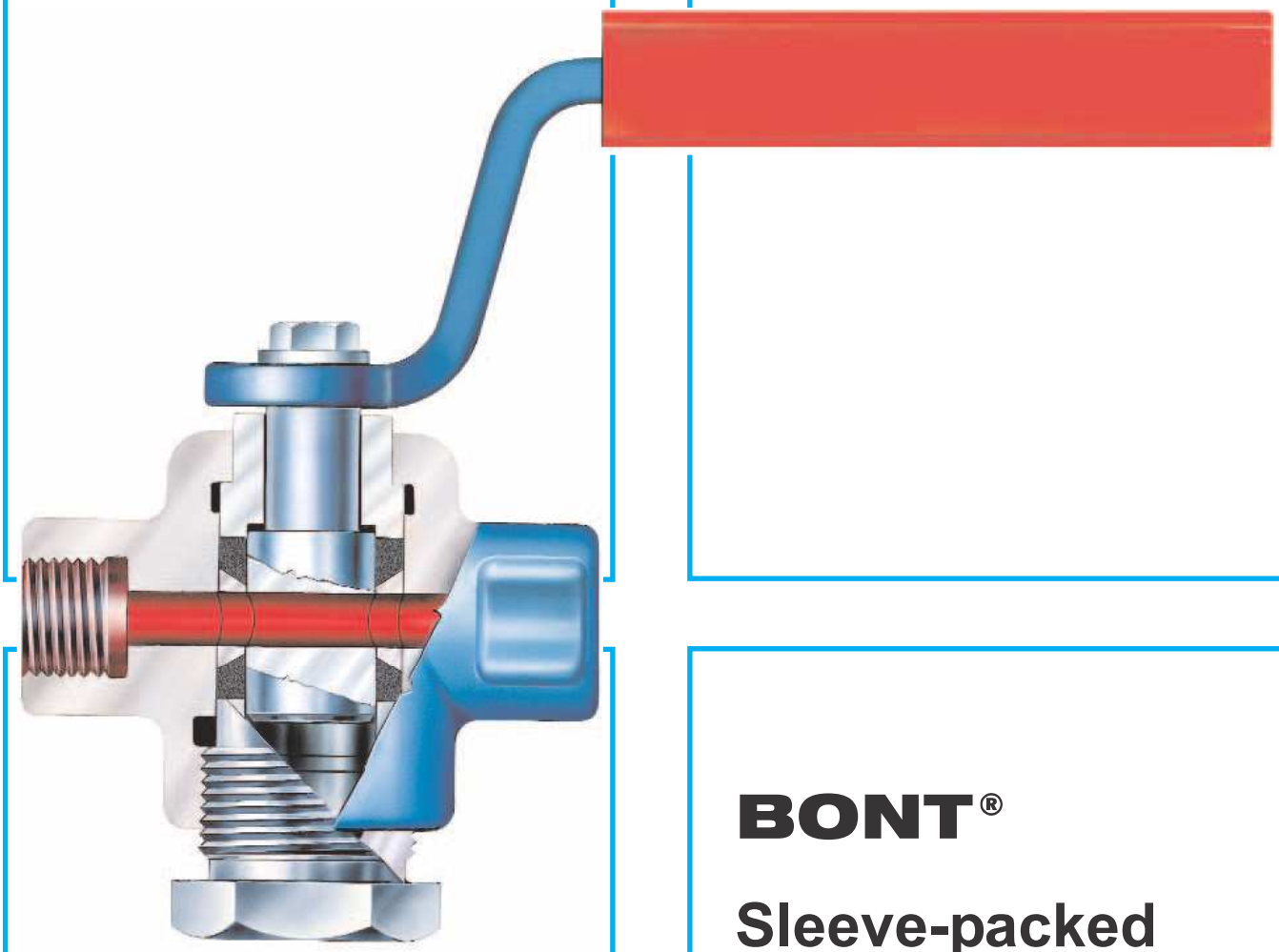
BONETTI®



BONT®

Sleeve-packed Cocks type RM

BONT® Sleeve-packed Cocks

GENERAL INFORMATION

BONT® sleeve-packed cocks have "soft seal" obtained by means of a packing sleeve fitted in the body between body and plug. The advantages of this system have been verified by very many users that have installed millions of cocks of this type all over the world in all operative fields.
Tha advantages of this design are:
- circular through flow passage,
- very long life of body and plug, since the elastic packing sleeve is interposed between these two pieces,
- no sensitivity to changes of temperature,
- no possible plug seizure,
- best performances at low and high temperature up to 350 ÷ 400 °C,
- possibility of restoring thightness during service by compressing packing sleeve,
- complete interchangeability of worn pieces,
- packing sleeve can be replaced by unskilled personnel without removing the cock from the vessel. After sleeve change the cock is as good as new.

PATTERN

BONT® sleeve-packed cocks are usually straight-through cocks. Three-way and four-way patterns are often utilized too.

APPLICATIONS

BONT® sleeve-packed cocks are shut-off cocks. Type RM 421 is moreover a boiler blow-down controlling cock.

CONNECTIONS

Pipe connections are:
- flanged to UNI, DIN, NFE, etc.
- female screwed to UNI 338, DIN 259, BSP 2779; ANSI B2.1 or other
- male screwed to UNI 338, DIN 259, BSP 2779; ANSI B2.1 or other
- other connections on request.

SIZES (DN)

Cocks are currently manufactured for the nominal passage diameters 5 mm to 25 mm, that is 1/4" to 1"

MATERIAL SCHEDULES

In Fig 406 are indicated the Material Schedules currently manufactured. Boldface are given the ones of major diffusion.

RATINGS

In Fig. 406 are indicated the maximum operating conditions. Conditions for cocks of smaller size (DN) are:

Type	DN mm	PN bar	ASME Class	Temp. °C
RM1.	5	160	900	400
RM2.	8	160	900	400

The maximum operating temperature for continuous service depends also on packing sleeve quality (see page 5). The listed operating conditions are only guidelines for customers. The maximum operating conditions shall be those recommended by the Inspecting Authorities. For heavy or severe services, for pipes subject to strokes, oft-recurring stresses, possible condensate strokes, for dangerous fluids, Material Schedules with body of steel shall be chosen even for limited operating conditions.
When enquiring or ordering please state the most heavy operating conditions: type of fluid, pressure, temperature.

Table 1 - Material Schedules and Rating

Material Schedule	Material employed for: Body	Plug	Remarks	Max. operating conditions Pressure bar	Temperature °C	Fluid
52	Forged Carbon steel ASTM A105	Stailness steel AISI 316	exclusion of copper, silver and their alloys	Any Material Schedule having body of steel (carbon steel or stainless steel)is suitable for PN160 (ASME Class 900) and max. operating temperature of 400 °C (572 °F)		General purpose
63	Forged Stailness steel AISI 316	Stailness steel AISI 316	external non wetted parts in AISI 304			Corosive fluids and/or fluids at low temperature, up to -48 °C (-54.4 °F)
64	Forged Stailness steel AISI 316	Stailness steel AISI 316	external non wetted parts in Carbon steel			General purpose and/or corrosive fluids

Table 2 - Technical data for Sleeve-packed cocks type RM 413 and RM 415

TYPE	DIMENSIONS Packing sleeve type	Nominal bore	Plug Dia. mm	Thread d BSP	DIMENSIONS A1 mm	D mm	A mm	A2 mm	B mm	C mm	Q mm	M mm	Material Schedules	Fig.	Weight approx. kg
RM1.413	M1.2	1/4"	12	1/4" G o 3/8" G	-	-	70	-	45	76	8	100	52, 63, 64	413	0,35
RM2.413	M2.2	3/8"	18	3/8" G o 1/2" G	-	-	80	-	54	95	10	130	52, 63, 64	413	1,20
RM1.415	M1.2	5	12	3/8" G	12	9	60	85	45	76	8	100	52, 63, 64	415	0,40
RM2.415	M2.2	8	18	1/2" G	16	11	80	110	54	95	10	130	52, 63, 64	415	1,00

Table 3 - Technical data for Sleeve-packed cocks type RM 416 and RM 417

TYPE	DIMENSIONS Packing sleeve type	Nominal bore mm	Plug Dia. mm	DIMENSIONS Thread d1 BSP	d2 BSP	A3 mm	A4 mm	F mm	Flange D mm	b mm	E mm	Dimensions A mm	A1 mm	A2 mm	B mm	C mm	M mm	Material Schedules	Fig.	Weight approx. kg
RM1.416	M1.2	6	12	3/8"	3/8"	12	14	-	-	-	-	70	35	35	45	76	100	52, 63, 64	416	0,45
RM1.416	M2.2	8	18	1/2"	1/2"	14	19	-	-	-	-	80	40	40	54	95	130	52, 63, 64	416	1,15
RM2.417	M1.4	3	12	3/8"	3/8"	12	14	-	40	5	35	88	35	53	45	76	100	52, 63, 64	417	0,60
RM4.417	M2.4	6	18	1/2"	1/2"	14	19	28	40	5	35	130	70	60	54	95	130	52, 63, 64	417	1,30

BONT® Sleeve-packed Cocks, straight through
- type RM 413 female screwed
- tipo RM 415 male screwed

Fig 413

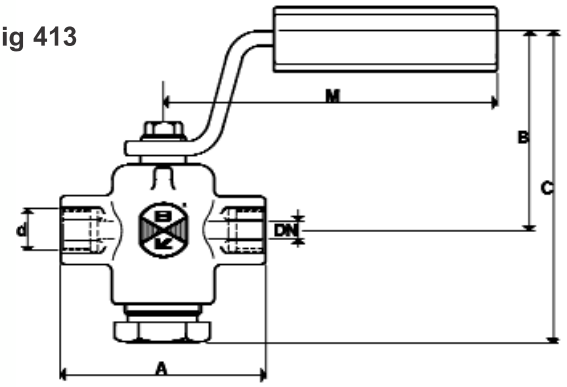
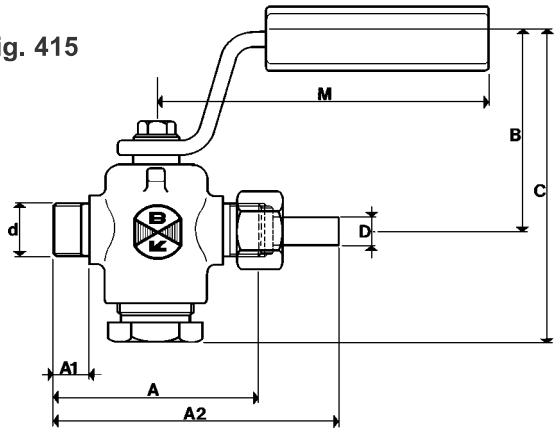


Fig. 415



1 Type RM 413 is usually supplied female screwed to UNI 338, DIN 259, BSP 2779. Type RM 415 is usually supplied male screwed to UNI 338, DIN 259, BSP 2779, with 1 union nut and 1 union tailpipe. On request and with overprice, second union nut and tailpipe are available.

2 Depending on our patterns and forgings, connections can be machined with different threads (e.g. ANSI B2.1) or with socked weld ends (ANSI B 16.11).

3 Body length (A) is not binding.

4 Weights shown in Technical table refer to Material Schedule 52.

5 Handle is usually supplied with each cock.

6 For Material Schedule and operating conditions, please refer to page 2.

BONT® Sleeve-packed Cocks
- type RM 416 pressure gauge 2 ways cock
- tipo RM 417 pressure gauge 3 ways cock with flange for testing gauge

Fig. 416

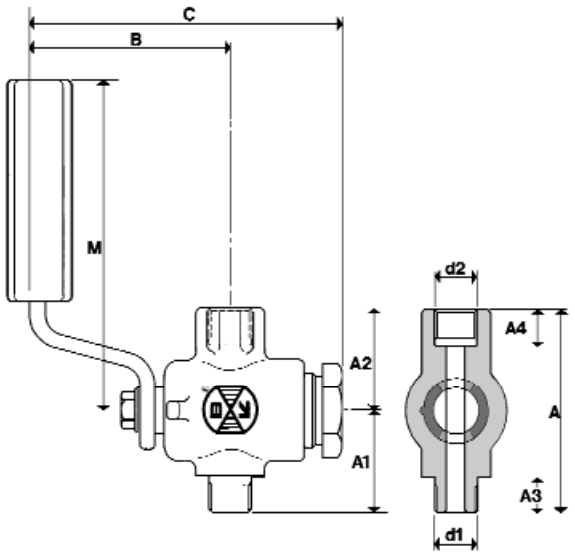
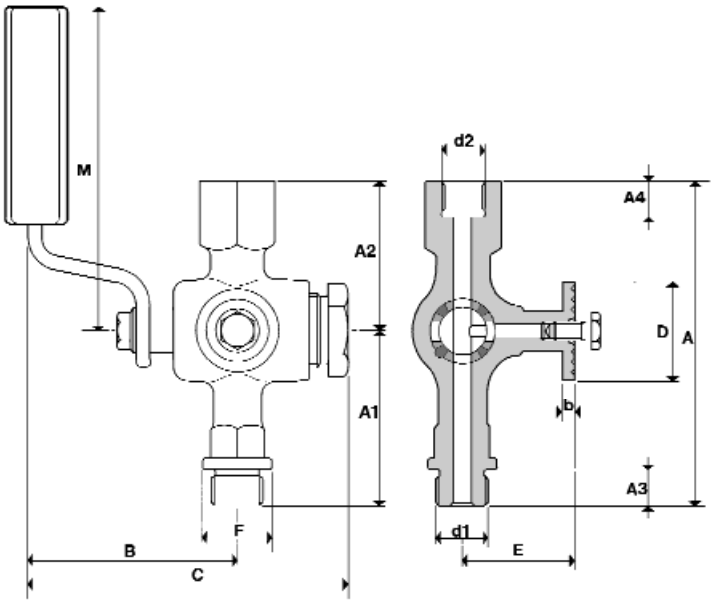


Fig. 417



1 These cocks are usually supplied screwed to UNI 338, DIN 259, BSP 2779. Sealing is performed:
- on pressure gauge side: at the bottom of female connection
- on the other side: at the end of male connection.

2 Depending on our patterns and forgings, connections can be machined with different threads (e.g. ANSI B2.1).

3 On request and with overprice, cocks with rotating female connection (instead of integral female connection) on pressure gauge side are available, to get pressure gauge exact orientation.

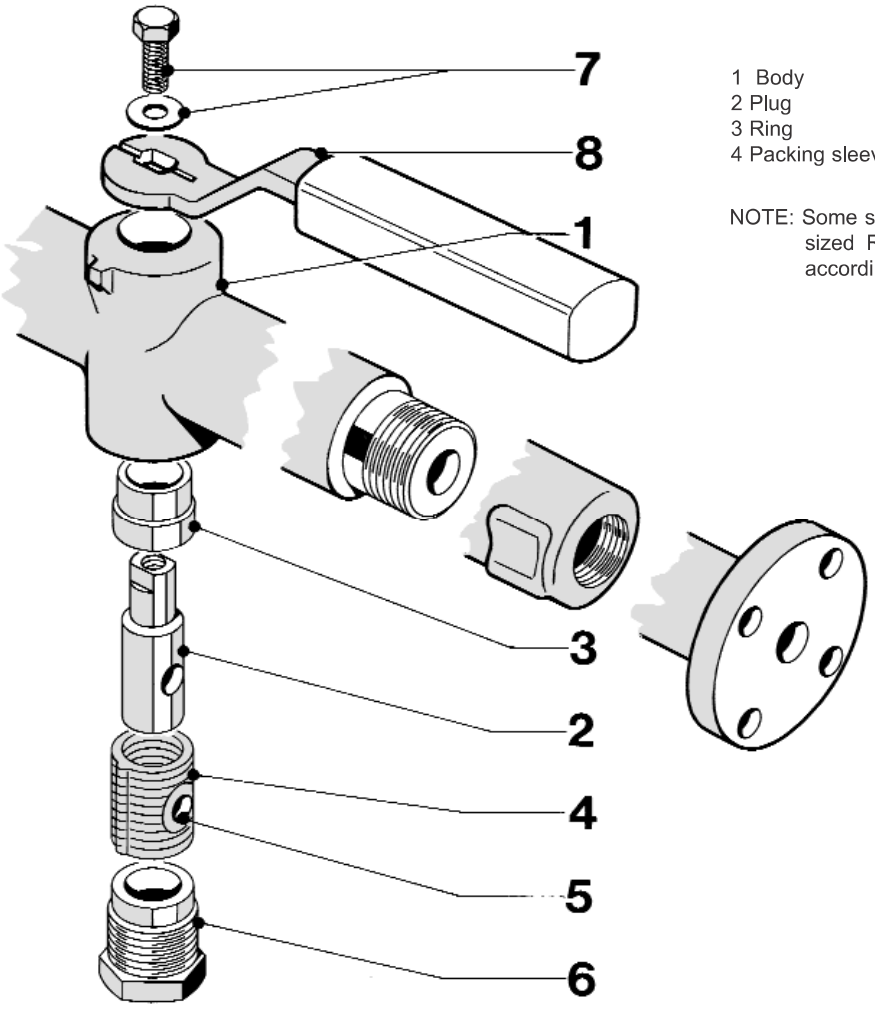
4 Each cock RM 417 has a screw with needle seal on the testing flange, to avoid dangerous fluid outflow in case of wrong operation.

5 Handle is usually supplied with each cock.

6 For Material Schedule and operating conditions, please refer to page 2

BONT® Sleeve-packed Cocks
Description and
Maintenance instructions

Fig. 404



1 Body
2 Plug
3 Ring
4 Packing sleeve
5 Eyelets
6 Tightening nut
7 Screw and washer
8 Handle

NOTE: Some special type excepted,sleeve-packed cocks sized RM1 and RM2 are usually manufactured according to Fig. 404.

Maintenance
- After cock is first put into service or after change of packing sleeve, OPEN THE COCK AND FOLLOW UP THE PACKING SLEEVE by the tightening nut (6). Repeat operation during the first hours and if any trace of leakage would appear. For long life of packing sleeve, compress it slightly and often, rather than strongly and once in a while.
- Should be impossible to reach perfect sealing in this way, dismantle the cock and repack.
- In the pattern of Fig. 404, to remove the handle from its place can be prejudicial to right operating of the cock.

Dismantling
- Make sure the line is NOT under pression.
- Remove tightening nut (6).
- Remove screw, washer and handle (Fig. 404)
- Tap top of plug with a wooden or aluminium mallet until plug is out of body.
- Examine plug and body for signs of scoring or damage which could affect cock tight seal. Clean carefully all parts.

Reassembling
- Insert ring into body. Insert new packing sleeve, making sure that its ridge enters the relevant groove of the body.
- Press plug and keep in place by handle, washer and screw (Fig. 404)
- Smear tightening nut (6) with a thin layer of graphitized grease and screw up.

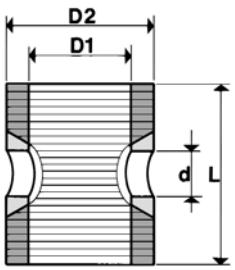
Spare parts
- When ordering spare parts please state:
- cock type and figure number
- outside diameter of plug
- item number according list
- material
- packing sleeves, on page 11.

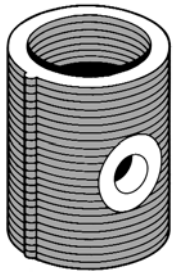
Kit of tools to facilitate the reassembling are available on request.

Packing sleeves with 2 eyelets of stainless steel

Fig. 401

TYPE	DN passage nominal bore d mm	d pollici	DIMENSIONS D1 mm	D2 mm	L mm
M1.2	6	1/4"	**12**	18	23
M2.2	8	5/16"	**18**	26	32
M3.2	10	3/8"	**22**	33	37
M4.2	15	1/2"	**28**	38	44
M5.2	20	3/4"	**40**	52	56
M6.2	25	1"	**50**	62	65



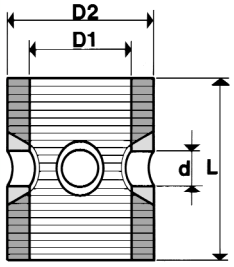


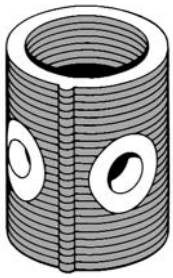
Packing sleeves type M3.2, M4.2, M5.2, M6.2 are only spare parts for old pattern cocks no more manufactured by us after year 1972

Packing sleeves with 4 eyelets of stainless steel

Fig. 402

TYPE	ND passage nominal bore d mm	DIMENSIONS D1 mm	D2 mm	L mm
M1.4	3	**12**	18	23
M2.4	6	**18**	26	32
M3.4	8	**22**	33	37
M4.4	10	**28**	38	44
M5.4	15	**40**	52	56
M6.4	20	**50**	62	65



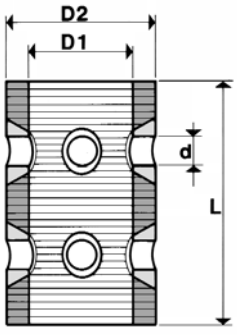


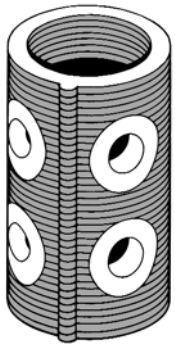
Packing sleeves type M3.4, M4.4, M5.4, M6.4 are only spare parts for old pattern cocks no more manufactured by us after year 1972

Packing sleeves with 8 eyelets of stainless steel

Fig. 403

TYPE	ND passage nominal bore d mm	DIMENSIONS D1 mm	D2 mm	L mm
M2.8	5	**18**	26	43





Packing sleeve type M2.8 is only spare part for old pattern cock no more manufactured by us after year 1972

QUALITY / PACKING SLEEVE MATERIAL	STANDARD GRAFITE	STANDARD PTFE GLASS REINFORCED
Max. operating temperature for continuous service	400 °C	da - 100 °C a + 200 °C
Fluid	Any fluids	Any corrosive fluids