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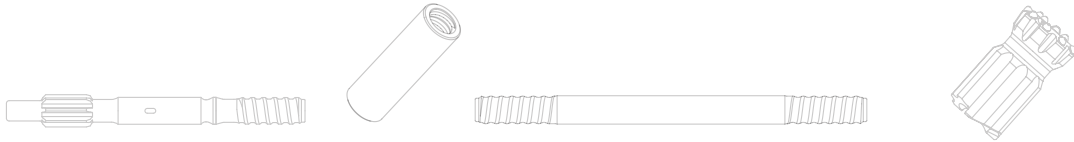
www.shareate.com



SHAREATE TOOLS LTD.
TOP HAMMER DRILLING TOOLS

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Company Profile



HOPH ROCK TOOLS CO., LTD. was founded in 2014 as a high-tech enterprise focused on the R&D, production, sales and after-sales service of high-end rock drilling tools. We integrate material science, production processes and engineering applications, and deliver premium, high-performance and ultra-reliable rock drilling tool solutions for global mining and infrastructure construction industries.

We have built in-depth industry-university-research collaborative partnerships with Guizhou University, and take a leading domestic position in core technologies including integral manufacturing of rock drill tools, composite reinforcement, high-energy modification, deformation control and precision machining.

In July 2022, our company officially became a subsidiary of listed firm Shareate Tools Co., Ltd. Leveraging the Group's global operation platform and full industrial chain advantages in cemented carbide, we are speeding up technological upgrading and global market layout. We strive to build the well-known "HOPH" brand and grow into an international integrated manufacturer and service provider within the rock drilling tool industry.



We Believe

Outstanding product performance is no accident.

It stems from sustained research on impact energy, rock formations, raw materials, production processes and field drilling conditions.

Every in-depth insight fuels ongoing product iteration and optimization.

01

R&D STRENGTH



02

MANUFACTURING STRENGTH



03

QUALITY MANAGEMENT SYSTEM



Continuous
Performance
Optimization



Rigorous
Quality
Control



Comprehensive
Testing
System



Strong
Technical
Service Team

Understanding Energy Transfer

The impact energy is transmitted from the rock drill through the shank adapter, drill rod, coupling sleeve, and drill bit. During transmission, energy efficiency is influenced by connection accuracy, contact conditions, material properties, and structural transitions. Optimizing energy transfer efficiency helps reduce energy loss, minimize wave reflection, and improve rock-breaking efficiency and overall drilling performance.

Research

Impact contact surface
Influence the efficiency of energy input

Spline contact area
Influence torque transmission stability

Thread Transition Areas
Affect fatigue life performance



Energy continuously propagates throughout the drilling system

Designed Around Real Drilling Conditions



Solutions

End-Face Heat Treatment Control
Improves impact contact conditions

Spline Precision Control
Enhances torque transmission stability

Residual Compressive Stress Control
Improves fatigue resistance



Understanding Rock Interaction Mechanisms

Customized Drilling Tools for Different Rock Formations



Nearly 1,000 product models
available to meet diverse
drilling requirements.



Understanding Failure Mechanisms & Material Performance

Product service life depends not only on structural design, but also on material properties, heat treatment processes, and microstructural control. Understanding how failures develop helps optimize product stability and service life under demanding drilling conditions.

Carbide Insert Wear Zones

Continuous wear affects tool life



Local Stress Concentration

High-load areas are more susceptible to failure



Crack Propagation Paths

Repeated impact loading leads to fatigue accumulation



Same Structure, Different Performance

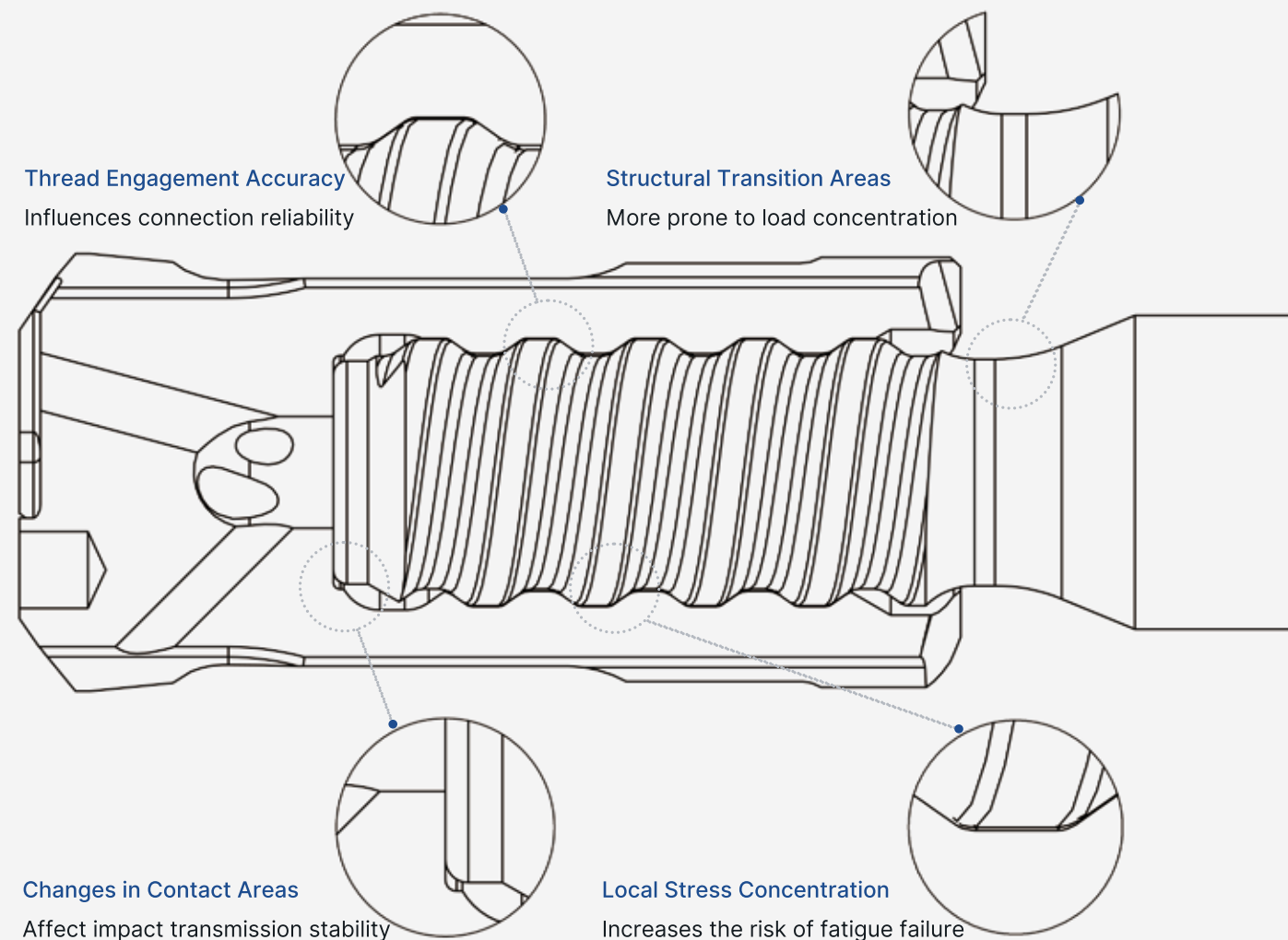


Material Development
Heat Treatment Control
Manufacturing Processes
Multiple related technologies have
been granted or are pending
national patents



Understanding Connection Reliability

Threaded connections not only provide mechanical linkage but also serve as a critical pathway for impact energy transmission.



Different Connection Designs for Different Application Requirements



Understanding Manufacturing Consistency

Manufacturing is more than a machining process, it is the critical link that transforms engineering design and theoretical concepts into consistent product performance. Machining precision, heat treatment consistency, thread quality, and assembly control all directly affect tool life, reliability, and adaptability to field conditions.

Uniform Manufacturing Delivers Stable Performance

01



Reliable Equipment



02



Controlled Processes



03

Assured
Product Quality

Understanding Field Applications

Different mines, drilling equipment, and operating environments place different demands on drilling tools. Understanding customers' operating conditions, drilling practices, productivity objectives, and maintenance approaches helps build a more suitable product portfolio and develop targeted solutions.

Continuous Improvement Driven by Field Feedback

Field Testing & Validation
Collecting performance data

Field Maintenance Services
Verifying service life performance

On-Site Technical Support
Gathering operating condition feedback

01
Long-Hole Drilling Applications
Stability First

02
Complex Rock Conditions
Wear Resistance First

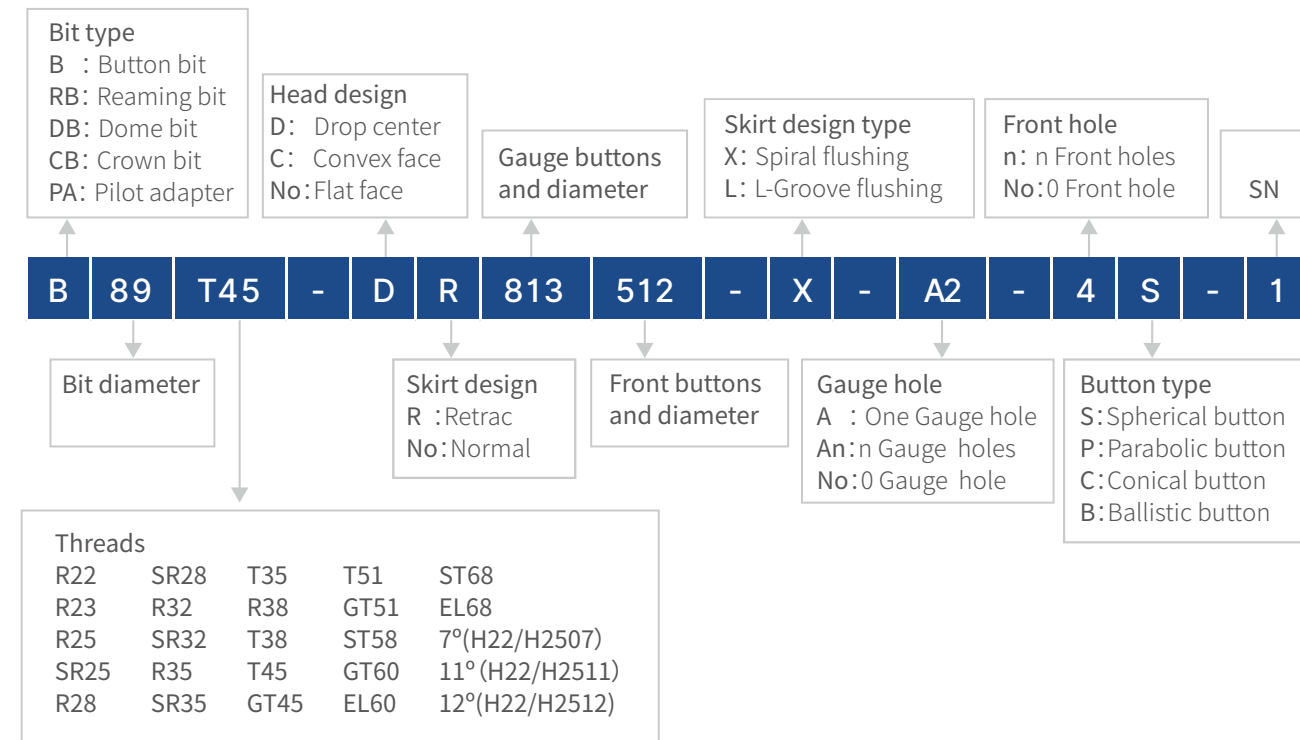
03
High-Productivity Operations
Penetration Rate First

04
Remote Sites with Limited
Maintenance
Service Life First

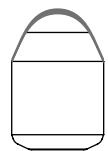


Drill bit codes

B89T45-DR813512-X-A2-4S-1



Button types

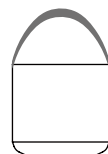
Conical Button: Button Type **C**

- Fast penetration
- Application Strength- fast penetration
- Suited for all non-abrasive ground types
- Smaller contact area
- Best suited for smaller diameter bits

Ballistic Button: Button Type **B**

- Fast penetration
- Suited for all non-abrasive ground types
- Smaller contact area
- Best suited for smaller diameter bits

Parabolic Button (Semi Ballistic):

Button Type **P**

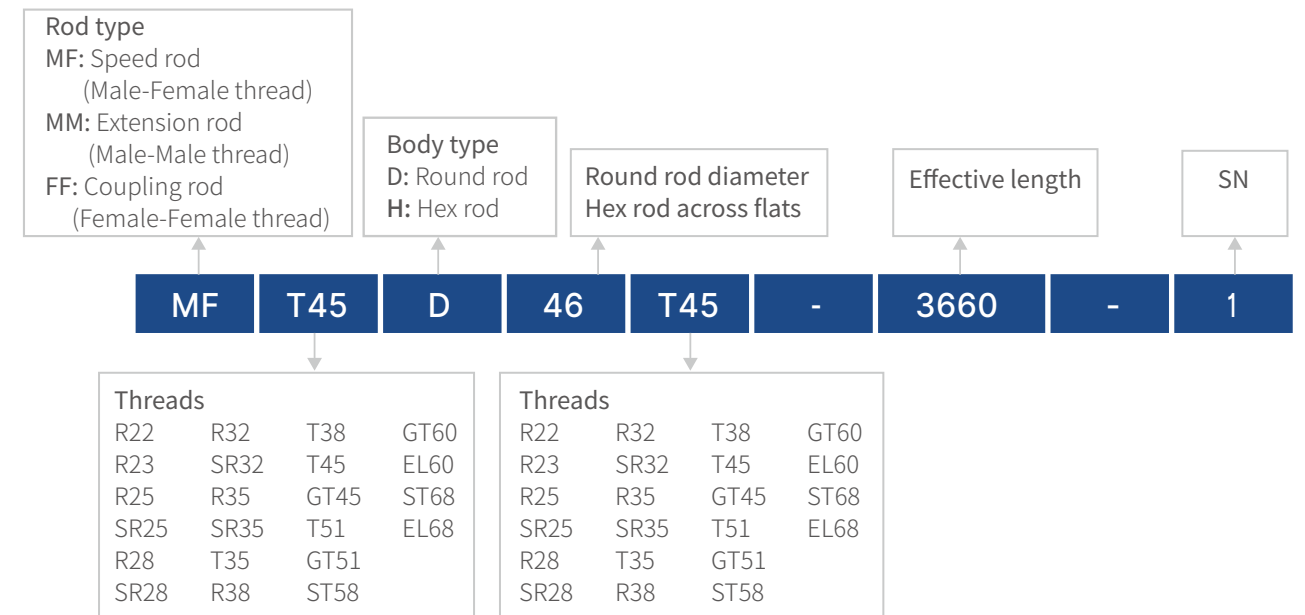
- Fast penetration
- Best suited for medium ground
- 15,000 to 25,000 PSI (100 to 170 MPa)
- Mildly abrasive ground

Spherical Button: Button Type **S**

- Best suited for hard ground
- 25,000 to 45,000 PSI (170 to 300 MPa)
- Abrasive to very abrasive

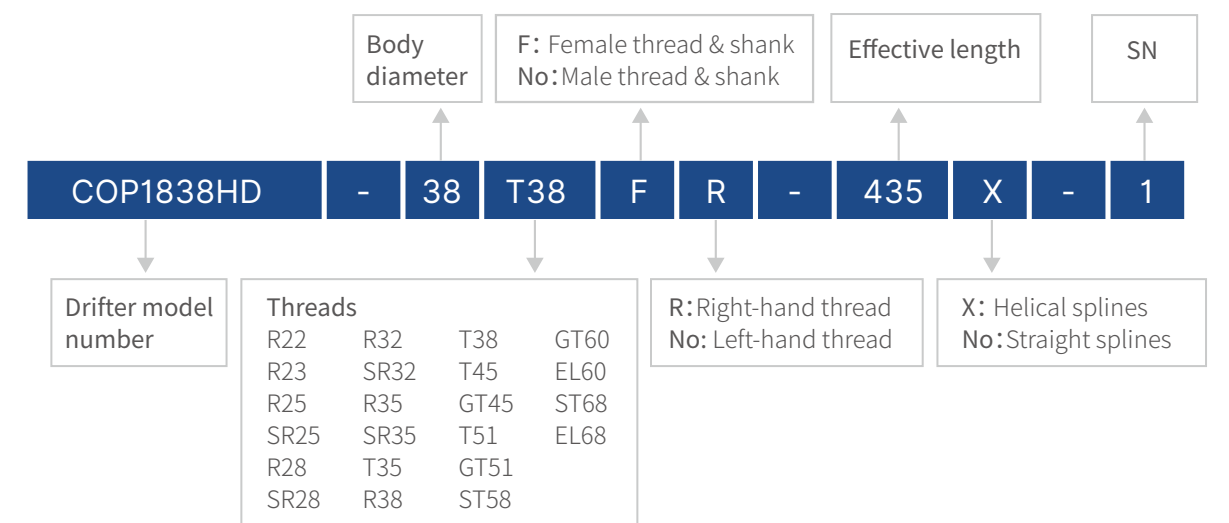
Drill rod codes

MF T45D46T45-3660-1

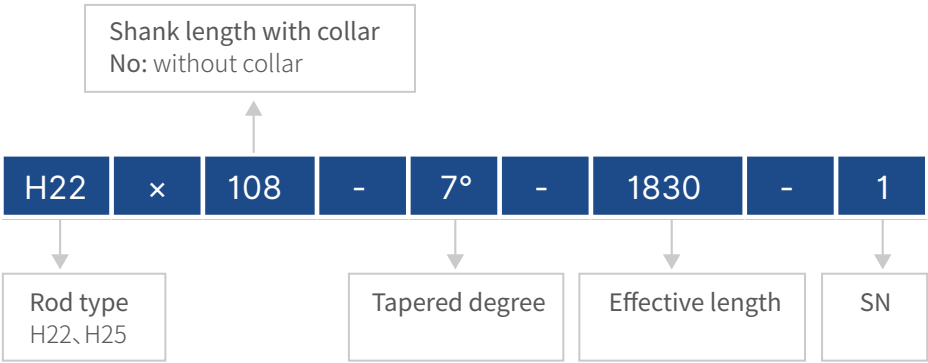


Shank adapter codes

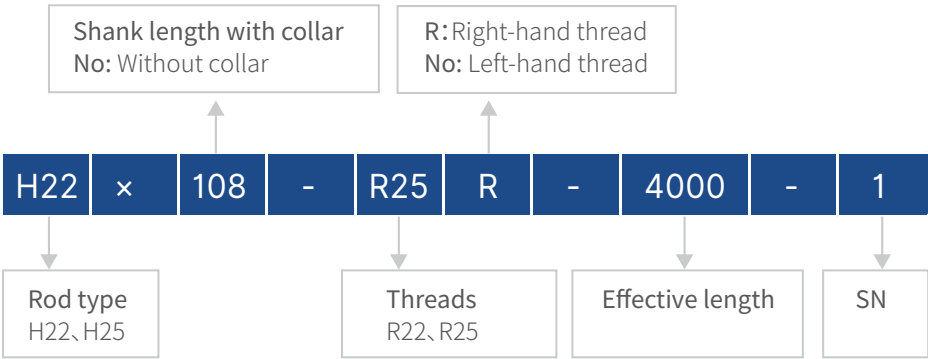
COP1838HD-38T38FR-435X-1



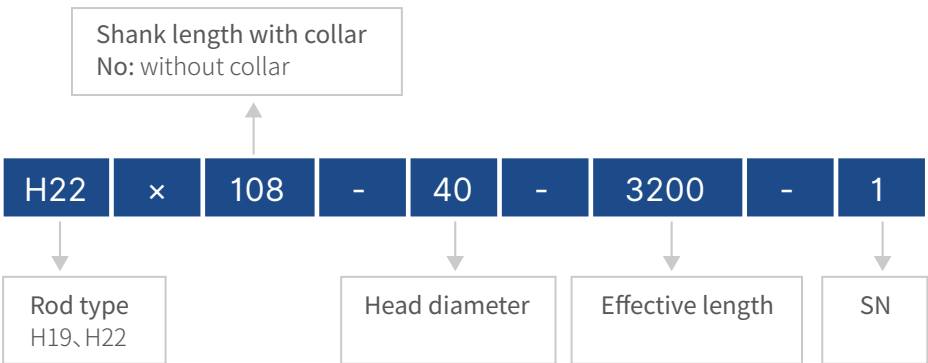
Tapered rod codes
H22×108-7°-1830-1



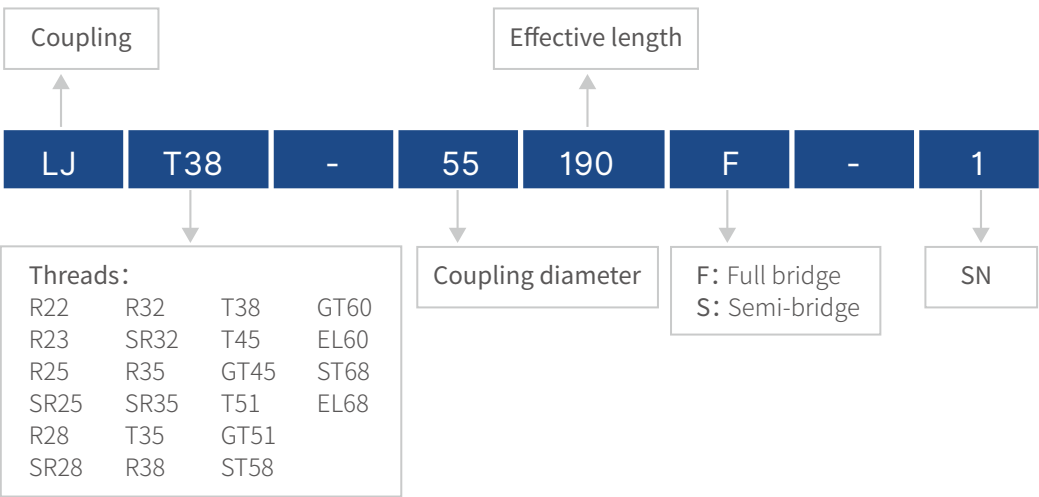
Shank end rod codes
H22×108-R25R-4000-1



Integral rod codes
H22×108-40-3200-1



Coupling sleeve codes
LJT38-55190F-1

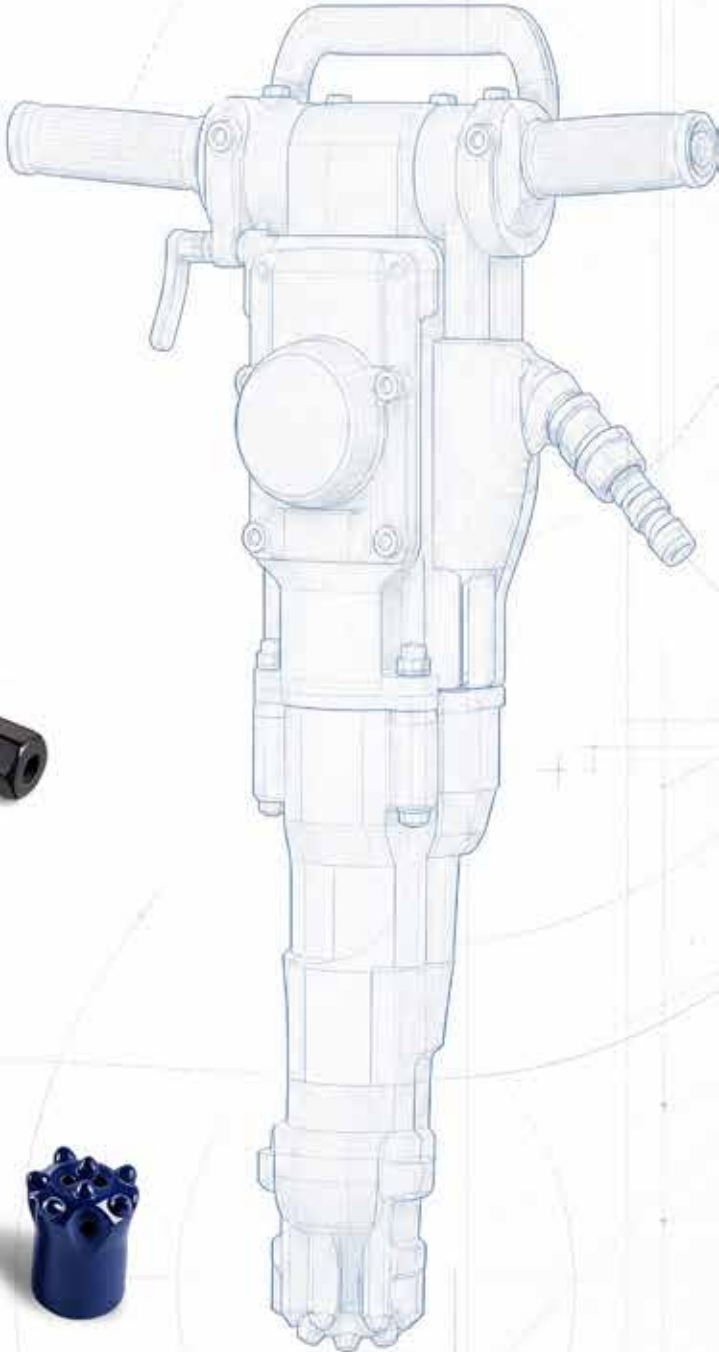


Small hole drilling tools

Understanding Impact Energy. Engineering Reliability.

Serving severe rock drilling scenarios
with precise, efficient energy transfer at every impact

Integral rods Shank end rods Tapered rods
Tapered bits Thread bits

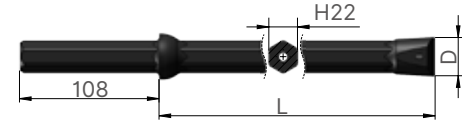


Integral rods H19 (3/4\") ×108mm

	L		D		WT	Product model	Part No.
	mm	ft in	mm	in			
	400	1' 3 3/4"	35	1 3/8"	1.3	H19×108-35-400	281081901
	800	2' 7 1/2"	28	1 1/8"	2.2	H19×108-28-800	281081902
	1600	5' 3"	27	1 1/16"	4.0	H19×108-27-1600	281081903
	2400	7' 10 1/2"	26	1 1/32"	5.7	H19×108-26-2400	281081904

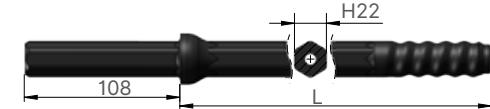
Integral rods H22 (7/8") ×108mm

	mm	L ft in	D mm in	WT Kg	Product model	Part No.
	400	1' 3 3/4"	41 1 5/8"	1.8	H22×108-41-400	281082201
	600	1' 11 5/8"	39 1 17/32"	2.4	H22×108-39-600	281082202
	800	2' 7 1/2"	38 1 1/2"	3.0	H22×108-38-800	281082203
	1000	3' 3 3/8"	37 1 15/32"	3.5	H22×108-37-1000	281082204
	1200	3' 11 1/4"	36 1 13/32"	4.3	H22×108-36-1200	281082205
	1600	5' 3"	35 1 3/8"	5.4	H22×108-35-1600	281082206
	1800	5' 10 7/8"	34 1 11/32"	6.0	H22×108-34-1800	281082207
	2000	6' 6 3/4"	33 1 5/16"	6.6	H22×108-33-2000	281082208
	2400	7' 10 1/2"	32 1 7/32"	7.9	H22×108-32-2400	281082209
	3200	10' 6"	31 1 7/32"	10.2	H22×108-31-3200	281082210
	4000	13' 1 1/2"	30 1 3/16"	12.6	H22×108-30-4000	281082211
	4800	15' 9"	29 1 5/32"	15.1	H22×108-29-4800	281082212
	5600	18' 4 1/2"	28 1 1/8"	17.6	H22×108-28-5600	281082213
	6400	21' —	27 1 1/16"	19.8	H22×108-27-6400	281082214
	7200	23' 7 1/2"	26 1 1/32"	22.2	H22×108-26-7200	281082215



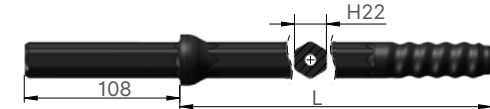
Shank end rods H22(7/8")×108mm×R22

	mm	L ft in	Thread	WT Kg	Product model	Part No.
	610	2' —	R22	2.3	H22×108-R22-610	251082201
	1200	3' 11 1/4"	R22	4.5	H22×108-R22-1200	251082202
	2435	8' —	R22	7.9	H22×108-R22-2435	251082203
	3200	10' 6"	R22	10.4	H22×108-R22-3200	251082204
	4000	13' 1 1/2"	R22	13.0	H22×108-R22-4000	251082205

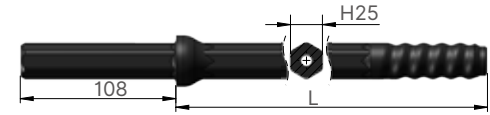


Shank end rods H22(7/8")×108mm×R25

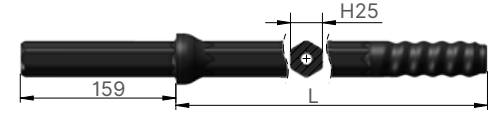
	mm	L ft in	Thread	WT Kg	Product model	Part No.
	1200	3' 11 1/4"	R25	6.8	H22×108-R25-1200	251082207
	2435	8' —	R25	7.9	H22×108-R25-2435	251082208
	3200	10' 6"	R25	10.4	H22×108-R25-3200	251082209
	4000	11' 9 3/4"	R25	11.8	H22×108-R25-4000	251082210



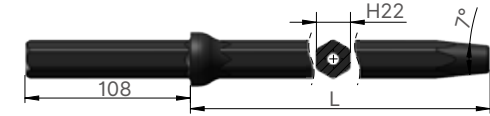
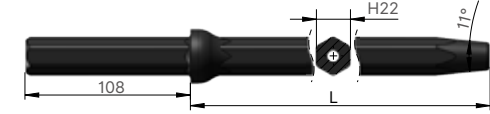
Shank end rods H25(1")×108mm×R25

	mm	L ft in	Thread	WT Kg	Product model	Part No.
	1200	3´ 11 1/4"	R25	4.5	H25×108-R25-1200	251082502
	1830	6´ —	R25	6.1	H25×108-R25-1830	251082503
	2435	8´ —	R25	7.9	H25×108-R25-2435	251082504

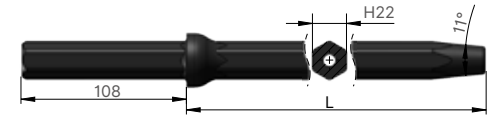
Shank end rods H25(1")×159mm×R25

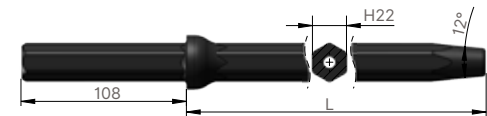
	mm	L ft in	Thread	WT Kg	Product model	Part No.
	1200	3´ 11 1/4"	R25	4.5	H25×159-R25-1200	251592502
	1830	6´ —	R25	6.1	H25×159-R25-1830	251592503
	2435	8´ —	R25	7.9	H25×159-R25-2435	251592504
	3200	10´ 6"	R25	10.4	H25×159-R25-3200	251592505
	3600	11´ 9 3/4"	R25	11.8	H25×159-R25-3600	251592506
	4000	13´ 1 1/2"	R25	13.0	H25×159-R25-4000	251592507

Tapered rods H22(7/8")×108mm

	mm	L ft in	Tapered	WT Kg	Product model	Part No.
	610	2´ —	7°	2.9	H22×108-7°-610	231089201
	800	2´ 7 1/2"		3.7	H22×108-7°-800	231089202
	1220	3´ 11 1/4"		5.4	H22×108-7°-1220	231089203
	1525	5´ —		6.5	H22×108-7°-1525	231089204
	1600	5´ 3"		6.9	H22×108-7°-1600	231089205
	1830	6´ —		7.8	H22×108-7°-1830	231089206
	2000	6´ 6 3/4"		8.4	H22×108-7°-2000	231089207
	2200	7´ 2 5/8"		9.2	H22×108-7°-2200	231089208
	2440	8´ —		10.2	H22×108-7°-2440	231089209
	3050	10´ —		12.6	H22×108-7°-3050	231089210
	3200	10´ 6"		13.2	H22×108-7°-3200	231089211
	4000	13´ 1 1/2"		16.4	H22×108-7°-4000	231089212
	4400	14´ 5"		13.8	H22×108-7°-4400	231089213
	5600	18´ 4 1/2"		22.7	H22×108-7°-5600	231089214
	6000	21´ —		24.3	H22×108-7°-6000	231089215
			11°			
	610	2´ —		2.9	H22×108-11°-610	231089301
	800	2´ 7 1/2"		3.7	H22×108-11°-800	231089302
	1220	3´ 11 1/4"		5.4	H22×108-11°-1220	231089303
	1525	5´ —		6.5	H22×108-11°-1525	231089304
	1600	5´ 3"		6.9	H22×108-11°-1600	231089305
	1830	6´ —		7.8	H22×108-11°-1830	231089306
	2000	6´ 6 3/4"		8.4	H22×108-11°-2000	231089307
	2200	7´ 2 5/8"		9.2	H22×108-11°-2200	231089308

Tapered rods H22(7/8")×108mm

	mm	L ft in	Tapered	WT Kg	Product model	Part No.
	2440	8' —	11°	10.2	H22×108-11°-2440	231089309
	3050	10' —		12.6	H22×108-11°-3050	231089310
	3200	10' 6"		13.2	H22×108-11°-3200	231089311
	4000	13' 1 1/2"		16.4	H22×108-11°-4000	231089312
	4400	14' 5"		13.8	H22×108-11°-4400	231089313
	5600	18' 4 1/2"		22.7	H22×108-11°-5600	231089314
	6000	21' —		24.3	H22×108-11°-6000	231089315

	610	2' —	12°	2.9	H22×108-12°-610	231089401
	800	2' 7 1/2"		3.7	H22×108-12°-800	231089402
	1220	3' 11 1/4"		5.4	H22×108-12°-1220	231089403
	1525	5' —		6.5	H22×108-12°-1525	231089404
	1600	5' 3"		6.9	H22×108-12°-1600	231089405
	1830	6' —		7.8	H22×108-12°-1830	231089406
	2000	6' 6 3/4"		8.4	H22×108-12°-2000	231089407
	2200	7' 2 5/8"		9.2	H22×108-12°-2200	231089408
	2440	8' —		10.2	H22×108-12°-2440	231089409
	3050	10' —		12.6	H22×108-12°-3050	231089410
	3200	10' 6"		13.2	H22×108-12°-3200	231089411
	4000	13' 1 1/2"		16.4	H22×108-12°-4000	231089412
	4400	14' 5"		13.8	H22×108-12°-4400	231089413
	5600	18' 4 1/2"		22.7	H22×108-12°-5600	231089414
	6000	21' —		24.3	H22×108-12°-6000	231089415

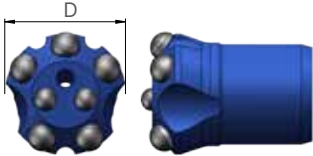
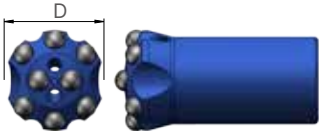
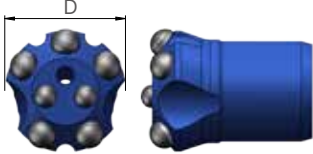
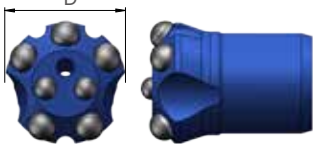
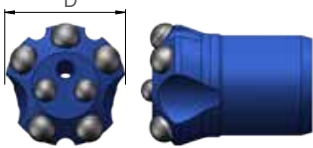
Tapered rods H25(1")×108mm

	mm	L ft in	Tapered	WT Kg	Product model	Part No.
	1500	4' 11"	7°	6.5	H25×108-7°-1500	231089701
	1600	5' 3"		6.9	H25×108-7°-1600	231089702
	1830	6' —		7.8	H25×108-7°-1830	231089703
	2200	7' 2 5/8"		9.2	H25×108-7°-2200	231089704
	2400	7' 10 1/2"		10.0	H25×108-7°-2400	231089705
	2600	8' 6 3/8"		10.8	H25×108-7°-2600	231089706
	3900	12' 9 1/2"		16.0	H25×108-7°-3900	231089707

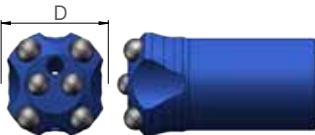
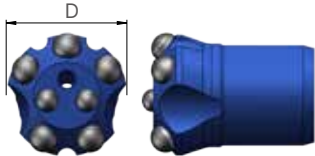
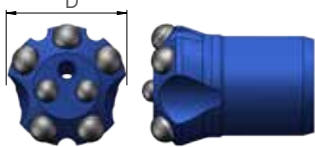
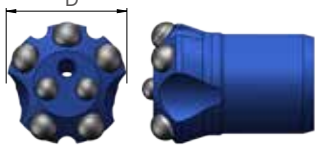
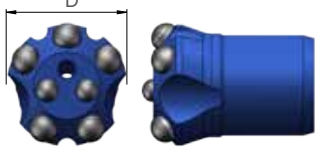
Tapered rods H25(1")×159mm

	mm	L ft in	Tapered	WT Kg	Product model	Part No.
	1830	6' —	12°	7.8	H25×159-12°-1830	231599901
	2400	7' 10 1/2"		10.0	H25×159-12°-2400	231599902
	2600	8' 6 3/8"		10.8	H25×159-12°-2600	231599903
	3900	12' 9 1/2"		16.0	H25×159-12°-3900	231599904

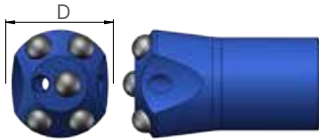
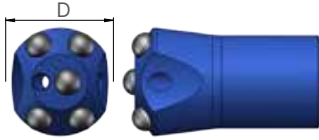
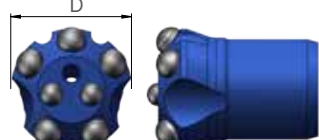
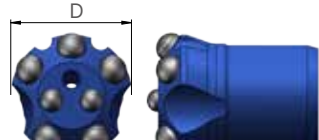
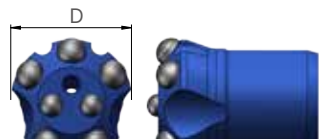
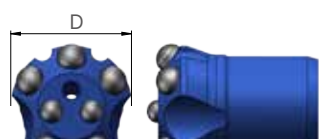
Tapered bits H22-7°

		mm	D in	Button No.×Size Gauge Front		Gauge buttons angle	Flushing hole F&G	Tapered	WT Kg	Product model	Part No.
		32	1 1/4"	5×7	2×7	35°	1F1G	7°	0.3	B32H2207-507207-A-1	112007001C
											112007001B
											112007001P
											112007001S
		34	1 5/16"	6×7	2×7	40°	1F1G	7°	0.3	B34H2207-607207-A-1	112007002C
											112007002B
											112007002P
											112007002S
		36	1 3/8"	5×8	2×7	40°	1F1G	7°	0.3	B36H2207-508207-A-1	112007003C
											112007003B
											112007003P
											112007003S
		38	1 1/2"	5×9	2×7	40°	1F1G	7°	0.3	B38H2207-509207-A-1	112007004C
											112007004B
											112007004P
											112007004S
		41	1 5/8"	5×9	2×8	40°	1F1G	7°	0.4	B41H2207-509208-A-1	112007005C
											112007005B
											112007005P
											112007005S

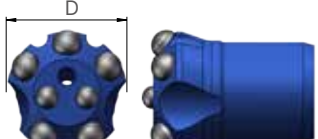
Tapered bits H22-11°

		mm	D in	Button No.×Size Gauge Front		Gauge buttons angle	Flushing hole F&G	Tapered	WT Kg	Product model	Part No.
		32	1 1/4"	4×7	2×7	35°	1F1G	11°	0.3	B32H2211-407207-A-1	112011001C
											112011001B
											112011001P
											112011001S
		34	1 11/32"	5×8	2×7	40°	1F1G	11°	0.3	B34H2211-508207-A-1	112011002C
											112011002B
											112011002P
											112011002S
		36	1 13/32"	5×8	2×7	35°	1F1G	11°	0.3	B36H2211-508207-A-1	112011003C
											112011003B
											112011003P
											112011003S
		38	1 1/2"	5×9	2×7	35°	1F1G	11°	0.3	B38H2211-509207-A-1	112011004C
											112011004B
											112011004P
											112011004S
		41	1 5/8"	5×9	2×8	35°	1F1G	11°	0.4	B41H2211-509208-A-1	112011005C
											112011005B
											112011005P
											112011005S

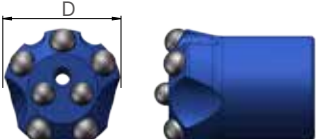
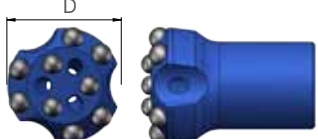
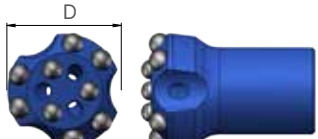
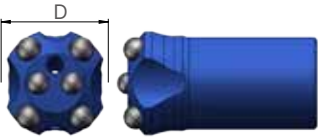
Tapered bits H22-12°

		mm	D in	Button No.×Size Gauge Front		Gauge buttons angle	Flushing hole F&G	Tapered	WT Kg	Product model	Part No.
		28	1 1/8"	4×7	1×7	35°	1F1G	12°	0.2	B28H2212-407107-A-1	112012001C
											112012001B
											112012001P
											112012001S
		30	1 3/16"	4×7	1×7	35°	1F1G	12°	0.2	B30H2212-407107-A-1	112012002C
											112012002B
											112012002P
											112012002S
		32	1 1/4"	5×7	2×7	35°	1F1G	12°	0.3	B32H2212-507207-A-1	112012003C
											112012003B
											112012003P
											112012003S
		34	1 11/32"	5×8	2×7	35°	1F1G	12°	0.3	B34H2212-508207-A-1	112012004C
											112012004B
											112012004P
											112012004S
		36	1 13/32"	5×8	2×7	35°	1F1G	12°	0.3	B36H2212-508207-A-1	112012005C
											112012005B
											112012005P
											112012005S
		38	1 1/2"	5×9	2×7	35°	1F1G	12°	0.3	B38H2212-509207-A-1	112012006C
											112012006B
											112012006P
											112012006S

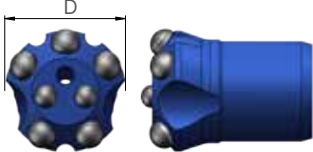
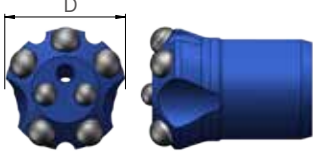
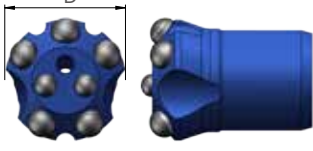
Tapered bits H22-12°

		mm	D in	Button No.×Size Gauge Front		Gauge buttons angle	Flushing hole F&G	Tapered	WT Kg	Product model	Part No.
		41	1 5/8"	5×9	2×7	35°	1F1G	12°	0.4	B41H2212-509207-A-1	112012007C
											112012007B
											112012007P
											112012007S

Tapered bits H25-7°

		mm	D in	Button No.×Size Gauge Front		Gauge buttons angle	Flushing hole F&G	Tapered	WT Kg	Product model	Part No.
		41	1 5/8"	5×9	2×8	40°	1F1G	7°	0.4	B41H2507-509208-A-1	112007008C
											112007008B
											112007008P
											112007008S
		41	1 5/8"	6×8	3×7	40°	3F1G	7°	0.4	B41H2507-608307-A-3	112007009C
											112007009B
											112007009P
											112007009S
		43	1 11/16"	6×8	3×7	40°	3F1G	7°	0.5	B43H2507-608307-A-3	112007010C
											112007010B
											112007010P
											112007010S
		43	1 11/16"	4×9	2×8	35°	1F1G	7°	0.3	B43H2507-409208-A-1	112007011C
											112007011B
											112007011P
											112007011S

Tapered bits H25-12°

	mm	D in	Button No.×Size		Gauge buttons angle	Flushing hole F&G	Tapered	WT Kg	Product model	Part No.
			Gauge	Front						
	36	1 13/32"	5×9	2×7	35°	1F1G	12°	0.3	B36H2512-509207-A-1	112007012C
										112007012B
										112007012P
										112007012S
	38	1 1/2"	5×9	2×7	40°	1F1G	12°	0.4	B38H2512-509207-A-1	112007013C
										112007013B
										112007013P
										112007013S
	41	1 5/8"	5×9	2×7	40°	1F1G	12°	0.4	B41H2512-509207-A-1	112007014C
										112007014B
										112007014P
										112007014S

Thread bits R22 (7/8")

	mm	D in	Button No.×Size		Gauge buttons angle	Flushing hole F&G	Thread	WT Kg	Product model	Part No.
			Gauge	Front						
	33	1 5/16"	5×7	2×7	35°	1F1G	R22	0.4	B33R22-507207-A-1	111022001C
										111022001B
										111022001P
										111022001S
	35	1 3/8"	5×8	2×7	35°	1F1G	R22	0.5	B35R22-508207-A-1	111022002C
										111022002B
										111022002P
										111022002S
	38	1 1/2"	5×9	2×7	35°	1F1G	R22	0.6	B38R22-509207-A-1	111022003C
										111022003B
										111022003P
										111022003S
	41	1 5/8"	5×9	2×8	35°	1F1G	R22	0.6	B41R22-509208-A-1	111022004C
										111022004B
										111022004P
										111022004S

Thread bits R25 (1")



		mm	D in	Button No.×Size		Gauge buttons	Gauge angle	Flushing hole F&G	Thread	WT Kg	Product model	Part No.
		33	1 5/16"	5×7	2×7	35°	1F1G	R25	0.4	B33R25-507207-A-1		111025001C
												111025001B
												111025001P
												111025001S
		35	1 3/8"	5×8	2×7	35°	1F1G	R25	0.5	B35R25-508207-A-1		111025002C
												111025002B
												111025002P
												111025002S
		38	1 1/2"	5×9	2×7	35°	1F1G	R25	0.6	B38R25-509207-A-1		111025003C
												111025003B
												111025003P
												111025003S
		41	1 5/8"	5×9	2×8	35°	1F1G	R25	0.6	B41R25-509208-A-1		111025004C
												111025004B
												111025004P
												111025004S
		45	1 3/4"	6×9	3×8	35°	3F1G	R25	0.7	B45R25-609308-A-3		111025005C
												111025005B
												111025005P
												111025005S
		48	1 7/8"	6×10	3×8	35°	3F1G	R25	0.9	B48R25-610308-A-3		111025006C
												111025006B
												111025006P
												111025006S

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SR25 R25 SR28 R28
SR32 R32 SR35 R35 T38



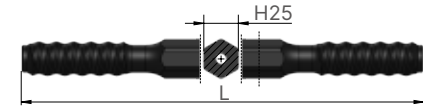
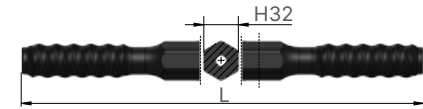
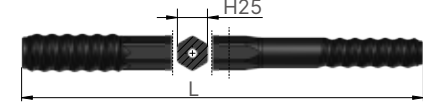
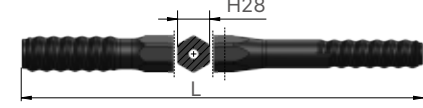
SR25(1") Rods

	L mm	L ft	Thread	D mm	D in	Thread	Impact type	WT kg	Product model	Part No.
	2475	8'1 1/2"	R32	25	1"	SR25	Bottom drive	9.8	MM R32H25SR25-2475	213226001

SR25(1") Bits

	D mm	Head design	Skirt design	Button No.×Size Gauge	Front	Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
	38	Flat face	Normal	5×9	2×7	40°	2F2G	0.5	B38SR25-509207-A2-2	111026001C 111026001B 111026001P 111026001S

R25(1") Rods

	mm	L ft	Thread	D mm	in	Thread	Impact type	WT kg	Product model	Part No.
	915	3'	R25	25	1"	R25	Bottom drive	3.6	MM R25H25R25-915	212525001
	1000	3' 3⅜"	R25	25	1"	R25	Bottom drive	4.0	MM R25H25R25-1000	212525002
	1220	4'	R25	25	1"	R25	Bottom drive	4.8	MM R25H25R25-1220	212525003
	2175	7' 1⅝"	R25	25	1"	R25	Bottom drive	8.6	MM R25H25R25-2175	212525004
	2400	7' 10½"	R25	25	1"	R25	Bottom drive	9.4	MM R25H25R25-2400	212525005
	2900	9' 6⅞"	R25	25	1"	R25	Bottom drive	11.3	MM R25H25R25-2900	212525006
	3300	11'	R25	25	1"	R25	Bottom drive	12.6	MM R25H25R25-3300	212525007
	4305	14' 1½"	R25	25	1"	R25	Bottom drive	16.6	MM R25H25R25-4305	212525008
	1000	3' 3⅜"	R25	32	1 1/4"	R25	Bottom drive	5.9	MM R25H32R25-1000	212525011
	4000	13' 1½"	R25	32	1 1/4"	R25	Bottom drive	25.0	MM R25H32R25-4000	212525012
	2120	6' 10⅝"	R32	25	1"	R25	Bottom drive	8.4	MM R32H25R25-2120	213225001
	2175	7' 1⅝"	R32	25	1"	R25	Bottom drive	8.6	MM R32H25R25-2175	213225002
	2200	7' 2⅝"	R32	25	1"	R25	Bottom drive	8.7	MM R32H25R25-2200	213225003
	2400	7' 10½"	R32	25	1"	R25	Bottom drive	9.5	MM R32H25R25-2400	213225004
	2475	8' 1½"	R32	25	1"	R25	Bottom drive	9.8	MM R32H25R25-2475	213225005
	2600	8' 6⅜"	R32	25	1"	R25	Bottom drive	10.0	MM R32H25R25-2600	213225006
	2800	9' 2¼"	R32	25	1"	R25	Bottom drive	10.8	MM R32H25R25-2800	213225007
	2900	9' 6⅞"	R32	25	1"	R25	Bottom drive	11.5	MM R32H25R25-2900	213225008
	3090	10' 1⅝"	R32	25	1"	R25	Bottom drive	12.0	MM R32H25R25-3090	213225009
	3700	12' 1⅝"	R32	25	1"	R25	Bottom drive	14.6	MM R32H25R25-3700	213225010
	4000	13' 1½"	R32	25	1"	R25	Bottom drive	15.8	MM R32H25R25-4000	213225011
	2800	9' 2¼"	R32	28	1 1/8"	R25	Bottom drive	15.0	MM R32H28R25-2800	213225021
	3090	10' 1⅝"	R32	28	1 1/8"	R25	Bottom drive	15.3	MM R32H28R25-3090	213225022
	3700	12' 1⅝"	R32	28	1 1/8"	R25	Bottom drive	18.9	MM R32H28R25-3700	213225023

R25(1") Bits

	D mm	Head design	Skirt design	Button No.×Size Gauge Front		Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
	32	Flat face	Normal	5×7	2×7	35°	1F2G	0.3	B32R25-507207-A2-1	111025012C
										111025012B
										111025012P
										111025012S
	33	Flat face	Normal	5×7	2×7	35°	1F0G	0.4	B33R25-507207-1	111025001C
										111025001B
										111025001P
										111025001S
	33	Flat face	Normal	5×7	2×7	35°	1F1G	0.3	B33R25-507207-A-1	111025017C
										111025017B
										111025017P
										111025017S
	35	Convex face	Normal	5×8	2×7	30°	1F1G	0.4	B35R25-C508207-A-1	111025004C
										111025004B
										111025004P
										111025004S
	35	Convex face	Normal	5×9	2×7	30°	1F2G	0.4	B35R25-C509207-A2-1	111025018C
										111025018B
										111025018P
										111025018S
	35	Flat face	Normal	5×9	2×7	35°	1F1G	0.4	B35R25-509207-A-1	111025002C
										111025002B
										111025002P
										111025002S

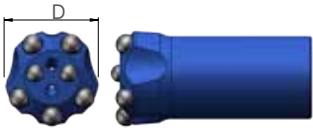
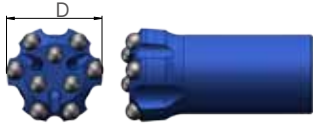
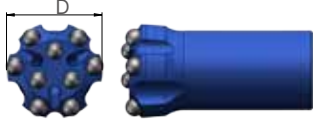
R25(1") Bits

	D mm	Head design	Skirt design	Button No.×Size Gauge	Front	Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
	37	Flat face	Normal	5×9	2×7	30°	1F2G	0.4	B37R25-509207-A2-1	111025013C
										111025013B
										111025013P
										111025013S
	37	Flat face	Normal	5×9	2×7	30°	1F1G	0.4	B37R25-509207-A-1	111025015C
										111025015B
										111025015P
										111025015S
	37	Flat face	Normal	6×8	2×7	30°	2F1G	0.5	B37R25-608207-A-2	111025016C
										111025016B
										111025016P
										111025016S
	38	Flat face	Normal	5×9	2×7	30°	1F1G	0.5	B38R25-509207-A-1	111025014C
										111025014B
										111025014P
										111025014S
	38	Flat face	Normal	5×9	2×7	30°	1F2G	0.5	B38R25-509207-A2-1	111025005C
										111025005B
										111025005P
										111025005S
	38	Flat face	Normal	6×8	2×8	30°	2F1G	0.5	B38R25-608208-A-2	111025006C
										111025006B
										111025006P
										111025006S

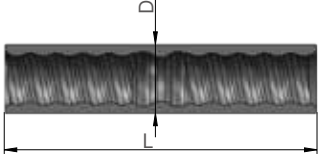
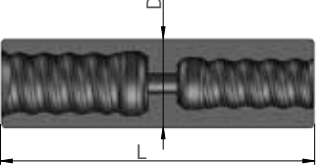
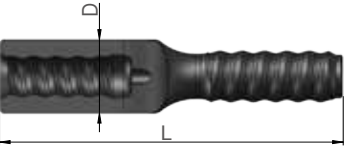
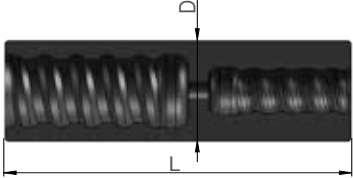
R25(1") Bits

	D mm	Head design	Skirt design	Button No.×Size Gauge	Front	Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
	41	Flat face	Normal	5×9	2×8	35°	1F2G	0.6	B41R25-509208-A2-1	111025021C
										111025021B
										111025021P
										111025021S
	41	Flat face	Normal	5×10	2×8	35°	2F1G	0.6	B41R25-510208-1	111025022C
										111025022B
										111025022P
										111025022S
	43	Flat face	Normal	6×9	3×8	35°	3F1G	0.7	B43R25-609308-A-3	111025010C
										111025010B
										111025010P
										111025010S
	45	Flat face	Normal	6×9	3×8	35°	3F1G	0.9	B45R25-609308-A-3	111025020C
										111025020B
										111025020P
										111025020S
	45	Flat face	Normal	6×10	3×8	35°	3F1G	0.9	B45R25-610308-A-3	111025007C
										111025007B
										111025007P
										111025007S
	48	Flat face	Normal	5×11	2×9	35°	1F2G	0.9	B48R25-511209-A2-1	111025008C
										111025008B
										111025008P
										111025008S

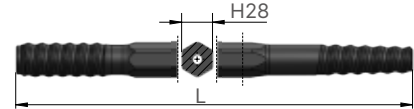
R25(1") Bits

	D mm	Head design	Skirt design	Button No.×Size Gauge Front	Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
	48	Flat face	Normal	5×11 2×9	35°	2F1G	0.9	B48R25-511209-A-2	111025009C
									111025009B
									111025009P
									111025009S
	51	Flat face	Normal	6×10 3×8	35°	3F1G	1.0	B51R25-610308-A-3	111025011C
									111025011B
									111025011P
									111025011S
	51	Flat face	Normal	6×10 3×9	35°	3F1G	1.0	B51R25-610309-A-3	111025019C
									111025019B
									111025019P
									111025019S

R25(1") Coupling sleeves

	L mm	D mm	Thread	Adapter type	Bridge type	WT Kg	Product model	Part No.
	150	33	R25	Straight	Semi-bridge	0.5	LJR25-33150S	382525071
	150	35	R25	Straight	Semi-bridge	0.6	LJR25-35150S	382525078
	160	45	R32-R25	Cross over	Full bridge	1.3	LJR32/R25-45160F	393225002
	195	45	R25-R32M	Cross over	-	1.4	LJR25/R32M-45195	362532001
	170	55	T38-R25	Cross over	Full bridge	1.8	LJT38/R25-55170F	393825005

SR28(1 1/8") Rods

	mm	L ft	Thread	D mm	in	Thread	Impact type	WT kg	Product model	Part No.
	1875	6´ 1 ³ / ₁₆ "	R32	28	1 1/8"	SR28	Bottom drive	9.3	MM R32H28SR28-1875	213229001
	2400	7´ 10 ¹ / ₂ "	R32	28	1 1/8"	SR28	Bottom drive	12.1	MM R32H28SR28-2400	213229004
	2475	8´ 1 ¹ / ₂ "	R32	28	1 1/8"	SR28	Bottom drive	12.4	MM R32H28SR28-2475	213229002
	2600	8´ 6 ³ / ₈ "	R32	28	1 1/8"	SR28	Bottom drive	13	MM R32H28SR28-2600	213229005
	2800	9´ 2 ¹ / ₄ "	R32	28	1 1/8"	SR28	Bottom drive	14.1	MM R32H28SR28-2800	213229007
	3090	10´ 1 ⁵ / ₈ "	R32	28	1 1/8"	SR28	Bottom drive	15.6	MM R32H28SR28-3090	213229009
	3300	11´	R32	28	1 1/8"	SR28	Bottom drive	16.7	MM R32H28SR28-3300	213229010

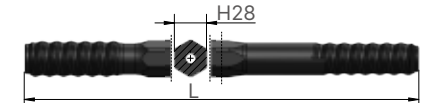
SR28(1 1/8") Bits

											D mm	Head design	Skirt design	Button No.×Size Gauge Front	Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
		33	Flat face	Normal	5×8	2×7	35°	1F1G	0.40	B33SR28-508207-A-1	111029001C								
											111029001B								
											111029001P								
											111029001S								
		35	Flat face	Normal	5×9	2×7	25°	1F1G	0.40	B35SR28-509207-A-1	111029002C								
											111029002B								
											111029002P								
											111029002S								
		37	Flat face	Normal	5×9	2×7	35°	1F1G	0.50	B37SR28-509207-A-1	111029003C								
											111029003B								
											111029003P								
											111029003S								

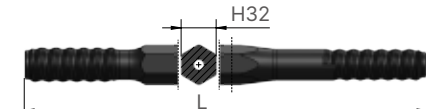
SR28(1 1/8") Bits

		D mm	Head design	Skirt design	Button No.×Size Gauge	Size Front	Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
		38	Flat face	Normal	5×9	2×7	30°	1F1G	0.50	B38SR28-509207-A-1	111029004C
											111029004B
											111029004P
											111029004S
		41	Flat face	Normal	5×9	2×8	40°	1F1G	0.70	B41SR28-509208-A-1	111029005C
											111029005B
											111029005P
											111029005S
		42	Flat face	Normal	5×9	2×8	40°	1F1G	0.70	B42SR28-509208-A-1	111029006C
											111029006B
											111029006P
											111029006S
		45	Flat face	Normal	5×11	2×8	30°	2F1G	0.60	B45SR28-511208-A2-1	111029007C
											111029007B
											111029007P
											111029007S
		45	Flat face	Normal	5×11	2×9	30°	2F2G	0.40	B45SR28-511209-A2-2	111029008C
											111029008B
											111029008P
											111029008S
		51	Flat face	Normal	5×11	2×8	45°	2F1G	0.90	B51SR28-511208-A2-1	111029009C
											111029009B
											111029009P
											111029009S

R28(1 1/8") Rods



	mm	L ft	Thread	D mm	in	Thread	Impact type	WT kg	Product model	Part No.
	2175	7' 1 5/8"	R32	28	1 1/8"	R28	Bottom drive	11.2	MM R32H28R28-2175	213228001
	2400	7' 10 1/2"	R32	28	1 1/8"	R28	Bottom drive	11.9	MM R32H28R28-2400	213228002
	2475	8' 1 1/2"	R32	28	1 1/8"	R28	Bottom drive	12.2	MM R32H28R28-2475	213228003
	2600	8' 6 3/8"	R32	28	1 1/8"	R28	Bottom drive	13.6	MM R32H28R28-2600	213228004
	2800	9' 2 1/4"	R32	28	1 1/8"	R28	Bottom drive	14.4	MM R32H28R28-2800	213228005
	3090	10' 1 5/8"	R32	28	1 1/8"	R28	Bottom drive	15.4	MM R32H28R28-3090	213228006
	3700	12' 1 5/8"	R32	28	1 1/8"	R28	Bottom drive	18.5	MM R32H28R28-3700	213228007
	5525	18' 1 1/2"	R32	28	1 1/8"	R28	Bottom drive	28.8	MM R32H28R28-5525	213228008



2475	8' 1 1/2"	R32	32	1 1/4"	R28	Bottom drive	15.3	MM R32H32R28-2475	213228021
3090	10' 1 5/8"	R32	32	1 1/4"	R28	Bottom drive	19.7	MM R32H32R28-3090	213228022

R28(1 1/8") Bits

	D mm	Head design	Skirt design	Button No. X Size Gauge Front	Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
	35	Flat face	Normal	5×9 2×7	35°	1F1G	0.4	B35R28-509207-A-1	11028001C
									11028001B
									11028001P
									11028001S
	37	Flat face	Normal	5×9 2×7	30°	1F2G	0.4	B37R28-509207-A2-1	11028002C
									11028002B
									11028002P
									11028002S
	38	Flat face	Normal	5×9 2×7	30°	1F2G	0.5	B38R28-509207-A2-1	11028003C
									11028003B
									11028003P
									11028003S
	38	Flat face	Normal	5×9 2×7	30°	2F2G	0.5	B38R28-509207-A2-2	11028004C
									11028004B
									11028004P
									11028004S
	41	Flat face	Normal	5×9 2×8	30°	1F2G	0.6	B41R28-509208-A2-1	11028005C
									11028005B
									11028005P
									11028005S
	41	Flat face	Normal	5×10 2×8	30°	1F2G	0.6	B41R28-510208-A2-1	11028009C
									11028009B
									11028009P
									11028009S

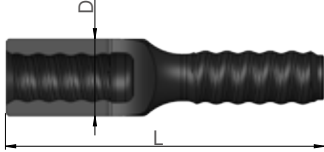
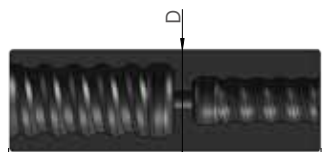
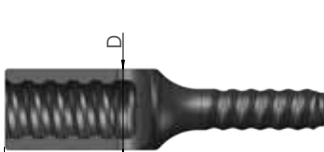
R28(1 1/8") Bits

	D mm	Head design	Skirt design	Button No.×Size		Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
				Gauge	Front					
	43	Flat face	Normal	6×9	3×8	35°	3F1G	0.7	B43R28-609308-A-3	11028006C
										11028006B
										11028006P
										11028006S
	45	Flat face	Normal	5×11	2×9	30°	2F2G	0.9	B45R28-511209-A2-2	11028008C
										11028008B
										11028008P
										11028008S
	45	Flat face	Normal	5×11	2×8	35°	1F2G	0.9	B45R28-511208-A2-1	11028010C
										11028010B
										11028010P
										11028010S
	45	Flat face	Normal	5×11	2×9	35°	1F2G	0.9	B45R28-511209-A2-1	11028011C
										11028011B
										11028011P
										11028011S
	45	Flat face	Normal	6×10	3×8	35°	3F1G	0.9	B45R28-610308-A-3	11028007C
										11028007B
										11028007P
										11028007S
	51	Flat face	Normal	5×11	2×10	35°	1F2G	1.0	B51R28-511210-A2-1	11028012C
										11028012B
										11028012P
										11028012S

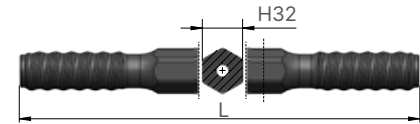
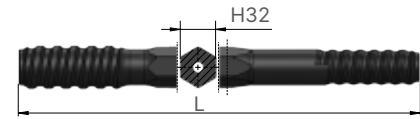
R28(1 1/8") Bits

	D mm	Head design	Skirt design	Button No.×Size		Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
				Gauge	Front					
	51	Flat face	Normal	6×10	3×9	35°	3F1G	1.0	B51R28-610309-A-3	11028013C
										11028013B
										11028013P
										11028013S

R28(1 1/8") Coupling sleeves

	L mm	D mm	Thread	Adapter type	Bridge type	WT Kg	Product model	Part No.
	187	45	R28-R32M	Cross over	-	1.20	LJR28/R32M-45187	362832009
	170	55	T38-R28	Cross over	Full bridge	1.80	LJT38/R28-55170F	393828011
	220	55	T38-R28M	Cross over	-	1.7	LJT38/R28M-55220	363828010

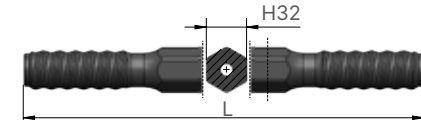
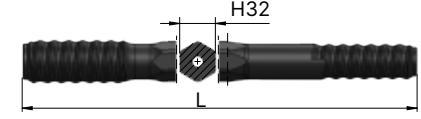
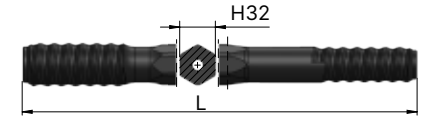
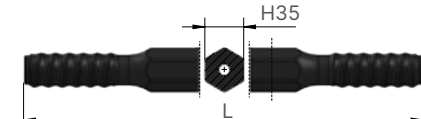
SR32(1 1/4") Rods

	mm	L ft	Thread	D mm	in	Thread	Impact type	WT kg	Product model	Part No.
	2670	8´ 9 1/8"	R32	32	1 1/4"	SR32	Bottom drive	16.7	MM R32H32SR32-2670	213234001
	2200	7´ 2 5/8"	T38	32	1 1/4"	SR32	Bottom drive	14	MM T38H32SR32-2200	213834001
	3090	10´ 1 5/8"	T38	32	1 1/4"	SR32	Bottom drive	19.7	MM T38H32SR32-3090	213834002

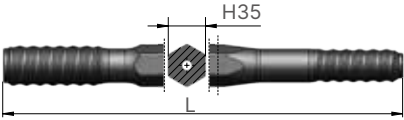
SR32(1 1/4") Bits

	D mm	Head design	Skirt design	Button No.×Size Gauge	Front	Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
	38	Flat face	Normal	5×9	2×7	40°	1F1G	0.5	B38SR32-509207-A-1	111034001C
										111034001B
										111034001P
										111034001S
	41	Flat face	Normal	6×9	3×7	40°	3F0G	0.6	B41SR32-609307-3	111034002C
										111034002B
										111034002P
										111034002S

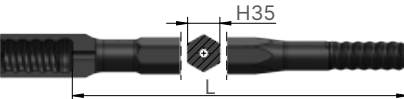
R32(1 1/4") Rods

	mm	L ft	Thread	D mm	in	Thread	Impact type	WT kg	Product model	Part No.
	2435	8´	R32	32	1 1/4"	R32	Bottom drive	15.2	MM R32H32R32-2435	213232001
	2900	9´ 6 1/8"	R32	32	1 1/4"	R32	Bottom drive	18.1	MM R32H32R32-2900	213232010
	3090	10´ 1 5/8"	R32	32	1 1/4"	R32	Bottom drive	19.4	MM R32H32R32-3090	213232011
	3700	12´ 1 5/8"	R32	32	1 1/4"	R32	Bottom drive	23.2	MM R32H32R32-3700	213232012
	4305	14´ 1 1/2"	R32	32	1 1/4"	R32	Bottom drive	27.1	MM R32H32R32-4305	213232013
	2400	7´ 10 1/2"	R38	32	1 1/4"	R32	Bottom drive	15.3	MM R38H32R32-2400	213732021
	3090	10´ 1 5/8"	R38	32	1 1/4"	R32	Bottom drive	19.1	MM R38H32R32-3090	213732023
	3700	12´ 1 5/8"	R38	32	1 1/4"	R32	Bottom drive	23.1	MM R38H32R32-3700	213732024
	4305	14´ 1 1/2"	R38	32	1 1/4"	R32	Bottom drive	27.4	MM R38H32R32-4305	213732026
	4915	16´ 1 1/2"	R38	32	1 1/4"	R32	Bottom drive	30.2	MM R38H32R32-4915	213732027
	2400	7´ 10 1/2"	T38	32	1 1/4"	R32	Bottom drive	15.3	MM T38H32R32-2400	213832021
	2475	8´ 1 1/2"	T38	32	1 1/4"	R32	Bottom drive	15.5	MM T38H32R32-2475	213832028
	3090	10´ 1 5/8"	T38	32	1 1/4"	R32	Bottom drive	19.1	MM T38H32R32-3090	213832022
	3700	12´ 1 5/8"	T38	32	1 1/4"	R32	Bottom drive	23.1	MM T38H32R32-3700	213832024
	4305	14´ 1 1/2"	T38	32	1 1/4"	R32	Bottom drive	27.4	MM T38H32R32-4305	213832025
	4915	16´ 1 1/2"	T38	32	1 1/4"	R32	Bottom drive	30.2	MM T38H32R32-4915	213832026
	5525	18´ 1 1/2"	T38	32	1 1/4"	R32	Bottom drive	34.2	MM T38H32R32-5525	213832027
	2175	7´ 1 5/8"	R32	35	1 3/8"	R32	Bottom drive	16.5	MM R32H35R32-2175	213232021
	2475	8´ 1/2"	R32	35	1 3/8"	R32	Bottom drive	18.8	MM R32H35R32-2475	213232022
	4305	14´ 1 1/2"	R32	35	1 3/8"	R32	Bottom drive	33.3	MM R32H35R32-4305	213232023

R32(1 1/4") Rods



	mm	L ft	Thread	D mm	in	Thread	Impact type	WT kg	Product model	Part No.
	3090	10´ 1 5/8"	R38	35	1 3/8"	R32	Bottom drive	24.3	MM R38H35R32-3090	213732051
	3700	12´ 1 5/8"	R38	35	1 3/8"	R32	Bottom drive	29.1	MM R38H35R32-3700	213732052
	4305	14´ 1 1/2"	R38	35	1 3/8"	R32	Bottom drive	33.8	MM R38H35R32-4305	213732053
	4915	16´ 1 1/2"	R38	35	1 3/8"	R32	Bottom drive	37.00	MM R38H35R32-4915	213732054
	5525	18´ 1 1/2"	R38	35	1 3/8"	R32	Bottom drive	42.40	MM R38H35R32-5525	213732055
	6400	21´	R38	35	1 3/8"	R32	Bottom drive	50.10	MM R38H35R32-6400	213732056
	3090	10´ 1 5/8"	T38	35	1 3/8"	R32	Bottom drive	24.0	MM T38H35R32-3090	213832001
	3700	12´ 1 5/8"	T38	35	1 3/8"	R32	Bottom drive	28.8	MM T38H35R32-3700	213832002
	4305	14´ 1 1/2"	T38	35	1 3/8"	R32	Bottom drive	33.8	MM T38H35R32-4305	213832003
	4915	16´ 1 1/2"	T38	35	1 3/8"	R32	Bottom drive	38.6	MM T38H35R32-4915	213832004
	5525	18´ 1 1/2"	T38	35	1 3/8"	R32	Bottom drive	43.4	MM T38H35R32-5525	213832005
	6095	20'	T38	35	1 3/8"	R32	Bottom drive	47.9	MM T38H35R32-6095	213832006
	6400	21´	T38	35	1 3/8"	R32	Bottom drive	50.3	MM T38H35R32-6400	213832007
	3090	10´ 1 5/8"	T38	35	1 3/8"	R32	Bottom drive	24.0	MF T38H35R32-3090	223832001
	3700	12´ 1 5/8"	T38	35	1 3/8"	R32	Bottom drive	28.8	MF T38H35R32-3700	223832002
	4305	14´ 1 1/2"	T38	35	1 3/8"	R32	Bottom drive	33.8	MF T38H35R32-4305	223832003
	4915	16´ 1 1/2"	T38	35	1 3/8"	R32	Bottom drive	38.6	MF T38H35R32-4915	223832004
	5525	18´ 1 1/2"	T38	35	1 3/8"	R32	Bottom drive	43.4	MF T38H35R32-5525	223832005
	6095	20'	T38	35	1 3/8"	R32	Bottom drive	47.9	MF T38H35R32-6095	223832006
	6400	21´	T38	35	1 3/8"	R32	Bottom drive	50.3	MF T38H35R32-6400	223832007



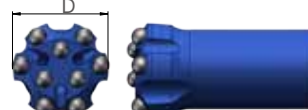
R32(1 1/4") Bits

	D mm	Head design	Skirt design	Button No. X Size Gauge Front	Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
	38	Flat face	Normal	5×9 2×7	35°	1F2G	0.5	B38R32-509207-A2-1	111031024C 111031024B 111031024P 111031024S
	41	Flat face	Normal	5×9 2×8	35°	1F2G	0.6	B41R32-509208-A2-1	111031001C 111031001B 111031001P 111031001S
	41	Flat face	Normal	5×9 2×8	35°	2F1G	0.6	B41R32-509208-A-2	111031035C 111031035B 111031035P 111031035S
	43	Flat face	Normal	5×10 2×8	35°	1F2G	0.7	B43R32-510208-A2-1	111031006C 111031006B 111031006P 111031006S
	43	Flat face	Normal	6×9 3×8	35°	3F1G	0.7	B43R32-609308-A-3	111031003C 111031003B 111031003P 111031003S
	43	Flat face	Normal	6×9 3×8	35°	3F1G	0.7	B43R32-609308-A-3-1	111031002C 111031002B 111031002P 111031002S

R32(1 1/4") Bits

	D mm	Head design	Skirt design	Button No.×Size		Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
				Gauge	Front					
	43	Flat face	Normal	6×9	3×8	35°	3F3G	0.7	B43R32-609308-A3-3	111031034C
										111031034B
										111031034P
										111031034S
	43	Flat face	Normal	6×9	3×8	35°	3F1G	0.7	B43R32-609308-A-3-2	111031007C
										111031007B
										111031007P
										111031007S
	43	Flat face	Normal	6×10	3×8	35°	3F1G	0.7	B43R32-610308-A-3	111031054C
										111031054B
										111031054P
										111031054S
	45	Flat face	Normal	5×11	2×9	35°	1F2G	0.9	B45R32-511209-A2-1-1	111031009C
										111031009B
										111031009P
										111031009S
	45	Flat face	Normal	5×11	2×9	35°	2F1G	0.9	B45R32-511209-2-A-2	111031055C
										111031055B
										111031055P
										111031055S
	45	Flat face	Normal	5×11	2×9	35°	2F1G	0.9	B45R32-511209-A-2	111031056C
										111031056B
										111031056P
										111031056S

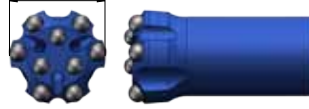
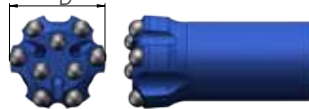
R32(1 1/4") Bits

	D mm	Head design	Skirt design	Button No.×Size		Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
				Gauge	Front					
	45	Flat face	Normal	5×11	2×9	35°	1F2G	0.9	B45R32-511209-A2-1	111031026C
										111031026B
										111031026P
										111031026S
	45	Flat face	Normal	6×10	3×8	35°	3F1G	0.9	B45R32-610308-A-3-1	111031010C
										111031010B
										111031010P
										111031010S
	45	Flat face	Normal	6×10	3×8	35°	3F1G	0.9	B45R32-610308-A-3P2	111031057C
										111031057B
										111031057P
										111031057S
	45	Flat face	Normal	6×10	3×8	35°	3F1G	0.9	B45R32-610308-1-A-3	111031058C
										111031058B
										111031058P
										111031058S
	45	Flat face	Normal	6×10	3×8	35°	3F1G	0.9	B45R32-610308-A-3-2	111031008C
										111031008B
										111031008P
										111031008S
	45	Flat face	Normal	6×10	3×8	35°	3F1G	0.9	B45R32-610308-A-3	111031059C
										111031059B
										111031059P
										111031059S

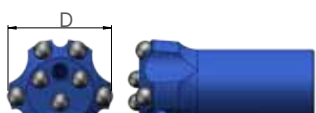
R32(1 1/4") Bits

	D mm	Head design	Skirt design	Button No.×Size		Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
				Gauge	Front					
	45	Flat face	Normal	6×10	3×9	35°	3F0G	0.9	B45R32-610309-3	111031060C
										111031060B
										111031060P
										111031060S
	45	Flat face	Normal	6×10	3×9	35°	3F3G	0.9	B45R32-610309-A3-3	111031031C
										111031031B
										111031031P
										111031031S
	45	Flat face	Retrac	6×9	3×8	35°	3F1G	0.9	B45R32-R609308-A-3	111031013C
										111031013B
										111031013P
										111031013S
	45	Flat face	Normal	6×10	3×9	35°	3F3G	0.9	B45R32-610309-A3-3-1	111031029C
										111031029B
										111031029P
										111031029S
	48	Flat face	Normal	6×10	3×9	35°	3F1G	0.9	B48R32-610309-A-3	111031061C
										111031061B
										111031061P
										111031061S
	48	Flat face	Normal	6×10	3×9	35°	3F3G	0.9	B48R32-610309-A3-3	111031025C
										111031025B
										111031025P
										111031025S

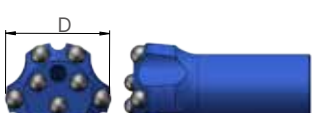
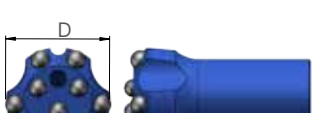
R32(1 1/4") Bits

	D mm	Head design	Skirt design	Button No.×Size		Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
				Gauge	Front					
	48	Flat face	Normal	6×11	3×9	35°	3F3G	0.9	B48R32-611309-A3-3	111031036C
										111031036B
										111031036P
										111031036S
	49	Flat face	Normal	6×11	3×9	35°	3F2G	0.9	B49R32-611309-A2-3	111031017C
										111031017B
										111031017P
										111031017S
	51	Flat face	Normal	5×11	2×10	35°	2F1G	1.0	B51R32-511210-2-A-2	111031062C
										111031062B
										111031062P
										111031062S
	51	Flat face	Normal	5×11	2×10	35°	2F1G	1.0	B51R32-511210-A-2	111031019C
										111031019B
										111031019P
										111031019S
	51	Flat face	Normal	6×10	3×9	35°	3F1G	1.0	B51R32-610309-A-3-1	111031018C
										111031018B
										111031018P
										111031018S
	51	Flat face	Normal	6×10	3×9	35°	3F1G	1.0	B51R32-610309-A-3	111031063C
										111031063B
										111031063P
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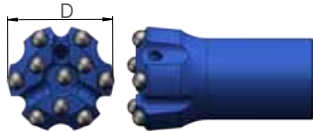
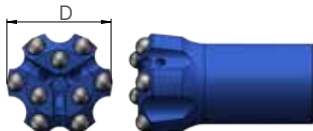
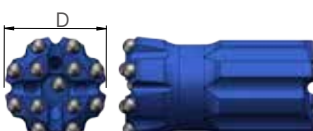
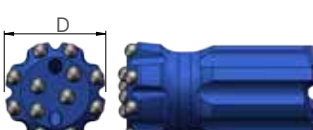
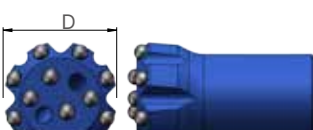
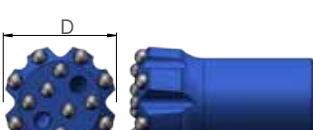
R32(1 1/4") Bits

	D mm	Head design	Skirt design	Button No.×Size		Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
				Gauge	Front					
	51	Flat face	Normal	6×11	3×9	35°	3F0G	1.0	B51R32-611309-3	111031064C
										111031064B
										111031064P
										111031064S
	51	Flat face	Normal	6×11	3×9	35°	3F3G	1.0	B51R32-611309-A3-3	111031037C
										111031037B
										111031037P
										111031037S
	51	Convex face	Normal	6×10	3×9	30°	3F1G	1.0	B51R32-C610309-A-3	111031038C
										111031038B
										111031038P
										111031038S
	51	Flat face	Retrac	6×10	3×9	35°	3F1G	1.0	B51R32-R610309-A-3	111031027C
										111031027B
										111031027P
										111031027S
	51	Flat face	Normal	6×11	3×9	35°	3F3G	1.0	B51R32-611309-A3-3-1	111031030C
										111031030B
										111031030P
										111031030S
	57	Flat face	Normal	6×10	3×9	35°	1F1G	1.2	B57R32-610309-A-1	111031065C
										111031065B
										111031065P
										111031065S

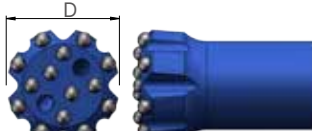
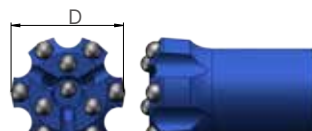
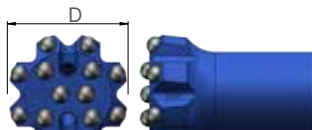
R32(1 1/4") Bits

	D mm	Head design	Skirt design	Button No.×Size		Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
				Gauge	Front					
	57	Flat face	Normal	6×11	3×9	35°	3F1G	1.2	B57R32-611309-A-3	111031021C
										111031021B
										111031021P
										111031021S
	57	Flat face	Normal	6×11	3×9	35°	3F1G	1.2	B57R32-611309-A-3-1	111031023C
										111031023B
										111031023P
										111031023S
	57	Flat face	Normal	6×11	3×10	35°	3F1G	1.2	B57R32-611310-A-3	111031066C
										111031066B
										111031066P
										111031066S
	57	Flat face	Retrac	6×11	3×10	35°	3F2G	1.2	B57R32-R611310-A2-3	111031022C
										111031022B
										111031022P
										111031022S
	64	Flat face	Normal	6×12	3×10	35°	1F2G	1.7	B64R32-612310-A2-1	111031067C
										111031067B
										111031067P
										111031067S
	64	Flat face	Normal	6×12	3×11	35°	1F2G	1.7	B64R32-612311-A2-1	111031047C
										111031047B
										111031047P
										111031047S

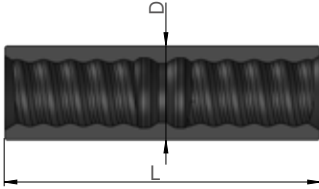
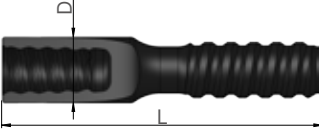
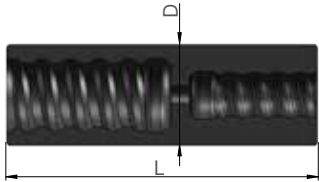
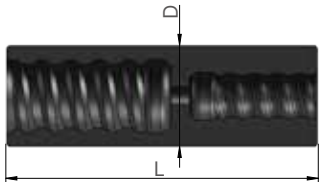
R32(1 1/4") Bits

	D mm	Head design	Skirt design	Button No.×Size Gauge Front	Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
	64	Drop center	Normal	6×11 4×10	35°	3F1G	1.7	B64R32-D611410-A-3	111031051C
									111031051B
									111031051P
									111031051S
	64	Drop center	Normal	6×12 3×11	35°	3F1G	1.7	B64R32-D612311-A-3	111031043C
									111031043B
									111031043P
									111031043S
	64	Drop center	Retrac	8×10 5×9	35°	4F0G	2.0	B64R32-DR810509-4	111031041C
									111031041B
									111031041P
									111031041S
	64	Flat face	Retrac	8×10 4×10	35°	2F0G	1.7	B64R32-R810410-2	111031042C
									111031042B
									111031042P
									111031042S
	76	Flat face	Normal	8×11 4×11	35°	2F1G	2.5	B76R32-811411-A-2	111031048C
									111031048B
									111031048P
									111031048S
	76	Flat face	Normal	8×11 6×10	35°	2F0G	2.5	B76R32-811610-2	111031069C
									111031069B
									111031069P
									111031069S

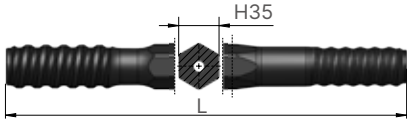
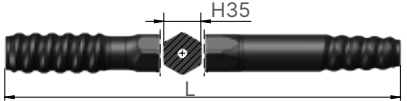
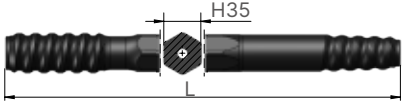
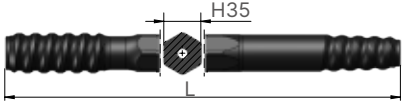
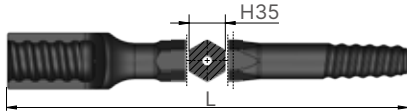
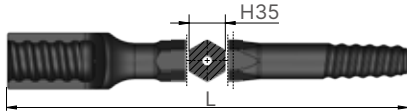
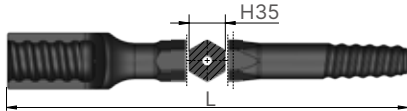
R32(1 1/4") Bits

	D mm	Head design	Skirt design	Button No.×Size Gauge Front	Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
	76	Flat face	Normal	8×11 6×10	35°	2F2G	2.5	B76R32-811610-A2-2	111031049C
									111031049B
									111031049P
									111031049S
	76	Convex face	Normal	6×13 3×13 1×13	35°	3F1G	2.5	B76R32-C613313113-A-3	111031050C
									111031050B
									111031050P
									111031050S
	76	Drop center	Normal	6×13 3×12 1×11	35°	3F1G	2.5	B76R32-D613312111-A-3	111031070C
									111031070B
									111031070P
									111031070S
	89	Flat face	Normal	8×13 6×13	35°	2F2G	3.3	B89R32-813613-A2-2	111031071C
									111031071B
									111031071P
									111031071S

R32(1 1/4") Coupling sleeves

	L mm	D mm	Thread	Adapter type	Bridge type	WT Kg	Product model	Part No.
	150	45	R32	Straight	Semi-bridge	1	LJR32-45150S	383232001
	220	45	R32-T38M	Cross over	-	1.6	LJR32/T38M-45220	363238019
	170	55	T38-R32	Cross over	Full bridge	1.80	LJT38/R32-55170F	393832025
	190	55	T38-R32	Cross over	Full bridge	2.00	LJT38/R32-55190F	393832026
	220	55	T38-R32M	Cross over	-	1.30	LJT38/R32M-55220	363832031

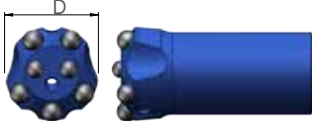
SR35(1 3/8") Rods

	mm	L ft	Thread	D mm	in	Thread	Impact type	WT kg	Product model	Part No.
	3090	10´ 1 5/8"	R38	35	1 3/8"	SR35	Bottom drive	24.3	MM R38H35SR35-3090	213735051
	3090	10´ 1 5/8"	T38	35	1 3/8"	SR35	Bottom drive	24.0	MM T38H35SR35-3090	213835001
	3700	12´ 1 5/8"	T38	35	1 3/8"	SR35	Bottom drive	29.1	MM T38H35SR35-3700	213835003
	4305	14´ 1 1/2"	T38	35	1 3/8"	SR35	Bottom drive	33.8	MM T38H35SR35-4305	213835004
	4915	16´ 1 1/2"	T38	35	1 3/8"	SR35	Bottom drive	38.6	MM T38H35SR35-4915	213835005
	5525	18´ 1 1/2"	T38	35	1 3/8"	SR35	Bottom drive	43.4	MM T38H35SR35-5525	213835006
	6400	21´	T38	35	1 3/8"	SR35	Bottom drive	50.3	MM T38H35SR35-6400	213835008
	3090	10´ 1 5/8"	T38	35	1 3/8"	SR35	Bottom drive	24.0	MF T38H35SR35-3090	223835059
	3700	12´ 1 5/8"	T38	35	1 3/8"	SR35	Bottom drive	29.1	MF T38H35SR35-3700	223835053
	4305	14´ 1 1/2"	T38	35	1 3/8"	SR35	Bottom drive	33.8	MF T38H35SR35-4305	223835054
	4915	16´ 1 1/2"	T38	35	1 3/8"	SR35	Bottom drive	38.6	MF T38H35SR35-4915	223835055
	5525	18´ 1 1/2"	T38	35	1 3/8"	SR35	Bottom drive	43.4	MF T38H35SR35-5525	223835056
	6400	21´	T38	35	1 3/8"	SR35	Bottom drive	50.3	MF T38H35SR35-6400	223835058

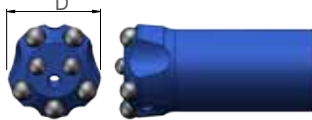
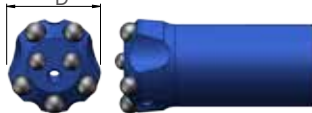
SR35(1 3/8") Bits

	D mm	Head design	Skirt design	Button No.×Size Gauge Front	Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
	43	Flat face	Normal	6×9	3×8	35°	3F1G	0.7	B43SR35-609308-A-3-1
									111035001C
									111035001B
									111035001P
									111035001S

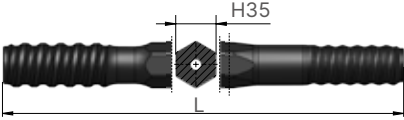
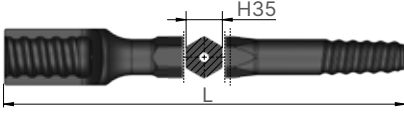
SR35(1 3/8") Bits

	D mm	Head design	Skirt design	Button No.×Size		Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
				Gauge	Front					
	43	Flat face	Normal	6×9	3×8	35°	3F1G	0.7	B43SR35-609308-1-A-3	111035002C
										111035002B
										111035002P
										111035002S
	45	Flat face	Normal	5×11	2×9	35°	1F2G	0.9	B45SR35-511209-A2-1	111035005C
										111035005B
										111035005P
										111035005S
	45	Flat face	Normal	6×10	3×8	35°	3F1G	0.9	B45SR35-610308-A-3-1	111035003C
										111035003B
										111035003P
										111035003S
	45	Flat face	Normal	6×10	3×8	35°	3F1G	0.9	B45SR35-610308-A-3	111035006C
										111035006B
										111035006P
										111035006S
	45	Flat face	Normal	6×9	3×8	35°	3F1G	0.9	B45SR35-609308-A-3	111035012C
										111035012B
										111035012P
										111035012S
	45	Flat face	Normal	6×10	3×9	35°	3F1G	0.9	B45SR35-610309-A-3	111035010C
										111035010B
										111035010P
										111035010S

SR35(1 3/8") Bits

	D mm	Head design	Skirt design	Button No.×Size		Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
				Gauge	Front					
	45	Flat face	Normal	6×10	3×9	35°	3F1G	0.9	B45SR35-610309-A-3-1	111035004C
										111035004B
										111035004P
										111035004S
	45	Flat face	Normal	6×10	3×9	35°	3F3G	0.9	B45SR35-610309-A3-3	111035011C
										111035011B
										111035011P
										111035011S
	48	Flat face	Normal	5×11	2×9	35°	1F2G	0.9	B48SR35-511209-A2-1	111035007C
										111035007B
										111035007P
										111035007S
	48	Flat face	Normal	5×11	2×10	35°	1F2G	0.9	B48SR35-511210-A2-1	111035008C
										111035008B
										111035008P
										111035008S
	51	Flat face	Normal	5×12	2×10	35°	1F2G	1.0	B51SR35-512210-A2-1	111035009C
										111035009B
										111035009P
										111035009S
	51	Flat face	Normal	6×10	3×8	35°	3F1G	1.0	B51SR35-610308-A-3	111035013C
										111035013B
										111035013P
										111035013S

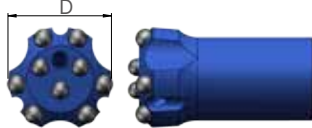
R35(1 3/8") Rods

	mm	L ft	Thread	D mm	in	Thread	Impact type	WT kg	Product model	Part No.
	3090	10´ 1⅝"	T38	35	1 3/8"	R35	Bottom drive	24.3	MM T38H35R35-3090	213833001
	3700	12´ 1⅝"	T38	35	1 3/8"	R35	Bottom drive	29.1	MM T38H35R35-3700	213833002
	4305	14´ 1½"	T38	35	1 3/8"	R35	Bottom drive	33.8	MM T38H35R35-4305	213833003
	3090	10´ 1⅝"	T38	35	1 3/8"	R35	Bottom drive	24.8	MF T38H35R35-3090	223833001
	3700	12´ 1⅝"	T38	35	1 3/8"	R35	Bottom drive	29.1	MF T38H35R35-3700	223833002
	4305	14´ 1½"	T38	35	1 3/8"	R35	Bottom drive	33.8	MF T38H35R35-4305	223833003

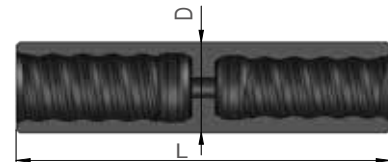
R35(1 3/8") Bits

											D mm	Head design	Skirt design	Button No.×Size Gauge Front	Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
	43	Flat face	Normal	6×9	3×8	35°	3F1G	0.7	B43R35-609308-A-3	111033001C									
										111033001B									
										111033001P									
										111033001S									
	45	Flat face	Normal	6×10	3×8	35°	3F1G	0.9	B45R35-610308-A-3	111033002C									
										111033002B									
										111033002P									
										111033002S									
	48	Flat face	Normal	6×10	3×9	35°	3F1G	0.9	B48R35-610309-A-3	111033003C									
										111033003B									
										111033003P									
										111033003S									

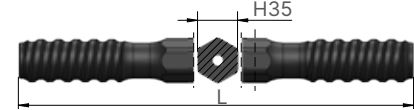
R35(1 3/8") Bits

											D mm	Head design	Skirt design	Button No.×Size Gauge Front	Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
	51	Flat face	Normal	5×12	2×10	35°	1F2G	1.0	B51R35-512210-A2-1	111033004C									
										111033004B									
										111033004P									
										111033004S									
	54	Flat face	Normal	6×11	3×9	35°	3F1G	1.0	B54R35-611309-A-3	111033007C									
										111033007B									
										111033007P									
										111033007S									
	64	Flat face	Normal	6×12	3×11	35°	1F2G	1.7	B64R35-612311-A2-1	111033005C									
										111033005B									
										111033005P									
										111033005S									

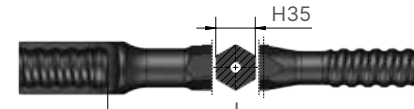
R35(1 3/8") Coupling sleeves

	L mm	D mm	Thread	Adapter type	Bridge type	WT Kg	Product model	Part No.
	160	47	R35-R32	Cross over	Full bridge	0.70	LJR35/R32-47160F	393332023

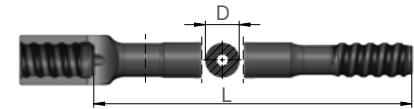
T38(1 1/2") Rods



	mm	L ft	Thread	D mm	in	Thread	Impact type	WT kg	Product model	Part No.
	3090	10'15/8"	T38	35	1 3/8"	T38	Bottom drive	24.9	MM T38H35T38-3090	213838001
	3700	12'15/8"	T38	35	1 3/8"	T38	Bottom drive	29.1	MM T38H35T38-3700	213838012
	4305	14'11/2"	T38	35	1 3/8"	T38	Bottom drive	33.8	MM T38H35T38-4305	213838006
	4915	16'11/2"	T38	35	1 3/8"	T38	Bottom drive	39.1	MM T38H35T38-4915	213838013
	5525	18'11/2"	T38	35	1 3/8"	T38	Bottom drive	43.9	MM T38H35T38-5525	213838010
	6400	21'	T38	35	1 3/8"	T38	Bottom drive	50.8	MM T38H35T38-6400	213838011

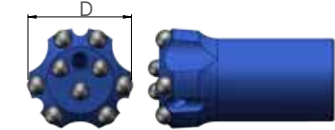
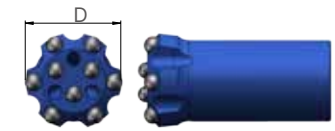
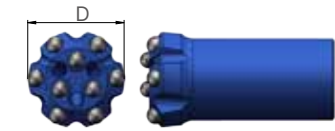
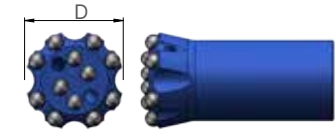
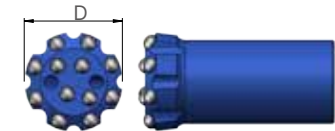
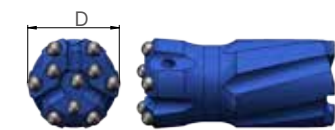


	3090	10'15/8"	T38	35	1 3/8"	T38	Bottom drive	24.9	MF T38H35T38-3090	223838001
	3700	12'15/8"	T38	35	1 3/8"	T38	Bottom drive	29.1	MF T38H35T38-3700	223838010
	4305	14'11/2"	T38	35	1 3/8"	T38	Bottom drive	33.8	MF T38H35T38-4305	223838011
	4915	16'11/2"	T38	35	1 3/8"	T38	Bottom drive	39.1	MF T38H35T38-4915	223838012
	5525	18'11/2"	T38	35	1 3/8"	T38	Bottom drive	43.9	MF T38H35T38-5525	223838013
	6400	21'	T38	35	1 3/8"	T38	Bottom drive	50.8	MF T38H35T38-6400	223838014



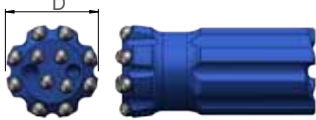
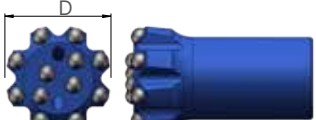
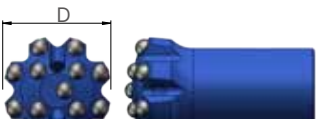
	4305	14'11/2"	T38	39	1 1/2"	T38	Bottom drive	34.2	MF T38D39T38-4305	223838015
	4915	16'11/2"	T38	39	1 1/2"	T38	Bottom drive	39.2	MF T38D39T38-4915	223838016
	5525	18'11/2"	T38	39	1 1/2"	T38	Bottom drive	44.1	MF T38D39T38-5525	223838017
	6400	21'	T38	39	1 1/2"	T38	Bottom drive	51.2	MF T38D39T38-6400	223838018

T38(1 1/2") Bits

	D mm	Head design	Skirt design	Button No. X Size Gauge Front	Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
	64	Flat face	Normal	6×12 3×11	35°	1F2G	1.7	B64T38-612311-A2-1	111038023C 111038023B 111038023P 111038023S
	64	Flat face	Normal	6×12 3×11	35°	3F0G	1.7	B64T38-612311-3	111038001C 111038001B 111038001P 111038001S
	64	Drop center	Normal	6×12 3×11	35°	3F0G	1.7	B64T38-612311-3-1	111038024C 111038024B 111038024P 111038024S
	64	Flat face	Normal	8×11 4×10	35°	2F2G	1.7	B64T38-811410-A2-2	111038025C 111038025B 111038025P 111038025S
	64	Flat face	Normal	8×11 4×10	35°	2F0G	1.7	B64T38-811410-2-1	111038006C 111038006B 111038006P 111038006S
	64	Drop center	Retrac	6×11 4×10	35°	3F1G	2.0	B64T38-DR611410-X-A-3	111038026C 111038026B 111038026P 111038026S

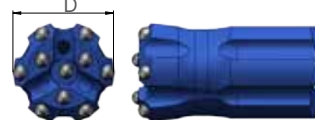
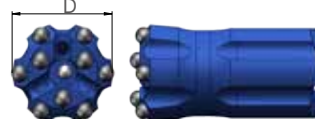
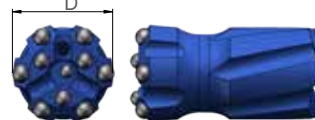
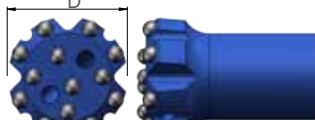
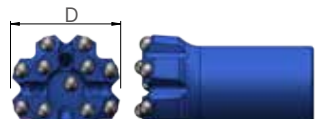
T38(1 1/2") Bits



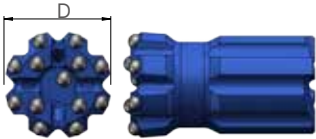
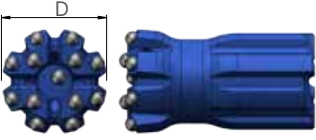
	D mm	Head design	Skirt design	Button No.×Size Gauge Front	Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
	64	Flat center	Retrac	6×12 3×11	35°	3F0G	2.0	B64T38-R612311-3-1	111038007C
									111038007B
									111038007P
									111038007S
	64	Drop center	Retrac	8×10 5×10	35°	4F0G	2.0	B64T38-DR810510-4	111038013C
									111038013B
									111038013P
									111038013S
	64	Flat face	Retrac	8×10 5×10	35°	2F0G	2.0	B64T38-R810510-2	111038010C
									111038010B
									111038010P
									111038010S
	64	Flat face	Retrac	8×11 4×10	35°	2F0G	2.0	B64T38-R811410-2	111038022C
									111038022B
									111038022P
									111038022S
	76	Flat face	Normal	8×13 4×12	35°	2F0G	2.5	B76T38-813412-2	111038021C
									111038021B
									111038021P
									111038021S
	76	Convex face	Normal	8×13 5×12	35°	2F0G	2.5	B76T38-C813512-2	111038020C
									111038020B
									111038020P
									111038020S

T38(1 1/2") Bits

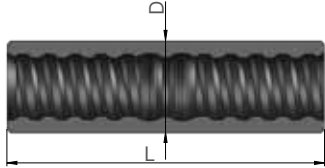
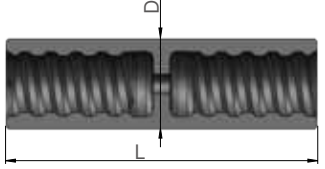
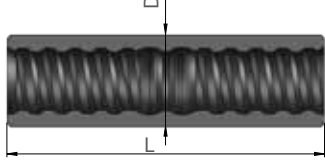
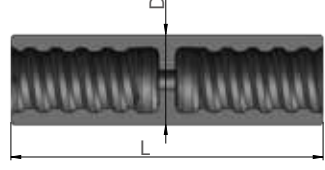


	D mm	Head design	Skirt design	Button No.×Size Gauge Front	Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
	76	Drop center	Retrac	6×12 4×11	40°	3F0G	3.3	B76T38-DR612411-3	111038015C
									111038015B
									111038015P
									111038015S
	76	Drop center	Retrac	6×13 3×12 1×11	35°	3F0G	3.3	B76T38-DR613312111-3	111038017C
									111038017B
									111038017P
									111038017S
	76	Drop center	Retrac	6×14 3×12 1×10	35°	3F1G	3.3	B76T38-DR614312110-X-A-3	111038028C
									111038028B
									111038028P
									111038028S
	76	Drop center	Retrac	8×12 5×11	35°	4F0G	3.3	B76T38-DR812511-4	111038016C
									111038016B
									111038016P
									111038016S
	89	Flat face	Normal	8×13 5×12	35°	2F0G	3.3	B89T38-813512-2	111038038C
									111038038B
									111038038P
									111038038S
	89	Drop center	Normal	8×13 5×12	35°	4F0G	3.3	B89T38-D813512-4	111038037C
									111038037B
									111038037P
									111038037S

T38(1 1/2") Bits

	D mm	Head design	Skirt design	Button No.×Size Gauge Front	Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
	89	Drop center	Retrac	8×13 5×12	35°	4F0G	5.0	B89T38-DR813512-4	111038033C
									111038033B
									111038033P
									111038033S
	89	Drop center	Retrac	8×13 5×13	35°	4F2G	5.0	B89T38-DR813513-A2-4	111038036C
									111038036B
									111038036P
									111038036S

T38(1 1/2") Coupling sleeves

	L mm	D mm	Thread	Adapter type	Bridge type	WT Kg	Product model	Part No.
	190	55	T38	Straight	Semi-bridge	2.00	LJT38-55190S	383838034
	190	55	T38	Straight	Full bridge	2.00	LJT38-55190F	393838037
	190	55	T38-R38	Cross over	Semi-bridge	2.00	LJT38/R38-55190S	383837032
	190	55	T38-R38	Cross over	Full bridge	2.00	LJT38/R38-55190F	393837035

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with precise, efficient energy transfer at every impact

R32 T35 T38 T45 T51 ST58 ST68

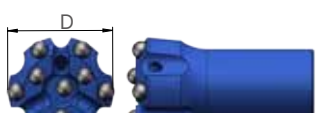
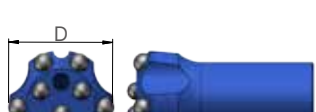


R32(1 1/4") Rods

	mm	L ft	Thread	mm	D in	Thread	Impact type	WT kg	Product model	Part No.
	915	3'	R32	32	1 1/4"	R32	Bottom drive	5.3	MM R32D32R32-915	213232002
	1220	4'	R32	32	1 1/4"	R32	Bottom drive	7.1	MM R32D32R32-1220	213232003
	1525	5'	R32	32	1 1/4"	R32	Bottom drive	8.9	MM R32D32R32-1525	213232004
	1830	6'	R32	32	1 1/4"	R32	Bottom drive	10.7	MM R32D32R32-1830	213232005
	2435	8'	R32	32	1 1/4"	R32	Bottom drive	14.2	MM R32D32R32-2435	213232006
	915	3'	R32	32	1 1/4"	R32	Bottom drive	5.3	MF R32D32R32-915	223232002
	1220	4'	R32	32	1 1/4"	R32	Bottom drive	7.1	MF R32D32R32-1220	223232003
	1525	5'	R32	32	1 1/4"	R32	Bottom drive	8.9	MF R32D32R32-1525	223232004
	1830	6'	R32	32	1 1/4"	R32	Bottom drive	10.7	MF R32D32R32-1830	223232005
	2435	8'	R32	32	1 1/4"	R32	Bottom drive	14.2	MF R32D32R32-2435	223232006
	1220	4'	R32	46	1 3/4"	R32	Bottom drive	13.5	MF R32D46R32-1220	273232015
	1525	5'	R32	46	1 3/4"	R32	Bottom drive	16.9	MF R32D46R32-1525	273232016
	1830	6'	R32	46	1 3/4"	R32	Bottom drive	20.3	MF R32D46R32-1830	273232017

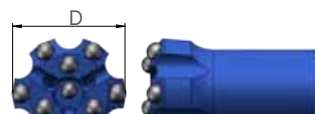
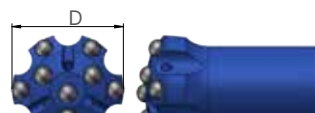
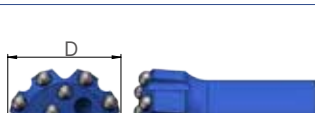
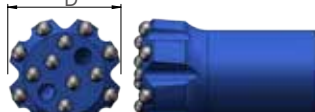
R32(1 1/4")

Bits

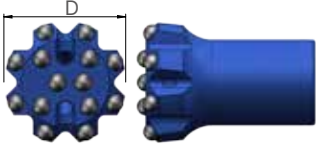
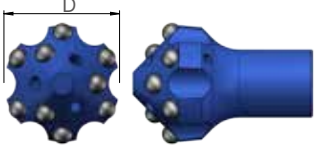
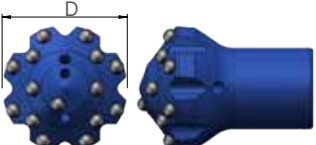
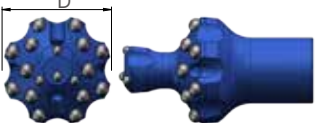
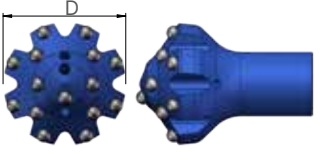
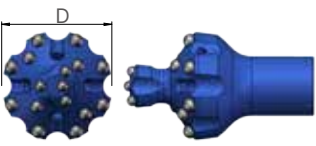
	D mm	Head design	Skirt design	Button No.×Size Gauge	Front	Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
	51	Flat face	Normal	6×10	3×9	35°	3F1G	1.0	B51R32-610309-A-3	111032018C
										111032018P
										111032018S
	51	Flat face	Normal	5×11	2×10	35°	2F1G	1.0	B51R32-511210-A-2	111032019C
										111032019P
										111032019S
	57	Flat face	Normal	6×11	3×9	35°	3F1G	1.2	B57R32-611309-A-3	111032021C
										111032021P
										111032021S
	57	Flat face	Retrac	6×11	3×10	35°	3F2G	1.4	B57R32-R611310-A2-3	111032022C
										111032022P
										111032022S
	64	Drop center	Normal	6×11	4×10	35°	3F1G	1.7	B64R32-D611410-A-3	111032051C
										111032051B
										111032051P
										111032051S
	64	Flat face	Normal	6×12	3×11	35°	1F2G	1.7	B64R32-612311-A2-1	111032047C
										111032047B
										111032047P
										111032047S
	64	Flat face	Normal	6×12	3×11	35°	3F1G	1.7	B64R32-612311-A-3	111032043C
										111032043B
										111032043P
										111032043S

R32(1 1/4")

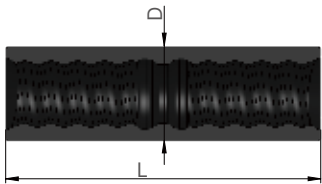
Bits

	D mm	Head design	Skirt design	Button No.×Size Gauge	Front	Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
	64	Flat face	Normal	8×10	4×10	35°	2F0G	1.7	B64R32-R810410-2	111032040C
										111032040B
										111032040P
	64	Drop center	Retrac	8×10	5×9	35°	4F0G	2.0	B64R32-DR810509-4	111032040S
										111032041C
										111032041B
	64	Drop center	Retrac	8×10	5×9	35°	4F0G	2.0	B64R32-DR810509-4	111032041P
										111032041S
										111032041S
	76	Drop center	Normal	6×13	3×12 1×11	35°	3F1G	2.5	B76R32-D613312111-A-3	111032045C
										111032045B
										111032045P
										111032045S
	76	Convex face	Normal	6×13	3×13 1×13	35°	3F1G	2.5	B76R32-C613313113-A-3	111032045S
										111032050C
										111032050B
										111032050P
	76	Flat face	Normal	8×11	4×11	35°	2F1G	2.5	B76R32-811411-A-2	111032050S
										111032048C
										111032048B
										111032048P
	76	Flat face	Normal	8×11	6×10	35°	2F2G	2.5	B76R32-811610-A2-2	111032048S
										111032049C
										111032049B
										111032049P
	76	Flat face	Normal	8×11	6×10	35°	2F2G	2.5	B76R32-811610-A2-2	111032049S
										111032049B
										111032049P

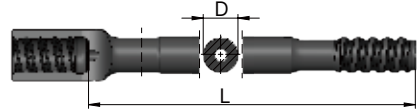
R32(1 1/4") Bits

	D mm	Head design	Skirt design	Button No.×Size Gauge Front		Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
	89	Flat face	Normal	8×13	6×13	35°	2F2G	3.3	B89R32-813613-A2-2	111032053C
										111032053B
										111032053P
										111032053S
	76	-	Normal	6×13	3×13	35°	3F1G	1.7	DB76R32-613313-A-3	115032001P
										115032001S
	76	-	Normal	8×11	4×11 4×9	35°	2F0G	2.0	RB76/40R32-811411/409-2	113032001P
										113032001S
	89	-	Normal	8×11	6×11 1×10	35°	3F2G	2.9	DB89R32-811611110-A2-3	115032002P
										115032002S
	89	-	Normal	8×12	6×12 4×8	35°	2F0G	2.8	RB89/40R32-812612/408-2	113032002P
										113032002S
	102	-	Normal	8×12	4×12 3×12	35°	3F2G	3.7	DB102R32-812412312-A2-3	115032003P
										115032003S
	102	-	Normal	8×13	4×12 4×10	35°	4F2G	3.9	RB102/40R32-813412/410-A2-4	113032003P
										113032003S

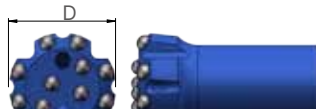
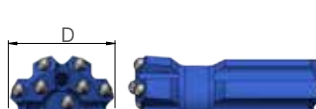
R32(1 1/4") Coupling sleeves

	L mm	D mm	Thread	Adapter type	Bridge type	WT Kg	Product model	Part No.
	160	45	R32	Straight	Semi-bridge	1.3	LJR32-45160S	383232001

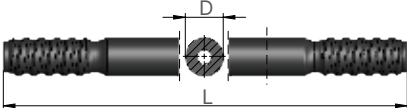
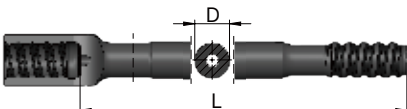
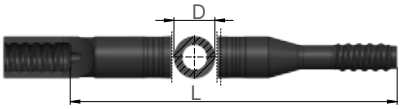
T35(1 3/8") Rods

	L mm	L ft	Thread	D mm	D in	Thread	Impact type	WT kg	Product model	Part No.
	915	3'	T35	39	1 1/2"	T35	Bottom drive	7.3	MF T35D39T35-915	223636002
	1220	4'	T35	39	1 1/2"	T35	Bottom drive	9.8	MF T35D39T35-1220	223636003
	1525	5'	T35	39	1 1/2"	T35	Bottom drive	12.2	MF T35D39T35-1525	223636004
	1830	6'	T35	39	1 1/2"	T35	Bottom drive	14.7	MF T35D39T35-1830	223636005
	2435	8'	T35	39	1 1/2"	T35	Bottom drive	19.5	MF T35D39T35-2435	223636006

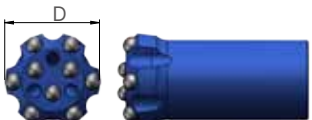
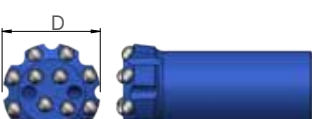
T35(1 3/8") Bits

	D mm	Head design	Skirt design	Button No.×Size Gauge Front	Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
	64	Flat face	Normal	6×12 3×11	35°	1F2G	1.7	B64T35-612311-A2-1	11136001C
									11136001B
									11136001P
									11136001S
	64	Flat face	Normal	6×12 3×11	35°	3F0G	1.8	B64T35-612311-3	11136002C
									11136002B
									11136002P
									11136002S
	76	Flat face	Normal	8×12 4×11	35°	2F0G	2.5	B76T35-812411-2	11136003C
									11136003B
									11136003P
									11136003S
	76	Drop center	Retrac	6×12 4×11	40°	3F0G	3.3	B76T35-DR612411-3	11136004C
									11136004B
									11136004P
									11136004S
	89	Flat face	Normal	8×13 5×12	35°	2F0G	3.3	B89T35-813512-2	11136005C
									11136005B
									11136005P
									11136005S
	89	Drop center	Retrac	8×12 5×12	35°	4F0G	5.0	B89T35-DR812512-4	11136006C
									11136006B
									11136006P
									11136006S

T38(1 1/2") Rods

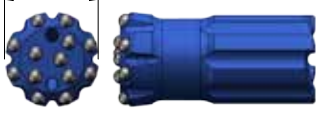
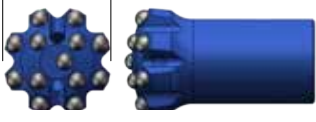
	mm	L ft	Thread	mm	D in	Thread	Impact type	WT kg	Product model	Part No.
	915	3'	T38	39	1 1/2"	T38	Bottom drive	7.3	MM T38D39T38-915	213838002
	1220	4'	T38	39	1 1/2"	T38	Bottom drive	9.8	MM T38D39T38-1220	213838003
	1525	5'	T38	39	1 1/2"	T38	Bottom drive	12.2	MM T38D39T38-1525	213838004
	1830	6'	T38	39	1 1/2"	T38	Bottom drive	14.7	MM T38D39T38-1830	213838005
	2435	8'	T38	39	1 1/2"	T38	Bottom drive	19.5	MM T38D39T38-2435	213838006
	915	3'	T38	39	1 1/2"	T38	Bottom drive	7.3	MF T38D39T38-915	223838002
	1220	4'	T38	39	1 1/2"	T38	Bottom drive	9.8	MF T38D39T38-1220	223838003
	1525	5'	T38	39	1 1/2"	T38	Bottom drive	12.2	MF T38D39T38-1525	223838004
	1830	6'	T38	39	1 1/2"	T38	Bottom drive	14.7	MF T38D39T38-1830	223838005
	2435	8'	T38	39	1 1/2"	T38	Bottom drive	19.5	MF T38D39T38-2435	223838006
	1220	4'	T38	56	2 13/64"	T38	Bottom drive	13.8	MF T38D56T38-1220	273838015
	1525	5'	T38	56	2 13/64"	T38	Bottom drive	17.2	MF T38D56T38-1525	273838016
	1830	6'	T38	56	2 13/64"	T38	Bottom drive	20.7	MF T38D56T38-1830	273838017

T38(1 1/2") Bits

	D mm	Head design	Skirt design	Button No.×Size		Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
				Gauge	Front					
	64	Flat face	Normal	6×12	3×11	35°	1F2G	1.7	B64T38-612311-A2-1	111038023C
										111038023B
										111038023P
										111038023S
	64	Flat face	Normal	6×12	3×11	35°	3F0G	1.7	B64T38-612311-3	111038001C
										111038001B
										111038001P
										111038001S
	64	Flat face	Normal	6×12	3×11	35°	3F0G	1.7	B64T38-612311-3-1	111038024C
										111038024B
										111038024P
										111038024S
	64	Flat face	Normal	8×11	4×10	35°	2F2G	1.7	B64T38-811410-A2-2	111038025C
										111038025B
										111038025P
										111038025S
	64	Flat face	Normal	8×11	4×10	35°	2F0G	1.7	B64T38-811410-2-1	111038006C
										111038006B
										111038006P
										111038006S
	64	Drop center	Retrac	6×11	4×10	35°	3F1G	2.0	B64T38-DR611410-X-A-3	111038026C
										111038026B
										111038026P
										111038026S

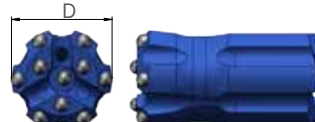
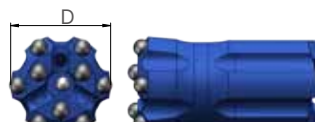
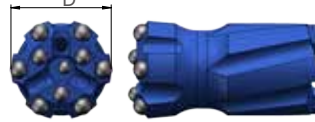
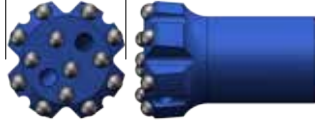
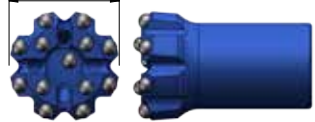
T38(1 1/2")

Bits

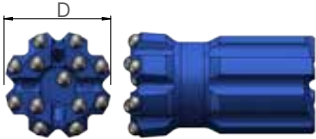
		D mm	Head design	Skirt design	Button No.×Size		Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
					Gauge	Front					
		64	Flat face	Retrac	6×12	3×11	35°	3F0G	2.0	B64T38-R612311-3	111038007C
											111038007B
											111038007P
											111038007S
		64	Drop center	Retrac	8×10	5×10	35°	4F0G	2.0	B64T38-DR810510-4	111038013C
											111038013B
											111038013P
											111038013S
		64	Flat face	Retrac	8×10	5×10	35°	2F0G	2.0	B64T38-R810510-2	111038010C
											111038010B
											111038010P
											111038010S
		64	Flat face	Retrac	8×11	4×10	35°	2F0G	2.0	B64T38-R811410-2	111038022C
											111038022B
											111038022P
											111038022S
		76	Flat face	Normal	8×13	4×12	35°	2F0G	2.5	B76T38-813412-2	111038021C
											111038021B
											111038021P
											111038021S
		76	Convex face	Normal	8×13	5×12	35°	2F0G	2.5	B76T38-C813512-2	111038020C
											111038020B
											111038020P
											111038020S

T38(1 1/2")

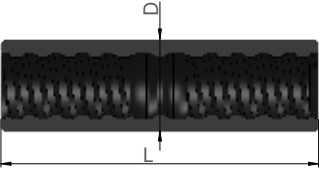
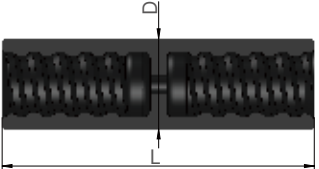
Bits

		D mm	Head design	Skirt design	Button No.×Size		Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
					Gauge	Front					
		76	Drop center	Retrac	6×12	4×11	40°	3F0G	3.3	B76T38-DR612411-3	111038015C
											111038015B
											111038015P
											111038015S
		76	Drop center	Retrac	6×13	3×12 1×11	35°	3F0G	3.3	B76T38-DR613312111-3	111038017C
											111038017B
											111038017P
											111038017S
		76	Drop center	Retrac	6×14	3×12 1×10	35°	3F1G	3.3	B76T38- DR614312110-X-A-3	111038028C
											111038028B
											111038028P
											111038028S
		76	Drop center	Retrac	8×12	5×11	35°	4F0G	3.3	B76T38-DR812511-4	111038016C
											111038016B
											111038016P
											111038016S
		89	Flat face	Normal	8×13	5×12	35°	2F0G	3.3	B89T38-813512-2	111038038C
											111038038B
											111038038P
											111038038S
		89	Drop center	Normal	8×13	5×12	35°	4F0G	3.3	B89T38-D813512-4	111038037C
											111038037B
											111038037P
											111038037S

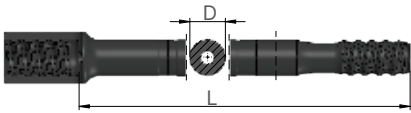
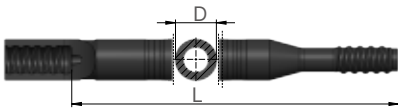
T38(1 1/2") Bits

	D mm	Head design	Skirt design	Button No.×Size Gauge Front		Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
	89	Drop center	Retrac	8×13	5×12	35°	4F0G	5.0	B89T38-DR813512-4	111038033C
										111038033B
										111038033P
										111038033S
	89	Drop center	Retrac	8×13	5×13	35°	4F2G	5.0	B89T38-DR813513-A2-4	111038036C
										111038036B
										111038036P
										111038036S

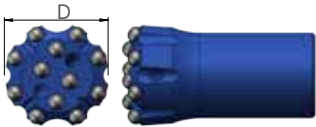
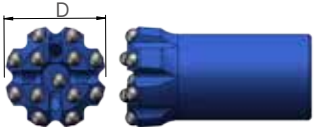
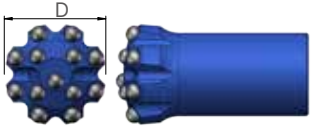
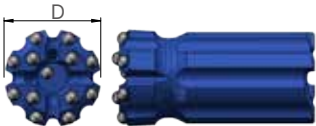
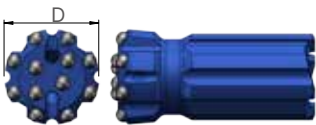
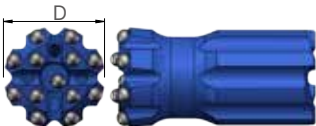
T38(1 1/2") Coupling sleeves

	L mm	D mm	Thread	Adapter type	Bridge type	WT Kg	Part No.	Part No.
	190	55	T38	Straight	Semi-bridge	1.9	LJT38-55190S	383838034
	190	55	T38	Straight	Full bridge	1.9	LJT38-55190F	393838037

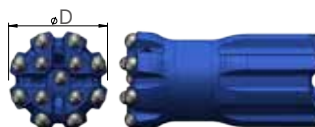
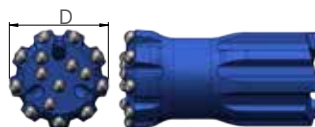
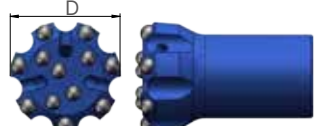
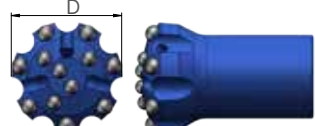
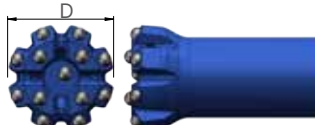
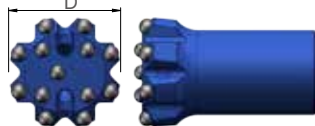
T45(1 3/4") Rods

	mm	L ft	Thread	D mm	in	Thread	Impact type	WT kg	Product model	Part No.
	915	3'	T45	46	1 3/4"	T45	Bottom drive	10.1	MF T45D46T45-915	224545002
	1220	4'	T45	46	1 3/4"	T45	Bottom drive	13.5	MF T45D46T45-1220	224545003
	1525	5'	T45	46	1 3/4"	T45	Bottom drive	16.9	MF T45D46T45-1525	224545004
	1830	6'	T45	46	1 3/4"	T45	Bottom drive	20.3	MF T45D46T45-1830	224545005
	2435	8'	T45	46	1 3/4"	T45	Bottom drive	27.0	MF T45D46T45-2435	224545006
	1220	4'	T45	65	2 5/9"	T45	Bottom drive	19.0	MF T45D65T45-1220	274545015
	1525	5'	T45	65	2 5/9"	T45	Bottom drive	23.8	MF T45D65T45-1525	274545016
	1830	6'	T45	65	2 5/9"	T45	Bottom drive	28.5	MF T45D65T45-1830	274545017

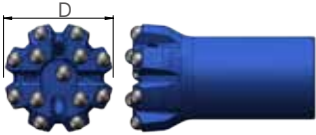
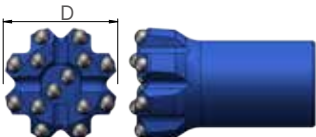
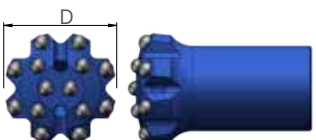
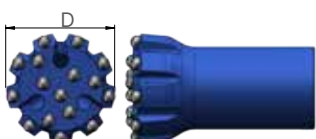
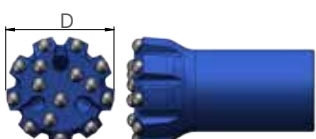
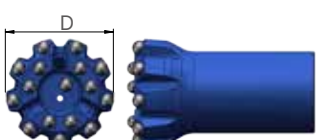
T45(1 3/4") Bits

	D mm	Head design	Skirt design	Button No.×Size		Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
				Gauge	Front					
	76	Flat face	Normal	8×12	4×12	35°	2F1G	2.5	B76T45-812412-A-2	111045015C
										111045015B
										111045015P
										111045015S
	76	Drop center	Normal	8×12	5×11	35°	4F0G	2.5	B76T45-D812511-4	111045003C
										111045003B
										111045003P
										111045003S
	76	Convex face	Normal	8×13	5×12	35°	2F0G	2.5	B76T45-C813512-2	111045009C
										111045009B
										111045009P
										111045009S
	76	Drop center	Retrac	8×11	4×11 1×10	35°	4F0G	3.3	B76T45-DR811411110-4	111045010C
										111045010B
										111045010P
										111045010S
	76	Flat face	Retrac	8×12	4×12	35°	2F2G	3.3	B76T45-R812412-A2-2	111045016C
										111045016B
										111045016P
										111045016S
	76	Drop center	Retrac	8×12	5×11	35°	4F1G	3.3	B76T45-DR812511-A-4	111045018C
										111045018B
										111045018P
										111045018S

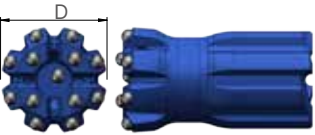
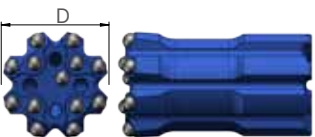
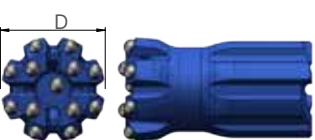
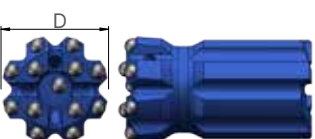
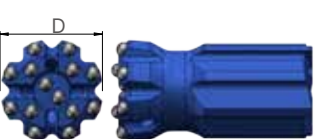
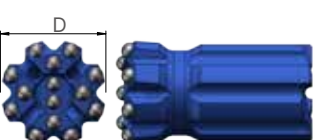
T45(1 3/4") Bits

	D mm	Head design	Skirt design	Button No.×Size		Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
				Gauge	Front					
	76	Drop center	Retrac	8×13	5×11	35°	4F2G	3.3	B76T45-DR813511-A2-4	111045011C
										111045011B
										111045011P
										111045011S
	76	Flat face	Retrac	9×11	6×10	35°	3F0G	3.3	B76T45-R911610-3	111045014C
										111045014B
										111045014P
										111045014S
	89	Flat face	Normal	7×14	5×12	35°	3F1G	3.6	B89T45-714512-A-3	111045024C
										111045024B
										111045024P
										111045024S
	89	Convex face	Normal	7×14	5×12	35°	3F1G	3.6	B89T45-C714512-A-3	111045025C
										111045025B
										111045025P
										111045025S
	89	Drop center	Normal	8×12	5×12	35°	4F2G	3.6	B89T45-D812512-A2-4	111045035C
										111045035B
										111045035P
										111045035S
	89	Flat face	Normal	8×13	5×12	35°	2F2G	3.6	B89T45-813512-A2-2	111045028C
										111045028B
										111045028P

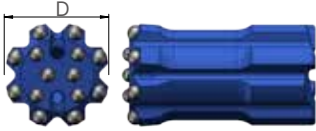
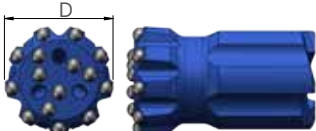
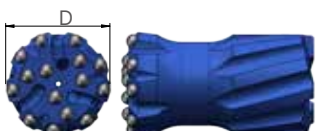
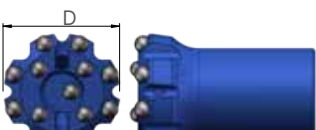
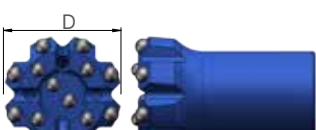
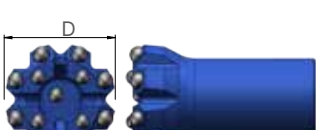
T45(1 3/4") Bits

	D mm	Head design	Skirt design	Button No.×Size		Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
				Gauge	Front					
	89	Drop center	Normal	8×13	5×13	35°	4F2G	3.6	B89T45-D813513-A2-4	111045037C
										111045037B
										111045037P
										111045037S
	89	Drop center	Normal	8×13	6×12	35°	4F0G	3.6	B89T45-D813612-4	111045022C
										111045022B
										111045022P
										111045022S
	89	Convex face	Normal	8×13	6×12	35°	2F2G	3.6	B89T45-C813612-A2-2	111045027C
										111045027B
										111045027P
										111045027S
	89	Flat face	Normal	9×11	7×11	35°	3F0G	3.6	B89T45-911711-3	111045036C
										111045036B
										111045036P
										111045036S
	89	Flat face	Normal	9×12	6×12	35°	3F0G	3.6	B89T45-912612-3	111045047C
										111045047B
										111045047P
										111045047S
	89	Drop center	Normal	9×12	7×11	35°	4F0G	3.6	B89T45-D912711-4	111045045C
										111045045B
										111045045P
										111045045S

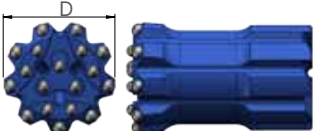
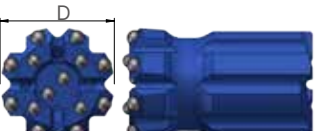
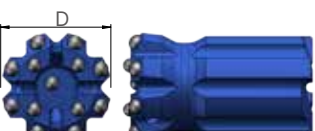
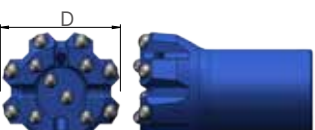
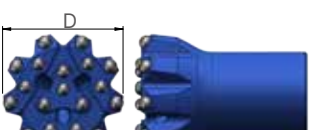
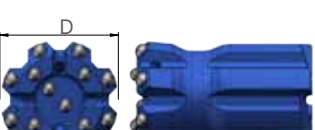
T45(1 3/4") Bits

	D mm	Head design	Skirt design	Button No.×Size		Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
				Gauge	Front					
	89	Drop center	Retrac	8×12	5×12	35°	4F2G	4.7	B89T45- DR812512-A2-4	111045034C
										111045034B
										111045034P
										111045034S
	89	Drop center	Retrac	8×13	5×12	35°	4F0G	4.7	B89T45-DR813512-4	111045021C
										111045021B
										111045021P
										111045021S
	89	Drop center	Retrac	8×13	5×13	35°	4F1G	4.7	B89T45- DR813513-A-4	111045030C
										111045030B
										111045030P
										111045030S
	89	Drop center	Retrac	8×13	5×13	35°	4F2G	4.7	B89T45- DR813513-A2-4-1	111045029C
										111045029B
										111045029P
										111045029S
	89	Drop center	Retrac	8×13	6×12	35°	4F1G	4.7	B89T45- DR813612-L-A-4	111045041C
										111045041B
										111045041P
										111045041S
	89	Drop center	Retrac	8×14	4×13 2×12	35°	4F1G	4.7	B89T45- DR814413212-A-4	111045026C
										111045026B
										111045026P
										111045026S

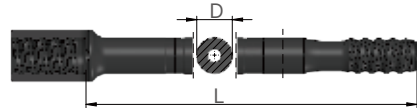
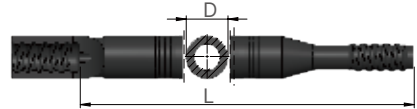
T45(1 3/4") Bits

	D mm	Head design	Skirt design	Button No.×Size		Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
				Gauge	Front					
	89	Flat face	Retrac	8×14	6×12	35°	2F0G	4.7	B89T45-R814612-A2-2	111045038C
										111045038B
										111045038P
										111045038S
	89	Flat face	Retrac	9×12	6×12	35°	3F0G	4.7	B89T45-R912612-3	111045023C
										111045023B
										111045023P
										111045023S
	89	Flat face	Retrac	9×12	6×12	35°	3F0G	4.7	B89T45-R912612-X-3	111045033C
										111045033B
										111045033P
										111045033S
	102	Drop center	Normal	8×14	5×14	35°	2F2G	5.5	B102T45-D816514-A2-2	111045052C
										111045052B
										111045052P
										111045052S
	102	Drop center	Normal	8×14	6×12	35°	4F0G	5.5	B102T45-D814612-4	111045049C
										111045049B
										111045049P
										111045049S
	102	Drop center	Normal	8×16	5×13	35°	4F2G	5.5	B102T45-D816513-A2-4	111045055C
										111045055B
										111045055P
										111045055S

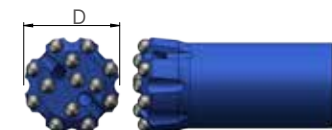
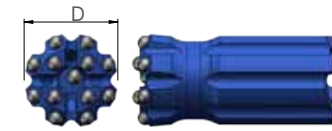
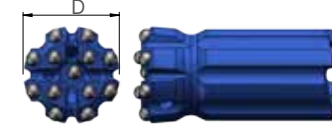
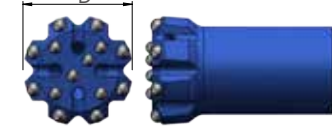
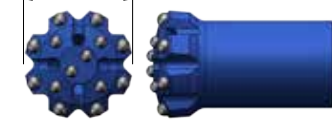
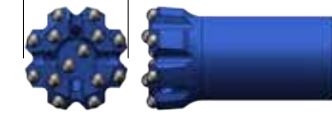
T45(1 3/4") Bits

	D mm	Head design	Skirt design	Button No.×Size		Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
				Gauge	Front					
	102	Flat face	Retrac	9×13	9×11	35°	3F0G	7.0	B102T45-R913911-3	111045051C
										111045051B
										111045051P
										111045051S
	102	Drop center	Retrac	8×14	6×12	35°	4F0G	7.0	B102T45-DR814612-4	111045050C
										111045050B
										111045050P
										111045050S
	102	Drop center	Retrac	8×15	5×13	35°	4F2G	7.0	B102T45-DR815513-A2-4	111045056C
										111045056B
										111045056P
										111045056S
	115	Drop center	Normal	8×15	6×13	35°	4F2G	6.2	B115T45-D815613-A2-4	111045054C
										111045054B
										111045054P
										111045054S
	115	Flat face	Normal	9×14	10×12	35°	3F1G	6.2	B115T45-9141012-A-3	111045057C
										111045057B
										111045057P
										111045057S
	115	Drop center	Retrac	8×15	6×13	35°	4F2G	9.5	B115T45-DR815613-A2-4	111045053C
										111045053B
										111045053P
										111045053S

T51(2") Rods

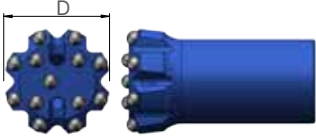
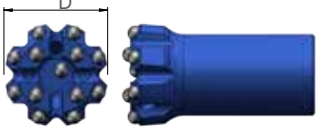
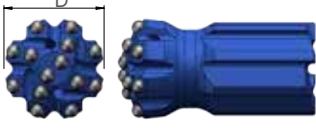
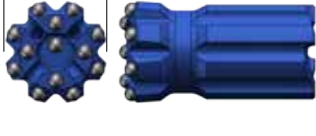
	L		Thread	D		Thread	Impact type	WT kg	Product model	Part No.
	mm	ft		mm	in					
	915	3'	T51	52	2"	T51	Bottom drive	12.6	MF T51D52T51-915	225151002
	1220	4'	T51	52	2"	T51	Bottom drive	16.7	MF T51D52T51-1220	225151003
	1525	5'	T51	52	2"	T51	Bottom drive	20.9	MF T51D52T51-1525	225151004
	1830	6'	T51	52	2"	T51	Bottom drive	25.1	MF T51D52T51-1830	225151005
	2435	8'	T51	52	2"	T51	Bottom drive	33.4	MF T51D52T51-2435	225151006
										
	1830	6'	T51	76	3"	T51	Bottom drive	35.7	MF T51D76T51-1830	275151017

T51(2") Bits

	D mm	Head design	Skirt design	Button No. X Size		Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
				Gauge	Front					
	76	Flat face	Normal	8×12	5×11	35°	2F2G	2.5	B76T51-812511-A2-2	111051002C
										111051002B
										111051002P
										111051002S
	76	Drop center	Retrac	8×12	5×11	35°	4F0G	3.3	B76T51-DR812511-4	111051001C
										111051001B
										111051001P
										111051001S
	76	Drop center	Retrac	8×12	5×11	35°	4F2G	3.3	B76T51-DR812511-A2-4	111051003C
										111051003B
										111051003P
										111051003S
	89	Flat face	Normal	8×12	6×10	35°	4F0G	3.3	B89T51-812610-4	111051016C
										111051016B
										111051016P
										111051016S
	89	Convex face	Normal	8×12	6×10	35°	4F0G	3.3	B89T51-C812610-4	111051017C
										111051017B
										111051017P
										111051017S
	89	Drop center	Normal	8×12	6×12	35°	4F2G	3.3	B89T51-D812612-A2-4	111051040C
										111051040B
										111051040P
										111051040S

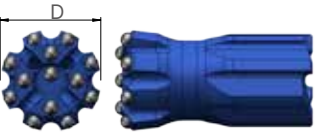
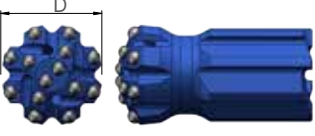
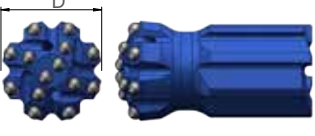
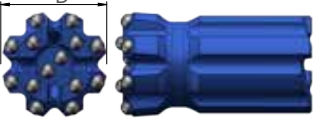
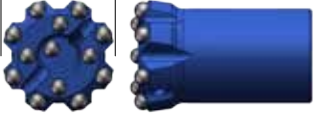
T51(2")

Bits

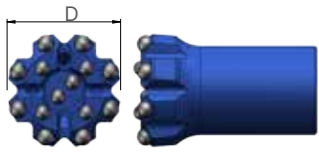
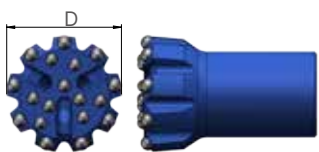
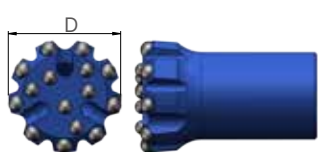
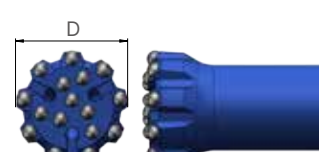
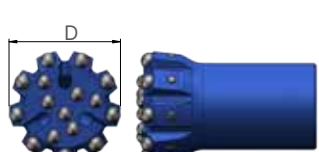
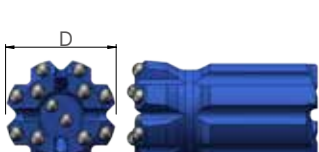
	D mm	Head design	Skirt design	Button No.×Size		Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
				Gauge	Front					
	89	Flat face	Normal	8×13	5×12	35°	2F2G	3.3	B89T51-813512-A2-2	111051033C
										111051033B
										111051033P
										111051033S
	89	Drop center	Normal	8×13	5×13	35°	4F1G	3.3	B89T51-D813513-A-4	111051019C
										111051019B
										111051019P
										111051019S
	89	Convex face	Retrac	8×13	4×13 2×11	40°	4F2G	4.5	B89T51- CR813413211-L-A2-4	111051022C
										111051022B
										111051022P
										111051022S
	89	Drop center	Retrac	8×13	5×12	35°	4F1G	4.5	B89T51-DR813512-A-4	111051038C
										111051038B
										111051038P
										111051038S
	89	Flat face	Retrac	8×13	5×13	35°	2F1G	4.5	B89T51-R813513-A-2	111051013C
										111051013B
										111051013P
										111051013S
	89	Drop center	Retrac	8×13	5×13	35°	4F1G	4.5	B89T51-DR813513-A-4	111051034C
										111051034B
										111051034P
										111051034S

T51(2")

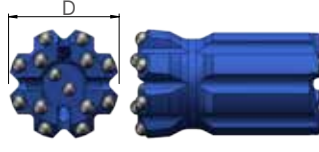
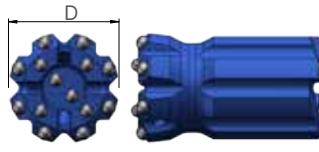
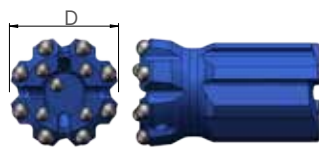
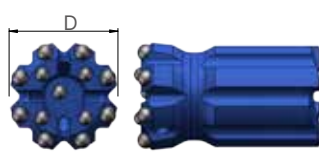
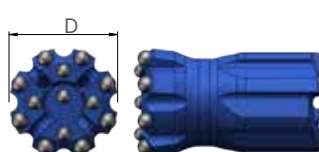
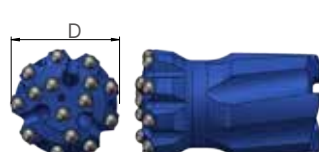
Bits

	D mm	Head design	Skirt design	Button No.×Size		Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
				Gauge	Front					
	89	Drop center	Retrac	8×13	5×13	35°	4F0G	4.5	B89T51-DR813513-L-4	111051029C
										111051029B
										111051029P
										111051029S
	89	Convex face	Retrac	8×13	6×12	35°	4F1G	4.5	B89T51- CR813612-L-A-4	111051026C
										111051026B
										111051026P
										111051026S
	89	Convex face	Retrac	8×13	6×12	35°	4F2G	4.5	B89T51- CR813612-L-A2-4	111051037C
										111051037B
										111051037P
										111051037S
	89	Drop center	Retrac	8×13	6×12	35°	4F0G	4.5	B89T51-DR813612-4	111051009C
										111051009B
										111051009P
										111051009S
	89	Drop center	Retrac	8×13	6×12	35°	4F0G	4.5	B89T51-DR813612-L-4	111051020C
										111051020B
										111051020P
										111051020S
	102	Drop center	Normal	8×16	5×14	35°	2F2G	5.5	B102T51-D816514-A2-2	111051073C
										111051073B
										111051073P
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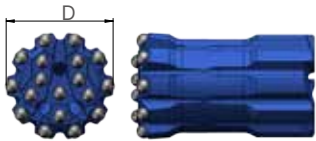
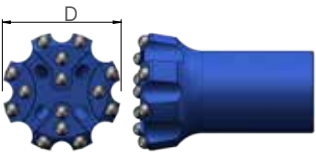
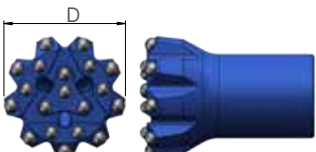
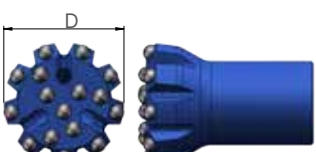
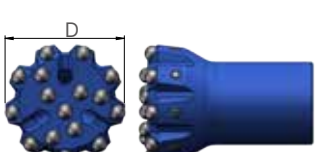
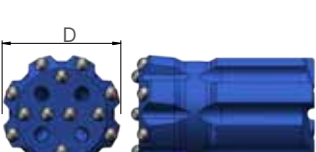
T51(2”) Bits

		D mm	Head design	Skirt design	Button No.×Size Gauge Front		Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
	102	Drop center	Normal	8×16	6×13	35°	4F0G	5.5	B102T51-D816613-4		111051052C
											111051052B
											111051052P
											111051052S
	102	Flat face	Normal	9×13	9×11	35°	3F0G	5.5	B102T51-913911-3		111051079C
											111051079B
											111051079P
											111051079S
	102	Flat face	Normal	9×14	6×12	35°	3F0G	5.5	B102T51-914612-3		111051053C
											111051053B
											111051053P
											111051053S
	102	Flat face	Normal	9×15	7×13	35°	3F0G	5.5	B102T51-915713-3		111051075C
											111051075B
											111051075P
											111051075S
	102	Flat face	Normal	9×15	7×13	35°	3F0G	5.5	B102T51-915713-908-3		111051077C
											111051077B
											111051077P
											111051077S
	102	Drop center	Retrac	8×13	4×13 2×12	35°	4F0G	7.0	B102T51-DR813413212-4		111051055C
											111051055B
											111051055P
											111051055S

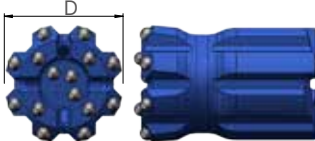
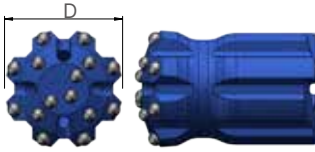
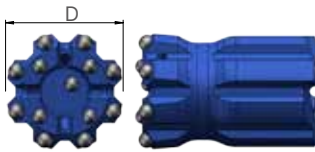
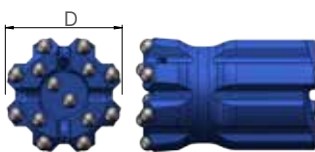
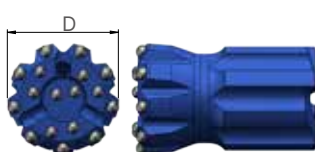
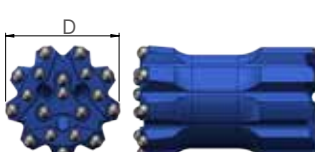
T51(2”) Bits

		D mm	Head design	Skirt design	Button No.×Size Gauge Front		Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
	102	Drop center	Retrac	8×14	4×13 2×12	35°	4F0G	7.0	B102T51-DR814413212-4		111051049C
											111051049B
											111051049P
											111051049S
	102	Drop center	Retrac	8×14	6×12	35°	4F1G	7.0	B102T51-DR814612-A-4		111051056C
											111051056B
											111051056P
											111051056S
	102	Drop center	Retrac	8×16	5×13	35°	4F1G	7.0	B102T51-DR816513-L-A-4		111051060C
											111051060B
											111051060P
											111051060S
	102	Drop center	Retrac	8×16	5×13	35°	4F2G	7.0	B102T51-DR816513-A2-4		111051070C
											111051070B
											111051070P
											111051070S
	102	Drop center	Retrac	8×16	5×13	35°	4F0G	7.0	B102T51-DR816513-L-4		111051068C
											111051068B
											111051068P
											111051068S
	102	Convex face	Retrac	9×14	6×14	35°	4F0G	7.0	B102T51-CR914614-X-4		111051085C
											111051085B
											111051085P
											111051085S

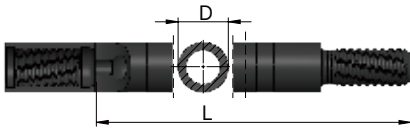
T51(2”) Bits

		D mm	Head design	Skirt design	Button No.×Size Gauge Front		Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
	102	Drop center	Retrac	10×14	8×13	35°	3F0G	7.0	B102T51-DR1014813-3		111051059C
											111051059B
											111051059P
											111051059S
	115	Flat face	Normal	8×14	6×13	35°	4F0G	6.2	B115T51-814613-4		111051066C
											111051066B
											111051066P
											111051066S
	115	Flat face	Normal	9×14	10×12	35°	3F1G	6.2	B115T51-9141012-A-3		111051086C
											111051086B
											111051086P
											111051086S
	115	Flat face	Normal	9×15	7×15	35°	3F0G	6.2	B115T51-915715-3		111051076C
											111051076B
											111051076P
											111051076S
	115	Flat face	Normal	9×15	7×15	35°	3F0G	6.2	B115T51-915715-909-3		111051078C
											111051078B
											111051078P
											111051078S
	115	Flat face	Retrac	8×14	6×13	35°	4F0G	9.4	B115T51-R814613-4		111051064C
											111051064B
											111051064P
											111051064S

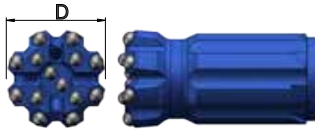
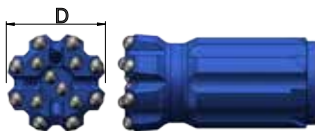
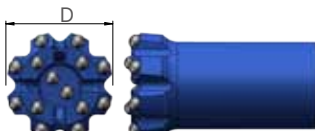
T51(2”) Bits

		D mm	Head design	Skirt design	Button No.×Size Gauge Front		Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
	115	Drop center	Retrac	8×14	7×13	35°	4F1G	9.4	B115T51-DR814713-A-4		111051082C
											111051082B
											111051082P
											111051082S
	115	Convex face	Retrac	8×14	7×13	35°	4F1G	9.4	B115T51-CR814713-A-4		111051081C
											111051081B
											111051081P
											111051081S
	115	Drop center	Retrac	8×16	5×14	35°	4F1G	9.4	B115T51-DR816514-A-4		111051087C
											111051087B
											111051087P
											111051087S
	115	Drop center	Retrac	8×16	6×14	35°	4F2G	9.4	B115T51-DR816614-A2-4		111051071C
											111051071B
											111051071P
											111051071S
	115	Drop center	Retrac	9×14	8×12	35°	3F0G	9.4	B115T51-DR914812-3		111051063C
											111051063B
											111051063P
											111051063S
	115	Flat face	Retrac	9×14	10×12	35°	3F0G	9.4	B115T51-R9141012-3		111051067C
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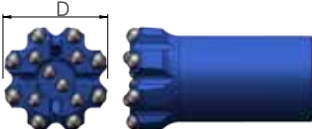
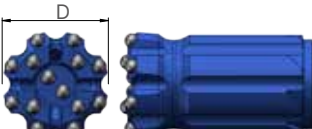
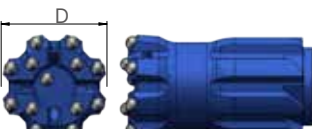
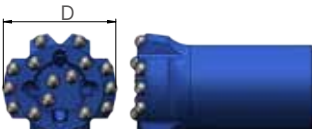
ST58(2 1/4") Rods

	L mm	L ft	Thread	D mm	D in	Thread	Impact type	WT kg	Product model	Part No.
	1220	4'	ST58	76	3"	ST58	Dual drive	23.8	MF ST58D76ST58-1220	275858003
	1525	5'	ST58	76	3"	ST58	Dual drive	29.7	MF ST58D76ST58-1525	275858004
	1830	6'	ST58	76	3"	ST58	Dual drive	35.7	MF ST58D76ST58-1830	275858005

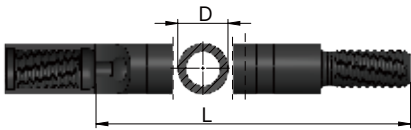
ST58(2 1/4") Bits

	D mm	Head design	Skirt design	Button No.×Size Gauge Front	Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.	
	89	Drop center	Retrac	8×12	6×12	35°	4F0G	4.5	B89ST58-DR812612-4	111058002C
										111058002B
										111058002P
										111058002S
	89	Drop center	Retrac	8×14	6×12	35°	4F0G	4.5	B89ST58-DR814612-4	111058001C
										111058001B
										111058001P
										111058001S
	102	Drop center	Normal	8×14	6×13	35°	4F0G	5.9	B102ST58-D814613-4	111058003C
										111058003B
										111058003P
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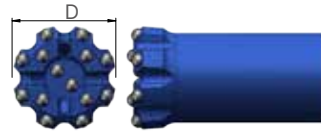
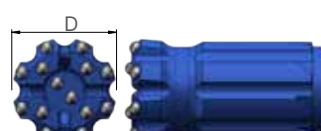
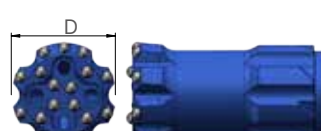
ST58(2 1/4") Bits

											D mm	Head design	Skirt design	Button No.×Size Gauge Front	Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
	102	Drop center	Normal	8×16	6×13	35°	4F0G	5.9	B102ST58- D816613-4	111058006C									
										111058006B									
										111058006P									
										111058006S									
	102	Drop center	Retrac	8×14	6×14	35°	4F0G	5.9	B102ST58- DR814614-4	111058007C									
										111058007B									
										111058007P									
										111058007S									
	102	Drop center	Retrac	8×14	5×13	35°	4F2G	6.8	B102ST58- DR814513-A2-4	111058005C									
										111058005B									
										111058005P									
										111058005S									
	115	Drop center	Normal	10×14	7×14	35°	4F0G	7.2	B115ST58- D1014714-4	111058004C									
										111058004B									
										111058004P									
										111058004S									

ST68(2 3/4") Rods

	L mm	ft	Thread	D mm	in	Thread	Impact type	WT kg	Product model	Part No.
	1220	4'	ST68	87	3 1/2"	ST68	Dual drive	29.8	MF ST68D87ST68-1220	276868003
	1525	5'	ST68	87	3 1/2"	ST68	Dual drive	37.2	MF ST68D87ST68-1525	276868004
	1830	6'	ST68	87	3 1/2"	ST68	Dual drive	44.7	MF ST68D87ST68-1830	276868005

ST68(2 3/4") Bits

	D mm	Head design	Skirt design	Button No.×Size Gauge	Front	Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
	102	Drop center	Normal	8×14	6×13	35°	4FOG	5.9	B102ST68-D814613-4	111068004C
										111068004B
										111068004P
										111068004S
	102	Drop center	Retrac	8×14	5×14	35°	5FOG	6.8	B102ST68- DR814514-808-X-5	111068003C
										111068003B
										111068003P
										111068003S
	102	Drop center	Retrac	8×14	6×13	35°	4FOG	6.8	B102ST68-DR814613-4	111068002C
										111068002B
										111068002P
										111068002S
	102	Drop center	Retrac	10×12	8×12	35°	4FOG	6.8	B102ST68-DR1012812-4	111068001C
										111068001B
										111068001P
										111068001S

Bench drilling tools

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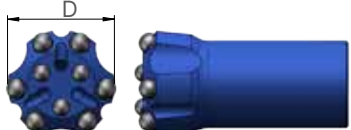
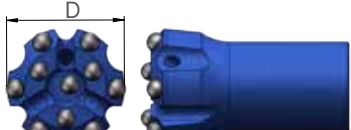
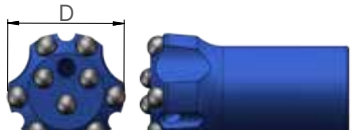
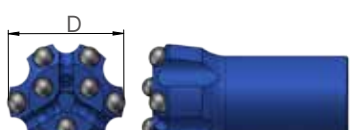
R32 T35 T38 T45 GT45
T51 GT51 GT60 EL60 EL68



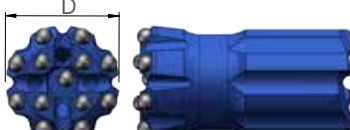
R32(1 1/4") Rods

	mm	L ft	Thread	mm	D in	Thread	Impact type	WT kg	Product model	Part No.
	3050	10'	R32	32	1 1/4"	R32	Bottom drive	17.8	MM R32D32R32-3050	213232007
	3660	12'	R32	32	1 1/4"	R32	Bottom drive	21.3	MM R32D32R32-3660	213232008
	4265	14'	R32	32	1 1/4"	R32	Bottom drive	24.9	MM R32D32R32-4265	213232009
	3050	10'	R32	32	1 1/4"	R32	Bottom drive	17.8	MF R32D32R32-3050	223232007
	3660	12'	R32	32	1 1/4"	R32	Bottom drive	21.3	MF R32D32R32-3660	223232008
	4265	14'	R32	32	1 1/4"	R32	Bottom drive	24.9	MF R32D32R32-4265	223232009
	3050	10'	R32	46	1 3/4"	R32	Bottom drive	33.8	MF R32D46R32-3050	273232019

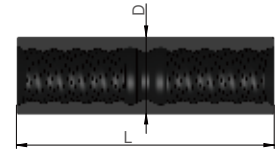
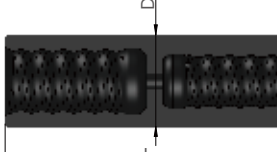
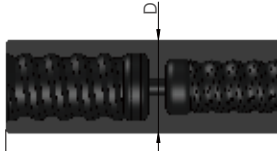
R32(1 1/4") Bits

	D mm	Head design	Skirt design	Button No.× Size		Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
				Gauge	Front					
	51	Flat face	Normal	6×10	3×9	35°	3F1G	1	B51R32-610309-A-3	111032018C
										111032018B
										111032018P
										111032018S
	57	Flat face	Normal	6×11	3×9	35°	3F1G	1.2	B57R32-611309-A-3	111032021C
										111032021B
										111032021P
										111032021S
	64	Drop center	Normal	6×11	4×10	35°	3F1G	1.7	B64R32-D611410-A-3	111032051C
										111032051B
										111032051P
										111032051S
	64	Flat face	Normal	6×12	3×11	35°	1F2G	1.7	B64R32-612311-A2-1	111032047C
										111032047B
										111032047P
										111032047S
	64	Flat face	Normal	6×12	3×11	35°	3F1G	1.7	B64R32-612311-A-3	111032043C
										111032043B
										111032043P
										111032043S
	64	Flat face	Retrac	8×10	4×10	35°	2F0G	1.7	B64R32-R810410-2	111032040C
										111032040B
										111032040P
										111032040S

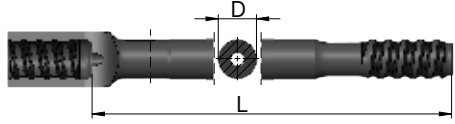
R32(1 1/4") Bits

	D mm	Head design	Skirt design	Button No.× Size		Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
				Gauge	Front					
	64	Drop center	Retrac	8×10	5×9	35°	4F0G	2.0	B64R32-DR810509-4	111032041C
										111032041B
										111032041P
										111032041S

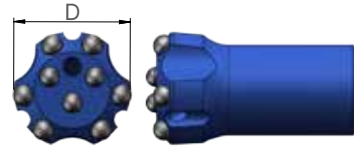
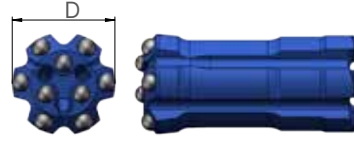
R32(1 1/4") Coupling sleeves

	L mm	D mm	Thread	Adapter type	Bridge type	WT kg	Product model	Part No.
	160	45	R32	Straight	Semi-bridge	1.3	LJR32-45160S	383232001
	170	55	R38-R32	Cross over	Full bridge	2.0	LJR38/R32-55170F	393732024
	170	55	T38-R32	Cross over	Full bridge	2.0	LJT38/R32-55170F	393832025

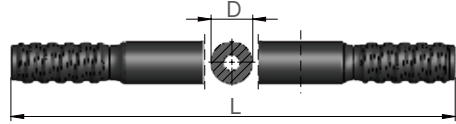
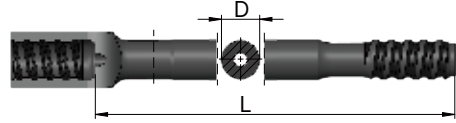
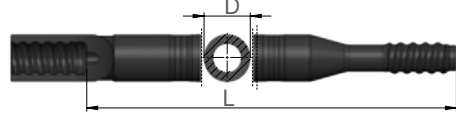
T35(1 3/8") Rods

	mm	L ft	Thread	D mm	in	Thread	Impact type	WT kg	Product model	Part No.
	3050	10'	T35	39	1 1/2"	T35	Bottom drive	24.5	MF T35D39T35-3050	223636007
	3660	12'	T35	39	1 1/2"	T35	Bottom drive	29.4	MF T35D39T35-3660	223636008
	4265	14'	T35	39	1 1/2"	T35	Bottom drive	34.2	MF T35D39T35-4265	223636009

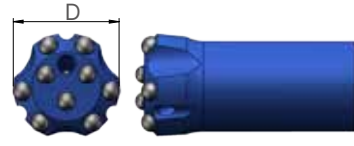
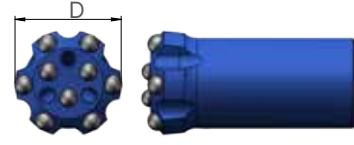
T35(1 3/8") Bits

	D mm	Head design	Skirt design	Button No.× Size Gauge	Front	Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
	64	Flat face	Normal	6×12	3×11	35°	1F2G	1.7	B64T35-612311-A2-1	11136001C
										11136001B
										11136001P
										11136001S
	64	Flat face	Retrac	6×12	3×11	35°	3F0G	1.8	B64T35-R612311-3	11136002C
										11136002B
										11136002P
										11136002S

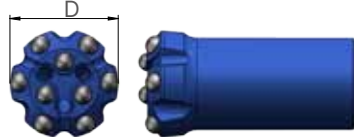
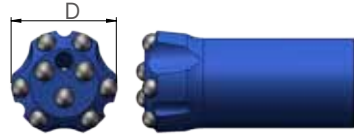
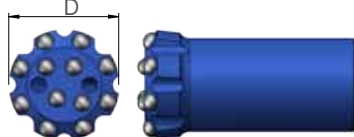
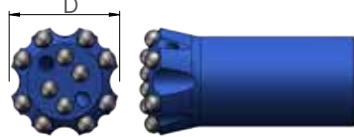
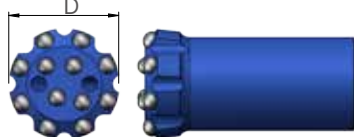
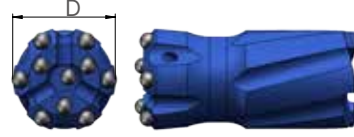
T38(1 1/2") Rods

	mm	L ft	Thread	D mm	in	Thread	Impact type	WT kg	Product model	Part No.
	3050	10'	T38	39	1 1/2"	T38	Bottom drive	24.5	MM T38D39T38-3050	213838007
	3660	12'	T38	39	1 1/2"	T38	Bottom drive	29.4	MM T38D39T38-3660	213838008
	4265	14'	T38	39	1 1/2"	T38	Bottom drive	34.2	MM T38D39T38-4265	213838009
	3050	10'	T38	39	1 1/2"	T38	Bottom drive	24.5	MF T38D39T38-3050	223838007
	3660	12'	T38	39	1 1/2"	T38	Bottom drive	29.4	MF T38D39T38-3660	223838008
	4265	14'	T38	39	1 1/2"	T38	Bottom drive	34.2	MF T38D39T38-4265	223838009
	3050	10'	T38	56	2 13/64"	T38	Bottom drive	34.5	MF T38D56T38-3050	273838019
	3660	12'	T38	56	2 13/64"	T38	Bottom drive	41.4	MF T38D56T38-3660	273838020

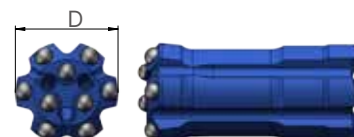
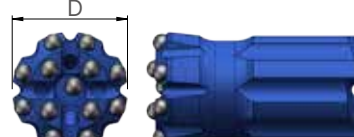
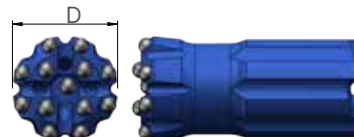
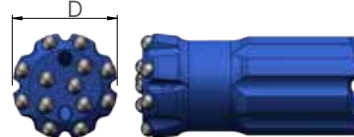
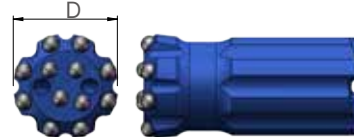
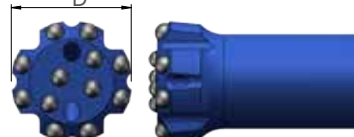
T38(1 1/2") Bits

	D mm	Head design	Skirt design	Button No.× Size Gauge	Front	Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
	64	Flat face	Normal	6×12	3×11	35°	1F2G	1.7	B64T38-612311-A2-1	111038023C
										111038023B
										111038023P
										111038023S
	64	Flat face	Normal	6×12	3×11	35°	3F0G	1.7	B64T38-612311-3	111038001C
										111038001B
										111038001P
										111038001S

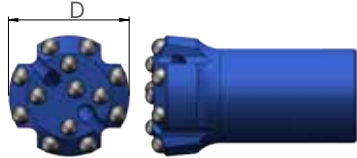
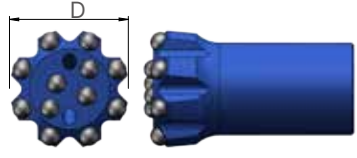
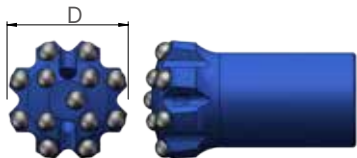
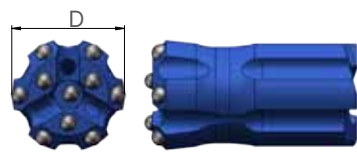
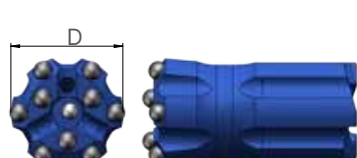
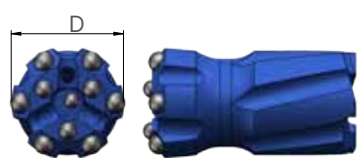
T38(1 1/2") Bits

	D mm	Head design	Skirt design	Button No.× Size		Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
				Gauge	Front					
	64	Flat face	Normal	6×12	3×11	35°	3F0G	1.7	B64T38-612311-3-1	111038024C
										111038024B
										111038024P
										111038024S
	64	Flat face	Normal	6×12	3×12	35°	1F1G	1.7	B64T38-612312-A-1	111038012C
										111038012B
										111038012P
										111038012S
	64	Flat face	Normal	8×11	4×10	35°	2F0G	1.7	B64T38-811410-2	111038009C
										111038009B
										111038009P
										111038009S
	64	Flat face	Normal	8×11	4×10	35°	2F2G	1.7	B64T38-811410-A2-2	111038025C
										111038025B
										111038025P
										111038025S
	64	Flat face	Normal	8×11	4×10	35°	2F0G	1.7	B64T38-811410-2-1	111038006C
										111038006B
										111038006P
										111038006S
	64	Drop center	Retrac	6×11	4×10	35°	3F1G	2.0	B64T38-DR611410-X-A-3	111038026C
										111038026B
										111038026P
										111038026S

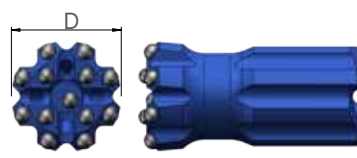
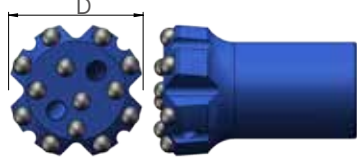
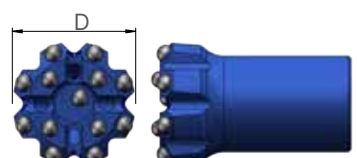
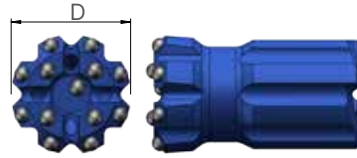
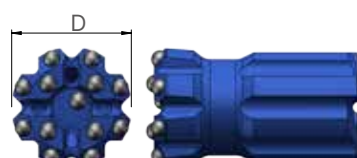
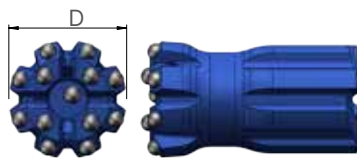
T38(1 1/2") Bits

	D mm	Head design	Skirt design	Button No.× Size		Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
				Gauge	Front					
	64	Flat face	Retrac	6×12	3×11	35°	3F0G	2.0	B64T38-R612311-3	111038007C
										111038007B
										111038007P
										111038007S
	64	Drop center	Retrac	8×10	5×9	35°	4F0G	2.0	B64T38-DR810509-4	111038011C
										111038011B
										111038011P
										111038011S
	64	Drop center	Retrac	8×10	5×10	35°	4F0G	2.0	B64T38-DR810510-4	111038013C
										111038013B
										111038013P
										111038013S
	64	Flat face	Retrac	8×10	5×10	35°	2F0G	2.0	B64T38-R810510-2	111038010C
										111038010B
										111038010P
										111038010S
	64	Flat face	Retrac	8×11	4×10	35°	2F0G	2.0	B64T38-R811410-2	111038022C
										111038022B
										111038022P
										111038022S
	76	Flat face	Normal	8×12	4×11	35°	2F0G	2.5	B76T38-812411-2	111038018C
										111038018B
										111038018P
										111038018S

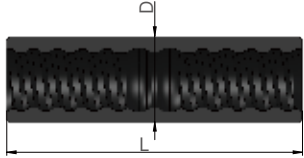
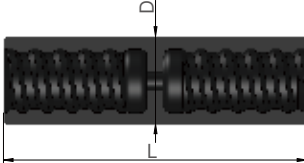
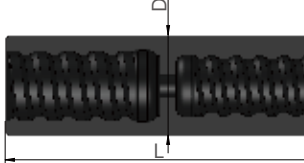
T38(1 1/2") Bits

	D mm	Head design	Skirt design	Button No.× Size		Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
				Gauge	Front					
	76	Flat face	Normal	8×12	5×11	35°	2F0G	2.5	B76T38-812511-2	111038019C
										111038019B
										111038019P
										111038019S
	76	Flat face	Normal	8×13	4×12	35°	2F0G	2.5	B76T38-813412-2	111038021C
										111038021B
										111038021P
										111038021S
	76	Convex face	Normal	8×13	5×12	35°	2F0G	2.5	B76T38-C813512-2	111038020C
										111038020B
										111038020P
										111038020S
	76	Drop center	Retrac	6×12	4×11	40°	3F0G	3.3	B76T38-DR612411-3	111038015C
										111038015B
										111038015P
										111038015S
	76	Drop center	Retrac	6×13	3×12 1×11	35°	3F0G	3.3	B76T38-DR613312111-3	111038017C
										111038017B
										111038017P
										111038017S
	76	Drop center	Retrac	6×14	3×12 1×10	35°	3F1G	3.3	B76T38-DR614312110-X-A-3	111038028C
										111038028B
										111038028P
										111038028S

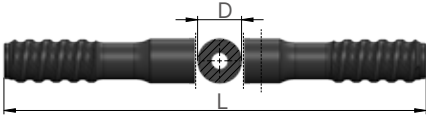
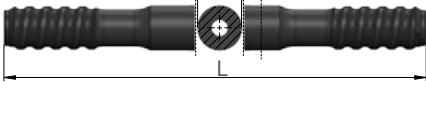
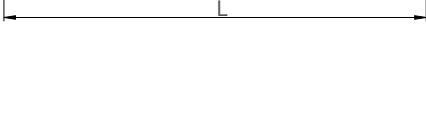
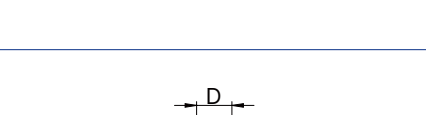
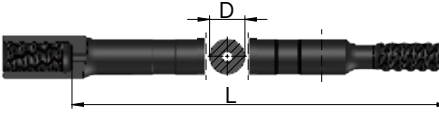
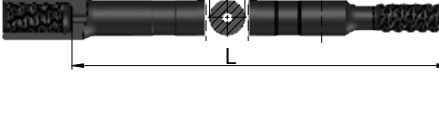
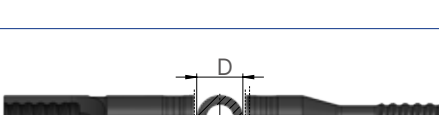
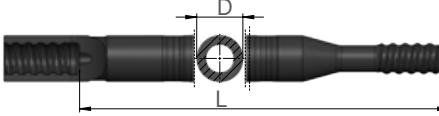
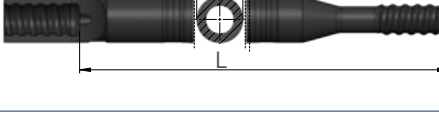
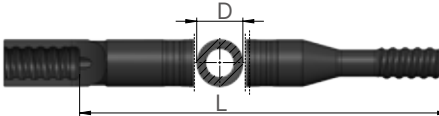
T38(1 1/2") Bits

	D mm	Head design	Skirt design	Button No.× Size		Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
				Gauge	Front					
	76	Drop center	Retrac	8×12	5×11	35°	4F0G	3.3	B76T38-DR812511-4	111038016C
										111038016B
										111038016P
										111038016S
	89	Flat face	Normal	8×13	5×12	35°	2F0G	3.3	B89T38-813512-2	111038038C
										111038038B
										111038038P
										111038038S
	89	Drop center	Normal	8×13	5×12	35°	4F0G	3.3	B89T38-D813512-4	111038037C
										111038037B
										111038037P
										111038037S
	89	Drop center	Retrac	8×12	5×12	35°	4F0G	5.0	B89T38-DR812512-4	111038035C
										111038035B
										111038035P
										111038035S
	89	Drop center	Retrac	8×13	5×12	35°	4F0G	5.0	B89T38-DR813512-4	111038033C
										111038033B
										111038033P
										111038033S
	89	Drop center	Retrac	8×13	5×13	35°	4F2G	5.0	B89T38-DR813513-A2-4	111038036C
										111038036B
										111038036P
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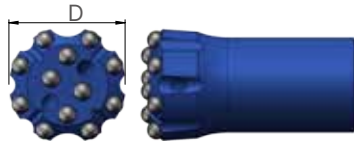
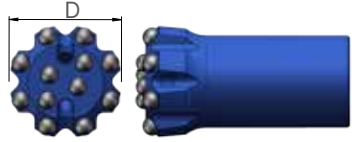
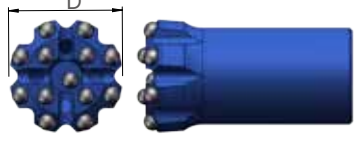
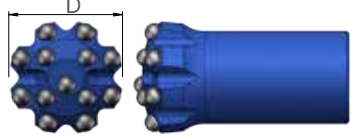
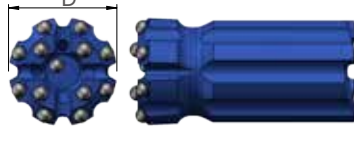
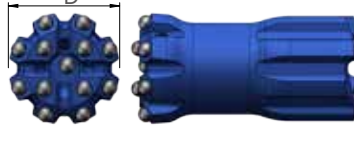
T38(1 1/2") Coupling sleeves

	L mm	D mm	Thread	Adapter type	Bridge type	WT kg	Product model	Part No.
	190	55	T38	Straight	Semi-bridge	1.9	LJT38-55190S	383838034
	190	55	T38	Straight	Full bridge	1.9	LJT38-55190F	393838037
	200	63	T45-T38	Cross over	Full bridge	3.0	LJT45/T38-63200F	394538041

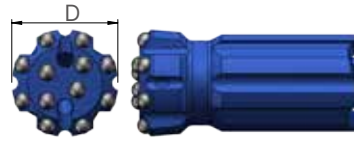
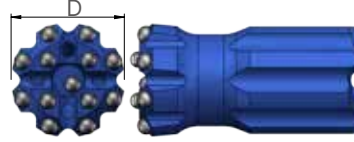
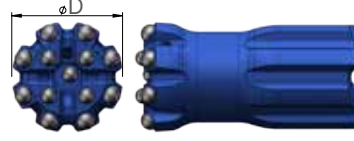
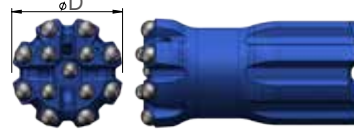
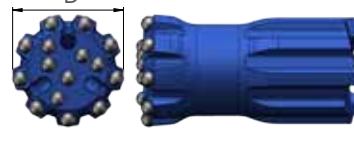
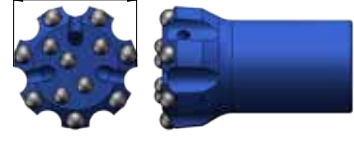
T45(1 3/4") Rods

	L mm	L ft	Thread	D mm	D in	Thread	Impact type	WT kg	Product model	Part No.
	3050	10'	T45	46	1 3/4"	T45	Bottom drive	33.8	MM T45D46T45-3050	214545007
	3660	12'	T45	46	1 3/4"	T45	Bottom drive	40.5	MM T45D46T45-3660	214545008
	4265	14'	T45	46	1 3/4"	T45	Bottom drive	47.2	MM T45D46T45-4265	214545009
	6095	20'	T45	46	1 3/4"	T45	Bottom drive	67.5	MM T45D46T45-6095	214545011
	3050	10'	T45	46	1 3/4"	T45	Bottom drive	33.8	MF T45D46T45-3050	224545007
	3660	12'	T45	46	1 3/4"	T45	Bottom drive	40.5	MF T45D46T45-3660	224545008
	4265	14'	T45	46	1 3/4"	T45	Bottom drive	47.2	MF T45D46T45-4265	224545009
	6095	20'	T45	46	1 3/4"	T45	Bottom drive	67.5	MF T45D46T45-6095	224545011
	3050	10'	T45	65	2 5/9"	T45	Bottom drive	47.6	MF T45D65T45-3050	274545019
	3660	12'	T45	65	2 5/9"	T45	Bottom drive	57.1	MF T45D65T45-3660	274545020
	3660	12'	T45	76	3"	T45	Bottom drive	71.4	MF T45D76T45-3660	274545025

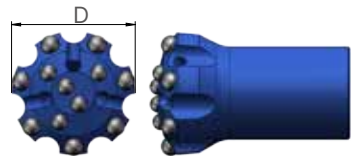
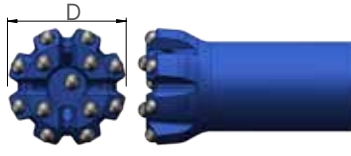
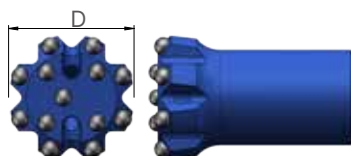
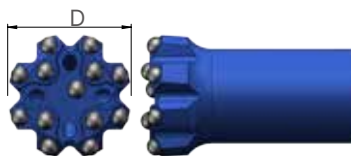
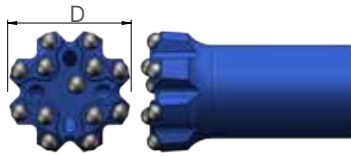
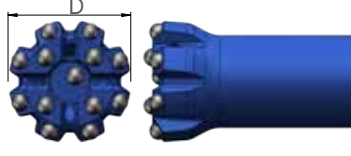
T45(1 3/4") Bits

	D mm	Head design	Skirt design	Button No.× Size		Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
				Gauge	Front					
	76	Flat face	Normal	8×12	4×12	35°	2F1G	2.5	B76T45-812412-A-2	111045015C
										111045015B
										111045015P
										111045015S
	76	Flat face	Normal	8×13	4×12	35°	2F0G	2.5	B76T45-813412-2	111045008C
										111045008B
										111045008P
										111045008S
	76	Drop center	Normal	8×12	5×11	35°	4F0G	2.5	B76T45-D812511-4	111045003C
										111045003B
										111045003P
										111045003S
	76	Convex face	Normal	8×13	5×12	35°	2F0G	2.5	B76T45-C813512-2	111045009C
										111045009B
										111045009P
										111045009S
	76	Drop center	Retrac	8×11	4×11 1×10	35°	4F0G	3.3	B76T45-DR811411110-4	111045010C
										111045010B
										111045010P
										111045010S
	76	Drop center	Retrac	8×11	5×11	35°	4F2G	3.3	B76T45-DR811511-A2-4	111045012C
										111045012B
										111045012P
										111045012S

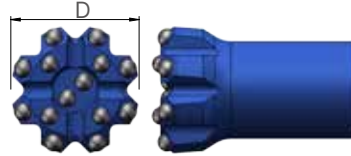
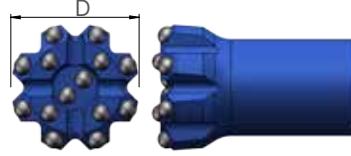
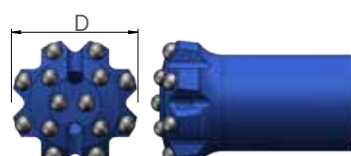
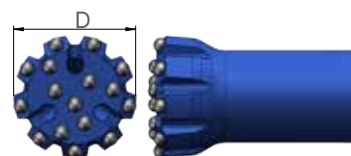
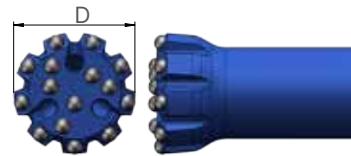
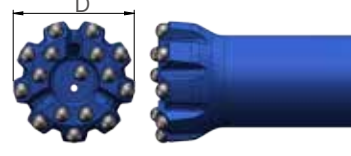
T45(1 3/4") Bits

	D mm	Head design	Skirt design	Button No.× Size		Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
				Gauge	Front					
	76	Flat face	Retrac	8×12	4×12	35°	2F2G	3.3	B76T45-R812412-A2-2	111045016C
										111045016B
										111045016P
										111045016S
	76	Drop center	Retrac	8×12	5×11	35°	4F0G	3.3	B76T45-DR812511-4	111045004C
										111045004B
										111045004P
										111045004S
	76	Drop center	Retrac	8×12	5×11	35°	4F1G	3.3	B76T45-DR812511-A-4	111045018C
										111045018B
										111045018P
										111045018S
	76	Drop center	Retrac	8×13	5×11	35°	4F2G	3.3	B76T45-DR813511-A2-4	111045011C
										111045011B
										111045011P
										111045011S
	76	Flat face	Retrac	9×11	6×10	35°	3F0G	3.3	B76T45-R911610-3	111045014C
										111045014B
										111045014P
										111045014S
	89	Flat face	Normal	7×14	5×12	35°	3F1G	3.6	B89T45-714512-A-3	111045024C
										111045024B
										111045024P
										111045024S

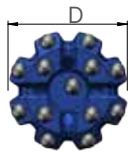
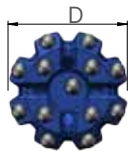
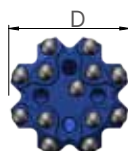
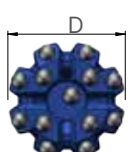
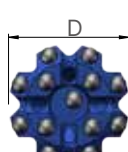
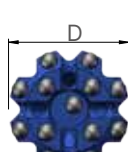
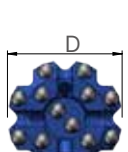
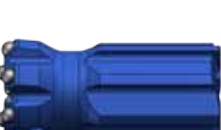
T45(1 3/4") Bits

	D mm	Head design	Skirt design	Button No.× Size		Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
				Gauge	Front					
	89	Convex face	Normal	7×14	5×12	35°	3F1G	3.6	B89T45-C714512-A-3	111045025C
										111045025B
										111045025P
										111045025S
	89	Drop center	Normal	8×12	5×12	35°	4F2G	3.6	B89T45-D812512-A2-4	111045035C
										111045035B
										111045035P
										111045035S
	89	Flat face	Normal	8×13	5×12	35°	2F2G	3.6	B89T45-813512-A2-2	111045028C
										111045028B
										111045028P
										111045028S
	89	Drop center	Normal	8×13	5×12	35°	4F0G	3.6	B89T45-D813512-4	111045044C
										111045044B
										111045044P
										111045044S
	89	Drop center	Normal	8×13	5×13	35°	4F0G	3.6	B89T45-D813513-4	111045046C
										111045046B
										111045046P
										111045046S
	89	Drop center	Normal	8×13	5×13	35°	4F2G	3.6	B89T45-D813513-A2-4	111045037C
										111045037B
										111045037P
										111045037S

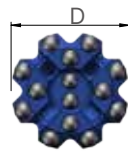
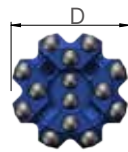
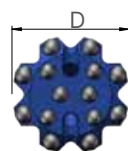
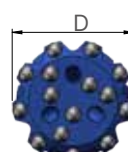
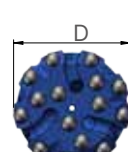
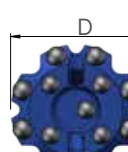
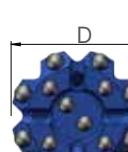
T45(1 3/4") Bits

	D mm	Head design	Skirt design	Button No.× Size		Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
				Gauge	Front					
	89	Drop center	Normal	8×13	6×12	35°	4F2G	3.6	B89T45-D813612-A2-4	111045022C
										111045022B
										111045022P
										111045022S
	89	Drop center	Normal	8×13	6×12	35°	4F0G	3.6	B89T45-D813612-4	111045031C
										111045031B
										111045031P
										111045031S
	89	Convex face	Normal	8×13	6×12	35°	2F2G	3.6	B89T45-C813612-A2-2	111045027C
										111045027B
										111045027P
										111045027S
	89	Flat face	Normal	9×11	7×11	35°	3F0G	3.6	B89T45-911711-3	111045036C
										111045036B
										111045036P
										111045036S
	89	Flat face	Normal	9×12	6×12	35°	3F0G	3.6	B89T45-912612-3	111045047C
										111045047B
										111045047P
										111045047S
	89	Drop center	Normal	9×12	7×11	35°	4F0G	3.6	B89T45-D912711-4	111045045C
										111045045B
										111045045P
										111045045S

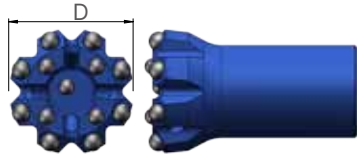
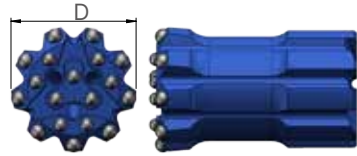
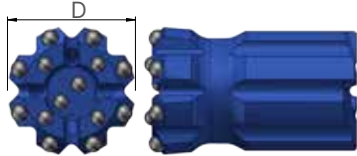
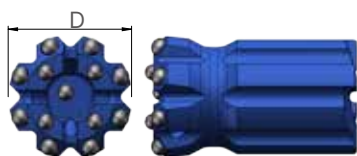
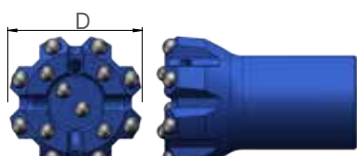
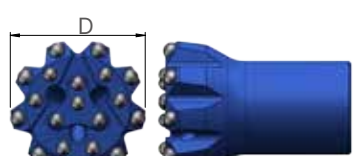
T45(1 3/4") Bits

		D mm	Head design	Skirt design	Button No.× Size		Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
					Gauge	Front					
		89	Drop center	Retrac	8×12	5×12	35°	4F2G	4.7	B89T45-DR812512-A2-4	111045034C
											111045034B
											111045034P
											111045034S
		89	Drop center	Retrac	8×13	5×12	35°	4F0G	4.7	B89T45-DR813512-4	111045021C
											111045021B
											111045021P
											111045021S
		89	Drop center	Retrac	8×13	5×13	35°	4F1G	4.7	B89T45-DR813513-A-4	111045030C
											111045030B
											111045030P
											111045030S
		89	Drop center	Retrac	8×13	5×13	35°	4F2G	4.7	B89T45-DR813513-A2-4	111045029C
											111045029B
											111045029P
											111045029S
		89	Drop center	Retrac	8×13	5×13	35°	4F2G	4.7	B89T45-DR813513-A2-4-1	111045032C
											111045032B
											111045032P
											111045032S
		89	Drop center	Retrac	8×13	6×12	35°	4F1G	4.7	B89T45-DR813612-L-A-4	111045041C
											111045041B
											111045041P
											111045041S

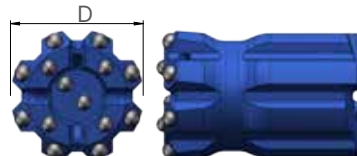
T45(1 3/4") Bits

		D mm	Head design	Skirt design	Button No.× Size		Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
					Gauge	Front					
		89	Drop center	Retrac	8×14	4×13 2×12	35°	4F1G	4.7	B89T45-DR814413212-A-4	111045026C
											111045026B
											111045026P
											111045026S
		89	Flat face	Retrac	8×14	6×12	35°	2F0G	4.7	B89T45-R814612-A2-2	111045038C
											111045038B
											111045038P
											111045038S
		89	Flat face	Retrac	9×12	6×12	35°	3F0G	4.7	B89T45-R912612-3	111045023C
											111045023B
											111045023P
											111045023S
		89	Flat face	Retrac	9×12	6×12	35°	3F0G	4.7	B89T45-R912612-X-3	111045033C
											111045033B
											111045033P
											111045033S
		102	Drop center	Normal	8×16	5×14	35°	2F2G	5.5	B102T45-D816514-A2-2	111045052C
											111045052B
											111045052P
											111045052S
		102	Drop center	Normal	8×14	6×12	35°	4F0G	5.5	B102T45-D814612-4	111045049C
											111045049B
											111045049P
											111045049S

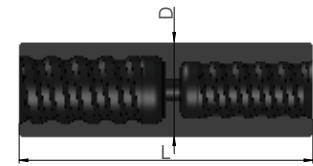
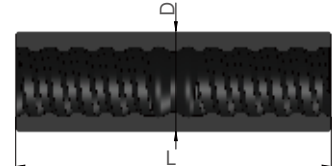
T45(1 3/4") Bits

	D mm	Head design	Skirt design	Button No.× Size		Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
				Gauge	Front					
	102	Drop center	Normal	8×16	5×13	35°	4F2G	5.5	B102T45-D816513-A2-4	111045055C
										111045055B
										111045055P
										111045055S
	102	Flat face	Retrac	9×13	9×11	35°	3F0G	7.0	B102T45-R913911-3	111045051C
										111045051B
										111045051P
										111045051S
	102	Drop center	Retrac	8×14	6×12	35°	4F0G	7.0	B102T45-DR814612-4	111045050C
										111045050B
										111045050P
										111045050S
	102	Drop center	Retrac	8×15	5×13	35°	4F2G	7.0	B102T45-DR815513-A2-4	111045056C
										111045056B
										111045056P
										111045056S
	115	Drop center	Normal	8×15	6×13	35°	4F2G	6.2	B115T45-D815613-A2-4	111045054C
										111045054B
										111045054P
										111045054S
	115	Flat face	Normal	9×14	10×12	35°	3F1G	6.2	B115T45-9141012-A-3	111045057C
										111045057B
										111045057P
										111045057S

T45(1 3/4") Bits

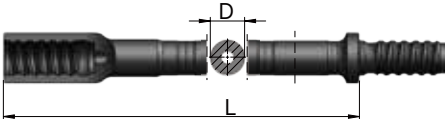
	D mm	Head design	Skirt design	Button No.× Size		Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
				Gauge	Front					
	115	Drop center	Retrac	8×15	6×13	35°	4F2G	9.5	B115T45-DR815613-A2-4	111045053C
										111045053B
										111045053P
										111045053S

T45(1 3/4") Coupling sleeves

	L mm	D mm	Thread	Adapter type	Bridge type	WT kg	Product model	Part No.
	200	63	T45-T38	Cross over	Full bridge	3.0	LJT45/T38-63200F	394538041
	210	63	T45	Straight	Semi-bridge	3.2	LJT45-63210S	384545051
	265	63	T45-T38M	Cross over	-	2.6	LJT45/T38M-63265	364538047
	285	72	T51-T45M	Cross over	-	4.1	LJT51/T45M-72285	365145050

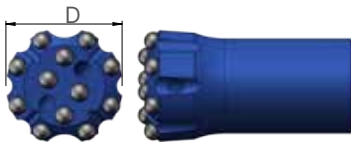
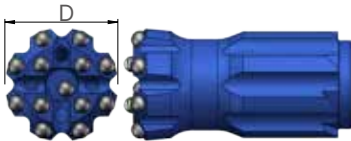
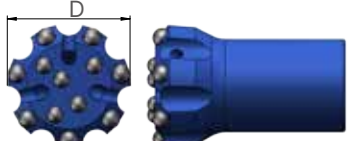
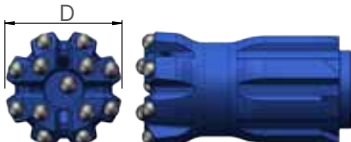
GT45(1 3/4") Rods



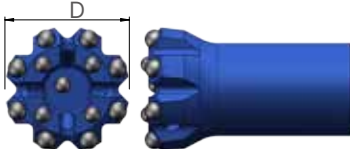
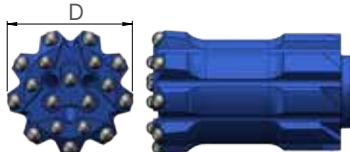
	L		Thread	D		Thread	Impact type	WT kg	Product model	Part No.
	mm	ft		mm	in					
	3660	12'	GT45	46	1 3/4"	GT45	Dual drive	40.5	MF GT45D46GT45-3660	224646008

GT45(1 3/4") Bits

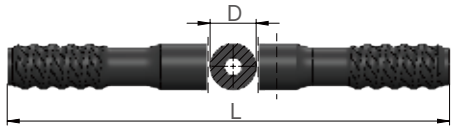
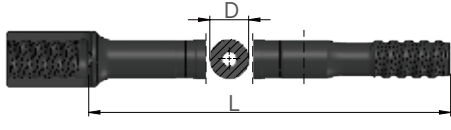
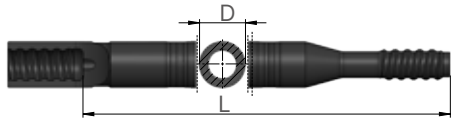
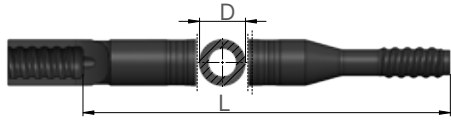


	D mm	Head design	Skirt design	Button No.× Size Gauge Front	Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
	76	Flat face	Normal	8×12 4×12	35°	2F1G	2.5	B76GT45-812412-A-2	11146003C
									11146003B
									11146003P
									11146003S
	76	Drop center	Retrac	8×12 5×11	35°	4F1G	3.3	B76GT45-DR812511-A-4	11146004C
									11146004B
									11146004P
									11146004S
	89	Flat face	Normal	7×14 5×12	35°	3F0G	3.6	B89GT45-714512-3	11146005C
									11146005B
									11146005P
									11146005S
	89	Drop center	Retrac	8×13 5×13	35°	4F1G	4.7	B89GT45-DR813513-A-4	11146006C
									11146006B
									11146006P
									11146006S

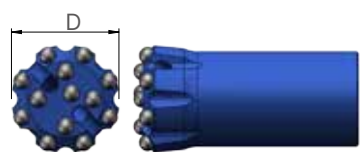
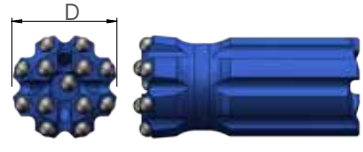
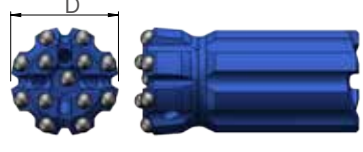
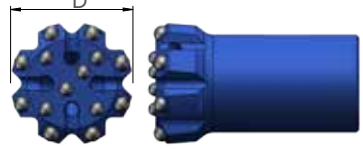
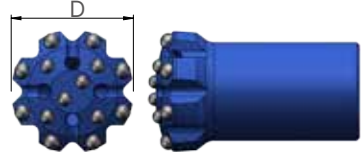
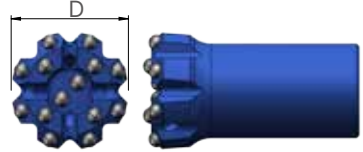
GT45(1 3/4") Bits

	D mm	Head design	Skirt design	Button No.× Size Gauge	Front	Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
	102	Drop center	Normal	8×16	5×13	35°	4F2G	5.5	B102GT45-D816513-A2-4	11146007C
										11146007B
										11146007P
										11146007S
	102	Flat face	Retrac	9×13	9×11	35°	3F0G	7.0	B102GT45-R913911-3	11146008C
										11146008B
										11146008P
										11146008S

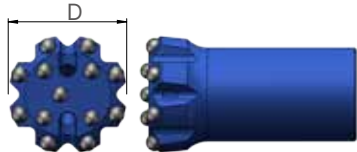
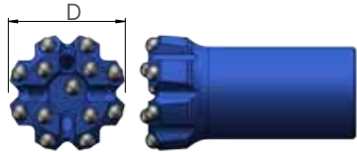
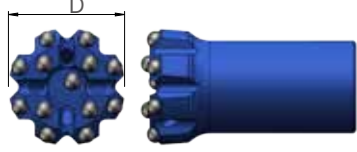
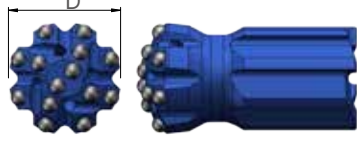
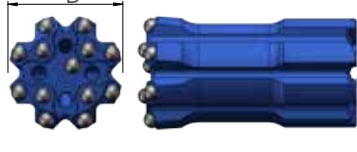
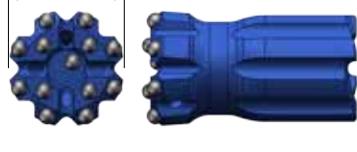
T51(2") Rods

	mm	L ft	Thread	D mm	in	Thread	Impact type	WT kg	Product model	Part No.
	3660	12'	T51	52	2"	T51	Bottom drive	50.2	MM T51D52T51-3660	215151008
	4265	14'	T51	52	2"	T51	Bottom drive	58.5	MM T51D52T51-4265	215151009
	6095	20'	T51	52	2"	T51	Bottom drive	83.6	MM T51D52T51-6095	215151011
	3660	12'	T51	52	2"	T51	Bottom drive	50.2	MF T51D52T51-3660	225151008
	4265	14'	T51	52	2"	T51	Bottom drive	58.5	MF T51D52T51-4265	225151009
	6095	20'	T51	52	2"	T51	Bottom drive	83.6	MF T51D52T51-6095	225151011
	3660	12'	T51	76	3"	T51	Bottom drive	71.4	MF T51D76T51-3660	275151020
	3660	12'	T51	87	3 1/2"	T51	Bottom drive	89.3	MF T51D87T51-3660	275151032

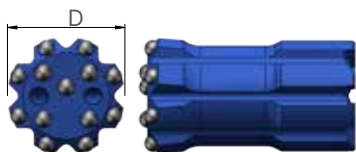
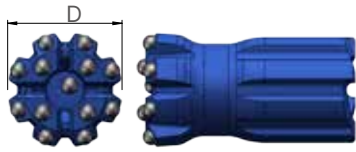
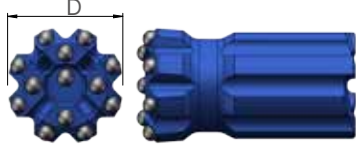
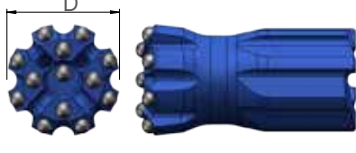
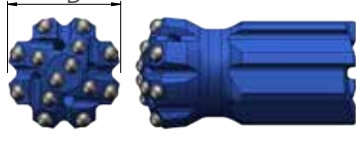
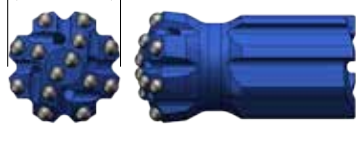
T51(2") Bits

	D mm	Head design	Skirt design	Button No.× Size Gauge Front	Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
	76	Flat face	Normal	8×12 5×11	35°	2F2G	2.5	B76T51-812511-A2-2	111051002C
									111051002B
									111051002P
									111051002S
	76	Drop center	Retrac	8×12 5×11	35°	4F0G	3.3	B76T51-DR812511-4	111051001C
									111051001B
									111051001P
									111051001S
	76	Drop center	Retrac	8×12 5×11	35°	4F2G	3.3	B76T51-DR812511-A2-4	111051003C
									111051003B
									111051003P
									111051003S
	89	Flat face	Normal	8×12 6×10	35°	4F0G	3.3	B89T51-812610-4	111051016C
									111051016B
									111051016P
									111051016S
	89	Convex face	Normal	8×12 6×10	35°	4F0G	3.3	B89T51-C812610-4	111051017C
									111051017B
									111051017P
									111051017S
	89	Drop center	Normal	8×12 6×12	35°	4F2G	3.3	B89T51-D812612-A2-4	111051040C
									111051040B
									111051040P
									111051040S

T51(2") Bits

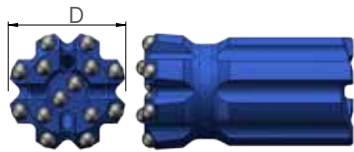
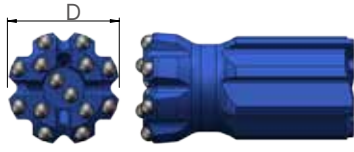
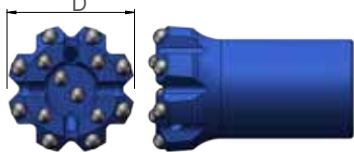
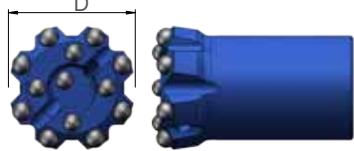
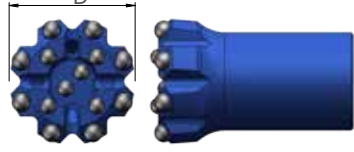
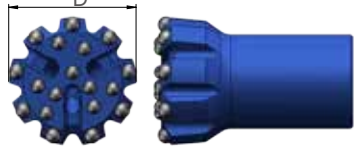
	D mm	Head design	Skirt design	Button No.× Size		Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
				Gauge	Front					
	89	Flat face	Normal	8×13	5×12	35°	2F2G	3.3	B89T51-813512-A2-2	111051033C
										111051033B
										111051033P
										111051033S
	89	Drop center	Normal	8×13	5×12	35°	4F0G	3.3	B89T51-D813512-4	111051027C
										111051027B
										111051027P
										111051027S
	89	Drop center	Normal	8×13	5×13	35°	4F1G	3.3	B89T51-D813513-A-4	111051019C
										111051019B
										111051019P
										111051019S
	89	Convex face	Retrac	8×13	4×13 2×11	40°	4F2G	4.5	B89T51-CR813413211-L-A2-4	111051022C
										111051022B
										111051022P
										111051022S
	89	Drop center	Retrac	8×13	5×12	35°	4F0G	4.5	B89T51-DR813512-4	111051008C
										111051008B
										111051008P
										111051008S
	89	Drop center	Retrac	8×13	5×12	35°	4F1G	4.5	B89T51-DR813512-A-4	111051038C
										111051038B
										111051038P
										111051038S

T51(2") Bits

	D mm	Head design	Skirt design	Button No.× Size		Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
				Gauge	Front					
	89	Flat face	Retrac	8×13	5×13	35°	2F1G	4.5	B89T51-R813513-A-2	111051013C
										111051013B
										111051013P
										111051013S
	89	Drop center	Retrac	8×13	5×13	35°	4F0G	4.5	B89T51-DR813513-4	111051012C
										111051012B
										111051012P
										111051012S
	89	Drop center	Retrac	8×13	5×13	35°	4F1G	4.5	B89T51-DR813513-A1-4	111051034C
										111051034B
										111051034P
										111051034S
	89	Drop center	Retrac	8×13	5×13	35°	4F0G	4.5	B89T51-DR813513-L-4	111051029C
										111051029B
										111051029P
										111051029S
	89	Convex face	Retrac	8×13	6×12	35°	4F1G	4.5	B89T51-CR813612-L-A-4	111051026C
										111051026B
										111051026P
										111051026S
	89	Convex face	Retrac	8×13	6×12	35°	4F2G	4.5	B89T51-CR813612-L-A2-4	111051037C
										111051037B
										111051037P
										111051037S

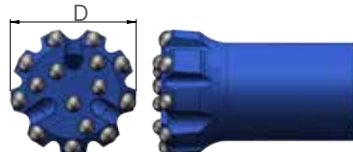
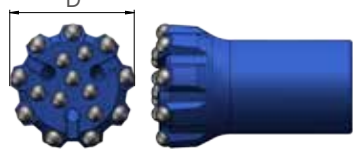
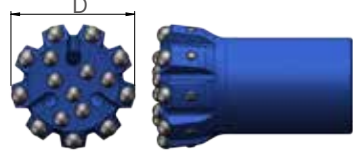
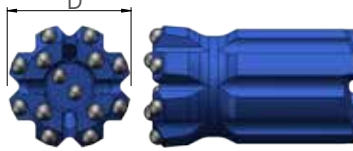
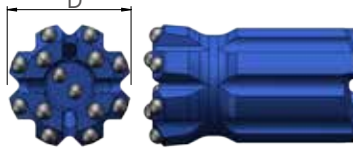
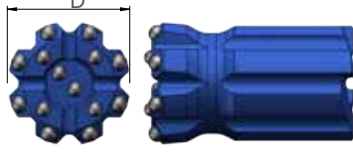
T51(2") Bits



	D mm	Head design	Skirt design	Button No.× Size		Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
				Gauge	Front					
	89	Drop center	Retrac	8×13	6×12	35°	4F0G	4.5	B89T51-DR813612-4	111051009C
										111051009B
										111051009P
										111051009S
	89	Drop center	Retrac	8×13	6×12	35°	4F0G	4.5	B89T51-DR813612-L-4	111051020C
										111051020B
										111051020P
										111051020S
	102	Drop center	Normal	8×14	6×12	35°	4F0G	5.5	B102T51-D814612-4	111051051C
										111051051B
										111051051P
										111051051S
	102	Drop center	Normal	8×16	5×14	35°	2F2G	5.5	B102T51-D816514-A2-2	111051073C
										111051073B
										111051073P
										111051073S
	102	Drop center	Normal	8×16	6×13	35°	4F0G	5.5	B102T51-D816613-4	111051052C
										111051052B
										111051052P
										111051052S
	102	Flat face	Normal	9×13	9×11	35°	3F0G	5.5	B102T51-913911-3	111051079C
										111051079B
										111051079P
										111051079S

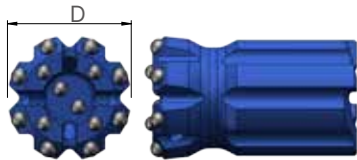
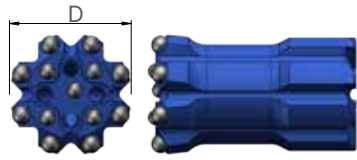
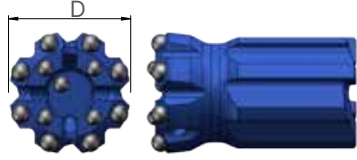
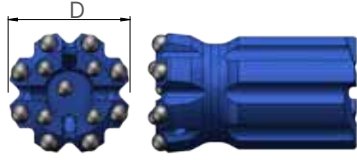
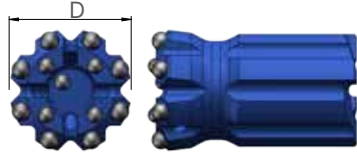
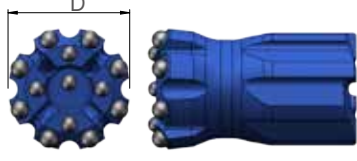
T51(2") Bits



	D mm	Head design	Skirt design	Button No.× Size		Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
				Gauge	Front					
	102	Flat face	Normal	9×14	6×12	35°	3F0G	5.5	B102T51-914612-3	111051053C
										111051053B
										111051053P
										111051053S
	102	Flat face	Normal	9×15	7×13	35°	3F0G	5.5	B102T51-915713-3	111051075C
										111051075B
										111051075P
										111051075S
	102	Flat face	Normal	9×15	7×13	35°	3F0G	5.5	B102T51-915713-908-3	111051077C
										111051077B
										111051077P
										111051077S
	102	Drop center	Retrac	8×13	4×13 2×12	35°	4F0G	7.0	B102T51-DR813413212-4	111051055C
										111051055B
										111051055P
										111051055S
	102	Drop center	Retrac	8×14	4×13 2×12	35°	4F0G	7.0	B102T51-DR814413212-4	111051049C
										111051049B
										111051049P
										111051049S
	102	Drop center	Retrac	8×14	6×12	35°	4F0G	7.0	B102T51-DR814612-4	111051054C
										111051054B
										111051054P
										111051054S

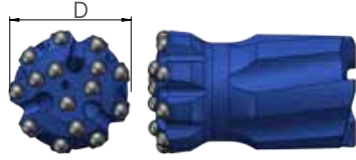
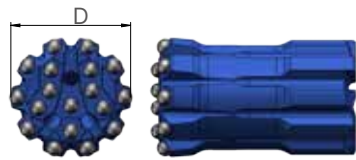
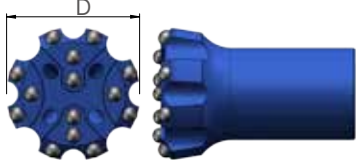
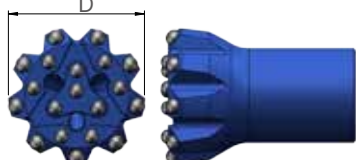
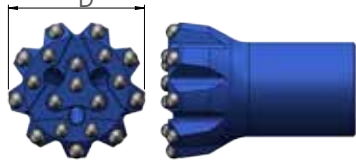
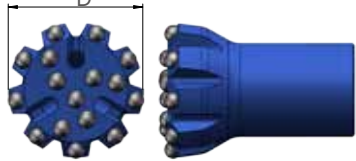
T51(2") Bits



	D mm	Head design	Skirt design	Button No.× Size		Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
				Gauge	Front					
	102	Drop center	Retrac	8×14	6×12	35°	4F1G	7.0	B102T51-DR814612-A-4	111051056C
										111051056B
										111051056P
										111051056S
	102	Drop center	Retrac	8×16	5×13	35°	4F0G	7.0	B102T51-DR816513-4	111051057C
										111051057B
										111051057P
										111051057S
	102	Drop center	Retrac	8×16	5×13	35°	4F1G	7.0	B102T51-DR816513-L-A-4	111051060C
										111051060B
										111051060P
										111051060S
	102	Drop center	Retrac	8×16	5×13	35°	4F2G	7.0	B102T51-DR816513-A2-4	111051070C
										111051070B
										111051070P
										111051070S
	102	Drop center	Retrac	8×16	5×13	35°	4F1G	7.0	B102T51-DR816513-A-4	111051058C
										111051058B
										111051058P
										111051058S
	102	Drop center	Retrac	8×16	5×13	35°	4F0G	7.0	B102T51-DR816513-L-4	111051068C
										111051068B
										111051068P
										111051068S

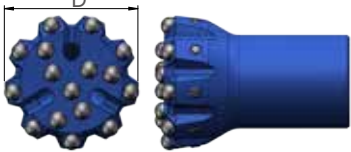
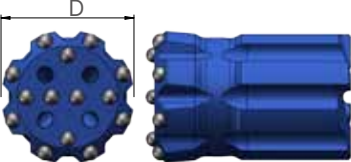
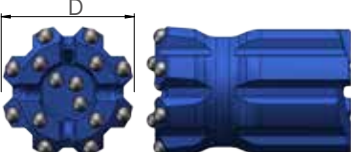
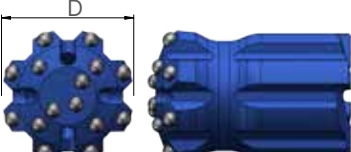
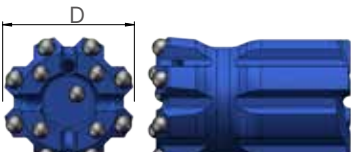
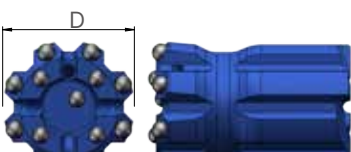
T51(2") Bits



	D mm	Head design	Skirt design	Button No.× Size		Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
				Gauge	Front					
	102	Convex face	Retrac	9×14	6×14	35°	4F0G	7.0	B102T51-CR914614-X-4	111051085C
										111051085B
										111051085P
										111051085S
	102	Drop center	Retrac	10×14	8×13	35°	3F0G	7.0	B102T51-DR1014813-3	111051059C
										111051059B
										111051059P
										111051059S
	115	Flat face	Normal	8×14	6×13	35°	4F0G	6.2	B115T51-814613-4	111051066C
										111051066B
										111051066P
										111051066S
	115	Flat face	Normal	9×14	10×12	35°	3F0G	6.2	B115T51-9141012-3	111051061C
										111051061B
										111051061P
										111051061S
	115	Flat face	Normal	9×14	10×12	35°	3F1G	6.2	B115T51-9141012-A-3	111051086C
										111051086B
										111051086P
										111051086S
	115	Flat face	Normal	9×15	7×15	35°	3F0G	6.2	B115T51-915715-3	111051076C
										111051076B
										111051076P
										111051076S

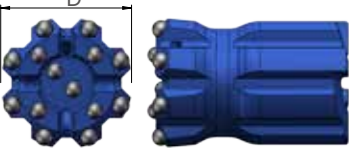
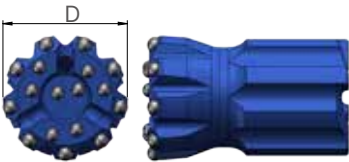
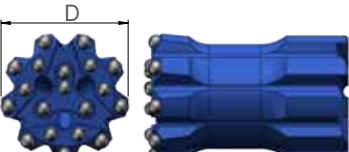
T51(2”) Bits



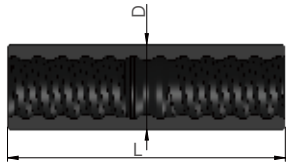
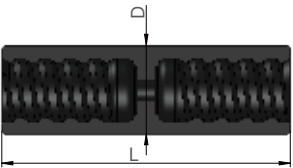
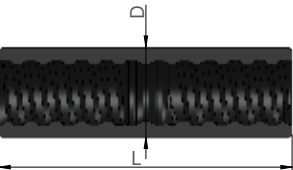
	D mm	Head design	Skirt design	Button No.× Size		Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
				Gauge	Front					
	115	Flat face	Normal	9×15	7×15	35°	3F0G	6.2	B115T51-915715-909-3	111051078C
										111051078B
										111051078P
										111051078S
	115	Flat face	Retrac	8×14	6×13	35°	4F0G	9.4	B115T51-R814613-4	111051064C
										111051064B
										111051064P
										111051064S
	115	Drop center	Retrac	8×14	7×13	35°	4F1G	9.4	B115T51-DR814713-A-4	111051082C
										111051082B
										111051082P
										111051082S
	115	Convex face	Retrac	8×14	7×13	35°	4F1G	9.4	B115T51-CR814713-A-4	111051081C
										111051081B
										111051081P
										111051081S
	115	Drop center	Retrac	8×16	5×14	35°	4F2G	9.4	B115T51-DR816514-A2-4	111051065C
										111051065B
										111051065P
										111051065S
	115	Drop center	Retrac	8×16	5×14	35°	4F1G	9.4	B115T51-DR816514-A-4	111051087C
										111051087B
										111051087P
										111051087S

T51(2”) Bits

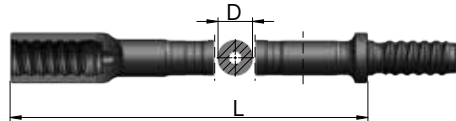


	D mm	Head design	Skirt design	Button No.× Size		Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
				Gauge	Front					
	115	Drop center	Retrac	8×16	6×14	35°	4F2G	9.4	B115T51-DR816614-A2-4	111051071C
										111051071B
										111051071P
										111051071S
	115	Drop center	Retrac	9×14	8×12	35°	3F0G	9.4	B115T51-DR914812-3	111051063C
										111051063B
										111051063P
										111051063S
	115	Flat face	Retrac	9×14	10×12	35°	3F0G	9.4	B115T51-R9141012-3	111051067C
										111051067B
										111051067P
										111051067S

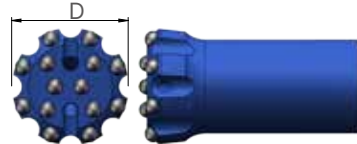
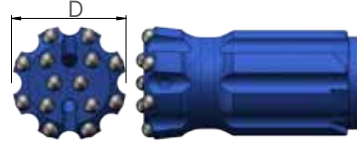
T51(2") Coupling sleeves

	L mm	D mm	Thread	Adapter type	Bridge type	WT kg	Product model	Part No.
	250	51	T51	Straight	-	3.5	LJT51M-51250	355151068
	235	72	T51	Straight	Semi-bridge	4.3	LJT51-72235S	385151061
	235	72	T51	Straight	Full bridge	4.3	LJT51-72235F	395151057
	235	76	T51	Straight	Semi-bridge	4.5	LJT51-76235S	385151060
	285	72	T51-T45M	Cross over	-	3.9	LJT51/45M-72285	365145050

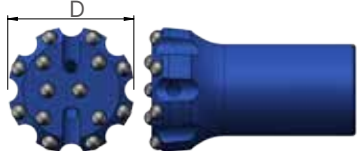
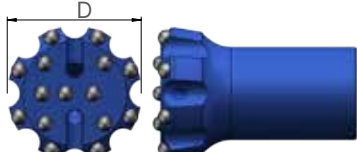
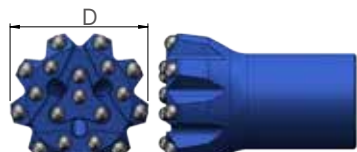
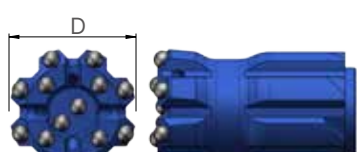
GT51(2") Rods

	L mm	L ft	Thread	D mm	D in	Thread	Impact type	WT kg	Product model	Part No.
	3660	12'	GT51	52	2"	GT51	Dual drive	50.2	MF GT51D52GT51-3660	225252008
	4265	14'	GT51	52	2"	GT51	Dual drive	58.5	MF GT51D52GT51-4265	225252009
	6095	20'	GT51	52	2"	GT51	Dual drive	83.6	MF GT51D52GT51-6095	225252011

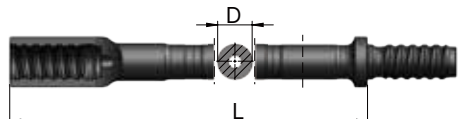
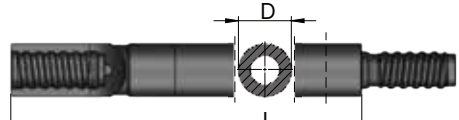
GT51(2") Bits

	D mm	Head design	Skirt design	Button No.× Size Gauge	Front	Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
	89	Flat face	Normal	8×13	6×12	35°	2F2G	3.3	B89GT51-813612-A2-2	111052001C
										111052001B
										111052001P
										111052001S
	89	Flat face	Retrac	8×13	6×12	35°	2F2G	4.5	B89GT51-R813612-A2-2	111052002C
										111052002B
										111052002P
										111052002S

GT51(2") Bits

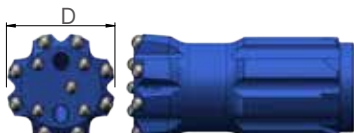
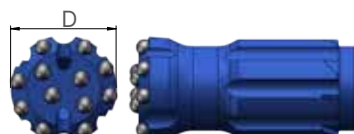
	D mm	Head design	Skirt design	Button No.× Size Gauge	Front	Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
	102	Flat face	Normal	8×13	6×12	35°	2F2G	5.5	B102GT51-813612-A2-2	111052003C
										111052003B
										111052003P
										111052003S
	115	Flat face	Normal	8×14	7×13	35°	2F2G	6.2	B115GT51-814713-A2-2	111052004C
										111052004B
										111052004P
										111052004S
	115	Flat face	Normal	9×14	10×12	35°	3F0G	6.2	B115GT51-9141012-3	111052006C
										111052006B
										111052006P
										111052006S
	115	Drop center	Retrac	8×16	6×15	35°	4F1G	9.4	B115GT51-DR816615-A-4	111052007C
										111052007B
										111052007P
										111052007S

GT60(2 3/8") Rods

	L mm	L ft	Thread	D mm	D in	Thread	Impact type	WT kg	Product model	Part No.
	3660	12'	GT60	60	2 3/8"	GT60	Shoulder drive	49.2	MF GT60D60GT60-3660	226060008
	4265	14'	GT60	60	2 3/8"	GT60	Shoulder drive	57.4	MF GT60D60GT60-4265	226060009
	6095	20'	GT60	60	2 3/8"	GT60	Shoulder drive	82.0	MF GT60D60GT60-6095	226060011
	3660	12'	GT60	87	3 1/2"	GT60	Shoulder drive	89.3	MF GT60D87GT60-3660	276060020
	4265	14'	GT60	87	3 1/2"	GT60	Shoulder drive	104.1	MF GT60D87GT60-4265	276060021
	6095	20'	GT60	87	3 1/2"	GT60	Shoulder drive	148.7	MF GT60D87GT60-6095	276060023

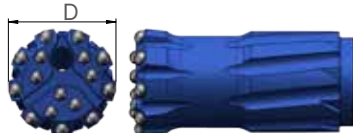
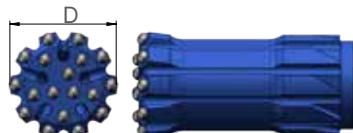
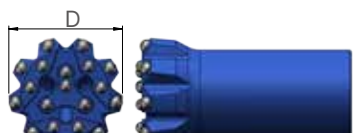
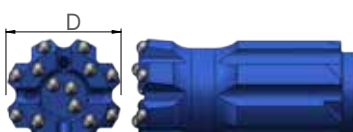
GT60(2 3/8") Bits



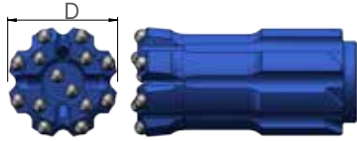
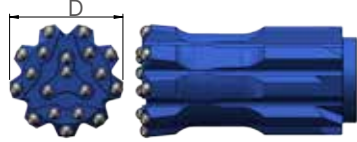
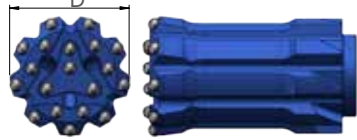
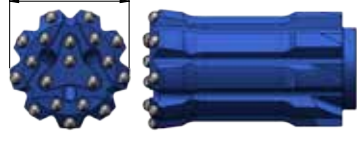
	D mm	Head design	Skirt design	Button No.× Size		Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
				Gauge	Front					
	92	Drop center	Normal	9×12	9×12	35°	3F0G	11.4	B92GT60-D912912-3	111060014C
										111060014B
										111060014P
										111060014S
	102	Drop center	Retrac	8×13	4×12 3×11	35°	4F0G	16.1	B102GT60-DR813412311-4	111060009C
										111060009B
										111060009P
										111060009S
	102	Flat face	Retrac	8×14	5×12	35°	2F2G	16.1	B102GT60-R814512-A2-2	111060004C
										111060004B
										111060004P
										111060004S
	102	Flat face	Retrac	8×16	4×16	35°	2F0G	16.2	B102GT60-R816416-2	111060011C
										111060011B
										111060011P
										111060011S
	102	Flat face	Retrac	9×13	9×11	35°	3F0G	16.1	B102GT60-R913911-3	111060005C
										111060005B
										111060005P
										111060005S
	102	Drop center	Retrac	8×14	5×12	35°	4F0G	16.1	B102GT60-DR814512-4	111060017C
										111060017B
										111060017P
										111060017S

GT60(2 3/8") Bits

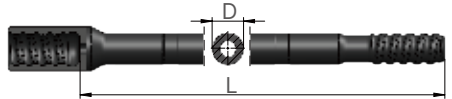
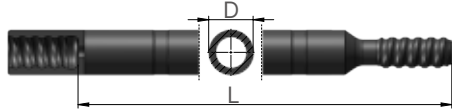


	D mm	Head design	Skirt design	Button No.× Size		Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
				Gauge	Front					
	102	Flat face	Retrac	9×14	7×12	35°	1F0G	16.1	B102GT60-R914712-X-1	111060015C
										111060015B
										111060015P
										111060015S
	102	Flat face	Retrac	10×13	8×12	35°	5F0G	16.1	B102GT60-R1013812-5	111060006C
										111060006B
										111060006P
										111060006S
	102	Flat face	Retrac	10×13	8×12	35°	5F0G	16.1	B102GT60-R1013812-5-1	111060010C
										111060010B
										111060010P
										111060010S
	102	Flat face	Retrac	10×13	8×12	35°	5F0G	16.2	B102GT60-R1013812-X-5	111060013C
										111060013B
										111060013P
										111060013S
	115	Flat face	Normal	9×14	10×12	35°	3F0G	21.3	B115GT60-9141012-3	111060012C
										111060012B
										111060012P
										111060012S
	115	Drop center	Retrac	8×14	7×14	35°	4F0G	21.8	B115GT60-DR814714-4	111060007C
										111060007B
										111060007P
										111060007S

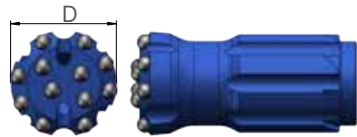
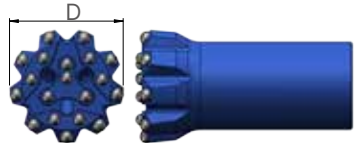
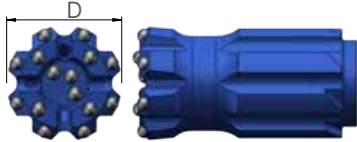
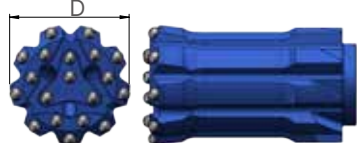
GT60(2 3/8") Bits

	D mm	Head design	Skirt design	Button No.× Size		Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
				Gauge	Front					
	115	Drop center	Retrac	8×16	6×14	35°	4F0G	21.8	B115GT60-DR816614-4	111060018C
										111060018B
										111060018P
										111060018S
										111060008C
	115	Flat face	Retrac	9×14	10×12	35°	3F0G	21.8	B115GT60-R9141012-3	111060008B
										111060008P
										111060008S
										111060019C
										111060019B
	127	Flat face	Retrac	9×14	10×13	35°	3F0G	29.7	B127GT60-R9141013-3	111060019P
										111060019S
										111060020C
										111060020B
										111060020P
	127	Flat face	Retrac	9×16	10×14	35°	3F0G	29.7	B127GT60-R9161014-3	111060020S
										111060021C
										111060021B
										111060021P
										111060021S

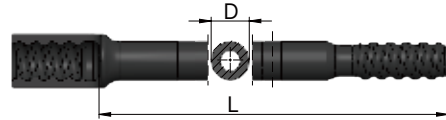
EL60(2 3/8") Rods

	mm	L ft	Thread	mm	D in	Thread	Impact type	WT kg	Product model	Part No.
	3660	12'	EL60	60	2 3/8"	EL60	Bottom drive	49.2	MF EL60D60EL60-3660	226363008
	4265	14'	EL60	60	2 3/8"	EL60	Bottom drive	57.4	MF EL60D60EL60-4265	226363009
	6095	20'	EL60	60	2 3/8"	EL60	Bottom drive	82.0	MF EL60D60EL60-6095	226363011
	3660	12'	EL60	87	3 1/2"	EL60	Bottom drive	89.3	MF EL60D87EL60-3660	276363020
	4265	14'	EL60	87	3 1/2"	EL60	Bottom drive	104.1	MF EL60D87EL60-4265	276363021
	4265	14'	EL60	87	3 1/2"	EL60	-	104	FF EL60D87EL60-4265	276363033

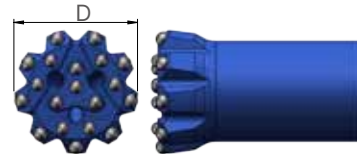
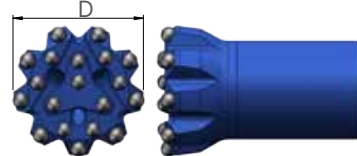
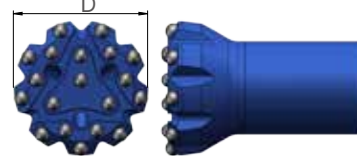
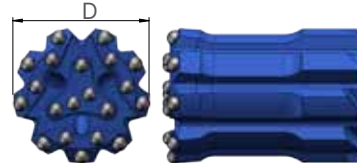
EL60(2 3/8") Bits

	D mm	Head design	Skirt design	Button No.× Size		Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
				Gauge	Front					
	102	Flat face	Retrac	8×16	4×16	35°	2F0G	16.1	B102EL60-R816416-2	111063004C
										111063004B
										111063004P
										111063004S
	115	Drop center	Normal	9×14	10×12	35°	3F0G	21.3	B115EL60-D9141012-3	111063012C
										111063012B
										111063012P
										111063012S
	115	Drop center	Retrac	8×14	7×14	35°	4F0G	21.8	B115EL60-DR814714-4	111063007C
										111063007B
										111063007P
										111063007S
	127	Flat face	Retrac	9×16	10×14	35°	3F0G	29.7	B127EL60-R9161014-3	111063020C
										111063020B
										111063020P
										111063020S

EL68(2 3/4") Rods

	L mm	L ft	Thread	D mm	D in	Thread	Impact type	WT kg	Product model	Part No.
	3660	12'	EL68	70	2 3/4"	EL68	Bottom drive	64.2	MF EL68D70EL68-3660	276969008
	4265	14'	EL68	70	2 3/4"	EL68	Bottom drive	74.9	MF EL68D70EL68-4265	276969009
	6095	20'	EL68	70	2 3/4"	EL68	Bottom drive	107.0	MF EL68D70EL68-6095	276969011

EL68(2 3/4") Bits

	D mm	Head design	Skirt design	Button No.× Size		Gauge buttons angle	Flushing hole F&G	WT kg	Product model	Part No.
				Gauge	Front					
	115	Flat face	Normal	9×14	10×12	35°	3F0G	7.8	B115EL68-9141012-3	111069002C
										111069002B
										111069002P
										111069002S
	127	Flat face	Normal	9×16	10×14	35°	3F0G	8.9	B127EL68-9161014-3	111069003C
										111069003B
										111069003P
										111069003S
	140	Flat face	Normal	9×16	10×14	35°	3F0G	10.5	B140EL68-9161014-3	111069004C
										111069004B
										111069004P
										111069004S
	140	Flat face	Retrac	9×16	11×14	35°	3F0G	14.6	B140EL68-R9161114-3	111069005C
										111069005B
										111069005P
										111069005S

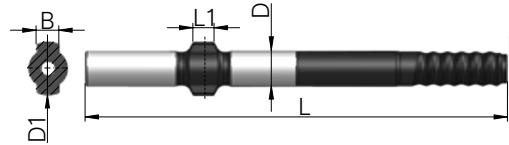
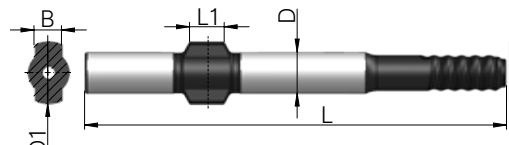
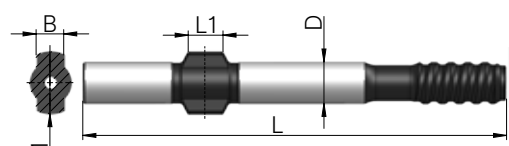
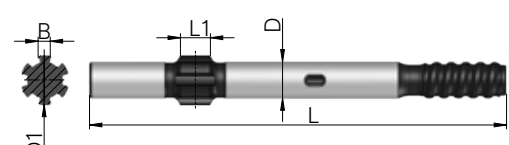
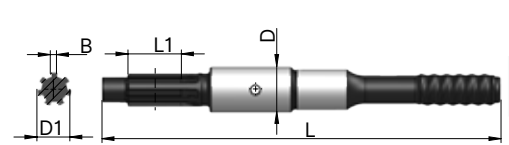
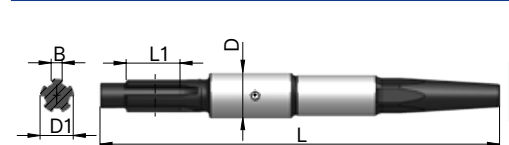
Shank adapters

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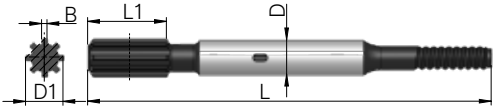
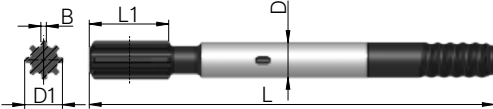
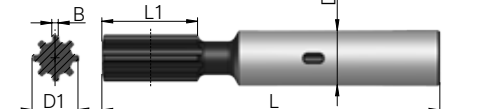
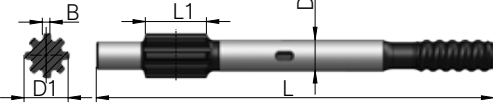
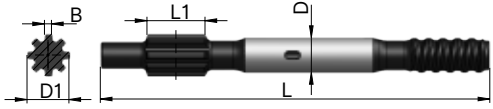
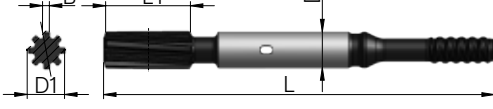
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Epiroc, Sandvik, Furukawa, Montabert,
Ingersoll Rand, Doofer, Toyo,
Everdigm, Yonda, Other Series

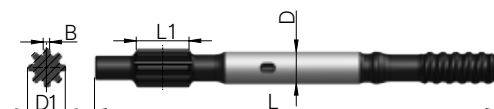
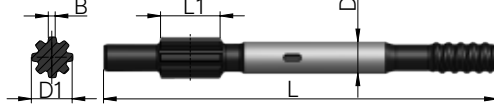
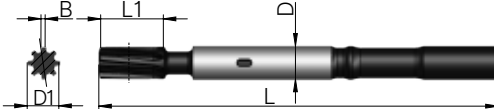
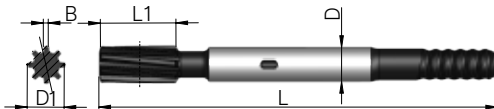
Epiroc

	L mm	D mm	Thread	D1 mm	L1 mm	B mm	WT Kg	Product model	Part No.
	380	32	R32	48	19	20.4	2.1	COPBBC100-32R32-380	413432001
	390	38	R32	57	32	25.4	3.0	COPBBC120-38R32-390	412232001
	390	38	T38	57	32	25.4	3.1	COPBBC120-38T38-390	412238001
	445	38	T38	52	32	13	3.8	COP131-38T38-445	413138001
	400	45	R32	33	54	11.6	3.2	COP1028-45R32-400	413932001
	397	45	7°	33	54	11.6	3.0	COP1028HB-45-7°-397	413545001

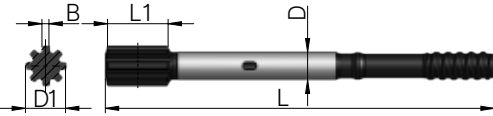
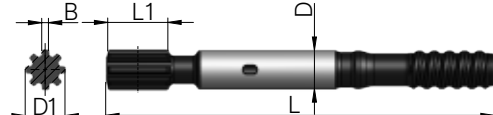
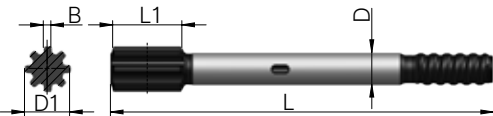
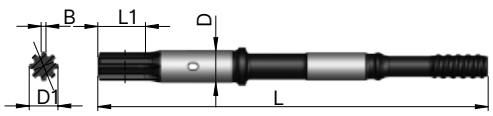
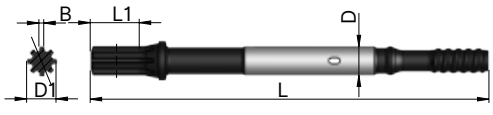
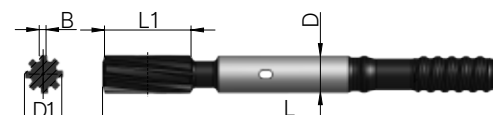
Epiroc

	L mm	D mm	Thread	D1 mm	L1 mm	B mm	WT Kg	Product model	Part No.
	410	35	R23	38	79	5.3	2.3	COP1132-35R23-410	411923001
	410	35	R32	38	79	5.3	2.3	COP1132-35R32-410	411932001
	500	35	R32	38	79	5.3	2.8	COP1132-35R32-500	411932002
	410	35	R35	38	79	5.3	2.8	COP1132-35R35-410	411933001
	280	45	R32F	38	79	5.3	2.5	COP1132-45R32F-280	411932003
	485	38	R32	53.8	74	8.9	4.0	COP1238-38R32-485	410232004
	485	38	R38	53.8	74	8.9	4.0	COP1238-38R38-485	410237004
	485	38	T38	53.8	74	8.9	4.0	COP1238-38T38-485	410238004
	500	38	R32	53.8	74	8.9	4.2	COP1238-38R32-500	410232001
	500	38	T38	53.8	74	8.9	4.2	COP1238-38T38-500	410238002
	500	45	T45	53.8	74	8.9	5.0	COP1238-45T45-500	410245002
	565	52	T38	53.7	127	9.8	6.5	COP1240-52T38-565X	410538001

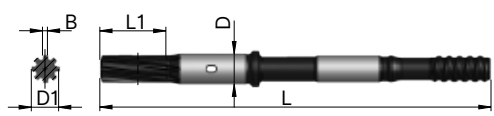
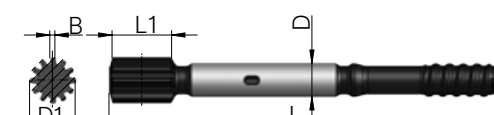
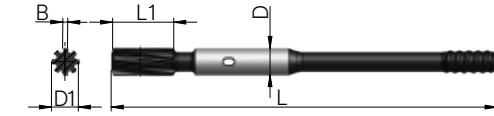
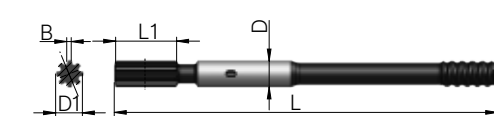
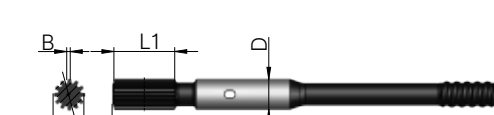
Epiroc

	L mm	D mm	Thread	D1 mm	L1 mm	B mm	WT Kg	Product model	Part No.
	575	38	R32	53.8	74	8.9	5.2	COP1238-38R32-575	410232003
	575	38	R38	53.8	74	8.9	5.4	COP1238-38R38-575	410237005
	575	38	T38	53.8	74	8.9	5.4	COP1238-38T38-575	410238001
	575	45	R32	53.8	74	8.9	5.8	COP1238-45R32-575	410232002
	575	45	R38	53.8	74	8.9	5.8	COP1238-45R38-575	410237002
	575	45	T38	53.8	74	8.9	5.8	COP1238-45T38-575	410238003
	575	45	T45	53.8	74	8.9	5.8	COP1238-45T45-575	410245001
	654	52	T38	67.8	98	11	6.2	COP RD18S-52T38-654	411038001
	654	52	T45	67.8	98	11	6.2	COP RD18S-52T45-654	411045001
	654	52	T51	67.8	98	11	6.3	COP RD18S-52T51-654	411051001
	480	40	R25F	38	79	5	3.0	COP1435-40R25F-480X	412825001
	410	35	R32	38	79	5	2.5	COP1435-35R32-410X	412832001
	500	35	R32	38	79	5	3.0	COP1435-35R32-500X	412832002
	500	35	T35	38	79	5	3.2	COP1435-35T35-500X	412836001
	435	38	R32	53.8	84	9	4.5	COP1838HD-38R32-435	410332001
	435	38	R38	53.8	84	9	4.5	COP1838HD-38R38-435	410337001
	435	38	T38	53.8	84	9	4.5	COP1838HD-38T38-435	410338001

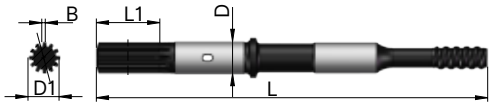
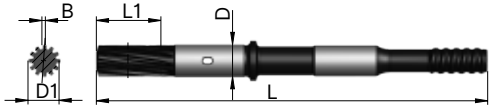
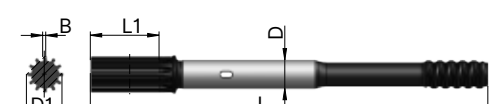
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	L mm	D mm	Thread	D1 mm	L1 mm	B mm	WT Kg	Product model	Part No.
	525	38	R32	53.8	84	9	5.8	COP1838-38R32-525	410332002
	525	38	R38	53.8	84	9	5.8	COP1838-38R38-525	410337002
	525	38	T38	53.8	84	9	5.8	COP1838-38T38-525	410338003
	525	52	T38	53.8	88	9	6.8	COP1838-52T38-525	410338002
	525	52	T45	53.8	88	9	6.8	COP1838-52T45-525	410345001
	525	52	T51	53.8	88	9	6.8	COP1838-52T51-525	410351001
	455	38	R38	53.8	84	9	4.6	COP1838AW-38R38-455	413637001
	455	38	T38	53.8	84	9	4.6	COP1838AW-38T38-455	413638001
	730	60	T45	53.8	89	8.9	10.2	COP1838EX-60T45-730	410445001
	730	60	T51	53.8	89	8.9	10.4	COP1838EX-60T51-730	410451001
	730	52	T38	53.8	90	8.9	10.0	COP1838MUX-52T38-730	412738001
	730	52	T45	53.8	90	8.9	10.2	COP1838MUX-52T45-730	412745001
	565	52	T45	53.7	127	9.8	7.5	COP1840-52T45-565X	410545001
	565	52	T51	53.7	127	9.8	7.5	COP1840-52T51-565X	410551001

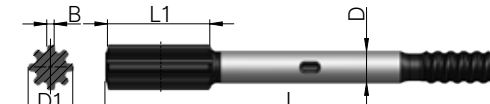
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	L mm	D mm	Thread	D1 mm	L1 mm	B mm	WT Kg	Product model	Part No.
	770	60	T38	53.8	130	9.8	9.9	COP1840EX-60T38-770X	410638001
	770	60	T45	53.8	130	9.8	10.8	COP1840EX-60T45-770X	410645001
	770	60	T51	53.8	130	9.8	10.9	COP1840EX-60T51-770X	410651001
	440	45	T38	61.5	84	6.8	4.5	COP RD22U-45T38-440	411038003
	525	45	T38	61.5	84	6.8	5.4	COP RD22U-45T38-525	411038002
	525	45	T45	61.5	84	6.8	5.4	COP RD22U-45T45-525	411045002
	770	52	T45	53.7	124.5	8.9	9.2	COP2150-52T45-770X	411745001
	770	52	T51	53.8	124.5	8.9	10.0	COP2150-52T51-770	411751001
	770	60	T45	53.5	130	9.8	10.9	COP2550UX-60T45-770X	411445001
	770	60	T51	53.6	130	9.8	11.0	COP2550UX-60T51-770X	411451001
	770	77	T51	53.6	130	9.8	18.2	COP2550UX-77T51-770X	411451002
	770	77	ST58	53.6	130	9.8	19.7	COP2550UX-77ST58-770X	411458001
	770	60	T38	61.5	124.5	6.8	10.7	COP2560-60T38-770	410738001
	770	60	T45	61.5	124.5	6.8	10.9	COP2560-60T45-770	410745001
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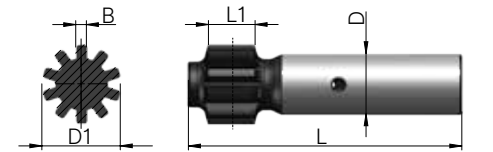
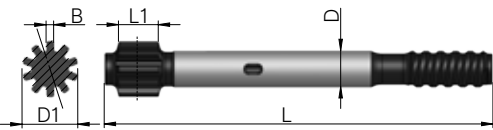
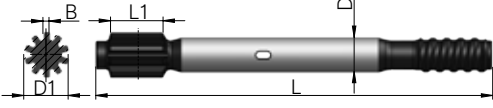
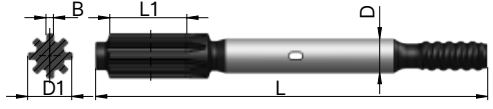
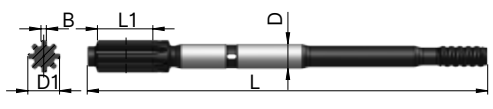
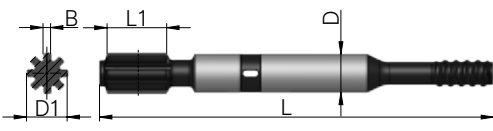
Epiroc

	L mm	D mm	Thread	D1 mm	L1 mm	B mm	WT Kg	Product model	Part No.
	770	63	T45	61	125	6.8	13.2	COP2560EX-63T45-770	410845001
	770	63	T51	61	125	6.8	13.3	COP2560EX-63T51-770	410851001
	770	63	T45	61	125	6.8	13.2	COP2560EX-63T45-770X	410945001
	770	63	T51	61	125	6.8	13.3	COP2560EX-63T51-770X	410951001
	770	63	GT60	61	125	6.8	13.5	COP2560EX-63GT60-770X	410960001
	770	63	GT60	61	125	6.8	13.5	COP2560EX-63GT60-770X-1	410960002
	525	45	T38	53.5	84	9.8	5.6	COP3038-45T38R-525X	413238002
	525	45	TC42	53.5	84	9.8	5.8	COP3038-45TC42-525X	413242001
	840	60	T51	75	145	6.5	15.8	COP3060MEX-60T51-840	411551001
	840	60	EL60	75	145	6.5	16.6	COP3060MEX-60EL60-840	412063001
	840	60	GT60	75	145	6.5	16.6	COP3060MEX-60GT60-840	412060001
	840	60	Twiz60	75	145	6.5	17.0	COP3060MEX-60Twiz60-840	412062001
	770	90	T51	75	140	6.5	23.5	COP3060MUX-90T51-770	411551003
	745	90	ST58	75	140	6.5	23.7	COP3060MUX-90ST58-745	411558001
	745	90	ST68	75	140	6.5	24.0	COP3060MUX-90ST68-745	411568001
	605	52	T51	67.8	105	7	8.9	COP4050ME-52T51-605X	411851001
	700	70	GT60	67.8	108	7	14.7	COP4050ME-70GT60-700X	411860001

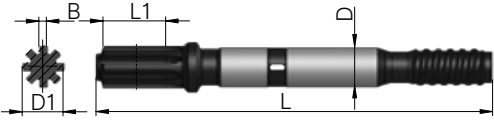
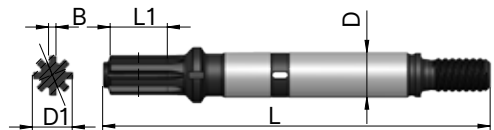
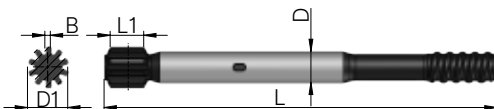
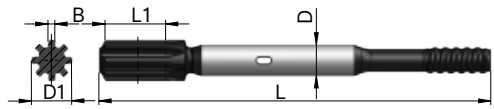
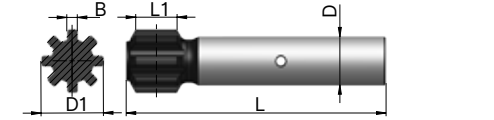
Epiroc

	L mm	D mm	Thread	D1 mm	L1 mm	B mm	WT Kg	Product model	Part No.
	835	90	ST58	67.8	112	11	26.6	COP4050MUX-90ST58-835	413058001
	835	90	ST68	67.8	112	11.6	26.9	COP4050MUX-90ST68-835	413068001
	470	38	R38	53.5	138.5	8.9	4.4	COPMD20-38R38-470	412937001
	470	38	T38	53.5	138.5	8.9	4.4	COPMD20-38T38-470	412938001

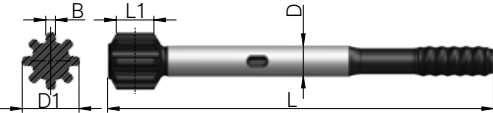
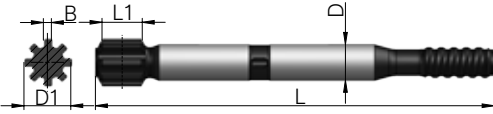
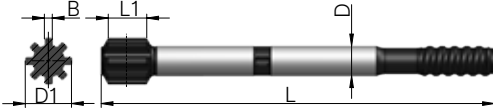
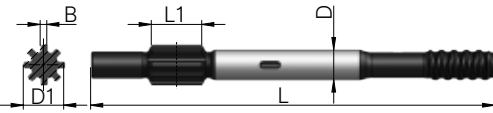
Sandvik

	L mm	D mm	Thread	D1 mm	L1 mm	B mm	WT Kg	Product model	Part No.
	205	45	R32F	58.8	35	8	2.0	RD314-45R32F-205	421232002
	410	38	R32	58.8	42	8	3.2	RD314-38R32-410	421232001
	410	38	T35	58.8	42	8	3.3	RD314-38T35-410	421236001
	410	38	T38	58.8	42	8	3.3	RD314-38T38-410	421238001
	745	45	R38	58.8	69.5	8	5.6	RD525-45R38-745	420637001
	525	45	T38	58.8	69.5	8	5.6	RD525-45T38-525	420638002
	525	45	T45	58.8	69.5	8	5.7	RD525-45T45-525	420645001
	525	45	T38	58.8	103	9.9	5.7	RD525PE-45T38-525	420638003
	745	45	T38	58.8	103	9.9	7.2	RD525PE-45T38-745	420638001
	670	65	T45	69	131.5	12.8	14.8	RD900-65T45-670	420245001
	670	65	GT45	69	131.5	12.8	15.0	RD900-65GT45-670	420246001
	670	65	ST58	69	131.5	12.8	15.0	RD900-65ST58-670	420258001
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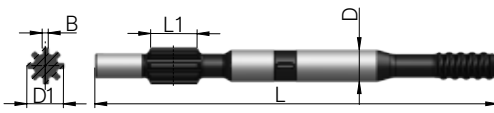
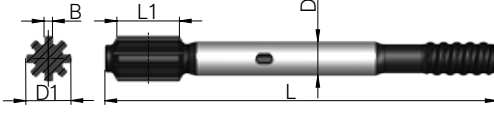
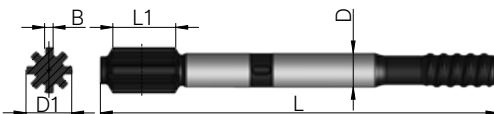
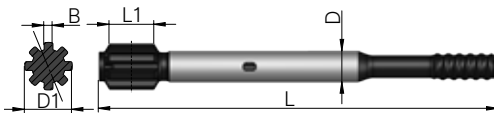
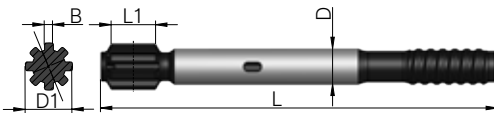
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	L mm	D mm	Thread	D1 mm	L1 mm	B mm	WT Kg	Product model	Part No.
	670	65	T45	69	106	12.8	14.8	RD900PE-65T45-670	421345001
	670	65	ST58	69	106	12.8	15.0	RD900PE-65ST58-670	421358001
	670	65	GT60	69	106	12.8	15.0	RD900PE-65GT60-670	421360001
	670	77	ST58	69	99	12.8	18.0	RD927PE-77ST58-670	422258001
	500	45	R38	58.8	49	8	5.2	HLX5-45R38-500	420137001
	500	45	T38	58.8	49	8	5.2	HLX5-45T38-500	420138002
	500	45	T45	58.8	49	8	5.2	HLX5-45T45-500	420145001
	575	45	R32	59	49	8	5.9	HLX5-45R32-575	420132001
	575	45	T38	59	49	8	5.9	HLX5-45T38-575	420138001
	575	45	T45	59	49	8	5.9	HLX5-45T45-575	420145002
	575	45	R32	58.9	89	10	6.0	HLX5PE-45R32-575	421432001
	575	45	T38	58.9	89	10	6.0	HLX5PE-45T38-575	421438001
	245	45	R32F	58.8	39	10	2.7	HL300-45R32F-245	420832002

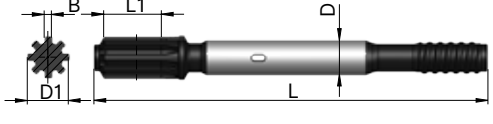
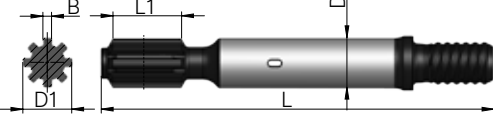
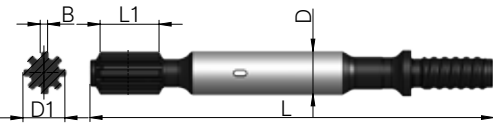
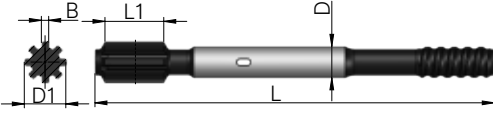
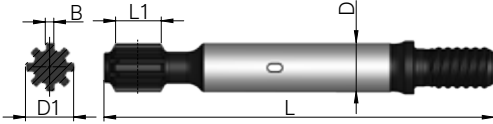
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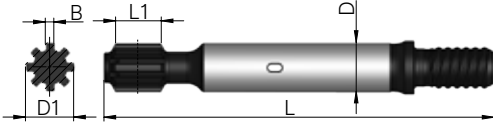
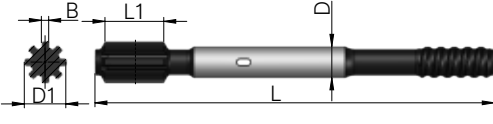
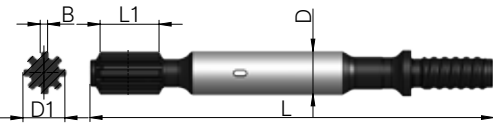
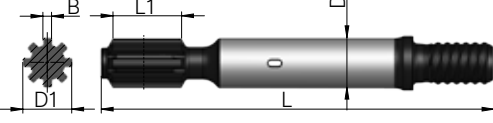
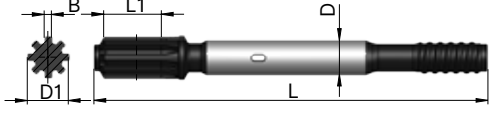
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	400	32	R32	58.8	39	10	2.6	HL300-32R32-400	420832001
	550	45	T38	58.8	49	10	6.0	HL500-45T38-550	421738002
	460	45	T45	58.8	49	10	5.0	HL500-45T45-460	421745002
	550	45	T45	58.8	49	10	6.2	HL500-45T45-550	421745001
	460	38	R32	58.8	49	10	3.9	HL500-38R32-460	421732001
	460	38	R38	58.8	49	10	4.1	HL500-38R38-460	421737001
	460	38	T35	58.8	49	10	4.1	HL500-38T35-460	421736001
	460	38	T38	58.8	49	10	4.1	HL500-38T38-460	421738004
	500	38	T38	58.8	49	10	4.3	HL500-38T38-500	421738001
	550	38	T38	58.8	49	10	4.7	HL500-38T38-550	421738003
	500	45	T38	58.9	49	10	5.0	HL550-45T38-500	422038001
	600	45	T38	59	75	9.8	6.4	HL600-45T38-600	420338001
	600	45	T45	59	75	9.8	6.4	HL600-45T45-600	420345001

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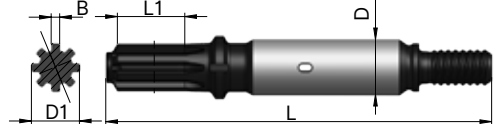
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	650	52	T45	59	75	9.8	6.6	HL600-52T45-650	420345002
	600	45	T38	69	95	12.8	7.0	HL700-45T38-600	420438003
	600	45	T45	69	95	12.8	7.2	HL700-45T45-600	420445001
	600	52	T38	69	95	12.8	8.4	HL700-52T38-600	420438001
	600	52	T45	69	95	12.8	8.8	HL700-52T45-600	420445002
	600	52	T51	69	95	12.8	9.2	HL700-52T51-600	420451001
	600	52	T45	69	95	12.8	9.0	HL800-52T45-600	420445003
	600	52	T51	69	95	12.8	9.2	HL800-52T51-600	420451002
	590	52	T45	78.8	75	13.9	9.3	HL1000-52T45-590	420545001
	590	52	T51	78.8	75	13.9	9.3	HL1000-52T51-590	420551002
	670	52	T45	78.8	75	13.9	10.0	HL1000-52T45-670	420545002
	670	52	T51	78.8	75	13.9	10.2	HL1000-52T51-670	420551001
	670	60	T51	78.8	75	13.9	12.0	HL1000-60T51-670	420551003
	670	60	ST58	78.8	75	13.9	13.0	HL1000-60ST58-670	420558002
	670	60	GT60	78.8	75	13.9	13.0	HL1000-60GT60-670	420560001

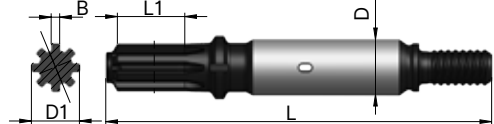
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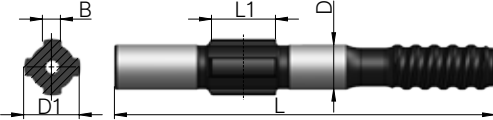
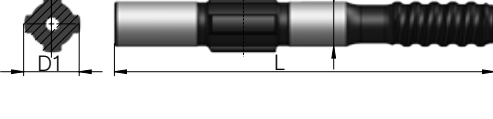
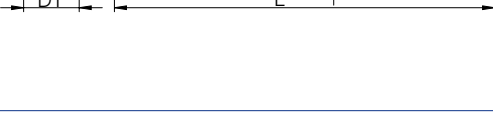
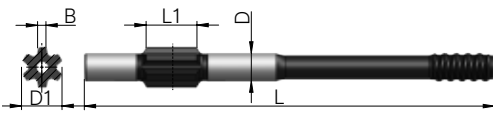
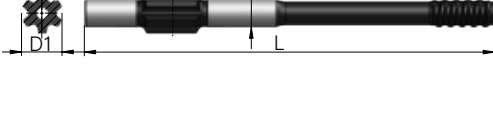
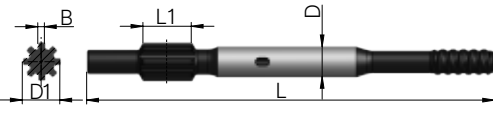
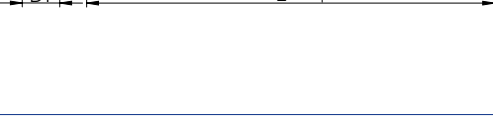
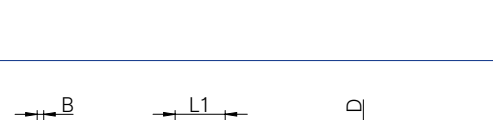
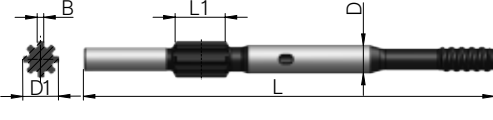
	L mm	D mm	Thread	D1 mm	L1 mm	B mm	WT Kg	Product model	Part No.
	635	80	ST58	78.8	75	13.9	16.8	HL1000-80ST58-635	420558001
	640	80	ST68	78.8	75	13.9	17.0	HL1000-80ST68-640	420568001
	710	52	T51	79	112	13.9	11.0	HL1500-52T51-710	420751001
	635	80	ST58	79	112	13.9	18.3	HL1500-80ST58-635	420758002
	760	60	EL60	79	112	13.9	16.0	HL1500-60EL60-760	420763001
	760	60	GT60	79	112	13.9	16.0	HL1500-60GT60-760	420760002
	760	80	EL60	79	112	13.9	21.0	HL1500-80EL60-760	420763002
	760	80	GT60	79	112	13.9	21.0	HL1500-80GT60-760	420760001
	635	80	ST68	79	112	13.9	18.3	HL1500-80ST68-635	420768001
	760	65	T51	79	111	13.9	16.0	HL1500PE-65T51-760	420951001
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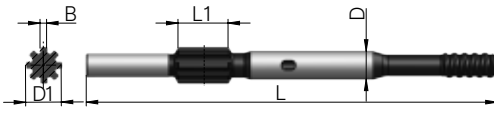
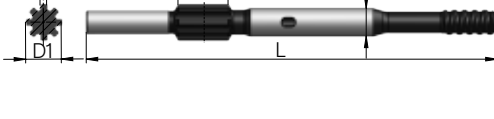
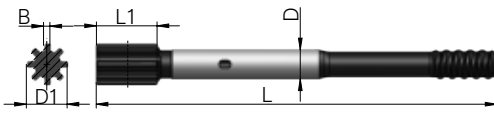
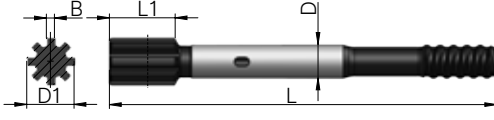
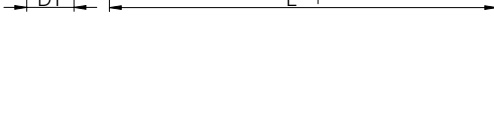
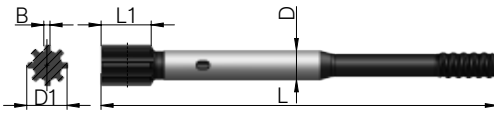


	L mm	D mm	Thread	D1 mm	L1 mm	B mm	WT Kg	Product model	Part No.
	635	90	ST58	79	111	13.9	22.0	HL1560PE-90ST58-635	420758001
	635	90	ST68	79	111	13.9	22.0	HL1560PE-90ST68-635	420768002

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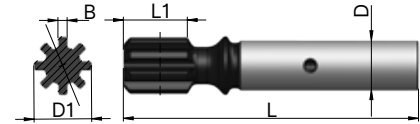
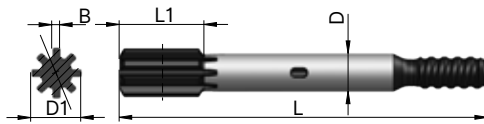
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	380	44	T38	55.5	65	18	4.2	PD200-44T38-380	440138001
	446	44	T38	55.5	65	18	4.5	PD200-44T38-446	440138002
	380	44	T45	55.5	65	18	4.3	PD200-44T45-380	440145001
	490	40	T38	63	85	9.3	5.0	HD220-40T38-490	441638001
	654	45	T38	64.5	80	12.9	6.4	HD300-45T38-654	440238001
	654	45	T45	64.5	80	12.9	6.6	HD300-45T45-654	440245001
	620	45	T38	57	75	10	6.2	HD609-45T38-620	440338001
	690	45	T38	57	75	10	6.4	HD609-45T38-690	440338002
	620	45	T45	57	75	10	6.3	HD609-45T45-620	440345002
	690	45	T45	57	75	10	6.9	HD609-45T45-690	440345001
	670	51	T45	64.8	91	11.8	8.5	HD612-51T45-670	440445003
	710	51	T45	64.8	91	11.8	9.1	HD612-51T45-710	440445001
	710	51	T51	64.8	91	11.8	9.3	HD612-51T51-710	440451001
	750	51	T45	64.8	91	11.8	9.2	HD612-51T45-750	440445002
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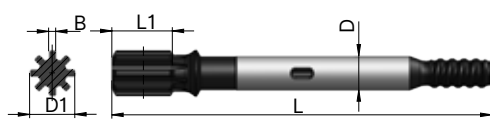
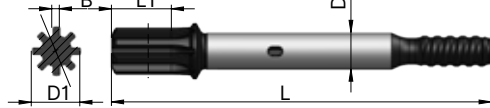
	L mm	D mm	Thread	D1 mm	L1 mm	B mm	WT Kg	Product model	Part No.
	700	58	T45	74.8	100	12	10.6	HD615-58T45-700	440545002
	880	58	T45	74.8	100	12	13.0	HD615-58T45-880	440545001
	700	58	T51	74.8	100	12	10.8	HD615-58T51-700	440551001
	590	45	T38	63	94	9.8	6.2	HD709-45T38-590	440938002
	620	45	T38	63	94	9.8	6.6	HD709-45T38-620	440938001
	590	45	T45	63	94	9.8	6.5	HD709-45T45-590	440945001
	620	45	T45	63	94	9.8	6.8	HD709-45T45-620	440945004
	815	45	T38	63	126	9.8	9.3	HD709RP-45T38-815	441238001
	800	45	T45	63	126	9.8	9.7	HD709RP-45T45-800	441245002
	815	45	T45	63	126	9.8	9.9	HD709RP-45T45-815	441245001
	590	51	T38	71.8	100	12.3	8.2	HD712-51T38-590	441038001
	590	51	T45	71.8	100	12.3	8.4	HD712-51T45-590	441045002
	790	51	T45	71.8	100	12.3	9.7	HD712-51T45-790	441045001
	590	51	T51	71.8	100	12.3	8.8	HD712-51T51-590	441051001
	790	51	T51	71.8	100	12.3	9.9	HD712-51T51-790	441051002
	790	58	T51	80	99	12.3	12.0	HD715-58T51-790	441151001

Technical drawing of the probe assembly showing dimensions: B, L1, D, D1, and L.

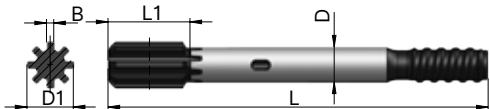
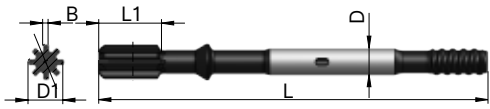
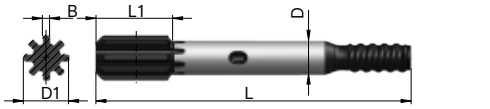
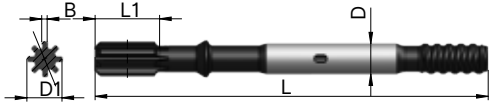
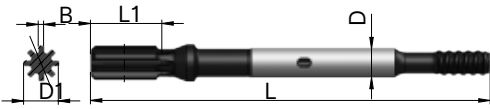
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	L mm	D mm	Thread	D1 mm	L1 mm	B mm	WT Kg	Product model	Part No.
	270	45	R32F	52.7	58.5	8.4	2.8	HC50-45R32F-270	430132002
	372	38	R32	52.7	58.5	8.4	3.4	HC50-38R32-372	430132003
	440	38	R32	52.7	58.5	8.4	3.9	HC50-38R32-440	430132001
	447	38	R32	52.7	58.5	8.4	4.0	HC50-38R32-447	430132004
	445	38	R38	52.7	58.5	8.4	4.0	HC50-38R38-445	430137001
	380	38	T38	52.7	58.5	8.4	3.5	HC50-38T38-380	430138003
	445	38	T38	52.7	58.5	8.4	4.0	HC50-38T38-445	430138002
	447	38	T38	52.7	58.5	8.4	4.0	HC50-38T38-447	430138004
	440	45	T38	59.8	101	9.4	5.0	HC95-45T38-440	431138002
	500	45	T38	59.8	101	9.4	5.7	HC95-45T38-500	431138001
	503	45	T38	59.8	80.5	9.4	5.7	HC95LHRP-45T38-503	431838002
	518	45	T38	59.6	80.5	9.4	6.0	HC95LHRP-45T38-518	431838003
	518	45	T45	59.6	80.5	9.4	6.2	HC95LHRP-45T45-518	431845001
	500	45	T38	59.8	79	9.4	5.6	HC95LM-45T38-500	430738001
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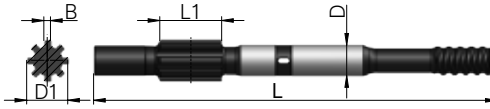
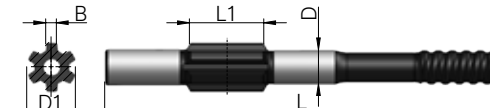
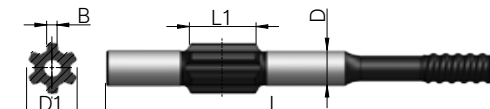
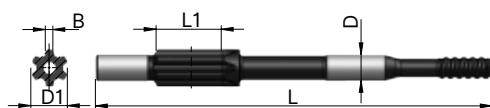
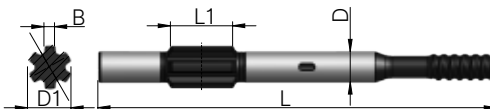
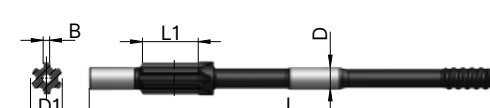
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	L mm	D mm	Thread	D1 mm	L1 mm	B mm	WT Kg	Product model	Part No.
	503	45	R32	59.8	80	9.4	5.8	HC95LQ-45R32-503	431732001
	503	45	T38	59.8	80	9.4	5.8	HC95LQ-45T38-503	431745001
	500	45	T38	59.8	79	9.4	5.7	HC95R-45T38-500	431038001
	503	45	T38	59.8	79	9.4	5.7	HC95R-45T38-503	431038006
	508	45	T38	59.8	79	9.4	5.8	HC95R-45T38-508	431038002
	520	45	T38	59.8	79	9.4	5.9	FHC95R-45T38-520	432438001
	515	45	T45	59.8	79	9.4	5.8	HC95R-45T45-515	431045002
	570	45	T45	59.8	79	9.4	6.4	HC95R-45T45-570	431045003
	518	51	T45	59.8	79	9.4	6.8	HC95R-51T45-518	431045001
	518	51	T51	59.8	79	9.4	6.8	HC95R-51T51-518	431051001
	530	51	T51	59.8	79	9.4	7.0	HC95R-51T51-530	431051003
	503	45	T38	59.8	81	9.4	5.7	HC95RP-45T38-503	432038001
	468	45	T38	59.8	74	9.4	5.5	HC95SA-45T38-468	431238001

Montabert

	L mm	D mm	Thread	D1 mm	L1 mm	B mm	WT Kg	Product model	Part No.
	440	38	R32	52.7	105.5	8.4	3.7	HC109-38R32-440	430332001
	440	38	R38	52.7	105.5	8.4	3.9	HC109-38R38-440	430337001
	440	45	T38	52.7	105.5	8.4	4.5	HC109-38T38-440	430338004
	500	38	T38	52.2	105.5	8.4	4.5	HC109-38T38-500	430338001
	460	45	R32	59.8	105.5	9.4	4.7	HC109-45R32-460	430332002
	460	45	T38	59.8	105.5	9.4	4.9	HC109-45T38-460	430338003
	490	45	T38	59.8	105.5	9.4	5.0	HC109-45T38-490	430338002
	490	45	T45	59.8	105.5	9.4	5.2	HC109-45T45-490	430345001
	670	45	T45	59.8	108	9.4	7.5	HC109RP-45T45-670	430445001
	770	45	T45	59.8	108	9.4	8.6	HC109RP-45T45-770	430445002
	415	45	T38	59.5	101	9.5	4.2	HC110-45T38-415	430338006
	425	45	T38	59.8	104	9.4	4.2	HC110-45T38-425	430338007
	670	51	T45	59.8	110	9.4	8.8	HC120RP-51T45-670	432345001
	670	51	T51	59.8	110	9.4	8.8	HC120RP-51T51-670	432351001
	865	60	T45	73	150	11.3	16.5	HC200A-60T45-865	431645001
	865	60	T51	73	150	11.3	16.8	HC200A-60T51-865	431651002

Ingersoll Rand

	L mm	D mm	Thread	D1 mm	L1 mm	B mm	WT Kg	Product model	Part No.
	728	55	T45	74	110	12	7.9	YH135-55T45-728	450745001
	725	55	T51	74	110	12	7.9	YH135-55T51-725	450751002
	728	55	T51	74	110	12	8.0	YH135-55T51-728	450751003
	890	55	T51	74	110	12	9.8	YH135-55T51-890	450751001
	440	38	T38	58	80	12	3.7	YH50-38T38-440	450138001
	500	45	T38	64.5	84	13.4	5.0	YH65-45T38-500	450238001
	500	45	T45	64.5	84	13.4	5.0	YH65-45T45-500	450245002
	700	45	T38	64.5	115	13.4	7.8	YH65RP-45T38-700	450338001
	700	45	T45	64.5	115	13.4	7.9	YH65RP-45T45-700	450345001
	610	45	T38	64.5	84	13.4	6.7	YH70-45T38-610	450238003
	610	45	T45	64.5	84	13.4	6.7	YH70-45T45-610	450245006
	820	45	T38	64.5	113.5	13.4	8.5	YH70RP-45T38-820	450938001
	700	45	T45	64.5	113.5	13.4	7.9	YH70RP-45T45-700	450945002
	820	45	T45	64.5	113.5	13.4	8.5	YH70RP-45T45-820	450945001

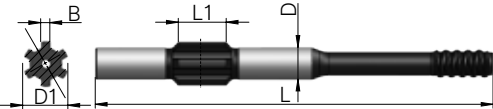
Ingersoll Rand

	L mm	D mm	Thread	D1 mm	L1 mm	B mm	WT Kg	Product model	Part No.
	500	51	T38	64.5	85	13.4	5.7	YH80A-51T38-500	450238004
	500	51	T45	64.5	85	13.4	5.7	YH80A-51T45-500	450245007
	500	51	T51	64.5	85	13.4	5.8	YH80A-51T51-500	450251001
	610	51	T45	64.5	85	13.4	6.7	YH80A-51T45-610	450245008
	610	51	T51	64.5	85	13.4	6.8	YH80A-51T51-610	450251002
	625	51	T45	73.8	91	11.8	7.0	YH95-51T45-625	450445001
	625	51	T51	73.8	91	11.8	7.0	YH95-51T51-625	450451002
	515	51	T51	73.8	95.5	11.8	5.7	YH95RP-51T51-515	450551002
	840	51	T51	73.8	95.5	11.8	9.3	YH95RP-51T51-840	450551001

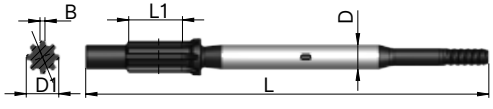
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	L mm	D mm	Thread	D1 mm	L1 mm	B mm	WT Kg	Product model	Part No.
	425	32	R32	50.8	50	6.4	2.7	DF530S-32R32-425	463132001
	465	45	R32	54	74	4.9	4.5	DF540L-45R32-465	463132002
	432	56	R32F	54	74	4.9	6.4	DF545-56R32F-432	463132003
	465	45	T38F	54	74	4.9	5.1	DF540L-45T38F-465	463138001
	432	56	T38	54	74	4.9	6.4	DF545-56T38-432	463138002
	639	56	T51	54	74	4.9	9.5	DF545-56T51-639	463151001
	385	45	R32F	54	74	4.9	4.0	DF550L-45R32F-385	463132004
	520	38	T38	54	73	4.9	4.5	DF550L-38T38-520	463138003
	515	45	T45	54	74.5	4.9	5.3	DF550L-45T45-515	463145001

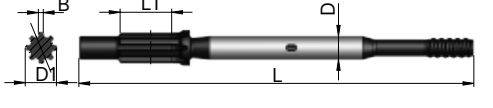
Toyo



L mm	D mm	Thread	D1 mm	L1 mm	B mm	WT Kg	Product model	Part No.
565	45	T38	64.2	68	13	5.6	TH501-45T38-565	474038001

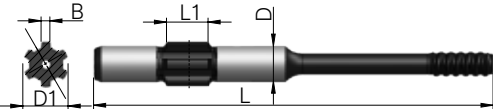


750	45	T45	60.3	100	9.3	8.2	TH921-45T45-750	473945001

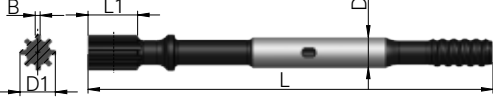


766	45	T45	60.5	100	9.3	9.1	TH800RP-45T45-766	474945001

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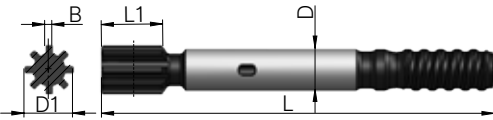
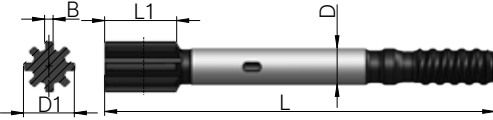
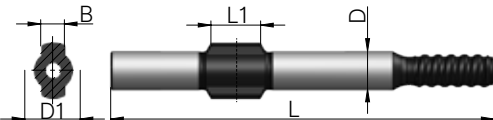


L mm	D mm	Thread	D1 mm	L1 mm	B mm	WT Kg	Product model	Part No.
620	56	T45	55.8	65	15.6	7.8	ED100-56T45-620	465145001

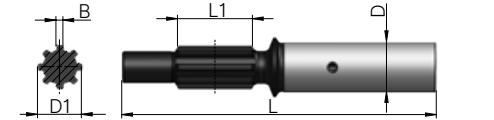
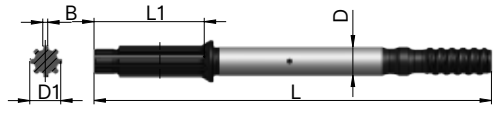
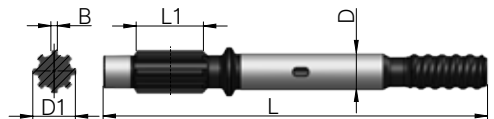
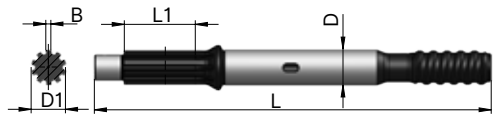
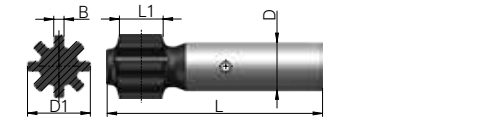


740	55	T45	64.5	90	9	10.6	EHD210RP-55T45-740	465345001
740	55	T51	64.5	90	9	11.0	EHD210RP-55T51-740	465351001

Yonda

	L mm	D mm	Thread	D1 mm	L1 mm	B mm	WT Kg	Product model	Part No.
	455	40	R32	60	75	9	4.2	YDH210-40R32-455	461132001
	455	40	T38	60	75	9	4.4	YDH210-40T38-455	461138002
	495	40	T38	60	75	9	5.1	YDH210-40T38-495	461138001
	455	45	T45	60	75	9	5.3	YDH210-45T45-455	461145001
	485	51	T51	60	75	9	6.5	YDH210-51T51-485	461151001
	495	40	T38	60	84	9	5.1	YDH210RP-40T38-495	461638001
	566	40	T38	60	62	9	5.6	YDH210RP-40T38-566	461638002
	545	51	T38	71	100	11.8	7.5	YYG260-51T38-545	466238001
	545	51	T51	71	100	11.8	8.1	YYG260-51T51-545	466251001
	455	45	T38	65.8	59	28.1	4.9	YGZ170-45T38-455	471038001

Others

	L mm	D mm	Thread	D1 mm	L1 mm	B mm	WT Kg	Product model	Part No.
	315	50	R32F	44	73.5	7	3.3	GTK32A-50R32F-315	470632001
	565	40	R38	44	157	7	5.1	GTK38-40R38-565	470737001
	565	40	T38	44	157	7	5.2	GTK38-40T38-565	470738001
	560	53	T51	62	96.5	9.4	8.6	GTK51F-53T51-560	471951001
	590	53	T51	51	105.5	7.5	8.1	GTK51A-53T51-590	471851001
	205	45	R32F	59.8	41	9.5	2.1	HTF314-45R32F-205	470832001

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