

**पनवेल महानगरपालिका**  
**जाहीर निविदा दरपत्रक**

आयुक्त, पनवेल महानगरपालिका हद्दीतील प्रभाग समिती 'क' प्रभाग क्र.१४ मधील भूखंड क्र.०४, सेक्टर - १६, नवीन पनवेल (प) या भूखंडावर पनवेल महानगरपालिकेचे "स्वराज्य" मुख्यालय इमारतीचे अंतर्गत सजावट व इतर अनुषंगीक कामे करणे. या कामाचे अंदाजपत्रक बनविण्याकरीता खाली नमूद केलेल्या बाबींकरीता खालील नमूण्यात दर मागविण्यात येत आहे.

अ.क्र.	कामाचे नाव	मुदत
१	पनवेल महानगरपालिका हद्दीतील प्रभाग समिती 'क' प्रभाग क्र.१४ मधील भूखंड क्र.०४, सेक्टर - १६, नवीन पनवेल (प) या भूखंडावर पनवेल महानगरपालिकेचे "स्वराज्य" मुख्यालय इमारतीचे अंतर्गत सजावट व इतर अनुषंगीक कामे करणे.	०४/१२/२०२३ ते १२/१२/२०२३ (७ दिवस)

**BASEMENT VENTILATION FANS & LOW SIDE WORK**  
**Specification**

Sr. No	DESCRIPTION	Quantity	Unit
	<b>NOTE:- 1) ALL ITEM RATES SHOULD CONSIST OF THREE YEAR DEFECT LIABILITY PERIOD INCLUDING WARRANTY / GUARANTEE PERIOD &amp; COMPREHENSIVE MAINTENANCE IN ALL RESPEC</b> <b>2)VENDER TO DO THE AIR BALNCING OF ALL AIR SUPPLY OUTLETS AND SUBMIT THE REPORT FOR THE SAME.</b> <b>3) CIVIL WORK REQUIRED FOR BASEMENT VENTILLATION FANS EXHUAST AND FRESH AIR ,WHICH WILL BE DONE BY CIVIL AGENCY AS PER DESIGN ,AS DIRECTED BY ENGINEER INCHARGE.</b>		
1.0	EXHAUST AIR FANS		
1.1	<b>Centrifugal Exhaust Fan: (AS SMOKE EXTRACTION FAN)</b>		
	Supply, installation,testing and commissioning of Centrifugal Exhaust air fan with Motor IE3 are required to be in compliance with the requirements of Class B ,performance, as defined in clause 9 of BS 7346:Part 2:1990. This requires the fan to be subjected to a rated temperature of 250C for a rated duration of 120 minutes.Electrical power cabling from Starter to motor is in HVAC contractor's scope. (with 5 NO/NC ,Relay contact with starter panel auto start on signal for fire alarm panel), with M.S floating foundations, motors, and all other accessories as per specifications.or as directed etc. Complete <b>Make:-Airflow / Kruger / Nicotra / Carryaire/ Humidin/ Systemair</b>		
1.1.1	Air Qty : 32,000 CFM ( FOR BASEMENT )		
	Static Pressure : 40 mm Wg		
	Type : DIDW Backward Curved		
	Cabinet : with		

	Mounting : Floor Mounted	4.00	NOS
1.2	<b>Axial Exhaust Fan: (AS SMOKE EXTRACTION FAN)</b>		
	Supply, installation,testing and commissioning of axial exhaust air fan are with Motor IE3 required to be in compliance with the requirements of Class B ,performance, as defined in clause 9 of BS 7346:Part 2:1990. This requires the fan to be subjected to a rated temperature of 250C for a rated duration of 120 minutes.Electrical power cabling from Starter to motor is in HVAC contractor's scope. (with 5 NO/NC, Relay contact with starter panel auto start on signal for fire alarm panel) with M.S floating foundations, motors,as per specifications.or as directed etc. Complete <b>Make:-Airflow / Kruger / Nicotra / Carryaire/ Humidin/ Systemair</b>		
1.2.1	Air Qty : 32,000 CFM (FOR BASEMENT )		
	Static Pressure : 20 mm Wg		
	Mounting : Ceiling Suspended	6.00	NOS
1.3	<b>In line Exhaust fan</b>		
	SITC of The inline / Cabinet fans shall be complete with Centrifugal fan, with Motor IE3 /EC Motor unit casing access door, electrical connections canopy fan shall be suitable for outdoor installation A/C contractor to include all accessories for installation of inline fan. Fresh air to have 6mm thick pad filter with frame.all starters with sufficient Potential free ,NO/NC contacts ,relay contacts , to control /monitor from the IBMS system, as per specifications.or as directed etc. Complete <b>Make:-Airflow / Kruger / Nicotra / Carryaire/ Humidin/ Systemair</b>		
1.3.1	2000 CFM @25 MM Static	0.00	NOS
1.3.2	1200 CFM @25 MM Static	0.00	NOS
1.4	<b>Propeller Fan:</b>		
	SITC of he propeller fans for exhaust and fresh air shall be complete with speed control, louver shutter, rain protection louver, bird screen. Fans with EC motors to be ring mountedon suitable frame provided by AC Contractor. Power will be provided 5 ft away from fan and necessary wiring with plug will be provided by AC contractor.as per specifications.or as directed etc. Complete <b>Make:-Airflow / Kruger / Nicotra / Carryaire/ Humidin/ Systemair/Crompton/ Havells /GEC</b>		
1.4.1	9" dia.	0.00	NOS
1.4.2	12" dia	0.00	NOS
1.4.3	15" dia	0.00	NOS
1.4.4	18" dia	0.00	NOS
<b>2.0</b>	<b>FRESH AIR FAN</b>		
2.1	<b>Centrifugal Fresh Air Fan:</b>		

	Supply, installation,testing and commissioning of Centrifugal Fresh air fan with Motor IE3 with Cabinet and Filters shall be 50mm thick, similar in construction to A.H.U. pre-filters and shall be easily removable for cleaning. Filter area shall be suitable for 107 M.P.M. air velocity. Electrical power cabling from Starter to motor is in HVAC contractor's scope. (with 5 NO/NC, Relay contact with starter panel auto start on signal for fire alarm panel) with M.S floating foundations, motors, as per specifications.or as directed etc. Complete <b>Make:- Airflow / Kruger / Nicotra / Carryaire/ Humidin/ Systemair</b>		
2.1.1	Air Qty : 1 6,500 CFM ( For BASEMENT)		
	Static Pressure : 45 mm Wg		
	Type : DIDW		
	Cabinet : with		
	Mounting : Ceiling Suspended	4.00	NOS
2.2	<b>Axial Fresh air Fan:</b>		
	Supply, installation,testing and commissioning of axial Fresh air fan are with Motor IE3 required to be in compliance with the requirements of Class B performance, as defined in clause 9 of BS 7346:Part 2:1990. This requires the fan to be subjected to a rated temperature of 250C for a rated duration of 120 minutes.Electrical power cabling from Starter to motor is in HVAC contractor's scope. (with 5 NO/NC ,Relay contact with starter panel auto start on signal for fire alarm panel) with M.S floating foundations, motors, as per specifications.or as directed etc. Complete <b>Make:-Airflow / Kruger / Nicotra / Carryaire/ Humidin/ Systemair</b>		
2.2.1	Air Qty : 1 6,500 CFM ( For BASEMENT)		
	Static Pressure : 20 mm Wg		
	Mounting : Ceiling Suspended	4.00	NOS
2.3	<b>In line Fresh Air fan</b>		
	SITC of The inline fans shall be complete with Centrifugal fan <b>with Motor IE3</b> , unit casing access door, electrical connections canopy fan shall be suitable for outdoor installation A/C contractor to include all accessories for installation of inline fan. Fresh air to have 6mm thick pad filter with frame. all starters with sufficient Potential free ,NO/NC contacts ,relay contacts , to control /monitor from the IBMS system, as per specifications.or as directed etc. Complete <b>Make:-Airflow / Kruger / Nicotra / Carryaire/ Humidin/ Systemair</b>		
2.3.1	1600 CFM @25 MM Static	0.00	NOS

2.3.2	1800 CFM @25 MM Static	0.00	NOS
<b>3.0</b>	<b>JET FANS</b>		
3.1	<b>Jet Fans: (For Basement)</b>		
	Supply, installation,testing and commissioning of Jet Fans with <b>Starter</b> Panel , all starters with sufficient Potential free ,NO/NC contacts ,relay contacts , to control /monitor from the IBMS system, motors Motor IE3, and all other accessories whether specifically mentioned or not. with MCB, Single Phase Preventer, over load protection, with 4 nos Potential Free NO/NC contacts (for run,trip& auto/manual) at fire signal & 1 no. of relay contact for on/off command . Local Panel compatible with BMS. as per specifications.or as directed etc. Complete <b>Make:- Airflow / Kruger / Nicotra / Carryaire/ Humidin/ Systemair</b>		
3.1.1	Air Qty : 1,250/ 2700 CFM (Normal/ Fire Mode)		
	Motor : 0.75 kW		
	Mounting : Ceiling Suspended	0.00	NOS
3.1.2	Air Qty : 2,200/ 4264 CFM (Normal/ Fire Mode)		
	Motor : 1.1 kW		
	Mounting : Ceiling Suspended	26.00	NOS
3.2	<b>CO sensors</b>		
	Supply , Installation , Testing and Commissioning of CO sensors for auto operation of Jet fans with cabling and all other accessories whether specifically mentioned or not. as per specifications.or as directed etc. Complete <b>Make:-JOHNSON CONTROL/ SIEMENS/ HONEYWLL/SCHNEIDER/L&amp;T/PANASONIC / Omicron make</b>	26.00	NOS
3.3	<b>Logical Control system for Basement Ventilation:</b>		
	Supply, Erection, Testing and Commissioning of Car park Electrical cum PLC Panel for Jet fan. Panel shall be free stand type with inbuilt with seimens PLC. It has control the jet fans, and signal provision for exhaust and supply air fans and Fire dampers. With 5 nos Potential Free NO/NC contacts (for run,trip& auto/manual) at fire signal & 1 no. of relay contact for on/off command . Local Panel compatible with BMS.as per specifications.or as directed etc. Complete <b>Make:- SCHNIEDER/L&amp;T/SEIMENS/LEGRAND/DB ELECTRICALS/VIVID ELECTROMECH/GOEL POWER/ADARSH ELECTRICAL/PRATIK SYSTEMS</b>		
	<b>BASEMENT :-</b> Electrical control panel for Auto operation of start/stop of all Fresh air and exhuaast air ventillation		

	<p>fans and all Jet fans on getting signal from the CO sensor, and also on getting signal from fire alarm panel, however in case of fire all these fans should run at full speed. All jet fans should run on getting signal from the CO sensors. The panel should have auto-manual settings for all individual fans and Automatic Fire suppression gas flooding system complete with Perfluoro Ketone (FK-5-1-12)/ HFC 227ea, DLP Assembly with automatic valve, push in connector for tube, Perfluoro Ketone (FK-5-1-12)/ HFC 227ea, mounting bracket, End of Line adopter and low pressure switch for monitoring system activation. Perfluoro Ketone (FK-5-1-12)/ HFC 227ea gas of suitable capacity, Heat detection tube as required and A/V alarm with all necessary installation to complete the system as per specifications or as directed etc.</p>		
	<p><b>Note:</b> For Basement Ventilation Panel refer Electrical Panel SLD</p>		
	<p><b>BASEMENT VENTILLATION DISTRIBUTION PANEL:-</b> Supply, installation, testing &amp; commissioning Floor mounted cubicle type panel Enclosure Fabricated from 14/16G CRCA sheet steel totally compartmentalized, treated for rust proofing. with separate busbar chamber &amp; cable chambers Access - Only Front access for switchgears, connectors etc. Operating Voltage- Suitable for 430 V, 3 phase / 4 Wire System, 50 Hz supply <b>Main Control Unit/ Incomer-</b> 1 No. - 315A MCCB, TPN, 16 KA, MP O/C, S/C, U/V, E/F Visual Indication 1- LED Based Phase indicating lamps, control MCBs, CTs, etc Visual Indication 2- Set - ON/OFF/ TRIP lamps with control MCBs <b>Potential Bus/Busbar</b> Type/Material- 1 set - 315A TPN +E, 25 KA, Tinned Aluminium busbar Insulation- Insulated with heat shrinkable sleeves <b>Feeder section/Outgoing</b> 4 NOS. OF 63A TP 16KA MCB FOR 32000 CFM X 4 NOS CENTRIFUGAL FLOOR MOUNTED EXHAUST FANS, 4 NOS. OF 63A TPN 16KA MCB FOR 32000 CFM Axial Smoke Extraction Fans ( on Fire Mode ), 4 NOS. OF 40A TPN 16KA MCB FOR 16,500 CFM X 4 NOS Centrifugal Floor Mounted Fresh air Fans, 4 NOS. OF 40A TPN 16KA MCB FOR 16,500 CFM X 4 NOS NOS Smoke Axial Fresh air Fans ( On Fire Mode), 26 NOS. OF 25A TPN 16KA MCB FOR 26 NOS. JET FANS, SPARE- 3 NOS. 40 A TPN 16 KA MCB &amp; 5 NOS. 25 A TPN 16 KA MCB</p>		
3.3.1	<b>For Basement - 1 No Panel</b>	1.00	NOS
	32,000 CFM X 4 NOS Centrifugal Floor mounted Exhaust Fans		
	32,000 CFM X 4 NOS Axial Smoke Extraction Fans ( <b>on Fire Mode</b> )		
	JET Fans = 26 Nos		
	16,500 CFM X 4 NOS Centrifugal Floor Mounted Fresh air Fans		

	16,500 CFM X 4NOS NOS Smoke Axial Fresh air Fans ( On Fire Mode)		
3.4	<b>CFD analyses for Basement Ventilation:Vender to submit the complete CFD analysis report along with desing and detail drawings.</b>	1.00	JOB
	<b>BY FAN SUPPLIERS:-Airflow / Kruger / Nicotra / Carryaire/ Humidin/ Systemair</b>		
<b>4.0</b>	<b>SHEET METAL WORKS</b>		
4.1	<b>GI Duct ( Metal Ducts)</b>		
	<b>GI Sheet Make:-Tata / Jindal / Sail</b>		
	<b>FACTORY MADE GI Duct as per SMACNA STD'S</b>		
	Fabrication, supply, installation, testing & commissioning of Galvanised Iron ( GI )shall conform IS: 227 – 1977 Sheet ducting complete with splitter dampers, turning vanes, access doors, supports etc. as per drawings as per specifications.or as directed etc. complete.. Supports for ducts at 2.4m distance apart upto 2250/1.2m distance part for larger ducts. Each Hangers and supports shall have minimum 2 vertical rods of 10mm/12mm diameter with 40 x 40 x 6 or 50 x 50 x 6 angles as approved by Consultant.as per specifications.or as directed etc. complete..All Duct joints should be Air tight joints & shall be fully sealed with Silicon Sealant for leak tight installation.for leak tight installation. Accessories such as splitter, vanes etc.Ducts should be with proper reinforcement/ strengthening if required. Adhesives, Tapes and sealants for Joints.The gasket used in case for all ducts shall be fire retardant type as per specifications.or as directed etc. complete.. <b>FACTORY MADE GI Duct as per SMACNA STD'S Make:-Asawa /Zeco /Rollastar /Nutech/DS Ductofab</b>		
	<b><u>Note :</u></b>		
	1) All exposed ventilation duct work should be painted with 2 coats of epoxy primer and 2 coats of epoxy paint.All the supports of the duct will be painted to match the ducting. Please note that the supports for ducting have to be taken from the ceiling slab only. as per specifications.or as directed etc. complete..		
	2) Duct Should be Factory made		
4.1.1	18 Gauge (Thickness 1.25mm) for <b>PLENUM OR BIGGER DUCT</b>	480.00	SQFT
4.1.2	20 Gauge (Thickness 1.0mm)	0.00	SQFT
4.1.3	22 Gauge (Thickness 0.8mm)	1,800.00	SQFT
4.1.4	24 Gauge ( Thickness 0.63mm)	1,200.00	SQFT

4.2	<b>Continous Linear Grilles</b>		
	Supply, installation,testing and commissioning of following sizes of Aluminium extruded powder coated continous grilles with 4 side flanges as per specifications.or as directed etc. complete.. Note : If required Contractor should blank off the extra portion of grille without additional cost and provide deflection of 0 deg to 45 deg without extra cost as per specifications.or as directed etc. complete.. <b>Make:Dynacraft/ Cosmos/ Airproducts/System air</b>		
4.2.1	200mm wide	60.00	SQFT
4.2.2	150mm wide	90.00	SQFT
4.2.3	100mm wide	30.00	SQFT
4.3	<b>Gravity louvers</b>		
	<b>Make:Dynacraft/ Cosmos/ Airproducts/System air</b>		
4.3.1	Supply, installation, testing and commissioning of GI Gravity louvers	165.00	SQFT
4.4	<b>Louvers</b>		
	Make:Dynacraft/ Cosmos/ Airproducts/System air		
4.4.1	Supply, installation, testing and commissioning of Aluminiumanodised rain protection louvers	350.00	SQFT
4.5	<b>Fire Dampers</b>		
	Motorized fire damper UL555 with actuator <b>Make:Cosmos with belimo controller / Ruskin Titus / Fire Damper &amp; Belimo Actuators / Honey well /Caryaire</b>		
	GI Fire damper UL 555 <b>Make:Dynacraft/ Cosmos/ Airproducts/System air/Ruskin/Honeywell/Titus</b>		
	Actuator for Damper <b>Make:Belimo Actuators / Caryaire/ Servex/ Dynamic/Ruskin/Anergy</b>		
	Fusible Link For Fire Damper <b>Make:Cosmos / Ruskin /Titus /Caryaire/System air</b>		
	Supply, installation of fire dampers with control cabling at the unit outlet.		
4.5.1	SITC of Fire dampers (Only for Fresh Air Ducts)	30.00	SQFT
4.5.2	SITC of Motorized actuators rated for fire dampers and spring return type.	6.00	NOS
4.5.3	SITC of Fusible link as per specification UL 555 and CBRI approved.	1.00	NOS
4.6	<b>Volume Control Dampers for Duct</b>		
	<b>Volume Control Dampers Make:-Dynacraft/ Cosmos/</b>		

	<b>Airproducts / Dynamic / Servex</b>		
4.6.1	Supply, installation, testing and commissioning of volume control dampers in GI at Machine outlet and in Branch duct. (Gear Operated and Low Leakage), as per specifications or as directed etc. complete..	30.00	SQFT
4.7	<b>Volume Control Dampers for Collar (Only for Fresh Air Ducts)</b>		
	<b>Make: Dynacraft/ Cosmos/ Airproducts/System air</b>		
4.7.1	Supply and Installation of Black MS Box- Type Volume Control Dampers for Collar, as per specifications or as directed etc. complete..	18.00	SQFT
4.8	<b>Fire retardent Canvass Connections</b>		
	<b>Make:-ARAR Impex/Mauli Fire Safety/Canvass emporium/Reputed ,or as directed.</b>		
	Supply, installation, testing and commissioning of Flexible double Canvas with Fire retardant Connections for AHU, FCU & FAN. as per specifications or as directed etc. complete..	16.00	NOS
<b>5.0</b>	<b>ELECTRICAL WORK</b>		
5.1	<b>Starter Panels for Ventilation Fans</b>		
	Supply, Installation, Testing and Commissioning of cubicle type fully compartmentalized totally sheet steel enclosed LT panel suitable for 415V, 50 Hz, 3 phase and 4 wire AC power supply with TPN tinned copper busbars and suitable for top cable entry, front access, dead back type and complete with feeders, metering and indications as per specifications or as directed etc. single line diagram and specifications enclosed: complete.. 4 nos Potential Free NO/NC contacts (for run, trip & auto/manual) at fire signal & 1 no. of relay contact for on/off command . Local Panel compatible with BMS as per specifications or as directed etc. complete.. <b>Make:- SCHNIEDER/L&amp;T/SEIMENS/LEGRANDBB ELECTRICALS/VIVID ELECTROMECH/GOEL POWER/ADARSH ELECTRICAL/PRATIK SYSTEM</b>		
5.1.1	<b>For Centrifugal Exhaust Fan (AS SMOKE EXTRACTION FAN) 32,000 CFM @ 40 mm Static Centrifugal Exhaust Fan</b>	4.00	Nos.
5.1.2	<b>For Axial Exhaust Fan (AS SMOKE EXTRACTION FAN) NOS. 32,000 CFM @ 20 Centrifugal Exhaust Fan</b>	4.00	Nos.
5.1.3	<b>For Centrifugal Fresh Fan . 16,500 CFM @ 45 Centrifugal Fresh Air Fan</b>	4.00	Nos.
5.1.4	<b>For Axial Fresh Fan . 16,500 CFM @ 20 Centrifugal Fresh Air Fan</b>	4.00	Nos.
5.1.1	<b>1) For Centrifugal Exhaust Fan (AS SMOKE EXTRACTION FAN) 4 NOS. 32,000 CFM @ 40 mm</b>	1.00	set



	Static Centrifugal Exhaust Fan ,2) For Axial Exhaust Fan (AS SMOKE EXTRACTION FAN) 4 NOS. 32,000 CFM@ 20 Centrifugal Exhaust Fan ,3) For Centrifugal Fresh Fan ,4 NOS. 16,500 CFM @ 45 Centrifugal Fresh Air Fan		
5.2	Power Cable For All Fan		
	Supply, laying, dressing, testing and commissioning of 1100V grade, aluminum/copper conductor, galvanized steel wire/strip armoured, PVC sheathed power and control cables of following sizes to be laid on trays/ wall/racks including clamping as per specifications.or as directed etc. complete.. Make:-Finolex / Havells / RR Kabel/ CCI / Gloster/Polycab		
5.2.5	SITC of 4c x 2.5sqmm YRY Copper armoured cable	300.00	RMTR
5.3	Control Cables For Jet Fan		
	Supply & Installation of All control cables between Jet Fan unit laid in PVC pipe and clamped .as per specifications.or as directed etc. complete.. Make:-Finolex / Havells / RR Kabel/ CCI / Gloster/Polycab		
5.3.1	SITC of 3c x 1.5sqmm YRY Copper armoured cable	600.00	RMT
5.4	Cable Trays		
6.0	CIVIL WORK		
6.1	Chasing of wall .Finishing the same. Breaking and making opening in consultation with Architects for routing pipes, cables, fresh air etc. Scaffolding etc or any other civil work for carrying out Ac work.(Scope of Civil )as per specifications.or as directed etc. complete..of following sizes:	1.00	JOB
	<b>SUB TOTAL BASEMENT VENTILATION FANS &amp; LOW SIDE WORK - GST EXTRA AS APPLICABLE</b>		
	<b>GST EXTRA AS APPLICABLE</b>		

वर नमूद सुचित दर्शविलेल्या बाबींचे पुरवठा करणारे पुरवठादार/दुकानदार/उत्पादक/विक्रेते यांनी नमूद केलेल्या बाबींकरीता असलेले दर स्वतःच्या लेटरहेडवर महापालिकेच्या कार्यालयात अथवा ई-मेल द्वारे [pmcbandhkamdept01@gmail.com](mailto:pmcbandhkamdept01@gmail.com) यावर दिनांक 7/2/2023 पर्यंत पाठवावे ही विनंती, सदर दर हे अंदाजपत्रक तयार करणेसाठी गृहित धरणेत येणार आहेत.

*S. M. Mohan*  
कार्यकारी अभियंता (प्रकल्प)  
पनवेल महानगरपालिका

जा.क्र पमपा/बांधकाम/ 2321 /प्र.क्र. 03/ 8900/3/2023  
दि. 9 /92-2023