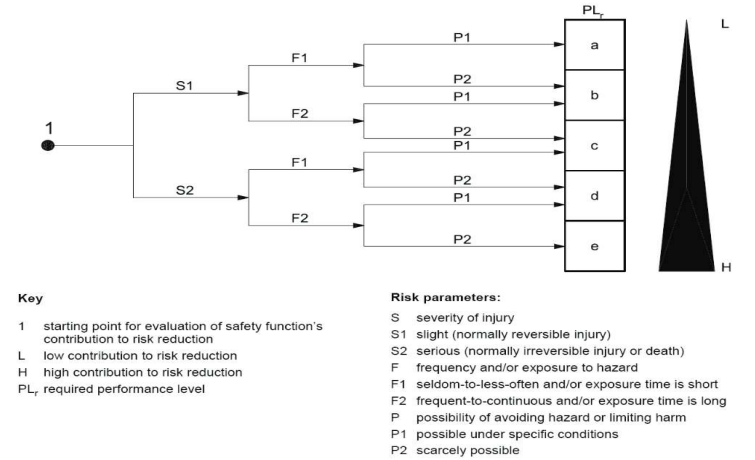


PROTOCOL APPROVAL

PREPARED BY	DESIGNATION	SIGNATURE AND DATE
Sahana I H	Automation	
REVIEWED BY BRML	DESIGNATION	SIGNATURE AND DATE
Vaibhav Bhosale	Automation	
Pabitra Hazra	Design	
REVIEWED BY MAKSON HEALTHCARE PVT. LTD	DESIGNATION	SIGNATURE AND DATE
APPROVED BY MAKSON HEALTHCARE PVT. LTD	DESIGNATION	SIGNATURE AND DATE



Assessment reference:	16339	Number of operatives:	1
Type of machine:	Semi Automatic Cartoning Machine	Number of shifts per week:	
Machine location:	MP	Usage (hours per week):	
Machine description:	Semi Automatic Cartoning Machine	Operating manuals:	Supplied
Machine manufacturer:	BAR	SOP's	As required, per post assembly Hazop.
Machine model:	p715	Operatives' training record:	
Machine serial number:		Warning signs:	As required, per post assembly Hazop.
Modifications from 'as-supplied':	None	Raw materials:	
Energy sources:	Electrical Power and Compressed Air	Maintenance manual:	Supplied
Energy source ratings:	Electrical - 1phase, 230V Pneumatic - Air @6bar.	Maintenance training record:	Operators & maintenance to be trained upon installation
Safety measures:	(eg. PLd safety architecture)	Access by untrained visitors:	Prohibited
Assessment carried out by:			
Assessment date:	20-10-2022		
Assessment reviewed by:			
Assessment review date:			
Version:	1.0		

LO (Likelihood of Occurrence)		
0.033	Almost impossible	Only in extreme circumstances
1	Highly unlikely	Though conceivable
1.5	Unlikely	But could occur
2	Possible	But unusual
5	Even chance	Could happen
8	Probable	Not surprising
10	Likely	To be expected
15	Certain	No doubt

FE (Frequency of Exposure)	
0.5	Annually
1	Monthly
1.5	Weekly
2.5	Daily
4	Hourly
5	Constantly

HRN	Risk
0-5	Negligible
5-50	Low, significant
50-500	High
Over 500	Unacceptable

HRN = LO x FE x DPH x NP

DPH (Degree of Possible Harm)		
0.1	Scratch or bruise	
0.5	Laceration or mild ill-effect	
2	Break of minor bone or minor illness (temporary)	
4	Break of major bone or major illness (temporary)	
6	Loss of one limb, eye, hearing (permanent)	
10	Loss of two limbs or eyes (permanent)	
15	Fatality	

NP (Number of Persons at risk)	
1	1-2 persons
2	3-7 persons
4	8-15 persons
8	16-50 persons
12	50+ persons

RML Assumptions: Machine has no electronic guarding at all at initial assessment, frame is present.
Keywords: See "Example Keywords" sheet for further keywords

No.	Assembly	Machine Location	Type of Hazard	Potential consequences	Comments	Initial assessment						Action required	Re-assessment after taking action						Residual Risk Action Required
						LO	FE	DPH	NP	HRN	Risk level		LO	FE	DPH	NP	HRN	Risk level	
3	Enclosure Assembly	Enclosure Assembly	Electrical Hazards (Improper Grounding, Exposed Electrical Parts, Damaged Insulation, Wet Conditions, Inadequate Wiring)	An electrical shock may cause burns, or it may leave no visible mark on the skin, Electrocutation	Hazards - electrical shock, fire and arc flash. Why is the hazard there - The Earthing is not connected properly What drives the hazard - Electrical Energy How could harm be caused - Operator in contact with hot motor and gearbox Surface. Why would the hazard occur - Operator intervention or inspection around the machine, intervention by maintenance personnel. Potential occurrence of hazard - Consistently. Possible harm - Minor burns , Electrocutation	1	4	15	1	--	Low, significant	Use best practice design	1	4	15	1	--	Low, significant	Use best practice design

Componets/Instruments might Damage				Remarks
Componets/ Instruments Details	LO	Critical Spare	Recommened Spare	
	0.33	--	--	
	2	--	✓	
	1.5	--	--	
	8	✓	--	