

Physical Demands Analysis

Job Title	Drywall Carpenter– CONSIDERED TO BE A SAFETY-SENSITIVE POSITION
Job Summary	Installs drywall to cover walls, ceilings, soffits, shafts, and movable partitions in residential, commercial, and industrial buildings.
Job/Work Schedule	8.5-hour day dependent on contract
Scheduled Breaks	Two 15-min. breaks and a 30-min. lunch dependent on contract
Overtime	Dependent on contract
Physical Demand Requirement of Job*	Medium to Heavy
*Based on Dictionary of Occupational Title's Physical Demand Characteristics of Work	
Date of Analysis	5/15/18
Evaluator	Mike Milidonis Ergonomics Manager / National

Essential Functions & Physical Demands

The position includes, but may not be limited to the following. The activities a worker performs at any job may change, and the analysis does not attempt to describe each individual task or duty to which the employee may be assigned or unusual circumstances that may occur at a job. The analysis describes the anticipated duties and usual and customary job activities as noted through observation, experience, discussions with job site supervisors and workers.

Essential Functions	
1.	Plans gypsum drywall installations, erects metal framing and furring channels for fastening drywall, and installs drywall to cover walls, ceilings, soffits, and other areas in residential, commercial, and industrial buildings.
2.	Reads blueprints and other specifications to determine method of installation, work procedures, materials, and tools. Lays out reference lines and points for use in computing location and position of metal framing and furring channels and marks position for erecting metalwork, using chalk line. Measures, marks, and cuts metal runners, studs, and furring channels to specified size, using tape measure, straightedge and hand and portable power cutting tools such as tin snips and hot saw. Secures metal framing to walls and furring channels to ceilings, using hand and cordless tools. Measures, cuts, assembles, and installs metal framing and decorative trim for windows, doorways, and vents.
3.	Measures and marks cutting lines on drywall, using square, tape measure, and marking devices. Scribes cutting lines on drywall, using straightedge and utility knife and breaks board along cut lines. Fits and fastens board into specified position on wall, using cordless tools and screws. Cuts openings into board for electrical outlets, vents, or fixtures, using keyhole saw, router, or other cutting tools. Hang up to 800 sq./ft. per day. Typically work in a team of 2 people.
4.	Able to perform all job duties and associated work functions in a constant state of alertness and in a safe manner.

Lifting / Carrying (force required to transfer object)

Job Task Description	Weight	Frequency	Start Heights	End Heights	Carry Distance
Cary tool bags/buckets to and from vehicles and the site.	7 to 50 lbs.	2 times per day	Personal preference	Personal preference	Dependent on site
Frame walls in buildings with metal framing. Framing can vary in length, width, and thickness.	Avg. 5 to 6 lbs.	As needed	1 to 50in.	1 in. to overhead	Dependent on site
Hang 4x8, 4x10, and 4x12 sheets of drywall/sheetrock. Take from stacks to a cart and then to the designated area for installation. Majority of drywall is 5/8" thick.	52 to 105 lbs. per sheet.	Avg. of 20 per person per day	5 to 50in.	30 in. to overhead.	Dependent on site
Handle individual hand and cordless tools to install framing and drywall.	Up to 9 lbs.	As needed	2 to 50in.	2 in. to overhead	Dependent on site

Total Body Pushing / Pulling (Initial force required to move object. Not weight of object)

Job Task Description	Force Required	Frequency	Distance
Maneuver drywall carts from staging areas to needed locations	Up to 28 lbs.	1 time per hour	Dependent on site
Maneuver job/gang box around sites as needed	10 to 50 lbs.	As needed	Dependent on site
Maneuver scaffolding	5 to 24 lbs.	As needed	Up to 10 ft.

Upper Extremity Pushing / Pulling (Force required to move object while lower extremities are stationary)

Job Task Description	Force Required	Frequency
Use hand and cordless tools to frame and drywall	Up to 15 lbs.	As needed
Position carts and scaffolding	5 to 24 lbs.	As needed

Gripping / Coupling (force required to trigger a tool or hold an object)

Job Task Description	Force Required	Frequency
Use cordless tools to frame and install drywall	Up to 5 lbs.	As needed
Use hand tools such as tin snips	Up to 35 lbs.	As needed
Cary framing and drywall from carts to installation areas	Max grip force	As needed

Reaching (Horizontal distance from the midline of the body)

Job Task Description	Height	Horizontal Distance	Frequency
Install framing and drywall	2 in. to overhead	Up to 18 in.	As needed

Job Images



Psychological/Mental Demands

	Yes	No	Description
Working under pressure/deadlines	X		Complete installation in contracted timeframes
Perform fast-pace work		X	
Perform self-pace work	X		Keep work areas and tools clean and maintained
Perform incentive/piece work		X	
Perform with precise/production standards		X	
Deal with multiple tasks throughout the workday	X		Follow blueprints to install framing and drywall in multiple areas
Perform complex or varied tasks	X		Follow blueprints to install framing and drywall in multiple areas
Perform simple and repetitive tasks	X		Install framing and drywall
Advanced interpersonal skills (influence/negotiate)		X	
Perform in a leadership role (manage/supervise)		X	
Follow simple instructions	X		Perform some simple tasks
Follow complex instructions (beyond 3 steps)	X		Follow blueprints to install framing and drywall in multiple areas
Working alone		X	
Working in a group	X		Work in a team environment
Travelling and/or Driving	X		Access construction sites

Work Environment / Environmental Conditions

	Yes	No	Description
Personal Protective Equipment(PPE)	X		Safety glasses, hearing protection, hardhat, safety shoes
Chemical Exposure		X	
Confined Spaces (29 CFR 1910.146)		X	
High Elevations (> 4' above floor level)	X		Work on ladders and/or scaffolding
Temperature Exposure (Heat/Cold)	X		Work in inside ambient temperatures
Work Near Moving Machinery		X	
Work Near Powered Industrial Trucks	X		Sites may have forklifts
Near Visual Acuity (Clarity ≤ 20in.)	X		Read blueprints
Far Visual Acuity (Clarity ≥ 20ft.)		X	
Color Vision		X	
Depth Perception	X		Maneuver carts
Feel/Touch (Perceiving object attributes)			

Job Title	Drywall Carpenter
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Physical Demand Summary

Tasks	Frequency N/I/O/F/C	Description / Tools & Equipment
LIFTING/FORCE		
0 to 5 lbs.	O	Use hand and cordless tools
6 to 10 lbs.	F	Use hand and cordless tools, handle framing
11 to 25 lbs.	O	Handle small pieces of drywall
26 to 50 lbs.	O	Handle cut sheets of drywall and bucket of tools
51 to 100 lbs.	O	Handle larger sheets of drywall
Floor - Waist (1"-41")	O	Install framing and drywall
Waist - Shoulder (41"-54")	F	Install framing and drywall
Shoulder - Overhead (55"-85")	O	Install framing and drywall
Total Body Push / Pull	O	Maneuver carts
Upper Extremity Push/Pull	F	Use hand and cordless tools, push drywall into place
POSITIONAL TASKS		
Bending / Squatting	O	Install framing and drywall below waist height
Twisting (Waist)	O	Install framing and drywall
Kneeling	I	Install framing on the floor
Supine-lying	N	
Crawling	I	May access tight areas and ledges
Neck Extension	O	Install framing and drywall overhead
Neck Flexion	O	Install framing and drywall below waist height
Neck Twisting	I	Install framing and drywall
UPPER EXTREMITY		
Overhead Reaching	O	Install framing and drywall overhead
Horizontal Reaching	O	Install framing and drywall
Simple Grasping	F	R ☒ / L ☒ Handle hand and cordless tools, small supply's
Firm/Power Grip	O	R ☒ / L ☒ Carry drywall and handle hand and cordless tools
Fine Manipulation/Pinch Grip	O	R ☒ / L ☒ Handle blueprints, nails and screws
Wrist Flexion/Extension	O	R ☒ / L ☒ Handle materials and tools
Wrist Deviation	O	R ☒ / L ☒ Handle materials and tools
Hand/Arm Vibration	O	R ☒ / L ☒ Operate cordless tools
Keying	N	
Mousing	N	
Writing	O	Mark materials for installation and cutting/trimming
Phone Calls	N	
TOTAL BODY		
Total Body Vibration	N	
Sitting	I	May sit on breaks
Standing (<3 steps)	O	Install framing and drywall
Walking (>3 steps)	F	Install framing and drywall
Climb Stairs	I	Access multiple floors at sites
Climb Ladders	O	Use ladders to access areas of the site and to install drywall on ceilings and taller walls.
Driving/Foot Controls	I	Access work site locations
Balancing-Slippy, Narrow	I	May work on uneven surfaces

Never	Infrequently 2-5 % of time 1-2 reps/ hr. 2-20 reps/day	Occasionally 6-33% of time 3-12 reps/hr. 21-100 reps/day	Frequently 34-66% of time 13-30 reps/hr. 101-245 reps/day	Constantly 67-100% of time > 31 reps/hr. > 246 reps/day
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