PRODUCT OVERVIEW HITH-LITH Tilting Dividing Heads





Precision made in Germany

Technical data of HTH-UTH Tilting Dividing Heads

Main characteristics

- Manual, tilting dividing head with centre heights of 100 mm, 125 mm, 160 mm and 200 mm for direct and indirect positioning of workpieces on machine tools.
- The worm gear is set to a low amount of backlash and enables the turning axis to be positioned manually with an indexing plate device. The standard indexing plate has 10 indexing circles on each side with the hole counts 13, 15, 16, 17, 18, 19, 20, 21, 23, 24, 27, 29, 31, 33, 37, 39, 41, 43, 47 and 49.
- Eccentric worm shaft bearing to compensate the backlash in the worm gear, or for swivelling out for direct indexing work.
- If the worm gear is swivelled out, direct indexing can be carried out at the indexing spindle with direct indexing plate and notch lever. The direct indexing plate is located protected at the rear end of the indexing spindle, and has 24 notches for indexing 2, 3, 4, 6, 8, 12 and 24 positions.
- Indexing spindle with MT (Morse taper) hole and external short taper to enable workpiece clamping systems to be replaced quickly.

- Compact, space-saving design with high rigidity in both axes.
- The turning and tilting axes are clamped to achieve a high machining performance. The turning axis is clamped by a manually operated hydraulic clamp and the swivel axis to both tension brackets at the trunnions.
- Housing parts are painted with structured coating RAL 7035 Light Grey.

Additional options for UTH configuration:

- In addition to the characteristics of the HTH indexing device, the UTH universal indexing device is equipped with an additional drive with a gear spindle via change wheels, change gear quadrant and differential bolt to the indexing spindle. The scope of delivery includes 12 change gearwheels with 24, 28, 32, 40, 44, 48, 56, 64, 72, 86 and 100 teeth. This allows to carry out the following indexing processes.
- Differential indexing process for all indexing up to 1000, including up to 400 with the supplied adjustment table.
- Spiral milling with mechanical coupling via a set of change gears to the table feed.

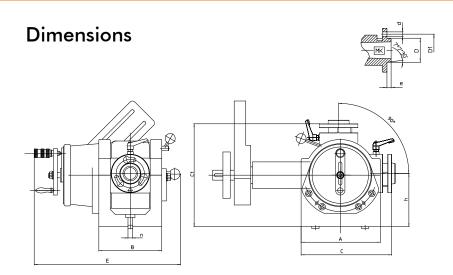
Accuracies

Size		100	125	160	200
Tilt range with 1° reading value	(°)	0° bis 90°	0° bis 90°	0° bis 90°	0° bis 90°
Worm gear ratio	(i)	40:1	40:1	40:1	40:1
Indexing accuracy	(sec)	±60"	±60"	±60"	±60"
Circular runout of internal and external spindle taper	(mm)	0.01	0.01	0.01	0.01
Axial runout of indexing spindle face	(mm)	0.01	0.01	0.01	0.01

Load and performance data

Size		100	125	160	200
Load capacity for horizontal axis max.	(kg)	50	100	100	100
Load capacity for horizontal axis with tailstock max.	(kg)	100	200	200	200
Load capacity for vertical axis max.	(kg)	50	100	100	100
Axial force max.	(kN)	10	30	30	30
Radial force max.	(kN)	5	10	10	10
Tilting moment	(Nm)	75	125	125	125
Tilting moment indexing spindle clamped	(Nm)	160	270	270	270





Size		100	125	160	200
Α	(mm)	160	230	230	230
В	(mm)	140	190	190	190
С	(mm)	197	258	258	258
C1	(mm)	197	258	293	333
d		8.5	10.5	10.5	10.5
D1 ^{H7}	(mm)	49	85	85	85
D _{h6}	(mm)	36	63.525	63.525	63.525
е	(mm)	10	11	11	11
E	(mm)	350	453	453	453
h	(mm)	100	125	160	200
MK	(mm)	3	5	5	5
n	(mm)	14	14	14	14

Weight HTH (kg) 25 72 81 96 UTH (kg) 37 85 105 120





HTH-100 UTH-100

HTH and UTH accessories

- Rigid, manually operated tailstocks, also with MT tailstock sleeve
- Moveable tailstock with fixed tailstock centre
- Manual three-jaw chuck with flange to be attached to the indexing spindle
- Manual collet chuck with through bore or MK retainers to be attached to the indexing spindle for standard collets
- Centre and carrier to be attached to the indexing spindle
- Steady rest for longer workpieces
- Raiser plate set for dividing head and tailstock for increasing the centre height
- Additional direct indexing plates with 2 to 36 notches; can be replaced with the standard direct indexing plate
- The additional direct indexing plate for the indexing plate device has ten indexing circles on each side with the hole numbers 51, 53, 57, 59, 61, 63, 67, 69, 71, 73, 77, 79, 81, 83, 87, 89, 91, 93, 97 and 99.
- Hand wheel with micrometer dial, also suitable for uneven indexing, can be replaced by the hole plate attachment (you cannot use the micrometer dial on the UTH universal dividing head to carry out differential indexing and spiral milling).

UTH special accessories

- Protective hood to protect the change gears from contacting the change gear quadrant.
- Gear spindle with differing length and change gear wheels with differing interior hole suitable for mechanical coupling to the table feed of milling machines.



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