

Rectangular duct section lifting and assembly - JSA - A

en-SG · Basic task controls · v1.0 · 2026-10-14 · Sources: article section 9

Site: _____ | Item ID: _____ | Work area: _____

Approval	Work supervisor	Technical reviewer	Release / handover authority

1. Job details and team signatures

Date / time	Location / area			Assessor		Supervisor	
Team signatures							

2. Conditions and hold points

Stage	Time	Location / area	Environment / readings	Item / condition	Controls	Plant / tools	Approval / signature
HP-0 Start							
HP-1 Review section and supports							
HP-2 Lift and align							
HP-3 Transfer load deliberately							
HP-4 Inspect and hand over							

Complete after actual checks. Recheck after changes, defects or shift handover.

3. JSA risk assessment

Job stage	Hazards and effects	Failure factors	Technical and procedural controls	Site verification	P	S	R	A
1. Review section and supports	1. Duct collapse 2. Unbalanced suspended load 3. Anchor failure	1. Mass or centre unknown 2. Lift configuration changed 3. Support design absent	1. Identify complete lifted section 2. Confirm weight and centre 3. Accept hanger and anchor basis	1. Section and assembly ID 2. Weight and centre evidence 3. Support layout and acceptance				
2. Inspect and prepare zone	1. Sharp-edge cuts 2. Platform fall 3. Dropped materials	1. Damaged edges ignored 2. Access unsuitable 3. Work below continues	1. Inspect duct and joint parts 2. Provide suitable protected access 3. Exclude people below	1. Edge and flange condition 2. Access equipment acceptance 3. Controlled fall zone				
3. Lift and align	1. Falling duct 2. Suspended-load strike 3. Access collision	1. Lift point unsuitable 2. People enter fall zone 3. Travel obstructed	1. Use approved lift arrangement 2. Maintain exclusion and signals 3. Move within planned clearance	1. Rigging and load balance 2. Signal owner and clear zone 3. Platform and duct separation				
4. Connect hangers and flanges	1. Unstable partial support 2. Finger pinch 3. Fastener failure	1. Lift released early 2. Hands used as alignment aid 3. Wrong joint hardware	1. Retain lifting support 2. Use suitable alignment aids 3. Install specified hardware	1. Hanger and anchor identity 2. Connection sequence 3. Fastener and gasket inspection				
5. Transfer load deliberately	1. Hanger pullout 2. Elbow sag 3. Duct distortion	1. Support path unaccepted 2. Transfer abrupt 3. Flange mistaken for support	1. Verify permanent load path 2. Follow planned gradual transfer 3. Observe hanger and duct response	1. Support acceptance record 2. Transfer sequence and observer 3. Movement and load response				
6. Inspect and hand over	1. Unseen loose connection 2. Premature system use 3. Leaking concealed joint	1. Final inspection omitted 2. Assembly equals release 3. Test requirement skipped	1. Inspect before concealment 2. Separate assembly and use release 3. Record required leakage tests	1. Support and joint checks 2. Leakage test status 3. As-built section route				

P/S/R/A: Complete only after actual site assessment using the site risk method.

4. Pre-work checklist

☐ Section and assembly ID	☐ Edge and flange condition	☐ Rigging and load balance
☐ Hanger and anchor identity	☐ Support acceptance record	☐ Support and joint checks
☐ Support layout and acceptance	☐ Fastener and gasket inspection	☐ As-built section route