ODI TYPE

SPECIAL PACKINGS FOR PISTON SEALS IRON RUBBER (PUR)

● Please designate NOK Part number and type & size on your order.

(Example) Order for the packing as a single piece

・Type Dimensions ODI 18 8 7.5

ODI — Type Sign

18 8 7.5 — Nominal Size of Packing described in order of outer diameter(D), inner diameter(d), and height(h)

・Part Number FU2150H0

※ When placing orders for backup rings used in combination with packing, designate the NOK part number and the model size.

・Type Dimensions BRT3 8 18 2

BRT3 — Type Sign

8 18 2 — Nominal Size of Backup ring described in order of inner diameter(d), outer diameter(D), and thickness(t)*

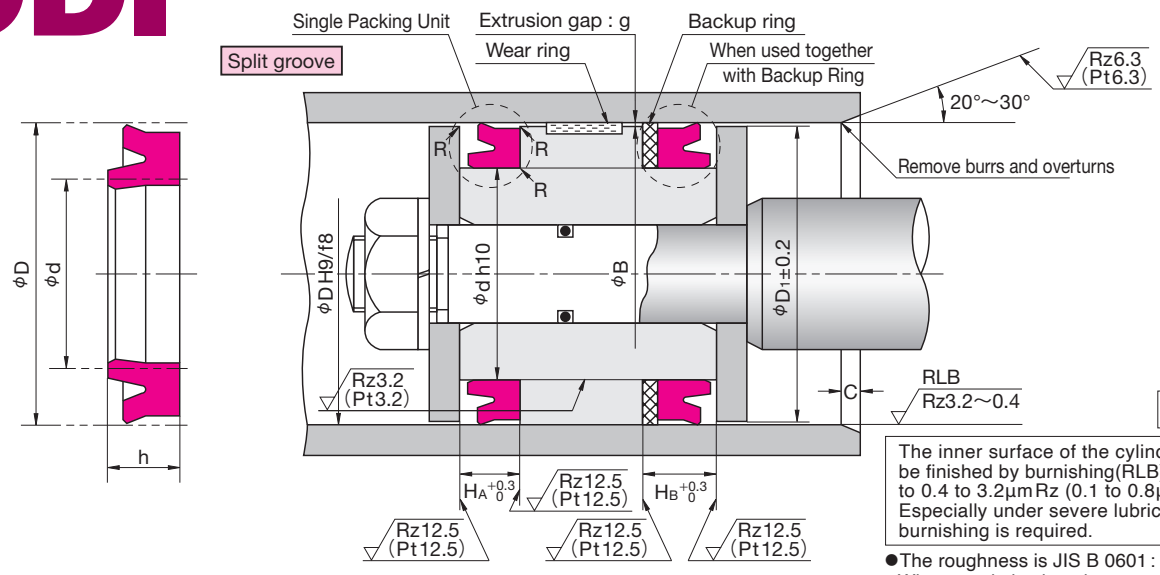
*t = H_B − H_A (Housing dimensions)

・Part Number GN0725V0

● Please check the application range on pages 14 and 15 before selecting the type.

Material	NOK U801

ODI TYPE SPECIAL PACKINGS FOR PISTON SEALS



R=0.3 or below

The inner surface of the cylinder tube should be finished by burnishing(RLB) or honing(GH) to 0.4 to 3.2μmRz (0.1 to 0.8μmRa). Especially under severe lubricating condition, burnishing is required.

●The roughness is JIS B 0601 : 2001.
When regulation length cannot be kept, apply Pt.

Nominal Size of Packing, and Housing dimensions							Packing Part Number	Combination Backup Ring Part Number	
								BRT3 (Endless)	BRN3 (Endless)
D	d	h	H_A	H_B	ϕD_1	C		19YF	80NP
18	8	7.5	8.5	10.5	17	2.5	FU2150H0	GN0725V0	GN9101O1
19.2	11.2	5	5.7	7.7	18.2	2.5	※FU0202H0	GN7236V0	GN9792O0
20	10	6	7	9	19	2.5	※FU0205H0	GN0733V0	GN9102O1
20	10	7.5	8.5	10.5	19	2.5	FU0206H0	GN0733V0	GN9102O1
20	10	8	9	11	19	2.5	FU0207H0	GN0733V0	GN9102O1
20	12	5	5.7	7.7	19	2.5	※FU0208H0	GN7237V0	GN9793O0
22	14	5	5.7	7.7	21	2.5	※FU0242H0	GN7238V0	GN9794O0
24	14	7.5	8.5	10.5	23	3.5	FU2151H0	GN0745V0	GN9103O1
25	15	6	7	9	24	3.5	※FU0273H0	GN0749V0	GN9738O1
25	15	8	9	11	24	3.5	FU0274H0	GN0749V0	GN9738O1
25	17	5	5.7	7.7	24	3.5	※FU0275H0	GN7239V0	GN9795O0
26	16	7.5	8.5	10.5	25	3.5	FU2152H0	GN0751V0	GN9105O1
26	18	5	5.7	7.7	25	3.5	※FU0310H0	GN6377V0	GN9106O1
28	15	10	11	13	27	3.5	FU2153H0	GN6445V0	GN9104O1
28	20	5	5.7	7.7	27	2	※FU2138H0	GN6447V0	GN9108O1
30	20	5	5.7	7.7	29	3.5	※FU0351H0	GN0762V0	GN9109O1
30	20	6	7	9	29	3.5	※FU0352H0	GN0762V0	GN9109O1
30	20	8	9	11	29	3.5	FU0353H0	GN0762V0	GN9109O1
30	22.4	5	5.7	7.7	29	2	※FU2139H0	GN6450V0	GN9112O1
31	18	10	11	13	30	3.5	FU2154H0	GN6446V0	GN9107O1
31.5	18.5	8	9	11	30.5	3.5	FU0377H0	GN7240V0	GN9796O0
31.5	18.5	10	11	13	30.5	3.5	FU0378H0	GN7240V0	GN9796O0
31.5	21.5	6	7	9	30.5	3.5	※FU0379H0	GN0767V0	GN9797O0
31.5	21.5	8	9	11	30.5	3.5	FU0380H0	GN0767V0	GN9797O0
31.5	23.5	5	5.7	7.7	30.5	2	※FU0381H0	GN6452V0	GN9114O1
33	20	10	11	13	32	3.5	FU2155H0	GN6448V0	GN9110O1
33	25	5	5.7	7.7	32	2	※FU2140H0	GN6665V0	GN9786O1
35	22	10	11	13	34	3.5	FU2156H0	GN6449V0	GN9111O1
35	25	6	7	9	34	3.5	※FU0418H0	GN0781V0	GN9115O1
35	25	8	9	11	34	3.5	FU0419H0	GN0781V0	GN9115O1
35.4	22.4	10	11	13	34.4	3.5	FU2157H0	GN6017V0	GN9798O0
35.5	22.5	8	9	11	34.5	3.5	FU0446H0	GN7241V0	GN9799O0
35.5	22.5	10	11	13	34.5	3.5	FU0447H0	GN7241V0	GN9799O0
35.5	25.5	6	7	9	34.5	3.5	※FU0448H0	GN6454V0	GN9117O1
35.5	25.5	8	9	11	34.5	3.5	FU0449H0	GN6454V0	GN9117O1
38	25	10	11	13	37	3.5	FU0466H0	GN6453V0	GN9116O1
40	25	9	10	12	39	3.5	FU0485H0	GN6591V0	GN9800O0
40	25	10	11	13	39	3.5	FU0486H0	GN6591V0	GN9800O0
40	27	8	9	12	39	3.5	FU0488H0	GN6455V0	GN9118O1
40	27	10	11	14	39	3.5	FU0489H0	GN6455V0	GN9118O1
40	30	8	9	12	39	3.5	FU0491H0	GN6361V0	GN9122O1
41	28	10	11	14	40	3.5	FU2158H0	GN6458V0	GN9121O1

※ The resisting pressure limit applies to the OSI type.

HOW TO DETERMINE B DIMENSION

When using backup ring

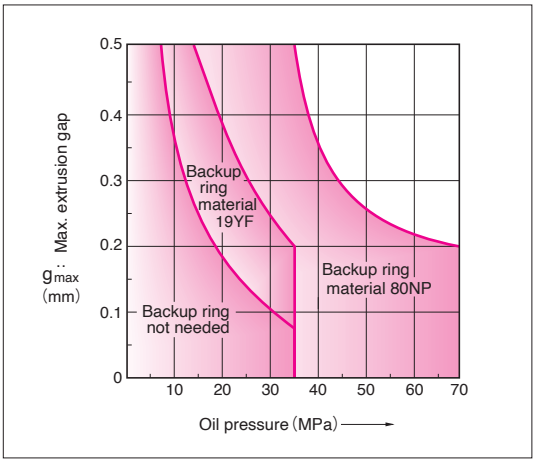
Please determine B dimension according to the table below. If you require smaller B dimension because of the cylinder configuration, please consult NOK.

Maximum Service Pressure	14MPa	21MPa	35MPa
Material of Backup ring	19YF		
B Dimension	B≧φD－1.0	B≧φD－0.5	B≧φD－0.2

Maximum Service Pressure	35MPa	42MPa	70MPa
Material of Backup ring	80NP		
B Dimension	B≧φD－0.8	B≧φD－0.4	B≧φD－0.2

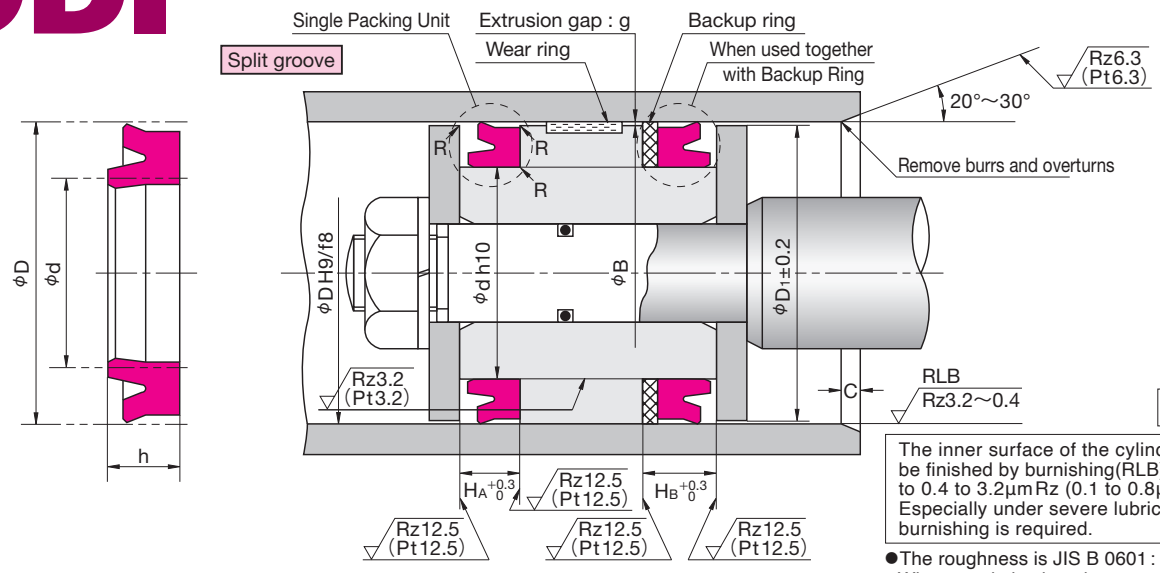
When not using backup ring

To determine B dimension, please refer to the graph in the right for the maximum extrusion gap (one side) considering the eccentricity of operating condition of the piston.



Nominal Size of Packing, and Housing dimensions							Packing Part Number	Combination Backup Ring Part Number	
								BRT3 (Endless)	BRN3 (Endless)
D	d	h	H_A	H_B	ϕD_1	C		19YF	80NP
43	30	10	11	14	42	3.5	FU2159H0	GN6459V0	GN9123O1
44.5	31.5	10	11	14	43.5	3.5	FU2160H0	GN6461V0	GN9125O1
45	30	9	10	13	44	3.5	FU0559H0	GN7061V0	GN9801O0
45	30	10	11	14	44	3.5	FU0560H0	GN7061V0	GN9801O0
45	32	8	9	12	44	3.5	FU0561H0	GN7242V0	GN9802O0
45	32	10	11	14	44	3.5	FU0562H0	GN7242V0	GN9802O0
45	35	8	9	12	44	3.5	FU0564H0	GN6463V0	GN9127O1
50	34	10	11	14	49	4	FU0608H0	GN6462V0	GN9126O1
50	34	12	13	16	49	4	FU0609H0	GN6462V0	GN9126O1
50	35	9	10	13	49	4	FU0610H0	GN0816V0	GN9128O1
50	35	10	11	14	49	4	FU0611H0	GN0816V0	GN9128O1
50	35	12	13	16	49	4	FU2161H0	GN0816V0	GN9128O1
50	40	8	9	12	49	4	FU0614H0	GN6465V0	GN9131O1
51.5	35.5	12	13	16	50.5	4	FU2162H0	GN6330V0	GN9130O1
55	40	9	10	13	54	4	FU0689H0	GN6759V0	GN9948O0
55	40	10	11	14	54	4	FU0690H0	GN6759V0	GN9948O0
55	45	8	9	12	54	4	FU0693H0	GN6467V0	GN9133O1
56	40	10	11	14	55	4	FU0716H0	GN6466V0	GN9132O1
56	40	12	13	16	55	4	FU0717H0	GN6466V0	GN9132O1
56	41	9	10	13	55	4	FU0718H0	GN0835V0	GN9949O0
56	41	10	11	14	55	4	FU0719H0	GN0835V0	GN9949O0
56	46	8	9	12	55	4	FU0721H0	GN7243V0	GN9782O1
60	45	9	10	13	59	4	FU0740H0	GN0845V0	GN9950O0
60	45	10	11	14	59	4	FU0741H0	GN0845V0	GN9950O0
60	50	8	9	12	59	4	FU0743H0	GN6302V0	GN9138O1
61	45	12	13	16	60	4	FU2163H0	GN6469V0	GN9135O1
63	47	10	11	14	62	4	FU0779H0	GN6471V0	GN9137O1
63	47	12	13	16	62	4	FU0780H0	GN6471V0	GN9137O1
63	48	9	10	13	62	4	FU0781H0	GN0853V0	GN9951O0
63	48	10	11	14	62	4	FU0782H0	GN0853V0	GN9951O0
63	53	8	9	12	62	4	FU0785H0	GN6413V0	GN9140O1
65	50	9	10	13	64	4	FU0804H0	GN6439V0	GN9952O0
65	50	10	11	14	64	4	FU0805H0	GN6439V0	GN9952O0
65	55	8	9	12	64	4	FU0808H0	GN6472V0	GN9141O1
66	50	12	13	16	65	4	FU2164H0	GN6329V0	GN9139O1
69	53	12	13	16	68	4	FU0836H0	GN7008V0	GN9803O0
70	50	12	13	16	69	5	FU0842H0	GN6592V0	GN9529O0
70	55	9	10	13	69	5	FU0844H0	GN6408V0	GN9804O0
70	55	10	11	14	69	5	FU0845H0	GN6408V0	GN9804O0
70	60	8	9	12	69	5	FU0847H0	GN6444V0	GN9144O1

ODI TYPE SPECIAL PACKINGS FOR PISTON SEALS



The inner surface of the cylinder tube should be finished by burnishing(RLB) or honing(GH) to 0.4 to 3.2μmRz (0.1 to 0.8μmRa). Especially under severe lubricating condition, burnishing is required.

●The roughness is JIS B 0601 : 2001.
When regulation length cannot be kept, apply Pt.

Nominal Size of Packing, and Housing dimensions							Packing Part Number	Combination Backup Ring Part Number	
								BRT3 (Endless)	BRN3 (Endless)
D	d	h	H_A	H_B	ϕD_1	C		19YF	80NP
71	51	12	13	16	70	5	FU0872H0	GN0862V0	GN9805O0
71	55	10	11	14	70	5	FU0873H0	GN6473V0	GN9142O1
71	55	12	13	16	70	5	FU0874H0	GN6473V0	GN9142O1
71	56	9	10	13	70	5	FU0875H0	GN7247V0	GN9806O0
71	56	10	11	14	70	5	FU0876H0	GN7247V0	GN9806O0
71	61	8	9	12	70	5	FU0878H0	GN7248V0	GN9783O1
75	55	12	13	16	74	5	FU0894H0	GN7249V0	GN9807O0
75	60	9	10	13	74	5	FU0895H0	GN6363V0	GN9808O0
75	60	10	11	14	74	5	FU0896H0	GN6363V0	GN9808O0
75	65	8	9	12	74	5	FU0898H0	GN6479V0	GN9149O1
76	60	12	13	16	75	5	FU2165H0	GN6476V0	GN9146O1
80	60	12	13	16	79	5	FU0929H0	GN0886V1	GN9953O0
80	64	10	11	14	79	5	FU0931H0	GN6478V0	GN9148O1
80	64	12	13	16	79	5	FU0932H0	GN6478V0	GN9148O1
80	65	9	10	13	79	5	FU0933H0	GN6364V0	GN9754O1
80	65	10	11	14	79	5	FU0934H0	GN6364V0	GN9754O1
80	70	8	9	12	79	5	FU0937H0	GN6362V1	GN9092O1
85	65	12	13	16	84	5	FU0974H0	GN0899V0	GN9810O0
85	70	9	10	13	84	5	FU0977H0	GN6442V0	GN9411O0
85	70	10	11	14	84	5	FU0978H0	GN6442V0	GN9411O0
85	75	8	9	12	84	5	FU0980H0	GN6729V0	GN9241O1
90	70	12	13	16	89	5	FU1014H0	GN0910V0	GN9151O1
90	70	15	16	19	89	5	FU1015H0	GN0910V0	GN9151O1
90	75	9	10	13	89	5	FU1017H0	GN6443V0	GN9757O1
90	75	10	11	14	89	5	FU1018H0	GN6443V0	GN9757O1
90	80	8	9	12	89	5	FU1020H0	GN6483V0	GN9155O1
95	75	12	13	16	94	5	FU1045H0	GN0920V0	GN9154O1
95	75	15	16	19	94	5	FU1046H0	GN0920V0	GN9154O1
95	80	9	10	13	94	5	FU1047H0	GN6898V0	GN9582O0
95	80	10	11	14	94	5	FU1048H0	GN6898V0	GN9582O0
100	80	12	13	16	98	5	FU1072H0	GN0927V0	GN9156O1
100	80	15	16	19	98	5	FU1074H0	GN0927V0	GN9156O1
100	85	10	11	14	98	5	FU1079H0	GN6484V0	GN9091O1
105	85	15	16	19	103	5	FU2166H0	GN0932V0	GN9157O1
110	90	12	13	16	108	5	FU1149H0	GN0939V0	GN9159O1
110	90	15	16	19	108	5	FU1150H0	GN0939V0	GN9159O1
110	95	10	11	14	108	5	FU1153H0	GN6486V0	GN9160O1
112	92	12	13	16	110	5	FU1174H0	GN0940V0	GN9811O0
112	92	15	16	19	110	5	FU1175H0	GN0940V0	GN9811O0
112	97	9	10	13	110	5	FU1176H0	GN7250V0	GN9812O0
112	97	10	11	14	110	5	FU1177H0	GN7250V0	GN9812O0

HOW TO DETERMINE B DIMENSION

When using backup ring

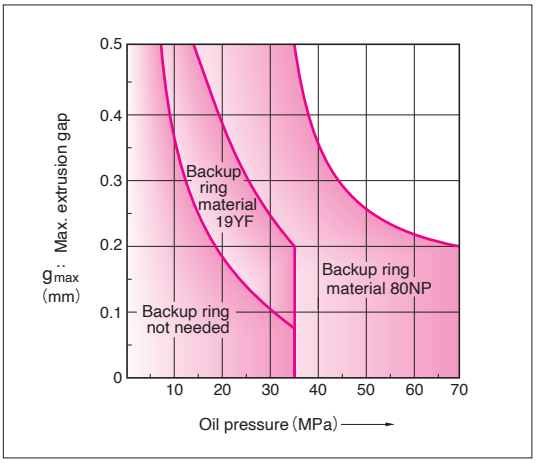
Please determine B dimension according to the table below. If you require smaller B dimension because of the cylinder configuration, please consult NOK.

Maximum Service Pressure	14MPa	21MPa	35MPa
Material of Backup ring	19YF		
B Dimension	B≧φD－1.0	B≧φD－0.5	B≧φD－0.2

Maximum Service Pressure	35MPa	42MPa	70MPa
Material of Backup ring	80NP		
B Dimension	B≧φD－0.8	B≧φD－0.4	B≧φD－0.2

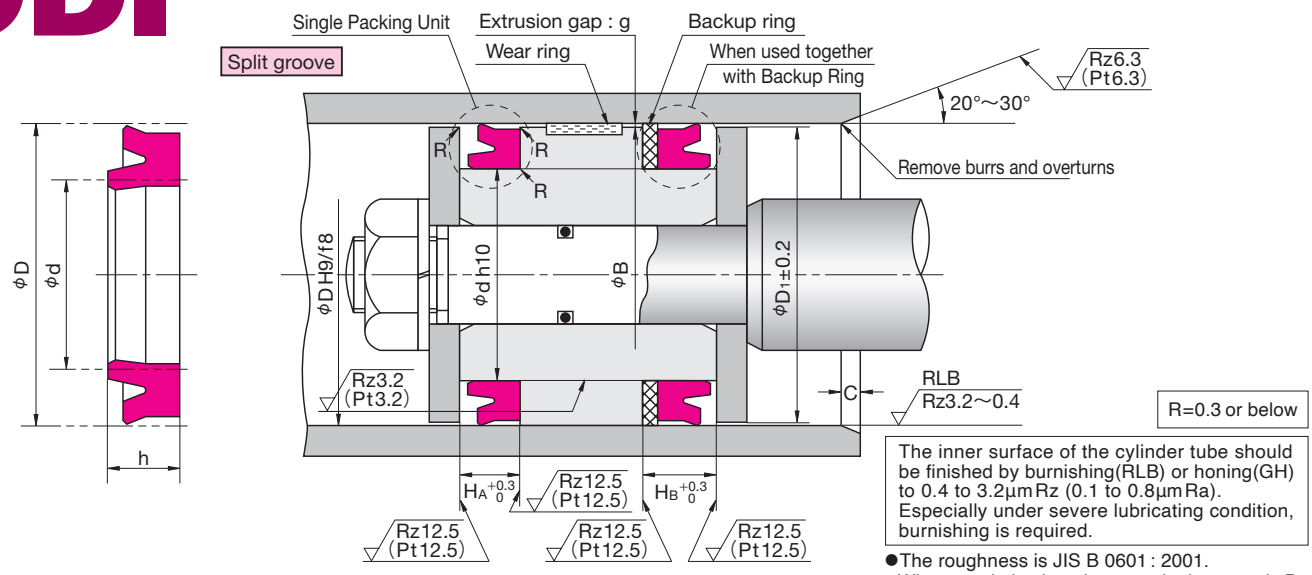
When not using backup ring

To determine B dimension, please refer to the graph in the right for the maximum extrusion gap (one side) considering the eccentricity of operating condition of the piston.



Nominal Size of Packing, and Housing dimensions							Packing Part Number	Combination Backup Ring Part Number	
								BRT3 (Endless)	BRN3 (Endless)
D	d	h	H_A	H_B	ϕD_1	C		19YF	80NP
115	95	15	16	19	113	5	FU2167H0	GN0945V0	GN9161O1
120	100	12	13	16	118	5	FU1210H0	GN0952V0	GN9164O1
120	100	15	16	19	118	5	FU1211H0	GN0952V0	GN9164O1
120	105	10	11	14	118	5	FU1213H0	GN6684V0	GN9589O1
125	105	12	13	16	123	5	FU1243H0	GN0959V0	GN9165O1
125	105	15	16	19	123	5	FU1244H0	GN0959V0	GN9165O1
125	105	16	17	20	123	5	FU1245H0	GN0959V0	GN9165O1
125	110	9	10	13	123	5	FU1247H0	GN6761V0	GN9430O1
125	110	10	11	14	123	5	FU1248H0	GN6761V0	GN9430O1
130	110	12	13	16	128	5	FU1274H0	GN6790V0	GN9694O0
130	110	15	16	19	128	5	FU1275H0	GN6790V0	GN9694O0
130	110	16	17	20	128	5	FU1276H0	GN6790V0	GN9694O0
130	115	10	11	14	128	5	FU1279H0	GN6741V0	GN9274O1
132	112	15	16	19	130	5	FU2168H0	GN0970V0	GN9168O1
140	120	12	13	16	138	5	FU1316H0	GN0982V0	GN9169O1
140	120	15	16	19	138	5	FU1317H0	GN0982V0	GN9169O1
140	120	16	17	20	138	5	FU1318H0	GN0982V0	GN9169O1
140	125	10	11	14	138	5	FU1321H0	GN6491V0	GN9170O1
150	125	19	20	23	148	6.5	FU2169H0	GN6135V0	GN9171O1
150	125	20	21	24	148	6.5	FU1351H0	GN6135V0	GN9171O1
150	130	12	13	16	148	6.5	FU1352H0	GN6925V0	GN9335O1
150	130	16	17	20	148	6.5	FU1354H0	GN6925V0	GN9335O1
150	135	10	11	14	148	6.5	FU1357H0	GN6666V0	GN9539O1
157	132	20	21	24	155	6.5	FU1909H0	GN7013V0	GN9813O0
160	135	19	20	23	158	6.5	FU2170H0	GN6492V0	GN9172O1
160	135	20	21	24	158	6.5	FU1398H0	GN6492V0	GN9172O1
160	140	12	13	16	158	6.5	FU1399H0	GN1002V0	GN9668O0
160	140	16	17	20	158	6.5	FU1402H0	GN1002V0	GN9668O0
160	145	10	11	14	158	6.5	FU1405H0	GN6495V0	GN9175O1
165	140	19	20	23	163	6.5	FU1426H0	GN6494V0	GN9174O1
165	140	20	21	24	163	6.5	FU2186H0	GN6494V0	GN9174O1
170	145	19	20	23	168	6.5	FU1436H0	GN6496V0	GN9176O1
170	145	20	21	24	168	6.5	FU1437H0	GN6496V0	GN9176O1
170	150	12	13	16	168	6.5	FU1438H0	GN1011V0	GN9672O1
170	150	16	17	20	168	6.5	FU1440H0	GN1011V0	GN9672O1
170	155	10	11	15	168	6.5	FU1442H0	GN6498V0	GN9178O1
180	155	16	17	21	178	6.5	FU1475H0	GN1016V0	GN9179O1
180	155	19	20	24	178	6.5	FU2171H0	GN1016V0	GN9179O1
180	155	20	21	25	178	6.5	FU1476H0	GN1016V0	GN9179O1
180	160	12	13	17	178	6.5	FU1478H0	GN6905V0	GN9814O0
180	160	16	17	21	178	6.5	FU1479H0	GN6905V0	GN9814O0
180	165	10	11	15	178	6.5	FU1482H0	GN6500V0	GN9182O1

ODI TYPE SPECIAL PACKINGS FOR PISTON SEALS



R=0.3 or below

The inner surface of the cylinder tube should be finished by burnishing(RLB) or honing(GH) to 0.4 to 3.2μmRz (0.1 to 0.8μmRa). Especially under severe lubricating condition, burnishing is required.

●The roughness is JIS B 0601 : 2001.
When regulation length cannot be kept, apply Pt.

Nominal Size of Packing, and Housing dimensions							Packing Part Number	Combination Backup Ring Part Number	
								BRT3 (Endless)	BRN3 (Endless)
D	d	h	H_A	H_B	φD_1	C		19YF	80NP
185	160	19	20	24	183	6.5	FU2172H0	GN1020V0	GN9181O1
185	160	20	21	25	183	6.5	FU2187H0	GN1020V0	GN9181O1
190	165	16	17	21	188	6.5	FU1507H0	GN1023V0	GN9815O0
190	165	20	21	25	188	6.5	FU1508H0	GN1023V0	GN9815O0
190	170	12	13	17	188	6.5	FU1509H0	GN6985V0	GN9816O0
190	170	16	17	21	188	6.5	FU1510H0	GN6985V0	GN9816O0
190	175	10	11	15	188	6.5	FU1512H0	GN6503V0	GN9185O1
200	175	16	17	21	198	6.5	FU1536H0	GN1031V0	GN9186O1
200	175	19	20	24	198	6.5	FU2173H0	GN1031V0	GN9186O1
200	175	20	21	25	198	6.5	FU1538H0	GN1031V0	GN9186O1
200	180	16	17	21	198	6.5	FU1540H0	GN6372V0	GN9187O1
205	180	19	20	24	203	6.5	FU2174H0	GN1035V0	GN9188O1
205	180	20	21	25	203	6.5	FU2188H0	GN1035V0	GN9188O1
210	185	16	17	21	208	6.5	FU1570H0	GN1039V0	GN9817O0
210	185	20	21	25	208	6.5	FU1571H0	GN1039V0	GN9817O0
210	190	16	17	21	208	6.5	FU1573H0	GN6505V0	GN9190O1
215	190	16	17	21	213	6.5	FU2260H0	GN1042V0	GN9818O0
220	195	16	17	21	218	6.5	FU1592H0	GN7253V0	GN9819O0
220	195	20	21	25	218	6.5	FU1593H0	GN7253V0	GN9819O0
220	200	16	17	21	218	6.5	FU1595H0	GN6276V0	GN9191O1
224	199	16	17	21	222	6.5	FU1604H0	GN1047V0	GN9820O0
224	199	20	21	25	222	6.5	FU1605H0	GN1047V0	GN9820O0
224	204	16	17	21	222	6.5	FU1607H0	GN6506V0	GN9193O1
225	200	16	17	21	223	6.5	FU1616H0	GN1050V0	GN9192O1
225	200	19	20	24	223	6.5	FU2175H0	GN1050V0	GN9192O1
225	200	20	21	25	223	6.5	FU1617H0	GN1050V0	GN9192O1
225	205	16	17	21	223	6.5	FU1619H0	GN7255V0	GN9784O1
230	205	16	17	21	228	6.5	FU1632H0	GN1053V0	GN9557O1
230	205	19	20	24	228	6.5	FU1633H0	GN1053V0	GN9557O1
230	205	20	21	25	228	6.5	FU1634H0	GN1053V0	GN9557O1
230	210	16	17	21	228	6.5	FU1636H0	GN6352V0	GN9195O1
240	215	16	17	21	238	6.5	FU1652H0	GN7256V0	GN9574O0
240	215	19	20	24	238	6.5	FU1653H0	GN7256V0	GN9574O0
240	215	20	21	25	238	6.5	FU1654H0	GN7256V0	GN9574O0
240	220	16	17	21	238	6.5	FU1656H0	GN6508V0	GN9196O1
250	225	16	17	21	248	6.5	FU1671H0	GN1065V0	GN9045O1
250	225	19	20	24	248	6.5	FU1672H0	GN1065V0	GN9045O1
250	225	20	21	25	248	6.5	FU1673H0	GN1065V0	GN9045O1
250	230	16	17	21	248	6.5	FU1676H0	GN6510V0	GN9047O1
260	235	16	17	21	258	6.5	FU1698H0	GN7257V0	GN9821O0
260	235	19	20	24	258	6.5	FU1699H0	GN7257V0	GN9821O0
260	240	16	17	21	258	6.5	FU1701H0	GN6511V0	GN9198O1

HOW TO DETERMINE B DIMENSION

When using backup ring

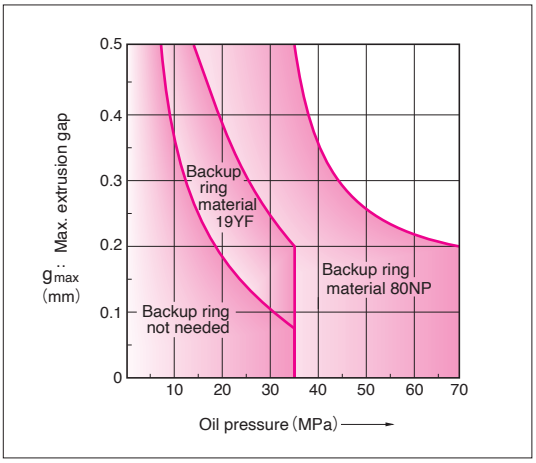
Please determine B dimension according to the table below. If you require smaller B dimension because of the cylinder configuration, please consult NOK.

Maximum Service Pressure	14MPa	21MPa	35MPa
Material of Backup ring	19YF		
B Dimension	B ≧ φD − 1.0	B ≧ φD − 0.5	B ≧ φD − 0.2

Maximum Service Pressure	35MPa	42MPa	70MPa
Material of Backup ring	80NP		
B Dimension	B ≧ φD − 0.8	B ≧ φD − 0.4	B ≧ φD − 0.2

When not using backup ring

To determine B dimension, please refer to the graph in the right for the maximum extrusion gap (one side) considering the eccentricity of operating condition of the piston.



Nominal Size of Packing, and Housing dimensions							Packing Part Number	Combination Backup Ring Part Number	
								BRT3 (Endless)	BRN3 (Endless)
D	d	h	H_A	H_B	ϕD_1	C		19YF	80NP
270	245	16	17	21	268	6.5	FU1715H0	GN7258V0	GN9675O0
270	245	19	20	24	268	6.5	FU1716H0	GN7258V0	GN9675O0
270	250	16	17	21	268	6.5	FU1718H0	GN6512V0	GN9199O1
275	250	19	20	24	273	6.5	FU2176H0	GN1078V0	GN9200O1
275	250	20	21	25	273	7.5	FU2189H0	GN1078V0	GN9200O1
280	250	19	20	24	278	7.5	FU1729H0	GN6197V0	GN9432O1
280	255	19	20	24	278	7.5	FU1731H0	GN6513V0	GN9201O1
290	260	19	20	24	288	7.5	FU1744H0	GN1083V0	GN9431O1
290	265	19	20	24	288	7.5	FU1746H0	GN6318V0	GN9203O1
297	265	24	25	29	295	7.5	FU2177H0	GN6515V0	GN9204O1
297	265	25	26	30	295	7.5	FU2190H0	GN6515V0	GN9204O1
300	270	19	20	24	298	7.5	FU1758H0	GN1089V0	GN9206O1
300	270	24	25	29	298	7.5	FU2178H0	GN1089V0	GN9206O1
300	270	25	26	30	298	7.5	FU1759H0	GN1089V0	GN9206O1
300	275	19	20	24	298	7.5	FU1761H0	GN6517V0	GN9207O1
312	280	24	25	29	310	7.5	FU2193H0	GN6519V0	GN9209O1
332	300	24	25	29	330	7.5	FU2194H0	GN6522V0	GN9212O1

OSI TYPE

SPECIAL PACKINGS FOR PISTON SEALS IRON RUBBER (PUR)

E DIMENSION OSI

● Please designate NOK Part number and type & size on your order.

(Example) Order for the packing as a single piece

・Type Dimensions　OSI　35　27　5

OSI: Type Sign

35 27 5: Nominal Size of Packing described in order of outer diameter(D), inner diameter(d), and height(h)

・Part Number　FU0420L0

※ When placing orders for backup rings used in combination with packing, designate the NOK part number and the model size.

・Type Dimensions　BRT2　27　35　3

BRT2: Type Sign

27 35 3: Nominal Size of Backup ring described in order of inner diameter(d), outer diameter(D), and thickness(t)*

*t = H_B − H_A (Housing dimensions)

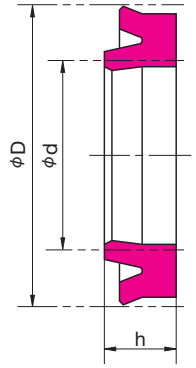
・Part Number　GN5707V0

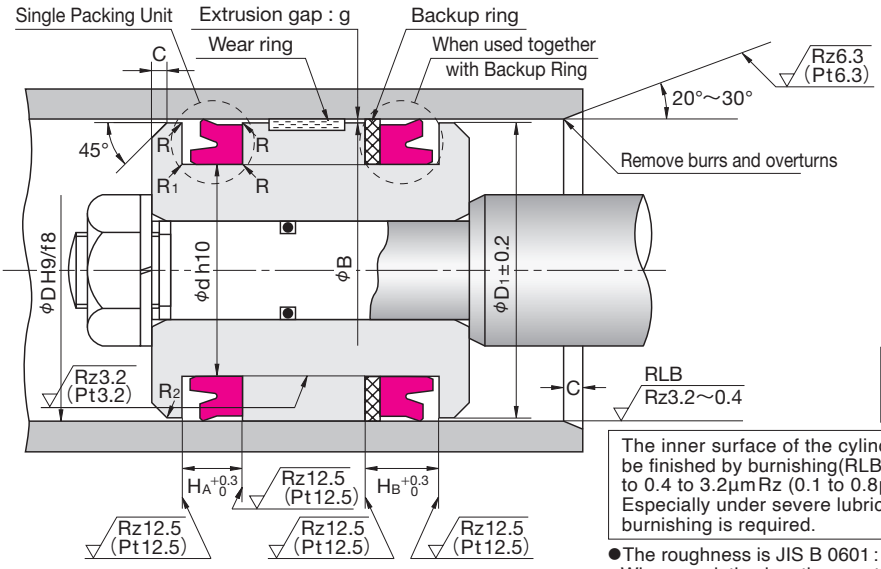
● Please check the application range on pages 14 and 15 before selecting the type.

Material	NOK U801

OSI TYPE

SPECIAL PACKINGS FOR PISTON SEALS (INSTALLED WITH INTERNAL GROOVE)





R =0.3 or below
R1=0.5 or below
R2=1

The inner surface of the cylinder tube should be finished by burnishing(RLB) or honing(GH) to 0.4 to 3.2μmRz (0.1 to 0.8μmRa). Especially under severe lubricating condition, burnishing is required.

●The roughness is JIS B 0601 : 2001.
When regulation length cannot be kept, apply Pt.

Nominal Size of Packing, and Housing dimensions							Packing Part Number	Combination Backup Ring Part Number	
								BRT2 (Biascut)	BRN2 (Biascut)
D	d	h	HA	HB	φD1	C		19YF	80NP
35	27	5	5.7	8.7	34	2	FU0420L0	GN5707V0	GN9780O0
35.5	27.5	5	5.7	8.7	34.5	2	FU0450L0	GN5708V0	GN9781O0
35.5	28	5	5.7	8.7	34.5	2	FU2141L0	GN4791V0	GN9119O0
40	30	6	7	10	39	2.5	FU0490L0	GN4794V0	GN9122O0
41.5	31.5	6	7	10	40.5	2.5	FU2142L0	GN4796V0	GN9124O0
45	35	6	7	10	44	2.5	FU0563L0	GN4799V0	GN9127O0
45	35.5	6	7	10	44	2.5	FU2143L0	GN4801V0	GN9129O0
50	40	6	7	10	49	2.5	FU0613L0	GN4050V0	GN9131O0
55	45	6	7	10	54	2.5	FU0692L0	GN4804V0	GN9133O0
56	45	7	8	11	55	2.5	FU2144L0	GN4805V0	GN9134O0
56	46	6	7	10	55	2.5	FU0720L0	GN5709V0	GN9782O0
60	50	6	7	10	59	2.5	FU0742L0	GN4335V0	GN9138O0
63	53	6	7	10	62	2.5	FU0784L0	GN4693V0	GN9140O0
65	55	6	7	10	64	2.5	FU0807L0	GN4810V0	GN9141O0
66	56	6	7	10	65	2.5	FU0825L0	GN4766V0	GN9143O0
70	60	6	7	10	69	2.5	FU0846L0	GN4676V0	GN9144O0
71	60	7	8	11	70	2.5	FU2145L0	GN4812V0	GN9145O0
71	61	6	7	10	70	2.5	FU0877L0	GN4629V0	GN9783O0
73	63	6	7	10	72	2.5	FU0889L0	GN4814V0	GN9147O0
75	65	6	7	10	74	2.5	FU0897L0	GN4816V0	GN9149O0
77	67	6	7	10	76	2.5	FU0922L0	GN4697V0	GN9150O0
80	70	6	7	10	79	2.5	FU0936L0	GN4651V0	GN9092O0
80	71	6	7	10	79	2.5	FU2146L0	GN4818V0	GN9152O0
85	75	6	7	10	84	2.5	FU0979L0	GN4692V0	GN9241O0
90	80	6	7	10	89	2.5	FU1019L0	GN4820V0	GN9155O0
100	85	9	10	13	98	4	FU1078L0	GN4687V0	GN9091O0
105	90	9	10	13	103	4	FU1120L0	GN4698V0	GN9158O0
110	95	9	10	13	108	4	FU1152L0	GN4822V0	GN9160O0
112	98	8.5	9.5	12.5	110	4	FU2147L0	GN4824V0	GN9162O0
115	100	9	10	13	113	4	FU1193L0	GN4512V0	GN9163O0
120	105	9	10	13	118	4	FU1212L0	GN5198V0	GN9589O0
120	106	8.5	9.5	12.5	118	4	FU2148L0	GN4826V0	GN9166O0
125	112	8.5	9.5	12.5	123	4	FU2847L0	GN4827V0	GN9167O0
125	112	9	10	13	123	4	FU1926L0	GN4827V0	GN9167O0
130	115	9	10	13	128	4	FU1278L0	GN4593V0	GN9274O0
140	125	9	10	13	138	4	FU1320L0	GN4481V0	GN9170O0
145	130	9	10	13	143	4	FU2405L0	GN4628V1	GN9742O1
150	135	9	10	13	148	4	FU1356L0	GN5025V0	GN9539O0
150	136	8.5	9.5	12.5	148	4	FU2149L0	GN4830V0	GN9173O0

HOW TO DETERMINE B DIMENSION

When using backup ring

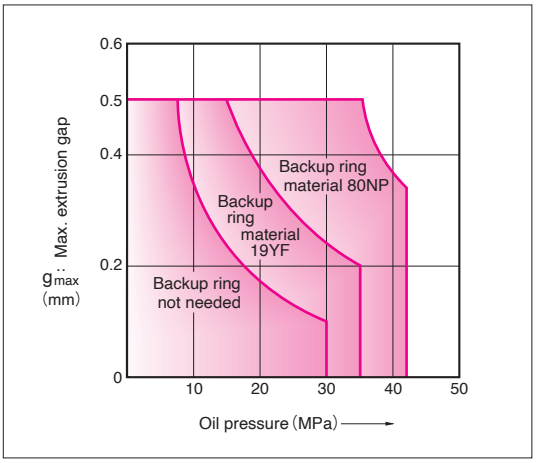
Please determine B dimension according to the table below. If you require smaller B dimension because of the cylinder configuration, please consult NOK.

Maximum Service Pressure	14MPa	21MPa	35MPa
Material of Backup ring	19YF		
B Dimension	B≧φD－1.0	B≧φD－0.5	B≧φD－0.2

Maximum Service Pressure	35MPa	42MPa
Material of Backup ring	80NP	
B Dimension	B≧φD－0.8	B≧φD－0.4

When not using backup ring

To determine B dimension, please refer to the graph in the right for the maximum extrusion gap (one side) considering the eccentricity of operating condition of the piston.



Nominal Size of Packing, and Housing dimensions							Packing Part Number	Combination Backup Ring Part Number	
								BRT2 (Biascut)	BRN2 (Biascut)
D	d	h	H_A	H_B	ϕD_1	C		19YF	80NP
155	140	9	10	13	153	4	FU1386L0	GN4526V0	GN9410O0
160	145	9	10	13	158	4	FU1404L0	GN4551V0	GN9175O0
170	155	9	10	14	168	4	FU1441L0	GN4834V0	GN9178O0
175	160	9	10	14	173	4	FU1458L0	GN4835V0	GN9180O0
180	165	9	10	14	178	4	FU1481L0	GN4836V0	GN9182O0
190	175	9	10	14	188	4	FU1511L0	GN4839V0	GN9185O0
200	180	12	13	17	198	5	FU1539L0	GN4470V0	GN9187O0
210	190	12	13	17	208	5	FU1572L0	GN4841V0	GN9190O0
220	200	12	13	17	218	5	FU1594L0	GN4385V0	GN9191O0
224	204	12	13	17	222	5	FU1606L0	GN4842V0	GN9193O0
225	205	12	13	17	223	5	FU1618L0	GN5710V0	GN9784O0
230	210	12	13	17	228	5	FU1635L0	GN4627V0	GN9195O0
240	220	12	13	17	238	5	FU1655L0	GN4444V0	GN9196O0
250	230	12	13	17	248	5	FU1675L0	GN4635V0	GN9047O0
260	240	12	13	17	258	5	FU1700L0	GN4845V0	GN9198O0
270	250	12	13	17	268	5	FU1717L0	GN4459V0	GN9199O0
280	255	16	17	21	278	6.5	FU1730L0	GN4846V0	GN9201O0
290	265	16	17	21	288	6.5	FU1745L0	GN4848V0	GN9203O0
300	275	16	17	21	298	6.5	FU1760L0	GN4852V0	GN9207O0

OUIS TYPE

SPECIAL PACKINGS FOR PISTON SEALS IRON RUBBER (PUR)

E DIMENSION OUIS

● Please designate NOK Part number and type & size on your order.

(Example) Order for the packing as a single piece

・Type Dimensions　OUIS　40 30 6

Type Sign

Nominal Size of Packing described in order of outer diameter(D), inner diameter(d), and height(h)

・Part Number　FU0490P0

※ When placing orders for backup rings used in combination with packing, designate the NOK part number and the model size.

・Type Dimensions　BRT2　30 40 3

Type Sign

Nominal Size of Backup ring described in order of inner diameter(d), outer diameter(D), and thickness(t)*

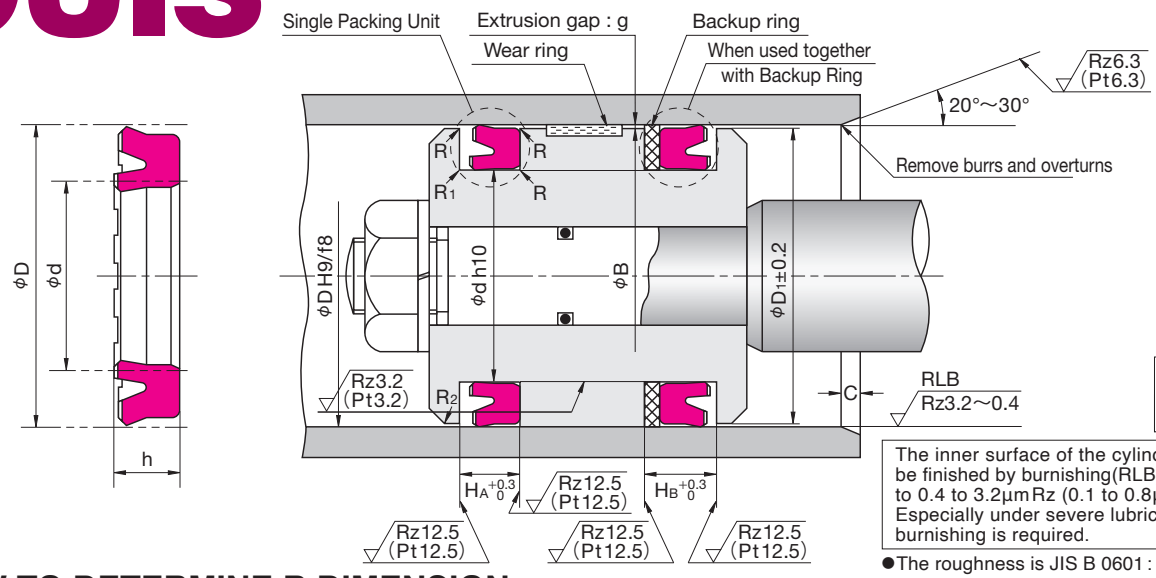
*$t = H_B - H_A$ (Housing dimensions)

・Part Number　GN4794V0

● Please check the application range on pages 14 and 15 before selecting the type.

Material	Standard : NOK U801 Heat resistant type : NOK U641

OUIS TYPE SPECIAL PACKINGS FOR PISTON SEALS (INSTALLED WITH INTERNAL GROOVE)



R =0.3 or below
R1=0.5 or below
R2=1

The inner surface of the cylinder tube should be finished by burnishing(RLB) or honing(GH) to 0.4 to 3.2μmRz (0.1 to 0.8μmRa). Especially under severe lubricating condition, burnishing is required.

● The roughness is JIS B 0601 : 2001.
When regulation length cannot be kept, apply Pt.

HOW TO DETERMINE B DIMENSION

■ When using backup ring

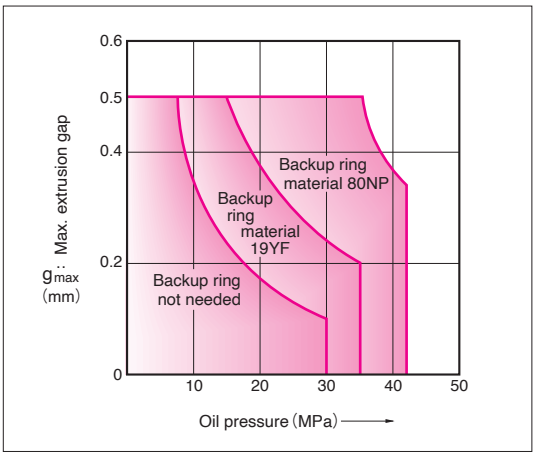
Please determine B dimension according to the table below. If you require smaller B dimension because of the cylinder configuration, please consult NOK.

Maximum Service Pressure	14MPa	21MPa	35MPa
Material of Backup ring	19YF		
B Dimension	B≧φD−1.0	B≧φD−0.5	B≧φD−0.2

Maximum Service Pressure	35MPa	42MPa
Material of Backup ring	80NP	
B Dimension	B≧φD−0.8	B≧φD−0.4

■ When not using backup ring

To determine B dimension, please refer to the graph in the right for the maximum extrusion gap (one side) considering the eccentricity of operating condition of the piston.



Nominal Size of Packing, and Housing dimensions							Packing Part Number		Combination Backup Ring Part Number	
									BRT2 (Biascut)	BRN2 (Biascut)
D	d	h	HA	HB	φD1	C	Standard (U801)	Heat resistant (U641)	19YF	80NP
40	30	6	7	10	39	2.5	FU0490P1	FU0490P0	GN4794V0	GN9122O0
45	35	6	7	10	44	2.5	FU0563P1	FU0563P0	GN4799V0	GN9127O0
50	40	6	7	10	49	2.5	FU0613P1	FU0613P0	GN4050V0	GN9131O0
60	50	6	7	10	59	2.5	FU0742P1	FU0742P0	GN4335V0	GN9138O0
63	53	6	7	10	62	2.5	FU0784P1	FU0784P0	GN4693V0	GN9140O0
65	55	6	7	10	64	2.5	FU0807P1	FU0807P0	GN4810V0	GN9141O0
70	60	6	7	10	69	2.5	FU0846P1	FU0846P0	GN4676V0	GN9144O0
75	65	6	7	10	74	2.5	FU0897P1	FU0897P0	GN4816V0	GN9149O0
80	70	6	7	10	79	2.5	FU0936P1	FU0936P0	GN4651V0	GN9092O0
80	71	6	7	10	79	2.5	FU2146P1	FU2146P0	GN4818V0	GN9152O0
85	75	6	7	10	84	2.5	FU0979P1	FU0979P0	GN4692V0	GN9241O0
90	80	6	7	10	89	2.5	FU1019P1	FU1019P0	GN4820V0	GN9155O0
100	85	9	10	13	98	4	FU1078P1	FU1078P0	GN4687V0	GN9091O0
105	90	9	10	13	103	4	FU1120P1	FU1120P0	GN4698V0	GN9158O0
110	95	9	10	13	108	4	FU1152P1	FU1152P0	GN4822V0	GN9160O0
115	100	9	10	13	113	4	FU1193P0	FU1193P1	GN4512V0	GN9163O0
120	105	9	10	13	118	4	FU1212P1	FU1212P0	GN5198V0	GN9589O0
125	112	8.5	9.5	12.5	123	4	FU2903P0	FU2903P1	GN4827V0	GN9167O0
125	112	9	10	13	123	4	FU1926P1	FU1926P0	GN4827V0	GN9167O0
130	115	9	10	13	128	4	FU1278P1	FU1278P0	GN4593V0	GN9274O0
140	125	9	10	13	138	4	FU1320P1	FU1320P0	GN4481V0	GN9170O0
150	135	9	10	13	148	4	FU1356P1	FU1356P0	GN5025V0	GN9539O0
150	136	8.5	9.5	12.5	148	4	FU2149P0	FU2149P1	GN4830V0	GN9173O0
160	145	9	10	13	158	4	FU1404P1	FU1404P0	GN4551V0	GN9175O0
170	155	9	10	14	168	4	FU1441P1	FU1441P0	GN4834V0	GN9178O0
175	160	9	10	14	173	4	FU1458P0	FU1458P1	GN4835V0	GN9180O0
180	165	9	10	14	178	4	FU1481P1	FU1481P0	GN4836V0	GN9182O0
190	175	9	10	14	188	4	FU1511P1	FU1511P0	GN4839V0	GN9185O0
200	180	12	13	17	198	5	FU1539P1	FU1539P0	GN4470V0	GN9187O0
224	204	12	13	17	222	5	FU1606P1	FU1606P0	GN4842V0	GN9193O0
250	230	12	13	17	248	5	FU1675P1	FU1675P0	GN4635V0	GN9047O0

OUHR TYPE

SPECIAL PACKINGS FOR PISTON SEALS NITRILE RUBBER (NBR)

E DIMENSION OUHR

● Please designate NOK Part number and type & size on your order.

(Example) Order for the packing as a single piece

・Type Dimensions OUHR 32 24 5

OUHR: Type Sign

32 24 5: Nominal Size of Packing described in order of outer diameter(D), inner diameter(d), and height(h)

・Part Number CU2683Q2

※ When placing orders for backup rings used in combination with packing, designate the NOK part number and the model size.

・Type Dimensions BRT2 24 32 2

BRT2: Type Sign

24 32 2: Nominal Size of Backup ring described in order of inner diameter(d), outer diameter(D), and thickness(t)*

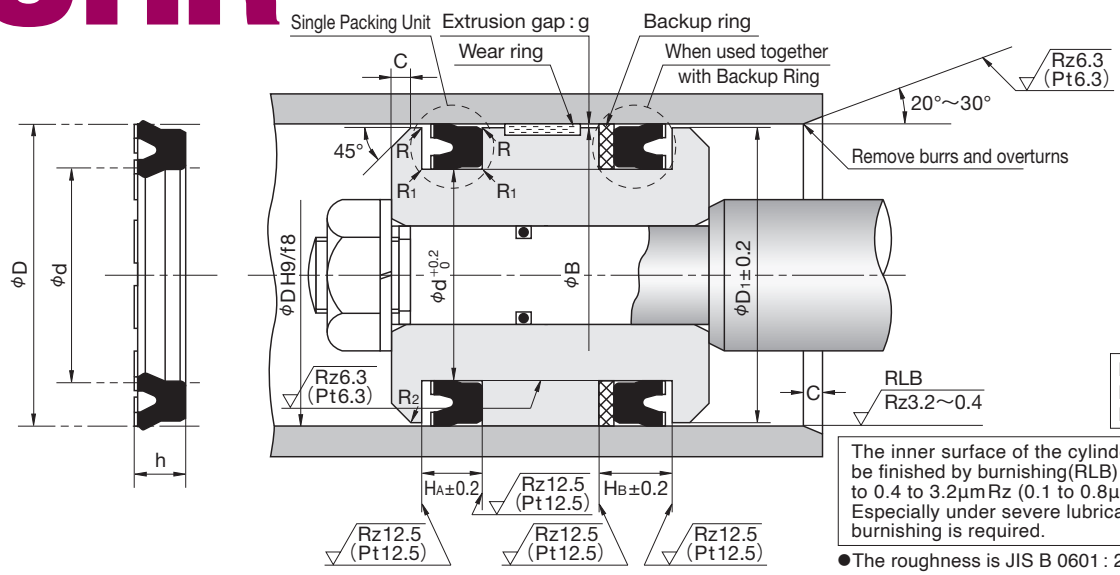
*t = H_B − H_A (Housing dimensions)

・Part Number GN5727V0

● Please check the application range on pages 14 and 15 before selecting the type.

Material	Standard : NOK A505 Cold resistant type : NOK A567

OUHR TYPE SPECIAL PACKINGS FOR PISTON SEALS (INSTALLED WITH INTERNAL GROOVE)



R =0.3 or below
R1=0.5 or below
R2=1

The inner surface of the cylinder tube should be finished by burnishing(RLB) or honing(GH) to 0.4 to 3.2μmRz (0.1 to 0.8μmRa). Especially under severe lubricating condition, burnishing is required.

● The roughness is JIS B 0601 : 2001.
When regulation length cannot be kept, apply Pt.

HOW TO DETERMINE B DIMENSION

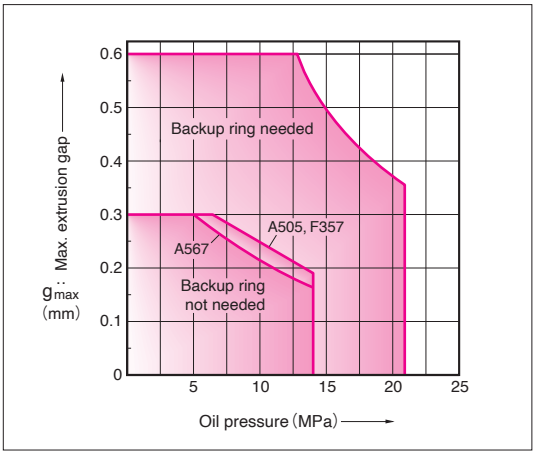
■ When using backup ring

Please determine B dimension according to the table below. If you require smaller B dimension because of the cylinder configuration, please consult NOK.

Maximum Service Pressure	14MPa	21MPa
Material of Backup ring	19YF	
B Dimension	B≧φD − 1.0	B≧φD − 0.5

■ When not using backup ring

To determine B dimension, please refer to the graph in the right for the maximum extrusion gap (one side) considering the eccentricity of operating condition of the piston.



Nominal Size of Packing, and Housing dimensions							Packing Part Number		Combination Backup Ring Part Number
									BRT2 (Biascut)
D	d	h	H_A	H_B	ϕD_1	C	Standard (A505)	Cold resistant (A567)	19YF
32	24	5	5.7	7.7	31	3.5	CU2683Q2	CU2683Q3	GN5727V0
40	30	6	7	10	39	3.5	CU2684Q3	CU2684Q5	GN4794V0
50	40	6	7	10	49	3.5	CU2604Q3	CU2604Q4	GN4050V0
55	45	6	7	10	54	3.5	CU2697Q1		GN4804V0
60	50	6	7	10	59	3.5	CU2696Q2	CU2696Q3	GN4335V0
63	53	6	7	10	62	3.5	CU2685Q0	CU2685Q4	GN4693V0
65	55	6	7	10	64	3.5	CU2930Q2	CU2930Q3	GN4810V0
70	60	6	7	10	69	3.5		CU2634Q2	GN4676V0
75	62	7.5	8.5	11.5	74	4.5	CU2943Q2	CU2943Q3	GN5712V0
80	65	9	10	13	79	4.5	CU2666Q2	CU2666Q3	GN4549V0
80	71	6	7	10	79	4.5	CU3238Q1		GN4818V0
85	70	9	10	13	84	4.5	CU0977Q2	CU0977Q3	GN4876V0
95	80	9	10	13	94	4.5	CU2605Q2	CU2605Q4	GN5023V0
100	85	9	10	13	98	4.5	CU2669Q2	CU2669Q3	GN4687V0
110	95	9	10	13	108	4.5	CU2607Q2	CU2607Q3	GN4822V0
115	100	9	10	13	113	4.5		CU3241Q2	GN4512V0
125	110	9	10	13	123	4.5		CU2670Q2	GN4480V0
125	112	8.5	9.5	12.5	123	4.5	CU3492Q0		GN4827V0
140	125	9	10	13	138	4.5	CU2647Q3	CU2647Q2	GN4481V0
150	136	8.5	9.5	12.5	148	4.5	CU3244Q1		GN4830V0
160	145	9	10	13	158	4.5	CU2687Q1		GN4551V0
180	165	9	10	14	178	4.5	CU2688Q1		GN4836V0
200	180	12	13	17	198	5.5	CU1539Q1	CU1539Q2	GN4470V0
224	204	12	13	17	222	5.5	CU3491Q0		GN4842V0
250	230	12	13	17	248	5.5	CU2691Q2	CU2691Q3	GN4635V0

OKH TYPE

SPECIAL PACKINGS FOR PISTON SEALS
NITRILE RUBBER (NBR)

OKH TYPE + BRL TYPE

COMBINED WEAR RING AND BACKUP RING
POLYAMIDE RESIN (PA)

● Please designate NOK Part number and type & size on your order.

(Example) Order for the packing as a single piece

・Type Dimensions OKH 40 30 6.5

OKH: Type Sign

40 30 6.5: Nominal Size of Packing described in order of outer diameter(D), inner diameter(d), and height(h)

・Part Number CQ0371C0

※ When placing orders for Combined wear ring and backup ring, designate the NOK part number and the model size.

・Type Dimensions BRL 30 40 5.5

BRL: Type Sign

30 40 5.5: Nominal Size of Backup ring described in order of inner diameter(d), outer diameter(D), and height(h)

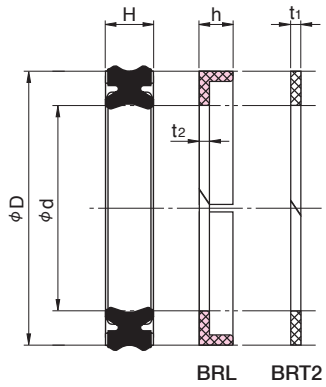
・Part Number GN9965V0

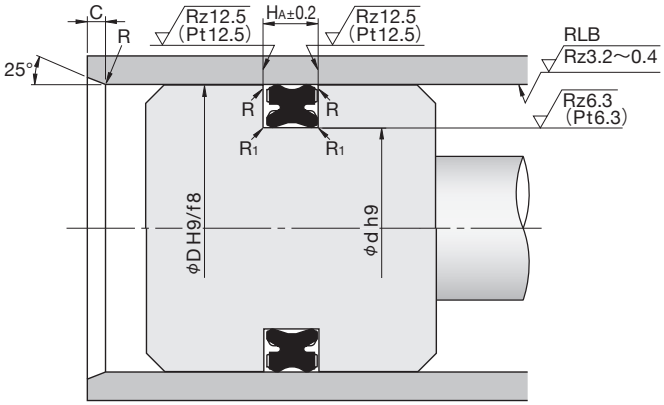
● Please check the application range on pages 14 and 15 before selecting the type.

Material	Standard : NOK A566 Cold resistant type : NOK A567 + NOK 63NP or NOK 19YF

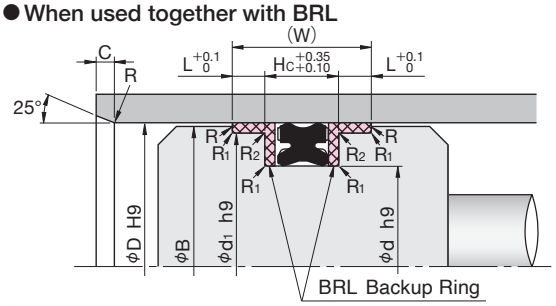
OKH TYPE + BRL TYPE

SPECIAL PACKINGS FOR PISTON SEALS

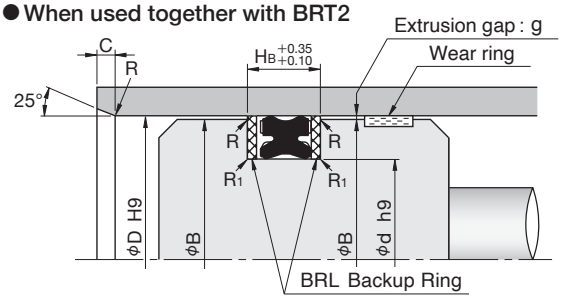




● When used together with BRL



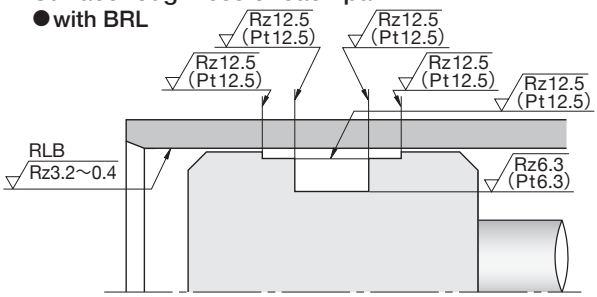
● When used together with BRT2



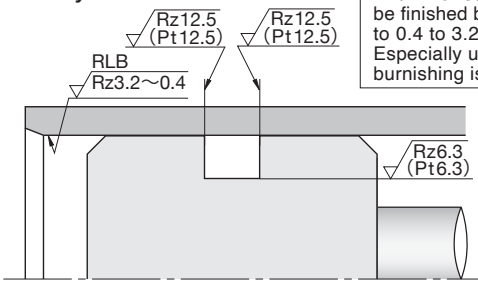
R =0.3 or below
R1=0.4 or below
R2=0.2

Surface roughness of each part

● with BRL



● only OKH · with BRT2



The inner surface of the cylinder tube should be finished by burnishing(RLB) or honing(GH) to 0.4 to 3.2μmRz (0.1 to 0.8μmRa). Especially under severe lubricating condition, burnishing is required.

● The roughness is JIS B 0601: 2001.
When regulation length cannot be kept, apply Pt.

E DIMENSION OKB HR +L

HOW TO DETERMINE B DIMENSION

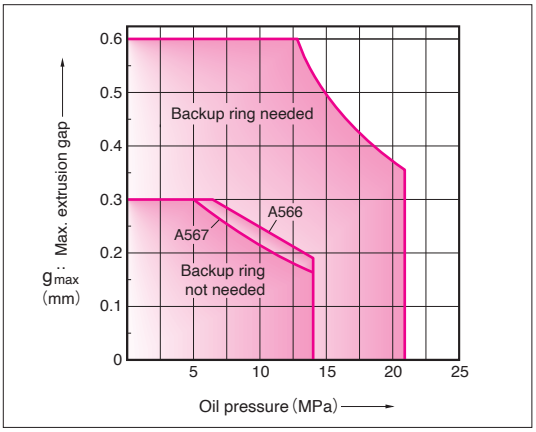
■ When using backup ring

Please determine B dimension according to the table below. If you require smaller B dimension because of the cylinder configuration, please consult NOK.

Maximum Service Pressure	14MPa	21MPa
Material of Backup ring	63NP, 19YF	
B Dimension	B≧φD − 1.0	B≧φD − 0.5

■ When not using backup ring

To determine B dimension, please refer to the graph in the right for the maximum extrusion gap (one side) considering the eccentricity of operating condition of the piston.



Nominal Number	Nominal Size of Packing, and Housing dimensions													Packing Part Number		Combination Backup Ring Part Number	
																BRL(also be used as Wear Ring)	BRT2(Biascut)
	D	d	H	t1	t2	h	φd1	HA	HB	HC	L	(W)	C	Standard(A566)	Heat resistant(A567)	63NP	19YF
OKH40	40	30	6.5	2	1.5	5.5	37	7	11	10	4	18	2.5	CQ0371C0	CQ0371C1	GN9965V0	GN4662V0
45	45	35	6.5	2	1.5	5.5	42	7	11	10	4	18	2.5	CQ0372C0	CQ0372C1	GN9966V0	GN5765V0
50	50	40	6.5	2	1.5	5.5	47	7	11	10	4	18	2.5	CQ0311C1	CQ0311C2	GN9967V0	GN4672V0
55	55	45	6.5	2	1.5	5.5	52	7	11	10	4	18	2.5	CQ0373C0	CQ0373C1	GN9968V0	GN5480V0
60	60	50	6.5	2	1.5	5.5	57	7	11	10	4	18	2.5	CQ0316C0	CQ0316C1	GN9696V1	GN4976V0
63	63	53	6.5	2	1.5	5.5	60	7	11	10	4	18	2.5	CQ0374C0	CQ0374C1	GN9969V0	GN5511V0
65	65	55	6.5	2.5	2	7	61	7	12	11	5	21	2.5	CQ0329C0	CQ0329C1	GN9730V1	GN5766V0
70	70	60	6.5	2.5	2	7	66	7	12	11	5	21	2.5	CQ0313C1	CQ0313C2	GN9695V1	GN5525V0
75	75	65	6.5	2.5	2	7	71	7	12	11	5	21	2.5	CQ0375C0	CQ0375C1	GN9970V0	GN5767V0
80	80	67	8	2.5	2	7	76	8.5	13.5	12.5	5	22.5	3	CQ0330C0	CQ0330C1	GN9731V1	GN5768V0
85	85	72	8	2.5	2	7	81	8.5	13.5	12.5	5	22.5	3	CQ0376C0	CQ0376C1	GN9971V0	GN5769V0
90	90	77	8	2.5	2	7	86	8.5	13.5	12.5	5	22.5	3	CQ0377C0	CQ0377C1	GN9972V0	GN5770V0
100	100	85	9	3	2	7	96	10	16	14	5	24	4	CQ0378C0	CQ0378C1	GN9973V0	GN4687V0

SPGO TYPE

SPECIAL PACKINGS FOR PISTON SEALS RAREFLON (PTFE) + NITRILE RUBBER (NBR)

● Please designate NOK Part number and type & size on your order.

(Example) · Type Dimensions SPGO 14 20 3

SPGO — Type Sign

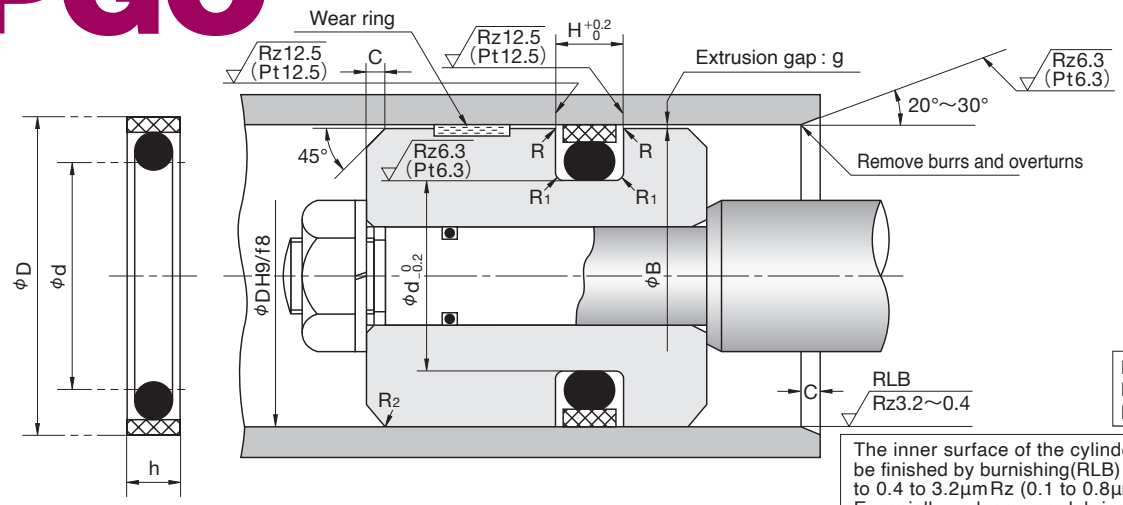
14 20 3 — Nominal Size of Packing described in order of inner diameter(d), outer diameter(D), and height(h)

· Part Number GS1800V0

● Please check the application range on pages 14 and 15 before selecting the type.

Material	NOK 19YF + NOK A305

SPGO TYPE SPECIAL PACKINGS FOR PISTON SEALS



R =0.3 or below
R1=0.5 or below
R2=1

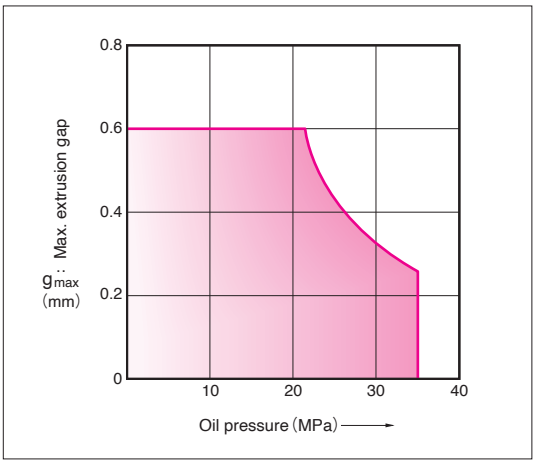
The inner surface of the cylinder tube should be finished by burnishing(RLB) or honing(GH) to 0.4 to 3.2μmRz (0.1 to 0.8μmRa). Especially under severe lubricating condition, burnishing is required.

●The roughness is JIS B 0601 : 2001.
When regulation length cannot be kept, apply Pt.

Nominal Number	Nominal Size of Packing, and Housing dimensions					NOK Part Number
	d	D	h	H	C	
SPGO 20	14	20	3	3.2	2	GS1800V0
25	19	25	3	3.2	2	GS1801V0
30	21.5	30	3.8	4	3.5	GS1802V0
31.5	23	31.5	3.8	4	3.5	GS1803V0
32	23.5	32	3.8	4	3.5	GS1804V0
35	26.5	35	3.8	4	3.5	GS1805V0
35.5	27	35.5	3.8	4	3.5	GS1806V0
40	31.5	40	3.8	4	3.5	GS1807V0
45	36.5	45	3.8	4	3.5	GS1808V0
50	41.5	50	3.8	4	4	GS1809V0
53	44.5	53	3.8	4	4	GS1810V0
55	46.5	55	3.8	4	4	GS1811V0
56	47.5	56	3.8	4	4	GS1812V0
60	51.5	60	3.8	4	4	GS1813V0
63	49	63	6.3	6.5	4	GS1814V0
65	51	65	6.3	6.5	4	GS1815V0
70	56	70	6.3	6.5	5	GS1816V0
71	57	71	6.3	6.5	5	GS1817V0
75	61	75	6.3	6.5	5	GS1818V0
80	66	80	6.3	6.5	5	GS1819V0
85	71	85	6.3	6.5	5	GS1820V0
90	76	90	6.3	6.5	5	GS1821V0
95	81	95	6.3	6.5	5	GS1822V0
100	86	100	6.3	6.5	5	GS1823V0
105	91	105	6.3	6.5	5	GS1824V0
110	96	110	6.3	6.5	5	GS1825V0
112	98	112	6.3	6.5	6.5	GS1826V0
115	101	115	6.3	6.5	6.5	GS1827V0
120	106	120	6.3	6.5	6.5	GS1828V0

HOW TO DETERMINE B DIMENSION

To determine B dimension, please refer to the graph in the right for the maximum extrusion gap (one side) considering the eccentricity of operating condition of the piston.



Nominal Number	Nominal Size of Packing, and Housing dimensions					NOK Part Number
	d	D	h	H	C	
SPGO 125	111	125	6.3	6.5	6.5	GS1829V0
130	116	130	6.3	6.5	6.5	GS1830V0
135	121	135	6.3	6.5	6.5	GS1831V0
140	126	140	6.3	6.5	6.5	GS1832V0
150	136	150	6.3	6.5	6.5	GS1833V0
160	146	160	6.3	6.5	6.5	GS1834V0
170	150	170	9.8	10	6.5	GS1835V0
180	160	180	9.8	10	6.5	GS1836V0
190	170	190	9.8	10	6.5	GS1837V0
200	180	200	9.8	10	6.5	GS1838V0
210	190	210	9.8	10	6.5	GS1839V0
220	200	220	9.8	10	6.5	GS1840V0
224	204	224	9.8	10	6.5	GS1841V0
230	210	230	9.8	10	6.5	GS1842V0
240	220	240	9.8	10	6.5	GS1843V0
250	230	250	9.8	10	6.5	GS1844V0
260	240	260	9.8	10	7.5	GS1845V0
270	250	270	9.8	10	7.5	GS1846V0
280	260	280	9.8	10	7.5	GS1847V0
290	270	290	9.8	10	7.5	GS1848V0
300	280	300	9.8	10	7.5	GS1849V0
310	290	310	9.8	10	7.5	GS1850V0
320	300	320	9.8	10	7.5	GS1851V0
340	320	340	9.8	10	7.5	GS1852V0
350	330	350	9.8	10	7.5	GS1853V0
360	340	360	9.8	10	7.5	GS1854V0
375	355	375	9.8	10	7.5	GS1855V0
380	360	380	9.8	10	7.5	GS1856V0
400	380	400	9.8	10	7.5	GS1857V0

SPG TYPE

SPECIAL PACKINGS FOR PISTON SEALS RAREFLON (PTFE) + NITRILE RUBBER (NBR)

● Please designate NOK Part number and type & size on your order.

(Example) ・Type Dimensions SPG 20.5 30 4.3

SPG — Type Sign

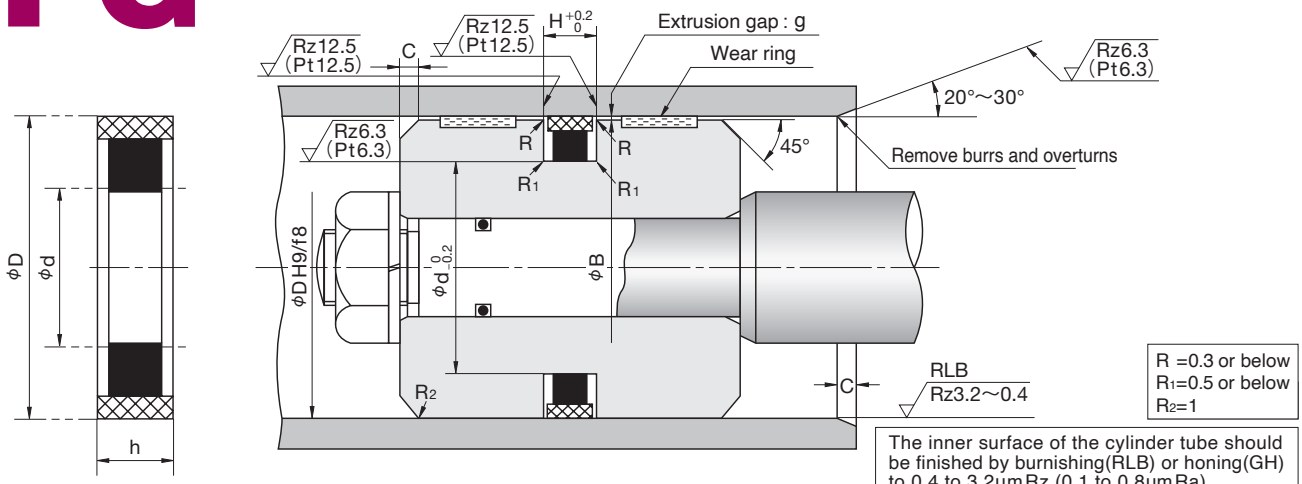
20.5 30 4.3 — Nominal Size of Packing described in order of inner diameter(d), outer diameter(D), and height(h)

・Part Number GS0327V0

● Please check the application range on pages 14 and 15 before selecting the type.

Material	NOK 19YF + NOK A980 : Outer diameter 950mm or below NOK 19YF + NOK A402 : Outer diameter more than 950mm

SPG TYPE SPECIAL PACKINGS FOR PISTON SEALS



R =0.3 or below
R1=0.5 or below
R2=1

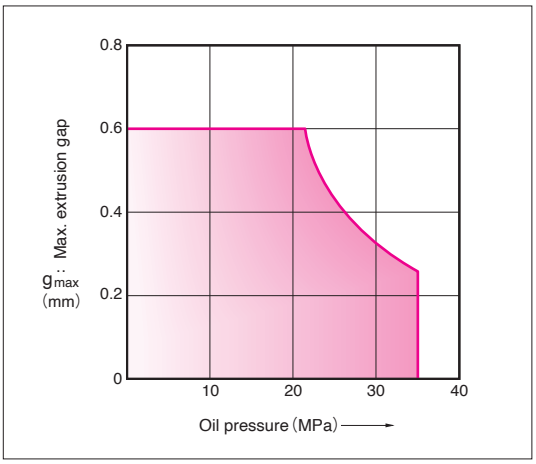
The inner surface of the cylinder tube should be finished by burnishing(RLB) or honing(GH) to 0.4 to 3.2μmRz (0.1 to 0.8μmRa). Especially under severe lubricating condition, burnishing is required.

●The roughness is JIS B 0601 : 2001.
When regulation length cannot be kept, apply Pt.

Nominal Number	Nominal Size of Packing, and Housing dimensions					NOK Part Number
	d	D	h	H	C	
SPG 30	20.5	30	4.3	4.5	2	GS0327V0
31.5	22	31.5	4.3	4.5	3.5	GS0328V0
32	22.5	32	4.3	4.5	3.5	GS0329V0
35	25.5	35	4.3	4.5	3.5	GS0330V0
35.5	26	35.5	4.3	4.5	3.5	GS0331V0
40	30	40	4.3	4.5	3.5	GS0332V0
45	35	45	4.3	4.5	3.5	GS0333V0
50	40	50	4.3	4.5	4	GS0334V0
55	45	55	4.3	4.5	4	GS0335V0
56	46	56	4.3	4.5	4	GS0336V0
60	50	60	4.3	4.5	4	GS0337V0
63	48	63	7.3	7.5	4	GS0338V0
65	50	65	7.3	7.5	4	GS0339V0
69	54	69	7.3	7.5	4	GS0340V0
70	55	70	7.3	7.5	5	GS0341V0
71	56	71	7.3	7.5	5	GS0342V0
75	60	75	7.3	7.5	5	GS0343V0
80	65	80	7.3	7.5	5	GS0344V0
85	70	85	7.3	7.5	5	GS0345V0
90	75	90	7.3	7.5	5	GS0310V0
95	80	95	7.3	7.5	5	GS0346V0
100	85	100	7.3	7.5	5	GS0347V0
105	90	105	7.3	7.5	5	GS3509V0
108	92	108	7.3	7.5	5	GS0348V0
110	94	110	7.3	7.5	5	GS0311V0
112	96	112	7.3	7.5	6.5	GS0349V0
120	104	120	7.3	7.5	6.5	GS0350V0

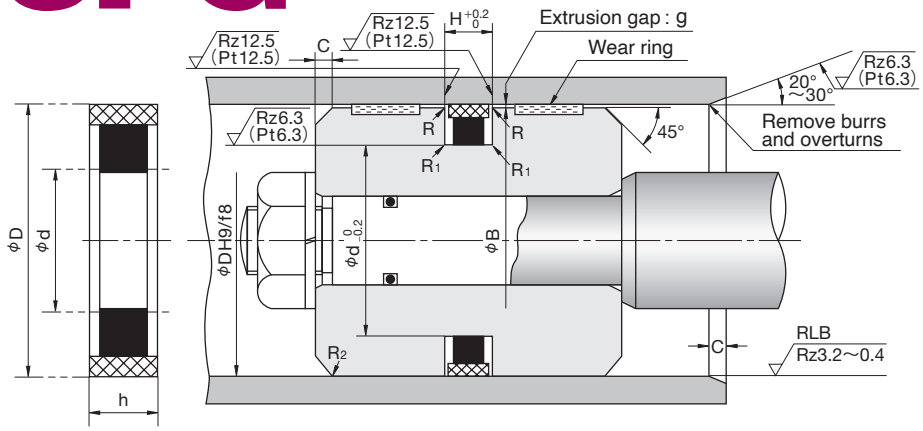
HOW TO DETERMINE B DIMENSION

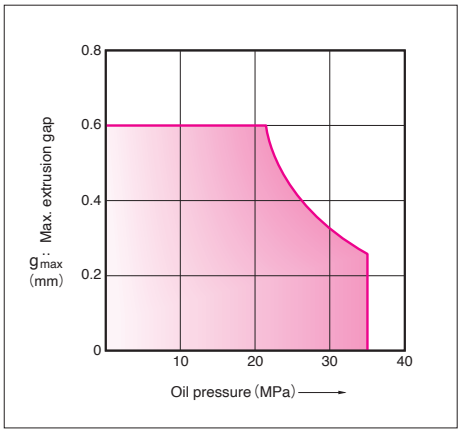
To determine B dimension, please refer to the graph in the right for the maximum extrusion gap (one side) considering the eccentricity of operating condition of the piston.



Nominal Number	Nominal Size of Packing, and Housing dimensions					NOK Part Number
	d	D	h	H	C	
SPG 125	109	125	7.3	7.5	6.5	GS0351V0
130	114	130	7.3	7.5	6.5	GS0352V0
135	119	135	7.3	7.5	6.5	GS0806V1
140	124	140	7.3	7.5	6.5	GS0353V0
145	129	145	7.3	7.5	6.5	GS0885V0
150	134	150	7.3	7.5	6.5	GS0354V0
155	139	155	7.3	7.5	6.5	GS3133V1
160	144	160	7.3	7.5	6.5	GS0355V0
170	148	170	10.8	11	6.5	GS0356V0
180	158	180	10.8	11	6.5	GS0357V0
190	168	190	10.8	11	6.5	GS0358V0
200	178	200	10.8	11	6.5	GS0359V0
204	182	204	10.8	11	6.5	GS0360V0
210	188	210	10.8	11	6.5	GS0361V0
215	193	215	10.8	11	6.5	GS0548V0
220	198	220	10.8	11	6.5	GS0842V0
224	202	224	10.8	11	6.5	GS0362V0
225	203	225	10.8	11	6.5	GS0363V0
230	208	230	10.8	11	6.5	GS0364V0
240	218	240	10.8	11	6.5	GS0365V0
250	228	250	10.8	11	6.5	GS0366V0
260	236	260	11.7	12	7.5	GS0700V0
270	246	270	11.7	12	7.5	GS0701V0
280	256	280	11.7	12	7.5	GS0702V0
290	266	290	11.7	12	7.5	GS0703V0
300	276	300	11.7	12	7.5	GS0704V0
310	286	310	11.7	12	7.5	GS0705V0
320	296	320	11.7	12	7.5	GS0706V0

SPG TYPE SPECIAL PACKINGS FOR PISTON SEALS (LARGE DIMENSION)





The inner surface of the cylinder tube should be finished by burnishing(RLB) or honing(GH) to 0.4 to 3.2μmRz (0.1 to 0.8μmRa). Especially under severe lubricating condition, burnishing is required.

R =0.3 or below
R_1=0.5 or below
R_2=1

●The roughness is JIS B 0601 : 2001. When regulation length cannot be kept, apply Pt.

HOW TO DETERMINE B DIMENSION

To determine B dimension, please refer to the graph in the right for the maximum extrusion gap (one side) considering the eccentricity of operating condition of the piston.

Nominal Number	Nominal Size of Packing, and Housing dimensions					NOK Part Number
	d	D	h	H	C	
SPG 330	308	330	9.75	10	10	GS0408V0
360	336	360	11.7	12	10	GS0917V0
400	376	400	11.7	12	10	GS3361V0
485	455	485	14.8	15	10	GS0504V1
500	470	500	14.8	15	10	GS0261V2
550	515	550	17.2	17.5	10	GS0379V2
600	570	600	14.8	15	10	GS0324V2
650	620	650	14.8	15	15	GS0527V0
720	690	720	14.8	15	15	GS0492V0
800	785	800	12.7	13	15	GS0520V0
900	870	900	24.5	25	15	GS0407V2
930	890	930	19	20	15	GS0466V1
935	920	935	12.7	13	15	GS0521V0
950	925	950	17.7	18	15	GS0285V2
1000	960	1000	19.7	20	20	GS0512V0
1060	1020	1060	19.7	20	20	GS0587V0
1120	1080	1120	19.7	20	20	GS0584V0
1150	1110	1150	19.7	20	20	GS3007V0
1180	1130	1180	19.7	20	20	GS0599V1
1210	1170	1210	19	20	20	GS0465V0
1250	1210	1250	19.7	20	20	GS0281V1
1260	1220	1260	19.7	20	20	GS0851V0
1400	1350	1400	19.7	20	20	GS0402V0
1500	1460	1500	19.7	20	20	GS0852V0
1650	1600	1650	24	25	20	GS0579V0

SPGM TYPE

SPECIAL PACKINGS FOR PISTON SEALS RAREFLON (PTFE) + NITRILE RUBBER (NBR)

E DIMENSION SPGM

● Please designate NOK Part number and type & size on your order.

(Example) Order for the packing as a single piece

・Type Dimensions SPGM 24.5 32 3

SPGM — Type Sign

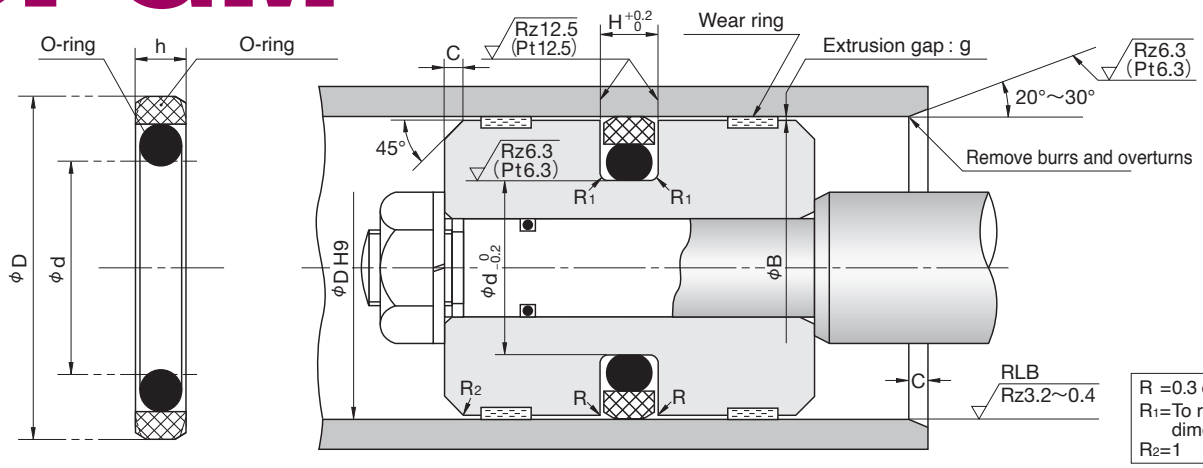
24.5 32 3 — Nominal Size of Packing described in order of inner diameter(d), outer diameter(D), and height(h)

・Part Number GS4283V0

● Please check the application range on pages 14 and 15 before selecting the type.

Material	NOK 55YF + NOK A305

SPGM TYPE SPECIAL PACKINGS FOR PISTON SEALS



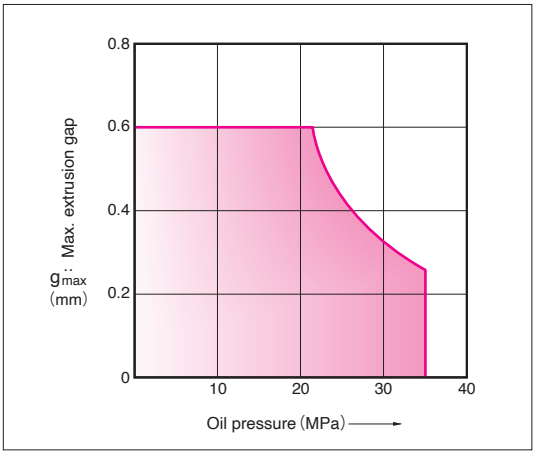
R =0.3 or below
R_1=To reter to the dimension table
R_2=1

The inner surface of the cylinder tube should be finished by burnishing(RLB) or honing(GH) to 0.4 to 3.2μmRz (0.1 to 0.8μmRa). Especially under severe lubricating condition, burnishing is required.

●The roughness is JIS B 0601 : 2001.
When regulation length cannot be kept, apply Pt.

HOW TO DETERMINE B DIMENSION

To determine B dimension, please refer to the graph in the right for the maximum extrusion gap (one side) considering the eccentricity of operating condition of the piston.



Nominal Number	Nominal Size of Packing, and Housing dimensions						NOK Part Number
	d	D	h	H	Bottom of groove R_1	C	
SPGM 32 S	24.5	32	3	3.2	0.6 or below	4	GS4283V0
40 S	29	40	4	4.2	1.0 or below	4	GS4284V0
50 S	39	50	4	4.2	1.0 or below	4	GS4285V0
63 S	52	63	4	4.2	1.0 or below	4	GS4286V0
80 S	64.5	80	6.1	6.3	1.3 or below	5	GS4288V0
100 S	84.5	100	6.1	6.3	1.3 or below	5	GS3882V2
125 S	109.5	125	6.1	6.3	1.3 or below	5	GS4289V0
140 S	119	140	7.7	8.1	1.8 or below	6.5	GS3703V1
150 S	129	150	7.7	8.1	1.8 or below	6.5	GS3683V2
160 S	139	160	7.7	8.1	1.8 or below	6.5	GS3704V3
180 S	159	180	7.7	8.1	1.8 or below	6.5	GS4088V1
200 S	179	200	7.7	8.1	1.8 or below	6.5	GS3764V1
250 S	229	250	7.7	8.1	1.8 or below	6.5	GS4291V0

SPGN TYPE

SPECIAL PACKINGS FOR PISTON SEALS
POLYAMIDE RESIN + NITRILE RUBBER (NBR)

E DIMENSION SPGN

● Please designate NOK Part number and type & size on your order.

(Example) Order for the packing as a single piece

・Type Dimensions SPGN 54 75 7.8

SPGN — Type Sign

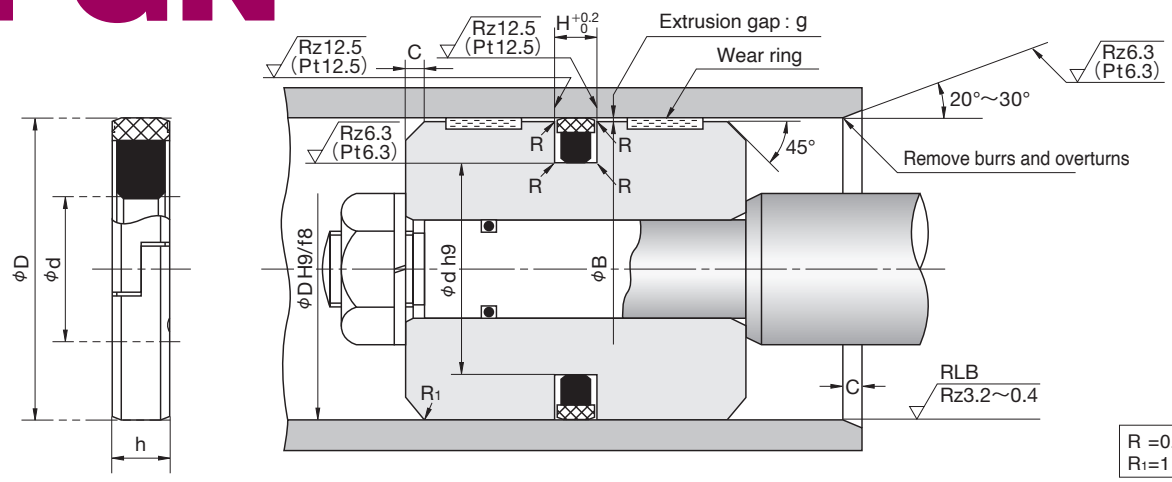
54 75 7.8 — Nominal Size of Packing described in order of inner diameter(d), outer diameter(D), and height(h)

・Part Number GS4243V0

● Please check the application range on pages 14 and 15 before selecting the type.

Material	NOK 21NB + NOK A626

SPGN TYPE SPECIAL PACKINGS FOR PISTON SEALS



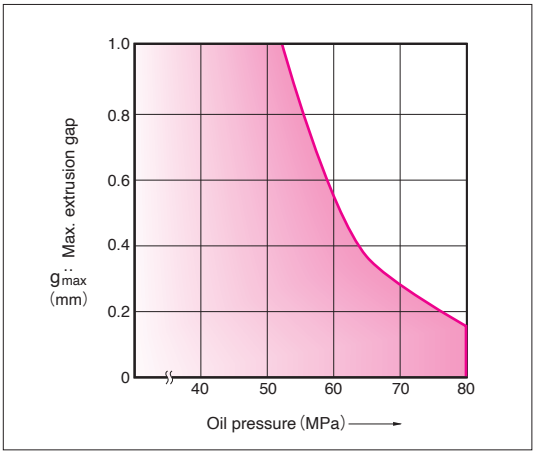
R =0.9 or below
R1=1

The inner surface of the cylinder tube should be finished by burnishing(RLB) or honing(GH) to 0.4 to 3.2μmRz (0.1 to 0.8μmRa). Especially under severe lubricating condition, burnishing is required.

- The roughness is JIS B 0601 : 2001.
  When regulation length cannot be kept, apply Pt.

HOW TO DETERMINE B DIMENSION

To determine B dimension, please refer to the graph in the right for the maximum extrusion gap (one side) considering the eccentricity of operating condition of the piston.



Nominal Number	Nominal Size of Packing, and Housing dimensions					NOK Part Number
	d	D	h	H	C	
SPGN 75	54	75	7.8	8.0	5.0	GS4243V0
80	59	80	7.8	8.0	5.0	GS4244V0
85	64	85	7.8	8.0	5.0	GS4245V0
90	69	90	7.8	8.0	5.0	GS4246V0
95	74	95	7.8	8.0	5.0	GS4247V0
100	79	100	7.8	8.0	5.0	GS4248V0
105	84	105	7.8	8.0	5.0	GS4249V0
110	89	110	7.8	8.0	5.0	GS4250V0
115	94	115	7.8	8.0	6.5	GS4251V0
120	99	120	7.8	8.0	6.5	GS4252V0
125	104	125	7.8	8.0	6.5	GS4253V0
130	109	130	7.8	8.0	6.5	GS4254V0
135	114	135	7.8	8.0	6.5	GS4255V0
140	119	140	7.8	8.0	6.5	GS4256V0
145	124	145	7.8	8.0	6.5	GS4257V0
150	129	150	7.8	8.0	6.5	GS4258V0
160	139	160	7.8	8.0	6.5	GS4259V0
170	149	170	7.8	8.0	6.5	GS4261V0
180	159	180	7.8	8.0	6.5	GS4263V0
190	169	190	7.8	8.0	6.5	GS4264V0
200	179	200	7.8	8.0	6.5	GS4266V0

SPGW TYPE

SPECIAL PACKINGS FOR PISTON SEALS

RAREFLON (PTFE) + POLYAMIDE RESIN + NITRILE RUBBER (NBR)

RAREFLON (PTFE) + POLYAMIDE RESIN + HYDROGENATED NITRILE RUBBER (H-NBR)

● Please designate NOK Part number and type & size on your order.

(Example) · Type Dimensions SPGW 36 50 8.5

SPGW — Type Sign

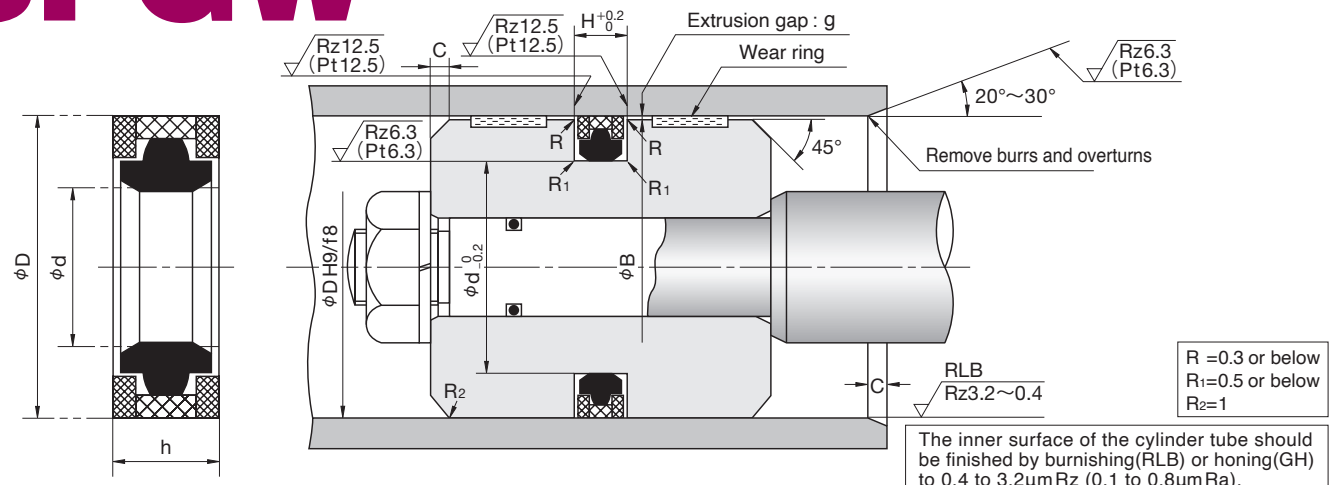
36 50 8.5 — Nominal Size of Packing described in order of inner diameter(d), outer diameter(D), and height(h)

· Part Number GS0535V5

● Please check the application range on pages 14 and 15 before selecting the type.

Material	NOK 19YF + NOK A980 / NOK G928 + NOK 80NP
	NOK 19YF + NOK A980 / NOK G928 + NOK 12NM

SPGW TYPE SPECIAL PACKINGS FOR PISTON SEALS



R =0.3 or below
R1=0.5 or below
R2=1

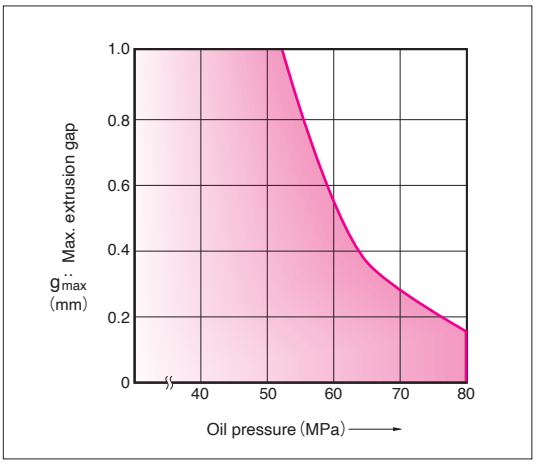
The inner surface of the cylinder tube should be finished by burnishing(RLB) or honing(GH) to 0.4 to 3.2μmRz (0.1 to 0.8μmRa). Especially under severe lubricating condition, burnishing is required.

●The roughness is JIS B 0601 : 2001.
When regulation length cannot be kept, apply Pt.

Nominal Number	Nominal Size of Packing, and Housing dimensions					NOK Part Number	
	d	D	h	H	C	Standard Backup Ring (A980)	Heat resistant Backup Ring (G928)
SPGW 50	36	50	8.5	9	4	GS0535V5	
60	46	60	8.5	9	4	GS0528V5	GS00528-V4A
65	50	65	10.5	11	5	GS3013V5	GS3013V6
70	55	70	10.5	11	5	GS0607V5	GS0607V7
75	60	75	10.5	11	5	GS0995V5	GS0995V6
80	65	80	10.5	11	5	GS0608V5	GS0608V8
85	70	85	10.5	11	5	GS0813V5	GS0813V6
90	75	90	10.5	11	5	GS0609V5	GS0609V7
95	80	95	10.5	11	5	GS0481V5	GS0481V6
100	85	100	12	12.5	5	GS0610V6	GS0610V8
105	90	105	12	12.5	5	GS0973V5	GS0973V7
110	95	110	12	12.5	5	GS0611V5	GS0611V6
115	100	115	12	12.5	6.5	GS0626V5	GS0626V6
120	105	120	12	12.5	6.5	GS0612V7	GS0612V8
125	102	125	15.5	16	6.5	GS0583V5	GS0583V6
130	107	130	15.5	16	6.5	GS0613V5	GS0613V7
135	112	135	15.5	16	6.5	GS0908V5	GS0908V6
140	117	140	15.5	16	6.5	GS0432V5	GS0432V7
145	122	145	15.5	16	6.5	GS0907V1	GS0907V2

HOW TO DETERMINE B DIMENSION

To determine B dimension, please refer to the graph in the right for the maximum extrusion gap (one side) considering the eccentricity of operating condition of the piston.



Nominal Number	Nominal Size of Packing, and Housing dimensions					NOK Part Number	
	d	D	h	H	C	Standard Backup Ring (A980)	Heat resistant Backup Ring (G928)
SPGW 150	127	150	15.5	16	6.5	GS0614V5	GS0614V7
160	137	160	15.5	16	6.5	GS0615V5	GS0615V8
170	147	170	15.5	16	6.5	GS0688V5	GS0688V6
180	157	180	15.5	16	6.5	GS0616V5	GS0616V7
185	162	185	15.5	16	6.5	GS0653V5	GS0653V6
190	167	190	15.5	16	6.5	GS0644V5	GS0644V6
200	177	200	15.5	16	6.5	GS0617V5	GS0617V7
210	187	210	15.5	16	6.5	GS0654V2	GS0654V4
220	197	220	15.5	16	6.5	GS0655V2	
225	202	225	15.5	16	6.5	GS0618V2	GS0618V8
230	207	230	15.5	16	6.5	GS0664V2	GS00664-V4A
240	217	240	15.5	16	6.5	GS0656V2	GS00656-V4A
250	222	250	17	17.5	6.5	GS0451V4	
260	232	260	17	17.5	7.5	GS0605V2	
270	242	270	17	17.5	7.5	GS0689V2	
280	252	280	17	17.5	7.5	GS0619V2	
300	272	300	17	17.5	7.5	GS0510V2	
320	292	320	17	17.5	7.5	GS0690V2	

SPGC TYPE

SPECIAL PACKINGS FOR PISTON SEALS RAREFLON (PTFE) + NITRILE RUBBER (NBR)

● Please designate NOK Part number and type & size on your order.

(Example) ・Type Dimensions SPGC 3 6 2.3

SPGC — Type Sign

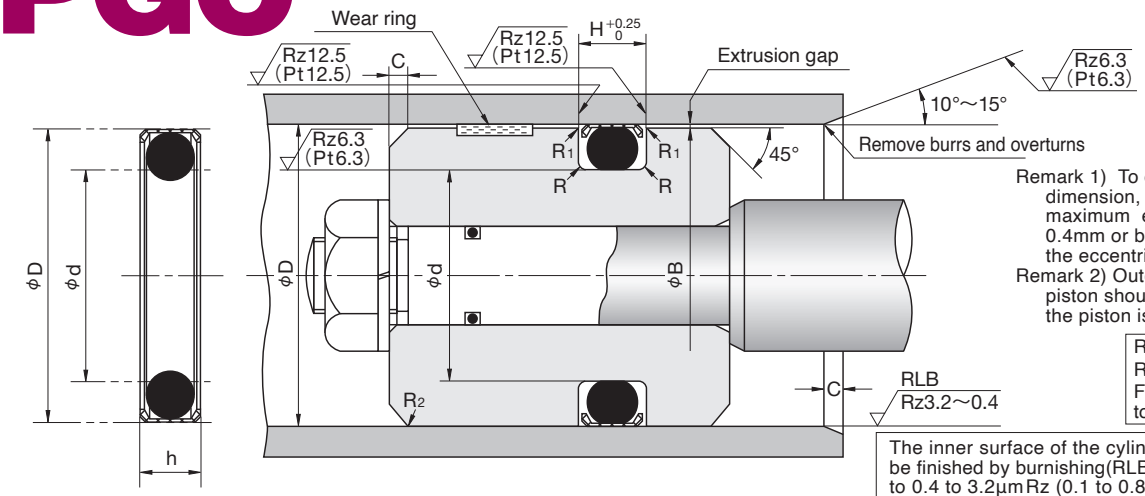
3 6 2.3 — Nominal Size of Packing described in order of inner diameter(d), outer diameter(D), and height(h)

・Part Number GS1000F0

● Please check the application range on pages 14 and 15 before selecting the type.

Material	NOK 31BF + NOK A305

SPGC TYPE SPECIAL PACKINGS FOR PISTON SEALS



Remark 1) To determine ϕB dimension, please make the maximum extrusion gap 0.4mm or below considering the eccentricity of piston.
Remark 2) Outer diameter of the piston should be ϕDf8 when the piston is used as bearing.

R_1=0.3 or below
R_2=1
For R, please refer to the table below.

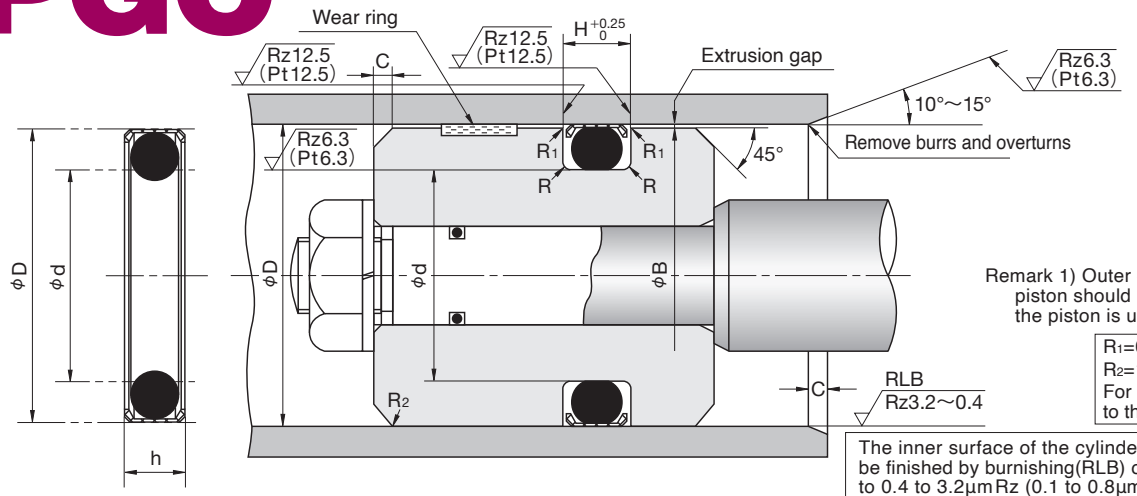
The inner surface of the cylinder tube should be finished by burnishing(RLB) or honing(GH) to 0.4 to 3.2μmRz (0.1 to 0.8μmRa). Especially under severe lubricating condition, burnishing is required.

●The roughness is JIS B 0601 : 2001.
When regulation length cannot be kept, apply Pt.

Nominal Number	Nominal Size of Packing			Housing dimensions				H	R	C	NOK Part Number
				For general hydraulic use		For pneumatic and hydraulic low-friction applications					
	d	D	h	$\phi d\ ^{0}_{-0.05}$	$\phi D\ ^{+0.05}_{0}$	$\phi d\ ^{0}_{-0.05}$	$\phi D\ ^{+0.05}_{0}$				
SPGC 6	3	6	2.3	3	6	2.5	6	2.5	0.3 or below	3～4	● GS1000F0
7	4	7	2.3	4	7	3.5	7	2.5	0.3 or below	3～4	● GS1001F0
8	5	8	2.3	5	8	4.5	8	2.5	0.3 or below	3～4	● GS1002F0
9	6	9	2.3	6	9	5.5	9	2.5	0.3 or below	3～4	● GS1003F0
10	7	10	2.3	7	10	6.5	10	2.5	0.3 or below	3～4	● GS1004F0
11	8	11	2.3	8	11	7.5	11	2.5	0.3 or below	3～4	● GS1005F0
12	9	12	2.3	9	12	8.5	12	2.5	0.3 or below	3～4	● GS1006F0
13	10	13	2.3	10	13	9.5	13	2.5	0.3 or below	3～4	● GS1007F0
Nominal Number	Nominal Size of Packing			Housing dimensions				H	R	C	NOK Part Number
				For general hydraulic use		For pneumatic and hydraulic low-friction applications					
	d	D	h	$\phi d\ ^{0}_{-0.06}$	$\phi D\ ^{+0.06}_{0}$	$\phi d\ ^{0}_{-0.06}$	$\phi D\ ^{+0.06}_{0}$				
SPGC 14	10	14	3	10	14	9.4	14	3.2	0.4 or below	4～5	● GS1008F0
15	11	15	3	11	15	10.4	15	3.2	0.4 or below	4～5	● GS1009F0
15.2	11.2	15.2	3	11.2	15.2	10.6	15.2	3.2	0.4 or below	4～5	● GS1010F0
16	12	16	3	12	16	11.4	16	3.2	0.4 or below	4～5	● GS1011F0
16.5	12.5	16.5	3	12.5	16.5	11.9	16.5	3.2	0.4 or below	4～5	● GS1012F0
18	14	18	3	14	18	13.4	18	3.2	0.4 or below	4～5	● GS1013F0
19	15	19	3	15	19	14.4	19	3.2	0.4 or below	4～5	● GS1014F0
20	16	20	3	16	20	15.4	20	3.2	0.4 or below	4～5	● GS1015F0
22	18	22	3	18	22	17.4	22	3.2	0.4 or below	4～5	● GS1016F0
24	20	24	3	20	24	19.4	24	3.2	0.4 or below	4～5	● GS1017F0
25	21	25	3	21	25	20.4	25	3.2	0.4 or below	4～5	● GS1018F0
26	22	26	3	22	26	21.4	26	3.2	0.4 or below	4～5	● GS1020F0
Nominal Number	Nominal Size of Packing			Housing dimensions				H	R	C	NOK Part Number
				For general hydraulic use		For pneumatic and hydraulic low-friction applications					
	d	D	h	$\phi d\ ^{0}_{-0.08}$	$\phi D\ ^{+0.08}_{0}$	$\phi d\ ^{0}_{-0.08}$	$\phi D\ ^{+0.08}_{0}$				
SPGC 28	22	28	4.4	22	28	21.4	28	4.7	0.7 or below	5～6	● GS1019F0
28.4	22.4	28.4	4.4	22.4	28.4	21.8	28.4	4.7	0.7 or below	5～6	● GS1021F0
30	24	30	4.4	24	30	23.4	30	4.7	0.7 or below	5～6	● GS1022F0
31	25	31	4.4	25	31	24.4	31	4.7	0.7 or below	5～6	● GS1023F0
31.5	25.5	31.5	4.4	25.5	31.5	24.9	31.5	4.7	0.7 or below	5～6	● GS1024F0
32	26	32	4.4	26	32	25.4	32	4.7	0.7 or below	5～6	● GS1025F0
34	28	34	4.4	28	34	27.4	34	4.7	0.7 or below	5～6	● GS1026F0
35	29	35	4.4	29	35	28.4	35	4.7	0.7 or below	5～6	● GS1027F0
35.5	29.5	35.5	4.4	29.5	35.5	28.9	35.5	4.7	0.7 or below	5～6	● GS1028F0
36	30	36	4.4	30	36	29.4	36	4.7	0.7 or below	5～6	● GS1029F0
37	31	37	4.4	31	37	30.4	37	4.7	0.7 or below	5～6	● GS1030F0
37.5	31.5	37.5	4.4	31.5	37.5	30.9	37.5	4.7	0.7 or below	5～6	● GS1031F0
38	32	38	4.4	32	38	31.4	38	4.7	0.7 or below	5～6	● GS1032F0
40	34	40	4.4	34	40	33.4	40	4.7	0.7 or below	5～6	● GS1033F0
41	35	41	4.4	35	41	34.4	41	4.7	0.7 or below	5～6	● GS1034F0
41.5	35.5	41.5	4.4	35.5	41.5	34.9	41.5	4.7	0.7 or below	5～6	● GS1035F0
42	36	42	4.4	36	42	35.4	42	4.7	0.7 or below	5～6	● GS1036F0

Remark) When using the packing with ●, provide separate grooves.

SPGC TYPE SPECIAL PACKINGS FOR PISTON SEALS



Remark 1) Outer diameter of the piston should be φDf8 when the piston is used as bearing.

R_1=0.3 or below
R_2=1
For R, please refer to the table below.

The inner surface of the cylinder tube should be finished by burnishing(RLB) or honing(GH) to 0.4 to 3.2μmRz (0.1 to 0.8μmRa). Especially under severe lubricating condition, burnishing is required.

●The roughness is JIS B 0601 : 2001.
When regulation length cannot be kept, apply Pt.

Nominal Number	Nominal Size of Packing			Housing dimensions				H	R	C	NOK Part Number
				For general hydraulic use		For pneumatic and hydraulic low-friction applications					
	d	D	h	φd $^{0}_{-0.08}$	φD $^{+0.08}_{0}$	φd $^{0}_{-0.08}$	φD $^{+0.08}_{0}$				
SPGC 44	38	44	4.4	38	44	37.4	44	4.7	0.7 or below	5～6	● GS1037F0
45	39	45	4.4	39	45	38.4	45	4.7	0.7 or below	5～6	● GS1038F0
46	40	46	4.4	40	46	39.4	46	4.7	0.7 or below	5～6	● GS1039F0
47	41	47	4.4	41	47	40.4	47	4.7	0.7 or below	5～6	● GS1040F0
48	42	48	4.4	42	48	41.4	48	4.7	0.7 or below	5～6	● GS1041F0
50	44	50	4.4	44	50	43.4	50	4.7	0.7 or below	5～6	GS1042F0
51	45	51	4.4	45	51	44.4	51	4.7	0.7 or below	5～6	GS1043F0
52	46	52	4.4	46	52	45.4	52	4.7	0.7 or below	5～6	GS1044F0
54	48	54	4.4	48	54	47.4	54	4.7	0.7 or below	5～6	GS1046F0
55	49	55	4.4	49	55	48.4	55	4.7	0.7 or below	5～6	GS1047F0
56	50	56	4.4	50	56	49.4	56	4.7	0.7 or below	5～6	GS1049F0

Nominal Number	Nominal Size of Packing			Housing dimensions				H	R	C	NOK Part Number
				For general hydraulic use		For pneumatic and hydraulic low-friction applications					
	d	D	h	φd $^{0}_{-0.10}$	φD $^{+0.10}_{0}$	φd $^{0}_{-0.10}$	φD $^{+0.10}_{0}$				
SPGC 58	48	58	7	48	58	47.4	58	7.5	0.8 or below	6～8	GS1045F0
60	50	60	7	50	60	49.4	60	7.5	0.8 or below	6～8	GS1048F0
62	52	62	7	52	62	51.4	62	7.5	0.8 or below	6～8	GS1050F0
63	53	63	7	53	63	52.4	63	7.5	0.8 or below	6～8	GS1051F0
65	55	65	7	55	65	54.4	65	7.5	0.8 or below	6～8	GS1052F0
66	56	66	7	56	66	55.4	66	7.5	0.8 or below	6～8	GS1053F0
68	58	68	7	58	68	57.4	68	7.5	0.8 or below	6～8	GS1054F0
70	60	70	7	60	70	59.4	70	7.5	0.8 or below	6～8	GS1055F0
72	62	72	7	62	72	61.4	72	7.5	0.8 or below	6～8	GS1056F0
73	63	73	7	63	73	62.4	73	7.5	0.8 or below	6～8	GS1057F0
75	65	75	7	65	75	64.4	75	7.5	0.8 or below	6～8	GS1058F0
77	67	77	7	67	77	66.4	77	7.5	0.8 or below	6～8	GS1059F0
80	70	80	7	70	80	69.4	80	7.5	0.8 or below	6～8	GS1060F0
81	71	81	7	71	81	70.4	81	7.5	0.8 or below	6～8	GS1061F0
85	75	85	7	75	85	74.4	85	7.5	0.8 or below	6～8	GS1062F0
90	80	90	7	80	90	79.4	90	7.5	0.8 or below	6～8	GS1063F0
95	85	95	7	85	95	84.4	95	7.5	0.8 or below	6～8	GS1064F0
100	90	100	7	90	100	89.4	100	7.5	0.8 or below	6～8	GS1065F0
105	95	105	7	95	105	94.4	105	7.5	0.8 or below	6～8	GS1066F0
110	100	110	7	100	110	99.4	110	7.5	0.8 or below	6～8	GS1067F0
112	102	112	7	102	112	101.4	112	7.5	0.8 or below	6～8	GS1068F0
115	105	115	7	105	115	104.4	115	7.5	0.8 or below	6～8	GS1069F0
120	110	120	7	110	120	109.4	120	7.5	0.8 or below	6～8	GS1070F0
122	112	122	7	112	122	111.4	122	7.5	0.8 or below	6～8	GS1071F0
125	115	125	7	115	125	114.4	125	7.5	0.8 or below	6～8	GS1072F0
130	120	130	7	120	130	119.4	130	7.5	0.8 or below	6～8	GS1073F0
135	125	135	7	125	135	124.4	135	7.5	0.8 or below	6～8	GS1074F0
140	130	140	7	130	140	129.4	140	7.5	0.8 or below	6～8	GS1075F0
142	132	142	7	132	142	131.4	142	7.5	0.8 or below	6～8	GS1076F0

Remark) When using the packing with ●, provide separate grooves.

HOW TO DETERMINE B DIMENSION

To determine B dimension, please make the maximum extrusion gap 0.4mm or below considering the eccentricity of piston.

Nominal Number	Nominal Size of Packing			Housing dimensions				H	R	C	NOK Part Number
				For general hydraulic use		For pneumatic and hydraulic low-friction applications					
	d	D	h	$\phi d\ ^{0}_{-0.10}$	$\phi D\ ^{+0.10}_{0}$	$\phi d\ ^{0}_{-0.10}$	$\phi D\ ^{+0.10}_{0}$				
SPGC 145	135	145	7	135	145	134.4	145	7.5	0.8 or below	6～8	GS1077F0
150	140	150	7	140	150	139.4	150	7.5	0.8 or below	6～8	GS1078F0
155	145	155	7	145	155	144.4	155	7.5	0.8 or below	6～8	GS1079F0
160	150	160	7	150	160	149.4	160	7.5	0.8 or below	6～8	GS1081F0
165	150	165	10.5	150	165	149.4	165	11.0	0.8 or below	8～12	GS1080F0
170	155	170	10.5	155	170	154.4	170	11.0	0.8 or below	8～12	GS1082F0
175	160	175	10.5	160	175	159.4	175	11.0	0.8 or below	8～12	GS1083F0
180	165	180	10.5	165	180	164.4	180	11.0	0.8 or below	8～12	GS1084F0
185	170	185	10.5	170	185	169.4	185	11.0	0.8 or below	8～12	GS1085F0
190	175	190	10.5	175	190	174.4	190	11.0	0.8 or below	8～12	GS1086F0
195	180	195	10.5	180	195	179.4	195	11.0	0.8 or below	8～12	GS1087F0
200	185	200	10.5	185	200	184.4	200	11.0	0.8 or below	8～12	GS1088F0
205	190	205	10.5	190	205	189.4	205	11.0	0.8 or below	8～12	GS1089F0
210	195	210	10.5	195	210	194.4	210	11.0	0.8 or below	8～12	GS1090F0
215	200	215	10.5	200	215	199.4	215	11.0	0.8 or below	8～12	GS1091F0
220	205	220	10.5	205	220	204.4	220	11.0	0.8 or below	8～12	GS1092F0
224	209	224	10.5	209	224	208.4	224	11.0	0.8 or below	8～12	GS1093F0
225	210	225	10.5	210	225	209.4	225	11.0	0.8 or below	8～12	GS1094F0
230	215	230	10.5	215	230	214.4	230	11.0	0.8 or below	8～12	GS1095F0
235	220	235	10.5	220	235	219.4	235	11.0	0.8 or below	8～12	GS1096F0
240	225	240	10.5	225	240	224.4	240	11.0	0.8 or below	8～12	GS1097F0
245	230	245	10.5	230	245	229.4	245	11.0	0.8 or below	8～12	GS1098F0
250	235	250	10.5	235	250	234.4	250	11.0	0.8 or below	8～12	GS1099F0
255	240	255	10.5	240	255	239.4	255	11.0	0.8 or below	8～12	GS1100F0
260	245	260	10.5	245	260	244.4	260	11.0	0.8 or below	8～12	GS1101F0
265	250	265	10.5	250	265	249.4	265	11.0	0.8 or below	8～12	GS1102F0
270	255	270	10.5	255	270	254.4	270	11.0	0.8 or below	8～12	GS1103F0
275	260	275	10.5	260	275	259.4	275	11.0	0.8 or below	8～12	GS1104F0
280	265	280	10.5	265	280	264.4	280	11.0	0.8 or below	8～12	GS1105F0
285	270	285	10.5	270	285	269.4	285	11.0	0.8 or below	8～12	GS1106F0
290	275	290	10.5	275	290	274.4	290	11.0	0.8 or below	8～12	GS1107F0
295	280	295	10.5	280	295	279.4	295	11.0	0.8 or below	8～12	GS1108F0
300	285	300	10.5	285	300	284.4	300	11.0	0.8 or below	8～12	GS1109F0
305	290	305	10.5	290	305	289.4	305	11.0	0.8 or below	8～12	GS1110F0
310	295	310	10.5	295	310	294.4	310	11.0	0.8 or below	8～12	GS1111F0
315	300	315	10.5	300	315	299.4	315	11.0	0.8 or below	8～12	GS1112F0
330	315	330	10.5	315	330	314.4	330	11.0	0.8 or below	8～12	GS1113F0
335	320	335	10.5	320	335	319.4	335	11.0	0.8 or below	8～12	GS1114F0
350	335	350	10.5	335	350	334.4	350	11.0	0.8 or below	8～12	GS1115F0
355	340	355	10.5	340	355	339.4	355	11.0	0.8 or below	8～12	GS1116F0
370	355	370	10.5	355	370	354.4	370	11.0	0.8 or below	8～12	GS1117F0
375	360	375	10.5	360	375	359.4	375	11.0	0.8 or below	8～12	GS1118F0
390	375	390	10.5	375	390	374.4	390	11.0	0.8 or below	8～12	GS1119F0
400	385	400	10.5	385	400	384.4	400	11.0	0.8 or below	8～12	GS1120F0

CPI TYPE

SPECIAL PACKINGS FOR PISTON SEALS IRON RUBBER (PUR)

E DIMENSION
C P I

● Please designate NOK Part number and type & size on your order.

(Example) ・Type Dimensions CPI 25 10 2.5 10

CPI — Type Sign

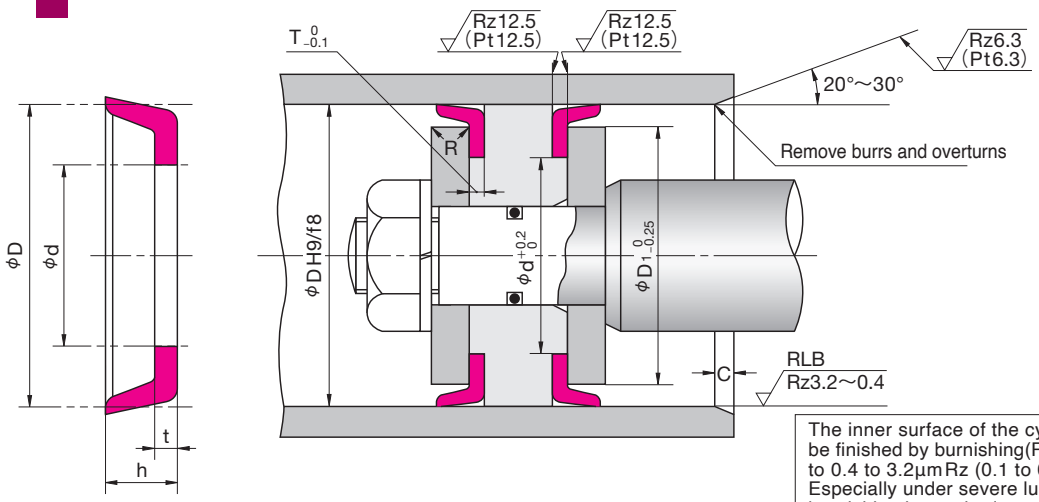
25 10 2.5 10 — Nominal Size of Packing described in order of outer diameter(D), height(h), thickness(t), and inner diameter(d)

・Part Number FC0013C0

● Please check the application range on pages 14 and 15 before selecting the type.

Material	NOK U801

CPI TYPE SPECIAL PACKINGS FOR PISTON SEALS



The inner surface of the cylinder tube should be finished by burnishing(RLB) or honing(GH) to 0.4 to 3.2μmRz (0.1 to 0.8μmRa). Especially under severe lubricating condition, burnishing is required.

● The roughness is JIS B 0601 : 2001.
When regulation length cannot be kept, apply Pt.

Nominal Size of Packing, and Housing dimensions								NOK Part Number
D	h	t	d	φD	T	R	C	
25	10	2.5	10	17	2.4	1.5	3	FC0013C0
28	10	2.5	10	20	2.4	1.5	3	FC0015C0
30	10	2.5	12	22	2.4	1.5	3	FC0020C0
31.5	10	2.5	14	23.5	2.4	1.5	3	FC0022C0
35	10	2.5	16	27	2.4	1.5	3	FC0026C0
35.5	10	2.5	16	27.5	2.4	1.5	3	FC0398C0
40	10	2.5	20	32	2.4	1.5	3	FC0035C0
45	12	3	20	36	2.9	2	3	FC0046C0
50	12	3	22	41	2.9	2	3	FC0055C0
53	12	3	25	44	2.9	2	3	FC0064C0
55	12	3	25	46	2.9	2	3	FC0068C0
56	12	3	25	47	2.9	2	3	FC0070C0
60	12	3	30	51	2.9	2	3	FC0077C0
63	12	3	35	54	2.9	2	3	FC0090C0
65	12	3	35	56	2.9	2	3.5	FC0095C0
67	12	3	38	58	2.9	2	3.5	FC0102C1
70	12	3	38	61	2.9	2	3.5	FC0106C0
71	12	3	40	62	2.9	2	3.5	FC0114C0
75	12	3	40	66	2.9	2	3.5	FC0117C0
80	16	4	40	69	3.8	3	4	FC0134C0
85	16	4	45	74	3.8	3	4	FC0142C0
90	16	4	50	79	3.8	3	4	FC0157C0
95	16	4	55	84	3.8	3	4	FC0164C0
100	16	4	55	89	3.8	3	4	FC0174C0
105	16	4	60	94	3.8	3	4	FC0187C0
106	16	4	60	95	3.8	3	4	FC0189C0
110	16	4	60	99	3.8	3	4	FC0195C0
112	16	4	65	101	3.8	3	4	FC0199C0
118	16	4	70	107	3.8	3	4	FC0205C0
120	16	4	70	109	3.8	3	4	FC0207C0
125	20	5	75	111	4.8	4	5.5	FC0222C0
130	20	5	80	116	4.8	4	5.5	FC0230C0
132	20	5	85	118	4.8	4	5.5	FC0233C1
140	20	5	90	126	4.8	4	5.5	FC0245C1
150	20	5	100	136	4.8	4	5.5	FC0255C1
160	20	5	110	146	4.8	4	5.5	FC0275C0
170	20	5	120	156	4.8	4	5.5	FC0279C0
180	20	5	130	166	4.8	4	5.5	FC0282C1
190	20	5	140	176	4.8	4	5.5	FC0289C0
200	20	5	150	186	4.8	4	5.5	FC0293C0
224	20	5	180	210	4.8	4	5.5	FC0314C0
250	20	5	200	236	4.8	4	5.5	FC0321C0
280	20	5	230	266	4.8	4	6.5	FC0337C0
300	20	5	250	286	4.8	4	7	FC0344C1

CPH TYPE

SPECIAL PACKINGS FOR PISTON SEALS NITRILE RUBBER (NBR)

● Please designate NOK Part number and type & size on your order.

(Example) ・Type Dimensions CPH 30 8 2.5 13

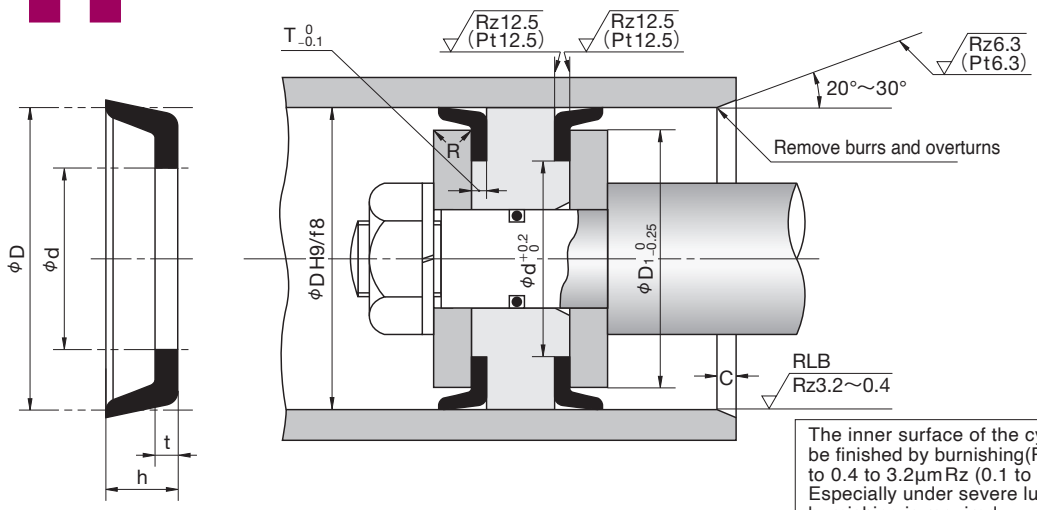
- CPH: Type Sign
- 30 8 2.5 13: Nominal Size of Packing described in order of outer diameter(D), height(h), thickness(t), and inner diameter(d)

・Part Number CC0019C3

● Please check the application range on pages 14 and 15 before selecting the type.

Material	NOK A102 NOK A103 NOK A104 NOK A505

CPH TYPE SPECIAL PACKINGS FOR PISTON SEALS



The inner surface of the cylinder tube should be finished by burnishing(RLB) or honing(GH) to 0.4 to 3.2μmRz (0.1 to 0.8μmRa). Especially under severe lubricating condition, burnishing is required.

● The roughness is JIS B 0601 : 2001.
When regulation length cannot be kept, apply Pt.

Nominal Size of Packing, and Housing dimensions								NOK Part Number	NOK Rubber material Sign
D	h	t	d	φD1	T	R	C		
30	8	2.5	13	23	2.5	1.5	7	CC0019C3	A104
30	10	2.5	12	23.5	2.5	1.5	7	CC0020C0	A103
30	10	2.5	15	23	2.5	1.5	7	CC0020C1	A102
35	10	2.5	18	28.5	2.5	1.5	7	CC0026C0	A102
40	8	2.5	16	33	2.5	1.5	7	CC0034C1	A104
40	10	2.5	20	33.5	2.5	1.5	7	CC0035C0	A102
42	12	3	23	34	3	2	7	CC0040C0	A505
45	10	2.5	25	38.5	2.5	2	7	CC0044C0	A102
50	12	3	25	41.5	3	2	7	CC0055C1	A104
55	10	3	40	48	3	2	7	CC0067C0	A103
60	8	2.5	40.5	54	2.5	2	7	CC0074C0	A103
60	12	3	30	51	3	2	7	CC0077C0	A505
65	13	3.5	34.5	56	3.5	2	7	CC0096C0	A104
70	12	3	38	62	3	2	7	CC0106C2	A505
75	12	3	38	66	3	2	7	CC0117C1	A104
80	15	4	40	70	4	3	7	CC0132C0	A505
80	16	4	40	69	4	3	7	CC0134C0	A102
90	15	4.3	38	80	4.3	3	8	CC0156C0	A505
90	16	4	45	79.5	4	3	8	CC0157C0	A102
90	17	5	50	77	5	3	8	CC0159C0	A104
100	15	4.3	38	88	4.3	3	8	CC0171C0	A104
100	16	4	50	89	4	3	8	CC0174C5	A104
100	16	4	55	89	4	3	8	CC0174C4	A505
120	16	4	60	109	4	3	8	CC0207C0	A102
120	16	4	70	109	4	3	8	CC0207C1	A104
125	16	5	75	115	5	4	8	CC0219C0	A104
130	20	5	80	116	5	4	8	CC0230C1	A104
150	20	5	75	136	5	4	11	CC0255C0	A102
150	20	5	100	138	5	4	11	CC0255C2	A505
180	20	5	90	166.5	5	4	11	CC0282C0	A102
180	25	5	80	166	5	4	11	CC0285C0	A104
200	20	5	150	187	5	4	11	CC0293C5	A505
205	23	4	134	190	4	4	11	CC0303C1	A103
257	22	5.5	192	245	5.5	4	14	CC0328C1	A103