







# **Model Curriculum**

## **Warper - Direct Warping Machine**

SECTOR: TEXTILE

SUB-SECTOR: WEAVING - TEXTILES

**OCCUPATION: PREPARATORY - WEAVING** 

REF ID: TSC/Q2101, V3.0

NSQF LEVEL: 3















### CURRICULUM COMPLIANCE TO QUALIFICATION PACK – NATIONAL OCCUPATIONAL STANDARDS

is hereby issued by the

### TEXTILE SECTOR SKILL COUNCIL

for the

#### MODEL CURRICULUM

Complying to National Occupational Standards of Job Role/ Qualification Pack: Warper - Direct Warping Machine QP No. 'TSC/ Q 2101'  $\underline{\textbf{NSQF L}}$ evel 3'

Date of Issuance: January, 27th, 2022

Valid up to: **January, 27th, 2025**\* Valid up to the nextreviewdate of the Qualification Pack

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## **Warper - Direct Warping Machine**

#### **CURRICULUM / SYLLABUS**

This program is aimed at training candidates for the job of a "Warper - Direct Warping Machine", in the "Textile" Sector/Industry and aims at building the following key competencies amongst the learner

Program Name	Warper - Direct Warping Machine				
Qualification Pack Name & Reference ID.	Warper - Direct Warping Machine TSC/Q 2101, version 3.0				
Version No.	3.0 Version Update Date 27.01.2022				
Pre-requisites to Training	<ul> <li>Grade 9 with No Experience (OR)</li> <li>Grade 8 pass and pursuing continuous schooling in regular school with vocational subject with no experience (OR)</li> <li>8th grade pass with 1 year of relevant experience (OR)</li> <li>5th grade pass with 4 years of relevant experience (OR)</li> <li>Ability to read and write with 5 years of experience</li> </ul>				
Training Outcomes	After completing this programme, participants will be able to:  Perform taking charge of shift and handing over shift Operate the Direct warping machine Perform piecing broken yarn at warping Maintain work area, tools and machines Gain behavioral skill for team working Maintain health, safety and security at work place Comply with industry and organizational requirement				









This course encompasses 7 out of 7 National Occupational Standards (NOS) of "Warper -Direct Warping Machine" Qualification Pack issued by "TSC: Textile Sector Skill Council"

	Module	Key Learning Outcomes	Equipment Required
1	Taking charge of shift and handing over shift to Warper – Direct Warping Machine  Theory Duration (hh:mm) 15:00  Practical Duration (hh:mm) 30:00  Corresponding NOS Code TSC/N 2102	<ul> <li>Gain knowledge on general discipline</li> <li>Gain knowledge about with basic skills of communication</li> <li>Understand the role of Warper - Direct Warping machine</li> <li>Perform tasks while taking charge of shift and handing over shift</li> <li>Become familiar in faults identification</li> </ul>	Class room requirements:a batch of 25 people seating capacity with a screen and projector
2	Operate Direct Warping Machine Theory Duration (hh:mm) 30:00 Practical Duration (hh:mm) 60:00 Corresponding NOS Code TSC/N 2102	<ul> <li>Gain knowledge on machine parts &amp; its function</li> <li>Gain knowledge on maintenance of Warping machine parts</li> <li>Gain knowledge on cleaning procedure of Direct Warping machine</li> </ul>	1. common for every batch: poster/video visuals for work method 2.Class room requirements: a batch of 25 people seating capacity with a screen and projector
3	Piecing the broken yarn at direct warping machine  Theory Duration (hh:mm) 15:00  Practical Duration (hh:mm) 60:00  Corresponding NOS Code TSC/N 2103	<ul> <li>Perform piecing the broken yarn</li> <li>Gain knowledge on yarn properties and identification of reason for yarn breakages</li> </ul>	1. common for every batch: poster/video visuals for work method 2.Class room requirements: a batch of 25 people seating capacity with a screen and projector









4	Maintain work area, tools and machines  Theory Duration (hh:mm) 05:00  Practical Duration (hh:mm) 10:00  Corresponding NOS Code TSC/N 9001	<ul> <li>Gain knowledge on Housekeeping system</li> <li>Identify and know unique functions of basic hand tools like cleaning hook, cleaning stick, bag, etc.</li> <li>Handling equipment</li> <li>Perform maintenance activities for handling equipment</li> </ul>	1. common for every batch: poster/video visuals for work method 2.Class room requirements: a batch of 25 people seating capacity with a screen and projector
5	Working in a team  Theory Duration (hh:mm) 05:00  Practical Duration (hh:mm) 10:00  Corresponding NOS Code TSC/N 9002	Understanding the team work and its importance     Knowing the basic requirements for team working	Class room requirements: a batch of 25 people seating capacity with a screen and projector
6	Maintain health, safety and security at work place  Theory Duration (hh:mm) 15:00  Practical Duration (hh:mm) 30:00  Corresponding NOS Code TSC/N 9003	<ul> <li>Gain knowledge on the general safety Rules</li> <li>Gain knowledge on importance of personal protective equipment like apron, cap, earplugs, nose mask etc. and their application under different working conditions.</li> <li>Gain knowledge on various health hazards relevant to workplace and basic first aid training.</li> <li>Identify and select right equipment such as fire extinguisher &amp; based on type of fire.</li> <li>Become good practice on first aid, fire fighting etc.</li> </ul>	1. A sample of following items for each trainee: apron, head cap, nose mask, ear plug, shoe, 2. common for every batch: first aid materials, fire extinguisher, work method posters/pictures, 3. Class room requirements: 25 people seating capacity with a screen and projector









7	Comply with industry and organisational requirement  Theory Duration (hh:mm) 05:00	<ul> <li>Know about organizational and industry standards</li> <li>Know the requirements for self-development</li> <li>Gain knowledge on Organizational &amp; Industry standards</li> </ul>	Class room requirements: 25 people seating capacity with a screen and projector
	Practical Duration (hh:mm) 10:00  Corresponding NOS Code TSC/N 9004		









8 Employability Skills (30 Hours)

Theory Duration (hh:mm) 12:00

Practical Duration (hh:mm) 18:00

- Discuss the importance of Employability Skills in meeting the job requirements.
- Explain constitutional values, civic rights, duties, citizenship, responsibility towards society etc. that are required to be followed to become a responsible citizen.
- Show how to practice different environmentally sustainable practices
- Discuss 21st century skills.
- Display positive attitude, self-motivation, problem solving, time management skills and continuous learning mindset in different situations.
- Use appropriate basic English sentences/ phrases while speaking
- Demonstrate how to communicate in a well -mannered way with others.
- Demonstrate working with others in a team
- Show how to conduct oneself appropriately with all genders and PwD
- Discuss the significance of reporting sexual harassment issues in time
- Discuss the significance of using financial products and services safely and securely.
- Explain the importance of managing expenses, income, and savings.
- Explain the significance of approaching the concerned authorities in time for any exploitation as per legal rights and laws
- Show how to operate digital devices and use the associated applications and features, safely and securely
- Discuss the significance of using internet for browsing, accessing social media platforms, safely and securely.
- Discuss the need for identifying opportunities for potential business, sources for arranging money and potential legal and financial challenges.
- Differentiate between types of customers
- Explain the significance of identifying customer needs and addressing them
- Discuss the significance of maintaining hygiene and dressing appropriately.
- · Create a biodata
- Use various sources to search and apply for jobs
- Discuss the significance of dressing up neatly and maintaining hygiene for an interview
- Discuss how to search and register for apprenticeship opportunities.

Class room requirements: 25 people seating capacity with a screen and projector









Total	Unique Equipment Required:
<b>Duration:</b>	Apron, head cap, nose mask, earplug, shoe, Empty beam, Beam trolley, Yarn Package, Hand knotter
Theory	
Duration	
102:00	
Practical Duration 228:00	

**Grand Total Course Duration: 330 Hours, 0 Minutes** 

(This syllabus/ curriculum has been approved by TSC: Textile Sector Skill Council)









# Trainer Prerequisites for Job role: "Warper – Direct Warping machine" mapped to Qualification Pack: "Warper – Direct Warping machine / TSC Q 2101, Version 3.0"

Sr. No.	Area	Details
1	Description	To deliver accredited training service, mapping to the curriculum detailed above, in accordance with the Qualification Pack "Warper – Direct warping machine /TSC Q 2101,
2	Personal Attributes	Aptitude for conducting training, and pre/ post work to ensure competent, employable candidates at the end of the training. Strong communication skills, interpersonal skills, ability to work as part of a team; a passion for quality and for developing others; well-organized and focused, eager to learn and keep oneself updated with the latest in the mentioned field.
3	Minimum Educational Qualifications	Basic Literacy and Numeracy
4a	Domain Certification	Certified for Job Role: "Warper – Direct warping machine" mapped to QP: "Direct Warping Machine Operator TSC Q2101, Version 3.0". Minimum accepted score 80%.
4b	Platform Certification	Required that the Trainer is certified for MEP/Q2601 Job Role: "Trainer" with atleast 80% score
5	Experience	4 years experience in specific sector as a trainer with 1 year as a warper

### **Employability Trainer Prerequisites**

Trainer Prerequisites							
Minimum Educational	Specialization	Relevant Industry Experience		Trainii	ng Experience	Remarks	
Qualification		Years	Specialization	Years Specialization			
Graduate/CITS	Any Discipline			2	Teaching Experience	Prospective ES trainer should:	
Current ITI Trainers	Employability Skills Training (3 days full- time course done between 2019-2022)					<ul> <li>have good communication skills</li> <li>be well versed in English</li> </ul>	
Certified current EEE trainers (155 hours)	from Management SSC (MEPSC)					<ul> <li>have digital skills</li> <li>have attention to detail</li> <li>be adaptable</li> </ul>	
Certified Trainer	Qualification Pack: Trainer (MEP/Q0102)					have willingness to learn	









Annexure: Assessment Criteria

**Job Role: Warper - Direct Warping Machine** 

Qualification Pack: Warper - Direct warping machine (TSC/Q 2101)

Sector Skill Counci: Textile Sector Skill Council

#### **Guidelines for assessment:-**

- 1. Criteria for assessment for each qualification pack will be created by the Sector Skill Council. Each performance criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for theory & skill practical for each PC.
- 2. The assessment for the theory part will be based on knowledge bank of question created by the SSC.
- 3. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training centre (as per assessment criteria below)
- 4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training centre based on these criteria.
- 5. To pass the qualification pack, every trainee should score a minimum of 50%.
- 6. In case of successfully passing only certain number of NOS's, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack

National Occupational	Performance Criteria (PC)	Total Marks	Out Of	Marks	Marks Allocation			
Standards (NOS)				Theory	Skills Practic al	Viva		
1. TSC/ N2101 (Taking charge of shift and	PC1. Come atleast 10 - 15 minutes earlier to the work spot	110	10	2	6	2		
handing over shift to Warper -Direct	PC2. Check for the necessary items like " chalk", " pen", " knife" etc		9	2	5	2		
Warping Machine)	PC3 Meet the previous shift warper , discuss with him/ her regarding the issues faced by them with respect to the quality or production or spare or safety or any other specific instruction etc.				9	3	З	3
	PC4. Check the condition of the running beams, machine, performance of the yarn running for the running program  PC5. Check whether all the stop motions work in good condition			9	2	5	2	
			9	3	3	3		
	PC6. Take "job cards" for the next programs, from the higher authority.		8	3	4	1		









	PC7. Check availability of the cones/ cheeses & empty warping beams required for the next programs.		8	3	3	2
	PC8. Check the cleanliness of the machines & other work areas .		8	3	4	1
	PC9. Check whether any spare/raw material/ tool /any other material is thrown under the machines or in the other work areas.		8	3	5	0
	PC10. Ask question to the previous shift warper for any deviation in the above and should bring the same to the knowledge of his/ her shift superior as well that of the previous shift as well.		8	2	6	0
	PC11. Hand over the Shift to the incoming Warper in a proper manner & get clearance from the incoming counterpart before leaving the work spot.		8	2	6	0
	PC12. Report to His/ Her shift Superiors as well as that of the incoming shift, in case His/ Her Counterpart doesn't doesn't come for work for the incoming shift. In that case, the shift has to be properly handed over to the incoming shift Superior & get clearance from Him/ Her, before leaving the work spot.		8	0	5	3
	PC13. Report to His/ Her shift Superior about the quality / production / safety issues/ any other issue faced in His/ Her shift and should leave the department only after getting concurrence for the same from His/ Her superiors		8	2	5	1
	Total		110	30	60	20
	Weightage %			27%	55%	18%
2. TSC/ N2102 (Operating a	PC1. Make tiny & firm warper's knots	220	9	4	5	0









Direct Warping Machine)	PC2. take straight the broken end in the warping beam .	9	4	5	0
	PC3. knot the broken end in the warping beam with the broken end in the creel, using tiny & firm warper knot by hand or by the knotting machine provided.	9	3	5	1
	PC4. leave straight the mended warp yarn in the beam and the machine has to be allowed to be run in slow speed for some time, before the machine is allowed to run in the speed prescribed.	9	3	5	1
	PC5. record the warping breakages details in the "yarn performance book" kept.	8	4	2	2
	PC6. remove the run out cones/ cheeses of the previous program .	8	5	1	2
	PC7. collect the removed cones/cheeses in trolleys/ bags provided.	8	5	1	2
	PC8. pack the said collected cones/ cheeses as per the instructions given	8	5	1	2
	PC9. write the following details on the packed bags a) Count details b) Mill Name c) Warping Set No. d) No. Of Cones e) Gross wt. in kgs f) Net Wt. in Kgs	9	3	6	0
	PC10.clean the warping creel area & the warping machine thoroughly	8	2	6	0
	PC11. bring the yarn bags required for the next program and keep the same at the centre of the warping creel	9	0	9	0
	PC12. bring the empty trolleys provided to store empty polythene cone covers . cone inserts and	9	0	9	0









keep the same at the centre of the warping creel				
PC13. remove the polythene cone bags, cone inserts etc., & to store the same in the respective trolleys provided	9	0	9	0
PC14. creel the cones/ cheeses in the creel stand	9	3	6	0
PC15. remove the trolleys wherein the empty polythene covers & cone inserts are collected, from the warping area.	9	0	9	0
PC16. check the stop motions & to ensure they are in " on" position, before the machine is allowed to run.	9	2	5	2
PC17. check the counter meter	9	2	5	2
PC18. mount the empty warping beam in the machine	9	2	5	2
PC19. set the beam mtrs in the counter meter	9	2	5	2
PC20. note down the "beam no"," beam ends" "beam set mtrs" etc. in the job card, immediately after the loading of the empty warping beam in the machine	9	3	4	2
PC21. switch on the "warping drum" so as to ensure no deviation between the "beam set mtrs" & "the actual beam mtrs"	9	3	4	2
PC22. while starting the machine, ensure that the ends in both the edges are coming properly without any overlapping. it has to be corrected using warping comb.	9	3	4	2
PC23. there should not be any "up" & "down" portion in the warping beam, particularly in the edges.	9	4	3	2









	PC24. after the completion of the warping beam, as per the set mtrs, the warped beams have to be doffed.		9	4	3	2
	PC25. immediately after the doffing of the warped beams, the following details have to be written on the warped beams using chalk a. Count b. Warp Set No. c. Warp Beam No. d. No. Of Ends e. Beam Mtrs		9	4	з	2
	Total		220	70	120	30
	Weightage %			32%	55%	13%
3. TSC/N 2103 (Piecing the broken yarn at	PC1. Patrol around the Warping machine & identify the yarn breakage.	170	8	4	4	0
direct warping)	PC2. ensure minimum time is taken for attending the yarn breakages		8	3	5	0
	PC3. check creel break, traveller fly/loading, undraft& roller lapping		7	2	3	2
	PC4. apply the knee break to stop the spindle		7	2	3	2
	PC5. check the quality		8	3	5	0
	PC6. ensure proper seating of empties in the spindle after yarn piecing		7	2	3	2
	PC7. verify the quality of piecing done in the yarn		8	3	5	0
	PC8. attend to the end breakage as and when they occur.		8	2	6	0
	PC9. take yarn from cop to feed to start piecing		7	2	5	0
	PC10. ensure proper material handling		7	2	5	0
	PC11. piece the yarn between false twister and drafting zone by following standard piecing		7	2	3	2









	techniques					
	PC12. ensure proper seating of empties in the spindle after yarn piecing		7	2	3	2
	PC13. ensure proper traveller running		7	2	3	2
	PC14. ensure minimum time is taken for piecing the yarn		8	0	8	0
	PC15. ensure the yarn should be pieced with minimum overlapping		7	0	7	0
	PC16. Put the roving ends and waste in the bags or pockets of coat / apron while attending the end breakages.		7	2	5	0
	PC17. ensure proper material handling of yarn and cops		7	3	4	0
	PC18. ensure the quality of piecing is as per standard		8	4	4	0
	PC19. ensure the tension of the pieced yarn is proper		7	3	4	0
	PC20. ensure the piecing is perfectly done		7	3	4	0
	PC21. verify proper material passage from drafting zone till the yarn wound		8	3	4	1
	PC22. remove the yarn waste and deposit in the respective waste collection bags		7	3	4	0
	PC23. ensure proper functioning of the machine		8	4	3	1
	Total		170	56	100	14
	Weightage %			33%	59%	8%
4. TSC/ N9001 (Maintain work area, tools and machines)	PC1. Handle materials, machinery, equipment and tools safely and correctly	50	4	2	1	1
	PC2. Use correct lifting and handling procedures		4	2	1	1









	PC3. Use materials to minimize					
	waste		3	1	1	1
	PC4. Maintain a clean and hazard free working area		3	1	1	1
	PC5. Maintain tools and equipment		4	1	2	1
	PC6. Carry out running maintenance within agreed schedules		4	2	1	1
	PC7. Carry out maintenance and/or cleaning within one's responsibility		4	2	1	1
	PC8. Report unsafe equipment and other dangerous occurrences		4	2	1	1
	PC9. Ensure that the correct machine guards are in place		3	1	1	1
	PC10. Work in a comfortable position with the correct posture		3	1	1	1
	PC11. Use cleaning equipment and methods appropriate for the work to be carried out		3	1	1	1
	PC12. Dispose of waste safely in the designated location		4	2	1	1
	PC13. Store cleaning equipment safely after use		3	1	1	1
	PC14. Carry out cleaning according to schedules and limits of responsibility		4	2	1	1
	Total		50	21	15	14
	Weightage %			42%	30%	28%
5.TSC/ N9002 (Working in a team)	PC1. Be accountable to the own role in whole process	50	5	1	3	1
icani)	PC2. Perform all roles with full responsibility		4	1	2	1
	PC3. Be effective and efficient at workplace		4	2	1	1
	PC4. Properly communicate about company policies		4	1	1	2
	PC5. Report all problems faced		4	1	1	2









	during the process					
	PC6. Talk politely with other team members and colleagues		4	1	1	2
	PC7. Submit daily report of own performance		5	2	2	1
	PC8. Adjust in different work situations		4	1	2	1
	PC9. Give due importance to others' point of view		4	1	1	2
	PC10. Avoid conflicting situations		4	2	1	1
	PC11. Develop new ideas for work procedures		4	2	1	1
	PC12. Improve upon the existing techniques to increase process efficiency		4	2	1	1
	Total		50	17	17	16
	Weightage %			34%	34%	32%
6. TSC/ N9003 (Maintain health, safety and security at	PC1. Comply with health and safety related instructions applicable to the workplace	100	5	2	2	1
workplace)	PC2. Use and maintain personal protective equipment as per protocol		5	2	2	1
	PC3. Carry out own activities in line with approved guidelines and procedures		4	1	2	1
	PC4. Maintain a healthy lifestyle and guard against dependency on intoxicants		4	1	2	1
	PC5. Follow environment management system related procedures		4	1	2	1
	PC6. Identify and correct (if possible) malfunctions in machinery and equipment		5	2	2	1
1	PC7. Report any service	1	<del>                                     </del>			









PC8. Store materials and equipment in line with manufacturer's and organisational requirements	4	2	1	1
PC9. Safely handle and move waste and debris	4	2	1	1
PC10. Minimize health and safety risks to self and others due to own actions	5	2	2	1
PC11. Seek clarifications, from supervisors or other authorized personnel in case of perceived risks	4	0	2	2
PC12. Monitor the workplace and work processes for potential risks and threats	5	2	2	1
PC13. Carry out periodic walk- through to keep work area free from hazards and obstructions, if assigned	5	2	2	1
PC14. Report hazards and potential risks/ threats to supervisors or other authorized personnel	4	2	1	1
PC15. Participate in mock drills/ evacuation procedures organized at the workplace	4	2	2	0
PC16. Undertake first aid, fire- fighting and emergency response training, if asked to do so	5	2	2	1
PC17. Take action based on instructions in the event of fire, emergencies or accidents	5	2	2	1
PC18. Follow organisation procedures for shutdown and evacuation when required	4	1	2	1
PC19. identify different kinds of possible hazards (environmental, personal, ergonomic, chemical) of the industry	4	1	2	1
PC20. recognise other possible security issues existing in the workplace	4	1	2	1









	PC21. recognise different measures to curb the hazards		4	1	2	1
	PC22. communicate the safety plan to everyone		4	1	2	1
	PC23. attach disciplinary rules with the implementation		4	1	2	1
	Total		100	34	43	23
	Weightage %			34%	43%	23%
7. TSC/ N9004 (Comply with	PC1. perform own duties effectively	50	4	2	1	1
industry and organisational	PC2. take responsibility for own actions		4	2	1	1
requirement)	PC3. be accountable towards the job role and assigned duties		4	1	2	1
	PC4. take initiative and innovate the existing methods		3	1	1	1
	PC5. focus on self-learning and improvement		4	2	1	1
	PC6. co-ordinate with all the team members and colleagues		4	2	1	1
	PC7. communicate politely		4	1	1	2
	PC8. avoid conflicts and miscommunication		4	2	1	1
	PC9. know the organisational standards		4	1	2	1
	PC10. implement them in your performance		4	2	1	1
	PC11. motivate others to follow them		3	1	1	1
	PC12. know the industry standards		4	1	3	0
	PC13. align them with organisation standards		4	1	2	1
	Total		50	19	18	13
	Weightage %			38%	36%	26%
	Total		750	247	373	130









National		Total	Out	Marks Allocation				
Occupational Standards (NOS)	Performance Criteria (PC)	Marks	Of	Theory Marks	Practical Marks	Viva Marks		
8. DGT/VSQ/	Introduction to Employability Skills			1	1	-		
N0101 — Employability Skills	understand the significance of employability skills in meeting the							
	job requirements							
	Constitutional values – Citizenship			1	1	-		
	identify constitutional values, civic rights, duties, personal values and ethics and environmentally sustainable practices.							
	Becoming a Professional in the 21st Century			1	3	-		
	3. explain 21st Century Skills such as Self-Awareness, Behavior Skills, Positive attitude, self-motivation, problem-solving, creative thinking, time management, social and cultural awareness, emotional awareness, continuous learning mindset etc.							
	Basic English Skills			2	3	-		
	4. speak with others using some basic English phrases or sentences							
	Communication Skills			1	1	_		
	5. follow good manners while communicating with others							
	6. work with others in a team							
	Diversity & Inclusion			1	1	-		
	7. communicate and behave appropriately with all genders and PwD							
	8. report any issues related to sexual harassment							
	Financial and Legal Literacy			3	4	-		
	use various financial products and services safely and securely							
	10. calculate income, expenses, savings etc.							
	11. approach the concerned authorities for any exploitation as per legal rights and laws							









Essential Digital Skills		4	6	-
12. operate digital devices and use its				
features and applications securely				
and safely				
13. use internet and social media				
platforms securely and safely				
Entrepreneurship		3	5	-
14. identify and assess opportunities				
for potential business				
15. identify sources for arranging				
money and associated financial				
and legal challenges				
Customer Service		2	2	-
16. identify different types of				
customers				
17. identify customer needs and				
address them appropriately.				
18. follow appropriate hygiene and				
grooming standards.				
Getting ready for apprenticeship &		1	2	
Jobs		1	3	_
19. create a basic biodata				
20. search for suitable jobs and apply				
21. identify and register apprenticeship				
opportunities as per requirement				
NOS Total	50	20	30	-
Grand Total	800	267	403	130







**Textile Sector Skill Council**15th Floor, Nirmal Tower, Barakhamba Road, New Delhi-110001