

**Pipe joint assemblies and fittings for types 1 and 2  
high-density polyethylene (HDPE) pressure pipes**Tees and branches produced by segment inserts  
and necking for butt welding Dimensions**DIN**  
**16 963**  
Part 2Rohrverbindungen und Rohrleitungsteile für Druckrohrleitungen aus Polyethylen hoher Dichte (HDPE) Typ 1 und 2;  
in Segmentbauweise und durch Aushalsen hergestellte T-Stücke und Abzweige für Stumpfschweissung, Masse

Dimensions in mm

**1 Scope and field of application**

This standard applies to types 1 and 2 high-density polyethylene (HDPE) tees and branches produced by segment inserts and necking of pipes conforming to DIN 8074 Part 1 and 2 and butt welded using heated tools in accordance with DIN 1910 Part 3 or in accordance with DVS 2207 Part 1 to types 1 and 2 HDPE pipes.

The tees and branches shall comply with the requirements specified in DIN 16 963 Part 5 or Part 25 \*).

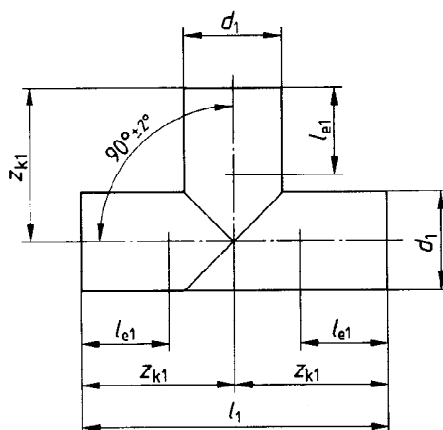
For welding reasons, the tees and branches shall only be welded to pipes conforming to DIN 8074 Part 1 and Part 2 and pipe fittings of the same pipe series. Deviations from this requirement are permitted if the same wall thicknesses are given in the welding zone.

**2 Dimensions, designations**

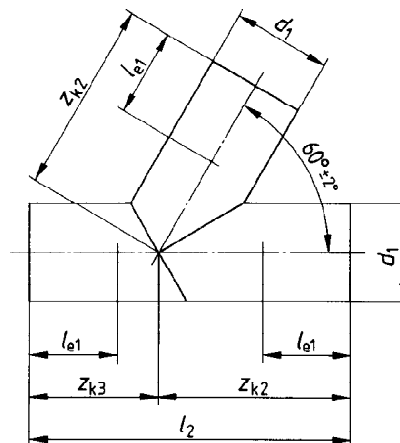
The tees and branches need not conform to the illustrations, only the dimensions specified are to be adhered to.

**Tee T1**

(produced by segment insert)

**Branch A 60**

(produced by segment insert)



Designation of a pipe series 3 type 1 60° branch (A 60) of 500 mm external diameter:

Branch DIN 16 963 – A 60 – 500 – 3 – 1

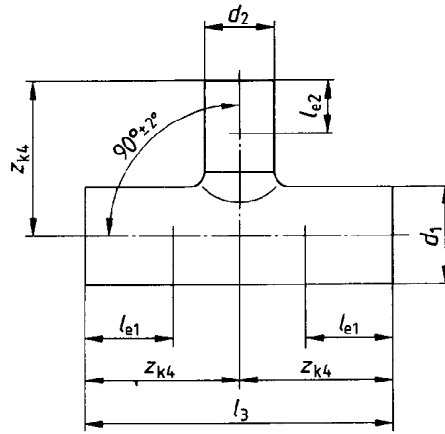
\*) At present at the stage of draft.

Continued on pages 2 to 4

Table 1. Tee T 1 and branch A 60

$d_1$	$l_{e1}$ min.	Tee		60° branch		
		$l_1$ min.	$z_{k1}$ min.	$l_2$ min.	$z_{k2}$ min.	$z_{k3}$ min.
110	150	410	205	500	325	175
125		430	215	545	355	190
140		440	220	581	375	206
160		460	230	642	412	230
180		480	240	700	450	250
200		500	250	759	487	272
225		530	265	830	530	300
250	250	750	375	905	580	325
280		780	390	995	630	365
315	300	920	460	1090	690	400
355		960	480	1155	730	425
400		1000	500	1250	800	450
450		1050	525	1325	850	475
500	350	1200	600	1400	900	500
560		1260	630	1480	950	530
630		1330	665	1545	1000	545
710		1410	705	1670	1090	580
800		1500	750	1810	1180	630
900	400	1700	850	1990	1320	670
1000		1800	900	2070	1360	710
1200		2000	1000	2400	1540	860

**Tee T5**  
(produced by necking)



Designation of a pipe series 3 type 1 necked, reduced tee T5 with  $d_1 = 200$  mm and  $d_2 = 140$  mm:  
**TEE DIN 16 963 – T5 – 200 × 140 – 3 – 1**

Table 2. Tee T5

$d_1$	$l_{e1}$ min.	$d_2$	$l_{e2}$ min.	$l_3$ min.	$z_{K4}$ min.
160	150	50	150	520	260
		63			
		75			
		90			
		110			
180	150	63	150	560	280
		75			
		90			
		125			
200	150	63	150	600	300
		75			
		90			
		110			
		125			
		140			
225	300	75	150	650	325
		90			
		110			
		125			
		140			
		160			
		180			
250	250	75	150	700	350
		90			
		110			
		125			
		140			
		160			
		180			
		200			
		225			
250					

$d_1$	$l_{e1}$ min.	$d_2$	$l_{e2}$ min.	$l_3$ min.	$z_{K4}$ min.
280	250	90	150	760	380
		110			
		125			
		140			
		160			
		180			
		200			
315	300	110	150	830	415
		125			
		140			
		160			
		180			
		200			
355	300	110	150	920	460
		125			
		140			
		160			
		180			
		200			
		225			
		250			
400	250	125	150	1000	500
		140			
		160			
		180			
		200			
		225			
		250			
		280			
		315			

$d_1$	$l_{e1}$ min.	$d_2$	$l_{e2}$ min.	$l_3$ min.	$z_{K4}$ min.
450	300	140	150	1100	550
		160			
		180			
		200			
		225			
		250			
500	350	160	150	1200	600
		180			
		200			
560	350	180	150	1320	660
		200			
		225			
		250			
		280			
		315			
		355			
630	250	200	150	1460	730
		225			
		250			
		280			
		315			
		355			
		400			
		450			
		500			

### Standards referred to and other documents

- DIN 1910 Part 3 Welding; welding of plastics, processes
- DIN 8074 Part 1 Type 1 rigid polyethylene (rigid PE) pipes; dimensions
- DIN 8074 Part 2 Type 2 high-density polyethylene (HDPE) pipes; dimensions
- DIN 16 963 Part 5 Pipe joint assemblies and fittings for type 1 rigid polyethylene (rigid PE) pressure pipes; general quality requirements, testing
- DIN 16 963 Part 25 (at present at the stage of draft) Pipe joint assemblies and fittings for type 2 high-density polyethylene (HDPE) pressure pipes; general quality requirements, testing, supplement to DIN 16 963 Part 5
- DVS 2207 Part 1 Welding of thermoplastics, rigid polyethylene (rigid PE); pipes and fittings for gas pipelines and water supply lines <sup>1)</sup>

### Other relevant standards

- DIN 8075 Part 1 Type 1 rigid polyethylene (rigid PE) pipes; general quality requirements, testing
- DIN 8075 Part 2 Type 2 high-density polyethylene (HDPE) pipes; general quality requirements, testing
- DIN 16 963 Part 1 Pipe joint assemblies and fittings for types 1 and 2 high-density polyethylene (HDPE) pressure pipes; bends produced by segment inserts for butt welding, dimensions
- DIN 16 963 Part 3 Pipe joint assemblies and fittings for types 1 and 2 high-density polyethylene (HDPE) pressure pipes; bends formed from pipes for butt welding, dimensions
- DIN 16 963 Part 6 (at present at the stage of draft) Pipe joint assemblies and fittings for types 1 and 2 high-density polyethylene (HDPE) pressure pipes; injection moulded fittings for butt welding, dimensions
- DIN 16 963 Part 7 Pipe joint assemblies and fittings for types 1 and 2 high-density polyethylene (HDPE) pressure pipes; injection moulded electric fusion fittings, dimensions
- DIN 16 963 Part 8 Pipe joint assemblies and fittings for types 1 and 2 high-density polyethylene (HDPE) pressure pipes; injection moulded elbows for socket welding, dimensions
- DIN 16 963 Part 9 Pipe joint assemblies and fittings for types 1 and 2 high-density polyethylene (HDPE) pressure pipes; injection moulded tees for socket welding, dimensions
- DIN 16 963 Part 10 Pipe joint assemblies and fittings for types 1 and 2 high-density polyethylene (HDPE) pressure pipes; injection moulded sockets and caps for socket welding, dimensions
- DIN 16 963 Part 11 Pipe joint assemblies and fittings for types 1 and 2 high-density polyethylene (HDPE) pressure pipes; bushes, flanges and seals for socket welding, dimensions
- DIN 16 963 Part 12 Pipe joint assemblies and fittings for types 1 and 2 high-density polyethylene (HDPE) pressure pipes; injection moulded reducers for connection to electric fusion fittings
- DIN 16 963 Part 13 Pipe joint assemblies and fittings for types 1 and 2 high-density polyethylene (HDPE) pressure pipes; turned and pressed reducers for butt welding, dimensions
- DIN 16 963 Part 14 Pipe joint assemblies and fittings for types 1 and 2 high-density polyethylene (HDPE) pressure pipes; injection moulded reducers and nipples for socket welding, dimensions

### International Patent Classification

F 16 L 47/00

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<sup>1)</sup> To be obtained from the *Deutscher Verlag für Schweißtechnik GmbH*, Postfach 27 25, D-4000 Düsseldorf.