

PERFORATOR® GmbH

Rods

Pipes

Collars

Stabis

Subs

Bits

Tools



7-0051



PERFORATOR GmbH

Drilling Tools

Mineral Exploration • Water Well • Blast Hole

SCHMIDT, KRANZ & CO GMBH

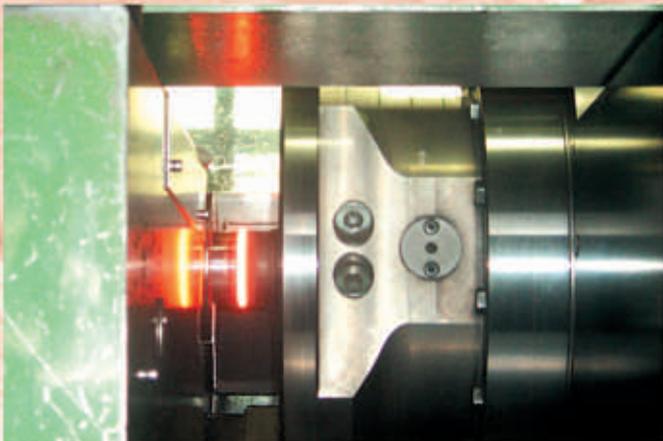
ROTARY DRILLING TOOLS FOR WATER WELL, BLAST HOLE AND MINERAL EXPLORATION DRILLING



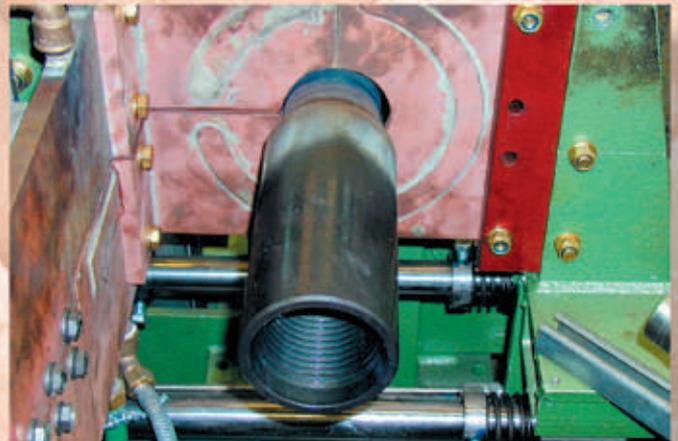
Production • Fertigung



Engineering • Konstruktion



Friction Welding • Reibschweißungen



Heat Treatment • Wärmebehandlung

- ✓ **APPROVED ACC. / GEPRÜFT NACH DIN EN ISO 9001**
- ✓ **MATERIAL PIPE / ROHR ST 52, STRUCTO 720, GRADE E, X, G + S**
- ✓ **MATERIAL TOOL JOINT / VERBINDER 42 CR MO 4 V**
- ✓ **FRICITION WELDING / REIBSCHWEISSUNG MAX. PIPE / ROHR \varnothing 6 5/8"**
- ✓ **HARD FACING / AUFTRAGS-SCHWEISSUNG ACC. / GEM. SK-STANDARD**

Introduction



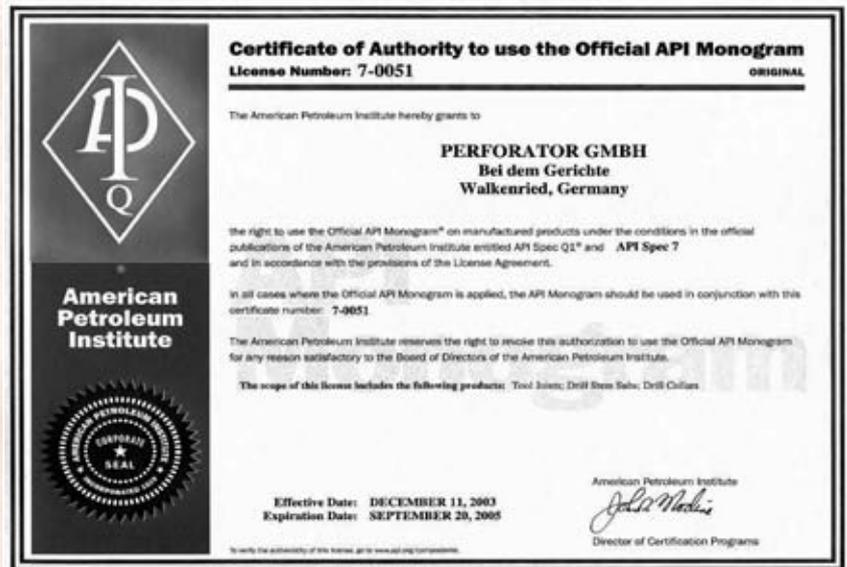
Schmidt, Kranz & Co was founded in 1885 and has since been supplying drilling tools and accessories to oil and gas exploration companies, water, mineral and quarry drilling contractors, also deep coal and salt mines.

The material used in the production of tool joints, subs, stabilizers, collars and pipes conforms to API standards and is traceable by our suppliers relevant certification.

The manufacturing process utilises modern CNC systems, robots and friction welding machines, thus guaranteeing cost effective and quality assured production.

PERFORATOR GmbH holds the API Spec 7 – license no. 7-0051.

References from all over the world – Europe, Near East, Far East, Russia, Ukraine, USA – are proof of the confidence our customers have shown over the years, and we would be pleased to provide this service for you also.



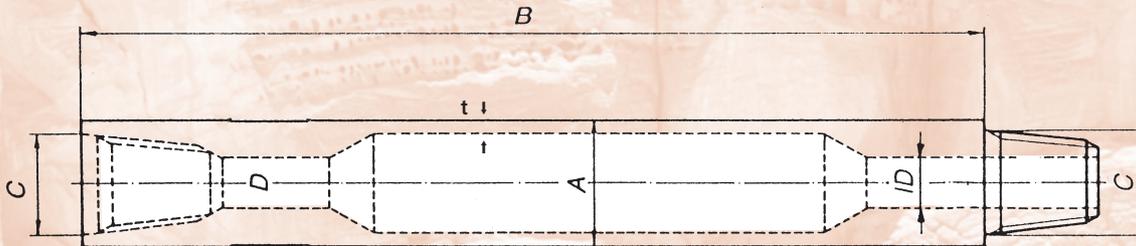


Drill Pipes – without flats

Drehbohrstangen – ohne Schlüsselflächen

Drill Pipes listed are for all types of applications.

They are to be used for rotary drilling and suitable for down the hole drilling.



A OD mm	OD inches	t wall inches	C tool joints connection	ID mm	max. machine torque (kNm)	approx. weight for 3 m lenght kg	Schmidt, Kranz drg. no.
51	2	0.317	W 51 (Tr 43.5x1/4")	22	2.5	27	VB 402.00.00-8
60.3	2 3/8	0.280	Gg 46	25	3.5	29	VB 821.00.00-7,1
63.5	2 1/2	0.248	W 63 (Tr 51x1/4")	25	3.7	30	VB 847.00.00-6,3
70	2 3/4	0.157	Gg 2"	38	3.2	23	VB 209.00.00-S-4
73	2 7/8	0.248	W 73 (Tr 63x1/4")	26	5.0	35	VB 753.00.00-6,3
76.1	3	0.346	Gg 2"	26	7.0	48	VB 790.00.00-8,8
76.1	3	0.248	API 2 3/8" REG	30	5.6	38	VB 180.00.00-6,3
76.1	3	0.346	Tr 66x1/4"	42	7.0	47	VB 35.00.00-8,8
76.1	3	0.346	W 73 (Tr 63x1/4")	26	7.0	45	VB 432.00.00-8,8
82.5	3 1/4	0.346	API 2 3/8" REG	28	8.5	55	VB 776.00.00-8,8
88.9	3 1/2	0.346	API 2 3/8" IF	32	10.1	60	VB 34.00.00-8,8
88.9	3 1/2	0.346	API 2 3/8" REG	30	10.1	58	VB 547.00.00-8,8
101.6	4	0.346	API 3 1/2" REG	38	13.7	65	VB 282.00.00-8,8
114.3	4 1/2	0.346	API 3 1/2" REG	38	17.8	78	VB 529.00.00-8,8
114.3	4 1/2	0.394	API 3 1/2" FH	70	19.6	85	VB 913.00.00-10
127	5	0.394	API 3 1/2" REG	38	24.9	99	VB 328.00.00-10
127	5	0.394	API 3 1/2" IF	60	24.9	99	VB 229.00.00-10
139.7	5 1/2	0.394	API 4 1/2" REG	57	30.8	115	VB 185.00.00-10
159	6 1/4	0.280	API 4 1/2" IF	95	30.8	102	VB 812.00.00-7,1

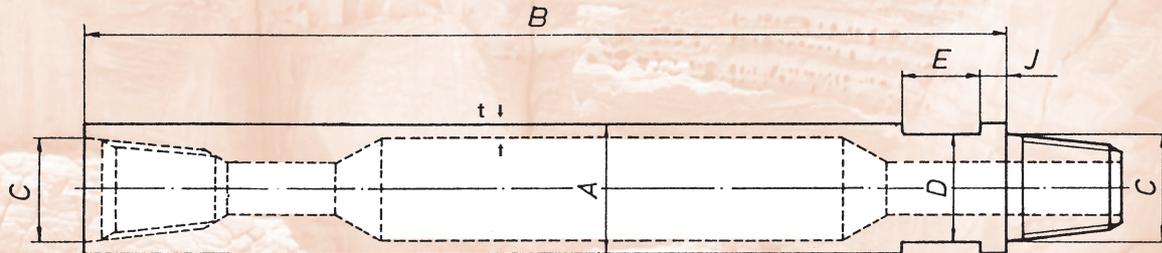
Drill Pipes – with flats pin side

Drehbohrstangen – mit Schlüsselflächen nippelseitig



Drill Pipes listed are for all types of applications.

They are to be used for rotary drilling and suitable for down the hole drilling.



A	OD	t	C	J	D	max.	approx.	Schmidt,		
OD	OD	wall	tool joints	ID	length	across	weight for	flats		
mm	inches	inches	connection	mm	shoulder	flat	3 m length	pin		
mm	inches	inches	connection	mm	mm	mm	kg	drg. no.		
48.3	1.9	0.157	Gg 1 3/16"	14	10	41	1.4	27	sq	VB 706.00.00-4,0
51	2	0.248	Gg 1 3/16"	14	25	41	2.2	27	sq	VB 978.00.00-6,3
51	2	0.248	Tr 41 x 1/4"	15	15	41	2.2	30	sw	VB 438.00.00-6,3
60.3	2 3/8	0.280	Gg 46	25	13	50	3.5	30	sq	VB 172.00.00-7,1
60.3	2 3/8	0.280	Gg 46	32	15	50	3.5	30	sq	VB 516.00.00-7,1
60.3	2 3/8	0.280	Gg 46	25	15	50	3.5	30	sq	VB 974.00.00-7,1
68	2 11/16	0.393	Tr 52 x 1/6"	25	15	–	5.8	46	key	VB 849.00.00-10,0
70	2 3/4	0.346	Tr 54 x 1/4"	38	10	–	5.8	44	key	VB 241.00.00-8,8
76.1	3	0.346	W 73 (Tr 63 x 1/4")	26	15	50	7.0	47	sq	VB 856.00.00-8,8
76.1	3	0.346	Gg 2"	26	10	–	7.0	51	key	VB 691.00.00/S-8,8
76.1	3	0.346	API 2 3/8" REG	25	10	–	7.0	50	key	VB 904.00.00-8,8
76.1	3	0.346	REG 61 x 1/5"	24	10	–	7.0	50	key	VB 819.00.00-8,8
76.1	3	0.346	REG 61 x 1/5"	20	10	–	7.0	50	key	VB 910.00.00-8,8
82.5	3 1/4	0.346	API 2 3/8" REG	25	10	–	8.5	57	key	VB 668.00.00/S-8,8
88.9	3 1/2	0.346	API 2 3/8" REG	25	10	–	10.1	64	key	VB 217.00.00-8,8
101.6	4	0.346	API 2 7/8" REG	32	10	–	13.7	77	key	VB 896.00.00-8,8
114.3	4 1/2	0.393	API 3 1/2" REG	40	20	95	19.6	85	sq	VB 635.00.00-10,0
114.3	4 1/2	0.346	API 3 1/2" REG	38	12	–	17.8	83	key	VB 948.00.00-8,8
127	5	0.393	API 3 1/2" REG	48	13	–	24.9	108	key	VB 787.00.00-10,0
139.7	5 1/2	0.433	API 4 1/2" REG	52	18	115	33.1	127	sw	VB 636.00.00-11,0
139.7	5 1/2	0.346	API 4 1/2" REG	52	10	115	27.8	105	sq	VB 178.00.00-8,8

sw = spanner flats • sq = square flats • key = key flats

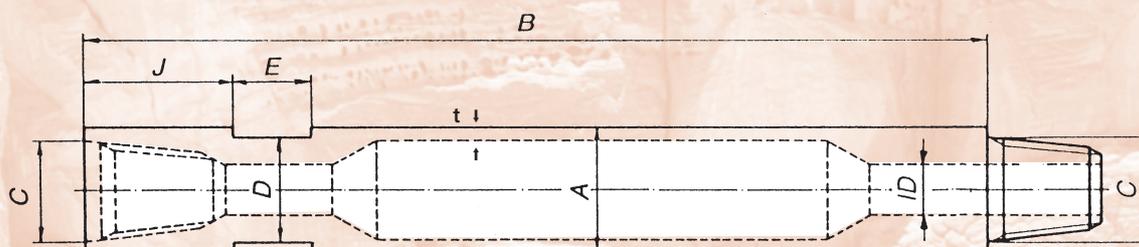


Drill Pipes – with flats box side

Drehbohrstangen – mit Schlüssel­flächen muffenseitig

Drill Pipes listed are for all types of applications.

They are to be used for rotary drilling and suitable for down the hole drilling.



A	t	C	J	D	max.	approx.	Schmidt,
OD	wall	tool joints	ID	across	machine	weight for	flats
mm	inches	connection	mm	flat	torque (kNm)	3 m length	Kranz
			length	mm		kg	drg. no.
42.4	0.248	Rd 32 x 1/8"	5 40	32	1.4	19	sq VB 653.00.00/1-6,3
51	0.248	Rd 40 x 1/6"	15 52	41	2.2	23	sq VB 345.00.00-6,3
60.3	0.280	Gg 46	27 60	50	3.5	30	sq VB 984.00.00-7,1
76.1	0.346	REG 61 x 1/5"	20 140	–	7.0	49	key VB 365.00.00-8,8
76.1	0.346	Gg 2"	32 101	50	7.0	46	sw VB 918.00.00-8,8
80	0.355	API 2 3/8" REG	28 105	–	8.0	56	key VB 194.00.00-9,0
88.9	0.346	API 2 3/8" IF	32 85	67	10.1	76	sw VB 551.00.00-8,8
127	0.394	API 3 1/2" REG	40 90	–	24.9	118	key VB 288.00.00-10,0
127	0.394	API 3 1/2" IF	60 100	95	24.9	98	sw VB 47.00.00-10,0
139.7	0.433	API 4 1/2" REG	57 170	115	33.1	115	sw VB 780.00.00-11,0
146	0.394	API 3 1/2" REG	40 95	127	33.9	117	sw VB 572.00.00-10,0

sw = spanner flats • sq = square flats • key = key flats

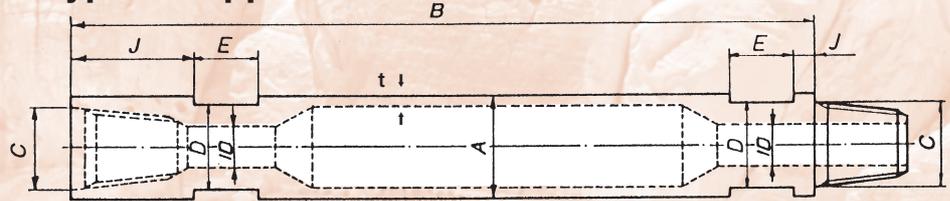
Drill Pipes – with flats on both sides

Drehbohrstangen – mit beidseitigen Schlüsselflächen



Drill Pipes listed are for all types of applications.

They are to be used for rotary drilling and suitable for down the hole drilling.



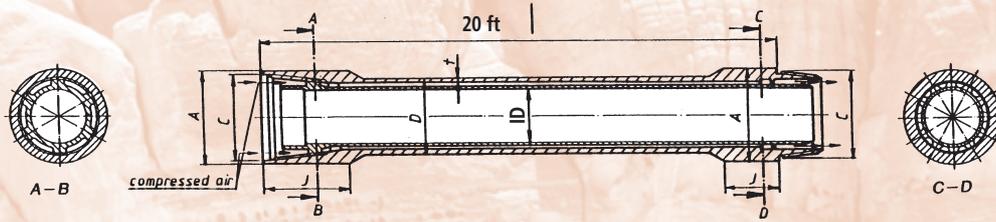
A	t	C	J	D	max.	approx.	Schmidt,			
OD	wall	tool joints	length shoulder	across	machine	weight for	Kranz			
mm	inches	connection	pin / box mm	flat mm	torque (kNm)	3m length kg flats	drg. no.			
51	2	0.248	Rd 40 x 1/6"	15	52/20	41	2.2	25	sq	VB 188.00.00-6,3
57	2 1/4	0.197	Rd 40 x 1/4"	22	57/12	42	2.4	22	sq	VB 576.00.00-5,0
60.3	2 3/8	0.280	Gg 46	27	68/15	50	3.5	30	sq	VB 91.00.00-7,1
60.3	2 3/8	0.280	Gg 46	25	80/20	-	3.5	32	key	VB 124.00.00-7,1
68	2 11/16	0.394	Tr 52 x 1/6"	25	62/20	56	5.8	45	sq	VB 219.00.00-10,0
68	2 11/16	0.157	Rd 45 x 5"	23	80/25	50	3.0	23	sq	VB 858.00.00-4,0
70	2 3/4	0.220	Gg 2"	38	85/10	50	4.2	29	sw	VB 209.00.00-5,6
70	2 3/4	0.220	Gg 2"	35	85/10	50	4.2	29	sq	VB 80.00.00-5,6
70	2 3/4	0.220	Gg 1 3/4"	32	85/60	50	4.2	30	sq	VB 279.00.00-5,6
70	2 3/4	0.157	Rd 50 x 1/6"	30	60/10	50	4.2	25	sq	VB 875.00.00-4,0
76.1	3	0.248	API 2 3/8" REG	30	77/25	65	5.5	37	sq	VB 3000.00.00-6,3
76.1	3	0.346	REG 61 x 1/5"	50	90/10	-	7.0	50	key	VB 456.00.00-8,8
76.1	3	0.157	API 2 3/8" REG	30	108/10	50	3.9	24	sq	VB 785.00.00-4,0
76.1	3	0.220	Gg 2"	26	100/25	65	5.1	35	sq	VB 525.00.00-5,6
82.5	3 1/4	0.248	API 2 3/8" REG	28	85/15	70	6.6	40	sq	VB 829.00.00-6,3
88.9	3 1/2	0.248	API 2 3/8" REG	30	77/12	65	7.8	45	sq	VB 3001.00.00-6,3
88.9	3 1/2	0.157	API 2 3/8" REG	30	108/10	65	5.4	35	sq	VB 73.00.00-4,0
88.9	3 1/2	0.248	API 2 3/8" IF	32	95/13	70	7.8	46	sw	VB 202.00.00-6,3
88.9	3 1/2	0.248	Rd 70 x 1/4"	30	71/11	64	7.8	43	sq	VB 644.00.00-6,3
88.9	3 1/2	0.248	API 2 7/8" REG	32	110/13	65	7.8	45	sq	VB 924.00.00-6,3
101.6	4	0.346	API 3 1/2" REG	45	108/19	76.2	13.7	73	sq	VB 266.00.00-8,8
101.6	4	0.346	API 2 7/8" REG	32	70/20	85	13.7	68	sq	VB 607.00.00-8,8
114.3	4 1/2	0.248	API 3 1/2" REG	38	89/25	95	13.6	63	sq	VB 3002.00.00-6,3
114.3	4 1/2	0.346	API 2 7/8" IF	54	100/30	100	17.8	78	sq	VB 539.00.00-8,8
114.3	4 1/2	0.346	API 3 1/2" IF	68	100/30	100	17.8	76	sq	VB 570.00.00-8,8
127	5	0.248	API 3 1/2" REG	38	95/20	110	17.1	73	sq	VB 3004.00.00-6,3
127	5	0.346	API 4" FH	71	90/15	110	22.5	97	sq	VB 312.00.00-8,8
127	5	0.346	API 3 1/2" IF	68	124/17	110	22.5	92	sq	VB 885.00.00-8,8
139.7	5 1/2	0.248	API 3 1/2" REG	45	95/20	115	21.0	84	sq	VB 3003.00.00-6,3
139.7	5 1/2	0.346	API 4 1/2" REG	57	95/20	115	27.8	102	sq	VB 3005.00.00-8,8
139.7	5 1/2	0.346	API 4" FH	71	90/14	110	27.8	107	sq	VB 382.00.00-8,8
152.4	6	0.346	API 3 1/2" IF	68	120/40	130	33.6	110	sq	VB 689.00.00-8,8
159	6 1/4	0.346	API 4 1/2" REG	57	95/25	130	36.9	131	sq	VB 285.00.00-8,8
177.8	7	0.346	API 6 5/8" REG	88	160/25	150	46.9	155	sq	VB 968.00.00-8,8
193.7	7 5/8	0.346	API 6 5/8" REG	90	127/30	152.4	56.4	178	sq	VB 937.00.00-8,8
203	8	0.394	API 6 5/8" REG	90	127/30	152.4	69.0	200	sq	VB 888.00.00-10,0
254	10		API 8 5/8" REG	120	175/30	200	160.0	380	sq	VB 362.00.00-16,0

sw = spanner flats • sq = square flats • key = key flats

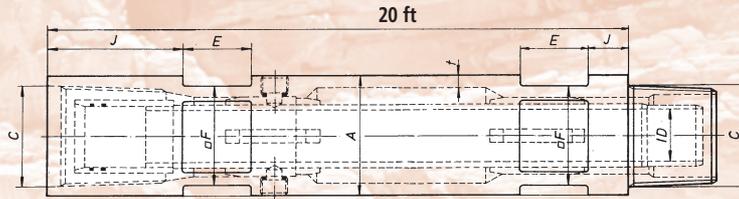


Reverse Circulation Drill Pipes

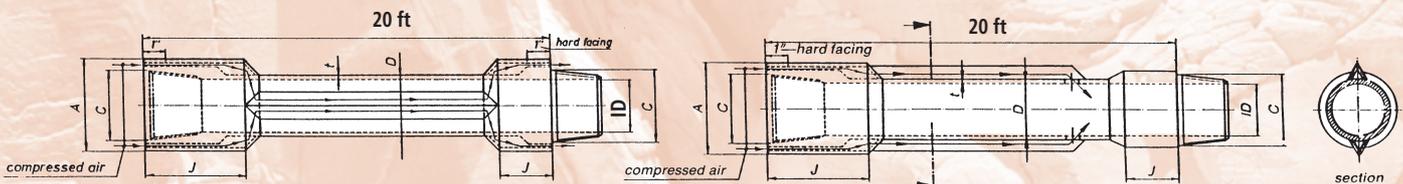
Lufthebestangen



D inches	t wall inches	C tool joints connection	J length shoulder box inches	pin inches	A OD inches	ID inches	max. machine torque (kNm)	approx. weight unit lbs kg	Schmidt, Kranz drg. no.
3 1/4	0.288	API 3 1/2 IF	6	4	5 1/4	2 3/8	7.3	258 117.5	VB 93.00.00
3 1/2	0.288	API 4 FH	6	4	5 1/4	2 5/8	8.6	286 130	VB 115.00.00
4	0.288	API 4 IF	6	4	5 3/4	3 3/16	11.6	358 163	VB 135.00.00
4 1/4	0.304	API 4 1/2 IF	6	4	6 3/4	3 9/16	14.6	438 199	VB 100.00.00
4 1/4	0.304	API 4 1/2 FH	6	4	6	2 15/16	14.6	409 186	VB 116.00.00
5	0.304	API 5 1/2 FH	7	5	7	4 1/8	20.9	468 213	VB 117.00.00
5 1/2	0.304	API 5 1/2 IF	7	5	7 3/8	4 3/4	25.7	633 288	VB 101.00.00
6 1/4	0.288	API 6 5/8 FH-short	7 7/8	4 3/4	7 5/16	4 11/16	30.7	638 290	VB 239.00.00
6 1/4	0.288	API 6 5/8 FH-short	8 1/4	5 1/4	6 1/4	4	30.7	598 272	VB 620.00.00



D inches	t wall inches	C tool joints connection	J length shoulder box inches	pin inches	F inches	ID inches	max. machine torque (kNm)	approx. Weight unit lbs kg	Schmidt, Kranz drg. no.
3 1/2	0.37	Tr 76 x 1 1/4"	3 15/16	3 15/16	2 15/16	1 9/16	11.0	323 147	VB 574.00.00
4 1/2	0.37	API 3 1/2 IF	3 15/16	3 15/16	3 15/16	2 1/16	19.6	391 178	VB 575.00.00
4 1/2	0.37	Tr 102 x 1 1/4"	3 15/16	5 5/16	3 15/16	2 1/4	19.6	391 178	VB 582.00.00



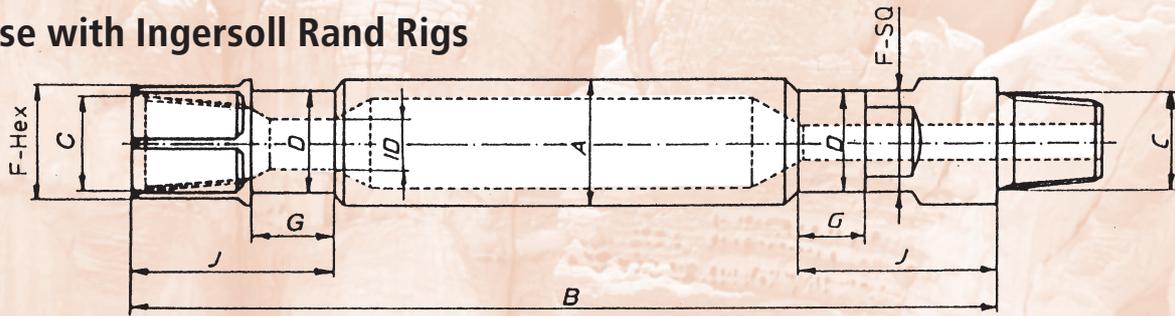
D inches	t wall inches	C tool joints connection	J length shoulder box inches	pin inches	A OD inches	ID inches	max machine torque (kNm)	approx. weight unit lbs kg	Schmidt, Kranz drg. no.
4	0.248	Tr 108.8 x 1/4"	3 15/16	3 15/16	6 1/2	3 5/8	10.5	273 124	VB 458.00.00
4 1/2	0.248	Tr 108.8 x 1/4"	3 15/16	3 15/16	6 1/2	3 5/8	13.6	343 156	VB 464.00.00
5 1/2	0.394	API 5 1/2 IF	10 1/4	5 5/16	8 3/4	4 3/4	30.8	598 272	VB 24.00.00
6 1/4	0.315	Tr 180.15 x 1/4"	10 1/4	5 5/16	8 3/4	4 3/4	34.0	682 310	VB 233.00.00
8 5/8	0.347	API-S5 9/4 x 1/4"	12 1/2	7 1/2	11	11 11/16	44.0	950 430	VB 323.00.00

Drill Pipes – special design with hex. wrench flats

Drehbohrstangen



For use with Ingersoll Rand Rigs

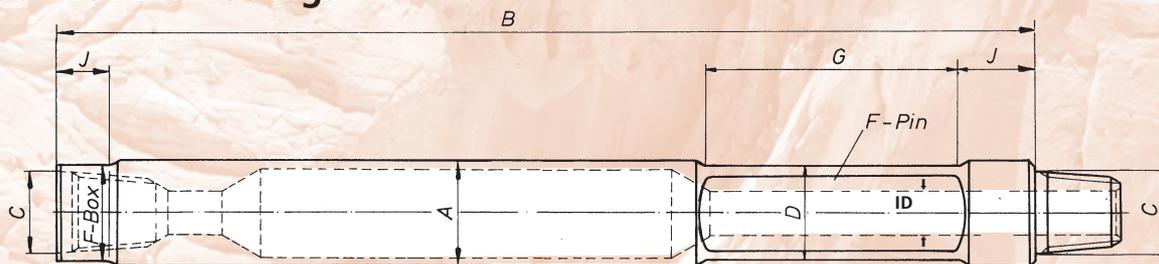


A	C	J	F-Hex	F-SQ	D	G	Schmidt, Kranz drg. no.
OD	wall	tool joints	ID	length	length	inches	
inches	inches	connection	max.	pin	box	inches	
3 1/2	0.346	API 2 3/8 REG	1 1/8	8 7/8	8 1/2	3	VB 794.00.00
4 1/2	0.346	API 2 7/8 IF	2 1/8	8 7/8	8 1/16	4	VB 77.00.00
4 1/2	0.346	API 3 1/2 REG	1 3/4	8 3/8	8 1/16	4	VB 104.00.00
4 1/2	0.346	API 3 1/2 REG	1 3/4	8 3/8	8 1/16	4	VB 383.00.00
4 1/2	0.346	API 2 7/8 REG	1 1/4	8 3/8	8 1/16	4	VB 125.00.00
5	0.394	API 3 1/2 REG	1 7/8	8 5/8	8	4	VB 962.00.00
5	0.4	API 3 1/2 REG	1 3/4	8 5/8	8 1/16	4	VB 293.00.00
5	0.5	API 3 1/2 REG	1 3/4	8 3/8	8 1/2	4	VB 907.00.00
5	0.5	API 3 1/2 REG	1 11/16	5 5/16	4 1/2	4	VB 536.00.00
5 1/2	0.42	API 4 FH	2 1/2	8 9/16	8 3/16	5	VB 484.00.00
5 1/2	0.5	3 1/2" BECO	1 5/8	8 1/8	11	5	VB 983.00.00

Basic dimensions, special combinations available on request.

Please advise: drill pipe length, wall thickness, thread type and size, wrenches, tubing OD.

For use with Dril Tec Rigs

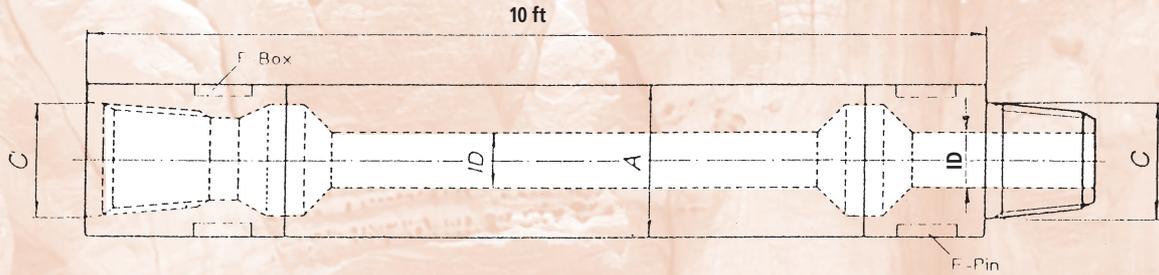


A	C	J	F-box	F-pin	D	G	Schmidt, Kranz drg. no.
OD	wall	tool joints	ID	length	length	inches	
inches	inches	connection	max.	pin	box	inches	
3 1/2	0.37	API 2 3/8 IF	1 3/4	3 1/4	2 1/4	3 1/4	VB 985.00.00
4	0.33	API 2 3/8 IF	1 3/4	3 1/4	2 1/4	3 1/2	VB 986.00.00
4 1/2	0.33	API 2 7/8 IF	2	3 1/4	2 1/4	4	VB 987.00.00
4 1/2	0.5	API 3 1/2 REG	1 3/4	3 1/4	2 1/4	4	VB 988.00.00
5	0.5	API 3 1/2 REG	1 1/2	3 1/4	2 1/4	4	VB 989.00.00
5	0.37	API 3 1/2 REG	2 1/4	3 1/4	2 1/4	4 5/8	VB 990.00.00
6	0.5	API 3 1/2 REG	1 3/4	3 1/4	2 1/4	4	VB 991.00.00



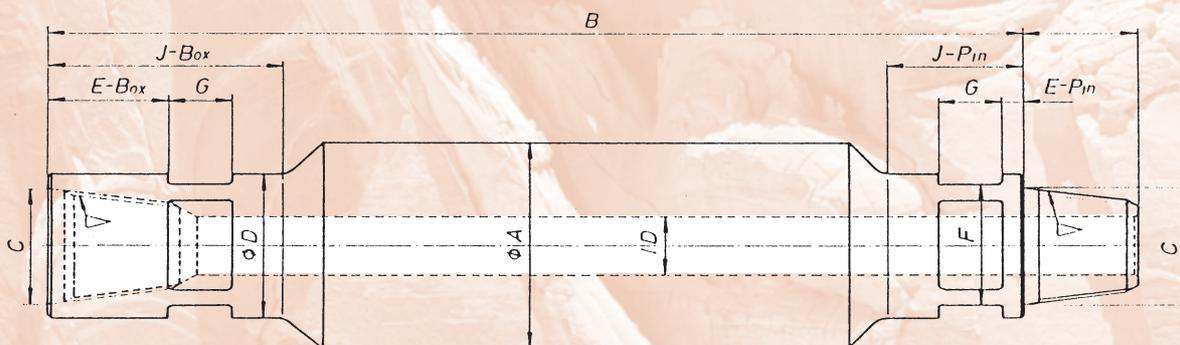
Drill Collars

Schwerstangen



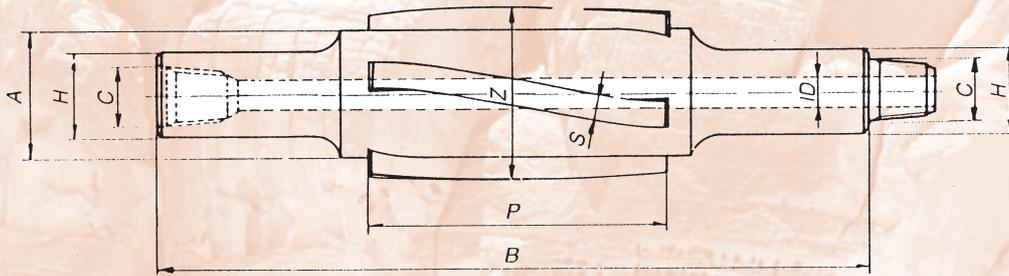
A	C	F-Box	F-Pin	approx. weight unit	Schmidt, Kranz drg. no.			
OD inches	ID inches	tool joints connection	ID pin inches	lbs	kg			
3 1/2	1 1/2	API 2 3/8 REG	1 1/8	–	–	260	118	BZ 13.01.00/10
3 1/2	1 1/2	API 2 7/8 REG	1 1/4	2 3/4	2 3/4	260	118	BZ 12.23.00/10
3 1/2	1 1/2	API 2 3/8 IF	1 1/2	1 9/16	–	260	118	VPI-Z 10.01.00/10
4 1/4	2 1/16	API 2 7/8 IF	2 1/16	–	–	374	170	VPI-Z 12.11.00/10
4 1/2	2	API 3 1/2 REG	1 1/2	3 3/4	–	418	190	VPI-Z 16.01.00/10
4 3/4	2 13/16	API 3 1/2 IF	2 11/16	–	–	392	178	VPI-Z 15.18.00/10
5 1/2	2 5/16	API 4 FH	2 13/16	–	–	638	290	VPI-Z 27.02.00/10
6	2 7/8	API 4 1/2 REG	2 1/4	5 1/8	5 1/8	739	336	VPI-Z 32.04.00/10
6	2 7/8	API 3 1/2 FH	2 7/16	–	–	739	336	VPI-Z 21.01.00/10
6	3 13/16	API 4 1/2 IF	3 3/4	–	–	572	260	VPI-Z 35.08.00/10
6 1/4	3 1/8	API 4 IF	3 1/4	–	–	763	347	VPI-Z 26.01.00/10
8	4 1/16	API 5 1/2 REG	2 3/4	–	–	1247	567	VPI-Z 45.02.00/10
8	4 1/16	API 6 5/8 REG	3 1/2	–	–	1247	567	VPI-Z 55.11.00/10

Design on request / Auf Anfrage



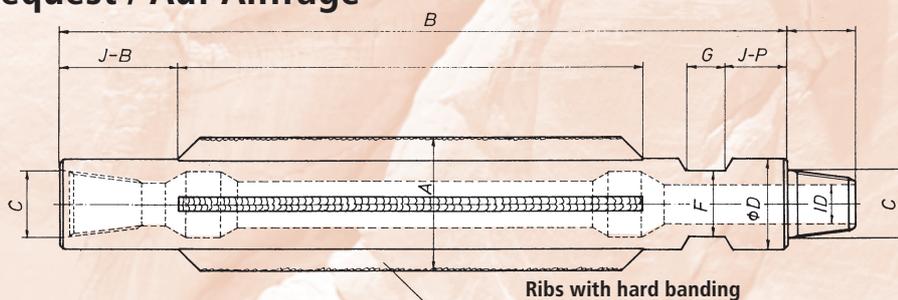
Stabilizers

Stabilisatoren



drill hole Z	dia inches	Z inches	mm	C connection	A inches	B inches	S inches	H inches	ID inches	P inches	Schmidt, Kranz drg. no.
5 6/8	5 5/8	142.8	142.8	API 2 7/8 IF	4 1/2	40	1 3/16	4 1/2	2 1/16	10	VPI-Z 14.05.00 / 40" / 5 6/8"
5 6/8	5 5/8	142.8	142.8	API 3 1/2 REG	4 1/2	40	1 3/16	4 1/2	1 1/2	10	VPI-Z 16.02.00 / 40" / 5 6/8"
6	5 3/4	146	146	API 2 7/8 IF	4 1/2	40	1 3/16	4 1/2	2 1/16	10	VPI-Z 14.05.00 / 40" / 6"
6	5 3/4	146	146	API 3 1/2 REG	4 1/2	40	1 3/16	4 1/2	1 1/2	10	VPI-Z 16.02.00 / 40" / 6"
6 1/4	6	152.4	152.4	API 3 1/2 REG	4 1/2	40	1 3/16	4 1/2	1 1/2	10	VPI-Z 16.02.00 / 40" / 6 1/4"
6 1/4	6	152.4	152.4	API 2 7/8 IF	4 1/2	40	1 3/16	4 1/2	2 1/16	10	VPI-Z 14.05.00 / 40" / 6 1/4"
6 3/4	6 1/2	165	165	API 3 1/2 IF	5 1/2	40	1 3/16	5 1/2	2 5/16	10	VPI-Z 23.24.00 / 40" / 6 3/4"
7 3/8	7 1/8	181	181	API 3 1/2 IF	5 1/2	40	1 3/16	5 1/2	2 5/16	10	VPI-Z 23.24.00 / 40" / 7 3/8"
8 1/2	8 1/4	216	216	API 3 1/2 IF	6	42	1 3/16	5 1/2	2 5/16	12	VPI-Z 23.02.00 / 42" / 8 1/2"
8 1/2	8 1/4	216	216	API 4 1/2 REG	8	42	1 3/16	5 1/2	2 1/4	12	VPI-Z 32.03.00 / 42" / 8 1/2"
9 7/8	9 5/8	244.5	244.5	API 3 1/2 IF	8	42	1 3/16	5 1/2	2 5/16	13	VPI-Z 23.02.00 / 42" / 9 7/8"
9 7/8	9 5/8	244.5	244.5	API 4 1/2 REG	8	42	1 3/16	5 1/2	2 1/4	13	VPI-Z 32.08.00 / 42" / 9 7/8"
11	10 3/4	273	273	API 3 1/2 IF	8	42	1 3/16	5 1/2	2 5/16	13	VPI-Z 23.02.00 / 42" / 11"
11	10 3/4	273	273	API 4 1/2 REG	8	42	1 3/16	5 1/2	2 1/4	13	VPI-Z 32.08.00 / 42" / 11"
11	10 3/4	273	273	API 6 5/8 REG	9	54	2	7 3/4	3 1/2	24	VPI-Z 55.06.00 / 54" / 11"
12 1/4	12	304.8	304.8	API 4 1/2 REG	8	44	1 3/16	5 1/2	2 1/4	14	VPI-Z 32.09.00 / 44" / 12 1/4"
12 1/4	12	304.8	304.8	API 3 1/2 IF	8	44	1 3/16	5 1/2	2 5/16	14	VPI-Z 23.03.00 / 44" / 12 1/4"
12 1/4	12	304.8	304.8	API 6 5/8 REG	9	54	2	7 3/4	3 1/2	24	VPI-Z 55.06.00 / 54" / 12 1/4"
13 3/4	13 1/2	342.9	342.9	API 3 1/2 IF	8	44	1 3/16	5 1/2	2 5/16	14	VPI-Z 23.03.00 / 44" / 13 3/4"
13 3/4	13 1/2	342.9	342.9	API 4 1/2 REG	8	44	1 3/16	5 1/2	2 1/4	14	VPI-Z 32.09.00 / 44" / 13 3/4"
14 3/4	14 1/2	368.3	368.3	API 3 1/2 IF	8	44	1 3/16	5 1/2	2 5/16	14	VPI-Z 23.03.00 / 44" / 14 3/4"
15	14 3/4	374.6	374.6	API 3 1/2 IF	8	51	1 3/16	5 1/2	2 5/16	21	VPI-Z 23.04.00 / 51" / 15"
15	14 3/4	374.6	374.6	API 6 5/8 REG	9	54	2	7 3/4	3 1/2	24	VPI-Z 55.06.00 / 54" / 15"
17 1/2	17 1/4	444.5	444.5	API 6 5/8 REG	9	54	2	7 3/4	3 1/2	24	VPI-Z 55.06.00 / 54" / 17 1/2"
20	19 1/2	508	508	API 6 5/8 REG	9	54	2	7 3/4	3 1/2	24	VPI-Z 55.06.00 / 54" / 20"

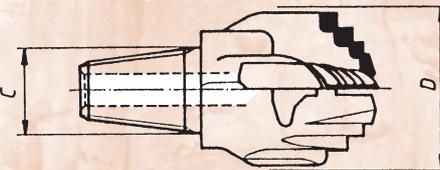
Design on request / Auf Anfrage





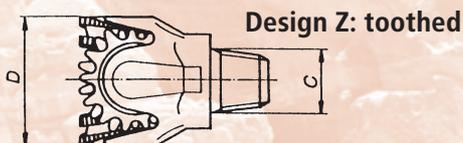
Carbide Blade Bits

Bits are principally used for exploration.



D diameter		C connection pin hole	weight		Schmidt, Kranz drg. no.
inches	mm		lbs	kg	
3 7/8	98	API 2 3/8 REG	6.8	3.1	BZ 232.01.00 / 3 7/8"
4 1/4	108	API 2 3/8 REG	8.8	3.1	BZ 232.01.00 / 4 1/4"
4 1/2	114.3	API 2 3/8 REG	10.3	4.7	BZ 232.01.00 / 4 1/2"
5	127	API 2 3/8 REG	16	7.3	BZ 232.01.00 / 5"
5 5/8	143	API 2 3/8 REG	21	9.5	BZ 232.01.00 / 5 5/8"
6	152.4	API 3 1/2 REG	26	12	BZ 635.15.00 / 6"
6 3/4	171.5	API 3 1/2 REG	33	15	BZ 635.15.00 / 6 3/4"
7 3/8	187.3	API 3 1/2 REG	41	18.5	BZ 635.15.00 / 7 3/8"

Steel Tooth Rock Bits



Tungsten Carbide Bits

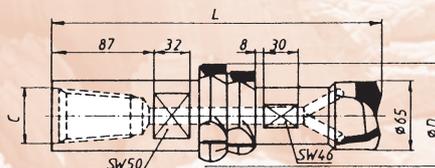


D diameter		C connection pin hole	weight		Schmidt, Kranz drg. no.	
inches	mm		lbs	kg	design Z	design W
3 7/8	98	API 2 3/8 REG	7.5	3.4	BZ 232.05.00 / 3 7/8"-Z	BZ 232.05.00 / 3 7/8"-W
4 1/2	114.3	API 2 3/8 REG	11	5	BZ 232.05.00 / 4 1/2"-Z	BZ 232.05.00 / 4 1/2"-W
5	127	API 2 7/8 REG	15	6.8	BZ 297.01.00 / 5"-Z	BZ 297.01.00 / 5"-W
5 5/8	143	API 3 1/2 REG	22	10	BZ 635.21.00 / 5 5/8"-Z	BZ 635.21.00 / 5 5/8"-W
6 1/4	158.7	API 3 1/2 REG	30	13.6	BZ 635.21.00 / 6 1/4"-Z	BZ 635.21.00 / 6 1/4"-W
7 3/8	187.3	API 3 1/2 REG	42	19.1	BZ 635.21.00 / 7 3/8"-Z	BZ 635.21.00 / 7 3/8"-W
8 1/2	215.9	API 4 1/2 REG	75	34	BZ 636.19.00 / 8 1/2"-Z	BZ 636.19.00 / 8 1/2"-W

Bits are available for soft, medium and hard formation and for fluid, air, jet circulation.

Remark: Other sizes on request!

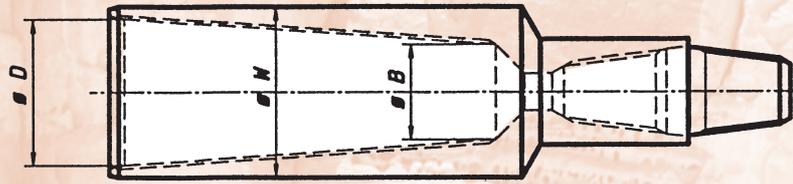
Multi-Stage Rotary Drill Bits



type	suitable for drill pipe	C connection	D	Schmidt, Kranz drg. no.					
				3 5/8"	3 11/32"	3 3/4"	4 9/64"	4 17/32"	5 1/8"
SK-L S 60	Salzgitter	Ø 60 Tr 50 x 1/6"	X	X	X	X	X	X	BZ 36.02.00
SK-L H 68	Hausherr	Ø 68 Tr 52 x 1/6"		X	X	X	X	X	BZ 219.06.00
SK-L T 51	Turmag	Ø 51 Rd 40 x 1/6"	X	X	X	X	X	X	BZ 345.41.00
SK-L B 70	Böhler	Ø 70 Rd 50 x 1/6"		X	X	X	X	X	BZ 466.51.00
SK-L H 76	Hausherr	Ø 76 API 2 3/8 REG			X	X	X	X	BZ 720.05.00
SK-L W 73	Wirth	Ø 73 Tr 63 x 1/4"			X	X	X	X	BZ 753.22.00
SK-L B 90	Böhler	Ø 90 Rd 70 x 1/4"				X	X	X	BZ 776.01.00
SK-L S 76	Salzgitter	Ø 76 Gg 2"			X	X	X	X	BZ 790.01.00
SK-L W 63	Wirth	Ø 63 Tr 51 x 1/4"		X	X	X	X	X	BZ 847.24.00
SK-L S 63	Salzgitter	Ø 63 Tr 50. 48 x 1/4"		X	X	X	X	X	BZ 949.04.00

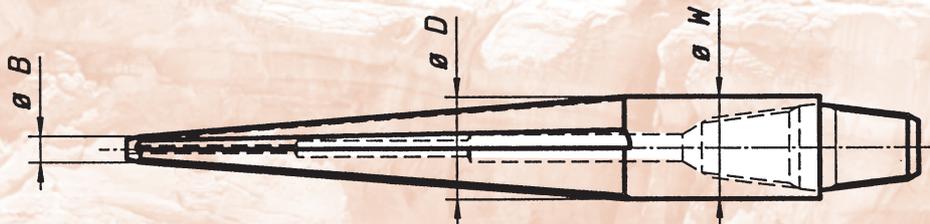
Diameter to be advised!

Overshots with female or male thread – RH or LH (to be advised)



Size Größe	Range / Fangbereich mm	OD inch	Size Größe	Range / Fangbereich mm	OD inch
I	76.1 – 25.4	3 – 1	III c	101.6 – 50.8	4 – 2
I a	58 – 38		IV	139.7 – 88.9	5 1/2 – 3 1/2
II	88.9 – 38.1	3 1/2 – 1 1/2	VI a	127.0 – 76.1	5 – 3
II a	76.1 – 38.1	3 – 1 1/2	V	165.1 – 114.3	6 1/2 – 4 1/2
II e	50 – 77		VI	190.5 – 139.7	7 1/2 – 5 1/2
III	114.3 – 63.5	4 1/2 – 2 1/2	VII	216.0 – 165.1	8 1/2 – 6 1/2
III a	114.3 – 38.1	4 1/2 – 1 1/2	VIII	241.3 – 190.5	9 1/2 – 7 1/2
III b	101.6 – 38.1	4 – 1 1/2	IX	266.7 – 216.0	10 1/2 – 8 1/2

Taper Taps with female or male thread – RH or LH (to be advised)

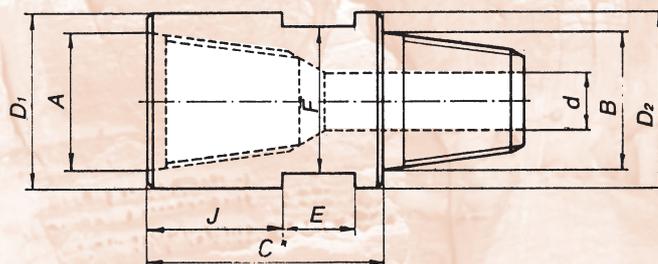


Size Größe	Range / Fangbereich mm	OD inch	Size Größe	Range / Fangbereich mm	OD inch
I	25.4 – 88.9	1 – 3 1/2	III a	50.8 – 127	2 – 5
I a	10 – 51		III b	38.1 – 127	1 1/2 – 5
I b	12 – 60.3		IV	63.5 – 139.7	2 1/2 – 5 1/2
I c	12 – 63.5		V	88.9 – 165.1	3 1/2 – 6 1/2
I d	15 – 70		V a	101.6 – 177.8	4 – 7
I e	18 – 73		VI	114.3 – 190.5	4 1/2 – 7 1/2
I f	19 – 76.1		VII	139.7 – 216	5 1/2 – 8 1/2
I g	19 – 80		VIII	165.1 – 241.3	6 1/2 – 9 1/2
II	25.4 – 101.6	1 – 4	IX	190.5 – 266.7	7 1/2 – 10 1/2
III	38.1 – 114.3	1 1/2 – 4 1/2			



Subs Box – Pin

Übergangsstücke

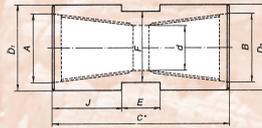


connection box up A	Pin down B	length C* inches	length shoulder J inches	width spanner flats E inches	std. bore d inches	outside diameter top D ₁ inches	outside diameter bottom D ₂ inches	across flat F inches	Schmidt. Kranz drg. no.
API 2 3/8 REG	API 3 1/2 REG	5 3/4	1 9/16	2	1 1/2	3 1/2	4 1/2	2 3/4	BZ 21.01.00
API 2 3/8 REG	API 2 3/8 IF	5 5/16	1 9/16	2	1 1/2	3 1/2	3 1/2	2 3/4	BZ 21.02.00
API 2 3/8 REG	API 2 7/8 REG	5 5/16	1 9/16	2	1 1/4	3 1/2	3 1/2	2 3/4	BZ 21.03.00
API 2 7/8 REG	API 2 3/8 REG	5 5/16	2 3/4	2	1 1/4	3 1/2	3 1/2	2 3/4	BZ 12.07.00
API 2 7/8 REG	API 2 7/8 IF	4 5/16	1 3/8	2	1 1/2	4 1/2	4 1/2	3 7/8	BZ 12.08.00
API 2 7/8 REG	API 3 1/2 IF	6 1/2	3 3/4	2	1 3/4	4 1/2	5 1/2	3 7/8	BZ 12.09.00
API 2 7/8 REG	API 3 1/2 REG	5 5/16	1 9/16	2	1 3/4	4 1/2	4 1/2	3 7/8	BZ 12.10.00
API 2 7/8 REG	API 4 1/2 REG	6 7/8	3 15/16	2	1 3/4	4 1/2	5 3/4	3 7/8	BZ 12.11.00
API 3 1/2 REG	API 2 7/8 REG	5 1/8	1 9/16	2	1 1/4	4 1/2	4 1/2	3 7/8	BZ 356.01.00
API 3 1/2 REG	API 2 7/8 REG	5 1/8	1 9/16	2	1 1/2	4 1/2	4 1/2	3 7/8	BZ 356.03.00
API 3 1/2 REG	API 4 1/2 FH	5 7/16	1 9/16	2	2 5/16	4 1/2	5 3/4	3 7/8	BZ 356.04.00
API 3 1/2 REG	API 3 1/2 IF	5 7/16	1 9/16	2	1 3/4	4 1/2	5 1/2	3 7/8	BZ 356.05.00
API 3 1/2 REG	API 4 1/2 REG	5 5/16	1 9/16	2	2 1/16	4 1/2	5 3/4	3 7/8	BZ 356.06.00
API 3 1/2 REG	API 6 5/8 REG	15	4 1/2	2	2 5/16	4 1/2	8	3 7/8	BZ 356.10.00
API 3 1/2 REG	API 2 3/8 IF	5 3/4	1 9/16	2	1 1/2	4 1/2	3 1/2	3 7/8	BZ 356.07.00
API 3 1/2 REG	API 3 1/2 REG	4	1 9/16	2	1 3/4	5	5	3 7/8	BZ 356.08.00
API 3 1/2 REG	API 2 3/8 REG	5 3/4	1 9/16	2	1	4 1/2	3 1/2	3 7/8	BZ 356.09.00
API NC 35	API 2 7/8 REG	5 5/16	2 1/2	2	2 1/4	4 1/2	4 1/2	2 7/8	BZ 20.01.00
API NC 35	API 2 7/8 IF	5 5/16	2 1/2	2	2 1/16	4 1/2	4 1/2	2 7/8	BZ 20.02.00
API NC 35	API 3 1/2 IF	6 1/4	3 5/8	2	2 5/16	4 1/2	5 1/2	2 7/8	BZ 20.03.00
API NC 35	AP 3 1/2 REG	5 3/4	3 3/4	2	1 3/4	4 1/2	4 1/2	2 7/8	BZ 20.04.00
API NC 35	API NC 35	6 1/2	3 3/4	2	2 5/16	4 1/2	4 1/2	2 7/8	BZ 20.05.00
API NC 35	API 4 1/2 REG	7	3 3/4	2	2 1/16	4 1/2	5 3/4	2 7/8	BZ 20.06.00
API NC 35	API 6 5/8 REG	9	4 1/2	2	2 5/16	4 1/2	8	2 7/8	BZ 20.08.00
API 4 1/2 REG	API 3 1/2 REG	6 1/4	3	2	1 3/4	5 3/4	4 1/2	4 3/4	BZ 30.01.00
API 6 5/8 REG	API NC 35	9	4 1/2	2	2 5/16	7 3/4	5 3/4	7	BZ 20.18.00
API 6 5/8 REG	API 4 1/2 REG	10	5	2	2 5/16	7 3/4	5 3/4	7	BZ 636.20.00

* Sizes obligatory. Length of sub can be altered on request.

Subs Box – Box

Übergangsstücke

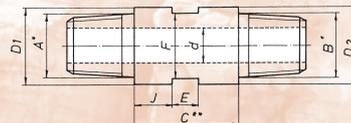


connection box up A	pin down B	length C* inches	length shoulder J inches	width spanner flats E inches	std. bore d inches	outside diameter top D ₁ inches	outside diameter bottom D ₂ inches	across flat F inches	Schmidt, Kranz drg. no.
API 2 3/8 REG	API 2 3/8 REG	8 5/8	2 1/4	2	1 1/2	3 1/2	3 1/2	2 3/4	BZ 21.04.00
API 2 3/8 REG	API 3 1/2 REG	5 1/16	2 1/4	2	1 1/2	3 1/2	4 1/2	2 3/4	BZ 21.05.00-I
API 2 7/8 REG	API 2 3/8 REG	8 5/8	2 3/4	2	1 1/2	4 1/2	3 1/2	3 7/8	BZ 21.21.00
API 2 7/8 REG	API 2 7/8 IF	9 1/2	2 3/4	2	1 3/4	4 1/2	4 1/2	3 7/8	BZ 12.02.00
API 2 7/8 REG	API 3 1/2 REG	9 1/2	2 3/4	2	1 3/4	4 1/2	4 1/2	3 7/8	BZ 12.03.00
API 2 7/8 REG	API 3 1/2 IF	9 7/8	3	2	1 3/4	3 1/2	5 1/2	3 7/8	BZ 12.04.00
API 2 7/8 REG	API 4 1/2 REG	9 7/8	3	2	1 3/4	4 1/2	5 3/4	3 7/8	BZ 12.05.00
API 2 7/8 REG	API 4 1/2 FH	9 7/8	3	2	1 3/4	4 1/2	5 3/4	3 7/8	BZ 12.06.00
API 3 1/2 REG	API 3 1/2 REG	9 1/2	2 3/4	2	1 3/4	4 1/2	4 1/2	3 7/8	BZ 356.12.00
API 3 1/2 REG	API 3 1/2 IF	10 5/8	3 1/2	2	1 3/4	4 1/2	5 1/2	3 7/8	BZ 356.13.00
API 3 1/2 REG	API 4 1/2 REG	10 5/8	3 1/2	2	2 5/16	4 1/2	5 3/4	3 7/8	BZ 356.14.00
API 3 1/2 REG	API 4 1/2 FH	10 5/8	3 1/2	2	2 5/16	4 1/2	5 3/4	3 7/8	BZ 356.15.00
API 3 1/2 REG	API 6 5/8 REG	11 1/4	3 1/2	2	2 5/16	4 1/2	7 3/4	3 7/8	BZ 356.16.00
API NC 35	API 3 1/2 REG	9 7/8	3 1/2	2	1 3/4	4 1/2	4 1/2	3 7/8	BZ 20.10.00
API NC 35	API 3 1/2 IF	10 5/8	4	2	2 5/16	4 1/2	5 1/2	3 7/8	BZ 20.11.00
API NC 35	API 4 1/2 REG	10 5/8	4	2	2 5/16	4 1/2	5 3/4	3 7/8	BZ 20.12.00
API NC 35	API 4 1/2 FH	10 5/8	4	2	2 5/16	4 1/2	5 3/4	3 7/8	BZ 20.13.00
API NC 35	API 6 5/8 REG	11 1/2	4 1/2	2	2 5/16	4 1/2	5 3/4	3 7/8	BZ 20.14.00

* Sizes obligatory. Length of sub can be altered on request.

Subs Pin – Pin

Übergangsstücke

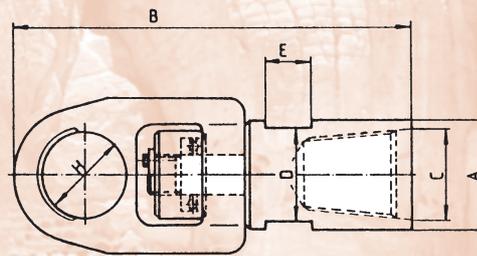


connection box up A	pin down B	length C** inches	length shoulder J inches	width spanner flats E inches	std. bore d inches	outside diameter top D ₁ inches	outside diameter bottom D ₂ inches	across flat F inches	Schmidt, Kranz drg. no.
Tr 51 x 1 1/4"-W	Tr 51 x 1/4"-W	2 3/4	3/8	1 9/16	1	2 1/2	2 1/2	2 3/16	BZ 847.08.00
Fl 36 x 1 1/4"-C	Tr 63 x 1/4"-W	2 1/4	3/8	1 9/16	7/8	1 11/16	2 7/8	2 9/16	BZ 753.13.00
Fl 41.5 x 1 1/3"-C	Tr 63 x 1/4"-W	2 1/4	3/8	1 9/16	7/8	2	2 7/8	2 9/16	BZ 753.12.00
Tr 66 x 1/4"-S	Tr 66 x 1/4"-S	14 5/8	3/4	1 3/16	1 9/16	3 1/8	3 1/8	2 9/16	BZ 35.06.00
Tr 66 x 1/4"-S	Tr 75 x 1/4"-S	9 1/2	7 1/4	1 9/16	1 9/16	3	3 1/2	2 7/8	BZ 35.01.00
API 2 3/8 IF	Tr 75 x 1/4"-S	9 1/2	7 1/2	1 3/8	1 1/4	3 1/2	3 1/2	2 7/8	BZ 34.03.00
API 2 3/8 REG	API 2 7/8 REG	6	2	2	1	3 1/2	3 1/2	2 3/4	BZ 21.06.00
API 3 1/2 REG	API 3 1/2 REG	7	2 1/2	2	1 3/4	4 1/2	4 1/2	3 7/8	BZ 356.17.00
API 3 1/2 REG	API NC 35	7	2 1/2	2	1 3/4	4 1/2	5 1/2	3 7/8	BZ 356.18.00
API 3 1/2 REG	API 3 1/2 IF	8	3	2	1 3/4	4 1/2	5 1/2	3 7/8	BZ 356.19.00
API 3 1/2 REG	API 4 1/2 REG	3 5/8	1/2	2 3/4	1 1/2	4 1/2	5 1/2	3 3/4	BZ 635.16.00
API 4 1/2 REG	API 4 1/2 REG	3 1/4	1	2	2 1/4	5 1/2	5 1/2	4 3/4	BZ 636.02.00
API 4 1/2 REG	API 6 5/8 REG	4 3/4	21/32	2	2 1/4	5 1/2	7 1/8	4 17/32	BZ 636.04.00

** Sizes obligatory. Length of sub can be altered on request.



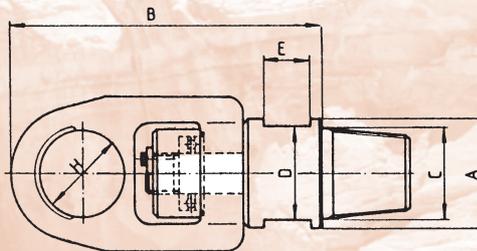
Swivel lifting plug with box



C connection	A	B approx.	D	E	H		Schmidt, Kranz drg. no.
API 2 3/8 REG	76.1	375	57.5	50	76	5 t	BZ 415.13.00
up to							
API 7 5/8 REG	225.4	500	200	60	105	10 t	VPI-Z 62.04.00
API 3 1/2 FH	114.3	435	95	50	95	8 t	BZ 277.12.00
up to							
API 6 5/8 FH	203.2	500	180	60	105	10 t	VPI-Z 56.02.00
API 2 3/8 IF	88.9	375	70	50	76	5 t	BZ 202.15.00
up to							
API 5 1/2 IF	187.3	500	165	60	105	10 t	VPI-Z 53.06.00

Other sizes on request.

Swivel lifting plug with pin



C connection	A	B approx.	D	E	H		Schmidt, Kranz drg. no.
API 2 3/8 REG	76.1	325	57.5	50	76	5 t	BZ 415.12.00
up to							
API 7 5/8 REG	225.4	420	200	60	105	10 t	VPI-Z 62.03.00
API 3 1/2 FH	114.3	370	95	50	95	8 t	BZ 277.11.00
up to							
API 6 5/8 FH	203.2	420	180	60	105	10 t	VPI-Z 56.01.00
API 2 3/8 IF	88.9	325	70	50	76	5 t	BZ 202.14.00
up to							
API 5 1/2 IF	187.3	420	165	60	105	10 t	VPI-Z 53.05.00

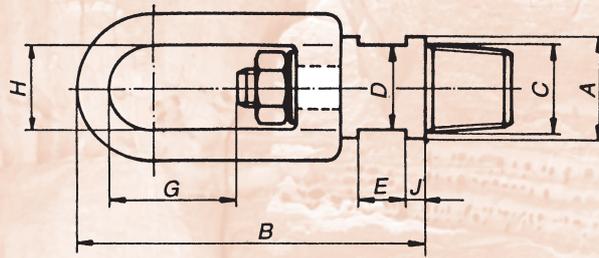
Other sizes on request.

Hoisting Equipment

Hebewerkzeuge



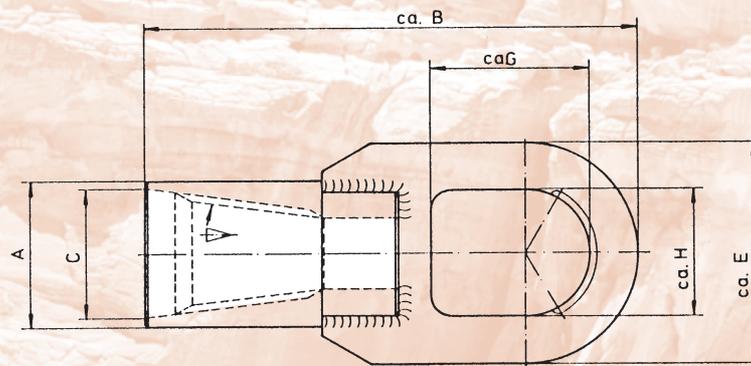
Hoisting Plugs



A OD inches	B length inches	C tool joints connection	J length shoulder inches	E width spanner flats inches	D across flat inches	G inches	H inches	Schmidt, Kranz drg. no.
4 11/16	15 3/16	API 3 1/2 IF *	9/16	2	3 7/8	5 1/4	3 3/4	VPI-Z 19.03.00
4 1/2	15	API NC 35 *	9/16	2	3 7/8	5 1/4	3 3/4	BZ 20.15.00
4 3/4	17 1/8	API 3 1/2 IF **	–	–	–	6	5	VPI-Z 15.17.00
3 1/3	12 9/16	Tr 71.6 x 1/4" *	9/16	1 9/16	2 3/4	4	2 3/4	BZ 184.01.00
7 3/4	18 3/8	API 6 5/8 REG **	–	–	–	6	5	VPI-Z 55.10.00

Other sizes and threads on request. * male ** female

Lifting Bail



A OD inches	B Length inches	C tool joints connection	E approx. inches	G approx. inches	H approx. inches	Schmidt, Kranz drg. no.
3	10	API 2 3/8 REG	4 9/16	3 3/16	2 9/16	BZ 37.04.00
4 1/2	12	API 3 1/2 REG	6 5/16	4	4	BZ 356.26.00
5 1/2	11 11/16	API 4 1/2 REG	6 5/16	4	4	BZ 636.30.00
7	15	API 6 5/8 REG	8 1/2	5 1/2	4 5/16	VPI-Z 55.04.00
8 7/8	15	API 7 5/8 REG	10	5 1/2	4	VPI-Z 62.02.00
5 1/4	14	API 4 FH	6 3/4	4	4	BZ 382.04.00
4 1/2	11 1/4	API 2 7/8 IF	6 5/16	4	4	BZ 276.03.00
4 3/4	12	API 3 1/2 IF	6 3/4	4	4	BZ 544.01.00
6 1/4	16 1/8	API 4 1/2 IF	8 1/2	5 1/2	4 5/16	VPI-Z 35.05.00



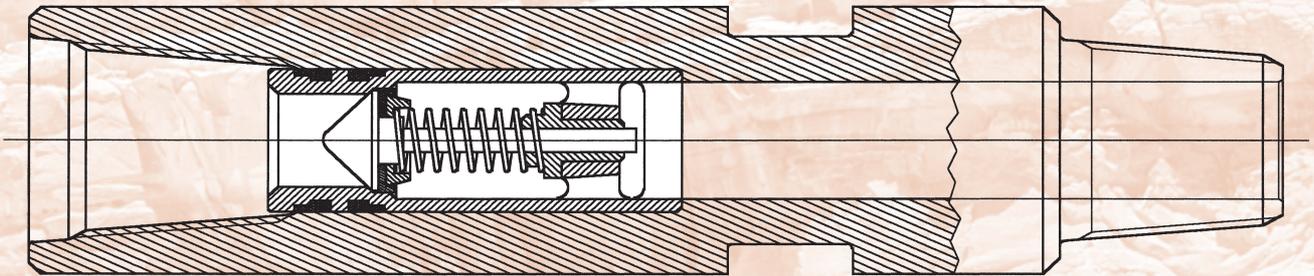
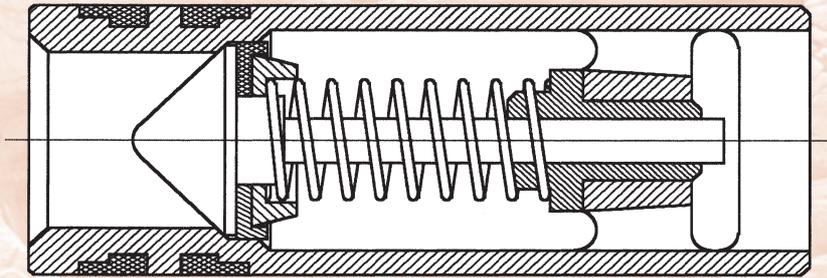
Float valves (Ventile)

1. For Box-Connection API 3 1/2 REG and API 2 7/8 REG
2. For Box-Connection API 4 1/2 REG
3. For Box-Connection API 6 5/8 REG and API 5 1/2 FH

Typ: 2F-3R = drg. no. VPI-Z 23.19.00

Typ: 4R = drg. no. VPI-Z 23.20.00

Typ: 5F-6R = drg. no. VPI-Z 23.21.00



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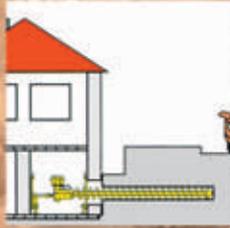


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