

NAL Project Procurement Tentative List 2023-24 as on [18th August 2023](#)

SI NO	Description	QTY
1	High speed camera with 4MP resolution @ Min 7000 fps with double exposure mode capability for PIV	1
2	Aerosol seed generator capable of producing particle diameter size of 0.3nm and capable of injecting seed particles inside high pressure environment	1
3	Laser optics Support rails and high power optical surface mounts	1 set
4	High damage threshold optics for PIV measurement	1
5	Pressure sensitive paint	5 kits
6	LED light	
7	Light arm with length 1.5m and above. Longer length is preferred. Capable of withstanding 650mJ @10Hz laser power, laser beam diameter, 8mm @532nm	1
8	Computer high end for post processing PIV images, with SSD hard disk, 256GB ram and 3TB storage, 8 USB 3 ports for connection with PIV devices	4
9	Carbon UD Prepreg	100 sqm
10	Supply of Epoxy Tooling Bulk Ply preperg LTC216-3	150 sqm
11	Carbon BD Prepreg	50 sqm
12	High specific energy density battery and smart BMS	4 kWh
13	High efficiency flexible solar arrays	25 sqm
14	High power density BLDC motors for high altitude operation	4
15	Tedlar PVF Film (White)	5 rolls
16	Kulite pressure sensors of type: XCS-062-10D, XCS-062-30A	30 No
17	ESP Pressure sensors (16/32 port-15PSID)	15 No
18	Silica Gel Sorbead-R (BASF)	15 Ton
19	Design Consultancy services for 2.5m x 2.5m Continuous Wind Tunnel and 1.75m x 1.75m Blowdown Wind Tunnel	1 No
20	Part Number Primary air filter AAP0540009-00089	4 Nos
21	Secondary air filter AAP0540009-00090	4Nos

22	Vibration probe AAP1407030-00100	4 Nos
23	spliteline gasket kit AAA3797125-00008	2 Nos
24	main oil pump AAP1401428-00633	1 No
25	Auxiliary pump assembly AAP1401428-00114	1 no
26	Auxiliary pump assembly AAP1401428-00013	1 no
27	Discharge below AAP0540139-01037	1 No
28	lubricating oil hose pipe AAP3794653-00173	2 no
29	lubricating oil hose pipe AAP3794653-00174	2 no
30	cylinder for stepper motor AAP1408596-00500	1 no
31	RTD.W/WELL (1/2 NPT CONNECTION) AAP3403629-00255	4 no
32	MOTOR.ELEC. ACTUATOR AAP1408596-00500	1 no

33	VALVE.BYPASS AAP0540008- 00837	1 no
34	REGULATOR.TEMPERATURE AAP1401581-01628	1 no
35	New procurements - Software Licenses	1 no
36	High End Workstations	15 no
37	Desktop PC's	10 no
38	External Portable 10TB Hard disks	15 no
39	UPS Maintenance	1 no
40	AMC - Xerox Machine	1 no
41	Toner Cartridges	24 no
42	Software Licenses maintenance	3 no
43	Color laser printer	1 no
44	Black laser printer	1 no

CSIR NAL Procurement Tentative List 2023 -2024

	Description of Line Item	Qty (if applicable)
45	IAFCC critical components	01 set
46	Cockpit switches	01 set
47	A0 size color printer - 1No A4 printer - 2Nos	3
48	Eval Boards for Synchro, LVDT, Current Drive	6
49	Crimping Tools & Ground Rig Tool Boxes	1 + 2 Set
50	Aircraft tool set	1 set
51	Miniature cockpit display - BMS	3
52	EDMU Rig Design Upgradation	1
53	CA71 Calibrator_Yokogowa	1
54	19inch Rack mountable Oscilloscope for Telemetry	1
55	Omega dry thermal chamber for calibration (Omega CL1000 Oven)	1
56	Power supply (20A)	2
57	RAM and SSD upgrade to old computers	6 set
58	Paperless Graphics Recorder (Data logger) (Sundar)	2 No
59	Clamp-ON meter (different ranges)	1
60	Rheostat _1KW	1
61	Embedded Wizard Studio	1
62	Visual Studio 2022	2 Licenses

S.No	Description	Quantity
Chemicals		
63	LR grade Acrylonitrile	5000 kg
64	Solvent DMAc (Dimethyl acetamide)	8000 kg
65	Solvent DMSO (Dimethyl sulphoxide)	2000 kg
66	Light Diesel Oil	15 kilolitres
Safety items		
67	Safety gloves for handling chemicals (nitrile rubber)	100 pairs
68	Working gloves with dotted grips	100 no's
69	Safety masks with canisters for organic vapour	50 sets
70	Heat resistant gloves (kevlar)	20 pairs
71	Welding gloves	5 pairs
72	Venus face mask with breather	10 no's
73	Safety goggles	100 no's
Boiler spares		
74	Pressure safety valves 12.5 kg/cm ² , Cast steel, 2 inches	2 no's
75	High pressure gasket sheet	1 no'
76	High temperature gasket sheet for boiler	1 no'
77	Boiler tube cleaning brush - 45 mm	10 no's
78	Boiler safety valve	2 no's
79	Boiler gauge glass	1 no'
80	Boiler blow down valve	1 no'
Demineralized water plant		
81	Cation resin T42 H	300 Litres
82	Anion resin A36 Gel	100 Litres
83	Anion resin for mixed bed A27	50 Litres
84	Filtering media for 400 dia DMF	1 no'
85	Soft water plant resin	450 liters
Others		
86	Lieca microscope 100X objective	1 no'
87	Lieca microscope Camera filter	1 no'
88	20W40 spray cans 10Nos	10 Nos
Procurement description (HCP0025)		
89	Aircraft Composite propellers	
90	Design, Development and supply of IPS actuator	
91	Design, Development and supply P seals & door seals for aircraft nacelle	
92	Aircraft Engine drain hoses, OC hoses, breather	
93	Aircraft Fuel blow back valves (SOV, filter, NRV)	
94	SOV and NRV for Aircraft ACOC ice protection	
95	supply of Non return Valve p/n SM3335-3 & Pressure sensor p/n 4499-002	
96	development & supply Engine Special tools & GHE/GSE	
97	Design, Development and supply of Alternate ACOC	
98	Existing Engines O/H & HS I	
99	Development and supply of Gas springs, latches, stay rods	

100	Special coatings & tests (intumescent, TBC)	
101	supply of Permaswage fittings	
102	aircraft Engine sensors	
103	Metal Wing tank for Fuel system test rig	
104	Design, Development and supply of triple cables aircraft engine control system	
105	Supply of Flap Control System	
106	Design, Development and Supply of Nose Wheel	
107	Bench Tests for Flaps & Elevator Disconnect Mechanisms etc	
108	Development and Supply of Life Support System	
109	Switches, sensors for LG, Hyd system (only major ones considered)	
110	ECS Ground Cooling Trolley	
111	Oxygen Charging Trolley for aircraft	
112	Data Aquisition system for test rig	
113	Development and qualification of Aircraft Seats (Passenger)	
114	Development and qualification of Aircraft Seats Aircraft Seats (Pilot and co-pilot)	
115	development and supply of Aircraft quality Moulds and Tools for part fabrication	
116	Aircraft stall warning system	
117	Aircraft relays, junctions modules, cables	
118	portable aircraft battery	
119	Indigenous Development of LED Luminaries for Civil aircraft	
120	Design, Development and Supply of 4 inch Non-Return Valve (NRV) for ECS for SARAS MkII	
121	Supply Airworthy Stall Warning and Protection System Equipment & certification documents	
122	Supply Airworthy Lithium battery system and certification documents	
123	Detail Design and Engineering of Nacelle with Engine Mount Structure for SARAS Mk-II Aircraft	
124	SUPPLY OF Airworthy GROUND COOLING FAN and certification documentation	
125	SUPPLY OF Airworthy Recirculation fan and certification documentation	
126	Design, Development and supply of Pneumatic Deicing System for Saras Mk II Aircraft	
127	Design, Development and supply of Control Yoke Assembly	
128	Engineering services & technical Support for Development of Crashworthiness Design for SARAS MK2 Aircraft	
129	Supply of Certified Hydraulic Power Pack for SARAS MK II	
130	Fabrication of Infused Mould (CFRP) Top and Bottom LH & RH for Cocured Aft Box of SARAS Mk-II Aileron	
131	Supply of Bleed Air Leak Detection System (BALD) for SARAS MkII Aircraft	
132	Fabrication of CFRP Moulds (Top & Bottom) for Elevator Co-cured Aft Box (By Infusion Process) of SARAS Mk II	
133	Fabrication of CFRP Moulds (LH & RH) for Rudder IS Box (By Infusion Process) of SARAS Mk II	
134	Fabrication of CFRP Moulds (LH & RH) for Rudder AFT Box TRIM Tab Tool (By Infusion Process) of SARAS Mk II	
135	Supply of Stall Warning and Protection System Equipment	
136	Rover unit for DGPS and its accessories	
137	Aircraft grade angle of attack vane sensors including documentation	
138	Fabrication of Mould for Horizontal Tail Inter Spar Box of SARAS Mk II	
139	Supply of Smoke Detector for Saras Mk II Aircraft	
140	Three-Window Visual Projection System for Iron Bird	
141	Aircraft Engine Fire Detection System	

142	Metal Tools for IB & OB Bottom Wing Skin of SARAS Mk II Aircraft	
143	Repair and upgrade of existing left-hand pushers to MTV-27-1-N-C-F-R(P)/CFR260-65a with spinner P-1059 tractor Props	
144	Supply of Certified Nose Wheel Steering LRUS for Saras MKII program	
145	Supply of Dual Ram Actuator for Secondary Flight Control System for Saras Mk II Aircraft	
146	Aircraft Hydraulic LRUs such as Parking Brake Valve, Brake Accumulator, Parking Brake Cable & Lever, Emergency Landing Gear Cable & Lever and Sampling valve	
147	Supply of airworthy metallic raw materials (steel, aluminium alloy) in the form of rods, plates, billets, tubes) for fabricating aircraft parts	
148	Supply of airworthy composite materials in the form of fabric, fibres, resins for fabricating aircraft parts	
149	Supply of airworthy fasteners of various types for assembling aircraft parts	
150	Supply of airworthy Paint, thinner, hardener, sealant, adhesive, grease, oils of various types for use towards aircraft equipment and test rigs	
	Mechanical Profilometer (Stylus type) SED	
151	UHV sputtering gun: 2" diameter and DC power supply	3
152	Turbo molecular pump to generate UHV	3
153	Nanostage for precision linear movement	2
154	Silicon wafers (2inch, 4inch ,or 6inch)	200
155	Photoresist and developer AZ series	5 L
156	high Purity Sputtering target , Metal, alloys and insulators	40
157	Pulse/ Pulse-Reverse Plating Power Supply,	1
158	Mechanical Profilometer (Stylus type)	1
159	Spares, Specialized powders and Serving of Cold Spray Equipment (Model: Dymet, Russia)*	

The publication of this list shall not be construed as initiation of a procurement process and cast any obligation