
International Standard



730/3

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**Agricultural wheeled tractors — Three-point linkage —
Part 3 : Category 4**

Tracteurs agricoles à roues — Attelage trois points — Partie 3 : Catégorie 4

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Agricultural wheeled tractors — Three-point linkage — Part 3 : Category 4

1 Scope

This International Standard specifies the requirements for the attachment of implements or equipment to the rear of agricultural wheeled tractors by means of a three-link hitch in association with a power lift.

2 Field of application

This part of ISO 730 applies to agricultural wheeled tractors with a maximum power at the drawbar from 135 to 300 kW when determined in accordance with ISO 789/1.

The category 4 L and category 4 H dimensions apply to tractors with the power take-off located, respectively, below and above the rear axle centre line.

3 References

ISO 730/1, *Agricultural wheeled tractors — Three-point linkage — Part 1 : Categories 1, 2 and 3.*

ISO 789/1, *Agricultural tractors — Test procedures — Part 1 : Power tests.*

4 Definitions

4.1 General

See ISO 730/1.

4.2 Components of the linkage

See ISO 730/1.

4.3 Dimensional characteristics of the linkage

See ISO 730/1, except definition 21; for the purposes of this part of ISO 730, the following definition applies :

21 mast adjustment¹⁾ : The usable range of movement of the mast in a vertical plane. It is measured as the maximum and minimum heights of the lower hitch points above the ground between which a mast of height either 686 mm (category 4 L) or 1 100 mm (category 4 H) can be adjusted to any inclination between the vertical and 10° to the vertical towards the rear.

5 Dimensions²⁾

5.1 Hitch points and zone around the hitch points

The dimensions concerning the hitch points shall be as given in table 2 and those concerning the zone around the hitch points shall be given as in table 1.

5.2 Lift, power lift, and levelling adjustments

The ranges of lift, power lift and levelling adjustments shall be as given in table 3.

6 Power lift capacity

A minimum lift force of 30 000 N and an additional 155 N for each drawbar power unit (kilowatt) above 135 kW drawbar power of the tractor shall be available at a distance of 610 mm to the rear of the hitch points.

NOTE — The above mentioned values relate to 90 % of the hydraulic relief valve pressure setting and the recommended mast height, and should be available through the full power range.

When determining the lift force, a minimum angle of 10° between the vertical and the mast shall be observed (see figure 1).

1) Adjustment of the mast controls the pitch of the implement. Specifying the mast adjustment to be provided enables the tractor designer to determine the minimum acceptable adjustment of the length of the top link in relation to the points of attachment of the linkage; it also permits the implement designer to determine the range of operating depths of the implement over which pitch adjustment can be obtained.

2) Dimensions are based on the assumption that the tractor manufacturer's normal wheel equipment is fitted.

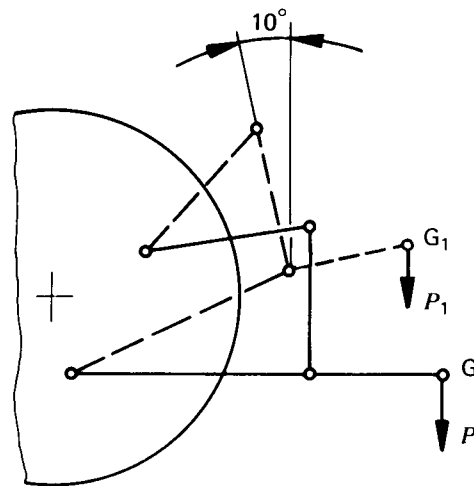


Figure 1 – Minimum angle between the vertical and the mast

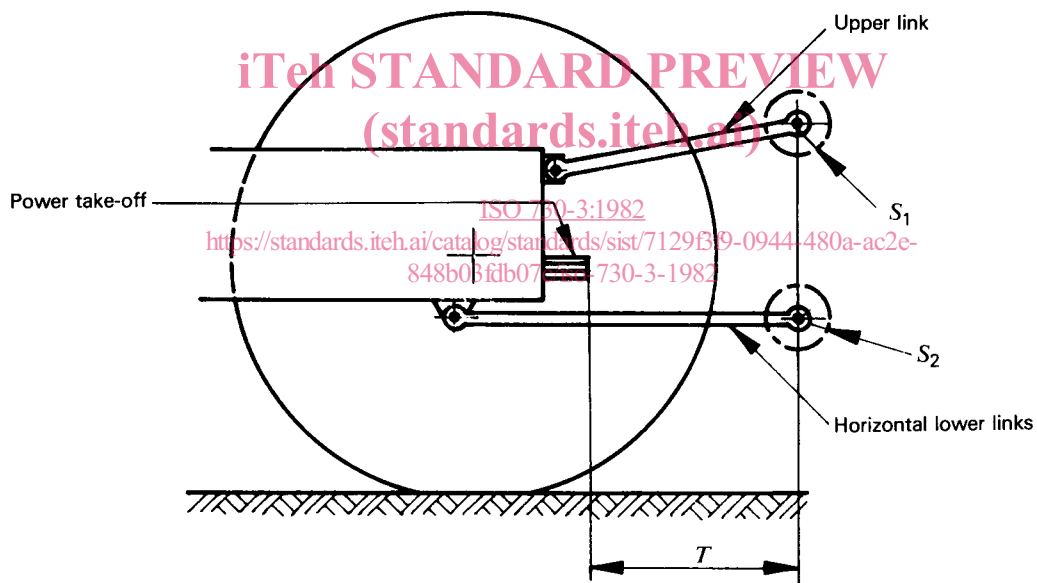


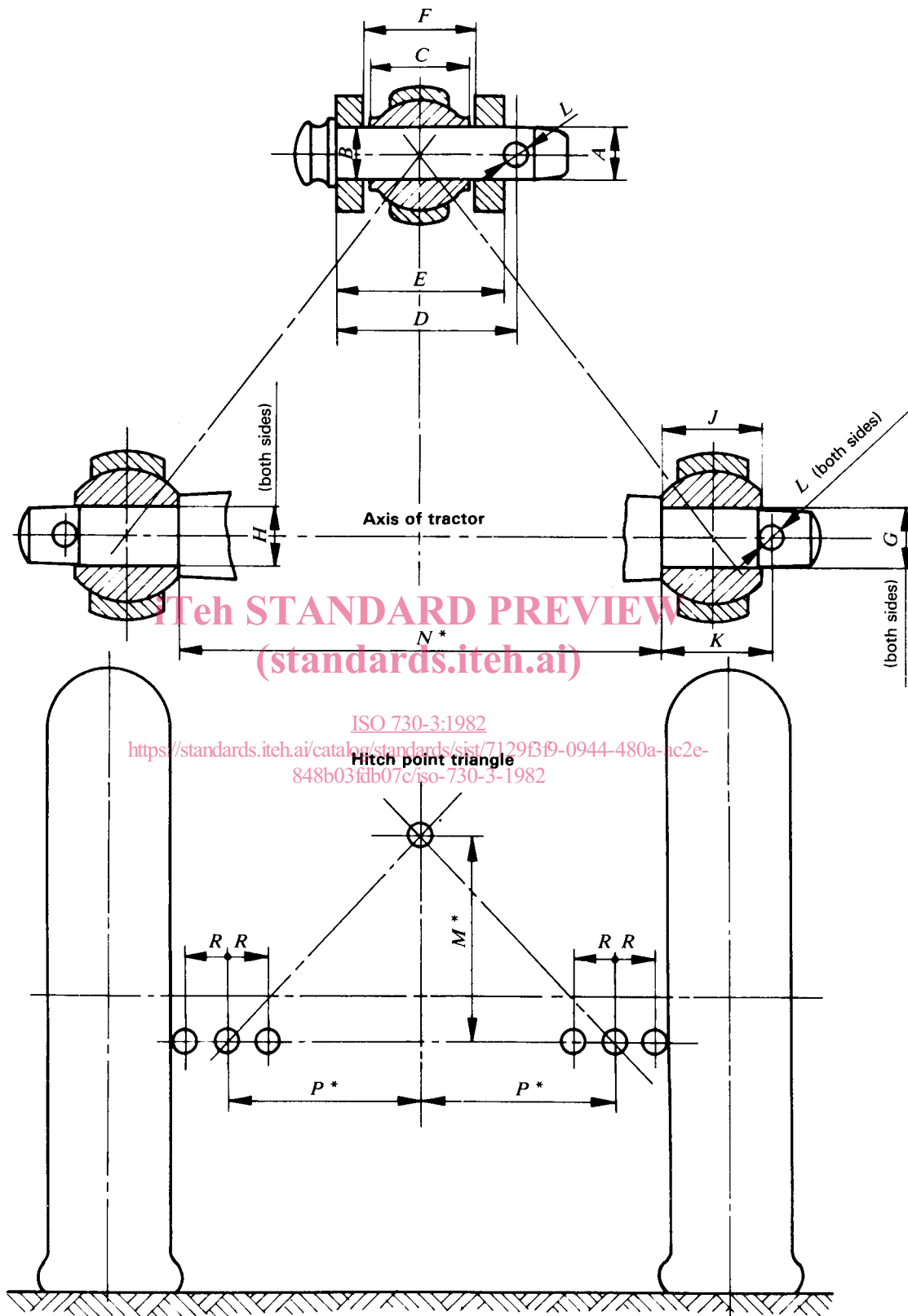
Figure 2 – Relation between power take-off and rear hitch points.
Zones of clearance around hitch points

Table 1 – Dimensions concerning the zone around hitch points (see figure 2)

Dimensions in millimetres

Dimension	Dimensional characteristics	Category 4 L		Category 4 H	
		min.	max.	min.	max.
S_1	Zone of clearance around each hitch point, spherical radius	—	65	As for category 4 L	
S_2		—	80		
T	Distance from end of power take-off to centre of lower hitch point. Lower link in horizontal position	500	575	610	670

NOTE — Dimensions 500 mm and 575 mm in category 4 L apply only to 35 mm (1 3/8 in) shafts. These should be increased by 100 mm if a 45 mm (1 3/4 in) 1 000 min⁻¹ (1 000 r/min) shaft is used.



- Recommended dimensions. It may be necessary to vary these dimensions in the case of specialized implements.

Figure 3 – Dimensions concerning the hitch points

Table 2 — Dimensions concerning hitch points (see figure 3)

Dimensions in millimetres

Dimension	Dimensional characteristics	Category 4 L		Category 4 H	
		min.	max.	min.	max.
Upper hitch points					
<i>A</i>	Diameter of hitch pin	44,2	45	As for category 4 L	
<i>B</i>	Diameter of hitch pin hole	45,2	45,5		
<i>C</i>	Width of ball	—	64		
<i>D</i>	Linch pin hole distance	140	—		
<i>E</i>	Width between outer faces of yoke	—	132		
<i>F</i>	Width between inner faces of yoke	65	—		
Lower hitch points					
<i>G</i>	Diameter of hitch pin	49,7	50,8	As for category 4 L	
<i>H</i>	Diameter of hitch pin hole	51	51,5		
<i>J</i>	Width of ball	57	57,5		
<i>K</i>	Linch pin hole distance	68	—		
Linch pin holes					
<i>L</i>	Diameter of linch pin holes	17,5	18		
<i>M*</i>	Mast height	686	—	1 100	—
<i>N*</i>	Lower hitch point span	1 165	1 168	As for category 4 L	
<i>P*</i>	Lateral distance from lower hitch point to centreline of tractor	610	—		
<i>R</i>	Lateral movement of lower hitch point	130	—		

* Recommended dimensions. It may be necessary to vary dimensions in the case of specialized implements.

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Table 3 — Lift, power lift and adjustment ranges

Dimensions in millimetres

Reference in sub-clause 4.3	Dimensional characteristics	Category 4 L	Category 4 H
14	Lower hitch points height	230 (max.)	As for category 4 L
15	Levelling adjustment range	150 (min.)	
18	Power range	760 (min.)	900 (min.)
19	Transport height (lower hitch point axis to be horizontal throughout)	1 200 (min.)	As for category 4 L
20	Lower hitch point clearance	100 (min.)	
21	Mast adjustment		
	Minimum height for highest position	710	
	Maximum height for lowest position	255	