ODI TYPE

SPECIAL PACKINGS FOR PISTON SEALS IRON RUBBER (AU)

● 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)*

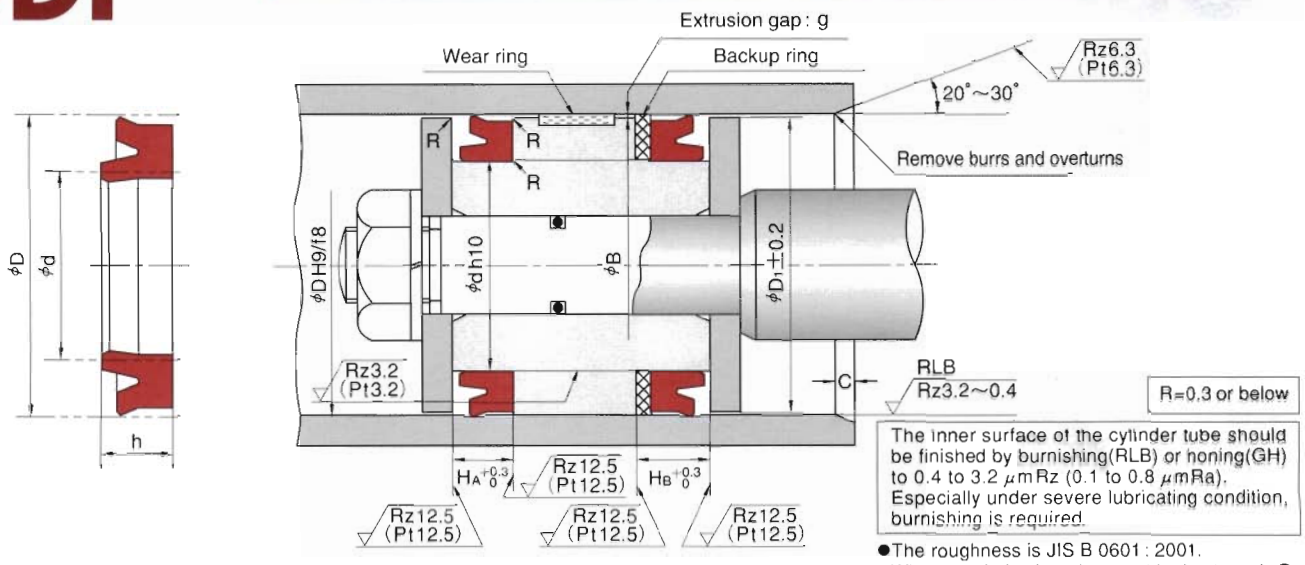
*t = $H_B - H_A$ (Housing dimensions)

・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 3.2 μmRz (0.1 to 0.8 μmRa). Especially under severe lubricating condition, burnishing is required.

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

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

F DIMENSION ODI

HOW TO DETERMINE B DIMENSION

When using backup ring

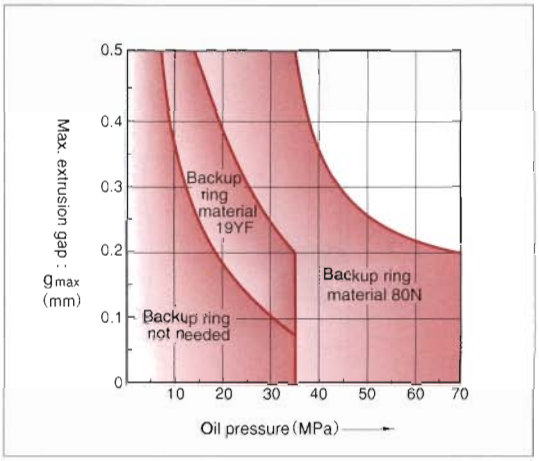
Please determine B dimension according to the table below. If you require smaller B dimension because of the cylinder configuration, please consult NOK.

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

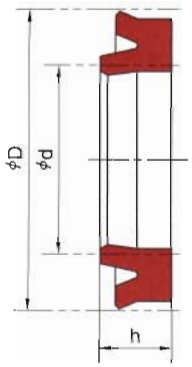
When not using backup ring

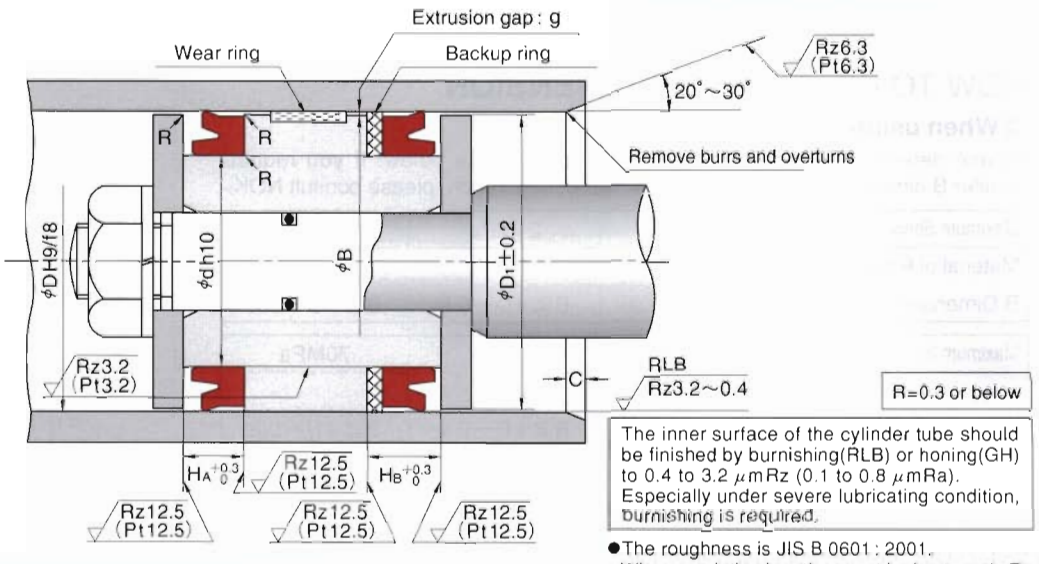
To determine B dimension, please refer to the graph in the right for the maximum extrusion gap (one side) considering the eccentricity of operating condition of the piston.



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		FU2159H0	GN6459V0	GN9123O1
44.5	31.5	10	11	14	43.5		FU2160H0	GN6461V0	GN9125O1
45	30	9	10	13	44		FU0559H0	GN7061V0	GN9801O0
	30	10	11	14	44	3.5	FU0560H0	GN7061V0	GN9801O0
	32	8	9	12	44		FU0561H0	GN7242V0	GN9802O0
	32	10	11	14	44		FU0562H0	GN7242V0	GN9802O0
	35	8	9	12	44		FU0564H0	GN6463V0	GN9127O1
50	34	10	11	14	49		FU0608H0	GN6462V0	GN9126O1
	34	12	13	16	49		FU0609H0	GN6462V0	GN9126O1
	35	9	10	13	49		FU0610H0	GN0816V0	GN9128O1
	35	10	11	14	49		FU0611H0	GN0816V0	GN9128O1
	35	12	13	16	49		FU2161H0	GN0816V0	GN9128O1
	40	8	9	12	49		FU0614H0	GN6465V0	GN9131O1
51.5	35.5	12	13	16	50.5		FU2162H0	GN6330V0	GN9130O1
55	40	9	10	13	54		FU0689H0	GN6759V0	GN9948O0
	40	10	11	14	54		FU0690H0	GN6759V0	GN9948O0
	45	8	9	12	54		FU0693H0	GN6467V0	GN9133O1
56	40	10	11	14	55		FU0716H0	GN6466V0	GN9132O1
	40	12	13	16	55		FU0717H0	GN6466V0	GN9132O1
	41	9	10	13	55		FU0718H0	GN0835V0	GN9949O0
	41	10	11	14	55		FU0719H0	GN0835V0	GN9949O0
	46	8	9	12	55	4	FU0721H0	GN7243V0	GN9782O1
60	45	9	10	13	59		FU0740H0	GN0845V0	GN9950O0
	45	10	11	14	59		FU0741H0	GN0845V0	GN9950O0
	50	8	9	12	59		FU0743H0	GN6302V0	GN9138O1
61	45	12	13	16	60		FU2163H0	GN6469V0	GN9135O1
63	47	10	11	14	62		FU0779H0	GN6471V0	GN9137O1
	47	12	13	16	62		FU0780H0	GN6471V0	GN9137O1
	48	9	10	13	62		FU0781H0	GN0853V0	GN9951O0
	48	10	11	14	62		FU0782H0	GN0853V0	GN9951O0
	53	8	9	12	62		FU0785H0	GN6413V0	GN9140O1
65	50	9	10	13	64		FU0804H0	GN6439V0	GN9952O0
	50	10	11	14	64		FU0805H0	GN6439V0	GN9952O0
	55	8	9	12	64		FU0808H0	GN6472V0	GN9141O1
66	50	12	13	16	65		FU2164H0	GN6329V0	GN9139O1
69	53	12	13	16	68		FU0836H0	GN7008V0	GN9803O0
70	50	12	13	16	69		FU0842H0	GN6592V0	GN9529O0
	55	9	10	13	69	5	FU0844H0	GN6408V0	GN9804O0
	55	10	11	14	69		FU0845H0	GN6408V0	GN9804O0
	60	8	9	12	69		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 3.2 μmRz (0.1 to 0.8 μmRa). 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		FU0872H0	GN0862V0	GN9805O0
	55	10	11	14	70		FU0873H0	GN6473V0	GN9142O1
	55	12	13	16	70		FU0874H0	GN6473V0	GN9142O1
	56	9	10	13	70		FU0875H0	GN7247V0	GN9806O0
	56	10	11	14	70		FU0876H0	GN7247V0	GN9806O0
	61	8	9	12	70		FU0878H0	GN7248V0	GN9783O1
75	55	12	13	16	74		FU0894H0	GN7249V0	GN9807O0
	60	9	10	13	74		FU0895H0	GN6363V0	GN9808O0
	60	10	11	14	74		FU0896H0	GN6363V0	GN9808O0
	65	8	9	12	74		FU0898H0	GN6479V0	GN9149O1
76	60	12	13	16	75		FU2165H0	GN6476V0	GN9146O1
80	60	12	13	16	79		FU0929H0	GN0886V1	GN9953O0
	64	10	11	14	79		FU0931H0	GN6478V0	GN9148O1
	64	12	13	16	79		FU0932H0	GN6478V0	GN9148O1
	65	9	10	13	79		FU0933H0	GN6364V0	GN9754O1
	65	10	11	14	79		FU0934H0	GN6364V0	GN9754O1
	70	8	9	12	79		FU0937H0	GN6362V1	GN9092O1
85	65	12	13	16	84		FU0974H0	GN0899V0	GN9810O0
	70	9	10	13	84		FU0977H0	GN6442V0	GN9411O0
	70	10	11	14	84		FU0978H0	GN6442V0	GN9411O0
	75	8	9	12	84	5	FU0980H0	GN6729V0	GN9241O1
90	70	12	13	16	89		FU1014H0	GN0910V0	GN9151O1
	70	15	16	19	89		FU1015H0	GN0910V0	GN9151O1
	75	9	10	13	89		FU1017H0	GN6443V0	GN9757O1
	75	10	11	14	89		FU1018H0	GN6443V0	GN9757O1
	80	8	9	12	89		FU1020H0	GN6483V0	GN9155O1
95	75	12	13	16	94		FU1045H0	GN0920V0	GN9154O1
	75	15	16	19	94		FU1046H0	GN0920V0	GN9154O1
	80	9	10	13	94		FU1047H0	GN6898V0	GN9582O0
	80	10	11	14	94		FU1048H0	GN6898V0	GN9582O0
100	80	12	13	16	98		FU1072H0	GN0927V0	GN9156O1
	80	15	16	19	98		FU1074H0	GN0927V0	GN9156O1
	85	10	11	14	98		FU1079H0	GN6484V0	GN9091O1
105	85	15	16	19	103		FU2166H0	GN0932V0	GN9157O1
110	90	12	13	16	108		FU1149H0	GN0939V0	GN9159O1
	90	15	16	19	108		FU1150H0	GN0939V0	GN9159O1
	95	10	11	14	108		FU1153H0	GN6486V0	GN9160O1
112	92	12	13	16	110		FU1174H0	GN0940V0	GN9811O0
	92	15	16	19	110		FU1175H0	GN0940V0	GN9811O0
	97	9	10	13	110		FU1176H0	GN7250V0	GN9812O0
	97	10	11	14	110		FU1177H0	GN7250V0	GN9812O0

F DIMENSION ODI

HOW TO DETERMINE B DIMENSION

When using backup ring

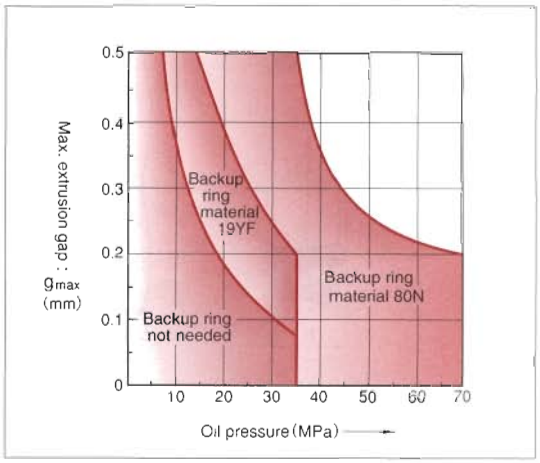
Please determine B dimension according to the table below. If you require smaller B dimension because of the cylinder configuration, please consult NOK.

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

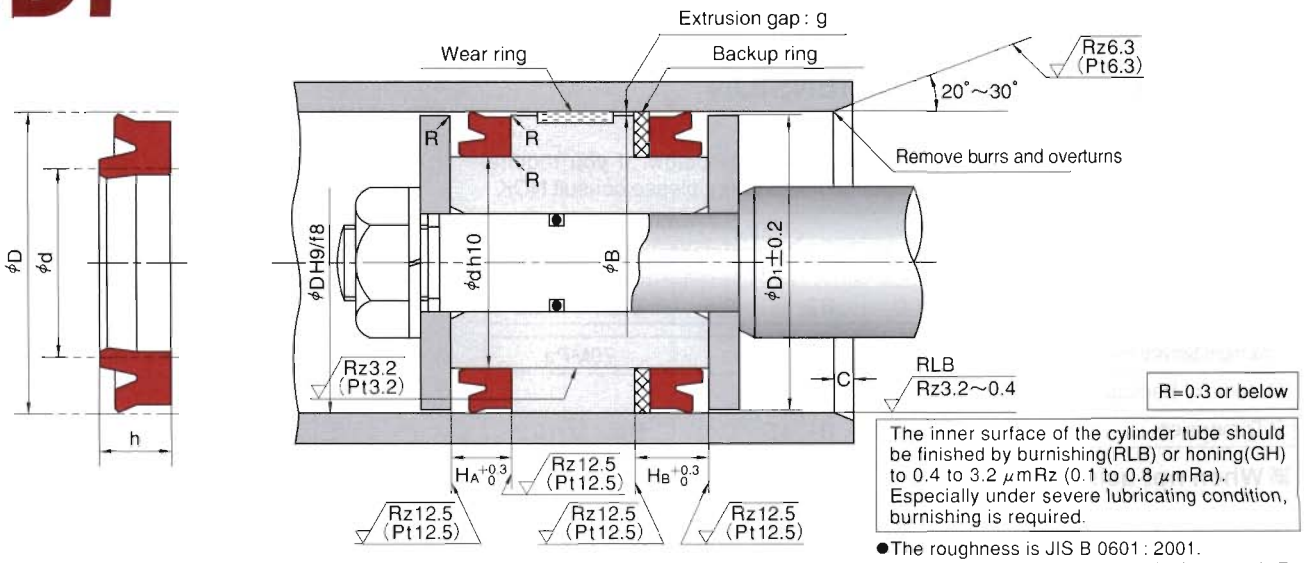
When not using backup ring

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		FU1210H0	GN0952V0	GN9164O1
	100	15	16	19	118		FU1211H0	GN0952V0	GN9164O1
	105	10	11	14	118		FU1213H0	GN6684V0	GN9589O1
125	105	12	13	16	123		FU1243H0	GN0959V0	GN9165O1
	105	15	16	19	123		FU1244H0	GN0959V0	GN9165O1
	105	16	17	20	123		FU1245H0	GN0959V0	GN9165O1
	110	9	10	13	123		FU1247H0	GN6761V0	GN9430O1
	110	10	11	14	123		FU1248H0	GN6761V0	GN9430O1
130	110	12	13	16	128		FU1274H0	GN6790V0	GN9694O0
	110	15	16	19	128		FU1275H0	GN6790V0	GN9694O0
	110	16	17	20	128		FU1276H0	GN6790V0	GN9694O0
	115	10	11	14	128		FU1279H0	GN6741V0	GN9274O1
132	112	15	16	19	130		FU2168H0	GN0970V0	GN9168O1
140	120	12	13	16	138		FU1316H0	GN0982V0	GN9169O1
	120	15	16	19	138		FU1317H0	GN0982V0	GN9169O1
	120	16	17	20	138		FU1318H0	GN0982V0	GN9169O1
	125	10	11	14	138		FU1321H0	GN6491V0	GN9170O1
150	125	19	20	23	148	6.5	FU2169H0	GN6135V0	GN9171O1
	125	20	21	24	148		FU1351H0	GN6135V0	GN9171O1
	130	12	13	16	148		FU1352H0	GN6925V0	GN9335O1
	130	16	17	20	148		FU1354H0	GN6925V0	GN9335O1
	135	10	11	14	148		FU1357H0	GN6666V0	GN9539O1
157	132	20	21	24	155		FU1909H0	GN7013V0	GN9813O0
160	135	19	20	23	158		FU2170H0	GN6492V0	GN9172O1
	135	20	21	24	158		FU1398H0	GN6492V0	GN9172O1
	140	12	13	16	158		FU1399H0	GN1002V0	GN9668O0
	140	16	17	20	158		FU1402H0	GN1002V0	GN9668O0
	145	10	11	14	158		FU1405H0	GN6495V0	GN9175O1
165	140	19	20	23	163		FU1426H0	GN6494V0	GN9174O1
	140	20	21	24	163		FU2186H0	GN6494V0	GN9174O1
170	145	19	20	23	168		FU1436H0	GN6496V0	GN9176O1
	145	20	21	24	168		FU1437H0	GN6496V0	GN9176O1
	150	12	13	16	168		FU1438H0	GN1011V0	GN9672O1
	150	16	17	20	168		FU1440H0	GN1011V0	GN9672O1
	155	10	11	15	168		FU1442H0	GN6498V0	GN9178O1
180	155	16	17	21	178		FU1475H0	GN1016V0	GN9179O1
	155	19	20	24	178		FU2171H0	GN1016V0	GN9179O1
	155	20	21	25	178		FU1476H0	GN1016V0	GN9179O1
	160	12	13	17	178		FU1478H0	GN6905V0	GN9814O0
	160	16	17	21	178		FU1479H0	GN6905V0	GN9814O0
	165	10	11	15	178		FU1482H0	GN6500V0	GN9182O1

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 3.2 μmRz (0.1 to 0.8 μmRa). 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		FU2172H0	GN1020V0	GN9181O1
	160	20	21	25	183		FU2187H0	GN1020V0	GN9181O1
190	165	16	17	21	188		FU1507H0	GN1023V0	GN9815O0
	165	20	21	25	188		FU1508H0	GN1023V0	GN9815O0
	170	12	13	17	188		FU1509H0	GN6985V0	GN9816O0
	170	16	17	21	188		FU1510H0	GN6985V0	GN9816O0
	175	10	11	15	188		FU1512H0	GN6503V0	GN9185O1
200	175	16	17	21	198		FU1536H0	GN1031V0	GN9186O1
	175	19	20	24	198		FU2173H0	GN1031V0	GN9186O1
	175	20	21	25	198		FU1538H0	GN1031V0	GN9186O1
	180	16	17	21	198		FU1540H0	GN6372V0	GN9187O1
205	180	19	20	24	203		FU2174H0	GN1035V0	GN9188O1
	180	20	21	25	203		FU2188H0	GN1035V0	GN9188O1
210	185	16	17	21	208		FU1570H0	GN1039V0	GN9817O0
	185	20	21	25	208		FU1571H0	GN1039V0	GN9817O0
	190	16	17	21	208		FU1573H0	GN6505V0	GN9190O1
215	190	16	17	21	213		FU2260H0	GN1042V0	GN9818O0
220	195	16	17	21	218		FU1592H0	GN7253V0	GN9819O0
	195	20	21	25	218		FU1593H0	GN7253V0	GN9819O0
	200	16	17	21	218		FU1595H0	GN6276V0	GN9191O1
224	199	16	17	21	222	6.5	FU1604H0	GN1047V0	GN9820O0
	199	20	21	25	222		FU1605H0	GN1047V0	GN9820O0
	204	16	17	21	222		FU1607H0	GN6506V0	GN9193O1
225	200	16	17	21	223		FU1616H0	GN1050V0	GN9192O1
	200	19	20	24	223		FU2175H0	GN1050V0	GN9192O1
	200	20	21	25	223		FU1617H0	GN1050V0	GN9192O1
	205	16	17	21	223		FU1619H0	GN7255V0	GN9784O1
230	205	16	17	21	228		FU1632H0	GN1053V0	GN9557O1
	205	19	20	24	228		FU1633H0	GN1053V0	GN9557O1
	205	20	21	25	228		FU1634H0	GN1053V0	GN9557O1
	210	16	17	21	228		FU1636H0	GN6352V0	GN9195O1
240	215	16	17	21	238		FU1652H0	GN7256V0	GN9574O0
	215	19	20	24	238		FU1653H0	GN7256V0	GN9574O0
	215	20	21	25	238		FU1654H0	GN7256V0	GN9574O0
	220	16	17	21	238		FU1656H0	GN6508V0	GN9196O1
250	225	16	17	21	248		FU1671H0	GN1065V0	GN9045O1
	225	19	20	24	248		FU1672H0	GN1065V0	GN9045O1
	225	20	21	25	248		FU1673H0	GN1065V0	GN9045O1
	230	16	17	21	248		FU1676H0	GN6510V0	GN9047O1
260	235	16	17	21	258		FU1698H0	GN7257V0	GN9821O0
	235	19	20	24	258		FU1699H0	GN7257V0	GN9821O0
	240	16	17	21	258		FU1701H0	GN6511V0	GN9198O1

HOW TO DETERMINE B DIMENSION

When using backup ring

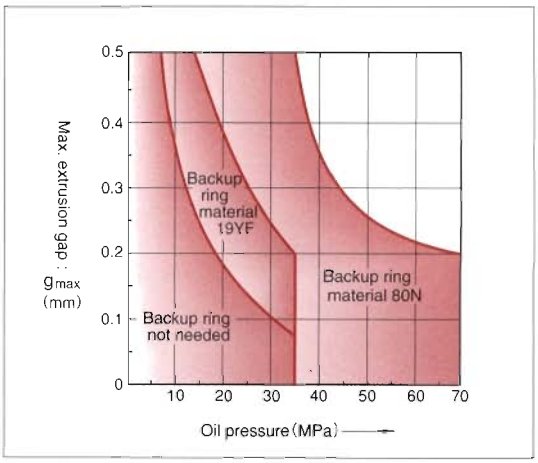
Please determine B dimension according to the table below. If you require smaller B dimension because of the cylinder configuration, please consult NOK.

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
	245	19	20	24	268		FU1716H0	GN7258V0	GN9675O0
	250	16	17	21	268		FU1718H0	GN6512V0	GN9199O1
275	250	19	20	24	273		FU2176H0	GN1078V0	GN9200O1
	250	20	21	25	273	7.5	FU2189H0	GN1078V0	GN9200O1
280	250	19	20	24	278		FU1729H0	GN6197V0	GN9432O1
	255	19	20	24	278		FU1731H0	GN6513V0	GN9201O1
290	260	19	20	24	288		FU1744H0	GN1083V0	GN9431O1
	265	19	20	24	288		FU1746H0	GN6318V0	GN9203O1
297	265	24	25	29	295		FU2177H0	GN6515V0	GN9204O1
	265	25	26	30	295		FU2190H0	GN6515V0	GN9204O1
300	270	19	20	24	298		FU1758H0	GN1089V0	GN9206O1
	270	24	25	29	298		FU2178H0	GN1089V0	GN9206O1
	270	25	26	30	298		FU1759H0	GN1089V0	GN9206O1
	275	19	20	24	298		FU1761H0	GN6517V0	GN9207O1
312	280	24	25	29	310		FU2193H0	GN6519V0	GN9209O1
332	300	24	25	29	330		FU2194H0	GN6522V0	GN9212O1

OSI TYPE

SPECIAL PACKINGS FOR PISTON SEALS IRON RUBBER (AU)

● 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)*

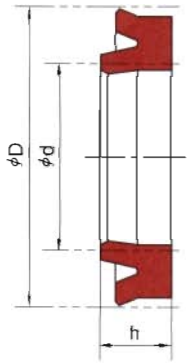
*t = $H_B - H_A$ (Housing dimensions)

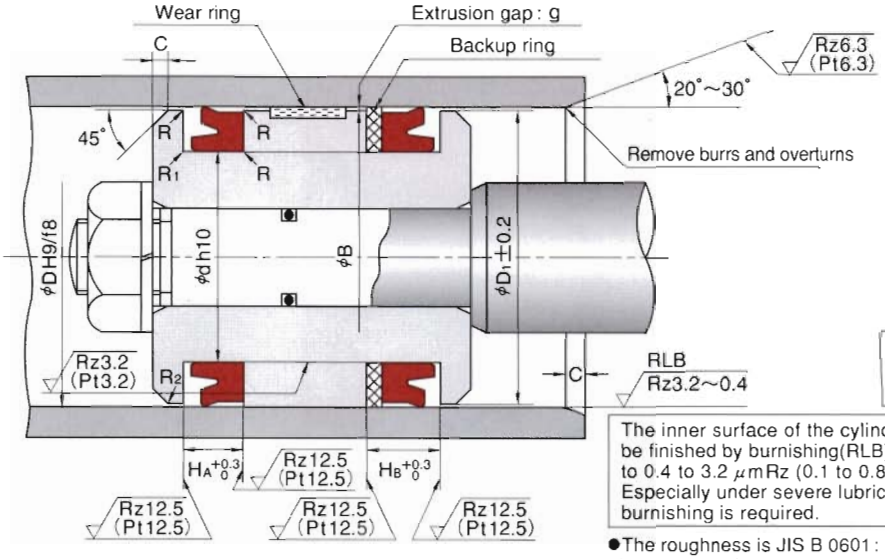
・Part Number GN5707V0

● 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 3.2 μmRz (0.1 to 0.8 μmRa). 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	H_A	H_B	φD_1	C		19YF	80NP
35	27	5	5.7	8.7	34	2	FU0420L0	GN5707V0	GN9780O0
35.5	27.5	5			34.5		FU0450L0	GN5708V0	GN9781O0
	28	5			34.5		FU2141L0	GN4791V0	GN9119O0
40	30	6	7	10	39	2.5	FU0490L0	GN4794V0	GN9122O0
41.5	31.5	6			40.5		FU2142L0	GN4796V0	GN9124O0
45	35	6			44		FU0563L0	GN4799V0	GN9127O0
	35.5	6			44		FU2143L0	GN4801V0	GN9129O0
50	40	6			49		FU0613L0	GN4050V0	GN9131O0
55	45	6			54		FU0692L0	GN4804V0	GN9133O0
56	45	7	8	11	55		FU2144L0	GN4805V0	GN9134O0
	46	6	7	10	55		FU0720L0	GN5709V0	GN9782O0
60	50	6			59		FU0742L0	GN4335V0	GN9138O0
63	53	6			62		FU0784L0	GN4693V0	GN9140O0
65	55	6			64		FU0807L0	GN4810V0	GN9141O0
66	56	6			65		FU0825L0	GN4766V0	GN9143O0
70	60	6			69		FU0846L0	GN4676V0	GN9144O0
71	60	7	8	11	70		FU2145L0	GN4812V0	GN9145O0
	61	6	7	10	70		FU0877L0	GN4629V0	GN9783O0
73	63	6			72		FU0889L0	GN4814V0	GN9147O0
75	65	6			74		FU0897L0	GN4816V0	GN9149O0
77	67	6			76		FU0922L0	GN4697V0	GN9150O0
80	70	6			79		FU0936L0	GN4651V0	GN9092O0
	71	6			79		FU2146L0	GN4818V0	GN9152O0
85	75	6			84		FU0979L0	GN4692V0	GN9241O0
90	80	6			89		FU1019L0	GN4820V0	GN9155O0
100	85	9	10	13	98	4	FU1078L0	GN4687V0	GN9091O0
105	90	9			103		FU1120L0	GN4698V0	GN9158O0
110	95	9			108		FU1152L0	GN4822V0	GN9160O0
112	98	8.5	9.5	12.5	110		FU2147L0	GN4824V0	GN9162O0
115	100	9	10	13	113		FU1193L0	GN4512V0	GN9163O0
120	105	9			118		FU1212L0	GN5198V0	GN9589O0
	106	8.5	9.5	12.5	118		FU2148L0	GN4826V0	GN9166O0
125	112	9	10	13	123		FU1926L0	GN4827V0	GN9167O0
130	115	9			128		FU1278L0	GN4593V0	GN9274O0
140	125	9			138		FU1320L0	GN4481V0	GN9170O0
145	130	9			143		FU2405L0	GN4628V1	GN9742O1
150	135	9			148		FU1356L0	GN5025V0	GN9539O0
	136	8.5	9.5	12.5	148		FU2149L0	GN4830V0	GN9173O0

F DIMENSION OSI

HOW TO DETERMINE B DIMENSION

When using backup ring

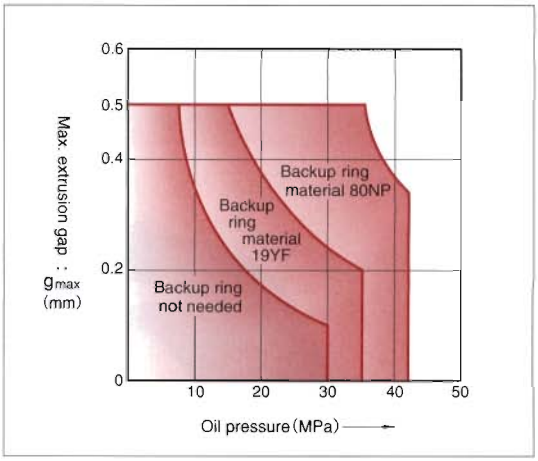
Please determine B dimension according to the table below. If you require smaller B dimension because of the cylinder configuration, please consult NOK.

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			158		FU1404L0	GN4551V0	GN9175O0
170	155	9		14	168		FU1441L0	GN4834V0	GN9178O0
175	160	9			173		FU1458L0	GN4835V0	GN9180O0
180	165	9			178		FU1481L0	GN4836V0	GN9182O0
190	175	9			188		FU1511L0	GN4839V0	GN9185O0
200	180	12	13	17	198	5	FU1539L0	GN4470V0	GN9187O0
210	190	12			208		FU1572L0	GN4841V0	GN9190O0
220	200	12			218		FU1594L0	GN4385V0	GN9191O0
224	204	12			222		FU1606L0	GN4842V0	GN9193O0
225	205	12			223		FU1618L0	GN5710V0	GN9784O0
230	210	12			228		FU1635L0	GN4627V0	GN9195O0
240	220	12			238		FU1655L0	GN4444V0	GN9196O0
250	230	12			248		FU1675L0	GN4635V0	GN9047O0
260	240	12			258		FU1700L0	GN4845V0	GN9198O0
270	250	12			268		FU1717L0	GN4459V0	GN9199O0
280	255	16	17	21	278	6.5	FU1730L0	GN4846V0	GN9201O0
290	265	16			288		FU1745L0	GN4848V0	GN9203O0
300	275	16			298		FU1760L0	GN4852V0	GN9207O0

F DIMENSION OSI

OUIS TYPE

SPECIAL PACKINGS FOR PISTON SEALS IRON RUBBER (AU)

F 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

OUIS: Type Sign

40 30 6: 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

BRT2: Type Sign

30 40 3: Nominal Size of Backup ring described in order of inner diameter(d), outer diameter(D), and thickness(t)*

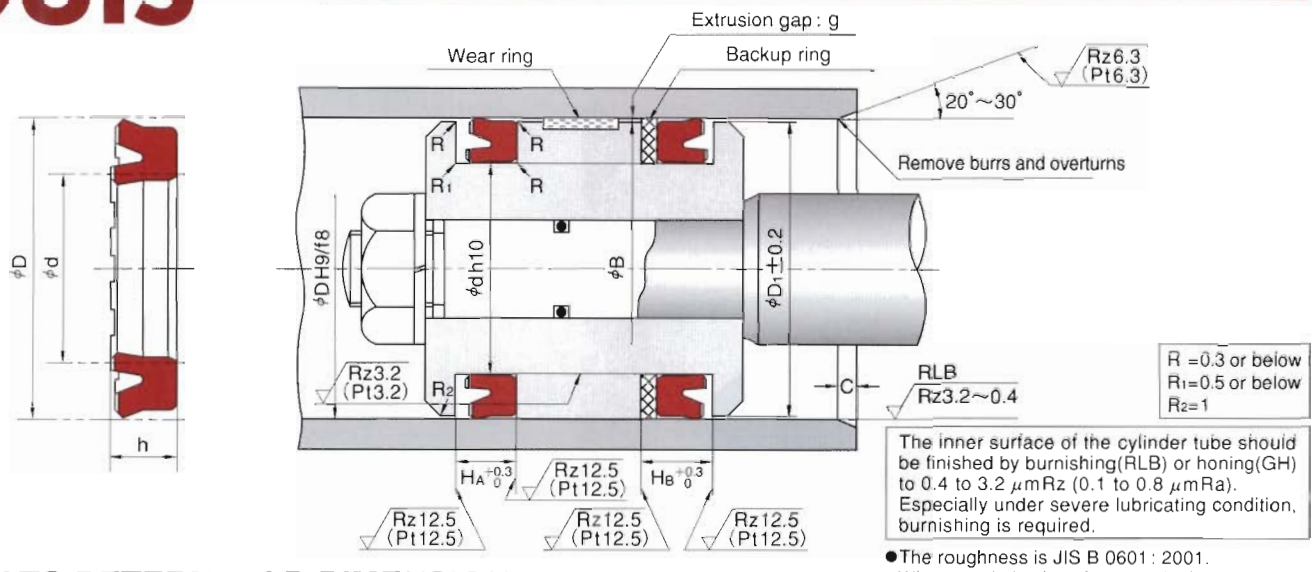
*t = $H_B - H_A$ (Housing dimensions)

・Part Number GN4794V0

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

Material	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 3.2 μmRz (0.1 to 0.8 μmRa). 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

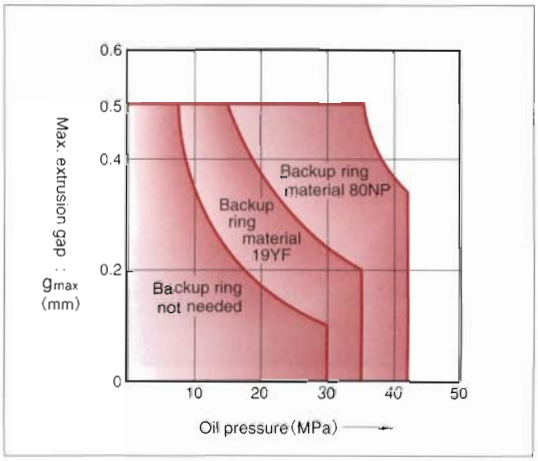
Please determine B dimension according to the table below. If you require smaller B dimension because of the cylinder configuration, please consult NOK.

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		
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		19YF	80NP
40	30	6	7	10	39	2.5	FU0490P0	GN4794V0	GN9122O0
45	35	6			44		FU0563P0	GN4799V0	GN9127O0
50	40	6			49		FU0613P0	GN4050V0	GN9131O0
60	50	6			59		FU0742P0	GN4335V0	GN9138O0
63	53	6			62		FU0784P0	GN4693V0	GN9140O0
65	55	6			64		FU0807P0	GN4810V0	GN9141O0
70	60	6			69		FU0846P0	GN4676V0	GN9144O0
75	65	6			74		FU0897P0	GN4816V0	GN9149O0
80	70	6			79		FU0936P0	GN4651V0	GN9092O0
85	75	6			84		FU0979P0	GN4692V0	GN9241O0
90	80	6			89		FU1019P0	GN4820V0	GN9155O0
100	85	9	10	13	98	4	FU1078P0	GN4687V0	GN9091O0
105	90	9			103		FU1120P0	GN4698V0	GN9158O0
110	95	9			108		FU1152P0	GN4822V0	GN9160O0
120	105	9			118		FU1212P0	GN5198V0	GN9589O0
125	112	9			123		FU1926P0	GN4827V0	GN9167O0
130	115	9			128		FU1278P0	GN4593V0	GN9274O0
140	125	9			138		FU1320P0	GN4481V0	GN9170O0
150	135	9			148		FU1356P0	GN5025V0	GN9539O0
160	145	9			158		FU1404P0	GN4551V0	GN9175O0
170	155	9		14	168		FU1441P0	GN4834V0	GN9178O0
180	165	9			178		FU1481P0	GN4836V0	GN9182O0
190	175	9			188		FU1511P0	GN4839V0	GN9185O0
200	180	12	13	17	198	5	FU1539P0	GN4470V0	GN9187O0

F DIMENSION OUIS

OUHR TYPE

SPECIAL PACKINGS FOR PISTON SEALS NITRILE RUBBER (NBR)

F 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

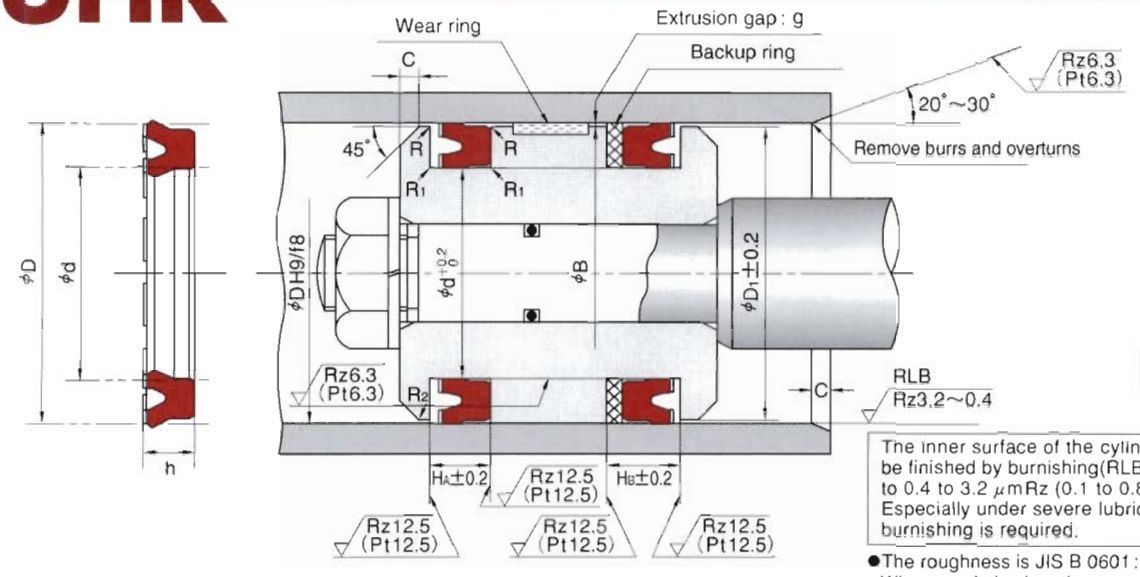
※ When placing orders for backup rings used in combination with packing, designate the NOK part number and the model size.

- 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	NOK U641

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 3.2 μmRz (0.1 to 0.8 μmRa). 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

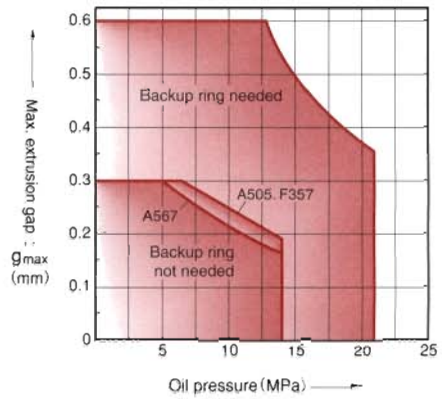
■ When using backup ring

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	標準(A505)	耐寒(A567)	19YF
32	24	5	5.7	7.7	31	3.5	CU2683Q2	CU2683Q3	GN5727V0
40	30	6	7	10	39		CU2684Q3	CU2684Q5	GN4794V0
50	40				49		CU2604Q3	CU2604Q4	GN4050V0
55	45				54		CU2697Q1		GN4804V0
60	50				59		CU2696Q2	CU2696Q3	GN4335V0
63	53				62		CU2685Q0	CU2685Q4	GN4693V0
65	55				64		CU2930Q2	CU2930Q3	GN4810V0
70	60				69			CU2634Q2	GN4676V0
75	62	7.5	8.5	11.5	74	4.5	CU2943Q2	CU2943Q3	GN5712V0
80	65	9	10	13	79		CU2666Q2	CU2666Q3	GN4549V0
	71	6	7	10			CU3238Q1		GN4818V0
85	70	9	10	13	84		CU0977Q2	CU0977Q3	GN4876V0
95	80				94		CU2605Q2	CU2605Q4	GN5023V0
100	85				98		CU2669Q2	CU2669Q3	GN4687V0
110	95				108		CU2607Q2	CU2607Q3	GN4822V0
115	100				113			CU3241Q2	GN4512V0
125	110				123			CU2670Q2	GN4480V0
	112	8.5	9.5	12.5			CU3492Q0		GN4827V0
130	115				128		CU2609Q2	CU2609Q3	GN4593V0
140	125	9	10	13	138		CU2647Q3	CU2647Q2	GN4481V0
150	136	8.5	9.5	12.5	148		CU3244Q1		GN4830V0
160	145	9	10	13	158		CU2687Q1		GN4551V0
180	165			14	178		CU2688Q1		GN4836V0
200	180	12	13	17	198	5.5	CU1539Q1	CU1539Q2	GN4470V0
224	204				222		CU3491Q0		GN4842V0
250	230				248		CU2691Q2	CU2691Q3	GN4635V0

F DIMENSION OUHR

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

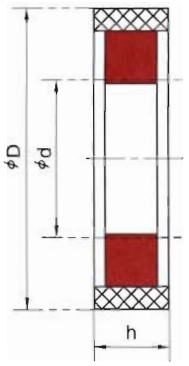
20.5 30 4.3 — Nominal Size of Packing described in order of inner diameter(d), outer diameter(D), and height(h)

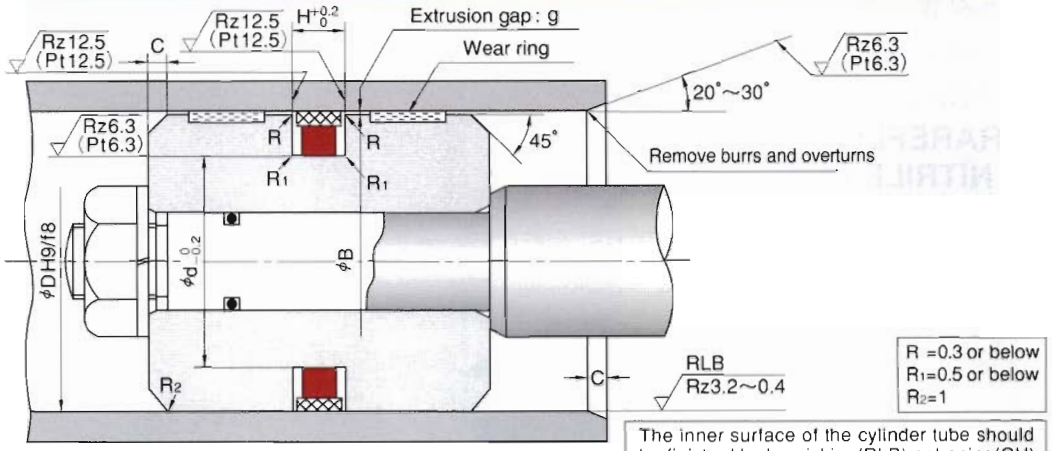
· Part Number GS0327V0

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

Material	NOK 19YF + NOK A980 : Outer diameter 950mm or less 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

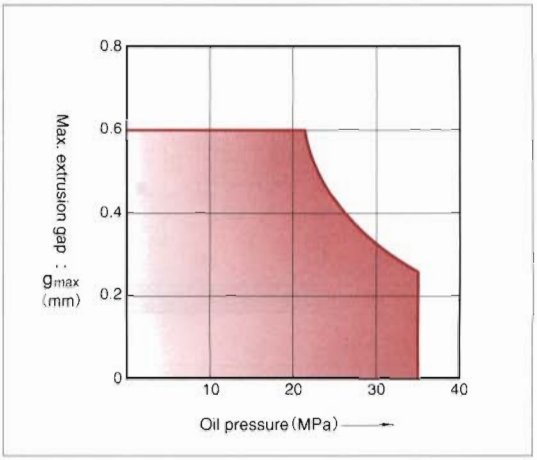
The inner surface of the cylinder tube should be finished by burnishing(RLB) or honing(GH) to 0.4 to 3.2 μmRz (0.1 to 0.8 μmRa). Especially under severe lubricating condition, burnishing is required.

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

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			3.5	GS0328V0
32	22.5	32				GS0329V0
35	25.5	35				GS0330V0
35.5	26	35.5				GS0331V0
40	30	40				GS0332V0
45	35	45				GS0333V0
50	40	50			4	GS0334V0
55	45	55				GS0335V0
56	46	56				GS0336V0
60	50	60				GS0337V0
63	48	63	7.3	7.5		GS0338V0
65	50	65				GS0339V0
69	54	69				GS0340V0
70	55	70			5	GS0341V0
71	56	71				GS0342V0
75	60	75				GS0343V0
80	65	80				GS0344V0
85	70	85				GS0345V0
90	75	90				GS0310V0
95	80	95				GS0346V0
100	85	100				GS0347V0
105	90	105				GS3509V0
108	92	108				GS0348V0
110	94	110				GS0311V0
112	96	112			6.5	GS0349V0
120	104	120				GS0350V0

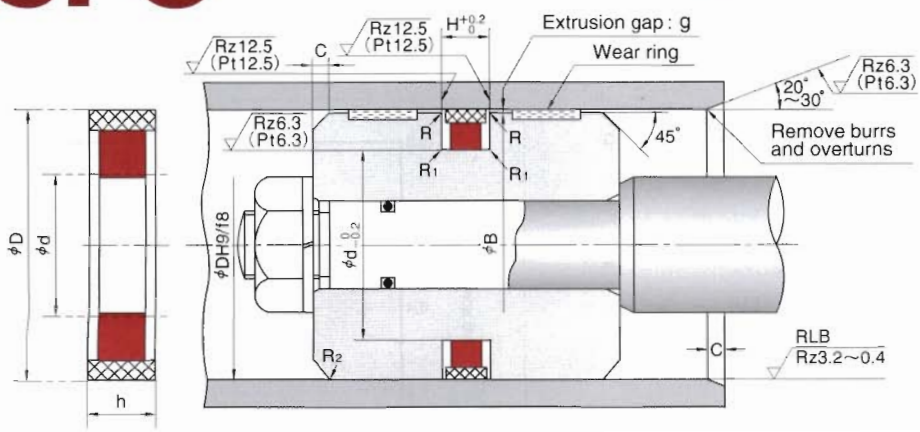
HOW TO DETERMINE B DIMENSION

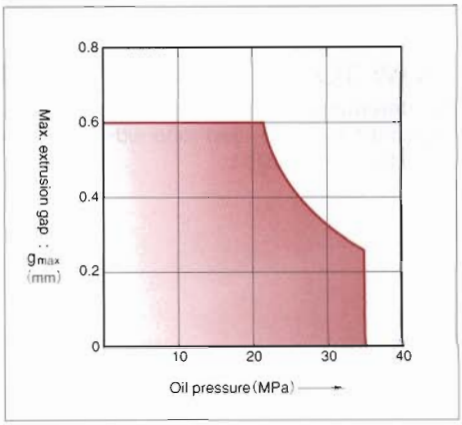
To determine B dimension, please refer to the graph in the right for the maximum extrusion gap (one side) considering the eccentricity of operating condition of the piston.



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				GS0352V0
135	119	135				GS0806V1
140	124	140				GS0353V0
145	129	145				GS0885V0
150	134	150				GS0354V0
155	139	155				GS3133V1
160	144	160				GS0355V0
170	148	170	10.8	11		GS0356V0
180	158	180				GS0357V0
190	168	190				GS0358V0
200	178	200				GS0359V0
204	182	204				GS0360V0
210	188	210				GS0361V0
215	193	215				GS0548V0
220	198	220				GS0842V0
224	202	224				GS0362V0
225	203	225				GS0363V0
230	208	230				GS0364V0
240	218	240				GS0365V0
250	228	250				GS0366V0
260	236	260	11.7	12	7.5	GS0700V0
270	246	270				GS0701V0
280	256	280				GS0702V0
290	266	290				GS0703V0
300	276	300				GS0704V0
310	286	310				GS0705V0
320	296	320				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 3.2 μmRz (0.1 to 0.8 μm Ra). Especially under severe lubricating condition, burnishing is required.

R =0.3 or below
R1=0.5 or below
R2=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		GS0917V0
400	376	400				GS3361V0
485	455	485	14.8	15		GS0504V1
500	470	500				GS0261V2
550	515	550	17.2	17.5		GS0379V2
600	570	600	14.8	15		GS0324V2
650	620	650			15	GS0527V0
720	690	720				GS0492V0
800	785	800	12.7	13		GS0520V0
900	870	900	24.5	25		GS0407V2
930	890	930	19	20		GS0466V1
935	920	935	12.7	13		GS0521V0
950	925	950	17.7	18		GS0285V2
1000	960	1000	19.7	20	20	GS0512V0
1060	1020	1060				GS0587V0
1120	1080	1120				GS0584V0
1150	1110	1150				GS3007V0
1180	1130	1180				GS0599V1
1210	1170	1210	19			GS0465V0
1250	1210	1250	19.7			GS0281V0
1260	1220	1260				GS0851V0
1400	1350	1400				GS0402V0
1500	1460	1500				GS0852V0
1650	1600	1650	24	25		GS0579V0

F DIMENSION SPG

SPGW TYPE

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

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

(Example) • Type Dimensions SPGW 36 50 8.5

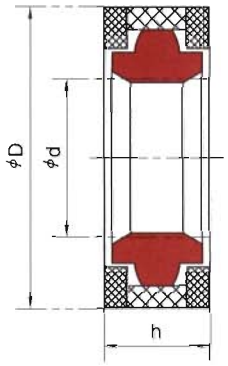
- SPGW: Type Sign
- 36 50 8.5: Nominal Size of Packing described in order of inner diameter(d), outer diameter(D), and height(h)

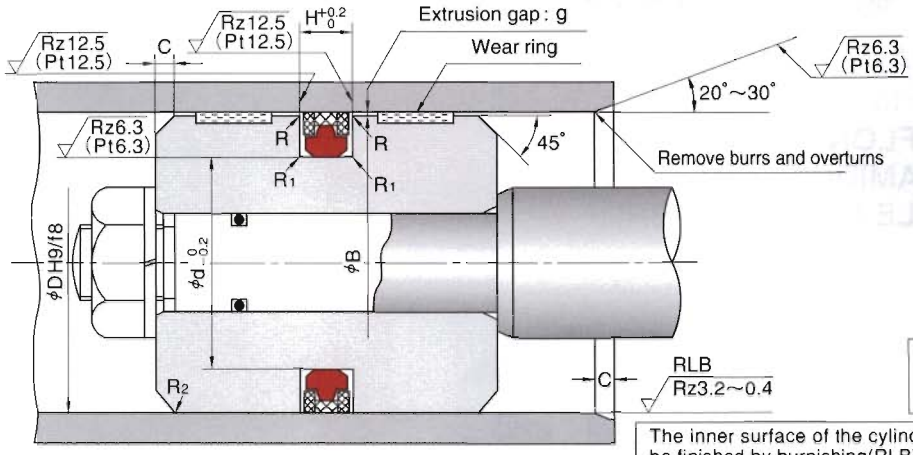
• Part Number GS0535V5

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

Material	NOK 19YF + NOK A980 + NOK 12NM (D=φ50~φ200) NOK 80NP (D=φ210~φ320)

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 3.2 μmRz (0.1 to 0.8 μmRa). Especially under severe lubricating condition, burnishing is required.

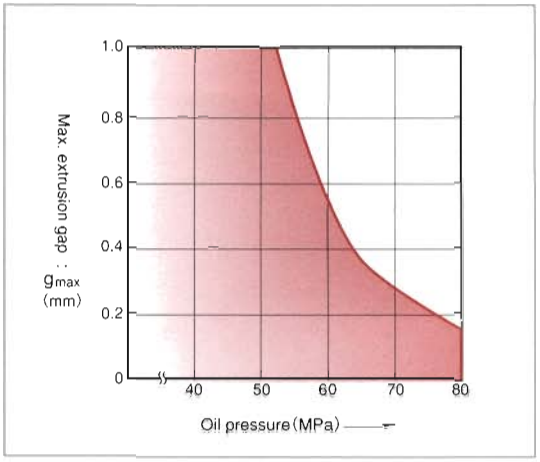
●The roughness is JIS B 0601 : 2001.
When regulation length cannot be kept, apply Pt.

Nominal Number	Nominal Size of Packing, and Housing dimensions					NOK Part Number
	d	D	h	H	C	
SPGW 50	36	50	8.5	9	4	GS0535V5
60	46	60				GS0528V5
65	50	65	10.5	11	5	GS3013V5
70	55	70				GS0607V5
75	60	75				GS0995V5
80	65	80				GS0608V5
85	70	85				GS0813V5
90	75	90				GS0609V5
95	80	95				GS0481V5
100	85	100	12	12.5		GS0610V6
105	90	105				GS0973V5
110	95	110				GS0611V5
115	100	115			6.5	GS0626V5
120	105	120				GS0612V7
125	102	125	15.5	16		GS0583V5
130	107	130				GS0613V5
135	112	135				GS0908V5
140	117	140				GS0432V5
145	122	145				GS0907V1

F DIMENSION SPGW

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	
SPGW 150	127	150	15.5	16	6.5	GS0614V5
160	137	160				GS0615V5
170	147	170				GS0688V5
180	157	180				GS0616V5
185	162	185				GS0653V5
190	167	190				GS0644V5
200	177	200				GS0617V5
210	187	210				GS0654V2
220	197	220				GS0655V2
225	202	225				GS0618V2
230	207	230				GS0664V2
240	217	240				GS0656V2
250	222	250	17	17.5		GS0451V4
260	232	260			7.5	GS0605V2
270	242	270				GS0689V2
280	252	280				GS0619V2
300	272	300				GS0510V2
320	292	320				GS0690V2

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

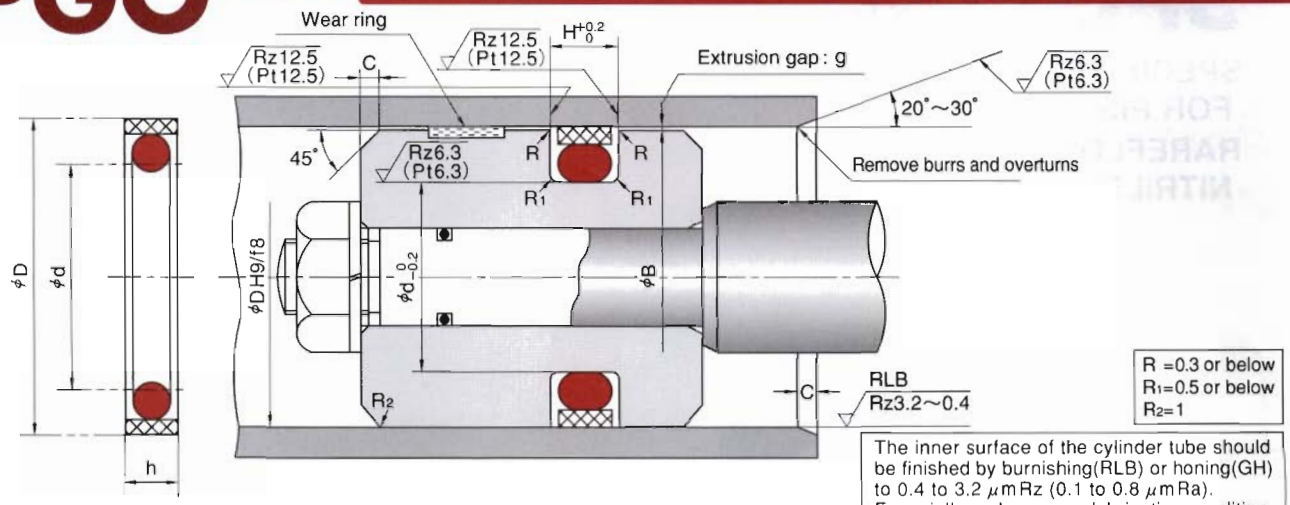
- SPGO: Type Sign
- 14 20 3: Nominal Size of Packing described in order of inner diameter(d), outer diameter(D), and height(h)

• 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 3.2 μmRz (0.1 to 0.8 μmRa). Especially under severe lubricating condition, burnishing is required.

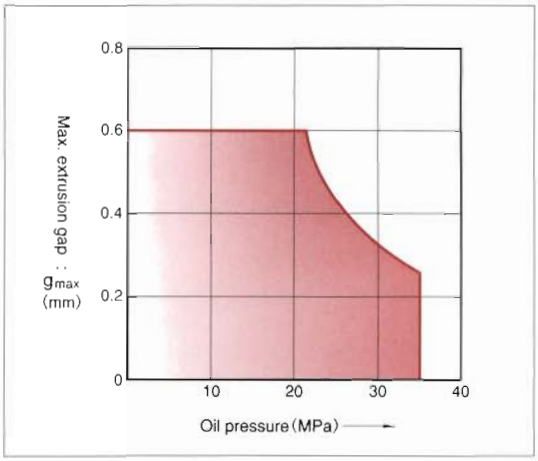
●The roughness is JIS B 0601 : 2001.
When regulation length cannot be kept, apply Pt.

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				GS1801V0
30	21.5	30	3.8	4	3.5	GS1802V0
31.5	23	31.5				GS1803V0
32	23.5	32				GS1804V0
35	26.5	35				GS1805V0
35.5	27	35.5				GS1806V0
40	31.5	40				GS1807V0
45	36.5	45				GS1808V0
50	41.5	50			4	GS1809V0
53	44.5	53				GS1810V0
55	46.5	55				GS1811V0
56	47.5	56				GS1812V0
60	51.5	60				GS1813V0
63	49	63	6.3	6.5		GS1814V0
65	51	65				GS1815V0
70	56	70			5	GS1816V0
71	57	71				GS1817V0
75	61	75				GS1818V0
80	66	80				GS1819V0
85	71	85				GS1820V0
90	76	90				GS1821V0
95	81	95				GS1822V0
100	86	100				GS1823V0
105	91	105				GS1824V0
110	96	110				GS1825V0
112	98	112			6.5	GS1826V0
115	101	115				GS1827V0
120	106	120				GS1828V0

F DIMENSION SPGO

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				GS1830V0
135	121	135				GS1831V0
140	126	140				GS1832V0
150	136	150				GS1833V0
160	146	160				GS1834V0
170	150	170	9.8	10		GS1835V0
180	160	180				GS1836V0
190	170	190				GS1837V0
200	180	200				GS1838V0
210	190	210				GS1839V0
220	200	220				GS1840V0
224	204	224				GS1841V0
230	210	230				GS1842V0
240	220	240				GS1843V0
250	230	250				GS1844V0
260	240	260			7.5	GS1845V0
270	250	270				GS1846V0
280	260	280				GS1847V0
290	270	290				GS1848V0
300	280	300				GS1849V0
310	290	310				GS1850V0
320	300	320				GS1851V0
340	320	340				GS1852V0
350	330	350				GS1853V0
360	340	360				GS1854V0
375	355	375				GS1855V0
380	360	380				GS1856V0
400	380	400				GS1857V0

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

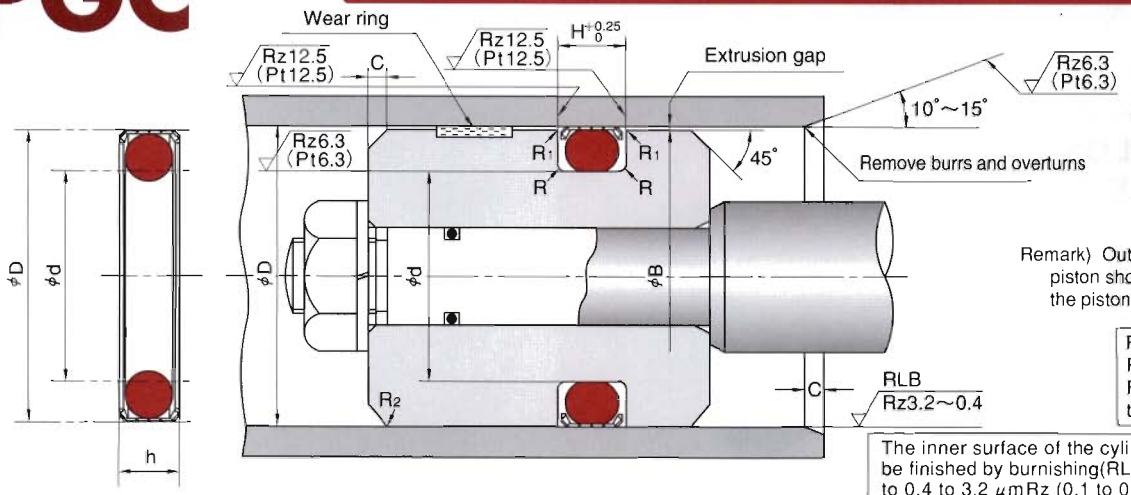
- SPGC: Type Sign
- 3 6 2.3: Nominal Size of Packing described in order of inner diameter(d), outer diameter(D), and height(h)

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

R1=0.3 or below
R2=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 3.2 μmRz (0.1 to 0.8 μmRa). 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									NOK Part Number
				For general hydraulic use				For pneumatic and hydraulic low-friction applications				H	R	C	
	d	D	h	φd		φD		φd		φD					
SPGC 6	3	6	2.3	3	0 −0.05	6	+0.05 0	2.5	0 −0.05	6	+0.05 0	2.5	0.3 or below	3～4	●GS1000F0
7	4	7		4		7		3.5		7					●GS1001F0
8	5	8		5		8		4.5		8					●GS1002F0
9	6	9		6		9		5.5		9					●GS1003F0
10	7	10		7		10		6.5		10					●GS1004F0
11	8	11		8		11		7.5		11					●GS1005F0
12	9	12		9		12		8.5		12					●GS1006F0
13	10	13		10		13		9.5		13					●GS1007F0
14	10	14	3	10	0 −0.06	14	+0.06 0	9.4	0 −0.06	14	+0.06 0	3.2	0.4 or below	4～5	●GS1008F0
15	11	15		11		15		10.4		15					●GS1009F0
15.2	11.2	15.2		11.2		15.2		10.6		15.2					●GS1010F0
16	12	16		12		16		11.4		16					●GS1011F0
16.5	12.5	16.5		12.5		16.5		11.9		16.5					●GS1012F0
18	14	18		14		18		13.4		18					●GS1013F0
19	15	19		15		19		14.4		19					●GS1014F0
20	16	20		16		20		15.4		20					●GS1015F0
22	18	22		18		22		17.4		22					●GS1016F0
24	20	24		20		24		19.4		24					●GS1017F0
25	21	25		21		25		20.4		25					●GS1018F0
26	22	26		22		26		21.4		26					●GS1020F0
28	22	28	4.4	22	0 −0.08	28	+0.08 0	21.4	0 −0.08	28	+0.08 0	4.7	0.7 or below	5～6	●GS1019F0
28.4	22.4	28.4		22.4		28.4		21.8		28.4					●GS1021F0
30	24	30		24		30		23.4		30					●GS1022F0
31	25	31		25		31		24.4		31					●GS1023F0
31.5	25.5	31.5		25.5		31.5		24.9		31.5					●GS1024F0
32	26	32		26		32		25.4		32					●GS1025F0
34	28	34		28		34		27.4		34					●GS1026F0
35	29	35		29		35		28.4		35					●GS1027F0
35.5	29.5	35.5		29.5		35.5		28.9		35.5					●GS1028F0
36	30	36		30		36		29.4		36					●GS1029F0
37	31	37		31		37		30.4		37					●GS1030F0
37.5	31.5	37.5		31.5		37.5		30.9		37.5					●GS1031F0
38	32	38		32		38		31.4		38					●GS1032F0
40	34	40		34		40		33.4		40					●GS1033F0
41	35	41		35		41		34.4		41					●GS1034F0
41.5	35.5	41.5		35.5		41.5		34.9		41.5					●GS1035F0
42	36	42		36		42		35.4		42					●GS1036F0
44	38	44		38		44		37.4		44					●GS1037F0
45	39	45		39		45		38.4		45					●GS1038F0
46	40	46		40		46		39.4		46					●GS1039F0

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

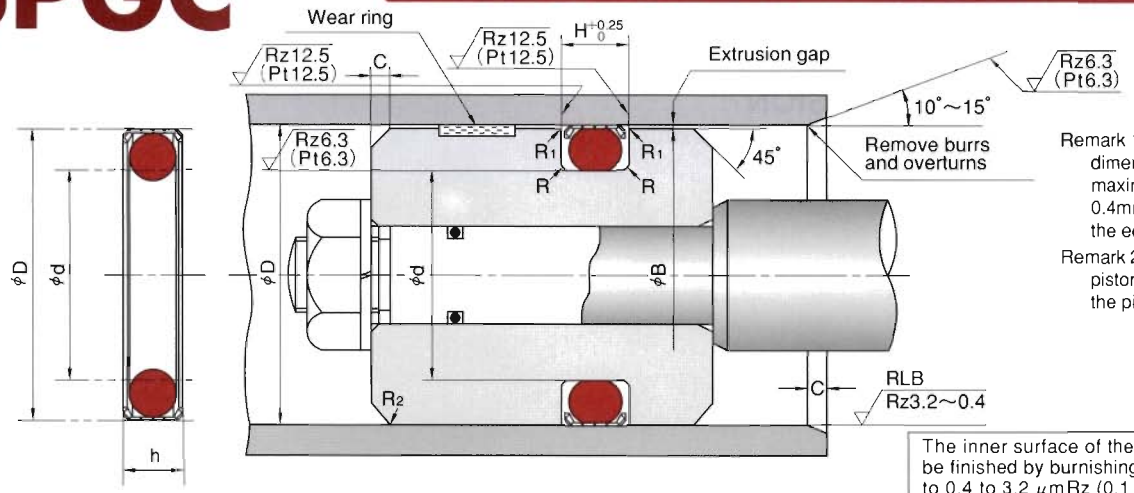
HOW TO DETERMINE B DIMENSION

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									NOK Part Number
				For general hydraulic use				For pneumatic and hydraulic low-friction applications					
	d	D	h	φd		φD		φd		φD	H	R	C	
SPGC 47	41	47	4.4	41	$^{0}_{-0.08}$	47	$^{+0.08}_{0}$	40.4	$^{0}_{-0.08}$	47	$^{+0.08}_{0}$	4.7	0.7 or below	5～6	●GS1040F0
48	42	48		42		48		41.4		48					●GS1041F0
50	44	50		44		50		43.4		50					GS1042F0
51	45	51		45		51		44.4		51					GS1043F0
52	46	52		46		52		45.4		52					GS1044F0
54	48	54		48		54		47.4		54					GS1046F0
55	49	55		49		55		48.4		55					GS1047F0
56	50	56		50		56		49.4		56					GS1049F0
58	48	58	7	48	$^{0}_{-0.10}$	58	$^{+0.10}_{0}$	47.4	$^{0}_{-0.10}$	58	$^{+0.10}_{0}$	7.5	0.8 or below	6～8	GS1045F0
60	50	60		50		60		49.4		60					GS1048F0
62	52	62		52		62		51.4		62					GS1050F0
63	53	63		53		63		52.4		63					GS1051F0
65	55	65		55		65		54.4		65					GS1052F0
66	56	66		56		66		55.4		66					GS1053F0
68	58	68		58		68		57.4		68					GS1054F0
70	60	70		60		70		59.4		70					GS1055F0
72	62	72		62		72		61.4		72					GS1056F0
73	63	73		63		73		62.4		73					GS1057F0
75	65	75		65		75		64.4		75					GS1058F0
77	67	77		67		77		66.4		77					GS1059F0
80	70	80		70		80		69.4		80					GS1060F0
81	71	81		71		81		70.4		81					GS1061F0
85	75	85		75		85		74.4		85					GS1062F0
90	80	90		80		90		79.4		90					GS1063F0
95	85	95		85		95		84.4		95					GS1064F0
100	90	100		90		100		89.4		100					GS1065F0
105	95	105		95		105		94.4		105					GS1066F0
110	100	110		100		110		99.4		110					GS1067F0
112	102	112		102		112		101.4		112					GS1068F0
115	105	115		105		115		104.4		115					GS1069F0
120	110	120		110		120		109.4		120					GS1070F0
122	112	122		112		122		111.4		122					GS1071F0
125	115	125		115		125		114.4		125					GS1072F0
130	120	130		120		130		119.4		130					GS1073F0
135	125	135		125		135		124.4		135					GS1074F0
140	130	140		130		140		129.4		140					GS1075F0
142	132	142		132		142		131.4		142					GS1076F0
145	135	145		135		145		134.4		145					GS1077F0
150	140	150		140		150		139.4		150					GS1078F0
155	145	155		145		155		144.4		155					GS1079F0
160	150	160		150		160		149.4		160					GS1081F0

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

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.

R1=0.3 or below
R2=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 3.2 μmRz (0.1 to 0.8 μmRa). 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							NOK Part Number
				For general hydraulic use		For pneumatic and hydraulic low-friction applications		H	R	C	
	d	D	h	φd	φD	φd	φD				
SPGC 165	150	165	10.5	150 0 −0.10	165 +0.10 0	149.4 0 −0.10	165 +0.10 0	11.0	0.8 or below	8~12	GS1080F0
170	155	170		155	170	154.4	170				GS1082F0
175	160	175		160	175	159.4	175				GS1083F0
180	165	180		165	180	164.4	180				GS1084F0
185	170	185		170	185	169.4	185				GS1085F0
190	175	190		175	190	174.4	190				GS1086F0
195	180	195		180	195	179.4	195				GS1087F0
200	185	200		185	200	184.4	200				GS1088F0
205	190	205		190	205	189.4	205				GS1089F0
210	195	210		195	210	194.4	210				GS1090F0
215	200	215		200	215	199.4	215				GS1091F0
220	205	220		205	220	204.4	220				GS1092F0
224	209	224		209	224	208.4	224				GS1093F0
225	210	225		210	225	209.4	225				GS1094F0
230	215	230		215	230	214.4	230				GS1095F0
235	220	235		220	235	219.4	235				GS1096F0
240	225	240		225	240	224.4	240				GS1097F0
245	230	245		230	245	229.4	245				GS1098F0
250	235	250		235	250	234.4	250				GS1099F0
255	240	255		240	255	239.4	255				GS1100F0
260	245	260		245	260	244.4	260				GS1101F0
265	250	265		250	265	249.4	265				GS1102F0
270	255	270		255	270	254.4	270				GS1103F0
275	260	275		260	275	259.4	275				GS1104F0
280	265	280		265	280	264.4	280				GS1105F0
285	270	285		270	285	269.4	285				GS1106F0
290	275	290		275	290	274.4	290				GS1107F0
295	280	295		280	295	279.4	295				GS1108F0
300	285	300		285	300	284.4	300				GS1109F0
305	290	305		290	305	289.4	305				GS1110F0
310	295	310		295	310	294.4	310				GS1111F0
315	300	315		300	315	299.4	315				GS1112F0
330	315	330		315	330	314.4	330				GS1113F0
335	320	335		320	335	319.4	335				GS1114F0
350	335	350		335	350	334.4	350				GS1115F0
355	340	355		340	355	339.4	355				GS1116F0
370	355	370		355	370	354.4	370				GS1117F0
375	360	375		360	375	359.4	375				GS1118F0
390	375	390		375	390	374.4	390				GS1119F0
400	385	400		385	400	384.4	400				GS1120F0

F DIMENSION SPGC

CPI TYPE

SPECIAL PACKINGS FOR PISTON SEALS IRON RUBBER (AU)

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

(Example) • Type Dimensions CPI 25 10 2.5 10

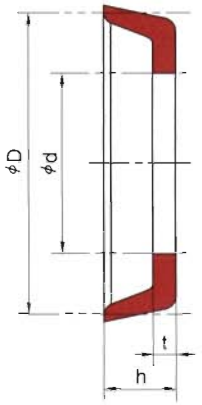
- CPI: Type Sign
- 25 10 2.5 10: Nominal Size of Packing described in order of outer diameter(D), height(h), thickness(t), and inner diameter(d)

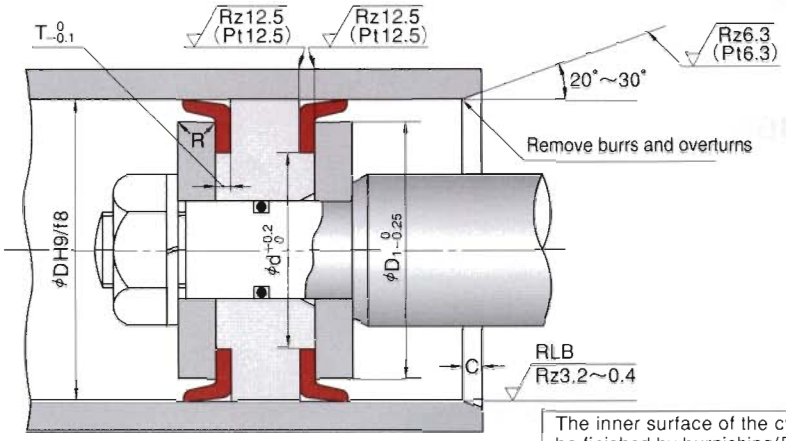
• Part Number FC0013C0

● 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 3.2 μmRz (0.1 to 0.8 μmRa). 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	φD1	T	R	C	
25	10	2.5	10	17	2.4	1.5	3	FC0013C0
28	10	2.5	10	20				FC0015C0
30	10	2.5	12	22				FC0020C0
31.5	10	2.5	14	23.5				FC0022C0
35	10	2.5	16	27				FC0026C0
35.5	10	2.5	16	27.5				FC0398C0
40	10	2.5	20	32				FC0035C0
45	12	3	20	36	2.9	2		FC0046C0
50	12	3	22	41				FC0055C0
53	12	3	25	44				FC0064C0
55	12	3	25	46				FC0068C0
56	12	3	25	47				FC0070C0
60	12	3	30	51				FC0077C0
63	12	3	35	54				FC0090C0
65	12	3	35	56			3.5	FC0095C0
67	12	3	38	58				FC0102C1
70	12	3	38	61				FC0106C0
71	12	3	40	62				FC0114C0
75	12	3	40	66				FC0117C0
80	16	4	40	69	3.8	3	4	FC0134C0
85	16	4	45	74				FC0142C0
90	16	4	50	79				FC0157C0
95	16	4	55	84				FC0164C0
100	16	4	55	89				FC0174C0
105	16	4	60	94				FC0187C0
106	16	4	60	95				FC0189C0
110	16	4	60	99				FC0195C0
112	16	4	65	101				FC0199C0
118	16	4	70	107				FC0205C0
120	16	4	70	109				FC0207C0
125	20	5	75	111	4.8	4	5.5	FC0222C0
130	20	5	80	116				FC0230C0
132	20	5	85	118				FC0233C1
140	20	5	90	126				FC0245C1
150	20	5	100	136				FC0255C1
160	20	5	110	146				FC0275C0
170	20	5	120	156				FC0279C0
180	20	5	130	166				FC0282C1
190	20	5	140	176				FC0289C0
200	20	5	150	186				FC0293C0
224	20	5	180	210				FC0314C0
250	20	5	200	236				FC0321C0
280	20	5	230	266			6.5	FC0337C0
300	20	5	250	286			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

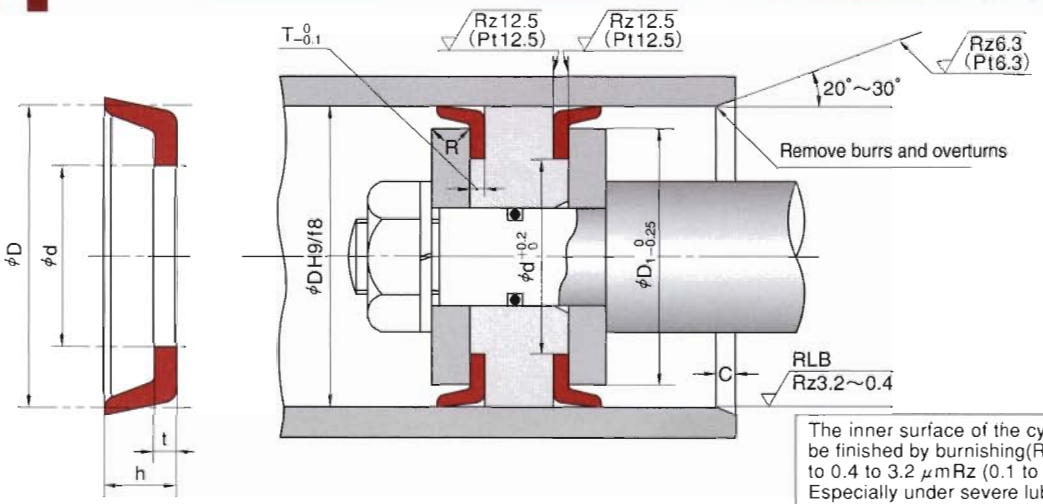
30 8 2.5 13 — Nominal Size of Packing described in order of outer diameter(D), height(h), thickness(t), and inner diameter(d)

• 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 3.2 μmRz (0.1 to 0.8 μmRa). 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 ゴム材料記号
D	h	t	d	φD1	T	R	C		
30	8	2.5	13	23	2.5	1.5	7	CC0019C3	A104
	10	2.5	12	23.5				CC0020C0	A103
	10	2.5	15	23				CC0020C1	A102
35	10	2.5	18	28.5				CC0026C0	A102
40	8	2.5	16	33				CC0034C1	A104
	10	2.5	20	33.5				CC0035C0	A102
42	12	3	23	34	3	2		CC0040C0	A505
45	10	2.5	25	38.5	2.5			CC0044C0	A102
50	12	3	25	41.5	3			CC0055C1	A104
55	10	3	40	48				CC0067C0	A103
60	8	2.5	40.5	54	2.5			CC0074C0	A103
	12	3	30	51	3			CC0077C0	A505
65	13	3.5	34.5	56	3.5			CC0096C0	A104
70	12	3	38	62	3			CC0106C2	A505
75	12	3	38	66				CC0117C1	A104
80	15	4	40	70	4	3		CC0132C0	A505
	16	4	40	69				CC0134C0	A102
90	15	4.3	38	80	4.3		8	CC0156C0	A505
	16	4	45	79.5	4			CC0157C0	A102
	17	5	50	77	5			CC0159C0	A104
100	15	4.3	38	88	4.3			CC0171C0	A104
	16	4	50	89	4			CC0174C5	A104
	16	4	55	89				CC0174C4	A505
120	16	4	60	109				CC0207C0	A102
	16	4	70	109				CC0207C1	A104
125	16	5	75	115	5	4		CC0219C0	A104
130	20	5	80	116				CC0230C1	A104
150	20	5	75	136			11	CC0255C0	A102
	20	5	100	138				CC0255C2	A505
180	20	5	90	166.5				CC0282C0	A102
	25	5	80	166				CC0285C0	A104
200	20	5	150	187				CC0293C5	A505
205	23	4	134	190	4			CC0303C1	A103
257	22	5.5	192	245	5.5		14	CC0328C1	A103

F DIMENSION CPH