

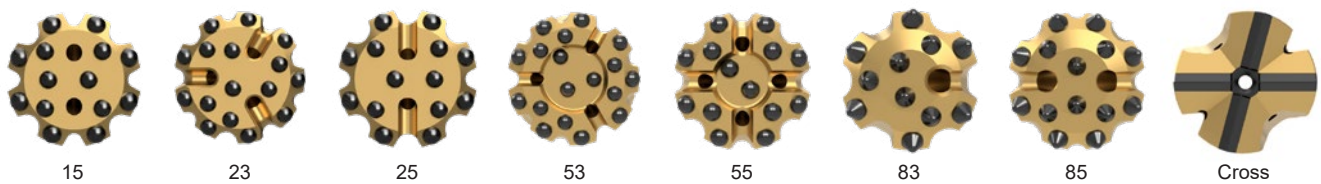
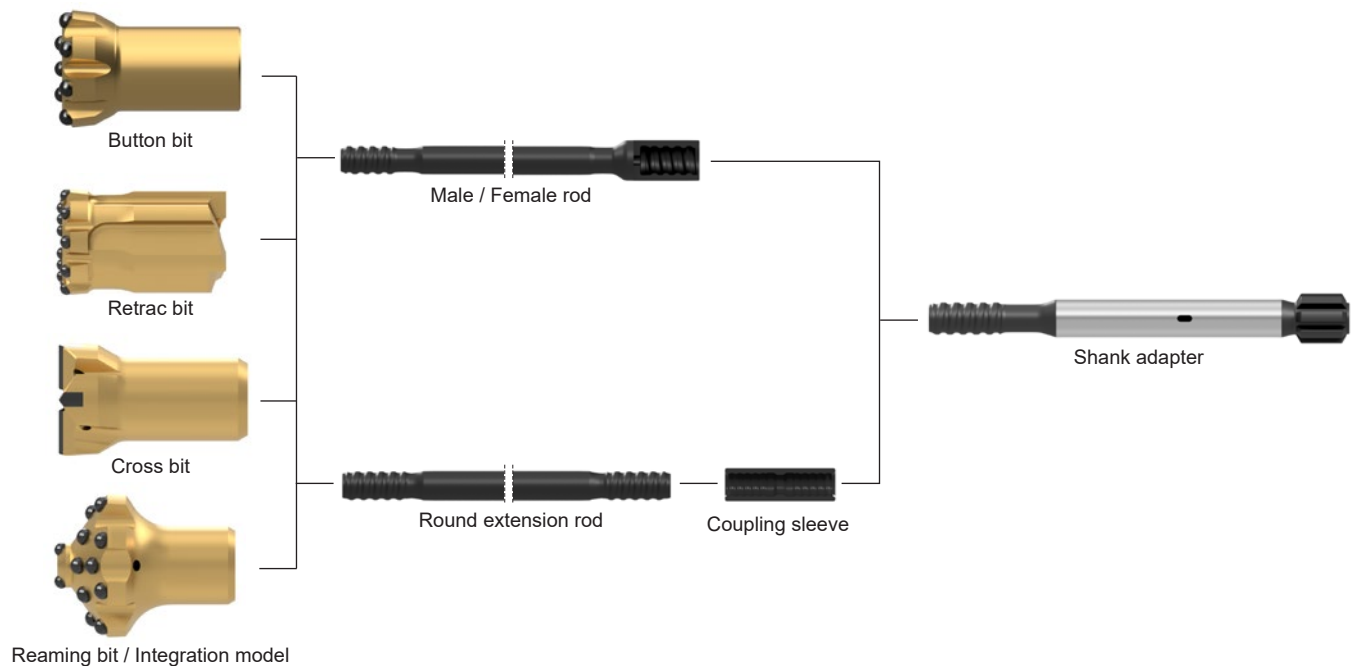


BENCH & LONGHOLE DRILLING EQUIPMENT



BENCH & LONG HOLE DRILLING EQUIPMENT

T38 SERIES (1 1/2") (Recommended Gauge diameter Ø64–Ø102)



Button Bit with Flat face Type 15



Part Number		Skirt	Gauge Diameter		Gauge Angle [°]	Gauge Button	Face Button	Blow Hole		Weight(kg)
Round	Semi Ballistic		(mm)	(in)		No × Dia(mm)	No × Dia(mm)	Side	Face	
38MPVS64R15M	38MPVS64BB15M		64	2 1/2"	35°	8×Ø11	4×Ø10	—	2	1.6
38MPVS70R15M	38MPVS70BB15M		70	2 3/4"	35°	8×Ø11	4×Ø11	—	2	1.9
38MPVS76R15M	38MPVS76BB15M		76	3"	35°	8×Ø12	4×Ø11	—	2	2.2
38MPVS89R15M	38MPVS89BB15M		89	3 1/2"	35°	8×Ø13	6×Ø12	—	2	3.4
38MPVS102R15M	—		102	4"	35°	8×Ø14	6×Ø13	—	2	4.5
38MPVR64R15M	38MPVR64BB15M		64	2 1/2"	35°	8×Ø11	4×Ø10	—	2	2.1
38MPVR70R15M	38MPVR70BB15M		70	2 3/4"	35°	8×Ø11	4×Ø11	—	2	2.5
38MPVR76R15M	38MPVR76BB15M		76	3"	35°	8×Ø12	4×Ø11	—	2	3.0
38MPVR89R15M	38MPVR89BB15M		89	3 1/2"	35°	8×Ø13	6×Ø12	—	2	4.6
38MPVR102R15M	—		102	4"	35°	8×Ø14	6×Ø13	—	2	6.8



Button Bit with Groove Type 23 and 25



Part Number		Skirt	Gauge Diameter		Gauge Angle [°]	Gauge Button	Face Button	Blow Hole		Weight(kg)
Round	Semi Ballistic		(mm)	(in)		No × Dia(mm)	No × Dia(mm)	Side	Face	
38MPVS64R23M	38MPVS64BB23M		64	2 1/2"	35°	6×φ12	3×φ11	—	3	1.7
38MPVS70R23M	38MPVS70BB23M		70	2 3/4"	35°	6×φ12	4×φ11	—	3	1.9
38MPVS76R23M	38MPVS76BB23M		76	3"	35°	6×φ12	4×φ12	—	3	2.3
38MPVS89R23M	38MPVS89BB23M		89	3 1/2"	35°	9×φ12	6×φ12	—	3	3.4
38MPVS102R23M	38MPVS102BB23M		102	4"	35°	9×φ13	7×φ13	—	3	4.5
38MPVR64R23M	38MPVR64BB23M		64	2 1/2"	35°	6×φ12	3×φ11	—	3	2.0
38MPVR70R23M	38MPVR70BB23M		70	2 3/4"	35°	6×φ12	4×φ11	—	3	2.5
38MPVR76R23M	38MPVR76BB23M		76	3"	35°	6×φ12	4×φ12	—	3	3.0
38MPVR89R23M	38MPVR89BB23M		89	3 1/2"	35°	9×φ12	6×φ12	—	3	4.4
38MPVR102R23M	38MPVR102BB23M		102	4"	35°	9×φ13	7×φ13	—	3	6.8

Part Number		Skirt	Gauge Diameter		Gauge Angle [°]	Gauge Button	Face Button	Blow Hole		Weight(kg)
Round	Semi Ballistic		(mm)	(in)		No × Dia(mm)	No × Dia(mm)	Side	Face	
38MPVS89R25M	38MPVS89BB25M		89	3 1/2"	35°	8×φ13	6×φ12	—	2	3.3
38MPVS102R25M	38MPVS102BB25M		102	4"	35°	8×φ14	6×φ13	—	2	4.4
38MPVR89R25M	38MPVR89BB25M		89	3 1/2"	35°	8×φ13	6×φ12	—	2	4.7
38MPVR102R25M	38MPVR102BB25M		102	4"	35°	8×φ14	6×φ13	—	2	6.8



Button Bit with Drop Center Type 53 and 55

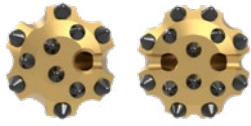


Part Number		Skirt	Gauge Diameter		Gauge Angle [°]	Gauge Button	Face Button	Blow Hole		Weight(kg)
Round	Semi Ballistic		(mm)	(in)		No × Dia(mm)	No × Dia(mm)	Side	Face	
38MPVS64R53M	38MPVS64BB53M		64	2 1/2"	35°	6×φ10	4×φ10	—	3	1.6
38MPVS70R53M	38MPVS70BB53M		70	2 3/4"	35°	6×φ11	4×φ11	—	3	1.8
38MPVS76R53M	38MPVS76BB53M		76	3"	35°	6×φ12	4×φ11	—	3	2.1
38MPVS89R53M	—		89	3 1/2"	35°	6×φ13	5×φ12	—	3	3.3
38MPVR64R53M	38MPVR64BB53M		64	2 1/2"	35°	6×φ10	4×φ10	—	3	2.0
38MPVR70R53M	38MPVR70BB53M		70	2 3/4"	35°	6×φ11	4×φ11	—	3	2.5
38MPVR76R53M	38MPVR76BB53M		76	3"	35°	6×φ12	4×φ11	—	3	2.8
38MPVR89R53M	—		89	3 1/2"	35°	6×φ13	5×φ12	—	3	4.2

Part Number		Skirt	Gauge Diameter		Gauge Angle [°]	Gauge Button	Face Button	Blow Hole		Weight(kg)
Round	Semi Ballistic		(mm)	(in)		No × Dia(mm)	No × Dia(mm)	Side	Face	
38MPVS64R55M	38MPVS64BB55M		64	2 1/2"	35°	8×φ10	5×φ9	—	4	1.6
38MPVS70R55M	38MPVS70BB55M		70	2 3/4"	35°	8×φ11	5×φ10	—	4	1.8
38MPVS76R55M	38MPVS76BB55M		76	3"	35°	8×φ11	5×φ11	—	4	2.2
38MPVS89R55M	38MPVS89BB55M		89	3 1/2"	35°	8×φ12	6×φ12	—	4	3.4
38MPVS102R55M	—		102	4"	35°	8×φ14	6×φ14	—	4	4.4
38MPVR64R55M	38MPVR64BB55M		64	2 1/2"	35°	8×φ10	5×φ9	—	4	2.1
38MPVR70R55M	38MPVR70BB55M		70	2 3/4"	35°	8×φ11	5×φ10	—	4	2.5
38MPVR76R55M	38MPVR76BB55M		76	3"	35°	8×φ11	5×φ11	—	4	3.0
38MPVR89R55M	38MPVR89BB55M		89	3 1/2"	35°	8×φ12	6×φ12	—	4	4.5
38MPVR102R55M	—		102	4"	35°	8×φ14	6×φ14	—	4	6.4

BENCH & LONG HOLE DRILLING EQUIPMENT

T38 SERIES (1 1/2") (Recommended Gauge diameter Ø64–Ø102)



Button Bit with Convex Type 83 and 85



Part Number	Skirt	Gauge Diameter		Gauge Angle [°]	Gauge Button No × Dia(mm)	Face Button No × Dia(mm)	Blow Hole		Weight(kg)
		(mm)	(in)				Side	Face	
38MPWS64SA83H		64	2 1/2"	20–40	6×Ø10	3×Ø10, 2×Ø9	1	1	1.5
38MPWS70SA83H		70	2 3/4"	20–40	6×Ø11	5×Ø10	1	1	1.8
38MPWS76SA83H		76	3"	20–40	6×Ø11	3×Ø11, 2×Ø10	1	1	2.3
38MPWS76SA85H		76	3"	20–40	8×Ø11	6×Ø10	2	2	2.1
38MPWS89SA85H		89	3 1/2"	20–40	8×Ø12	6×Ø12	2	2	3.2
38MPVS102SA85H		102	4"	20–40	8×Ø12	7×Ø12	—	2	4.2



Cross Bit



Part Number	Gauge Diameter		Carbide size W×H(mm)	Blow Hole		Weight(kg)
	(mm)	(in)		Side	Face	
38MX64S	64	2 1/2"	13×22	4	1	1.8
38MX76S2	76	3"	13×22	4	1	2.4
38MX89S	89	3 1/2"	13×22	4	1	3.7



Reaming Bit Integration model



Part Number	Gauge Diameter		Gauge Angle [°]	Gauge Button No × Dia(mm)	Face Button No × Dia(mm)	Blow Hole		Weight(kg)
	(mm)	(in)				Side	Face	
WI38MP127R-60	127	5"	30°	9×Ø13	6×Ø13	—	3	6.3
WI38MP152R-60	152	6"	30°	9×Ø14	9×Ø14	—	3	9.8
WI38MP152R-110Z2	152	6"	30°	9×Ø14	3×Ø14	—	3	14.6

Round Rod



Part number	Thread		Outside Diameter		Length		Weight(kg)
			(mm)	(in)	(mm)	(ft/in)	
ER38M38-3050	T38	T38	38	1 1/2"	3050	10'	24.7
ER38M38-3660					3660	12'	29.4
ER38M38-4270					4270	14'	34.7
ER38M38-4880					4880	16'	40.0
ER38M38-5490					5490	18'	44.6

Male / Female Rod



Part number	Thread		Outside Diameter		Length		Weight(kg)
			(mm)	(in)	(mm)	(ft/in)	
ER38M38MF-1220	T38	T38	38	1 1/2"	1220	4'	9.7
ER38M38MF-1525					1525	5'	13.3
ER38M38MF-1830					1830	6'	16.0
ER38M38MF-3050H					3050	10'	25.3
ER38M38MF-3660H					3660	12'	30.1
ER38M38MF-4270H					4270	14'	35.0

Coupling / Cross Over Coupling

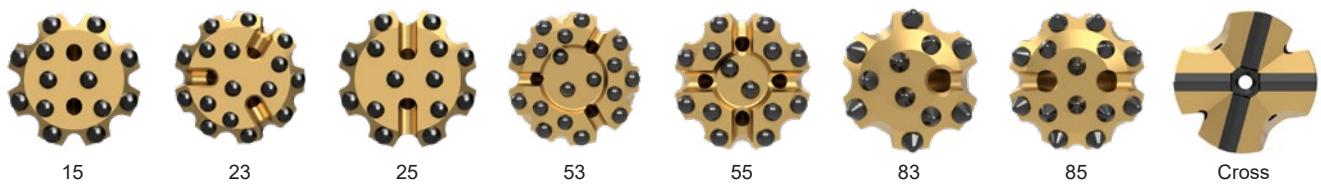
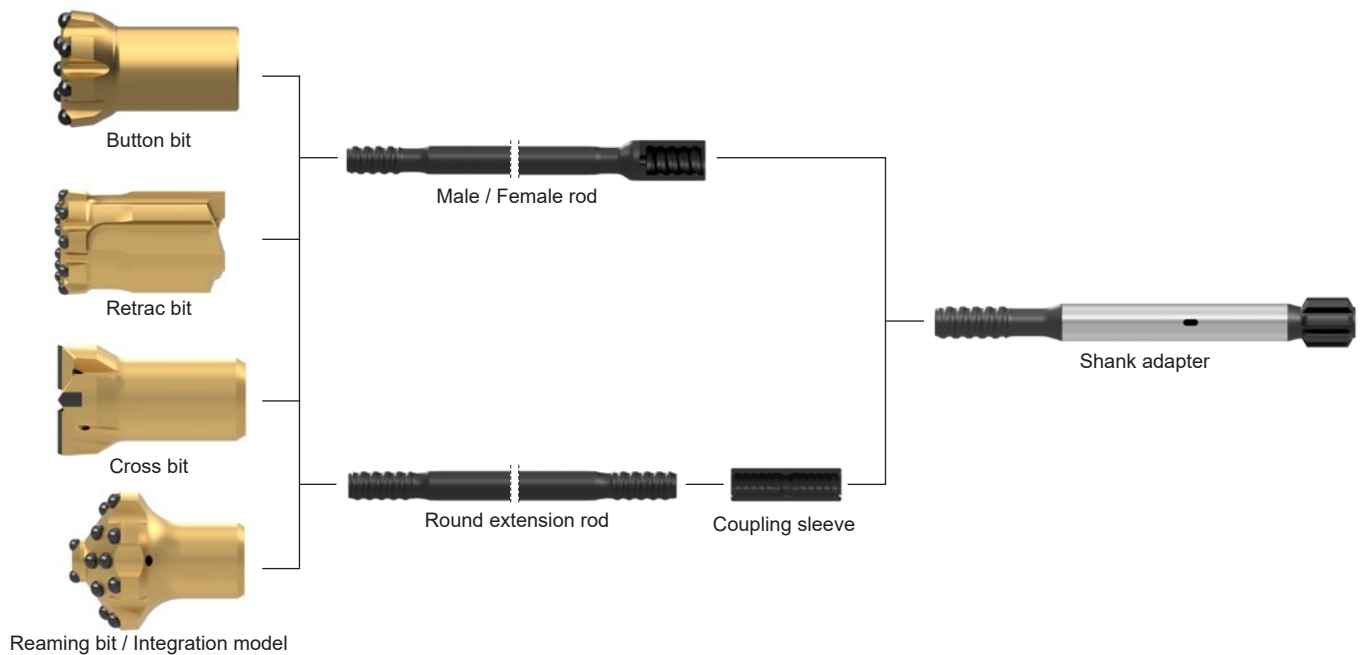


Part number	Thread		Outside Diameter		Length		Weight(kg)
			(mm)	(in)	(mm)	(ft/in)	
CM38Z2	T38		55	2 1/6"	190	7 1/2"	2.0

Part number	Thread		Outside Diameter		Length		Weight(kg)
			(mm)	(in)	(mm)	(ft/in)	
CM38R32	T38	R32	54	2 1/8"	188	7 1/2"	2.2
CM38R38		R38	54	2 1/8"	195	7 11/16"	2.0
CM45M38		T45	63	2 1/2"	215	8 1/2"	3.4

BENCH & LONG HOLE DRILLING EQUIPMENT

T45 SERIES (1 3/4") (Recommended Gauge diameter $\phi 70$ – $\phi 115$)



Button Bit Flat face Type 15



Part Number		Skirt	Gauge Diameter		Gauge Angle [°]	Gauge Button	Face Button	Blow Hole		Weight(kg)
Round	Semi Ballistic		(mm)	(in)		No × Dia(mm)	No × Dia(mm)	Side	Face	
45MPVS70R15M	45MPVS70BB15M		70	2 3/4"	35	8× $\phi 11$	4× $\phi 11$	—	2	1.9
45MPVS76R15M	45MPVS76BB15M		76	3"	35	8× $\phi 12$	4× $\phi 11$	—	2	2.3
45MPVS83R15M	45MPVS83BB15M		83	3 2/7"	35	8× $\phi 12$	6× $\phi 11$	—	2	2.6
45MPVS89R15M	45MPVS89BB15M		89	3 1/2"	35	8× $\phi 13$	6× $\phi 12$	—	2	3.8
45MPVS102R15M	—		102	4"	35	8× $\phi 14$	6× $\phi 13$	—	2	4.4
45MPVS115R15M	—		115	4 1/2"	35	8× $\phi 14$	7× $\phi 13$	—	2	6.4
45MPVR70R15M	45MPVR70BB15M		70	2 3/4"	35	8× $\phi 11$	4× $\phi 11$	—	2	2.7
45MPVR76R15M	45MPVR76BB15M		76	3"	35	8× $\phi 12$	4× $\phi 11$	—	2	3.0
45MPVR83R15M	45MPVR83BB15M		83	3 2/7"	35	8× $\phi 12$	6× $\phi 11$	—	2	3.9
45MPVR89R15M	45MPVR89BB15M		89	3 1/2"	35	8× $\phi 13$	6× $\phi 12$	—	2	4.5
45MPVR102R15M	—		102	4"	35	8× $\phi 14$	6× $\phi 13$	—	2	6.6
45MPVR115R15M	—		115	4 1/2"	35	8× $\phi 14$	7× $\phi 13$	—	2	8.7



Button Bit with Groove Type 23 and 25



Part Number		Skirt	Gauge Diameter		Gauge Angle [°]	Gauge Button	Face Button	Blow Hole		Weight(kg)
Round	Semi Ballistic		(mm)	(in)		No × Dia(mm)	No × Dia(mm)	Side	Face	
45MPVS70R23M	45MPVS70BB23M		70	2 3/4"	35	6×φ12	4×φ11	—	3	2.0
45MPVS76R23M	45MPVS76BB23M		76	3"	35	6×φ12	4×φ12	—	3	2.4
45MPVS83R23M	45MPVS83BB23M		83	3 2/7"	35	6×φ13	4×φ13	—	3	2.8
45MPVS89R23M	45MPVS89BB23M		89	3 1/2"	35	9×φ12	6×φ12	—	3	3.8
45MPVS102R23M	45MPVS102BB23M		102	4"	35	9×φ13	7×φ13	—	3	4.3
45MPVS115R23M	45MPVS115BB23M		115	4 1/2"	35	9×φ14	7×φ14	—	3	5.8
45MPVR70R23M	45MPVR70BB23M		70	2 3/4"	35	6×φ12	4×φ11	—	3	2.5
45MPVR76R23M	45MPVR76BB23M		76	3"	35	6×φ12	4×φ12	—	3	2.7
45MPVR83R23M	45MPVR83BB23M		83	3 2/7"	35	6×φ13	4×φ13	—	3	4.1
45MPVR89R23M	45MPVR89BB23M		89	3 1/2"	35	9×φ12	6×φ12	—	3	4.4
45MPVR102R23M	45MPVR102BB23M		102	4"	35	9×φ13	7×φ13	—	3	6.5
45MPVR115R23M	45MPVR115BB23M		115	4 1/2"	35	9×φ14	7×φ14	—	3	8.5

Part Number		Skirt	Gauge Diameter		Gauge Angle [°]	Gauge Button	Face Button	Blow Hole		Weight(kg)
Round	Semi Ballistic		(mm)	(in)		No × Dia(mm)	No × Dia(mm)	Side	Face	
45MPVS89R25M	45MPVS89BB25M		89	3 1/2"	35	8×φ13	6×φ12	—	2	3.8
45MPVS102R25M	45MPVS102BB25M		102	4"	35	8×φ14	6×φ13	—	2	4.4
45MPVR89R25M	45MPVR89BB25M		89	3 1/2"	35	8×φ13	6×φ12	—	2	4.5
45MPVR102R25M	45MPVR102BB25M		102	4"	35	8×φ14	6×φ13	—	2	6.8



Button Bit with Drop Center Type 53 and 55



Part Number		Skirt	Gauge Diameter		Gauge Angle [°]	Gauge Button	Face Button	Blow Hole		Weight(kg)
Round	Semi Ballistic		(mm)	(in)		No × Dia(mm)	No × Dia(mm)	Side	Face	
45MPVS70R53M	45MPVS70BB53M		70	2 3/4"	35	6×φ11	4×φ11	—	3	1.8
45MPVS76R53M	45MPVS76BB53M		76	3"	35	6×φ12	4×φ11	—	3	2.2
45MPVS83R53M	—		83	3 2/7"	35	6×φ13	4×φ12	—	3	2.6
45MPVS89R53M	—		89	3 1/2"	35	6×φ13	5×φ12	—	3	3.6
45MPVR70R53M	45MPVR70BB53M		70	2 3/4"	35	6×φ11	4×φ11	—	3	2.6
45MPVR76R53M	45MPVR76BB53M		76	3"	35	6×φ12	4×φ11	—	3	2.7
45MPVR83R53M	—		83	3 2/7"	35	6×φ13	4×φ12	—	3	3.7
45MPVR89R53M	—		89	3 1/2"	35	6×φ13	5×φ12	—	3	4.2

Part Number		Skirt	Gauge Diameter		Gauge Angle [°]	Gauge Button	Face Button	Blow Hole		Weight(kg)
Round	Semi Ballistic		(mm)	(in)		No × Dia(mm)	No × Dia(mm)	Side	Face	
45MPVS70R55M	45MPVS70BB55M		70	2 3/4"	35	8×φ11	5×φ10	—	4	1.8
45MPVS76R55M	45MPVS76BB55M		76	3"	35	8×φ11	5×φ11	—	4	2.2
45MPVS83R55M	45MPVS83BB55M		83	3 2/7"	35	8×φ12	4×φ12, 1×φ11	—	4	3.9
45MPVS89R55M	45MPVS89BB55M		89	3 1/2"	35	8×φ12	6×φ12	—	4	3.7
45MPVS102R55M	—		102	4"	35	8×φ14	6×φ14	—	4	4.4
45MPVS115R55M	—		115	4 1/2"	35	8×φ14	8×φ14	—	4	6.7
45MPVR70R55M	45MPVR70BB55M		70	2 3/4"	35	8×φ11	5×φ10	—	4	2.5
45MPVR76R55M	45MPVR76BB55M		76	3"	35	8×φ11	5×φ11	—	4	3.0
45MPVR83R55M	45MPVR83BB55M		83	3 2/7"	35	8×φ12	4×φ12, 1×φ11	—	4	3.8
45MPVR89R55M	45MPVR89BB55M		89	3 1/2"	35	8×φ12	6×φ12	—	4	4.5
45MPVR102R55M	—		102	4"	35	8×φ14	6×φ14	—	4	6.5
45MPVR115R55M	—		115	4 1/2"	35	8×φ14	8×φ14	—	4	8.4

BENCH & LONG HOLE DRILLING EQUIPMENT

T45 SERIES (1 3/4") (Recommended Gauge diameter $\phi 70$ – $\phi 115$)



Button Bit with Convex Type 83 and 85



Part Number	Skirt	Gauge Diameter		Gauge Angle [°]	Gauge Button	Face Button	Blow Hole		Weight(kg)
		(mm)	(in)		No × Dia(mm)	No × Dia(mm)	Side	Face	
45MPWS70SA83H		70	2 3/4"	20–40	6× $\phi 11$	5× $\phi 10$	1	1	1.7
45MPWS76SA83H		76	3"	20–40	6× $\phi 11$	3× $\phi 11$, 2× $\phi 10$	1	1	2.2
45MPWS76SA85H		76	3"	20–40	8× $\phi 11$	6× $\phi 10$	2	2	2.3
45MPWR76SA85H		76	3"	20–40	8× $\phi 11$	6× $\phi 10$	2	2	3.1
45MPWS89SA85H		89	3 1/2"	20–40	8× $\phi 12$	6× $\phi 12$	2	2	3.8
45MPWR89SA85H		89	3 1/2"	20–40	8× $\phi 12$	6× $\phi 12$	2	2	4.1
45MPVS102SA85H		102	4"	20–40	8× $\phi 12$	7× $\phi 12$	–	2	4.3
45MPVS115SA85H		115	4 1/2"	20–40	8× $\phi 14$	8× $\phi 12$	–	2	6.3



Cross Bit



Part Number	Gauge Diameter		Carbide size	Blow Hole		Weight(kg)
	(mm)	(in)	W×H(mm)	Side	Face	
45MX76S	76	3"	13×22	4	1	2.5
45MX90S	90	3 1/2"	13×22	4	1	4.0



Reaming Bit Integration model



Part Number	Gauge Diameter		Gauge Angle [°]	Gauge Button	Face Button	Blow Hole		Weight(kg)
	(mm)	(in)		No × Dia(mm)	No × Dia(mm)	Side	Face	
WI45MP127BB-70	127	5"	30°	9× $\phi 13$	6× $\phi 13$	–	3	8.0
WI45MP152BB-65Z	152	6"	30°	9× $\phi 14$	9× $\phi 14$	–	3	10.5

Round Rod



Part number	Thread		Outside Diameter		Length		Weight(kg)
			(mm)	(in)	(mm)	(ft/in)	
ER45M45-3050	T45	T45	45	1 3/4"	3050	10'	35.0
ER45M45-3660					3660	12'	41.7
ER45M45-4270					4270	14'	48.5
ER45M45-4880					4880	16'	54.9

Male / Female Rod



Part number	Thread		Outside Diameter		Length		Weight(kg)
			(mm)	(in)	(mm)	(ft/in)	
ER45M45MF-1220	T45	T45	45	1 3/4"	1220	4'	14.7
ER45M45MF-1525					1525	5'	18.1
ER45M45MF-1830					1830	6'	21.5
ER45M45MF-3050H					3050	10'	35.0
ER45M45MF-3660H					3660	12'	41.7
ER45M45MF-4270H					4270	14'	48.5
ER45M45MF-6100H					6100	20'	70.8

Coupling / Cross Over Coupling

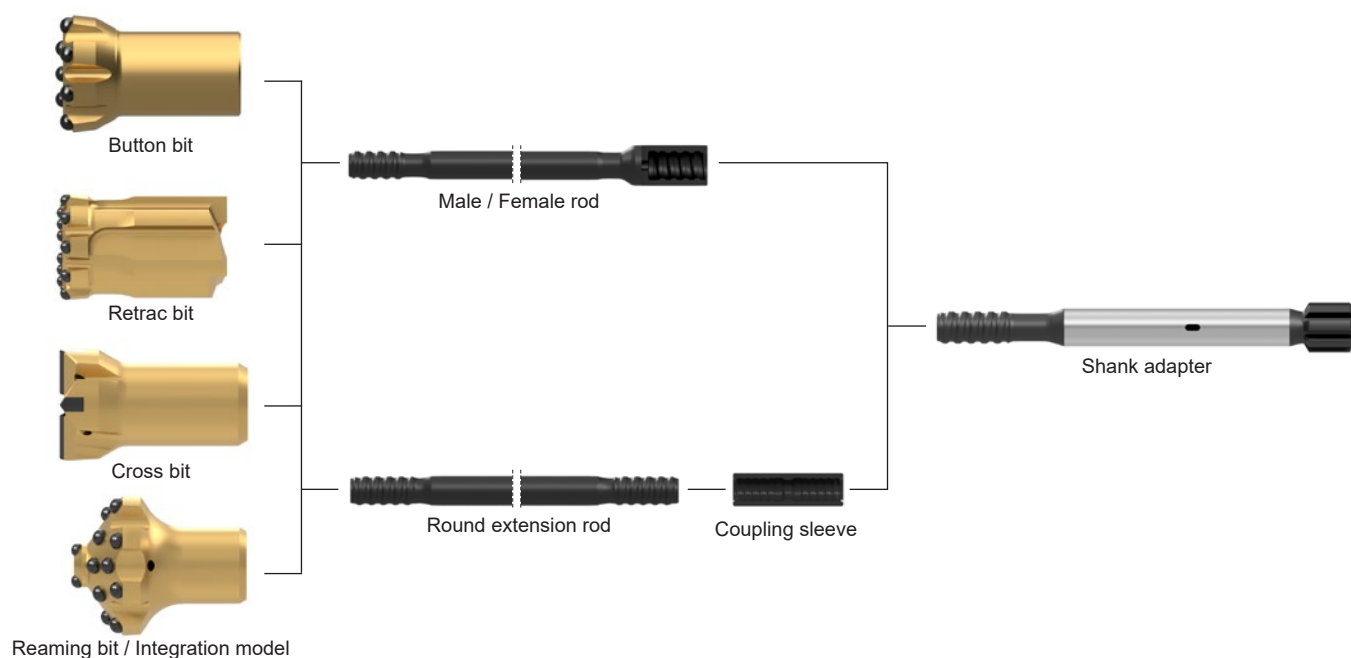


Part number	Thread		Outside Diameter		Length		Weight(kg)
			(mm)	(in)	(mm)	(ft/in)	
CM45	T45	T45	63	2 1/2"	210	8 1/4"	3.0
CM45-2			66	2 5/8"	210	8 1/4"	3.5
CM45F			63	2 1/2"	230	9 1/16"	3.2

Part number	Thread		Outside Diameter		Length		Weight(kg)
			(mm)	(in)	(mm)	(ft/in)	
CM45R32	T45	T32	63	2 1/2"	198	7" 13/16"	2.1
CM45M38		T38	63	2 1/2"	215	8 1/2"	3.4

BENCH & LONG HOLE DRILLING EQUIPMENT

T51 SERIES (2") (Recommended Gauge diameter $\phi 89$ – $\phi 127$)



Button Bit Flat face Type 15



Round	Semi Ballistic	Skirt	Gauge Diameter		Gauge Angle (°)	Gauge Button	Face Button	Blow Hole		Weight(kg)
			(mm)	(in)		No × Dia(mm)	No × Dia(mm)	Side	Face	
51MPVS89R15M	51MPVS89BB15M		89	3 1/2"	35	8× $\phi 13$	6× $\phi 12$	—	2	4.1
51MPVS102R15M	—		102	4"	35	8× $\phi 14$	6× $\phi 13$	—	2	5.2
51MPVS115R15M	—		115	4 1/2"	35	8× $\phi 14$	7× $\phi 13$	—	2	6.9
51MPVS127R15M	—		127	5"	35	8× $\phi 16$	8× $\phi 14$	—	2	9.0
51MPVR89R15M	51MPVR89BB15M		89	3 1/2"	35	8× $\phi 13$	6× $\phi 12$	—	2	4.3
51MPVR102R15M	—		102	4"	35	8× $\phi 14$	6× $\phi 13$	—	2	6.6
51MPVR115R15M	—		115	4 1/2"	35	8× $\phi 14$	7× $\phi 13$	—	2	8.8
51MPVR127R15M	—		127	5"	35	8× $\phi 16$	8× $\phi 14$	—	2	11.3



Button Bit with Groove Type 23 and 25



Part Number		Skirt	Gauge Diameter		Gauge Angle [°]	Gauge Button	Face Button	Blow Hole		Weight(kg)
Round	Semi Ballistic		(mm)	(in)		No × Dia(mm)	No × Dia(mm)	Side	Face	
51MPVS89R23M	51MPVS89BB23M		89	3 1/2"	35	9×φ12	6×φ12	—	3	4.1
51MPVS102R23M	51MPVS102BB23M		102	4"	35	9×φ13	7×φ13	—	3	5.2
51MPVS115R23M	51MPVS115BB23M		115	4"1/2"	35	9×φ14	7×φ14	—	3	6.8
51MPVS127R23M	—		127	5"	35	9×φ16	7×φ16	—	3	8.9
51MPVR89R23M	51MPVR89BB23M		89	3 1/2"	35	9×φ12	6×φ12	—	3	4.6
51MPVR102R23M	51MPVR102BB23M		102	4"	35	9×φ13	7×φ13	—	3	6.5
51MPVR115R23M	51MPVR115BB23M		115	4"1/2"	35	9×φ14	7×φ14	—	3	8.5
51MPVR127R23M	—		127	5"	35	9×φ16	7×φ16	—	3	10.9

Part Number		Skirt	Gauge Diameter		Gauge Angle [°]	Gauge Button	Face Button	Blow Hole		Weight(kg)
Round	Semi Ballistic		(mm)	(in)		No × Dia(mm)	No × Dia(mm)	Side	Face	
51MPVS89R25M	51MPVS89BB25M		89	3 1/2"	35	8×φ13	6×φ12	—	2	4.5
51MPVS102R25M	—		102	4"	35	8×φ14	6×φ13	—	2	5.4
51MPVS127R25M	—		127	5"	35	8×φ16	8×φ14	—	2	8.9
51MPVR89R25M	51MPVR89BB25M		89	3 1/2"	35	8×φ13	6×φ12	—	2	4.4
51MPVR102R25M	—		102	4"	35	8×φ14	6×φ13	—	2	6.5
51MPVR127R25M	—		127	5"	35	8×φ16	8×φ14	—	2	11.3



Button Bit with Drop Center Type 53 and 55



Part Number		Skirt	Gauge Diameter		Gauge Angle [°]	Gauge Button	Face Button	Blow Hole		Weight(kg)
Round	Semi Ballistic		(mm)	(in)		No × Dia(mm)	No × Dia(mm)	Side	Face	
51MPVS89R53M	—		89	3 1/2"	35	6×φ13	5×φ12	—	3	4.0
51MPVR89R53M	—		89	3 1/2"	35	6×φ13	5×φ12	—	3	4.4

Part Number		Skirt	Gauge Diameter		Gauge Angle [°]	Gauge Button	Face Button	Blow Hole		Weight(kg)
Round	Semi Ballistic		(mm)	(in)		No × Dia(mm)	No × Dia(mm)	Side	Face	
51MPVS89R55M	51MPVS89BB55M		89	3 1/2"	35	8×φ12	6×φ12	—	4	4.0
51MPVS102R55M	—		102	4"	35	8×φ14	6×φ14	—	4	5.1
51MPVS115R55M	—		115	4"1/2"	35	8×φ14	8×φ14	—	4	6.6
51MPVS127R55M	—		127	5"	35	8×φ16	4×φ16, 4×φ14	—	4	8.6
51MPVR89R55M	51MPVR89BB55M		89	3 1/2"	35	8×φ12	6×φ12	—	4	4.3
51MPVR102R55M	—		102	4"	35	8×φ14	6×φ14	—	4	6.4
51MPVR115R55M	—		115	4"1/2"	35	8×φ14	8×φ14	—	4	8.4
51MPVR127R55M	—		127	5"	35	8×φ16	4×φ16, 4×φ14	—	4	11.0

BENCH & LONG HOLE DRILLING EQUIPMENT

T51 SERIES (2") (Recommended Gauge diameter $\phi 89$ – $\phi 127$)



Button Bit with Convex Type 85



Part Number	Skirt	Gauge Diameter		Gauge Angle [°]	Gauge Button	Face Button	Blow Hole		Weight(kg)
		(mm)	(in)		No × Dia(mm)	No × Dia(mm)	Side	Face	
51MPWS89SA85H		89	3 1/2"	20–40	8× $\phi 12$	6× $\phi 12$	2	2	4.3
51MPVS102SA85H		102	4"	20–40	8× $\phi 12$	7× $\phi 12$	–	2	5.2
51MPVS115SA85H		115	4 1/2"	20–40	8× $\phi 14$	8× $\phi 12$	–	2	6.8



Cross Bit



Part Number	Gauge Diameter		Carbide size	Blow hole		Weight(kg)
	(mm)	(in)	W×H(mm)	Side	Face	
51MX102S	102	4"	13×22	4	1	4.8



Reaming Bit Integration model



Part Number	Gauge Diameter		Gauge Angle [°]	Gauge Button	Face Button	Blow hole			Weight(kg)
	(mm)	(in)		No × Dia(mm)	No × Dia(mm)	Side	Face	Reverse	
WI51MPJ152R-D	152	6"	35°	9× $\phi 14$	11× $\phi 14$	–	3	1	10.6

Round Rod



Part Number	Thread		Outside Diameter		Length		Weight(kg)
			(mm)	(in)	(mm)	(ft/in)	
ER51M51-3660	T51	T51	51	2"	3660	12'	49.6
ER51M51-4880					4880	16'	67.1
ER51M51-6100					6100	20'	82.9

Male / Female Rod



Part Number	Thread		Outside Diameter		Length		Weight(kg)
			(mm)	(in)	(mm)	(ft/in)	
ER51M51MF-1525	T51	T51	51	2"	1525	5'	22.0
ER51M51MF-1830					1830	6'	26.4
ER51M51MF-3660F					3660	12'	52.8
ER51M51MF-3660H					3660	12'	52.8
ER51M51MF-4270F					4270	14'	61.6
ER51M51MF-4270H					4270	14'	61.6
ER51M51MF-6100H					6100	20'	82.9



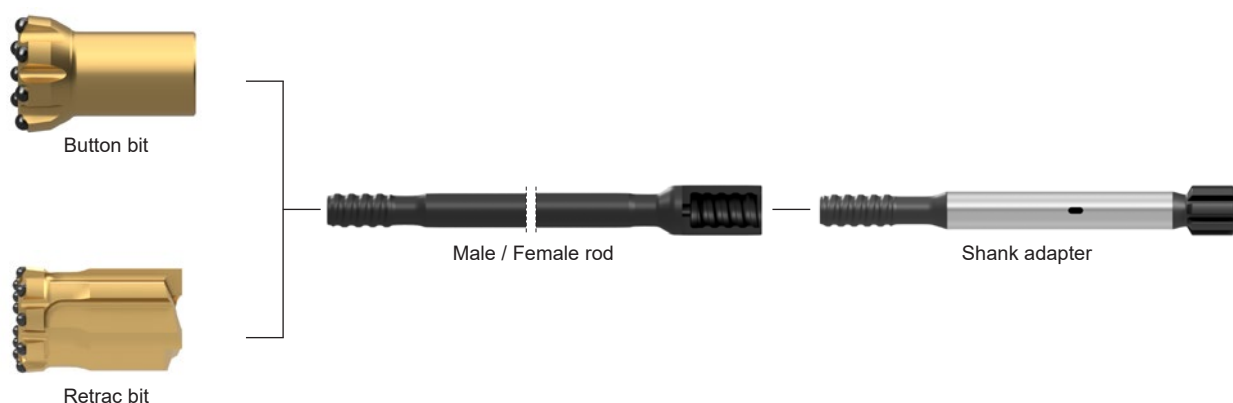
Coupling / Cross Over Coupling

Part Number	Thread		Outside Diameter		Length		Weight(kg)
			(mm)	(in)	(mm)	(ft/in)	
CM51	T51	T51	72	2 7/8"	235	9 1/4"	4.4
CM51-2			77	3"	235	9 1/4"	5.5
CM51F			72	2 7/8"	250	9 27/32"	5.5

Part Number	Thread		Outside Diameter		Length		Weight(kg)
			(mm)	(in)	(mm)	(ft/in)	
CM51M45	T51	T45	72	2 7/8"	240	9 1/2"	5.0

BENCH & LONG HOLE DRILLING EQUIPMENT

GT60 SERIES (2 1/4") (Recommended Gauge diameter $\phi 92$ – $\phi 152$)



Various type of products are being released. Please feel free to contact us.



Button Bit with Groove Type 23



Part Number	Skirt	Gauge Diameter		Gauge Angle (°)	Gauge Button	Face Button	Blow Hole		Weight(kg)
		(mm)	(in)		No × Dia(mm)	No × Dia(mm)	Side	Face	
60GMPVS102R23M		102	4"	35	9× $\phi 13$	7× $\phi 13$	—	3	6.8
60GMPVS115R23M		115	4"1/2"	35	9× $\phi 14$	7× $\phi 14$	—	3	8.6
60GMPVS127R23M		127	5"	35	9× $\phi 16$	7× $\phi 16$	—	3	9.4
60GMPVS140R23M		140	5 1/2"	35	9× $\phi 16$	8× $\phi 16$	—	3	12.3
60GMPVS152R23M		152	6"	35	9× $\phi 16$	12× $\phi 14$	—	3	15.5
60GMPVR102R23M		102	4"	35	9× $\phi 13$	7× $\phi 13$	—	3	8.1
60GMPVR115R23M		115	4"1/2"	35	9× $\phi 14$	7× $\phi 14$	—	3	9.2
60GMPVR127R23M		127	5"	35	9× $\phi 16$	7× $\phi 16$	—	3	14.4
60GMPVR140R23M		140	5 1/2"	35	9× $\phi 16$	8× $\phi 16$	—	3	15.5
60GMPVR152R23M		152	6"	35	9× $\phi 16$	12× $\phi 14$	—	3	18.9



Button Bit Type with Drop Center 53, 55 and 5X



Part Number	Skirt	Gauge Diameter		Gauge Angle [°]	Gauge Button No × Dia(mm)	Face Button No × Dia(mm)	Blow Hole		Weight(kg)
		(mm)	(in)				Side	Face	
60GMPVS140R53M		140	5 1/2"	35	9×φ16	9×φ16	—	3	11.9
60GMPVR140R53M		140	5 1/2"	35	9×φ16	9×φ16	—	3	15.2

Part Number	Skirt	Gauge Diameter		Gauge Angle [°]	Gauge Button No × Dia(mm)	Face Button No × Dia(mm)	Blow Hole		Weight(kg)
		(mm)	(in)				Side	Face	
60GMPVS92R55M		92	3 5/8"	35	8×φ12	6×φ12	—	4	5.6
60GMPVS102R55M		102	4"	35	8×φ14	6×φ14	—	4	7.6
60GMPVS115R55M		115	4 1/2"	35	8×φ14	8×φ14	—	4	8.4
60GMPVS127R55M		127	5"	35	8×φ16	4×φ16, 4×φ14	—	4	9.5
60GMPVS140R55M		140	5 1/2"	35	8×φ16	8×φ16	—	4	11.9
60GMPVR92R55M		92	3 5/8"	35	8×φ12	6×φ12	—	4	6.2
60GMPVR102R55M		102	4"	35	8×φ14	6×φ14	—	4	7.6
60GMPVR115R55M		115	4 1/2"	35	8×φ14	8×φ14	—	4	9.6
60GMPVR127R55M		127	5"	35	8×φ16	4×φ16, 4×φ14	—	4	13.5
60GMPVR140R55M		140	5 1/2"	35	8×φ16	8×φ16	—	4	15.2

Part Number	Skirt	Gauge Diameter		Gauge Angle [°]	Gauge Button No × Dia(mm)	Face Button No × Dia(mm)	Blow Hole		Weight(kg)
		(mm)	(in)				Side	Face	
60GMPVS152R5XM		152	6"	35	10×φ16	3×φ14, 6×φ16	—	4	15.4
60GMPVR152R5XM		152	6"	35	10×φ16	3×φ14, 6×φ16	—	4	18.8

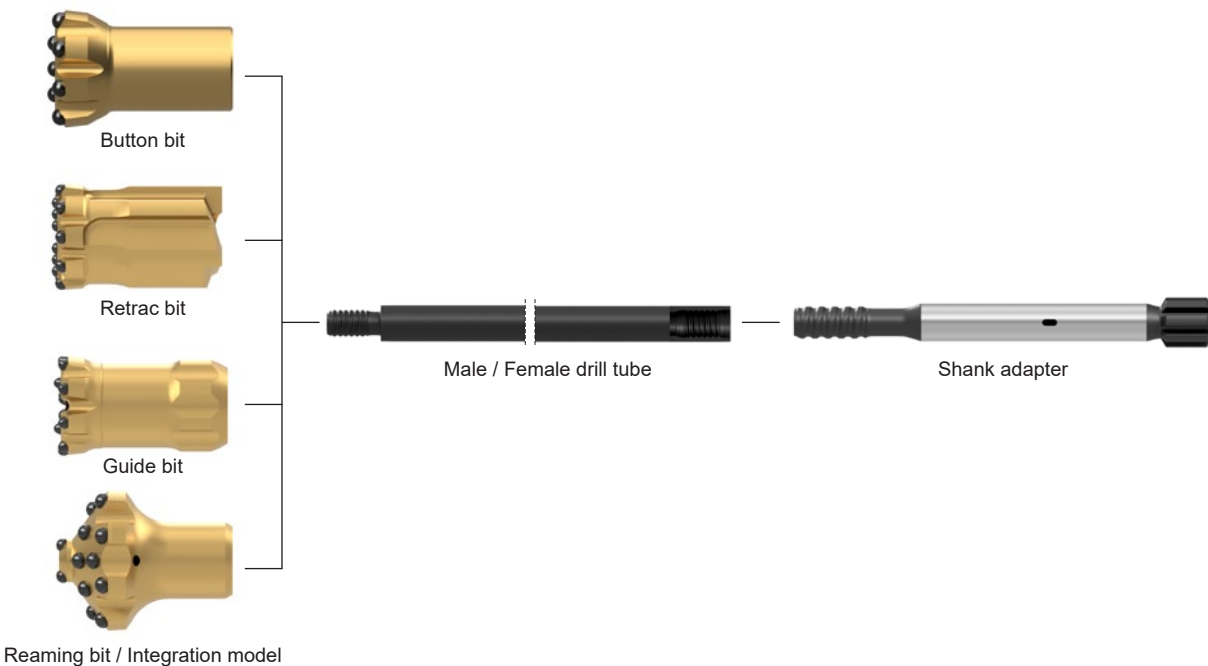
Male / Female Rod



Part Number	Thread		Outside Diameter		Length		Weight(kg)
			(mm)	(in)	(mm)	(ft/in)	
ER60GM60MF-3660F	GM60	GM60	60	2 1/4"	3660	12'	74.4
ER60GM60MF-4270F					4270	14'	86.0
ER60GM60MF-5490F					5490	18	109.3
ER60GM60MF-6100F					6100	20	121.0

BENCH & LONG HOLE DRILLING EQUIPMENT

ST58 SERIES (2 1/4") (Recommended Gauge diameter $\phi 89$ - $\phi 127$)



Various types of products are being released and are also available for BB(Semi-ballistic) and B(Ballistic).



Button Bit with Flat face Type 15



Part Number	Skirt	Gauge Diameter		Gauge Angle [°]	Gauge Button	Face Button	Blow Hole		Weight(kg)
		(mm)	(in)		No × Dia(mm)	No × Dia(mm)	Side	Face	
58WDPVS89R15M		89	3 1/2"	35	8× $\phi 13$	6× $\phi 12$	—	2	4.0
58WDPVS102R15M		102	4"	35	8× $\phi 14$	6× $\phi 13$	—	2	5.0



Button Bit with Groove Type 23 and 25



Part Number	Skirt	Gauge Diameter		Gauge Angle [°]	Gauge Button	Face Button	Blow Hole		Weight(kg)
		(mm)	(in)		No × Dia(mm)	No × Dia(mm)	Side	Face	
58WDPVS89R23M		89	3 1/2"	35	9× $\phi 12$	6× $\phi 12$	—	3	3.9
58WDPVS102R23M		102	4"	35	9× $\phi 13$	7× $\phi 13$	—	3	5.0
58WDPVS115R23M		115	4 1/2"	35	9× $\phi 14$	7× $\phi 14$	—	3	7.0
58WDPVS127R23M		127	5"	35	9× $\phi 16$	7× $\phi 16$	—	3	9.0

Part Number	Skirt	Gauge Diameter		Gauge Angle [°]	Gauge Button	Face Button	Blow Hole		Weight(kg)
		(mm)	(in)		No × Dia(mm)	No × Dia(mm)	Side	Face	
58WDPVS89R25M		89	3 1/2"	35	8× $\phi 13$	6× $\phi 12$	—	2	3.9
58WDPVS102R25M		102	4"	35	8× $\phi 14$	6× $\phi 13$	—	2	4.9
58WDPVS115R25M		115	4 1/2"	35	8× $\phi 14$	7× $\phi 13$	—	2	6.9
58WDPVS127R25M		127	5"	35	8× $\phi 16$	8× $\phi 14$	—	2	8.9
58WDPVR89R25M		89	3 1/2"	35	8× $\phi 13$	6× $\phi 12$	—	2	5.6
58WDPVR102R25M		102	4"	35	8× $\phi 14$	6× $\phi 13$	—	2	7.8
58WDPVR115R25M		115	4 1/2"	35	8× $\phi 14$	7× $\phi 13$	—	2	10.6
58WDPVR127R25M		127	5"	35	8× $\phi 16$	8× $\phi 14$	—	2	12.8



Button Bit with Drop Center Type 55 and 41



Part Number	Skirt	Gauge Diameter		Gauge Angle [°]	Gauge Button	Face Button	Blow Hole		Weight(kg)
		(mm)	(in)		No × Dia(mm)	No × Dia(mm)	Side	Face	
58WDPVR89R55M		89	3 1/2"	35	8×φ12	6×φ12	—	4	5.4
58WDPVR102R55M		102	4"	35	8×φ14	6×φ14	—	4	7.6
58WDPVR115R55M		115	4 1/2"	35	8×φ14	8×φ14	—	4	10.4
58WDPVR127R55M		127	5"	35	8×φ16	4×φ16, 4×φ14	—	4	12.6

Part Number	Skirt	Gauge Diameter		Gauge Angle [°]	Gauge Button	Face Button	Blow Hole		Weight(kg)
		(mm)	(in)		No × Dia(mm)	No × Dia(mm)	Side	Face	
58WDPVS89BB41M		89	3 1/2"	35	8×φ13	6×φ12	—	4	3.8
58WDPVS102BB41M		102	4"	35	10×φ13	8×φ13	—	4	5.0
58WDPVS115BB41M		115	4 1/2"	35	10×φ14	8×φ14	—	4	6.4
58WDPVS127BB41M		127	5"	35	10×φ16	4×φ16, 4×φ14	—	4	8.6
58WDPVG89R41M		89	3 1/2"	35	8×φ13	6×φ12	—	4	3.9
58WDPVG89BB41M		89	3 1/2"	35	8×φ13	6×φ12	—	4	3.9



Button Bit with Convex Type 85



Part Number	Skirt	Gauge Diameter		Gauge Angle [°]	Gauge Button	Face Button	Blow Hole		Weight(kg)
		(mm)	(in)		No × Dia(mm)	No × Dia(mm)	Side	Face	
58WDPVS102BB85H		102	4"	20–40	8×φ12	7×φ12	—	2	5.0
58WDPVS115BB85H		115	4 1/2"	20–40	8×φ14	8×φ12	—	2	6.6
58WDPVS127BB85H		127	5"	20–40	8×φ14	4×φ14, 5×φ12	—	2	8.6



Reaming Bit integration model

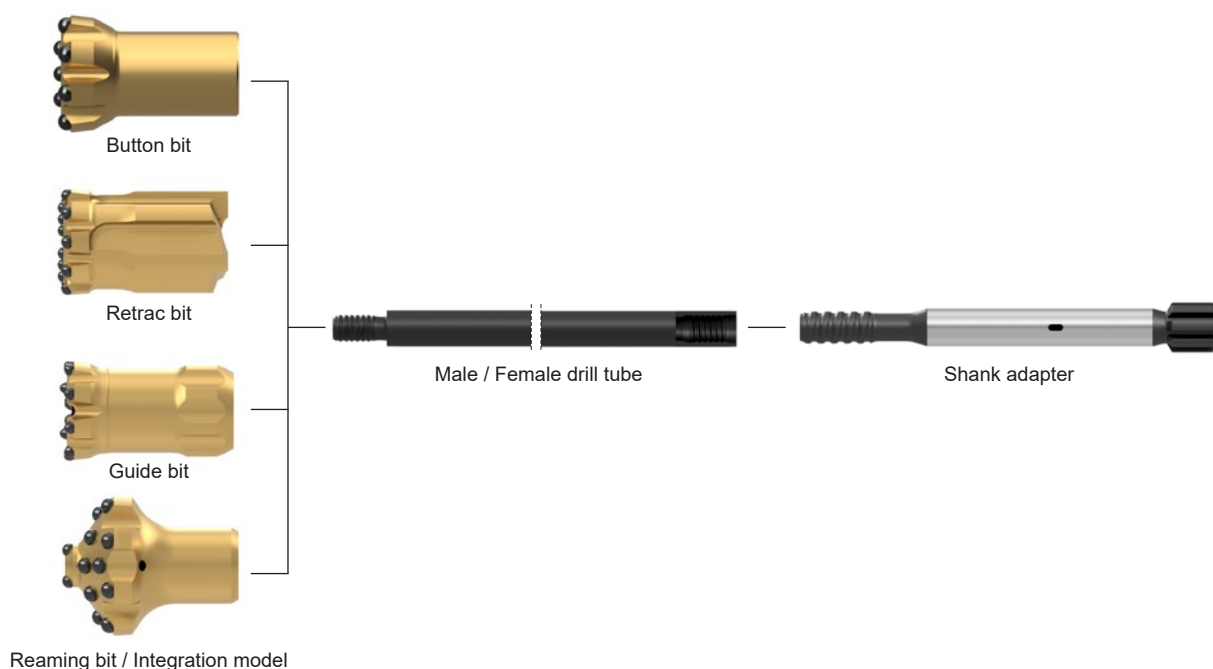


Part Number	Gauge Diameter		Gauge Angle [°]	Gauge Button	Face Button	Blow Hole		Weight(kg)
	(mm)	(in)		No × Dia(mm)	No × Dia(mm)	Side	Face	
WI58WDP127BB-80	127	5"	30	9×φ12	3×φ12	—	3	9.5
WI58WDP152BB-80	152	6"	30	9×φ16	6×φ16	—	3	11.8
WI58WDP203BB-140	203	8"	35	9×φ16	6×φ14	—	3	20.5

Part Number	Gauge Diameter		Gauge Angle [°]	Gauge Button	Face Button	Blow Hole		Weight(kg)
	(mm)	(in)		No × Dia(mm)	No × Dia(mm)	Side	Face	
WI58WDP117R-75R	117	4 5/8"	35	8×φ13	4×φ13, 3×φ8	—	2	6.9
WI58WDP170R-110R	170	6 3/4"	35	9×φ16	9×φ16, 5×φ12	—	3	16.5

BENCH & LONG HOLE DRILLING EQUIPMENT

ST68 SERIES (2 3/4") (Recommended Gauge diameter $\phi 102$ - $\phi 127$)



Various type of products are being released. Please feel free to contact us.



Button Bit with Groove Type 23 and 25



Part Number	Skirt	Gauge Diameter		Gauge Angle [°]	Gauge Button	Face Button	Blow Hole		Weight(kg)
		(mm)	(in)		No × Dia(mm)	No × Dia(mm)	Side	Face	
68WDPVS102BB23M		102	4"	35	9× $\phi 13$	7× $\phi 13$	—	3	5.5
68WDPVS115R23M		115	4"1/2"	35	9× $\phi 14$	7× $\phi 14$	—	3	7.9
68WDPVS127R23M		127	5"	35	9× $\phi 16$	7× $\phi 16$	—	3	10.3
Part Number	Skirt	Gauge Diameter		Gauge Angle [°]	Gauge Button	Face Button	Blow Hole		Weight(kg)
		(mm)	(in)		No × Dia(mm)	No × Dia(mm)	Side	Face	
68WDPVS102BB25M		102	4"	35	8× $\phi 14$	6× $\phi 13$	—	2	5.5
68WDPVS115R25M		115	4"1/2"	35	8× $\phi 14$	7× $\phi 13$	—	2	7.8
68WDPVS127R25M		127	5"	35	8× $\phi 16$	8× $\phi 14$	—	2	9.8



Button Bit with Drop Center Type 55 and 41



Part Number	Skirt	Gauge Diameter		Gauge Angle [°]	Gauge Button	Face Button	Blow Hole		Weight(kg)
		(mm)	(in)		No × Dia(mm)	No × Dia(mm)	Side	Face	
68WDPVG102R55M		102	4"	35	8×φ14	6×φ14	—	4	5.7
68WDPVG115R55M		115	4"1/2"	35	8×φ14	8×φ14	—	4	8.0
68WDPVG127R55M		127	5"	35	8×φ16	4×φ16, 4×φ14	—	4	12.4

Part Number	Skirt	Gauge Diameter		Gauge Angle [°]	Gauge Button	Face Button	Blow Hole		Weight(kg)
		(mm)	(in)		No × Dia(mm)	No × Dia(mm)	Side	Face	
68WDPVS102BB41M		102	4"	35	10×φ13	8×φ13	—	4	5.3
68WDPVS115BB41M		115	4"1/2"	35	10×φ14	8×φ14	—	4	7.2
68WDPVS127BB41M		127	5"	35	10×φ16	4×φ16, 4×φ14	—	4	10.6
68WDPVG102BB41M		102	4"	35	10×φ13	8×φ13	—	4	5.5
68WDPVG115BB41M		115	4"1/2"	35	10×φ14	8×φ14	—	4	8.4
68WDPVG127BB41M		127	5"	35	10×φ16	4×φ16, 4×φ14	—	4	11.3



Button Bit with Convex Type 85



Part Number	Skirt	Gauge Diameter		Gauge Angle [°]	Gauge Button	Face Button	Blow Hole		Weight(kg)
		(mm)	(in)		No × Dia(mm)	No × Dia(mm)	Side	Face	
68WDPVS115BB85H		127	5"	20–40	8×φ14	8×φ12	—	2	7.6
68WDPVS127BB85H		127	5"	20–40	8×φ14	4×φ14, 5×φ12	—	2	10.0



Reaming Bit Integration model



Part Number	Gauge Diameter		Gauge Angle [°]	Gauge Button	Face Button	Blow Hole		Weight(kg)
	(mm)	(in)		No × Dia(mm)	No × Dia(mm)	Side	Face	
WI68WDP152BB-90	152	6"	30	9×φ16	6×φ16	—	3	10.9
WI68WDP203BB-140	203	8"	35	9×φ16	9×φ16	—	3	20.0
WI68WDP252BB-140	252	9" 15/16"	35	9×φ16	15×φ16	—	3	35.2

Recovery pike for ST58 and ST68



Part Number	Outside Diameter		Length		Weight(kg)
	(mm)	(in)	(mm)	(ft/in)	
FTM-58WD-GR78	78	3"	260	10 1/4"	3.4
FTM-68WD-GR88-2	88	3" 1/2"	260	10 1/4"	6.2