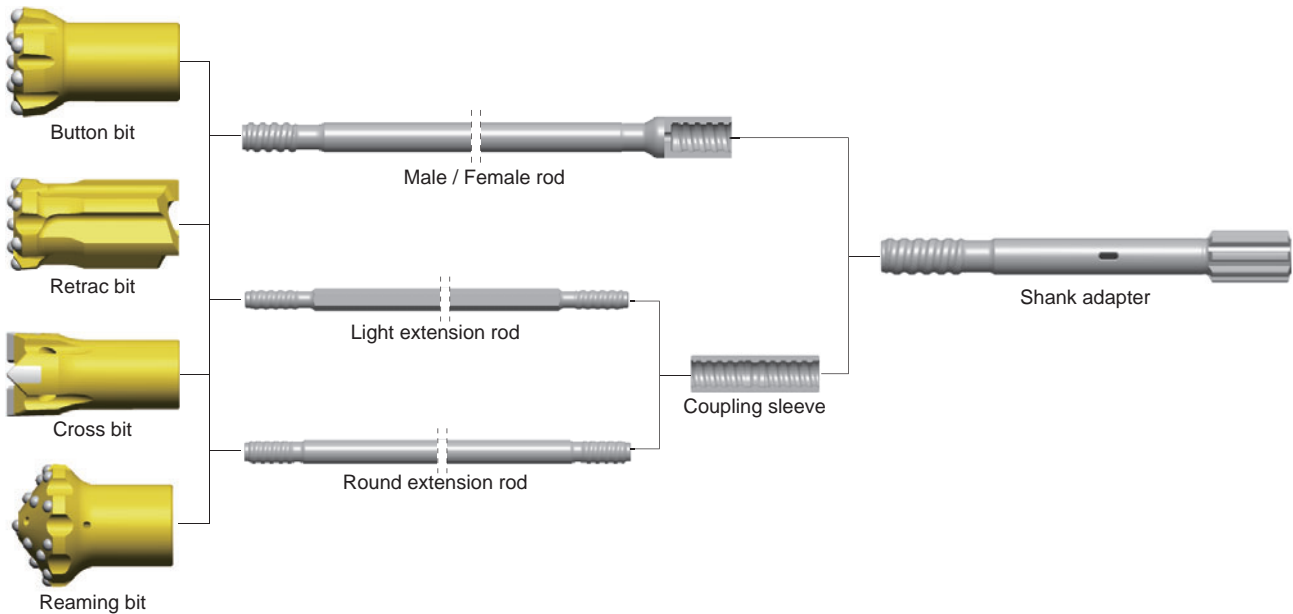


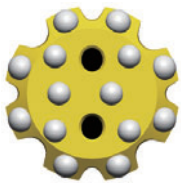
BENCH & LONG HOLE DRILLING EQUIPMENT

T38 (1 1/2") SERIES (Recommended gauge diameter $\phi 64\sim\phi 102$)



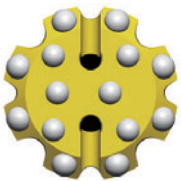
Standard item list - CUSTOM BUTTONS AND FLUSHING CONFIGURATIONS ARE AVAILABLE UPON REQUEST
For details of bit design, please refer to p.20

Button bit Type 15



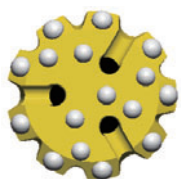
Gauge diameter		Gauge angle [°]	Button x Button dia.[mm]		Flushing hole		Weight [Kg]	Part number
[mm]	[in]		Gauge	Face	Side	Face		
64	2 1/2"	35	8x11	4x10	-	2	1.6	38MPVS64R15M
64	2 1/2"	40	8x10	5x10	-	2	1.6	38MPVS64R15H
70	2 3/4"	35	8x11	4x11	-	2	1.9	38MPVS70R15M
70	2 3/4"	40	8x11	5x10	-	2	1.9	38MPVS70R15H
76	3"	35	8x12	4x11	-	2	2.2	38MPVS76R15M
76	3"	40	8x11	5x11	-	2	2.2	38MPVS76R15H
89	3 1/2"	35	8x13	6x12	-	2	3.4	38MPVS89R15M
89	3 1/2"	40	8x12	6x12	-	2	3.4	38MPVS89R15H
102	4"	35	8x14	6x13	-	2	4.5	38MPVS102R15M
102	4"	40	8x13	6x13	-	2	4.5	38MPVS102R15H

Button bit Type 25



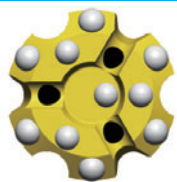
Gauge diameter		Gauge angle [°]	Button x Button dia.[mm]		Flushing hole		Weight [Kg]	Part number
[mm]	[in]		Gauge	Face	Side	Face		
89	3 1/2"	35	8x13	6x12	-	2	3.3	38MPVS89R25M
102	4"	35	8x14	6x13	-	2	4.4	38MPVS102R25M

Button bit Type 23



Gauge diameter		Gauge angle [°]	Button x Button dia.[mm]		Flushing hole		Weight [Kg]	Part number
[mm]	[in]		Gauge	Face	Side	Face		
89	3 1/2"	35	9x12	6x12	-	3	3.4	38MPVS89R23M
102	4"	35	9x13	6x13	-	3	4.5	38MPVS102R23M

Button bit Type 53 & 55



Type 53 (φ64-φ89)



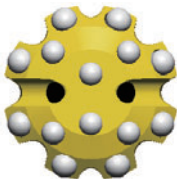
Type 55 (φ76-φ102)

Gauge diameter		Gauge angle [°]	Button x Button dia.[mm]		Flushing hole		Weight [Kg]	Part number
[mm]	[in]		Gauge	Face	Side	Face		
64	2 1/2"	35	6x10	4x10	-	3	1.6	38MPVS64R53M
70	2 3/4"	35	6x11	4x11	-	3	1.8	38MPVS70R53M
76	3"	35	6x12	4x11	-	3	2.1	38MPVS76R53M
76	3"	35	8x11	5x11	-	4	2.2	38MPVS76R55M
89	3 1/2"	35	6x13	5x12	-	3	3.3	38MPVS89R53M
89	3 1/2"	35	8x12	6x12	-	4	3.4	38MPVS89R55M
102	4"	35	8x14	6x14	-	4	4.4	38MPVS102R55M

Button bit Type 83 & 85



Type 83 (φ64-φ76)



Type 85 (φ76-φ102)

Gauge diameter		* Gauge angle [°]	Button x Button dia.[mm]		Flushing hole		Weight [Kg]	Part number
[mm]	[in]		Gauge	Face	Side	Face		
64	2 1/2"	20-40	6x10	3x10, 2x9	1	1	1.6	38MPWS64BB83H
70	2 3/4"	20-40	6x11	5x10	1	1	1.8	38MPWS70BB83H
76	3"	20-40	6x11	3x11, 2x10	1	1	2.1	38MPWS76BB83H
76	3"	20-40	8x11	6x10	2	2	2.2	38MPWS76BB85H
89	3 1/2"	20-40	8x12	6x12	2	2	3.4	38MPWS89BB85H
102	4"	20-40	8x12	7x12	-	2	4.4	38MPVS102BB85H

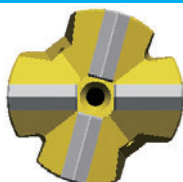
* Face angle 20°, Gauge angle 40°

Button bit Type 14



Gauge diameter		Gauge angle [°]	Button x Button dia.[mm]		Flushing hole		Weight [Kg]	Part number
[mm]	[in]		Gauge	Face	Side	Face		
64	2 1/2"	35	7x11	4x10	-	3	1.6	38MPVS64R14M
70	2 3/4"	35	7x11	4x11	-	3	1.8	38MPVS70R14M
76	3"	35	7x12	4x11	-	3	2.2	38MPVS76R14M
89	3 1/2"	35	7x14	5x12	-	3	3.4	38MPVS89R14M
102	4"	35	7x14	5x13	-	3	4.4	38MPVS102R14M

Cross bit

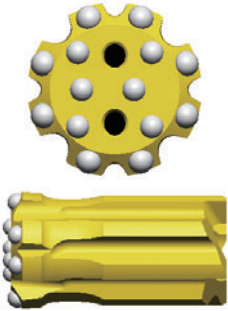


Gauge diameter		Carbide size W x H [mm]	Button x Button dia.[mm]		Flushing hole		Weight [Kg]	Part number
[mm]	[in]		Gauge	Face	Side	Face		
64	2 1/2"	13x22	-	-	4	1	1.8	38MX64S
76	3"	13x22	-	-	4	1	2.4	38MXB76S2

BENCH & LONG HOLE DRILLING EQUIPMENT

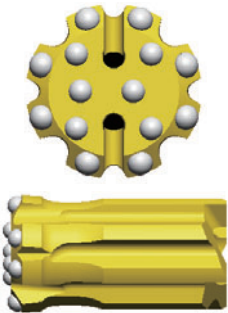
T38 (1 1/2") SERIES (Recommended gauge diameter $\phi 64\sim\phi 102$)

Retrac Button bit Type 15



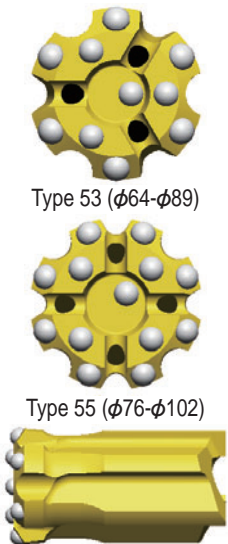
Gauge diameter		Gauge angle [°]	Button x Button dia.[mm]		Flushing hole		Weight [Kg]	Part number
[mm]	[in]		Gauge	Face	Side	Face		
64	2 1/2"	35	8x11	4x10	-	2	2.1	38MPVR64R15M
70	2 3/4"	35	8x11	4x11	-	2	2.6	38MPVR70R15M
76	3"	35	8x12	4x11	-	2	3.1	38MPVR76R15M
89	3 1/2"	35	8x13	6x12	-	2	4.4	38MPVR89R15M
102	4"	35	8x14	6x13	-	2	6.6	38MPVR102R15M

Retrac Button bit Type 25



Gauge diameter		Gauge angle [°]	Button x Button dia.[mm]		Flushing hole		Weight [Kg]	Part number
[mm]	[in]		Gauge	Face	Side	Face		
89	3 1/2"	35	8x13	6x12	-	2	4.4	38MPVR89R25M
102	4"	35	8x14	6x13	-	2	6.5	38MPVR102R25M

Retrac Button bit Type 53 & 55

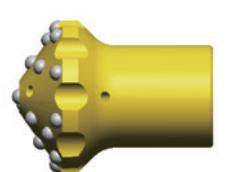


Type 53 ($\phi 64\sim\phi 89$)

Type 55 ($\phi 76\sim\phi 102$)

Gauge diameter		Gauge angle [°]	Button x Button dia.[mm]		Flushing hole		Weight [Kg]	Part number
[mm]	[in]		Gauge	Face	Side	Face		
64	2 1/2"	35	6x10	4x10	-	3	2.0	38MPVR64R53M
70	2 3/4"	35	6x11	4x11	-	3	2.5	38MPVR70R53M
76	3"	35	6x12	4x11	-	3	2.9	38MPVR76R53M
76	3"	35	8x11	5x11	-	4	3.0	38MPVR76R55M
89	3 1/2"	35	6x13	5x12	-	3	4.3	38MPVR89R53M
89	3 1/2"	35	8x12	6x12	-	4	4.4	38MPVR89R55M
102	4"	35	8x14	6x14	-	4	6.5	38MPVR102R55M

Reaming bit integration model



Gauge diameter		Gauge angle [°]	Button x Button dia.[mm]		Flushing hole		Weight [Kg]	Part number
[mm]	[in]		Gauge	Face	Side	Face		
127	5"	35	9x13	10x13	3	1	7.5	38MPJ127-D
152	6"	35	9x14	11x14	3	1	10.5	38MPJ152-D