









# Installer Frameless Glass Doors/Windows

Options: Framed Doors/Windows

QP Code: FFS/Q6104

Version: 2.0

NSQF Level: 4

Furniture and Fittings Skill Council || 407-408, DLF City Court, M G Road, Sikanderpur Gurgaon - 122002







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## FFS/Q6104: Installer Frameless Glass Doors/Windows

## **Brief Job Description**

Installer Frameless Glass Doors/Windows fixes the glass and then installs the doors/windows using required architectural hardware. The job holder must comply with relevant health and safety standards while carrying out the tasks.

#### **Personal Attributes**

She/he needs to be quality conscious, focused and physically active as well as capable to stand and work carefully for long hours. She/he should be able to work as per instructions given, responsible for own outcomes and works in a team. The job requires the individual to have an eye for detail and steady hands.

## **Applicable National Occupational Standards (NOS)**

## **Compulsory NOS:**

- 1. FFS/N6105: Planning installation of frameless glass door/ windows
- 2. FFS/N6106: Install Frameless Glass Door/Windows
- 3. FFS/N8501: Maintain work area, tools and machines
- 4. FFS/N8601: Ensure health and safety at workplace
- 5. FFS/N8801: Work effectively with others

#### **Options**(Not mandatory):

Option: Framed Doors/Windows

Installer fixes the glass with the frame and then installs the doors/windows using architectural hardware.

- 1. FFS/N6103: Planning for Installation of Framed Door/Windows
- 2. FFS/N6104: Install framed doors/windows

## **Qualification Pack (QP) Parameters**

Sector	Furniture & Fittings
Sub-Sector	Architectural Fittings-Doors/Windows
Occupation	Installation
Country	India







NSQF Level	4
Aligned to NCO/ISCO/ISIC Code	NCO-2015-7115.0200/7115.9900/7119.9900
Minimum Educational Qualification & Experience	8th Class
Minimum Level of Education for Training in School	
Pre-Requisite License or Training	For RPL: Expertise in Assembler Door/Windows Glass (Level 3) required
Minimum Job Entry Age	18 Years
Last Reviewed On	17/10/2019
Next Review Date	17/10/2023
<b>Deactivation Date</b>	17/10/2023
NSQC Approval Date	22/08/2019
Version	2.0







## FFS/N6105: Planning installation of frameless glass door/ windows

## **Description**

Installer Frameless Glass Doors/Windows installs the doors/windows and fix glass partitions using required architectural hardware

#### Scope

This unit/task covers the following:

- Understand the work requirement
- Prepare work area for installation
- Read and Interpret architectural drawings and technical specifications
- Working safely

#### **Elements and Performance Criteria**

#### Understand the work requirement

To be competent, the user/individual on the job must be able to:

- **PC1.** obtain job instructions from responsible personnelJob Instruction: design, hardware requirement, dimensions, size of fixed partitions etc.
- **PC2.** interact with supervisor in order to understand the client requirement
- **PC3.** read and confirm that the given instructions and design are complete and correct
- **PC4.** identify the work site/ opening where the door is to be fixed as per design
- **PC5.** plan out an efficient sequence of work as per the job requirement and specification

## Prepare the work area for installation

To be competent, the user/individual on the job must be able to:

- **PC6.** obtain appropriate hardware, materials and tools/machines suitable to carry out the given tasksTools & Machines: e.g. measuring tape, leveler, square, drill and bits, stapler, scissors and utility knife, screw drivers, hammer, chisel, sealant gun, saw, plumb line, electric screw driver, angle grinder, allen key set in mm, dowels, pliers etc. Hardware and Material: hinges, pivot, floor spring etc. requirement, hinges, pivot, floor spring, patch fitting, handles, locks, packing, sealant etc.
- **PC7.** identify and check the hardware that has come with the door / window for installation
- **PC8.** report on any shortage or defect of materials/hardware to the concerned person before commencement of work
- **PC9.** check that the selected tools & equipment are in safe working condition and ready for use
- **PC10.** take the size of the opening and match the same with the specification document/ job sheet and report discrepancies if any prior to installation
- **PC11.** use approved procedures to inspect glass door visually for any possible defects as per required standard parameters prior to workDefects: unevenness, chipped glass, waviness, bend in glass etc.

Read and interpret architectural drawaongs and technical specification

To be competent, the user/individual on the job must be able to:







- **PC12.** read and interpret the details from architectural drawings relevant to door and fixed partition installation
- **PC13.** read and understand manufacturer's specification for hardware and its installation
- **PC14.** identify the surfaces and dimensions as per the drawing
- **PC15.** read and understand the scope of work

#### Working safely

To be competent, the user/individual on the job must be able to:

- **PC16.** return all the used tools and materials safely to the appropriate personal
- **PC17.** work safely at all times, complying with health and safety legislation, regulations and other relevant guidelines
- **PC18.** maintain correct body posture while standing and working for long hours and carrying heavy materials
- **PC19.** lift, carry or move heavy glass /windows from one place to another using approved safe working practices
- **PC20.** ensure that the work area is free of clutters to carry out installation work smoothly
- **PC21.** select and use appropriate personal protective equipment compatible to the work and compliant to relevant occupational health and safety guidelinesPersonal Protective Equipment: masks, safety glasses, head protection, ear muffs, safety footwear, gloves, aprons, warning signs and tapes, fire extinguisher, first aid kit
- **PC22.** follow electrical safety measures while working with electrically powered tools & equipment

#### **Knowledge and Understanding (KU)**

The individual on the job needs to know and understand:

- 1. relevant legislation, standards, policies, and procedures followed in the company
- 2. expectations and responsibilities of the job role
- **3.** the organizations rules, codes, guidelines and standards
- **4.** statutory responsibilities, organizational legislation and regulations
- 5. contact person in case of queries on procedure or products
- **6.** method to handle tools and equipment safely and the health and safety implications of not doing so
- **7.** escalation matrix
- 8. relevant health and safety requirements applicable in the work place
- **9.** who to approach for support in order to obtain work related instructions, clarifications and support
- **10.** importance of following health, hygiene, safety and quality standards
- 11. different types of doors /windows and their installation requirementTypes of doors: entrance doors, bedroom doors, toilet doors, kitchen doors, stair case doors, fire doors etc. Types of windows: Bedroom window, balcony window, kitchen window,large/ tall opening windows etc
- **12.** different type of doors /windows on the basis of its functioningTypes of doors: swing doors, sliding doors, single acting door, double acting door etc. Types of window: Sliding window, fixed window, bay window etc
- **13.** importance of using personal protective equipment appropriate to the work







- **14.** different types of architectural hardware and their usesArchitectural Hardware: locks, hinges, handle cylinder, door closers, seal, pivot, patch fittings floor spring, glass connectors, plastic seals etc.
- **15.** different type of hinges and their use as per the door / window type/styleType of Hinges: heavy duty hinges, brass hinges, concealed hinges, ball bearings, lift off, self-closing, slip on hinges, click on hinges, glass door hinges etc.
- **16.** different types of locks and their installation processType of Locks: Multi point locks, motorize locks, electronic locks etc
- **17.** hazards and risks associated with glass door installation and how to minimize accidents and injury to self and others
- 18. importance of maintaining healthy work environment
- **19.** different types of door handles and their suitability as per door typestype of door handles: pull handle, fixed knob, lever handle etc.
- **20.** different types of tools and equipment and their usesTools & machines: e.g. measure tape, leveler, square, drill and bits, stapler, scissors and utility knife, screw drivers, hammer, chisel, sealant gun, saw, plumb line, electric screw driver, angle grinder, Allen key set in mm, dowels, pliers etc.
- **21.** terminology, pictorial representation, symbols, etc. related to architectural drawings and specifications
- 22. basic measurement units
- 23. basic calculations and mathematics
- **24.** methods of holding and centering work piece i.e door and frame
- 25. methods used to identify defects
- **26.** relevant methods used to rectify defects
- **27.** safe disposal of waste materials
- **28.** drawings and sketches for door installation
- **29.** how to check for alignment, straightness and plumb
- **30.** how to carry out markings to guide activities of subordinatesactivities: markings to make cut out, marking for pivots, patch fitting etc.
- **31.** appropriate Fastening Methods to be usedAppropriate fastening Method: clips & screws, backside attachment, etc.
- **32.** cleaning and maintenance procedures
- **33.** allowable tolerance limit for door and frame positioning

#### **Generic Skills (GS)**

User/individual on the job needs to know how to:

- 1. write in Hindi or local language
- 2. fill formats, logs and forms related to work in local language or Hindi/English
- 3. document measurement appropriately whenever required
- **4.** read instructions from supervisor provided in local language or Hindi
- 5. read and understand manufacturers instructions and job specifications
- **6.** interpret pictorial representations and written signs or instructions







- 7. read and interpret numbers written in Hindi or local language
- 8. understand safety symbols and basic warning signs wherever needed
- 9. communicate effectively with team members, supervisors, managers etc.
- 10. seek clarification on any unclear instructions in locally understood language
- 11. take decisions of once own roles and responsibilities
- **12.** decide on material requirement for related to once work
- 13. decide on to accept or reject a work piece on the basis of quality parameter
- 14. plan and organize own work in a way that all activities are completed in time and as per specifications
- **15.** plan work as per job specification
- **16.** plan and organize cleaning and maintenance activities
- 17. work and deliver output as per client requirement
- 18. identify any defects in materials, tools and equipment and ways to resolve them
- 19. determine timely correction of errors to minimize rejection of pieces or re-work







## **Assessment Criteria**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Understand the work requirement	10	10	-	-
<b>PC1.</b> obtain job instructions from responsible personnelJob Instruction: design, hardware requirement, dimensions, size of fixed partitions etc.	2	2	-	-
<b>PC2.</b> interact with supervisor in order to understand the client requirement	2	2	-	-
<b>PC3.</b> read and confirm that the given instructions and design are complete and correct	4	-	-	-
<b>PC4.</b> identify the work site/ opening where the door is to be fixed as per design	-	4	-	-
<b>PC5.</b> plan out an efficient sequence of work as per the job requirement and specification	2	2	-	-
Prepare the work area for installation	4	21	-	-
PC6. obtain appropriate hardware, materials and tools/machines suitable to carry out the given tasksTools & Machines: e.g. measuring tape, leveler, square, drill and bits, stapler, scissors and utility knife, screw drivers, hammer, chisel, sealant gun, saw, plumb line, electric screw driver, angle grinder, allen key set in mm, dowels, pliers etc. Hardware and Material: hinges, pivot, floor spring etc. requirement, hinges, pivot, floor spring, patch fitting, handles, locks, packing, sealant etc.	-	4	-	-
<b>PC7.</b> identify and check the hardware that has come with the door / window for installation	-	4	-	-
<b>PC8.</b> report on any shortage or defect of materials/hardware to the concerned person before commencement of work	2	2	-	-
<b>PC9.</b> check that the selected tools & equipment are in safe working condition and ready for use	-	4	-	-
<b>PC10.</b> take the size of the opening and match the same with the specification document/ job sheet and report discrepancies if any prior to installation	2	2	-	-







Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC11.</b> use approved procedures to inspect glass door visually for any possible defects as per required standard parameters prior to workDefects: unevenness, chipped glass, waviness, bend in glass etc.	-	5	-	-
Read and interpret architectural drawaongs and technical specfication	10	10	-	-
PC12. read and interpret the details from architectural drawings relevant to door and fixed partition installation	5	-	-	-
<b>PC13.</b> read and understand manufacturer's specification for hardware and its installation	5	-	-	-
<b>PC14.</b> identify the surfaces and dimensions as per the drawing	-	5	-	-
PC15. read and understand the scope of work	-	5	-	-
Working safely	6	29	-	-
<b>PC16.</b> return all the used tools and materials safely to the appropriate personal	-	5	-	-
<b>PC17.</b> work safely at all times, complying with health and safety legislation, regulations and other relevant guidelines	2	3	-	-
<b>PC18.</b> maintain correct body posture while standing and working for long hours and carrying heavy materials	-	5	-	-
<b>PC19.</b> lift, carry or move heavy glass /windows from one place to another using approved safe working practices	-	5	-	-
<b>PC20.</b> ensure that the work area is free of clutters to carry out installation work smoothly	-	5	-	-
<b>PC21.</b> select and use appropriate personal protective equipment compatible to the work and compliant to relevant occupational health and safety guidelinesPersonal Protective Equipment: masks, safety glasses, head protection, ear muffs, safety footwear, gloves, aprons, warning signs and tapes, fire extinguisher, first aid kit	2	3	-	-







Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC22.</b> follow electrical safety measures while working with electrically powered tools & equipment	2	3	-	-
NOS Total	30	70	-	-







# **National Occupational Standards (NOS) Parameters**

NOS Code	FFS/N6105
NOS Name	Planning installation of frameless glass door/ windows
Sector	Furniture & Fittings
Sub-Sector	Architectural Fittings-Doors/Windows
Occupation	Installation
NSQF Level	4
Credits	TBD
Version	1.0
Last Reviewed Date	17/10/2019
Next Review Date	17/10/2023
NSQC Clearance Date	22/08/2019







## FFS/N6106: Install Frameless Glass Door/Windows

## **Description**

Installer Frameless Glass Doors/Windows is required to install doors/windows using various architectural hardware. To perform the work competently the person is required to work with precision in delivering outcomes. The individual work under supervision and follows instructions related to work.

#### Scope

This unit/task covers the following:

- Carryout marking of layout
- Perform installation activities

#### **Elements and Performance Criteria**

#### Carryout markings of layout

To be competent, the user/individual on the job must be able to:

- **PC1.** identify the work site/ opening where the door is to be installed
- **PC2.** take the size of the opening and match the same with the specification document/ job sheet and report discrepancies if any prior to installation
- **PC3.** read and confirm that the given instructions and design are correct and complete
- PC4. obtain appropriate materials and tools suitable to carry out marking activities
- **PC5.** identify the surfaces and dimensions as per the drawing
- **PC6.** check the plumb, line and level of the opening
- **PC7.** carryout measurements for floor springs, wall/glass opening for installation
- **PC8.** calculate height and width as per design for installation
- **PC9.** carry out markings to guide activities of subordinates

#### Perform installation activities

To be competent, the user/individual on the job must be able to:

- **PC10.** obtain appropriate materials, hardware and tools/machines suitable to carry out the given taskstools & machines: e.g. measuring tape, leveler, square, drill and bits, stapler, scissors and utility knife, screw drivers, hammer, chisel, sealant gun, saw, plumb line, electric screw driver, angle grinder, allen key set in mm, dowels, pliers etc. hardware and material: hinges, pivot, floor spring etc. requirement, hinges, pivot, floor spring, patch fitting, handles, locks, packing, sealant etc.
- PC11. identify and check the hardware that has come with the door for installation
- **PC12.** report on any shortage or defect of materials/hardware to the cone'srned person before commencement of work
- **PC13.** take the size of the opening and match the same with the specification document/ job sheet and report discrepancies if any prior to installation
- **PC14.** check and ensure the size of the opening matched the size of the door prior to installation
- PC15. ensure that the size of the fixed partition matches the door and the opening







- PC16. ensure correct methods of holding and centering work piece i.e glass door
- **PC17.** ensure appropriate lifting devices for lifting glass /windowslifting device: glass holders with single and multiple knobs
- **PC18.** fix the floor spring in the cutout on the floor
- **PC19.** set the speed of the floor spring as per specification
- **PC20.** fix the top and the bottom pivot and check alignment
- **PC21.** fix the patch fitting as per design requirement
- **PC22.** install the fixed partitions with the support of the patch fittings before door installation
- **PC23.** use hinges to fix the glass door on the glass opening or wall opening
- **PC24.** install the door closer as per design specification and set the required speed if mentioned in the design specification
- **PC25.** fix the door handle at the appropriate heightappropriate height: height from the center of the door handle should be 1040mm of the finish floor level
- **PC26.** choose appropriate drill blades, depending upon the thickness of the glass and the hardware to be used
- **PC27.** ensure that the work area is free of clutters to carry out installation work smoothly

## **Knowledge and Understanding (KU)**

The individual on the job needs to know and understand:

- 1. relevant legislation, standards, policies, and procedures followed in the company
- **2.** expectations and responsibilities of the job role
- **3.** the organizations rules, codes, guidelines and standards
- **4.** statutory responsibilities, organizational legislation and regulations
- **5.** contact person in case of queries on procedure or products
- **6.** method to handle tools and equipment safely and the health and safety implications of not doing so
- **7.** escalation matrix
- 8. relevant health and safety requirements applicable in the work place
- **9.** who to approach for support in order to obtain work related instructions, clarifications and support
- **10.** importance of following health, hygiene, safety and quality standards
- **11.** different types of doors /windows and their installation requirementtypes of doors: entrance doors, bedroom doors, toilet doors, kitchen doors, stair case doors, fire doors etc.
- **12.** different type of doors /windows on the basis of its functioningtypes of doors: swing doors, sliding doors, single acting door, double acting door etc.
- 13. importance of using personal protective equipment appropriate to the work
- **14.** different types of architectural hardware and their usesarchitectural hardware: locks, hinges, handle cylinder, door closers, seal, pivot, patch fittings floor spring, glass connectors, plastic seals etc.







- **15.** different type of hinges and their use as per the door type/styletype of hinges: heavy duty hinges, brass hinges, cone'saled hinges, ball bearings, lift off, self-closing, slip on hinges, click on hinges, glass door hinges etc.
- **16.** different types of locks and their installation processtype of locks: multi point locks, motorize locks, electronic locks etc
- **17.** hazards and risks associated with glass door installation and how to minimize accidents and injury to self and others
- **18.** importance of maintaining healthy work environment
- **19.** different types of door handles and their suitability as per door typestype of door handles: pull handle, fixed knob, lever handle etc.
- **20.** different types of tools and equipment and their usestools & machines: e.g. measure tape, leveler, square, drill and bits, stapler, scissors and utility knife, screw drivers, hammer, chisel, sealant gun, saw, plumb line, electric screw driver, angle grinder, allen key set in mm, dowels, pliers etc.
- **21.** terminology, pictorial representation, symbols, etc. related to architectural drawings and specifications
- 22. basic measurement units
- 23. basic calculations and mathematics
- **24.** methods of holding and centering work piece i.e door and frame
- 25. methods used to identify defects
- **26.** relevant methods used to rectify defects
- **27.** safe disposal of waste materials
- **28.** drawings and sketches for door installation
- **29.** how to check for alignment, straightness and plumb
- **30.** how to carry out markings to guide activities of subordinatesactivities: markings to make cut out, marking for pivots, patch fitting etc.
- **31.** appropriate fastening methodsappropriate fastening method: clips & screws, backside attachment, etc.
- **32.** cleaning and maintenance procedures
- 33. how to read tape measurements
- **34.** step by step process of door installation i.e. sequence of tasks
- **35.** process of installing the fixed partition
- **36.** allowable tolerance limit for door positioning
- **37.** appropriate way to install door handlesappropriate process: height from the center of the door handle should be 1040mm of the finish floor level etc.
- **38.** step by step process to install various architectural hardware like door closer, floor spring, patch fitting etc.

## **Generic Skills (GS)**

User/individual on the job needs to know how to:

- 1. write in hindi or local language
- 2. fill formats, logs and forms related to work in local language or hindi/english







- 3. document measurement appropriately whenever required
- **4.** read instructions from supervisor provided in local language or hindi
- 5. read and understand manufacturers instructions and job specifications
- 6. interpret pictorial representations and written signs or instructions
- 7. read and interpret numbers written in hindi or local language
- 8. understand safety symbols and basic warning signs wherever needed
- **9.** communicate effectively with team members, supervisors, managers etc.
- 10. seek clarification on any unclear instructions in locally understood language
- 11. take decisions of one's own roles and responsibilities
- 12. decide on material requirement related to one's work
- **13.** decide to accept or reject a work piece on the basis of quality parameter
- **14.** plan and organize own work in a way that all activities are completed in time and as per specifications
- **15.** plan work as per job specification
- 16. plan and organize cleaning and maintenance activities
- 17. work and deliver output as per client requirement and satisfaction
- 18. identify any defects in materials, tools and equipment and ways to resolve them
- 19. determine timely correction of errors to minimize rejection of pieces or re-work







## **Assessment Criteria**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Carryout markings of layout	9	23	-	-
<b>PC1.</b> identify the work site/ opening where the door is to be installed	-	3	-	-
<b>PC2.</b> take the size of the opening and match the same with the specification document/ job sheet and report discrepancies if any prior to installation	1	3	-	-
<b>PC3.</b> read and confirm that the given instructions and design are correct and complete	-	3	-	-
<b>PC4.</b> obtain appropriate materials and tools suitable to carry out marking activities	2	2	-	-
<b>PC5.</b> identify the surfaces and dimensions as per the drawing	2	2	-	-
PC6. check the plumb, line and level of the opening	-	3	-	-
<b>PC7.</b> carryout measurements for floor springs, wall/glass opening for installation	1	3	-	-
<b>PC8.</b> calculate height and width as per design for installation	2	2	-	-
<b>PC9.</b> carry out markings to guide activities of subordinates	1	2	-	-
Perform installation activities	16	52	-	-
<b>PC10.</b> obtain appropriate materials, hardware and tools/machines suitable to carry out the given taskstools & machines: e.g. measuring tape, leveler, square, drill and bits, stapler, scissors and utility knife, screw drivers, hammer, chisel, sealant gun, saw, plumb line, electric screw driver, angle grinder, allen key set in mm, dowels, pliers etc. hardware and material: hinges, pivot, floor spring etc. requirement, hinges, pivot, floor spring, patch fitting, handles, locks, packing, sealant etc.	-	3	-	-
<b>PC11.</b> identify and check the hardware that has come with the door for installation	-	3	-	-







Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC12.</b> report on any shortage or defect of materials/hardware to the cone'srned person before commencement of work	1	2	-	-
<b>PC13.</b> take the size of the opening and match the same with the specification document/ job sheet and report discrepancies if any prior to installation	1	2	-	-
<b>PC14.</b> check and ensure the size of the opening matched the size of the door prior to installation	-	3	-	-
<b>PC15.</b> ensure that the size of the fixed partition matches the door and the opening	1	4	-	-
PC16. ensure correct methods of holding and centering work piece i.e glass door	2	2	-	-
<b>PC17.</b> ensure appropriate lifting devices for lifting glass /windowslifting device: glass holders with single and multiple knobs	1	2	-	-
PC18. fix the floor spring in the cutout on the floor	2	2	-	-
<b>PC19.</b> set the speed of the floor spring as per specification	-	4	-	-
PC20. fix the top and the bottom pivot and check alignment	-	4	-	-
PC21. fix the patch fitting as per design requirement	2	2	-	-
<b>PC22.</b> install the fixed partitions with the support of the patch fittings before door installation	2	3	-	-
PC23. use hinges to fix the glass door on the glass opening or wall opening	-	5	-	-
<b>PC24.</b> install the door closer as per design specification and set the required speed if mentioned in the design specification	-	4	-	-
<b>PC25.</b> fix the door handle at the appropriate heightappropriate height: height from the center of the door handle should be 1040mm of the finish floor level	2	2	-	-







Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC26.</b> choose appropriate drill blades, depending upon the thickness of the glass and the hardware to be used	2	2	-	-
<b>PC27.</b> ensure that the work area is free of clutters to carry out installation work smoothly	-	3	-	-
NOS Total	25	75	-	-







# **National Occupational Standards (NOS) Parameters**

NOS Code	FFS/N6106
NOS Name	Install Frameless Glass Door/Windows
Sector	Furniture & Fittings
Sub-Sector	Architectural Fittings-Doors/Windows
Occupation	Installation
NSQF Level	4
Credits	TBD
Version	1.0
Last Reviewed Date	17/10/2019
Next Review Date	17/10/2023
NSQC Clearance Date	22/08/2019







## FFS/N8501: Maintain work area, tools and machines

## **Description**

This OS unit is about organizing / maintaining work area and activities to ensure tools and machines are maintained as per norms

## Scope

This unit/task covers the following:

• Maintenance of work area, tools and machines

#### **Elements and Performance Criteria**

#### Maintenance of workarea, tools and machines

To be competent, the user/individual on the job must be able to:

- **PC1.** handle materials, machinery, equipment and tools safely and correctly
- **PC2.** use correct handling procedures
- PC3. use materials to minimize waste
- **PC4.** prepare and organize work
- **PC5.** maintain a clean and hazard free working area
- **PC6.** deal with work interruptions
- **PC7.** maintain tools equipment and consumables
- **PC8.** work in a comfortable position with the correct posture
- **PC9.** use cleaning equipment and methods appropriate for the work to be carried out
- PC10. dispose of waste safely in the designated location
- PC11. store cleaning equipment safely after use
- **PC12.** ensure safe and correct handling of materials, equipment and tools
- **PC13.** maintain appropriate environment to protect stock from pilfering, theft, damage and deterioration

## **Knowledge and Understanding (KU)**

The individual on the job needs to know and understand:

- 1. relevant legislation, standards, policies, and procedures followed in the company
- 2. expectations and responsibilities of the job role
- **3.** the organizations rules, codes, guidelines and standards
- **4.** statutory responsibilities, organizational legislation and regulations
- 5. contact person in case of queries on procedure or products
- **6.** method to handle tools and equipment safely and the health and safety implications of not doing so







- 7. escalation matrix
- 8. relevant health and safety requirements applicable in the work place
- **9.** who to approach for support in order to obtain work related instructions, clarifications and support
- 10. importance of following health, hygiene, safety and quality standards
- 11. work instructions and specifications and interpret them accurately
- 12. method to make use of the information detailed in specifications and instructions
- 13. different ways of minimizing waste
- 14. effects of contamination on products i.e. dirt, water and from other work happening on the site
- **15.** Common faults with equipment and the method to rectify them
- **16.** maintenance procedures of tools, equipment and consumables as per manufacturers instructions
- 17. Hazards likely to be encountered when conducting routine maintenance
- 18. different types of cleaning equipment and substances and their use
- 19. safe working practices for cleaning and the method of carrying them out

## **Generic Skills (GS)**

User/individual on the job needs to know how to:

- 1. write in Hindi or local language
- 2. fill logs, forms and formats in local language or Hindi for recording quantity and quality of work figures, defects and other related information, etc. whenever needed
- 3. fill formats, logs and forms related to work in local language or Hindi/English
- 4. document measurement appropriately whenever required
- **5.** read instructions from supervisor provided in local language or Hindi
- **6.** read and understand manufacturers instructions and job specifications
- 7. interpret pictorial representations and written signs or instructions
- 8. read and interpret numbers written in Hindi or local language
- 9. understand safety symbols and basic warning signs wherever needed
- 10. communicate effectively with team members, supervisors, managers etc.
- 11. seek clarification on any unclear instructions in locally understood language
- 12. take decisions of once own roles and responsibilities
- 13. decide on material requirement for related to once work
- 14. decide on to accept or reject a work piece on the basis of quality parameter
- 15. plan and organize own work in a way that all activities are completed in time and as per specifications
- **16.** plan word as per job specification
- 17. plan and organize cleaning and maintenance activities
- 18. work and deliver output as per client requirement and satisfaction
- 19. identify any defects in materials, tools and equipment and ways to resolve them
- 20. determine timely correction of errors to minimize rejection of pieces or rework







- 21. Analyse the situation and take appropriate actions while dealing with team members
- **22.** analyse, evaluate and apply the information gathered from observation, experience, reasoning, or communication to act efficiently







## **Assessment Criteria**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Maintenance of workarea, tools and machines	50	50	-	-
<b>PC1.</b> handle materials, machinery, equipment and tools safely and correctly	4	4	-	-
PC2. use correct handling procedures	4	4	-	-
PC3. use materials to minimize waste	4	4	-	-
PC4. prepare and organize work	4	4	-	-
PC5. maintain a clean and hazard free working area	4	4	-	-
PC6. deal with work interruptions	4	4	-	-
PC7. maintain tools equipment and consumables	4	4	-	-
<b>PC8.</b> work in a comfortable position with the correct posture	4	4	-	-
<b>PC9.</b> use cleaning equipment and methods appropriate for the work to be carried out	4	4	-	-
<b>PC10.</b> dispose of waste safely in the designated location	5	3	-	-
PC11. store cleaning equipment safely after use	3	4	-	-
<b>PC12.</b> ensure safe and correct handling of materials, equipment and tools	3	4	-	-
<b>PC13.</b> maintain appropriate environment to protect stock from pilfering, theft, damage and deterioration	3	3	-	-
NOS Total	50	50	-	-







# **National Occupational Standards (NOS) Parameters**

NOS Code	FFS/N8501
NOS Name	Maintain work area, tools and machines
Sector	Furniture & Fittings
Sub-Sector	Generic
Occupation	Generic
NSQF Level	3
Credits	NA
Version	1.0
Last Reviewed Date	17/10/2019
Next Review Date	17/10/2023
NSQC Clearance Date	22/08/2019







## FFS/N8601: Ensure health and safety at workplace

## **Description**

This OS unit covers health, safety and security at the workplace. This includes procedures and practices that candidate need to follow to help maintain a healthy, safe and secure work environment.

#### Scope

This unit/task covers the following:

• Health and safety-Dealing with emergencies

#### **Elements and Performance Criteria**

#### Health and Safety

To be competent, the user/individual on the job must be able to:

- **PC1.** work safely at all times, complying with health and safety legislation, regulations and other relevant guidelines
- **PC2.** ensure that health and safety instructions applicable to the work place are being followed
- PC3. check the worksite for any possible health and safety hazards
- **PC4.** Follow manufacturers instructions and job specifications relating to safe use of materials specifically chemicals and power equipment
- **PC5.** ensure safe handling and disposal of waste and debris
- **PC6.** identify and report any hazards and potential risks/ threats to supervisors or other authorized personnelHazards: sharp edged tools, hazardous surfaces, physical hazards, electrical hazards, health hazards from chemicals and other such toxic material etc.
- **PC7.** undertake first aid activities in case of any accident, if required and asked to do so
- **PC8.** select and use appropriate personal protective equipment compatible to the work and compliant to relevant occupational health and safety guidelines Personal Protective Equipment: masks, safety glasses, head protection, ear muffs, safety footwear, gloves, aprons etc.
- **PC9.** maintain correct body posture while standing and working for long hours and carrying heavy materials
- **PC10.** lift, carry or move heavy wooden furniture and accessories from one place to another using approved safe working practices
- **PC11.** handle all required tools, machines, materials & equipment safely
- **PC12.** adhere to relevant occupational safety policies while handling sharp tools to make and install furniture and fittings
- PC13. take safety measures while handling glass, heavy wood, materials, chemicals etc.
- **PC14.** apply good housekeeping practices at all timesGood Housekeeping Practices: clean/tidy work areas, removal/disposal of waste products, protect surfaces
- **PC15.** report accident/incident report to authorized personal
- **PC16.** perform basic safety checks before operation of all machines, tools and electrical equipment
- PC17. follow recommended material handling procedure to control damage and personal injury







#### **PC18.** follow safe working practices at all times

#### Dealing with Emergencies

To be competent, the user/individual on the job must be able to:

- **PC19.** follow appropriate procedure in case a of fire emergency
- **PC20.** follow electrical safety measures while working with electrically powered tools & equipment
- PC21. follow agreed work location procedures in the event of an emergency or an accident
- **PC22.** follow emergency and evacuation procedures in case of accidents, fires, natural calamities
- **PC23.** Check and ensure general health and safety equipment are available at work site. General Health and Safety Equipment: fire extinguishers; first aid equipment; safety instruments and clothing; safety installations (e.g. fire exits, exhaust fans)
- **PC24.** Comply with restrictions imposed on harmful chemicals inside work area during working hours
- **PC25.** correctly demonstrate rescue techniques applied during fire hazard
- **PC26.** demonstrate good housekeeping in order to prevent fire hazards
- PC27. demonstrate the correct use of a fire extinguisher
- **PC28.** demonstrate how to free a person from electrocution
- PC29. respond promptly and appropriately to an accident situation or medical emergency
- **PC30.** participate in emergency procedures Emergency Procedures: raising alarm, safe/efficient, evacuation, correct means of escape, correct assembly point, roll call, correct return to work
- **PC31.** use the various appropriate fire extinguishers on different types of fires correctly. Types of fires: Class A: e.g. ordinary solid combustibles, such as wood, paper, cloth, plastic, charcoal, etc.; Class B: flammable liquids andgases, such as gasoline, propane, diesel fuel, tar, cooking oil, and similar substances; Class C: e.g. electrical equipment such as appliances, wiring, breaker panels, etc. These categories of fires become Class A, B, and D fires when the electrical equipment that initiated the fire is no longer receiving electricity); Class D: combustible metals such as magnesium, titanium, and sodium (These fires burn at extremely high temperatures and require special suppression agents)
- **PC32.** state methods of accident prevention in the work environment. Methods of accident prevention: training in health and safety procedures; using health and safety procedures; use of equipment and working practices (such as safe carrying procedures); safety notices, advice; instruction from colleagues and supervisors

#### **Knowledge and Understanding (KU)**

The individual on the job needs to know and understand:

- 1. organizational procedures for safe handling of equipment and machine operations
- 2. how to respond to emergency situation in line with organisational procedures
- 3. reporting protocol and documentation required
- **4.** whom to contact in case of an emergency
- **5.** Where to get the list of contact in case of an emergency in the organization
- **6.** common health and safety hazards in a work environment and related precautions
- 7. organizational procedures for safe handling of tools and equipment
- **8.** how to respond to an emergency situation







- potential risks and threats
- **10.** organizational reporting protocol
- **11.** health and safety practices at work place
- 12. potential hazards and risks which may be present at furniture and fittings related workplace
- **13.** storage and handling of hazardous substances
- 14. importance of good housekeeping
- **15.** procedure to be followed for safe disposal of waste
- **16.** safe working practices in a furniture and fittings related workplace
- 17. how to deal with an accident which involve human life
- 18. different types of personal protective equipment and their use
- 19. how to follow safe working practices while at work
- **20.** different risks associated with the use of electrical equipment
- 21. preventative and remedial actions to be taken in the case of exposure to toxic materials, Exposure: ingested, contact with skin, inhaledPreventative action: ventilation, masks, protective clothing/ equipment); Remedial action: immediate first aid, report to supervisorToxic materials: solvents, flux, lead
- 22. importance of using protective clothing/equipment while working
- 23. Various causes of fire
- **24.** techniques of using the different fire extinguishers
- 25. different type of fire extinguishers and their use
- **26.** various types of safety signs and what they mean
- **27.** Appropriate basic first aid treatment relevant to the condition eg. shock, electrical shock, bleeding, breaks to bones, minor burns, resuscitation, poisoning, eye injuries, etc.
- 28. importance of safe lifting practices and correct body postures
- **29.** list of names (and job titles if applicable), and the contact details of all the people responsible for health and safety in a workplace

#### **Generic Skills (GS)**

User/individual on the job needs to know how to:

- 1. write in Hindi or local language
- 2. fill logs, forms and formats in local language or Hindi for recording quantity and quality of work figures, defects and other related information, etc. whenever needed
- 3. document measurement appropriately whenever required
- 4. read all organizational and equipment related health and safety manuals and documents
- 5. read and comprehend safety related documents
- **6.** communicate effectively with team members, supervisors, managers etc
- 7. seek clarification on any unclear instructions in locally understood language
- 8. take decisions of once own roles and responsibilities
- **9.** decide on material requirement for related to once work
- 10. decide on to accept or reject a work piece on the basis of quality parameter







- **11.** plan and organize own work in a way that all activities are completed in time and as per specifications
- 12. plan word as per job specification
- **13.** plan and organize cleaning and maintenance activities
- 14. work and deliver output as per client requirement and satisfaction
- 15. identify any defects in materials, tools and equipment and ways to resolve them
- **16.** determine timely correction of errors to minimize rejection of pieces or rework
- 17. analyse the situation and take appropriate actions while dealing with team members
- **18.** analyse, evaluate and apply the information gathered from observation, experience, reasoning, or communication to act efficiently







## **Assessment Criteria**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Health and Safety	17	39	-	-
<b>PC1.</b> work safely at all times, complying with health and safety legislation, regulations and other relevant guidelines	2	1	-	-
<b>PC2.</b> ensure that health and safety instructions applicable to the work place are being followed	1	2	-	-
<b>PC3.</b> check the worksite for any possible health and safety hazards	1	2	-	-
<b>PC4.</b> Follow manufacturers instructions and job specifications relating to safe use of materials specifically chemicals and power equipment	1	2	-	-
<b>PC5.</b> ensure safe handling and disposal of waste and debris	-	3	-	-
<b>PC6.</b> identify and report any hazards and potential risks/ threats to supervisors or other authorized personnelHazards: sharp edged tools, hazardous surfaces, physical hazards, electrical hazards, health hazards from chemicals and other such toxic material etc.	1	2	-	-
<b>PC7.</b> undertake first aid activities in case of any accident, if required and asked to do so	-	3	-	-
<b>PC8.</b> select and use appropriate personal protective equipment compatible to the work and compliant to relevant occupational health and safety guidelines Personal Protective Equipment: masks, safety glasses, head protection, ear muffs, safety footwear, gloves, aprons etc.	-	3	-	-
<b>PC9.</b> maintain correct body posture while standing and working for long hours and carrying heavy materials	-	3	-	-
<b>PC10.</b> lift, carry or move heavy wooden furniture and accessories from one place to another using approved safe working practices	2	2	-	-







Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC11.</b> handle all required tools, machines , materials & equipment safely	2	2	-	-
<b>PC12.</b> adhere to relevant occupational safety policies while handling sharp tools to make and install furniture and fittings	-	3	-	-
<b>PC13.</b> take safety measures while handling glass, heavy wood, materials, chemicals etc.	-	3	-	-
<b>PC14.</b> apply good housekeeping practices at all timesGood Housekeeping Practices: clean/tidy work areas, removal/disposal of waste products, protect surfaces	2	1	-	-
<b>PC15.</b> report accident/incident report to authorized personal	1	2	-	-
<b>PC16.</b> perform basic safety checks before operation of all machines, tools and electrical equipment	2	1	-	-
<b>PC17.</b> follow recommended material handling procedure to control damage and personal injury	1	2	-	-
PC18. follow safe working practices at all times	1	2	-	-
Dealing with Emergencies	13	31	-	-
<b>PC19.</b> follow appropriate procedure in case a of fire emergency	1	2	-	-
<b>PC20.</b> follow electrical safety measures while working with electrically powered tools & equipment	2	2	-	-
PC21. follow agreed work location procedures in the event of an emergency or an accident	1	2	-	-
<b>PC22.</b> follow emergency and evacuation procedures in case of accidents, fires, natural calamities	1	2	-	-
PC23. Check and ensure general health and safety equipment are available at work site. General Health and Safety Equipment: fire extinguishers; first aid equipment; safety instruments and clothing; safety installations (e.g. fire exits, exhaust fans)	1	3	-	-
PC24. Comply with restrictions imposed on harmful chemicals inside work area during working hours	-	3	-	-







Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC25.</b> correctly demonstrate rescue techniques applied during fire hazard	-	3	-	-
<b>PC26.</b> demonstrate good housekeeping in order to prevent fire hazards	-	3	-	-
<b>PC27.</b> demonstrate the correct use of a fire extinguisher	2	1	-	-
PC28. demonstrate how to free a person from electrocution	1	2	-	-
<b>PC29.</b> respond promptly and appropriately to an accident situation or medical emergency	-	3	-	-
<b>PC30.</b> participate in emergency procedures Emergency Procedures: raising alarm, safe/efficient, evacuation, correct means of escape, correct assembly point, roll call, correct return to work	-	3	-	-
<b>PC31.</b> use the various appropriate fire extinguishers on different types of fires correctly. Types of fires: Class A: e.g. ordinary solid combustibles, such as wood, paper, cloth, plastic, charcoal, etc.; Class B: flammable liquids andgases, such as gasoline, propane, diesel fuel, tar, cooking oil, and similar substances; Class C: e.g. electrical equipment such as appliances, wiring, breaker panels, etc. These categories of fires become Class A, B, and D fires when the electrical equipment that initiated the fire is no longer receiving electricity); Class D: combustible metals such as magnesium, titanium, and sodium (These fires burn at extremely high temperatures and require special suppression agents)	1	2	-	-
<b>PC32.</b> state methods of accident prevention in the work environment. Methods of accident prevention: training in health and safety procedures; using health and safety procedures; use of equipment and working practices (such as safe carrying procedures); safety notices, advice; instruction from colleagues and supervisors	3	-	-	-
NOS Total	30	70	-	-







# **National Occupational Standards (NOS) Parameters**

NOS Code	FFS/N8601
NOS Name	Ensure health and safety at workplace
Sector	Furniture & Fittings
Sub-Sector	Generic
Occupation	Generic
NSQF Level	3
Credits	NA
Version	1.0
Last Reviewed Date	17/10/2019
Next Review Date	17/10/2023
NSQC Clearance Date	22/08/2019







## FFS/N8801: Work effectively with others

## **Description**

This OS unit is about communicating and coordinating with team members including subordinates and superiors.

#### Scope

This unit/task covers the following:

- Interaction with seniors
- · Work effectively

#### **Elements and Performance Criteria**

#### Interaction with Seniors

To be competent, the user/individual on the job must be able to:

- **PC1.** seek assistance from supervisor or any such appropriate authority as and when required
- **PC2.** ask questions and seek clarifications on work tasks whenever requiredndling procedures
- **PC3.** seek and obtain clarifications on policies and procedures, from the supervisor or other authorized personnel
- **PC4.** identify and report any possible deviations to appropriate authority
- **PC5.** address the problems effectively and report if required to immediate supervisor appropriately
- **PC6.** Receive instructions clearly from superiors and respond effectively on the same
- **PC7.** follow escalation matrix in case of any grievance
- **PC8.** accurately receive information and instructions from the supervisor related to one's work

#### Work effectively

To be competent, the user/individual on the job must be able to:

- **PC9.** coordinate and cooperate with colleagues to achieve work objectives
- **PC10.** display courteous behaviour at all times
- **PC11.** respond politely to customer gueries and other team members
- **PC12.** follow work place dress code
- PC13. keep work area in a tidy and organized state
- **PC14.** adhere to time lines and quality standards
- PC15. follow organizational policies and procedures
- **PC16.** share information with team wherever and whenever required to enhance quality and productivity at work place
- **PC17.** work together with co-workers in a synchronized manner
- PC18. communicate with others clearly, at a pace and in a manner that helps them to understand
- **PC19.** show respect to other and their work
- **PC20.** display active listening skills while interacting with others at work







**PC21.** Demonstrate responsible and disciplined behaviors at the workplace disciplined behaviors: e.g. punctuality; completing tasks as per given time and standards; not gossiping and idling time; eliminating waste, honesty, etc.

## **Knowledge and Understanding (KU)**

The individual on the job needs to know and understand:

- 1. legislation, standards, policies, and procedures followed in the company relevant to own employment and performance conditions
- 2. reporting structure, inter-dependent functions, lines and procedures in the work area
- 3. relevant people and their responsibilities within the work area
- **4.** escalation matrix and procedures for reporting work and employment relate issue clarifications and support
- 5. importance of working effectively with others to achieve organizations goals
- **6.** importance of effective communication and establishing good working relationships with other
- **7.** responsibilities and objectives of the role
- 8. own roles and responsibilities
- **9.** principle of furniture and fittings manufacturing and installation
- 10. importance of having correct understanding of work task and objective
- 11. how to keep work area clean and tidy and its importance
- **12.** applicable quality standards for assigned work task and objective
- **13.** Reporting procedure in case of deviations
- 14. importance and need of supporting co-workers facing problems for smooth functioning of work
- different type of people that one is required to communicate and coordinate within the organization
- **16.** various components of communication cycle
- 17. importance of active listening
- **18.** importance of discipline and ethics for professional success
- 19. what constitutes disciplined behavior for a working professional
- 20. expressing and addressing grievances appropriately and effectively
- 21. importance and ways of managing interpersonal conflict effectively

#### **Generic Skills (GS)**

User/individual on the job needs to know how to:

- 1. write in Hindi or local language
- 2. fill formats, logs and forms related to work in local language or Hindi/English
- 3. document measurement appropriately whenever required
- **4.** read instructions from supervisor provided in local language or Hindi
- 5. read and understand manufacturers instructions and job specifications
- **6.** interpret pictorial representations and written signs or instructions







- 7. read and interpret numbers written in Hindi or local language
- 8. understand safety symbols and basic warning signs wherever needed
- 9. communicate effectively with team members, supervisors, managers etc.
- 10. seek clarification on any unclear instructions in locally understood language
- 11. take decisions of once own roles and responsibilities
- **12.** decide on material requirement for related to once work
- 13. decide on to accept or reject a work piece on the basis of quality parameter
- 14. Plan and organize own work in a way that all activities are completed in time and as per specifications
- **15.** plan word as per job specification
- 16. plan and organize cleaning and maintenance activities
- 17. work and deliver output as per client requirement and satisfaction
- 18. identify any defects in materials, tools and equipment and ways to resolve them
- 19. determine timely correction of errors to minimize rejection of pieces or rework
- 20. analyse the situation and take appropriate actions while dealing with team members
- **21.** analyse, evaluate and apply the information gathered from observation, experience, reasoning, or communication to act efficiently







## **Assessment Criteria**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Interaction with Seniors	18	15	-	-
<b>PC1.</b> seek assistance from supervisor or any such appropriate authority as and when required	1	2	-	-
<b>PC2.</b> ask questions and seek clarifications on work tasks whenever requiredndling procedures	1	2	-	-
<b>PC3.</b> seek and obtain clarifications on policies and procedures, from the supervisor or other authorized personnel	5	-	-	-
<b>PC4.</b> identify and report any possible deviations to appropriate authority	1	2	-	-
<b>PC5.</b> address the problems effectively and report if required to immediate supervisor appropriately	2	3	-	-
<b>PC6.</b> Receive instructions clearly from superiors and respond effectively on the same	1	2	-	-
<b>PC7.</b> follow escalation matrix in case of any grievance	4	2	-	-
<b>PC8.</b> accurately receive information and instructions from the supervisor related to one's work	3	2	-	-
Work effectively	12	55	-	-
<b>PC9.</b> coordinate and cooperate with colleagues to achieve work objectives	-	5	-	-
PC10. display courteous behaviour at all times	-	5	-	-
<b>PC11.</b> respond politely to customer queries and other team members	1	4	-	-
PC12. follow work place dress code	-	5	-	-
PC13. keep work area in a tidy and organized state	-	5	-	-
PC14. adhere to time lines and quality standards	2	3	-	-







Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC15.</b> follow organizational policies and procedures	4	-	-	-
<b>PC16.</b> share information with team wherever and whenever required to enhance quality and productivity at work place	2	3	-	-
<b>PC17.</b> work together with co-workers in a synchronized manner	-	6	-	-
<b>PC18.</b> communicate with others clearly, at a pace and in a manner that helps them to understand	3	3	-	-
PC19. show respect to other and their work	-	5	-	-
<b>PC20.</b> display active listening skills while interacting with others at work	-	5	-	-
<b>PC21.</b> Demonstrate responsible and disciplined behaviors at the workplace disciplined behaviors: e.g. punctuality; completing tasks as per given time and standards; not gossiping and idling time; eliminating waste, honesty, etc.	-	6	-	-
NOS Total	30	70	-	-







# **National Occupational Standards (NOS) Parameters**

NOS Code	FFS/N8801
NOS Name	Work effectively with others
Sector	Furniture & Fittings
Sub-Sector	Generic
Occupation	Generic
NSQF Level	3
Credits	NA
Version	1.0
Last Reviewed Date	17/10/2019
Next Review Date	17/10/2023
NSQC Clearance Date	22/08/2019







# FFS/N6103: Planning for Installation of Framed Door/Windows

### **Description**

Installer Framed Doors/Windows fixes the glass with the frame and then installs the doors/windows using required architectural hardware. The job holder must comply with relevant health and safety standards while carrying out the tasks.

### Scope

This unit/task covers the following:

- Understand the work requirement
- Prepare the work area for installation
- Read and Interpret architectural drawings and technical specifications
- Working safely

#### **Elements and Performance Criteria**

#### Understand the work requirement

To be competent, the user/individual on the job must be able to:

- **PC1.** obtain job instructions from responsible personneljob instruction: design, hardware requirement, frame instruction, dimensions etc.
- **PC2.** interact with supervisor in order to understand the client requirement
- **PC3.** read and confirm that the given instructions and design are complete and correct
- **PC4.** identify the work site/ opening where the door is to be fixed from the drawing
- **PC5.** identify the frame and panel requirement as per design specificationframe requirement: frame size, material i.e wood or aluminums etc., full frame, one sides frame, two sided frame etc.
- **PC6.** plan out an efficient sequence of work as per the job requirement and specification *Prepare the work area for installation*

To be competent, the user/individual on the job must be able to:

- **PC7.** obtain appropriate materials and tools/machines suitable to carry out the given taskstools & machines: e.g. measure tape, leveler, square, drill and bits, stapler, scissors and utility knife, screw drivers, hammer, chisel, sealant gun, saw, plumb line, electric screw driver, angle grinder, allen key set in mm, dowels, pliers etc.materials and hardware: frame material i.e wood, aluminum, fiber glass, vinyl as per design, hinges, pivot, floor spring, packing, shims, sealant, handles, locks etc.
- **PC8.** identify and check the hardware that has come with the door for installation
- **PC9.** report on any shortage or defect of materials/hardware to the concerned person before commencement of work
- PC10. check that the selected tools & equipment are in safe working condition and ready for use
- **PC11.** take the size of the opening and match the same with the specification document/ job sheet and report discrepancies if any prior to installation
- **PC12.** take the size of the frame and match it with the door panel







**PC13.** use approved procedures to inspect glass door as well as the frame visually for any possible defects as per required standard parameters prior to workdefects: unevenness, chipped glass, size variation, waviness, bend in glass etc.

### Read and interpret architectural drawings and technical specification

To be competent, the user/individual on the job must be able to:

- **PC14.** read and interpret the details from architectural drawings relevant to framed door installation
- **PC15.** read and understand manufacturer's specification of hardware and its installation
- **PC16.** identify the surfaces and dimensions as per the drawing
- **PC17.** read and understand the scope of work

#### Working safely

To be competent, the user/individual on the job must be able to:

- **PC18.** return all the used tools and materials safely to the appropriate personal
- **PC19.** work safely at all times, complying with health and safety legislation, regulations and other relevant guidelines
- **PC20.** maintain correct body posture while standing and working for long hours and carrying heavy materials
- **PC21.** lift, carry or move heavy frame and /windows from one place to another using approved safe working practices
- **PC22.** ensure that the work area is free of clutters to carry out installation work smoothly
- **PC23.** select and use appropriate personal protective equipment compatible to the work and compliant to relevant occupational health and safety guidelinespersonal protective equipment: masks, safety glasses, head protection, ear muffs, safety footwear, gloves, aprons etc.
- PC24. follow electrical safety measures while working with electrically powered tools & equipment

### **Knowledge and Understanding (KU)**

The individual on the job needs to know and understand:

- 1. relevant legislation, standards, policies, and procedures followed in the company
- 2. expectations and responsibilities of the job role
- **3.** the organizations rules, codes, guidelines and standards
- **4.** statutory responsibilities, organizational legislation and regulations
- 5. contact person in case of queries on procedure or products
- **6.** method to handle tools and equipment safely and the health and safety implications of not doing so
- **7.** escalation matrix
- 8. relevant health and safety requirements applicable in the work place
- **9.** who to approach for support in order to obtain work related instructions, clarifications and support
- **10.** importance of following health, hygiene, safety and quality standards







- **11.** different types of doors /windows and their installation requirementtypes of doors: entrance doors, bedroom doors, toilet doors, kitchen doors, stair case doors, fire doors etc.
- **12.** different type of doors /windows on the basis of its functioningtypes of doors: swing doors, sliding doors, single acting door, double acting door etc.
- 13. importance of using personal protective equipment appropriate to the work
- **14.** different types of architectural hardware and their usesarchitectural hardware: locks, hinges, handle cylinder, door closers, seal, pivot, patch fittings floor spring, glass connectors, plastic seals etc.
- **15.** different type of hinges and their use as per the door type/styletype of hinges: heavy duty hinges, brass hinges, concealed hinges, ball bearings, lift off, self-closing, slip on hinges, click on hinges, glass door hinges etc.
- **16.** different types of locks and their installation processtype of locks: multi point locks, motorize locks, electronic locks etc
- **17.** hazards and risks associated with glass door installation and how to minimize accidents and injury to self and others
- 18. iimportance of maintaining healthy work environment
- **19.** different types of door handles and their suitability as per door typestype of door handles: pull handle, fixed knob, lever handle etc.
- **20.** different types of tools and equipment and their usestools & machines: e.g. measure tape, leveler, square, drill and bits, stapler, scissors and utility knife, screw drivers, hammer, chisel, sealant gun, saw, plumb line, electric screw driver, angle grinder, allen key set in mm, dowels, pliers etc.
- **21.** terminology, pictorial representation, symbols, etc. related to architectural drawings and specifications
- 22. basic measurement units
- 23. basic calculations and mathematics
- **24.** methods of holding and centering work piece i.e door and frame
- **25.** methods used to identify defects
- **26.** relevant methods used to rectify defects
- **27.** safe disposal of waste materials
- 28. drawings and sketches for door installation
- 29. how to check for alignment, straightness and plumb
- **30.** how to carry out markings to guide activities of subordinatesactivities: markings to make cut out, marking for pivots, patch fitting etc.
- 31. different type of glass used for doors/windows i.e. toughened and laminated
- **32.** methods to be used appropriate fasteningappropriate fastening method: clips & screws, backside attachment, etc.
- **33.** cleaning and maintenance procedures
- **34.** correct way to tighten and un tighten a screw
- **35.** allowable tolerance limit for door and frame positioning

#### **Generic Skills (GS)**

User/individual on the job needs to know how to:







- 1. write in hindi or local language
- 2. fill formats, logs and forms related to work in local language or hindi/english
- 3. document measurement appropriately whenever required
- 4. read instructions from supervisor provided in local language or hindi
- 5. read and understand manufacturers instructions and job specifications
- **6.** interpret pictorial representations and written signs or instructions
- 7. read and interpret numbers written in hindi or local language
- 8. understand safety symbols and basic warning signs wherever needed
- 9. communicate effectively with team members, supervisors, managers etc.
- 10. seek clarification on any unclear instructions in locally understood language
- 11. take decisions of one's own roles and responsibilities
- 12. decide on material requirement related to one's work
- 13. decide to accept or reject a work piece on the basis of quality parameter
- 14. plan and organize own work in a way that all activities are completed in time and as per specifications
- **15.** plan work as per job specification
- 16. plan and organize cleaning and maintenance activities
- **17.** work and deliver output as per client requirement and satisfaction
- 18. identify any defects in materials, tools and equipment and ways to resolve them
- 19. determine timely correction of errors to minimize rejection of pieces or re-work







### **Assessment Criteria**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Understand the work requirement	7	17	-	-
<b>PC1.</b> obtain job instructions from responsible personneljob instruction: design, hardware requirement, frame instruction, dimensions etc.	1	3	-	-
<b>PC2.</b> interact with supervisor in order to understand the client requirement	1	2	-	-
<b>PC3.</b> read and confirm that the given instructions and design are complete and correct	1	2	-	-
<b>PC4.</b> identify the work site/ opening where the door is to be fixed from the drawing	-	4	-	-
<b>PC5.</b> identify the frame and panel requirement as per design specificationframe requirement: frame size, material i.e wood or aluminums etc., full frame, one sides frame, two sided frame etc.	2	3	-	-
<b>PC6.</b> plan out an efficient sequence of work as per the job requirement and specification	2	3	-	-
Prepare the work area for installation	8	23	-	-
PC7. obtain appropriate materials and tools/machines suitable to carry out the given taskstools & machines: e.g. measure tape, leveler, square, drill and bits, stapler, scissors and utility knife, screw drivers, hammer, chisel, sealant gun, saw, plumb line, electric screw driver, angle grinder, allen key set in mm, dowels, pliers etc.materials and hardware: frame material i.e wood, aluminum, fiber glass, vinyl as per design, hinges, pivot, floor spring, packing, shims, sealant, handles, locks etc.	2	4	-	-
<b>PC8.</b> identify and check the hardware that has come with the door for installation	1	3	-	-
<b>PC9.</b> report on any shortage or defect of materials/hardware to the concerned person before commencement of work	-	3	-	-







Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC10.</b> check that the selected tools & equipment are in safe working condition and ready for use	-	3	-	-
<b>PC11.</b> take the size of the opening and match the same with the specification document/ job sheet and report discrepancies if any prior to installation	2	3	-	-
<b>PC12.</b> take the size of the frame and match it with the door panel	1	4	-	-
<b>PC13.</b> use approved procedures to inspect glass door as well as the frame visually for any possible defects as per required standard parameters prior to workdefects: unevenness, chipped glass, size variation, waviness, bend in glass etc.	2	3	-	-
Read and interpret architectural drawings and technical specification	8	11	-	-
<b>PC14.</b> read and interpret the details from architectural drawings relevant to framed door installation	2	4	-	-
<b>PC15.</b> read and understand manufacturer's specification of hardware and its installation	3	2	-	-
<b>PC16.</b> identify the surfaces and dimensions as per the drawing	1	3	-	-
PC17. read and understand the scope of work	2	2	-	-
Working safely	7	19	-	-
<b>PC18.</b> return all the used tools and materials safely to the appropriate personal	1	3	-	-
<b>PC19.</b> work safely at all times, complying with health and safety legislation, regulations and other relevant guidelines	2	2	-	-
<b>PC20.</b> maintain correct body posture while standing and working for long hours and carrying heavy materials	1	3	-	-
<b>PC21.</b> lift, carry or move heavy frame and /windows from one place to another using approved safe working practices	1	3	-	-







Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC22.</b> ensure that the work area is free of clutters to carry out installation work smoothly	-	3	-	-
<b>PC23.</b> select and use appropriate personal protective equipment compatible to the work and compliant to relevant occupational health and safety guidelinespersonal protective equipment: masks, safety glasses, head protection, ear muffs, safety footwear, gloves, aprons etc.	1	3	-	-
PC24. follow electrical safety measures while working with electrically powered tools & equipment	1	2	-	-
NOS Total	30	70	-	-







# **National Occupational Standards (NOS) Parameters**

NOS Code	FFS/N6103
NOS Name	Planning for Installation of Framed Door/Windows
Sector	Furniture & Fittings
Sub-Sector	Architectural Fittings-Doors/Windows
Occupation	Installation
NSQF Level	4
Credits	TBD
Version	1.0
Last Reviewed Date	17/10/2019
Next Review Date	17/10/2023
NSQC Clearance Date	22/08/2019







## FFS/N6104: Install framed doors/windows

### **Description**

Installer Framed Doors/Windows fixes the glass with the frame and then installs the doors/windows using various architectural hardware. To perform the work competently the person is required to work with precision in delivering outcomes.

### Scope

This unit/task covers the following:

- Carryout marking of layout
- Fix the frame in the opening
- Perform door installation activities for swing doors/windows
- Perform installation activities for sliding doors/windows

#### **Elements and Performance Criteria**

### Carryout markings of layout

To be competent, the user/individual on the job must be able to:

- **PC1.** read and confirm that the given instructions and design are correct and complete
- PC2. obtain appropriate materials and tools suitable to carry out marking activities
- **PC3.** identify the surfaces and dimensions as per the drawing
- **PC4.** calculate height and width as per design for installation
- **PC5.** identify the work site/ opening where the frame and the door panel is to be installed
- **PC6.** take the size of the opening and match the same with the specification document/ job sheet and report discrepancies if any prior to installation
- **PC7.** take the size of the frame and match it with the glass on which the frame is to be fixed
- **PC8.** check the plumb line and level of the opening
- **PC9.** carry out markings to guide activities of subordinates
- **PC10.** mark the points on the glass to fix the frame
- **PC11.** measure and mark against the jamb where any shims are needed
- **PC12.** confirm the door location against the drawing and mark the dimensions on the opening are as specified in the drawing

#### Fix the frame in the opening

To be competent, the user/individual on the job must be able to:

- **PC13.** obtain appropriate materials and tools/machines suitable to carry out the given taskstools & machines: e.g. measure tape, leveler, square, drill and bits, stapler, scissors and utility knife, screw drivers, hammer, chisel, sealant gun, saw, plumb line, electric screw driver, angle grinder, allen key set in mm, dowels, pliers etc.materials and hardware: frame material i.e wood, aluminum, fiber glass, vinyl as per design, hinges, pivot, floor spring, packing, shims, sealant, handles, locks etc
- **PC14.** identify and check the hardware that has come with the frame and door for installation to match the door to be installed







- **PC15.** report on any shortage or defect of materials/hardware to the concerned person before commencement of work
- **PC16.** take the size of the opening and match the same with the specification document/ job sheet and report discrepancies if any prior to installation
- PC17. align the door frame against the setting out lines and ensure proper alignment
- **PC18.** secure the frame temporarily using wedges or clips to obtain required vertical and horizontal alignment
- **PC19.** fix the frame in position using architectural hardware as mentioned in the design
- PC20. grout the gap between the wall and the door frame
- PC21. make provisions of openings for the installation of hinges in the frame
- PC22. check for right angle and sqaureness in the frame
- PC23. check visually for any surface damage before installation
- PC24. determine the finished floor height
- PC25. ensure correct methods of holding and centering work piece i.e frame and the door panel
- PC26. use hinges and screws to fix the frame on the opening or wall
- **PC27.** choose appropriate drill bits, depending upon the thickness of the wall and the frame
- PC28. ensure that the work area is free of clutters to carry out installation work smoothly

#### Perform door installation activites for swing doors

To be competent, the user/individual on the job must be able to:

- **PC29.** ensure that the frame, panel and architrave are of the correct type, size and quality as per the specification document
- **PC30.** make provisions of openings for the installation of hinges in the door
- **PC31.** check for right angle and sqaureness in the door
- **PC32.** fix the hinges in the door before fixing it on the frame
- PC33. ensure proper alignment and verify the under-cut dimensions before fastening the hinges
- **PC34.** envelop the glass between the wooden or aluminium frame in case of framed /windows with the support of sealant, mouldings, screws etc.
- **PC35.** check the measurements of the glass and opening and then carefully insert the new glass into the door-frame opening
- **PC36.** check and ensure that there is a consistent gap not more than 5mm between the door panel and the frame
- **PC37.** ensure that the door and the frame corners maintained at right angel
- **PC38.** fix the door handle at the appropriate heightappropriate height: height from the center of the door handle should be 1040mm of the finish floor level
- PC39. choose appropriate drill bits, depending upon the thickness of the material to be used
- **PC40.** install the door closer as per design specification and set the required speed if mentioned in the design specification
- **PC41.** select and fix the latch if mentioned in the design specification

#### Peform installation activities during for sliding doors

To be competent, the user/individual on the job must be able to:

- **PC42.** check for plumb, line and level of the opening
- **PC43.** measure opening width at top, middle, and bottom of opening







- **PC44.** ensure size is correct, if not, the opening may need to be corrected
- **PC45.** chip out any concrete that stick out from the mounting surface and may interfere with the installation
- **PC46.** assemble the main frame header, jambs and sill in the correct position
- **PC47.** clean the end of the jambs to remove grease and debris
- PC48. fit the frame into the opening and seal the frame
- **PC49.** secure the frame in the opening using the required installation hardware
- **PC50.** seal all the four corners of the frame as per design specification
- **PC51.** set frame in opening and shim as necessary to make frame plumb, level and square
- PC52. install the main frame head screw covers and check for movement/sliding of the door
- **PC53.** install the panel so that the top of panel slips over track frame header
- PC54. check the panel wheels for movement/sliding
- **PC55.** envelop the glass between the wooden or aluminium frame in case of framed /windows with the support of sealant, mouldings, screws etc.

### **Knowledge and Understanding (KU)**

The individual on the job needs to know and understand:

- 1. relevant legislation, standards, policies, and procedures followed in the company
- 2. expectations and responsibilities of the job role
- **3.** the organizations rules, codes, guidelines and standards
- **4.** statutory responsibilities, organizational legislation and regulations
- 5. contact person in case of queries on procedure or products
- **6.** method to handle tools and equipment safely and the health and safety implications of not doing so
- **7.** escalation matrix
- 8. relevant health and safety requirements applicable in the work place
- **9.** who to approach for support in order to obtain work related instructions, clarifications and support
- **10.** importance of following health, hygiene, safety and quality standards
- **11.** different types of doors /windows and their installation requirementtypes of doors: entrance doors, bedroom doors, toilet doors, kitchen doors, stair case doors, fire doors etc.
- **12.** different type of doors /windows on the basis of its functioningtypes of doors: swing doors, sliding doors, single acting door, double acting door etc.
- 13. importance of using personal protective equipment appropriate to the work
- **14.** different types of architectural hardware and their usesarchitectural hardware: locks, hinges, handle cylinder, door closers, seal, pivot, patch fittings floor spring, glass connectors, plastic seals etc.
- **15.** different type of hinges and their use as per the door type/styletype of hinges: heavy duty hinges, brass hinges, concealed hinges, ball bearings, lift off, self-closing, slip on hinges, click on hinges, glass door hinges etc.







- **16.** different types of locks and their installation processtype of locks: multi point locks, motorize locks, electronic locks etc
- **17.** hazards and risks associated with glass door installation and how to minimize accidents and injury to self and others
- 18. importance of maintaining healthy work environment
- **19.** different types of door handles and their suitability as per door typestype of door handles: pull handle, fixed knob, lever handle etc.
- **20.** different types of tools and equipment and their usestools & machines: e.g. measure tape, leveler, square, drill and bits, stapler, scissors and utility knife, screw drivers, hammer, chisel, sealant gun, saw, plumb line, electric screw driver, angle grinder, allen key set in mm, dowels, pliers etc.
- **21.** terminology, pictorial representation, symbols, etc. related to architectural drawings and specifications
- 22. basic measurement units
- 23. basic calculations and mathematics
- 24. methods of holding and centering work piece i.e door and frame
- **25.** methods used to identify defects
- **26.** relevant methods used to rectify defects
- 27. safe disposal of waste materials
- 28. drawings and sketches for door installation
- 29. how to check for alignment, straightness and plumb
- **30.** how to carry out markings to guide activities of subordinatesactivities: markings to make cut out, marking for pivots, patch fitting etc.
- 31. different type of glass used for doors/windows i.e. toughened and laminated
- **32.** methods to be used appropriate fastening appropriate fastening method: clips & screws, backside attachment, etc.
- **33.** cleaning and maintenance procedures
- **34.** correct way to tighten and un tighten a screw
- **35.** allowable tolerance limit for door and frame positioning

#### **Generic Skills (GS)**

User/individual on the job needs to know how to:

- 1. write in hindi or local language
- 2. fill formats, logs and forms related to work in local language or hindi/english
- 3. document measurement appropriately whenever required
- **4.** read instructions from supervisor provided in local language or hindi
- read and understand manufacturers instructions and job specifications
- **6.** interpret pictorial representations and written signs or instructions
- 7. read and interpret numbers written in hindi or local language
- 8. understand safety symbols and basic warning signs wherever needed
- **9.** communicate effectively with team members, supervisors, managers etc.







- 10. seek clarification on any unclear instructions in locally understood language
- 11. take decisions of one's own roles and responsibilities
- 12. decide on material requirement related to one's work
- 13. decide to accept or reject a work piece on the basis of quality parameter
- **14.** plan and organize own work in a way that all activities are completed in time and as per specifications
- 15. plan work as per job specification
- **16.** plan and organize cleaning and maintenance activities
- 17. work and deliver output as per client requirement
- 18. identify any defects in materials, tools and equipment and ways to resolve them
- 19. determine timely correction of errors to minimize rejection of pieces or re-work







### **Assessment Criteria**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Carryout markings of layout	4	13	-	-
<b>PC1.</b> read and confirm that the given instructions and design are correct and complete	-	1	-	-
<b>PC2.</b> obtain appropriate materials and tools suitable to carry out marking activities	-	1	-	-
<b>PC3.</b> identify the surfaces and dimensions as per the drawing	-	1	-	-
<b>PC4.</b> calculate height and width as per design for installation	1	1	-	-
<b>PC5.</b> identify the work site/ opening where the frame and the door panel is to be installed	-	1	-	-
<b>PC6.</b> take the size of the opening and match the same with the specification document/ job sheet and report discrepancies if any prior to installation	1	1	-	-
<b>PC7.</b> take the size of the frame and match it with the glass on which the frame is to be fixed	-	2	-	-
PC8. check the plumb line and level of the opening	-	1	-	-
<b>PC9.</b> carry out markings to guide activities of subordinates	1	1	-	-
PC10. mark the points on the glass to fix the frame	-	2	-	-
<b>PC11.</b> measure and mark against the jamb where any shims are needed	-	1	-	-
<b>PC12.</b> confirm the door location against the drawing and mark the dimensions on the opening are as specified in the drawing	1	-	-	-
Fix the frame in the opening	7	19	-	-







Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC13. obtain appropriate materials and tools/machines suitable to carry out the given taskstools & machines: e.g. measure tape, leveler, square, drill and bits, stapler, scissors and utility knife, screw drivers, hammer, chisel, sealant gun, saw, plumb line, electric screw driver, angle grinder, allen key set in mm, dowels, pliers etc.materials and hardware: frame material i.e wood, aluminum, fiber glass, vinyl as per design, hinges, pivot, floor spring, packing, shims, sealant, handles, locks etc	1	1	-	-
<b>PC14.</b> identify and check the hardware that has come with the frame and door for installation to match the door to be installed	-	1	-	-
<b>PC15.</b> report on any shortage or defect of materials/hardware to the concerned person before commencement of work	-	1	-	-
<b>PC16.</b> take the size of the opening and match the same with the specification document/ job sheet and report discrepancies if any prior to installation	1	1	-	-
<b>PC17.</b> align the door frame against the setting out lines and ensure proper alignment	-	2	-	-
<b>PC18.</b> secure the frame temporarily using wedges or clips to obtain required vertical and horizontal alignment	1	1	-	-
<b>PC19.</b> fix the frame in position using architectural hardware as mentioned in the design	1	1	-	-
<b>PC20.</b> grout the gap between the wall and the door frame	-	2	-	-
<b>PC21.</b> make provisions of openings for the installation of hinges in the frame	1	1	-	-
<b>PC22.</b> check for right angle and sqaureness in the frame	-	1	-	-
PC23. check visually for any surface damage before installation	-	1	-	-
PC24. determine the finished floor height	1	1	-	-







Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC25.</b> ensure correct methods of holding and centering work piece i.e frame and the door panel	1	1	-	-
<b>PC26.</b> use hinges and screws to fix the frame on the opening or wall	-	2	-	-
<b>PC27.</b> choose appropriate drill bits, depending upon the thickness of the wall and the frame	-	1	-	-
<b>PC28.</b> ensure that the work area is free of clutters to carry out installation work smoothly	-	1	-	-
Perform door installation activites for swing doors	10	16	-	-
<b>PC29.</b> ensure that the frame, panel and architrave are of the correct type, size and quality as per the specification document	1	1	-	-
<b>PC30.</b> make provisions of openings for the installation of hinges in the door	-	2	-	-
<b>PC31.</b> check for right angle and sqaureness in the door	1	-	-	-
<b>PC32.</b> fix the hinges in the door before fixing it on the frame	-	2	-	-
<b>PC33.</b> ensure proper alignment and verify the under-cut dimensions before fastening the hinges	1	1	-	-
<b>PC34.</b> envelop the glass between the wooden or aluminium frame in case of framed /windows with the support of sealant, mouldings, screws etc.	1	2	-	-
<b>PC35.</b> check the measurements of the glass and opening and then carefully insert the new glass into the door-frame opening	1	2	-	-
<b>PC36.</b> check and ensure that there is a consistent gap not more than 5mm between the door panel and the frame	1	1	-	-
<b>PC37.</b> ensure that the door and the frame corners maintained at right angel	1	1	-	-







Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC38.</b> fix the door handle at the appropriate heightappropriate height: height from the center of the door handle should be 1040mm of the finish floor level	1	1	-	-
<b>PC39.</b> choose appropriate drill bits, depending upon the thickness of the material to be used	1	1	-	-
<b>PC40.</b> install the door closer as per design specification and set the required speed if mentioned in the design specification	1	1	-	-
<b>PC41.</b> select and fix the latch if mentioned in the design specification	-	1	-	-
Peform installation activities during for sliding doors	9	22	-	-
PC42. check for plumb, line and level of the opening	-	2	-	-
<b>PC43.</b> measure opening width at top, middle, and bottom of opening	-	2	-	-
<b>PC44.</b> ensure size is correct, if not, the opening may need to be corrected	1	1	-	-
<b>PC45.</b> chip out any concrete that stick out from the mounting surface and may interfere with the installation	-	1	-	-
<b>PC46.</b> assemble the main frame header, jambs and sill in the correct position	1	1	-	-
<b>PC47.</b> clean the end of the jambs to remove grease and debris	-	2	-	-
<b>PC48.</b> fit the frame into the opening and seal the frame	1	1	-	-
<b>PC49.</b> secure the frame in the opening using the required installation hardware	1	2	-	-
<b>PC50.</b> seal all the four corners of the frame as per design specification	-	2	-	-
<b>PC51.</b> set frame in opening and shim as necessary to make frame plumb, level and square	1	1	-	-







Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC52.</b> install the main frame head screw covers and check for movement/sliding of the door	1	2	-	-
<b>PC53.</b> install the panel so that the top of panel slips over track frame header	1	2	-	-
PC54. check the panel wheels for movement/sliding	1	1	-	-
<b>PC55.</b> envelop the glass between the wooden or aluminium frame in case of framed /windows with the support of sealant, mouldings, screws etc.	1	2	-	-
NOS Total	30	70	-	-







# **National Occupational Standards (NOS) Parameters**

NOS Code	FFS/N6104
NOS Name	Install framed doors/windows
Sector	Furniture & Fittings
Sub-Sector	Architectural Fittings-Doors/Windows
Occupation	Installation
NSQF Level	4
Credits	TBD
Version	1.0
Last Reviewed Date	17/10/2019
Next Review Date	17/10/2023
NSQC Clearance Date	22/08/2019







# Assessment Guidelines and Assessment Weightage

#### **Assessment Guidelines**

- 1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC.
- 2. The assessment for the theory part will be based on knowledge bank of questions created by the SSC.
- 3. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below).
- 4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/ training center based on these criteria.
- 5. In case of successfully passing only certain number of NOSs, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack.
- 6. In case of unsuccessful completion, the trainee may seek reassessment on the Qualification Pack

**Recommended Pass %:70** 

### **Assessment Weightage**

#### Compulsory NOS

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
FFS/N6105.Planning installation of frameless glass door/ windows	30	70	-	-	100	25
FFS/N6106.Install Frameless Glass Door/Windows	25	75	-	-	100	25
FFS/N8501.Maintain work area, tools and machines	50	50	-	-	100	20
FFS/N8601.Ensure health and safety at workplace	30	70	-	-	100	20
FFS/N8801.Work effectively with others	30	70	-	-	100	10







National Occupational	Theory	Practical	Project	Viva	Total	Weightage
Standards	Marks	Marks	Marks	Marks	Marks	
Total	165	335	-	-	500	100

### Optional: 1 Framed Doors/Windows

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
FFS/N6103.Planning for Installation of Framed Door/Windows	30	70	-	-	100	25
FFS/N6104.Install framed doors/windows	30	70	-	-	100	25
Total	60	140	-	-	200	50







## **Acronyms**

NOS	National Occupational Standard(s)
NSQF	National Skills Qualifications Framework
QP	Qualifications Pack
TVET	Technical and Vocational Education and Training







# **Glossary**

Sector is a conglomeration of different business operations having similar business and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.
Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
Occupation is a set of job roles, which perform similar/ related set of functions in an industry.
Job role defines a unique set of functions that together form a unique employment opportunity in an organisation.
OS specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the Knowledge and Understanding (KU) they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.
Performance Criteria (PC) are statements that together specify the standard of performance required when carrying out a task.
NOS are occupational standards which apply uniquely in the Indian context.
QP comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A QP is assigned a unique qualifications pack code.
Unit code is a unique identifier for an Occupational Standard, which is denoted by an 'N'
Unit title gives a clear overall statement about what the incumbent should be able to do.
Description gives a short summary of the unit content. This would be helpful to anyone searching on a database to verify that this is the appropriate OS they are looking for.
Scope is a set of statements specifying the range of variables that an individual may have to deal with in carrying out the function which have a critical impact on quality of performance required.







Knowledge and Understanding (KU)	Knowledge and Understanding (KU) are statements which together specify the technical, generic, professional and organisational specific knowledge that an individual needs in order to perform to the required standard.
Organisational Context	Organisational context includes the way the organisation is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility.
Technical Knowledge	Technical knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
Core Skills/ Generic Skills (GS)	Core skills or Generic Skills (GS) are a group of skills that are the key to learning and working in today's world. These skills are typically needed in any work environment in today's world. These skills are typically needed in any work environment. In the context of the OS, these include communication related skills that are applicable to most job roles.
Electives	Electives are NOS/set of NOS that are identified by the sector as contributive to specialization in a job role. There may be multiple electives within a QP for each specialized job role. Trainees must select at least one elective for the successful completion of a QP with Electives.
Options	Options are NOS/set of NOS that are identified by the sector as additional skills. There may be multiple options within a QP. It is not mandatory to select any of the options to complete a QP with Options.