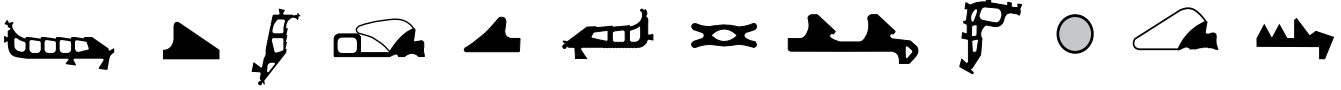


PRODUCT DATA SHEET

DS COMBINATION SOCKET



Concrete sockets DN 150 to DN 400 with formed or drilled sealing stop in manhole base units for drains and sewage pipelines allowing the connection of different types of pieces with DS GRS compressed in.

- KG Plastic pipe, (PVC-U) according to DIN 19534 T1.
- PVC-U, PVC-HI pipes according to DIN 8062.
- Cast iron pipe (ductile cast iron) according to DIN EN 598
- FZ pipe (fiber cement) according to DIN EN 588-1 / DIN 19850, T1, class A and B.
- GFR pipe (glass fiber reinforced polyester resin) according to DIN 16869, T1, diameter series 2 and 3.
- PE HD pipe (high density polyethylene) according to DIN 8074.

SPECIAL ADVANTAGES

- Allows connecting different types of pipes of equal nominal diameter with only one socket insert size, i.e. one annular core drilling bit. The various gap widths are sealed by adapting the size of the seal height.
- DS combination socket minimizes the required inventory of manhole base units in the concrete factory.

MATERIAL

DS GRS is usually produced from styrene butadiene rubber (SBR), hardness 40+5 IRHD and 45+5 IRHD. The material resists the usual stresses caused by sewage. In case of content of light liquids (oil, petrol, fuels) in the sewage water it is recommended to use DS ring GRS out of acryl-nitrile-butadiene-rubber (NBR), which has a higher resistance against light liquids.

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BENOR

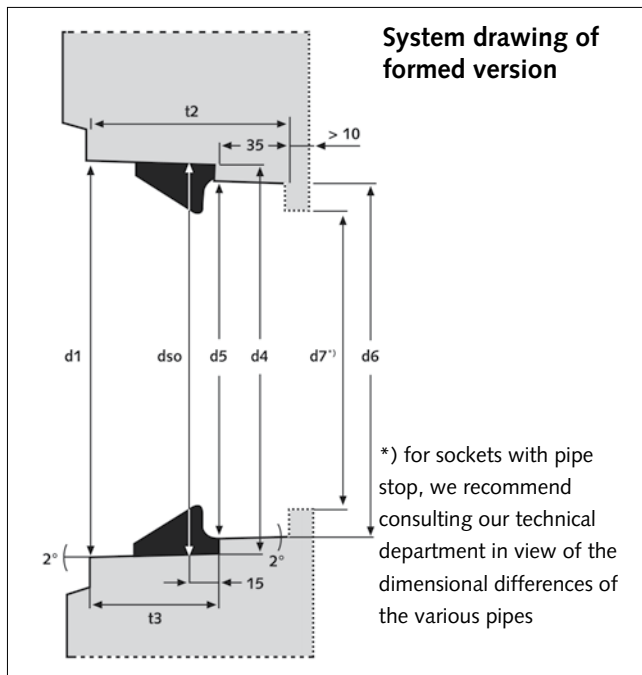
MPA



CE

DS⁺
DICHTUNGSTECHNIK

REQUIREMENTS ON USE AND INSTALLATION TIPS (Alle dimensions in mm)



- The pipe joints are only suited for open channels.
- Only one socket insert size and/or annular core drilling bit size for every nominal width of various types of pipes.
- All-concrete socket; in case of vibration defects or dry mixture etc. the problem is visible and repair measures can be taken.
- When using formwork sockets the inserts must remain in the concrete section until the concrete has cured.
- When using sockets with drilled sockets, stepped annular core drilling bits must be used (boring tolerance + 1 mm).

- Adapters or connecting pieces cut to size at the construction site must be trimmed along the cutting edges to a quality at least equaling the quality of the original pipe spigot, i.e. the cut edges must be adequately beveled to avoid assembly problems and impairment of the seal. This applies to both the original and the combination socket system
- Depending on the type of pipe, DS GRS 17 to GRS 36 are pressed into the sockets of the manholes base units to provide sealing.
- Prior to assembly the sealing ring in the socket and the spigot of the pipe to be connected have to be lubricated with DS lubricant.

DIMENSIONING OF THE COMBINATION SOCKET (Alle dimensions in mm)

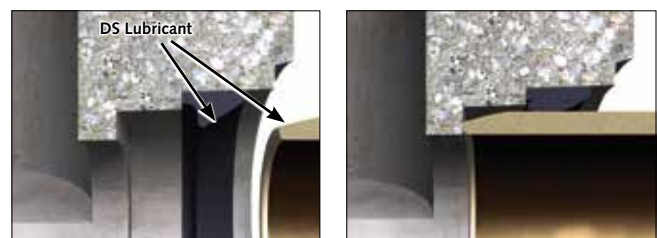
Tolerances of diameter $\pm 0,3\text{mm}$

1) $t2 = t3 \text{ min} + 35$

2) $t3 \text{ min} = (b + 1,5) \times 1,15 + 5$;

b = foot width of the largest GRS sealing to be used (see DS GRS product data sheet)

DN	t2 recom. 1)	t3 recom. 1)	d1	dso	d4	d5	d6
150	100	65	199,5	196	195	179,5	177
200	105	70	251,5	248	247	231,5	229
250	105	70	307,9	304	303	287,5	285
300	105	70	361,5	358	357	340,5	338
400	105	70	464,9	461	460	439,5	437



DS Combination socket (sealing: GRS [hj]: sealing ring thickness in mm) [DN: nominal diameter] [SL: cut length in mm]									
Combination socket insert/(DN)									
Pipe type	150 / (150)	150 / (160)	200 / (200)	200 / (225)	250 / (250)	250 / (280)	300 / (300)	300 / (315)	400 / (400)
KG	26 150/160 565 ²	-	34 200 705	-	36 250 885	-	30 300/315 1075	-	0
PVC-U	-	26 150/160 565 ²	34 200 705	17 225 760	36 250 885	17 280 945	-	30 300/315 1075	0
Guss	21 150 580	-	21 200 750	-	24 250 920	-	26 300 1090	-	26 400 1425
FZ Klasse A	-	-	-	-	-	-	-	-	22 400 1440
FZ Klasse B	18 150 585	-	21 200 755	-	20 250 935	-	20 300 1110	-	22 400 1440
GFK D-Reihe 2	21 150 580 ¹	-	21 200 750	-	24 250 920	-	26 300 1090	-	26 400 1425
GFK D-Reihe 3	-	-	34 200 705	-	36 250 885	-	30 300/315 1075	-	0
PE-HD	-	26 150/160 565 ²	34 200 705	17 225 760 ²	36 250 885	17 280 945	-	30 300/315 1075	0

¹⁾ = No data in the DIN, sealing suggestion for the pipes made by HOBAS and ETERNIT

0 = gap too wide for combination joint, proposal on request

²⁾ = Seal: DS GS

- = is not in the standard

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