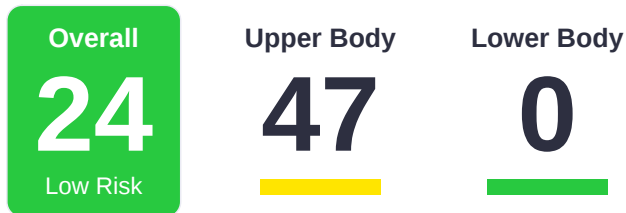


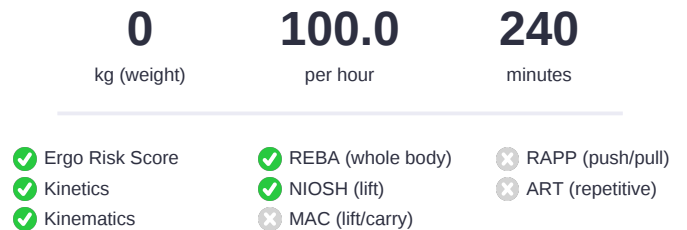
Name: Test Member 1 Test Memb... **Organization:** Textile Services Association **Height:** 180 cm
Date: May-28-2026 **Video ID:** Loading Test Member 1 280526 (2017_risk)

ASSESSMENT OVERVIEW

Ergonomic Risk Score

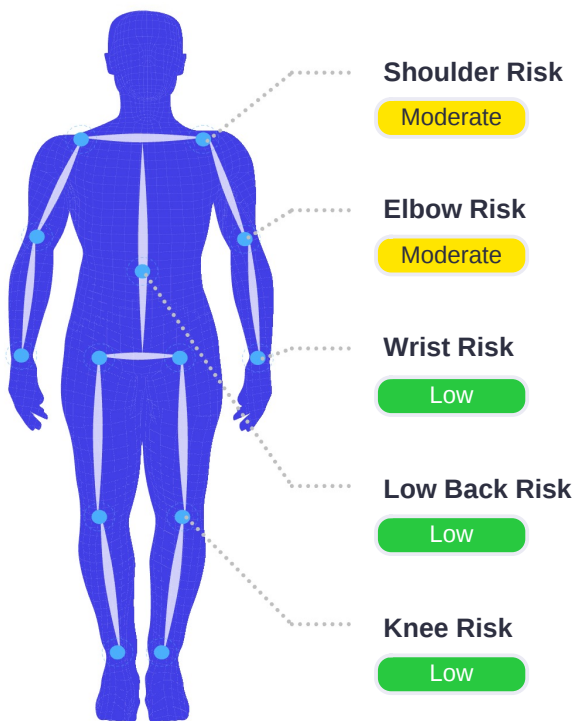


Task Details



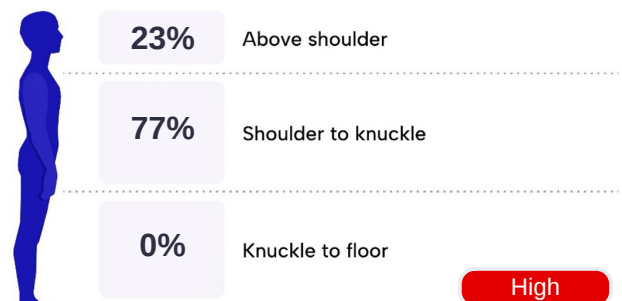
Joint Posture Risk

Low - Moderate - High

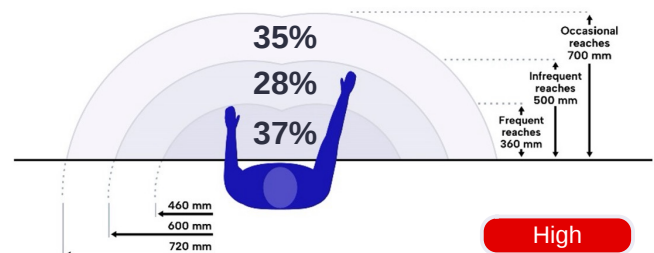


Reach Envelope

Hand Height Distribution



Reach Distance Distribution



! Recommendations to Reduce Risk

Your analysis showed low overall risk (particularly for the upper body) with the shoulders as the riskiest joint. Consider lowering the work location to limit shoulder flexion and reduce the risk level.

ERGONOMIC RISK SCORE

Overall

24

Low Risk

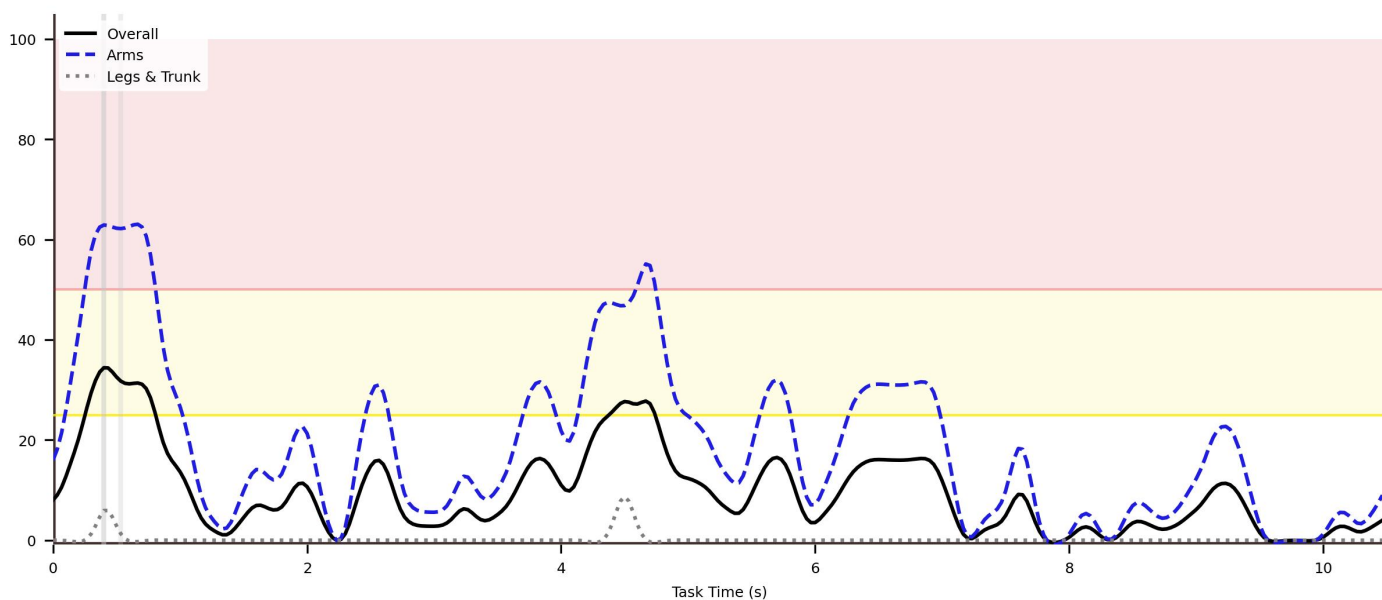
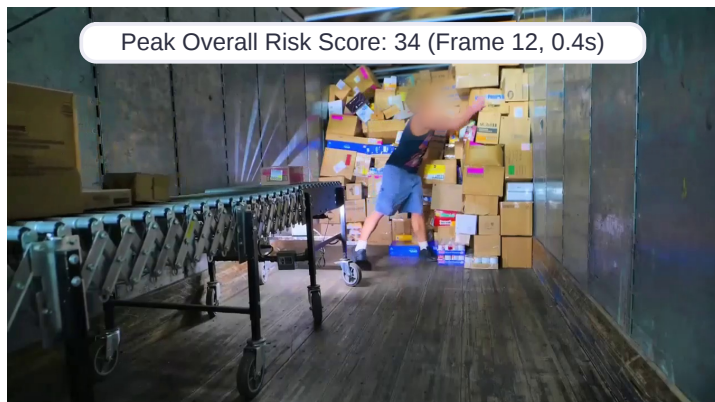
Upper Body

47

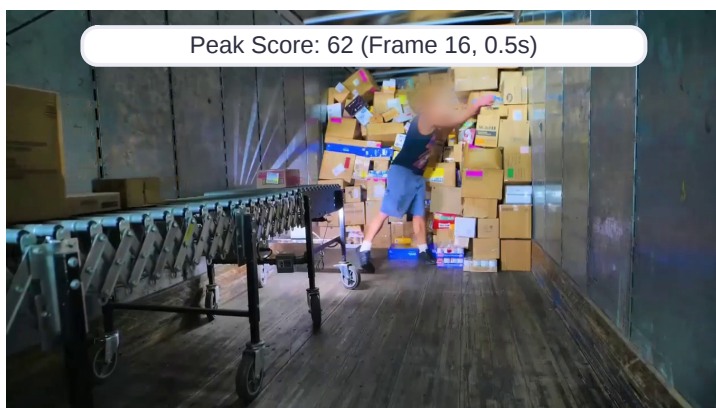
Lower Body

0

The "Risk Score" indicates muscular or soft tissue injury risk based on joint postures, reach envelope, hand load, task frequency, and joint loads.



Upper Body



Lower Body



The Upper Body "Risk Score" targets injury risk related to the neck, shoulders, elbows, and wrists. These joints are most affected by reaching and work above the shoulders.

The Lower Body "Risk Score" targets injury risk related to the low back and knees. These body regions are most affected by working close to ground level.

JOINT KINETICS

Compression

1633

N

LB Moment

82

N.m

SH Moment

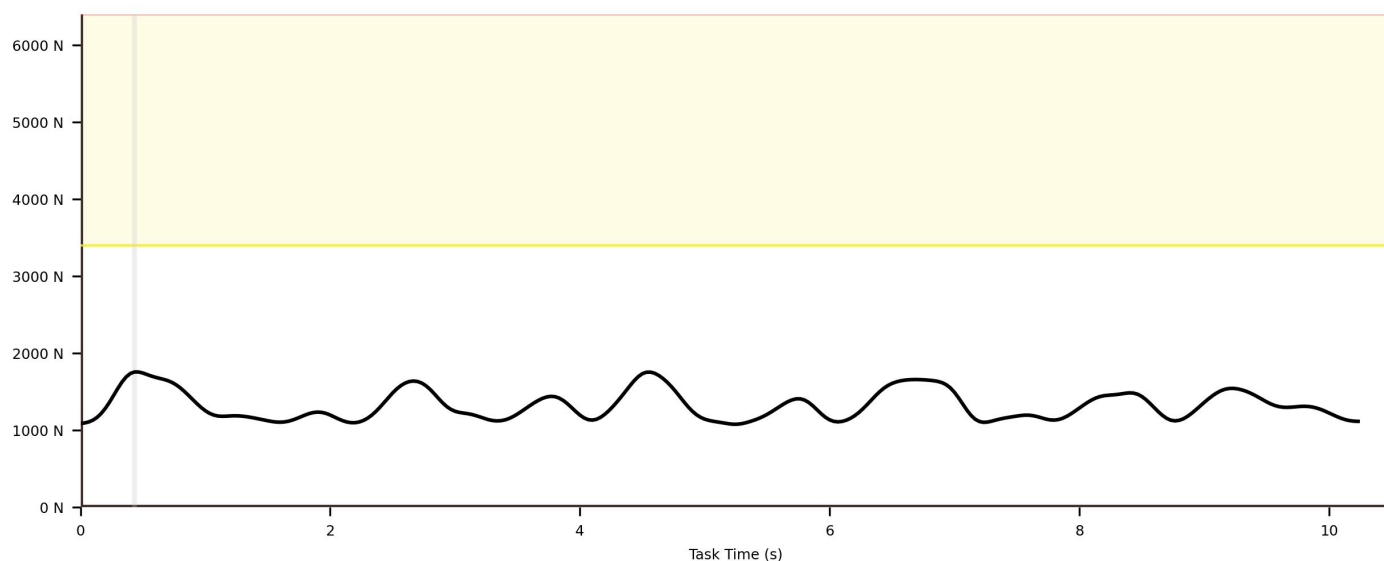
10

N.m

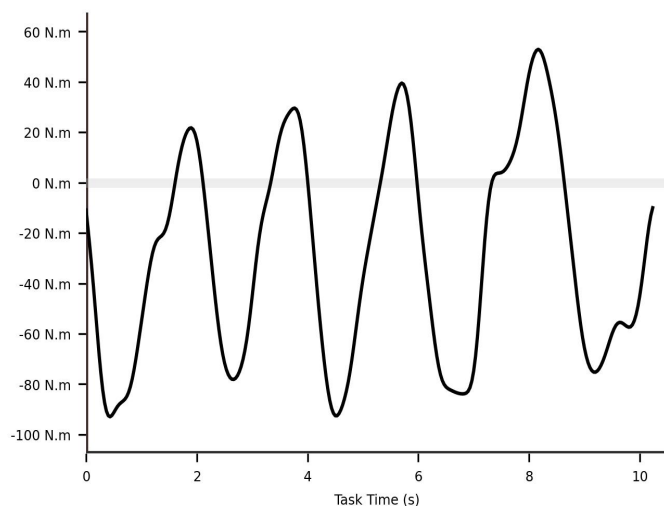
To limit low back (LB) disorders, NIOSH recommends compression below 3400 N (765 lb) for any single activity. Exceeding 6400 N (1440 lb) presents a significant hazard.



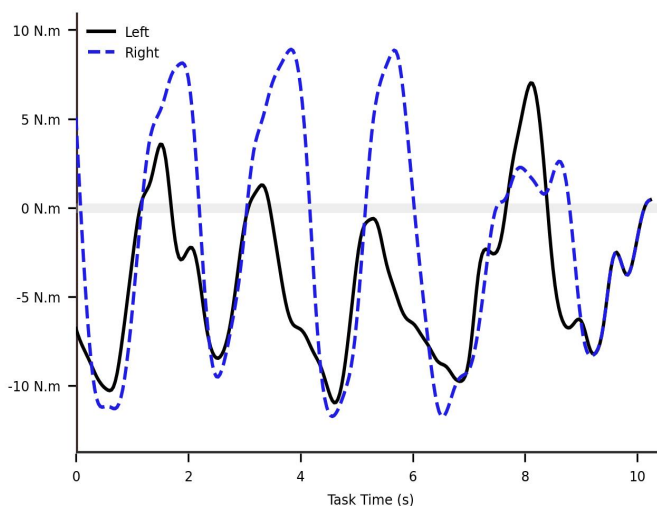
Low Back (LB) Compression



Low Back (LB) Moment



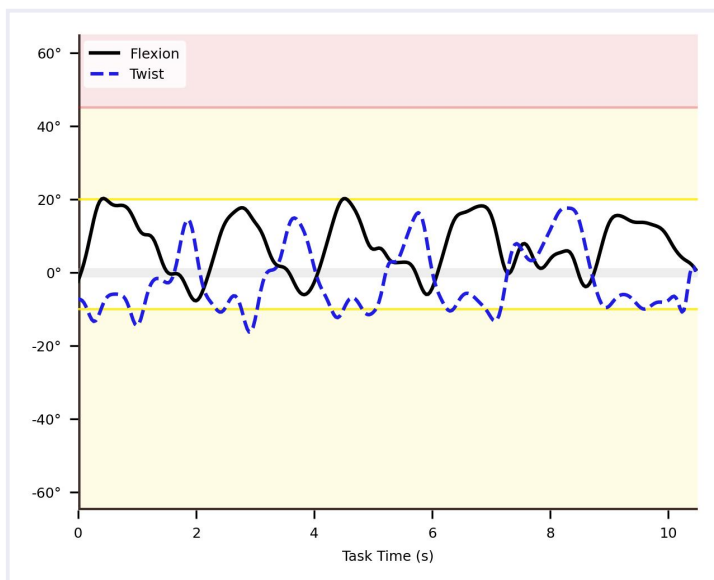
Shoulder (SH) Moment



JOINT KINEMATICS

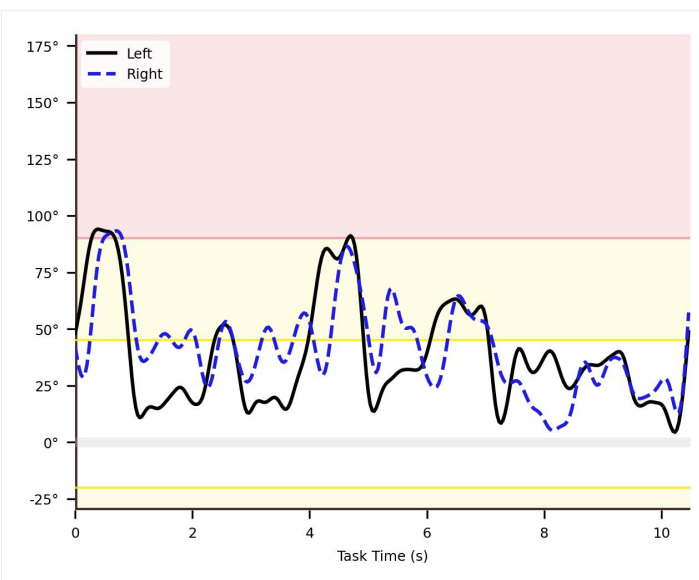
The 3motionAI system uses advanced computer vision and artificial intelligence (AI) to track human body motion. It creates a detailed, scaled 3D body model, which is used to calculate 3D joint angles. Research shows that injury risk is minimized when joints are in a neutral posture, while extreme postures can increase the likelihood of injury.

Low Back Angles



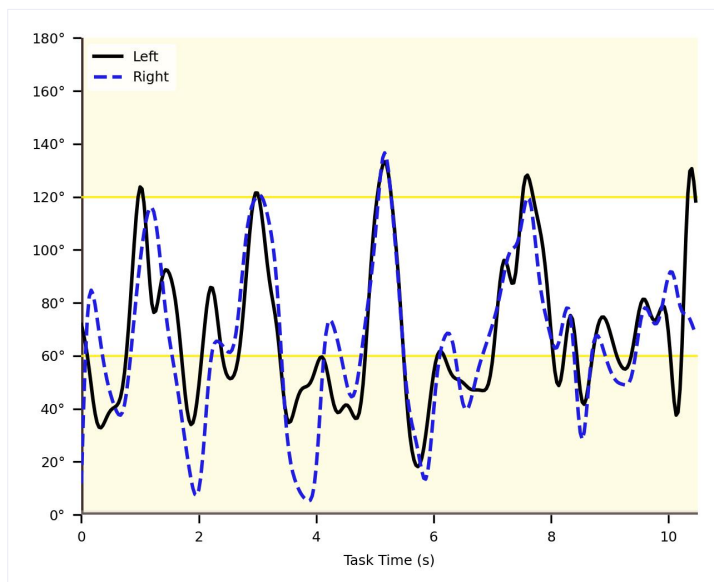
EXTENSION (<-10°)	0%
NEUTRAL (-10-20°)	99%
MODERATE FLEXION (20-45°)	1%
SEVERE FLEXION (>45°)	0%

Shoulder Elevation Angles



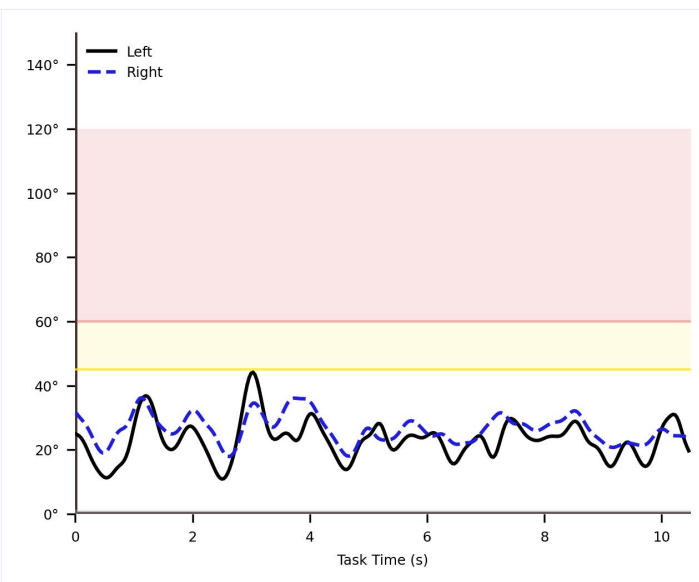
NEUTRAL (0-45°)	70% / 61%
MODERATE ELEVATION (45-90°)	26% / 36%
SEVERE ELEVATION (>90°)	5% / 3%

Elbow Flexion Angles



EXTENSION (<60°)	48% / 40%
NEUTRAL (60-120°)	46% / 57%
FLEXION (>120°)	7% / 3%

Knee Flexion Angles



NEUTRAL (0-45°)	100% / 100%
MILD FLEXION (45-60°)	0% / 0%
SEVERE FLEXION (60-120°)	0% / 0%

RAPID ENTIRE BODY ASSESSMENT (REBA)

Scoring outcomes based on Rapid Entire Body Assessment (REBA), Highnett & McAtamney, Applied Ergonomics 31 (2000), 201-205.

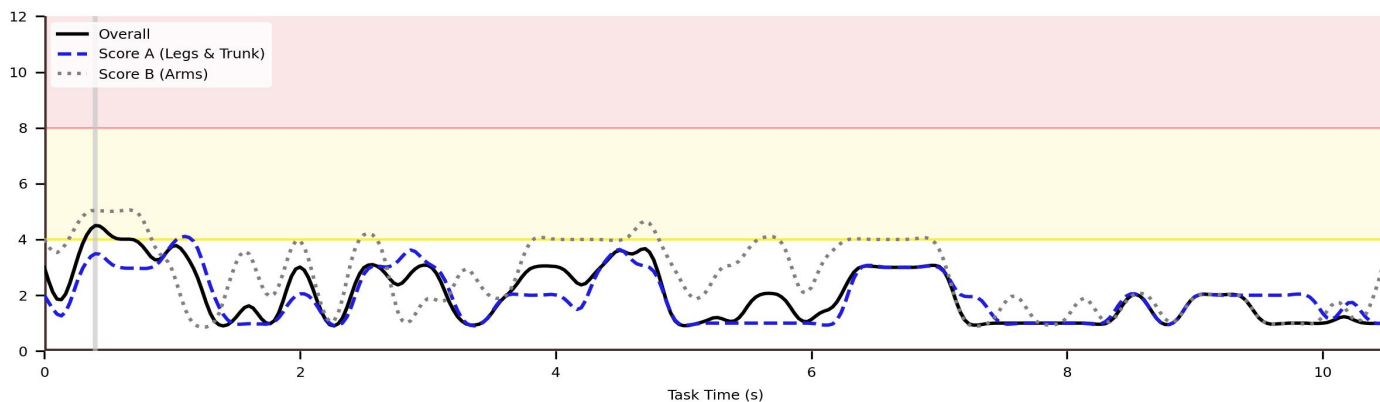
1: Negligible Risk

4-7: Medium Risk. Further investigate and change soon.

11+: Very High Risk. Implement change.

2-3: Low Risk. Change may be needed.

8-10: High Risk. Investigate and implement change.



Peak Overall REBA Score



Peak A Score (Legs & Trunk)



Peak B Score (Arms)



	Posture	Adjust	Score
NECK	2	0	2
TRUNK	3	0	3
LEGS	1	0	1
UPPER ARM	4	0	4
LOWER ARM	2	-	2
WRIST	1	0	1

LOAD	COUPLING	ACTIVITY
0	0	0
0 KG	Good	1.7 / MIN

A SCORE	B SCORE	OVERALL
4	5	5

	Posture	Adjust	Score
NECK	2	0	2
TRUNK	3	0	3
LEGS	1	0	1
UPPER ARM	4	0	4
LOWER ARM	2	-	2
WRIST	1	0	1

LOAD	COUPLING	ACTIVITY
0	0	0
0 KG	Good	1.7 / MIN

A SCORE	B SCORE	OVERALL
4	5	5

	Posture	Adjust	Score
NECK	2	0	2
TRUNK	3	0	3
LEGS	1	0	1
UPPER ARM	4	0	4
LOWER ARM	2	-	2
WRIST	1	0	1

LOAD	COUPLING	ACTIVITY
0	0	0
0 KG	Good	1.7 / MIN

A SCORE	B SCORE	OVERALL
4	5	5

NIOSH LIFTING EQUATION ASSESSMENT

The NIOSH Lifting Equation is a tool for safety practitioners to assess lifting risks. It establishes a recommended weight limit (RWL) that is safe for 75% of female and 90% of male workers. The outputs also include a Lifting Index (LI) that compares the actual load weight to the RWL, indicating risk levels: a higher LI reflects greater risk of injury when lifting. This ensures safer lifting practices in the workplace. See www.cdc.gov/niosh/docs/94-110/ for details on using the equation.

OBJECT WEIGHT

0

KG

RECOMMENDED WEIGHT LIMIT (RWL)

11.0

KG

LIFTING INDEX (LI)

0.0

DURATION

> 2 hours

START OF LIFT



END OF LIFT



MULTIPLIERS

HORIZONTAL
LOCATION (H)

15

CM

1.0

VERTICAL
LOCATION (V)

126

CM

0.85

VERTICAL
DISTANCE (D)

16

CM

1.0

ASYMMETRY
ANGLE (A)

27

DEG

0.91

FREQUENCY
RATE (F)

1.7

LIFTS / MIN

0.65

COUPLING
(C)

Fair

0.95