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Technical data and methods of the machinery: Machinery 02

Name: Product: Model: Serial: Serial: Revision: Vear of construction: Directive: Manufacturer: Intended use: Description:	Machinery 02 M Machinery 00 00 - 08/05/2021 2021 Dir. 2006/42/EC (EN) Manufacturer Intended purpose	ical Data and Methods
	The machinery does not complies Annex IV 1. Internal check for machinery production as Annex VIII.	Technical
CE Marking Process		F
Risk assessment		
EN ISO 12100	Safety of machinery - General principles for design - Risk assessment and risk reduction	
Tool EN ISO 12100 Operative	 State of the machine Operating condition Hazardous situation Hazardous event Initial risk evaluation Inherently safe design measures Safeguardings Complementary protective measure Information for use Safety signs Final risk evaluation Residual risk Technical standards applied Notes EHSR 	
ISO/TR 14121-2	 Safety of machinery - Risk assessment - Part 2: Pratical guidance and examples of methods The hybrid tool is described in section 6.5 of ISO/TR 14121-2. The hybrid tool combines two of the methods described in the ISO/TR 14121-2. They are usually risk charts (qualitative tool) combined with matrices or scoring systems (quantitative method). The risk factors to be taken into consideration are the same as the tree method (gravity, frequency, probability, and avoidability) and each of them contains different levels to which correspond to different numerical weights. The method is applied as follows: 1. to estabilish the numerical weights for the severity, the frequency, the probability and the avoidability of the damage (see below the tables with the relative numerical weights); 2. add the three frequency, probability, and avoidance weights to determine the probability class "Cl" (Class) (Cl = Fr + Pr + Av); 3. insert the Gravity and Class dimensions into a weighting matrix; 4. calculate the risk by finding the intersection point of the row (Cl) with the column (Se) of the matrix. 	



Project:	Machinery:		
Progetto EN ISO 12100	Machinery 02		Year: 2021
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Consequences / Severity			Class	CI (Fr-	+Pr+Av	')	Frequency		Probability		Avoidance	
(Se)		4	5-7	8-10	11-13	14-15	(Fr)		(Pr)		(Av)	
Death, losing an eye or arm	4						<= 1h	5	Very high	5		_
Permanent, losing fingers	3						> 1h to <= 24h	5	Likely	4		
Reversible, medical attention	2		?				> 24 to <= 2w	4	Possible	3	Impossible	1
Reversible, first aid	1						> 2w to <= 1y	3	Rarely	2	Possibile	:
							> 1y	2	Negligible	1	Likely	1

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							Hazard p	ore	esent	
- Crushing							P			
State of the machine Operating condition	n									_
State of the machine Operating condition										
lazardous situation Hazardous event										
Hazardous situation Hazardous event nitial risk evaluation										
(Single operator)						IS	O/TR 14121-2:2	012	2 p. 6.5 Hybrid T	ool
Se(3) Fr(3) + Pr(2) + Av(3) = Cl(8): Safe	ety measures							_		
Consequences / Severity			(Fr+Pr+A		Frequency	'	Probability		Avoidance	
(Se)	4	5-7 8-	10 11-13	14-15	(Fr)	_	(Pr)	5	(Av)	_
Death, losing an eye or arm Permanent, losing fingers	4 3		в		<= 1h > 1h to <= 24h		Very high Likely	5 4		
Reversible, medical attention	2				> 24 to <= 2w		Possible		Impossible	5
Reversible, first aid	1				> 2w to <= 1y		Rarely		Possibile	3
					> 1y	2	Negligible	1	Likely	1
nherently safe design measures Safegu	ardings C	ompleme	ntary pro	otective	e measures					
Inherently safe design measures Safeguar	rdings Com	plementary	v protectiv	/e measu	ures					
nformation for use										
Information for use										
afety signs										
Warning; Crushing of hands										
of hands inal risk evaluation							0/10 14121 2 2	017		
of hands inal risk evaluation (Single operator)						IS	O/TR 14121-2:20	012	2 p. 6.5 Hybrid T	ool
of hands inal risk evaluation (Single operator) Se(3) $Fr(2) + Pr(1) + Av(1) = Cl(4)$: OK		Class Cl	(Fr±Dr±Δ	N)	English			012		ool
of hands inal risk evaluation (Single operator) Se(3) $Fr(2) + Pr(1) + Av(1) = Cl(4)$: OK Consequences / Severity	4	Class Cl 5-7 8-			Frequency (Fr)		Probability	012	Avoidance	ool
of hands inal risk evaluation (Single operator) Se(3) $Fr(2) + Pr(1) + Av(1) = Cl(4)$: OK Consequences / Severity (Se)		T T	(Fr+Pr+A 10 11-13		(Fr)	,	Probability (Pr)		Avoidance (Av)	ool
of hands inal risk evaluation (Single operator) Se(3) $Fr(2) + Pr(1) + Av(1) = Cl(4)$: OK Consequences / Severity	4	T T				5	Probability (Pr) Very high	012 5 4	Avoidance (Av)	
of hands inal risk evaluation (Single operator) Se(3) $Fr(2) + Pr(1) + Av(1) = Cl(4)$: OK Consequences / Severity (Se) Death, losing an eye or arm	4 3 4 2	T T			(Fr)	, 5 5	Probability (Pr)	5 4 3	Avoidance (Av) Impossible	5
of hands inal risk evaluation (Single operator) Se(3) Fr(2) + Pr(1) + Av(1) = Cl(4): OK Consequences / Severity (Se) Death, losing an eye or arm Permanent, losing fingers	4 3 4	T T			(Fr) <= 1h > 1h to <= 24h > 24 to <= 2w > 2w to <= 1y	5 5 4 3	Probability (Pr) Very high Likely Possible Rarely	5 4 3 2	Avoidance (Av) Impossible Possibile	5 3
of hands inal risk evaluation (Single operator) Se(3) Fr(2) + Pr(1) + Av(1) = Cl(4): OK Consequences / Severity (Se) Death, losing an eye or arm Permanent, losing fingers Reversible, medical attention	4 3 4 2	T T			(Fr) <= 1h > 1h to <= 24h > 24 to <= 2w	5 5 4 3	Probability (Pr) Very high Likely Possible	5 4 3 2	Avoidance (Av) Impossible	5
of hands inal risk evaluation (Single operator) Se(3) $Fr(2) + Pr(1) + Av(1) = Cl(4)$: OK Consequences / Severity (Se) Death, losing an eye or arm Permanent, losing fingers Reversible, medical attention Reversible, first aid	4 3 4 2	T T			(Fr) <= 1h > 1h to <= 24h > 24 to <= 2w > 2w to <= 1y	5 5 4 3	Probability (Pr) Very high Likely Possible Rarely	5 4 3 2	Avoidance (Av) Impossible Possibile	5 3
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of hands inal risk evaluation (Single operator) Se(3) Fr(2) + Pr(1) + Av(1) = Cl(4): OK Consequences / Severity (Se) Death, losing an eye or arm Permanent, losing fingers Reversible, medical attention Reversible, first aid Residual risk rechnical standards applied Notes HSR 1.1.1 - Definitions 1.1.2 - Principles of safety integration	4 3 2 1 	5-7 8-		14-15	(Fr) <= 1h > 1h to <= 24h > 24 to <= 2w > 2w to <= 1y > 1y	5 5 4 3	Probability (Pr) Very high Likely Possible Rarely Negligible	5 4 3 2 1	Avoidance (Av) Impossible Possibile Likely	5 3

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