CAN address of the sensor.			
Create a "Checksums-Versions file" from sensor in a text format.			

Compare the Checksums and Versions read from sensor with a "Checksums-Versions file" read from computer. Present both side and highlight the differences in the sensor's data**.			
Open and display a calibration table file or a "Checksums-Versions file" without sensor being connected.			
Reset cumulative flow values.			
Reset latched diagnostics .			
Provide general sensor diagnostic channels.			
Change sensor's base CAN address: <ul style="list-style-type: none"> • Enable/Disable Auto CAN Address. • Set base CAN address when in fixed Can address mode. • With specific rights or even specific version. 			
Read a manufacturer calibration file and write to sensor.			
Read a manufacturer configuration file and write to sensor.			
Program software in the sensor.			
Upload program from the sensor.			
Provide keyboard shortcuts for the following functions (for easier handling at the track): <ul style="list-style-type: none"> • Read or write the calibration table + density data. • Read and display the checksums and versions. 			

Open and display a calibration table file and checksum/version files from the computer. The application should remember the folder location of the last calibration table file or checksum/version file accessed.			
Compare a calibration table file and checksum/version files with the sensor.			
Single shortcut to send both clear min/max and clear latched diagnostics commands.			
Reset cumulative flow values.			
Ask for confirmation before sending a reset or clear command to the sensor or before writing a calibration table file to the sensor.			
A message should be displayed to confirm successful or failed completion of any command to or from the sensor.			
Any file downloaded from sensor must match exactly that of the file stored within the sensor – meaning if a calibration table file is downloaded from a sensor and then re-uploaded then the checksums should not change.			
The GUI licenses should be managed by MAC Addresses.			

*** Checksums - Versions list:**

- Serial number of the sensor
- CAN Control Processor Software Checksum
- Measuring Processor Software Checksum
- Bootloader Checksum

- Sensor Manufacturer Calibration Checksum
- Sensor Manufacturer Configuration Checksum
- Density Calibration Checksum
- Third Party Checksum
- Hardware Version
- Data logger Software Version
- Measuring Processor Software Version
- CAN Control Processor Software Version
- Bootloader Version

Checksums must be displayed in Hex format (Example: CAN Control Processor Software Checksum = 7D6E)

Software versions should be displayed as integers.

The list of checksums may be altered with the consent of FIA.

**** Comparison examples:**

	File	Sensor
CAN Control Processor Software Checksum	7D6E	7D6E
Measuring Processor Software Checksum	F9FD0	F9FD0
Bootloader Checksum	6CBF	6CBF
Sensor Manufacturer Calibration Checksum	E836	E836
Sensor Manufacturer configuration Checksum	7ECE	7ECF
Density Calibration Checksum	38A	38A
Third Party Checksum	EA7B	EA7B
Hardware Version	1	1
Datalogger Software Version	100	100
Measuring Processor Software Version	100	100
CAN Control Processor Software Version	100	100
Bootloader Version	100	100

File

	Temp 0	Temp 1	Temp 2	Temp 3	Temp 4	Temp 5
Flow 0	1.002	1.002	1.002	1.002	1.002	1.002
Flow 1	1.002	1.002	1.002	1.002	1.002	1.002
Flow 2	1.002	1.002	1.002	1.002	1.002	1.002
Flow 3	1.002	1.002	1.002	1.002	1.002	1.002
Flow 4	1.002	1.002	1.002	1.002	1.002	1.002
Flow 5	1.002	1.002	1.002	1.002	1.002	1.002
Flow 6	1.002	1.002	1.002	1.002	1.002	1.002
Flow 7	1.002	1.002	1.002	1.002	1.002	1.002
Flow 8	1.002	1.002	1.002	1.002	1.002	1.002
Flow 9	1.002	1.002	1.002	1.002	1.002	1.002
Flow 10	1.002	1.002	1.002	1.002	1.002	1.002
Flow 11	1.002	1.002	1.002	1.002	1.002	1.002
Flow 12	1.002	1.002	1.002	1.002	1.002	1.002
Flow 13	1.002	1.002	1.002	1.002	1.002	1.002
Flow 14	1.002	1.002	1.002	1.002	1.002	1.002
Flow 15	1.002	1.002	1.002	1.002	1.002	1.002

Ref. Density	750
Ref.Temp	0
Slope	-0.91

Sensor

	Temp 0	Temp 1	Temp 2	Temp 3	Temp 4	Temp 5
Flow 0	1.002	1.002	1.002	1.002	1.002	1.002
Flow 1	1.002	1.002	1.002	1.002	1.002	1.002
Flow 2	1.002	1.002	1.002	1.002	1.002	1.002
Flow 3	1.002	1.002	1.002	1.002	1.002	1.002
Flow 4	1.002	1.002	1.002	1.002	1.002	1.002
Flow 5	1.002	1.002	1.002	1.002	1.002	1.002
Flow 6	1.002	1.002	1.002	1.002	1.002	1.002
Flow 7	1.002	1.002	0.99	1.002	1.002	1.002
Flow 8	1.002	1.002	1.002	1.002	1.002	1.002
Flow 9	1.002	1.002	1.002	1.002	1.002	1.002
Flow 10	1.002	1.002	1.002	1.002	1.002	1.002
Flow 11	1.002	1.002	1.002	1.002	1.002	1.002
Flow 12	1.002	1.002	1.002	1.002	1.002	1.002
Flow 13	1.002	1.002	1.002	1.002	1.002	1.002
Flow 14	1.002	1.002	1.002	1.002	1.002	1.002
Flow 15	1.002	1.002	1.002	1.002	1.002	1.002

Ref. Density	750
Ref.Temp	0
Slope	-0.89

5. Technical documentation

Proposals should include the following documentation:

- mechanical characteristics, including dimensions, weight, material, heat treatment, finish quality;
- installation characteristics, including mounting points, mounting torque, guidelines, drawings;
- environmental characteristics, including storage temperature, operating temperatures, thermal shock, tolerance to chemicals and humidity, vibration profile, electromagnetic compatibility;
- electrical characteristics, including supply voltage, current consumption, supply protection, insulation resistance;
- effect of supply voltage or ground variations on the measurement;
- outputs characteristics, including type, quantity, circuitry, voltage range, frequency bandwidth, resolution, impedance, total error band, protection;
- details of any redundant measurement;
- service and calibration intervals and details, life period, quality control;
- on and off-track handling procedures.

Each sensor should have a part number and unique serial number marked externally.

6. Calibration

Proposals should include a comprehensive description of the calibration process, calibration formula and calibration data supplied with the sensor.

7. Quality

Proposals should include a description of the following items:

- Design validation;
- Production quality control;
- Mean time between failure report of the PRODUCT, or existing system on which the design of the PRODUCT may be based;
- Test equipment;
- Calibration equipment;
- FMEA and FTA of the product;
- Support that the supplier is prepared to provide during the installation and validation process and subsequently during test and race events.

8. Supply lead time

Maximum lead times from PO to delivery should be 6 weeks.

APPENDIX III

Indexation Formula

Concerning the 2022 and 2023 seasons, the prices charged to COMPETITORS shall be the amount that equals the amount shown for 2021 in the PRICING FORM increased annually in accordance with the positive variation of the “Consumer Prices – All items” index published by the Organisation for Economic Cooperation and Development (OECD) in “Main Economic Indicators”. The indexation shall be in accordance with the variation between such base index and the index published in the October edition of “Main Economic Indicators” for the year to which the indexation applies and for the PROVIDER’s country.

APPENDIX IV

Pricing Form

PRODUCT	Price* before tax in euros	Supply lead time
Fuel Flow Meter for COMPETITION and OFFICIAL TESTING		
100 hour service		

*The purchase price of the fuel flow meter shall not exceed **£5000** with a warranty of 100 hours running time. The service cost for any 100 extra hours of running time shall not exceed **£500**.

The lifetime of the fuel flow meter shall, in any circumstances, not be less than 400 hours.

Please specify currency referred to in the supply agreements with the competitors if not British Pound.

APPENDIX V

FIA Standards of Conduct for Suppliers

ARTICLE 1 – GENERAL

1.1 The activities of the Fédération Internationale de l'Automobile ("**FIA**") are to be conducted in compliance with all applicable laws, statutes, regulations, ordinances, orders, decrees, codes of practice, guidelines, directions, relevant industry and ethical standards and any other applicable rules of the jurisdictions where the FIA and/or its suppliers operate ("**Applicable Law**").

1.2 The FIA further acts in a socially responsible manner, and has issued these standards of conduct for suppliers ("**Standards**") to set out its high expectations in the areas of health and safety, human rights and employment practices, environmental management and sustainability, business integrity and anti-bribery policies, and related fields.

1.3 These Standards apply to all individuals, companies, consultants, vendors, contractors, agents and any other entities that provide services and/or supply material or other products to the FIA ("**Suppliers**"), as well as to their own employees, suppliers, sub-contractors, agents and related entities.

1.4 Suppliers must comply with the Applicable Law and these Standards. They guarantee similar compliance for the work performed by their employees, suppliers, sub-contractors, agents and related entities. When the Applicable Law and these Standards cover the same subject matter, the ones setting the highest standards apply. When these Standards contradict the Applicable Law, the Applicable Law prevails.

1.5 As part of these Standards, the FIA further expects its Suppliers to abide by the generally recognised principles inspired by the international conventions and instruments of the United Nations (UN) (in particular the UN Guiding Principles on Business and Human Rights and the UN Global Compact), the International Labor Organization (ILO), the Organisation for Economic Co-operation and Development (OECD) (in particular the OECD Guidelines for Multinational Enterprises), as well as any similar protection norms.

1.6 Suppliers shall periodically review their practices, conduct periodic self-evaluations, due diligence and establish management systems for sustainable practices to ensure that they, as well as their employees, suppliers, sub-contractors, agents and related entities, are complying with the Applicable Law and these Standards. These Standards supersede any previous standards for Suppliers issued by the FIA.

1.7 The FIA may conduct or to have conducted on its behalf inspections, audits and/or due diligence checks of facilities and business practices to monitor Suppliers' compliance with the Applicable Law and these Standards, and fulfilment by Suppliers and their employees, suppliers, sub-contractors, agents and related entities of their undertakings. Suppliers shall provide any relevant information and documents, and give access to the representatives of the FIA to verify such compliance. Suppliers shall undertake to improve or correct any inadequacy. Suppliers shall keep sufficient authentic and accurate records to prove compliance. Failure to cooperate or to provide the information requested shall constitute a breach of these Standards.

1.8 The FIA may terminate or suspend its relationship with any Supplier, as well as resort to any other remedy available, when that Supplier does not comply with the Applicable Law and/or these Standards.

1.9 These Standards may be amended by the FIA from time to time. Their enforcement and interpretation rest solely with the FIA and do not confer or create any rights in favour of any party other than the FIA.

1.10 Should Suppliers need additional information or guidance on these Standards, or wish to report a violation, whether actual or potential, they shall contact the FIA Ethics Committee and/or the FIA Compliance Officer¹.

ARTICLE 2 - HEALTH AND SAFETY

2.1 Suppliers must provide their personnel with safe and healthy working conditions, in order to avoid accidents or injuries which could be caused by, be related to or derive from their work, including during the use of equipment or during work-related travel. Suppliers must implement proceedings and training programs to detect, avoid and minimise any risk to health and safety of the personnel. Suppliers' facilities are to be constructed and maintained in accordance with the Applicable Law and the relevant industry standards.

2.2 Suppliers working with the FIA or onsite at the FIA's premises or at any other location must work in a way that assures their own safety and the safety of others in compliance with the Applicable Law, including the applicable FIA and governmental, environmental, health and safety requirements. Any incidents that may impact the FIA must be reported promptly.

ARTICLE 3 - HUMAN RIGHTS AND EMPLOYMENT PRACTICES

Dignity and Fundamental Rights

3.1 Suppliers must treat the FIA and their own personnel with dignity and respect.

3.2 Suppliers represent and warrant that they, as well as their employees, suppliers, sub-contractors, agents and related entities, protect and safeguard human dignity and fundamental rights under any and all circumstances.

3.3 Suppliers comply with, and maintain awareness of, the Applicable Law in the countries where they conduct business. Suppliers conduct business responsibly, with integrity, honesty and transparency, and adhere to the standards set forth therein.

Discrimination, Harassment

3.4 Suppliers must comply with the Applicable Law, including all applicable employment laws and regulations, prohibiting discrimination in the workplace. There shall be no discrimination or any other form of unjustified inequality on the basis of race, skin colour, gender, sexual orientation, ethnic or social origin, language, religion, philosophical or political opinion, family situation or disability.

3.5 The FIA does not permit intimidation or hostility and will not tolerate any behaviour from Suppliers that might harass, disrupt or interfere with another person's ability to work.

Child Labor

3.6 Suppliers represent and warrant that they, as well as their employees, suppliers, sub-contractors, agents and related entities, comply with the Applicable Law and do not resort to any form of child labor or other exploitation of children which are not allowed under the applicable labor and employment laws and regulations.

¹ ethics-committee@fia.com

3.7 Suppliers must adhere to the minimum employment legal age limit defined by the Applicable Law, and comply with the 1999 ILO Convention No. 182² on the worst forms of child labour and the 1973 ILO Convention No. 138³ on the minimum age for admission to employment and work.

3.8 In no instance may a Supplier permit children to perform work that exposes them to undue physical risks that can cause physical, mental or emotional harm or improperly interfere with their schooling (except as may be permitted under apprenticeship or similar programs in which the minor is lawfully participating).

Forced, Bonded or Indentured Prison Labor, Slavery and Human Trafficking

3.9 Suppliers must not manufacture products or render services (or incorporate any materials therein that have been manufactured) in violation of laws governing workers' human rights, including human trafficking and slavery.

3.10 Suppliers confirm not using, in providing goods and services, involuntary or forced labor, whether indentured, bonded, prison labor or otherwise. This includes transporting, harbouring, recruiting, transferring or receiving persons by means of threat, force, coercion, abduction or fraud for labor or services.

3.11 Suppliers confirm not to have confiscated or withheld workers' identity documents or other valuable items, including passports, work permits and travel documentation.

3.12 Suppliers confirm not to have unreasonably withheld or diverted workers' wages.

3.13 Suppliers must comply with the Applicable Law to prevent undeclared, illegal and clandestine employment.

Wages and Working Hours

3.14 Suppliers must compensate all employees by providing wages, overtime pay, benefits and paid leave which as a minimum comply with the requirements under the Applicable Law. Suppliers shall also comply with the applicable rules and standards pertaining to working hours, subject to any exemptions relevant to events and competitions in the field of automotive and motor sports under the applicable laws and regulations.

Drugs

3.15 Suppliers must not possess, use or sell illegal drugs on the FIA's premises and/or at the FIA events or perform their work under the influence of alcohol, illegal drugs and any performance-enhancing substances. They shall make sure that the same applies to their employees, suppliers, sub-contractors, agents and related entities. In compliance with the applicable anti-doping regulations, all doping practices are strictly prohibited within the framework of the competitions organised by the FIA.

² Available at: http://ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:C182

³ Available at: https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:C138

ARTICLE 4 - ENVIRONMENTAL MANAGEMENT AND SUSTAINABILITY

4.1 Suppliers must comply with the Applicable Law in relation to the protection of the environment.

4.2 Suppliers must obtain any environmental permits and/or authorizations required and act in accordance with such permits and/or authorizations.

4.3 Suppliers shall endeavour to protect the environment on the occasion of any events they organise and/or within their business operations. They shall take reasonable endeavours that their operations are consistent with the generally accepted standards for environmental protection in their industries, and that on an ongoing basis, they join the FIA in its objective continuously improve its sustainability and environmental focus.

ARTICLE 5 - BUSINESS INTEGRITY

5.1 In addition to complying with the Applicable Law, Suppliers conduct business responsibly, with integrity, honesty and transparency, and adhere to the following standards of business integrity:

Corruption and Bribery

5.2 Suppliers are prohibited from engaging directly or indirectly in any form of corrupt practices and/or bribery, as well as any related illegal or unethical practices.

5.3 Corrupt practice means any form of misuse of power for any form of gain. Acts of corruption are usually intended to influence an individual in the performance of his work to act dishonestly and/or improperly.

5.4 A bribe is an inducement or reward or any form of benefit offered, promised, given or authorised, directly or indirectly: (i) to improperly influence anyone, or (ii) to reward anyone for the performance of any function or activity in order to secure or gain any commercial, contractual, regulatory or personal advantage. A bribe can take many forms, for example: (i) a direct or indirect promise or offer of something of value; (ii) the offer or receipt of a kickback, fee, reward or other form of benefit; (iii) the giving of aid or donations; (iv) the use of voting rights designed to exert improper influence.

5.5 In particular, Suppliers are prohibited from directly or indirectly paying anything of value to a government or other public official in order to:

- Obtain or retain business or improperly influence the act or decision of any government official, political party, candidate for political office, or official of a public international organization;
- Gain an improper advantage; or
- Illegally influence the action of any individual, customer, company, or company representative.

5.6 Suppliers are required to keep accurate and transparent records that reflect actual transactions and payments.

Gifts and Entertainment

5.7 Gifts and entertainment are not needed in order to conduct business with the FIA and are highly discouraged.

5.8 The following situations are always inappropriate and are expressly prohibited in relation to FIA employees, representatives, agents, appointees, consultants, volunteers, officers, commission members, sporting officials, etc., and third parties acting on behalf of the FIA:

- Offering any gift, entertainment, preferred treatment and/or any other advantage while involved in a current purchasing or contracting decision process (e.g. invitation to tender, call

- for interest, request for quotation, request for interest, request for proposals and any other form of calls for expression of interest);
- Any gift of currency, including "gift cards" ;
- Any gift (e.g. branded items, stationery, calendars, pens, etc), that is not compliant with the Applicable Law and/or local customs;
- Offering hospitality or any other form of entertainment that is not compliant with the Applicable Law and/or local customs;
- Offering an opportunity to purchase products, services, or benefit from a financial interest, under terms which are not available to other employees, suppliers, sub-contractors, agents and related entities.

5.9 The giving or receipt of gifts by Suppliers in the fulfilment of their duties for the FIA is not prohibited if all of the following requirements are met: (i) the gift complies with the Applicable Law, including the local standards and customs of the recipient's and the givers' country; (ii) the gift is not made with the intention of obtaining or retaining business or a business advantage, or of rewarding the provision or retention of business or a business advantage, or in explicit or implicit exchange for favours or benefits; (iii) the gift is given openly, not secretly; (iv) the gift cannot be viewed as excessive under local standards and customs (e.g. stationery, calendar, wine, sweets, etc.), and is only provided as a courtesy, token of esteem or gratitude for the service rendered, or a mark of friendship, when the circumstances so justify for example at an event or a specific period of the year (e.g. Christmas); and (v) the gift does not include cash or a cash equivalent (such as gift certificates, checks or vouchers). The value of a gift should not exceed, in any event, an amount of CHF 100.

5.10 The FIA appreciates that the practice of giving business gifts varies between countries and regions and what may be normal and acceptable in one region may not be in another. The test to be applied is whether in all the circumstances the gift is reasonable and justifiable. The intention behind the gift should always be considered.

5.11 The hospitality shown to Suppliers and the persons accompanying them shall not exceed the standards prevailing in the host country or in the event that they attend. The intention behind the hospitality should always be considered.

5.12 In case of doubt or queries concerning the above requirements, in particular the value of a gift or nature of the hospitality, the FIA Ethics Committee and/or the FIA Compliance Officer should be consulted before acceptance.

ARTICLE 6 - CONFLICTS OF INTEREST

6.1 Suppliers may not perform their duties in situations involving a perceived, apparent, potential and/or actual conflict of interest, and they must endeavour to avoid creating any such situations.

6.2 A conflict of interest arises when personal interests or activities influence, or appear to influence, the ability to act in the best interests of the FIA. Some situations that could cause a conflict of interest include:

- Having a significant financial investment in any company that competes, does business, or seeks to do business with the FIA. A significant financial interest includes voting control, or an ownership of more than 1% of the outstanding capital of a business, or an investment that represents more than 5% of the investor's total assets;
- Providing similar services for direct competitors of the FIA, with access to confidential or competitive information;
- When family members or partners work for the FIA or another FIA supplier.

6.3 Suppliers must disclose any perceived, apparent, potential and/or actual conflicts of interest to the FIA Ethics Committee and/or the FIA Compliance Officer. In case of doubt concerning any conflicts of interest, disclosure or at least consultation should be favoured.

6.4 Failure to disclose any such conflicts of interest in a timely manner, or provide complete information upon the FIA's request, constitutes a breach of these Standards.

ARTICLE 7 - FAIR COMPETITION AND ANTITRUST

7.1 Suppliers must comply with the Applicable Law regarding fair competition and antitrust. This covers the situations of abuse of dominant position, concerted practices and illegal cartels.

ARTICLE 8 - TRADE COMPLIANCE

8.1 Suppliers must comply with all import and export controls, commercial restrictions, sanctions regimes (in particular Swiss, EU and US sanctions), and any other trade compliance norms under the Applicable Law.

ARTICLE 9 - MONEY LAUNDERING AND INSIDER TRADING

9.1 Suppliers must comply with anti-monetary laundering norms under the Applicable Law and endeavour to take all appropriate measures to avoid that their activities be used as a vehicle of money laundering.

9.2 Suppliers must refrain from being involved in, or favouring business with, offshore entities. Suppliers shall inform the FIA in case any business conducted for the FIA involves jurisdictions identified as Offshore Financial Centers by the International Monetary Fund.

9.3 Suppliers must comply with all norms against insider trading under the Applicable Law and endeavour to take all appropriate measures to avoid that their knowledge of, or access to, sensitive information be used for favouring insider trading.

ARTICLE 10 - ACCURACY OF BUSINESS RECORDS

10.1 All Suppliers' financial books and records must conform to generally accepted accounting principles and the Applicable Law. Suppliers' records must be accurate in all material respects, they must be legible, transparent, and reflect actual transactions and payments. Furthermore, Suppliers undertake not to hide, fail to record or make false entries in their financial books.

ARTICLE 11 - CONFIDENTIAL INFORMATION

11.1 Suppliers must treat as confidential or secret any information, which is not public, communicated to them in the exercise of their duties. Any information or opinion shall be divulged only in accordance with the principles, directives and objectives of the FIA.

ARTICLE 12 - DATA PRIVACY

12.1 Suppliers must comply with the EU General Data Protection Regulation 2016/679 when handling personal data ("Personal Data") provided by the FIA.

12.2 Suppliers receiving Personal Data from the FIA will adopt, maintain and follow written and comprehensive security practices that are sufficient to safeguard FIA's Personal Data from any (a) unauthorized disclosure, access, use or modification; (b) misappropriation, theft, destruction, or loss; or (c) inability to account for such Personal Data; and treat all Personal Data as strictly confidential.

12.3 Suppliers will only process the Personal Data, in a Member State of the European Union or in a State party to the agreement on the European Economic Area ("EEA") or in Switzerland. A transfer of

the Personal Data to a third country other than the aforementioned requires prior informed consent given by the FIA.

12.4 Suppliers shall not, by any means, communicate the Personal Data to or put the Personal Data at the disposal of third parties without the FIA's prior written consent thereto unless it is required to do so by mandatory law. Suppliers shall notify the FIA if Personal Data is to be provided to a third party as a result of mandatory law unless the law prevents such notification taking place.

12.5 Suppliers shall notify the FIA Ethics Committee and/or the FIA Compliance Officer of any breach in the processing of the Personal Data and shall comply with any reasonable request for information to allow the FIA to respond to and to take suitable further steps in respect of the incident.

ARTICLE 13 - CONDUCT TOWARDS GOVERNMENTS AND PRIVATE ORGANISATIONS

13.1 Suppliers shall endeavour to maintain harmonious relations with national authorities, in accordance with the principle of universality and of political neutrality of the FIA.

13.2 Suppliers are free to play a role in the public life of the nations to which they belong. Within this framework, they may not abusively take advantage of their position within the FIA, engage in any activity or follow any ideology inconsistent with the principles defined in the FIA Statutes and Regulations and set out in these Standards.

ARTICLE 14 - MOBILE DEVICES, ELECTRONIC MEDIA, INTERNET AND E-MAIL USE

14.1 In those circumstances where Suppliers have access to the FIA's electronic environment (e-mail, voicemail, IT network, databases or other), Suppliers must:

- Protect the FIA's confidential information and electronic media;
- Secure mobile devices;
- Encrypt or password the protected data;
- Comply with all applicable data protection laws and regulations;
- Use these tools for performance of the agreement only; and
- Use these tools in accordance with good practices.

APPENDIX VI

Questionnaire Compliance – Due Diligence



QUESTIONNAIRE

Questions	Answers
1. GENERAL INFORMATION	
1.1. Type of partnership	
1.2. Name and country of the potential partner or stakeholder	
1.3. Name and country of the ultimate beneficial owners	
1.4. Name and country of the officers and directors	
1.5. Name and country of the bank	
2. INTERNATIONAL RELATIONSHIPS	
2.1. Will the relationship involve at any stage a High-Risk Country as per the list below?	Yes No
2.2. If yes to Q2.1, will there be any transactions denominated in USD between the FIA and the potential partner?	Yes No
2.3. If yes to Q2.1, are there any US citizens involved in the relationship?	Yes No
2.4. If yes to any of the questions above, please provide more details	
3. PUBLIC AUTHORITIES	
3.1. Will the potential partner or stakeholder represent the FIA before any public authority?	Yes No
3.2. Will the potential partner or stakeholder be authorized to make payments to any public authority on behalf of the FIA?	Yes No
3.3. If yes to any of the two questions above, please provide more details	
4. PAYMENTS	
4.1. Will there be any payments through an Offshore Financial Center as per the list below?	Yes No
4.2. If yes, please provide more details	



Compliance – Due Diligence Policy

5. CONNECTIONS	
5.1. Do you have any personal or business connections with any FIA Party (FIA members, FIA body members, consultants, officials, employees)?	Yes No
5.2. If yes, which?	
Stamp and signature	



High Risk Countries

- Syria
- Cuba
- Sudan
- Iran
- North Korea

Offshore Financial Centers

The International Monetary Fund has identified the following jurisdictions as Offshore Financial Centers. Any connections with those countries triggers money-laundering flags:

- Andorra
- Anguilla
- Antigua
- Aruba
- Bermuda
- British Virgin Islands
- Cayman Islands
- Gibraltar
- Guernsey
- Isle of Man
- Jersey
- Nauru
- Vanuatu